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SCHOOL OF GRADUATE STUDIES MASTERS OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE

**ASSESSMENT ON THE CHALLENGES AND PROSPECT OF E-BANKING: IN THE
CASE OF COMMERCIAL BANK OF ETHIOPIA.**

BY

ALAYU CHERNET

**A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES OF ST.MARY'S
UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR MASTER
OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE**

JUNE, 2015

ADDIS ABABA, ETHIOPIA

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ALAYU CHERNET

ADVISOR: ZEMENU AYNADIS (Asst. Prof.)

**ST.MARY'S UNIVERSITY SCHOOL GRADUATE STUDIES
MASTER OF BUSINESS ADIMINSTRATION IN ACCOUNTING AND
FINANCE**

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**ST. MARY UNIVERSITY SCHOOL OF GRADUATE CAMPUS
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Alayu Chernet

Approved by the Board of Examiner

Dean, graduate studies signature and date -----

Advisor Signature and date -----

Internal Examiner Signature and date -----

External Examiner Signature and date -----

Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for degree in any other university and that all sources of materials used for the thesis have been duly acknowledged.

Declared by:

Name: Alayu Chernet

Signature_____

Date_____

Confirmed by Advisor:

Name: Zemenu Aynadis (Asst.prof.)

Signature_____

Date_____

Place and date of submission: St. Mary university Post Graduate campus, June, 2015.

Endorsement

This is to certify that **Alayu Chernet Shumete** has carried out his research work on the topic entitled “**Assessment on the Challenges and Prospects of e-banking: in the case of Commercial Bank of Ethiopia**”. The work is original in nature and is suitable for the submission for the reward of MBA in Accounting and Finance.

Advisor: Zemenu Aynadis (Asst.Prof.)_____

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List of Abbreviations

ATM	Automated Teller Machine
B2C	Business to Consumer
CBE	Commercial Bank of Ethiopia
CSFs	Critical Success Factors
DIT	Diffusion of Innovation Theory
E-banking	Electronic Banking
E-commerce	Electronic Commerce
EFT	Electronic fund transfer
E-payment	Electronic Payment
PC	Personal Computer
POS	Point of Sale
PIN	Personal Identification Number
TAM	Technology Acceptance Model
TOE	Technology Organization Environment
TV	Television

Abstract-

This study attempts to understand and evaluate the challenges and prospects electronic banking facilities in commercial bank of Ethiopia. Bank employees and customers of commercial bank of Ethiopia were the primary source of data for working this paper and to adopt Qualitative research *approach through the review of existing literature and the experiences of the researcher in respect of the E-banking system in commercial bank of Ethiopia*. Data is presented through tables, graphs, pie charts and figures. *The study identified attitudes of customers and staffs, challenges, prospects and overall performance of commercial bank of Ethiopia*. As per the findings of this study it is observed that prospects include: excellent Banking transactions can be performed from the comfort of the home or office or from the place a customer's wants to, e-banking is the best means to reduce customer over load, E-banking technology helps customer for quickly access account, reduces time spending in the bank and other services and E-banking service is better managing of financial transaction.

According to findings the challenges include: customers Lack of awareness on the benefits of new technologies related with electronic banking, not literate enough to understand the usage of e-banking service, network and electric power interruption and Languages are an obstacle to use electronic-banking. *The study suggests a series of measures which could be taken by the commercial bank of Ethiopia. The measures include, detail training of employees about e-banking, localize language for his customers, internalize electric and network problems, and familiarize their customers with the processes and benefits of the system.*

Key Words: e-banking, challenges of e-banking prospects, mobile banking, internet banking, POS, ATM

CHAPTER ONE

1.1 Introduction

Most new channels of distribution to be used in the financial services organizations are electronic banking; this method was established in the mid-1990s, thereafter steadily becoming more important. The term electronic banking refers to "the provision of information or services by a bank to its customers, via a computer or television"(Allen, 2001). A more developed service is one that provides customers with the opportunity to gain access to their accounts and execute transactions or to buy product online via the internet (Daniel, 1999).

E-banking implies provision of banking products and services through electronic delivery channels. Electronic banking has been around for quite some time in the form of automatic teller machines (ATMs) and telephone transactions. In more recent times, it has been transformed by the internet a new delivery channel that has facilitated banking transactions for both customers and banks. For customers, the internet offers faster access, is more convenient and available around the clock irrespective of the customer's location.

New Information technology has taken important place in the future development of financial services, especially banking sector transition are affected more than any other financial provider groups. Increased use of mobile services and use of internet as a new distribution channel for banking transactions and international trading requires more attention towards e-banking security against fraudulent activities. The development and the increasing progress that is being experienced in the Information and Communication Technology have brought about a lot of changes in almost all facets of life. In the Banking Industry, it has been in the form of online banking, which is now replacing the traditional banking practice. Linked banking has a lot of benefits which add value to customers' satisfaction in terms of better quality of service offerings and at the same time enable the banks gain more competitive advantage over other competitors.

1.2. Back ground of the study

World over banks are reorienting their business strategies towards new opportunities offered by e-banking. E-banking has enabled banks to scale borders, change strategic behavior and thus

bring about new possibilities. However the economy of most developing countries is cash driven; meaning that monetary transactions are basically made through the exchange of bank notes and coins for goods and services. On the other hand developed countries, e-banking is now giving way to a modern and sophisticated payment system where the currency and notes are converted to data, which are in turn transmitted through the telephone lines and satellite transponders. This is as a result of rapid technological progress and development in the financial market (Ozuru et al., 2010). There is faster delivery of information from the customer and service provider, thus differentiating Internet enabled electronic banking system from the traditional banking operation.

The appearance of E-banking in Ethiopia goes back to the late 2001, when the largest state owned, commercial bank of Ethiopia (CBE) introduced automatic teller machine to deliver service to the local users. Electronic banking facilities provided by most Ethiopian Banks are very basic.

The modern e-banking methods like alert, Internet banking, Mobile banking and others are very new to the Ethiopian banking sector. E-banking which refers to the use of modern technology that allows customers to access banking services electronically whether it is to withdraw cash, transfer funds, to pay bills, or to obtain commercial information and advices are nearly recent years adopted by commercial bank of Ethiopia.

1.3. Statement of the problem

Banks play a key role in improving economic efficiency by channeling funds from resource surplus unit to those with better productive investment opportunities. In less monetized countries, like Ethiopia, financial sector is dominated by banking industry, effective and efficient functioning of the economy has significant role in accelerating economic growth. To enhance the role of banks in an economy, competition is an important driving force. In other words, insufficient competition may result in substantial social losses on account of higher price, higher transaction cost, lower credit supply, lack of innovation and poor service quality. Competition leads to innovation of new technology especially e-banking in recent years in Ethiopia.

One of the best competitive banks in Ethiopia is commercial bank of Ethiopia. Commercial bank of Ethiopia carries a comprehensive business throughout the country with its network of 948 branches, (From which 812 branches linked online until 30/05/2015) .Which truly makes it

national as well as the largest bank at present. However currently different sister union-banks are flourishing in the country at an alarming rate (www.comrbnket.et).

To be more competitive with other banks, there is a need for more diversified services, more speculative to reach the varying requirements of the economy, specially being adoption of new technology. When we talk about new technology, it can be viewed from different angles that are internal banking systems such as more complicated software, well-educated employees e-banking systems such as mobile banking, alert, point of sale, automatic teller machine and internet banking. Electronic banking is spreading quickly in recent years it leads much lower costs and greater competition in the financial service.

This study examines the challenges and prospects to assess whether the implementation of e-banking clients in commercial bank of Ethiopia is constrained by the technology, particularly on the basis of non-accessibility of internet, educational level, income level and etc. Findings of this research are useful for the banking sector in formulating appropriate strategies to build customer satisfaction, to know customer attitude about e-banking, and a guide to create cashless society in Ethiopia.

The gap between the previous study and this study about Challenges and prospects of e-banking is that previous studies are about e-banking in Ethiopia focus only automatic teller machine(ATM) and point of sale(POS), however these study focus including recently launched on ATM, point of sale, internet banking, mobile banking and alert . The other gap is that time gap, the previous customer's attitude and believing on e-banking different from today's e-banking users.

1.4. Research question

The main questions addressed in the research are:

1. What is the attitude of the customers about the e-banking?
2. What is the attitude of employees about e-banking?
3. What are the challenges to adopt e-banking in commercial bank of Ethiopia?
4. What are the prospects to adopting e-banking in commercial bank of Ethiopia?

1.5. Objective of the study

The main objective of this study is to investigate the challenges and prospects on adopting of Electronics banking services at commercial bank of Ethiopia.

Specific objective of the study

As mentioned from general objectives the following points are derived specific objective those are:

- To identify the challenges of E-banking in commercial bank of Ethiopia.
- To know the prospects of e-banking in commercial bank of Ethiopia.
- To determine the attitude of the customer about electronic banking.
- To find out the attitude of employees of commercial bank of Ethiopia about e-banking.

1.6. Significance of the study

The importance of the study is pointing out challenges in the application of bank in the implementations of electronic banking and to generate supportive recommendation that possibly solve this problem. The research output used by commercial bank of Ethiopia for e-banking procedure guideline and positively configure to words enhanced operational activities of new banking activities such as mobile internet, alert, ATM and POS. It will also be used as an input for further study by individual or organizations. In commercial bank of Ethiopia no sufficient study was conducted on e-banking especially more recent lunched technology due to that:

- It facilitates research beginners who are interested to conduct their research in this area.
- It aids the CBE management to hedge against adverse factors Tendency to be content with the existing structures like; Tendency to be content with the existing structures, Lack of awareness on the benefits of new technologies, uncertainty, and like strong demand and cost complementarities that improves performance.
- The study adds knowledge on the field of finance. The studies that are conducted on the perspectives and challenges affecting commercial banks e-banking are rare, therefore the study will be an important reference material on the field of finance.

1.7. Research Design and Methodology

This paper is to adopt Qualitative research methodologies. Data is gathered in such a way that 150 employees of commercial bank of Ethiopia and 150 commercial bank of Ethiopia customers.

Data collection is done only in Addis Ababa through randomly selected branch and head office employees and customers. The source of data is primary data through questionnaires' and observation, and secondary data such as books, quarterly and annual report of CBE, business news, articles.

Methods of data collection and analysis in financial institution depend very much on the nature of the topic of research objective and scope of the study. Availability of finance, time accessibility and facilities also influence the selection of the method to be used for data collection. The main tool of data collection is questionnaires used to collect data from employees and customers of commercial bank of Ethiopia. The questionnaires schedules are contain mostly close ended questions though same open ended questions also are included. Sample selection is both Random for selecting branches and non- Random sampling techniques for selecting sample within the branch.

1.8. Scope and limitation of the study

This study focus on commercial bank of Ethiopia about challenges and prospects of e-banking those include mobile banking, internet banking , point of sale and automatic teller machine at Addis Ababa city different branches and head office organs of the bank.

Every research study faces a certain limitations till its end. While conducting this research study, a number of limitations were occurred. The first challenge occurred in this study were getting all necessary data. To test all of the potential determinants of e-banking such as availability of networks, level of literacy, cost of internet, and the capability of employees, but it is difficult to explain in quantitative terms rather extremely subjective this leads unreliable conclusion. The researcher highly depends on a limited number of variables. Therefore, such a limitation may adversely affect the findings of the study. Paper, books and articles on e-banking in commercial banks of Ethiopia is very small due to that there is no sufficient data to do .Hence, this paper by no means claim itself complete and exhaustive due to time shortage and insufficient (nonexistence)of findings on similar area.

1.9. Organization of the Research Report

The research report expected to comprise five chapters, which include :chapter one contains background of the study, statement of the problem, basic research questions, objective of the

study, significance of the study and delimitation of the study. Chapter two include review of related literatures both theoretical and empirical literatures.

Chapter Three: Methods of the Study Under this chapter; conceptual framework adapted/adapted from previous studies, the subjects/participant of the study; the sources of given data; the data collection tools/instruments employed; the procedures of data collection; and the methods of data well be analyze.

Chapter Four: Results and Discussion this chapter should be summarize the results/findings of the study, and interpret and/or discuss the findings. Here, there will be expected to make extensive use of the literature review.

Chapter five: Summary, Conclusions and Recommendations this chapter comprises four sections, which include summary of findings, conclusions, limitations of the study and recommendations. Summary of findings should be drawn from the results discussed under chapter four, conclusions should be drawn from the summary of findings, and specify any limitations that could have effect on conclusions.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Definition of banking

Banking is one of the oldest professions in human history, it also flourished with civilizations. Since humans started using money bank services were in use throughout history. Modern banking established as we know it today was established in Italy and Greece in the 15th century. Today, banks are one of the most important institutions to for a modern economy to work in any country. From different historical sources the first foundations of the banking service in the world were put by goldsmiths and silversmiths. They have a safe box to put & they were the most trusted they used to receive gold, silver and various jewelries to put with them. Therefore an individual or merchant puts his wealth under their custody, for their service they charge a small amount of money and give the customer a receipt to guarantee their acceptance. Then they started using, money paying instrument what we now call this document as ‘check’. However as time goes by , the goldsmiths and silversmiths observed that their customers wouldn’t take their jewelry soon, and those clients ,whenever they face they shortage of money they started lending to this people and started to get profit from their service. They encouraged depositing and lending and rather than making the customers to pay a charge for depositing, they started to pay them interest and introduced the public to work with money. It is believed that, ancient Assyrians, Babylonians, Athenians, Romans and Abyssinians also used the banking service (Gedey, 1990). For further development of the bank there is the need for technological transformation in banking industry which is electronics banking.

2.2 definition of electronic banking

The concept of electronic banking has been defined in many ways. Daniel (1999) defines electronic banking as the delivery of banks' information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer and a mobile phone with browser or desktop software, telephone or digital television.

Pikkarainen (2004) define e- banking as an "internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments". With the exception of cash withdrawals, internet banking gives customers access to almost any type of banking transaction at the click of mouse. Indeed the use of the internet as a new alternative channel for the distribution of financial services has become a competitive necessity instead of just a way to achieve competitive advantage with the advent of globalization and fiercer competition.

Wise and Ali (2009) argued that many banks want to invest in ATMs to reduce branch cost since customers prefer to use them instead of a branch to transact business. The financial impact of ATMs is a marginal increase in fee income substantially offset by the cost of significant increases in the number of customer transactions. The value proposition however, is a significant increase in the intangible item "customer satisfaction". The increase translates into improved customer loyalty that in result in higher customer retention and growing organization value. Internet banking is a lower-cost delivery channel and a way to increase sales. Internet banking services has become one of the most important factors in the business economy today.

Banks which have a formal risk identification process and mechanisms in place to identify and assess the wide range of risks that impact their e-banking business are well placed to react quickly and put measures in place to reduce potential losses. Risk identification depends on the experience and knowledge of the analysts, and it is prudent to assign this exercise to competent people with the necessary qualifications, experience and credentials. Further research on the risks associated with the e-banking technologies and services could be helpful on resolving these risks. This could be done with research undertaken on the enhancement of IT security levels and authenticity of the banks 'networks, with firewalls or other software authentication. As far as the strategic risks are concerned, banks also need to conduct surveys, consult experts from various fields, establish achievable goals and monitor their performance. E-banking is an innovative product that banking institutions offer all over the world with superior benefits for the customers. In other words, an e-banking is *an idea, practice, or object that is perceived as new by an individual or other unit of adoption*' (for more information see Rogers, 2003). E-banking is an umbrella term for the process by which customers can conduct various banking transactions 24

hours a day, 7 days a week electronically without the need to visit a brick and mortar ‘institution (physical branch).

E-banking consists of Internet banking, telephone banking, PC Banking, mobile banking, TV based banking and ATMs. All the above distribution channels which involve the use of the internet or technology have enabled banks to offer to their customers access to their accounts as well as the ability to perform any banking activity, such as paying utility bills, transferring amounts between accounts, applying for credit or debit cards as well as applying for loans or even mortgages. In the Business to Consumer (B2C) segment, the Internet banking services that are being offered to customers include transfers of funds, viewing of account balances, payments of credit cards and bills, set ups of direct debits and standing orders, applications for loans and cheque books as well as requests for new personal identity numbers (PINs).

Supervisory and regulatory authorities are further required to develop methods for identifying new risks, assessing risks, managing risks and controlling risk exposure (Kondabagil, 2007). In the last decades, banking over the internet has attracted increased attention from bankers and bank customers. This popularity can be attributed to all the advantages that Internet banking is offering to both banks and customers. For instance, customers can have access to their accounts around the clock, from all over the world. In addition, they have access to up to date information on their accounts. Banks on the other hand can employ fewer personnel, as Internet banking encourages customers to perform banking transactions electronically at a lower cost. Automated e-banking services, offer banks a perfect opportunity for maximizing profits.

The main economic benefit is the positive impact of communication technologies on the entire economic growth of banking institutions. Banks are able to offer their services at lower costs, with fewer staff. Banks which offer e-banking services are perceived as leaders in technology implementation and they would have a better brand image. Moreover, there is easy publicity for banks, which can pass the information they want over the Internet, so there is significant reduction in banks costs. Opposed to the above advantages, there are also some down sides related to Internet banking. These include security concerns, along with insufficient knowledge of the technology used and lack of personal computers. Nowadays, banking institutions face various policy issues. A key policy could be considered to be the management of risks that are associated with the implementation of e-banking technologies and services (Kondabagil, 2007).

In particular, credit risk arises when customers cannot meet their financial obligations. Similarly, liquidity risk arises in the case of customers insufficient funds (Kondabagil, 2007).

Legal risk arises due to the existence of a poor legal framework or legal uncertainties that lead to credit or liquidity risk. Moreover, operational risk arises in the case of operational mistakes or malfunctions that could possibly lead to credit or liquidity risks (Kondabagil, 2007). Further, systematic risk refers to the inability of a participant to meet the obligations; this might be in the form of a disruption which leads to a failure of the participants, within the financial system, to meet their obligations. Reputational risk is the risk of receiving significant negative public opinion, which might result in a loss of customers. Additionally, there is the money laundering risk and the identity theft risk. All the above risks have influenced the overall risk profile of banking. It is crucial for banks to have flexible and responsive operating processes, in addition to sound and robust risk management systems that recognize, address and manage these risks in a prudent.

2.3 E-banking in Global Perspective

The advent of Internet has initiated an electronic revolution in the global banking sector. The dynamic and flexible nature of this communication channel as well as its everywhere reach has helped in leveraging a variety of banking activities. E-banking technologies have proliferated in recent years, and the availability of a wide range of products has led to increasing adoption among customers. These technologies include direct deposit, computer banking stored value card, and debit cards (Servon and Kaestner, 2008).

Growth of Electronic banking in a country depends on many factors, such as success of internet access, new online banking features, household growth of internet usage, legal and regulatory framework. E-banking can offer speedier, quicker and dependable services to the customers for which they may be relatively satisfied than that of manual system of banking. E-banking system not only generates latest viable return, it can get its better dealings with customers. New banking intermediaries offering entirely new types of banking services have emerged as a result of innovative e-business models.

The Internet has emerged as one of the major distribution channels of banking products and services, for the banks in US and in the European countries. Initially, banks promoted their core

capabilities i.e., products, services and advice through Internet. Then, they entered the e-commerce market as providers/distributors of their own products and services.

More recently, due to advances in Internet security and the advent of relevant protocols, banks have discovered that they can play their primary role as financial intermediate's and facilitators of complete commercial transactions via electronic networks especially through the Internet. Some banks have chosen a route of establishing a direct web presence while others have opted for either being an owner of financial services centric electronic marketplace or being participants of a non-financial services centric electronic marketplace.

The trend towards electronic delivery of banking products and services is occurring partly as a result of consumer demand and partly because of the increasing competitive environment in the global banking industry. The Internet has changed the customers' behaviors who are demanding more customized products/services at a lower price.

Moreover, new competition from pure online banks has put the profitability of even established brick and mortar banks under pressure. However, very few banks have been successful in developing effective strategies for fully exploiting the opportunities offered by the Internet. For traditional banks to define what niche markets to serve and decide what products/services to offer there is a need for a clear and concise Internet commerce strategy.

Banks use online banking as it is one of the cheapest delivery channels for banking products. Such service also saves the time and money of the bank with an added benefit of minimizing the likelihood of committing errors by bank tellers (Jayawardhena & Foley, 2000). *Banking is no longer bound to time and geography. Customers over the world have relatively easy access to their accounts, 24 hours per day, and seven days a week*'. The author further argued that, with internet banking services, the customers who felt that branch banking took too much time and effort are now able to make transactions at the click of their fingers.

There are other numerous advantages to banks offered by online banking such as mass customization to suit the likes of each user, innovation of new products and services, more effective marketing and communication at lower costs, development of non-core products such as insurance and stock brokerage as an expansion strategy, improved market image, better and quicker response to market evolution (Jayawardhena & Foley, 2000).

Banking transactions had already started taking place through the Internet way back in 1995. The Internet promised an ideal platform for commercial exchange, helping banks to achieve new levels of efficiency in financial transactions by strengthening customer relationship, promoting price discovery and spend aggregation and increasing the reach. Electronic finance offered considerable opportunities for banks to expand their client base and rationalize their business while the customers received value in the form of savings in time and money.

2.4. E-banking Practice in Ethiopian Commercial banks

Certainly the banking industry in Ethiopia is underdeveloped and therefore, there is an all immediate need to embark on capacity building arrangements and modernize the banking system by employing the state of the art technology being used anywhere in the world. With a growing number of import-export businesses, and increased international trades and international relations, the current banking system is short of providing efficient and dependable services and therefore all banks operating in Ethiopia should recognize the need for introducing electronic banking system to satisfy their customers and meet the requirements of rapidly expanding domestic and international trades, and increasing international banking services.

Undeniably the largest state-owned bank, Commercial Bank of Ethiopia, is the pioneer in introducing ATM service for local users in 2001 with its fleet of eight ATMs located in Addis Ababa. Moreover, CBE has had Visa membership since November 14, 2005. However, due to lack of appropriate infrastructure, it failed to reap the fruit of its membership. Despite, being the pioneer in introducing ATM based payment system and acquired Visa membership, CBE lagged behind Dashen Bank, which worked aggressively to maintain its lead in electronic payment systems. Dashen bank, a forerunner in introducing e-banking in Ethiopia, has installed ATMs at convenient locations for its own cardholders. The Dashen Bank ATM is available 24 hours a day, seven days a week and 365 days a year providing service to Dashen Debit Cardholders and International Visa Cardholders coming to the country. At the end of June 2009, Dashen bank has installed more than 40 ATMs in its area branches, university compounds, shopping malls, restaurants and hotels. Available services on Dashen Bank ATMs are, cash withdrawal, balance Inquiry, mini-statement, fund transfer between accounts attached to a single card and PIN (Personal Identification Number) change (Binyam, 2009). Currently, the bank gives debit service only for Visa cards. Dashen bank clients can withdraw up to 3,000 birr in cash and can buy

goods and services of up to 5,000 birr a day. As of June 30, 2009, Dashen Visa card holders have reached 54,624. Expanding its leadership, Dashen Bank has begun accepting MasterCard in addition to Visa credit cards it began serving over two years ago. Dashen won the membership license from MasterCard in 2008. Moreover, harnessing its leadership with advanced banking technology, Dashen Bank signed an agreement with iVeri, a South African electronic payment technology company, for the introduction of mobile commerce in April 21, 2009. According to the agreement, iVeri Payment Technologies has licensed its Gateway and MI Card e-payment processing solution to Dashen Bank. This would make Dashen Bank the first bank in Ethiopia to acquire e-commerce and mobile merchant transactions. The younger United Bank is the first to introduce tele-banking - including text messages (SMS) - by the end of 2008. Wegagen Bank has signed an agreement with Technology Associates (TA), a Kenyan based IT firm, for the development of the solutions for the payment system and installation of a network of ATMs on December 30, 2008 (Binyam, 2009).

Automated Teller Machine (ATM) and Point of Sale terminal (POS) network, in February 2009 is welcoming strategy to improve electronic card payment system in Ethiopia. Three private commercial banks - Awash International Bank S.C., Nib International Bank S.C and United Bank S.C. – have agreed in principle to establish an ATM network called Fettan ATM network. If everything goes as planned, Fettan ATM will install over 140 ATM machines and over 340 POSs across Ethiopia. There will be one ATM at every branch of the consortium banks, all domestic airports serviced by commercial service, shopping complexes and merchants. The agreement is the first significant cooperation between competing banks in Ethiopia, which others should be encouraged to follow as there is no single bank in Ethiopia that can afford to provide extensive geographical coverage and access (Binyam , 2009).

The first ever electronic banking gateway was signed between Ethiopian Commodity Exchange (ECX) and Dashen Bank and CBE. The electronic banking system being developed with both banks is designed to give a secure electronic data sharing gateway between clients, banks and ECX, facilitating a smooth transaction (Abiy Demilew, 2008).

As the CBE continues to move at a snail's pace in its turnkey solution for Card Based Payment System, Dashen Bank remains so far the sole player in the field of electronic banking since 2006. The agreements signed by other private banks to introduce e-banking are welcoming and further steps towards realizing those agreements should be taken.

Now in Ethiopia electronic banking is highly growing from which **mobile banking** service provider banks in Ethiopia are Wegagen, Commercial Bank of Ethiopia, United international bank, Dashin, Abay and Cooperative bank of Oromia. **Internet banking** service provider includes united international, Wegagen, Dashin, Abay, Nib international and Commercial Bank of Ethiopia. **Agent bank** service provider includes united international, Dashin, Abay, Anbesa and cooperative bank of Ethiopia. In the year 2014/2015 National bank of Ethiopia give ATM(automatic teller machine) license permission to Abay international bank, Anbesa international bank, Nib international bank and Cooperative banks of Oromia (National bank of Ethiopia, 2015).

2.5 Theories e-banking

2.5.1 Innovation Diffusion Theory

This theory developed by Roger in 1983 explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity, trial ability and observability. It is concerned with the manner in which a new technological idea, artifact or technique, or a new use of an old one, migrates from creation to use. According to (IDT) theory, technological innovation is communicated through particular channels, over time, among the members of a social system. The stages through which a technological innovation passes are: knowledge (exposure to its existence, and understanding of its functions); persuasion (the forming of a favorable attitude to it); decision (commitment to its adoption); implementation (putting it to use); and confirmation (reinforcement based on positive outcomes from it).

Early users generally are more highly educated, have higher social status, and are more open to both mass media and interpersonal channels of communication, and have more contact with change agents. Mass media channels are relatively more important at the knowledge stage, whereas interpersonal channels are relatively more important at the persuasion stage. Innovation decisions may be optional (where the person or organization has a real opportunity to adopt or reject the idea), collective (where a decision is reached by consensus among the members of a

system), or authority-based (where a decision is imposed by another person or organization which possesses requisite power, status or technical expertise).

Important characteristics of an innovation include: relative advantage (the degree to which it is perceived to be better than what it supersedes); compatibility (consistency with existing values, past experiences and needs); complexity (difficulty of understanding and use); trial ability (the degree to which it can be experimented with on a limited basis); observeability (the visibility of its results). Different adopter categories are identified as: innovators (venturesome); early adopters (respectable); early majority (deliberate); late majority (skeptical); laggards (traditional).

Earlier adopting individuals tend not to be different in age, but to have more years of education, higher social status and upward social mobility, be in larger organizations, have greater empathy, less dogmatism, a greater ability to deal with abstractions, greater rationality, greater intelligence, a greater ability to cope with uncertainty and risk, higher aspirations, more contact with other people, greater exposure to both mass media and interpersonal communications channels and engage in more active information seeking.

Important roles in the innovation process include: opinion leaders (who have relatively frequent informal influence over the behavior of others); change agents (who positively influence innovation decisions, by mediating between the change agency and the relevant social system); change aides (who complement the change agent, by having more intensive contact with clients, and who have less competence credibility but more correctness or trustworthiness credibility).

The change agent functions are: to develop a need for change on the part of the client; to establish an information-exchange relationship; to diagnose the client problems; to create intent to change in the client; to translate this intent into action; to stabilize adoption and prevent discontinuance; and to shift the client from reliance on the change agent to self-reliance.

2.5.2. Technology Acceptance Model (TAM):

TAM, introduced by Davis (1986), is an adaptation of TRA specifically tailored for modeling user acceptance of information systems. The goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified (Davis, 1986). TAM posits that two particular beliefs, perceived usefulness and perceived ease of use, are of primary relevance for computer

acceptance behaviors. Perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance (Davis, 1985).

2.6. Types of E-banking

2.6.1 Internet banking:

Internet Banking lets you handle many banking transactions via your personal Computer. For instance, you may use your computer to view your account balance, request transfers between accounts, and pay bills electronically. Internet banking system and method in which a personal computer is connected by a network service provider directly to a host computer system of a bank such that customer service requests can be processed automatically without need for intervention by customer service representatives. The system is capable of distinguishing between those customer service requests which are capable of automated fulfillment and those requests which require handling by a customer service representative.

2.6.1.1 The evolution of internet banking

The ancestor for the contemporary home online banking products and services were the distance banking products and services over electronic media from early 1980s. The term “online” became popular in the beginning of 1990s and referred to the use of a terminal, keyboard and TV (or monitor) to access the banking system using a phone line. Online services started in New York in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services using the videotex system (Cronin, 1997). Because of the commercial failure of videotex these banking services never became popular except in France where the use of videotex (Minitel) was subsidized by the telecom provider and the UK, where the Prestel system was used.

Today, many banks are internet only banks. Unlike their predecessors, these internet only banks do not maintain brick and mortar bank branches. Instead, they typically differentiate themselves by offering better interest rates and online banking features. In Europe, adoption rates of internet banking usage decreases from north to south and from rich to poor. According to a research report from Deutsche Bank, GDP per capita and latitude explain statistically around 80 per cent of the variation in Europe, as suggested by linear regression analysis, and the European average

(EU-25, 36%) is below the USA average (44%) (February, 2006). Internet banking grows – usually, but not always at the expense of branch visits. Bank customers in Europe increased their use of internet banking while Europeans do not discriminate between internet banking and e-commerce. By saying this, there is a tendency that those who shop online are also more willing to bank online with Nordic countries to be more responsive to internet banking than their share of online shoppers would suggest while Germans and British exhibit a more reserved and constant attitude towards online banking (Cronin, 1997).

Moreover, the same research report from Deutsche Bank states that the share of internet bankers does not decrease with age. In the opposite, internet usage declines with age but relative to internet users as a whole, the share of internet bankers in the EU is constant for those over 24 years, e.g., out of those who use the internet, around 40 percent also use internet banking, irrelevant of age. In doing so, one of the most difficulties in people approaching the internet is their reluctance which is further an obstacle to proliferation of online banking between older customers. In addition, Europeans with higher education are more likely to use the internet and do financial transactions online because better educated people have fewer reservations about technology adoption and therefore, are early adopters of it.

However, following Rousseau et al., (1998), customers' trust in e-banking is defined as willingness of customers to perform on-line banking transactions, expecting that the bank will fulfill its obligations, irrespective of their ability to monitor or control banks' actions. Security of online financial transactions is a main concern for customers' trust in e-banking services and specifically, in internet banking products and services. In doing so, even if security incidents have been on the fall, customers do not have trust in online banking services, partly, of their concern of losing their money. In the following section, withdraw on security issues is raised in order for security to be better understood.

The system is integrated with the host computer system of the bank so that the remote banking customer can access other automated services of the bank. The method of the invention includes the steps of inputting a customer banking request from among a menu of banking requests at a remote personnel computer; transmitting the banking requests to a host computer over a network; receiving the request at the host computer; identifying the type of customer banking request received; automatic logging of the service request, comparing the received request to a stored table of request types, each of the request types having an attribute to indicate whether the

request type is capable of being fulfilled by a customer service representative or by an automated system; and, depending upon the attribute, directing the request either to a queue for handling by a customer service representative or to a queue for processing by an automated system.

2.6.1.2. Advantages of internet banking

Many banks have begun to offer customers the option of online-internet banking, a practice that has advantages for both all parties involved. The convenience of being able to access accounts at any time as well as the ability to perform transactions without visiting a local branch, draw many people to be involved. Some of these advantages of internet banking but are not limited to, include:

- Customer's convenience: Direct banks are open for business anywhere there is an internet connection. They are also 24 hours a day, 365 days a year open while if internet service is not available, customer services is normally provided around the clock via telephone. Real-time account balances and information are available at the touch of a few buttons thus, making banking faster, easier and more efficient. In addition, updating and maintaining a direct account is easy since it takes only a few minutes to change the mailing address, order additional checks and be informed for market interest rates.
- More efficient rates: The lack of significant infrastructure and overhead costs allow direct banks to pay higher interest rates on savings and charge lower mortgage and loan rates. Some offer high-yield checking accounts, high- yield certificate of deposits (CDs), and even no-penalty CDs for early withdrawal. In addition, some accounts can be opened with no minimum deposits and carry no minimum balance or service fees.
- Services: Direct banks typically have more robust websites that offer a comprehensive set of features that may not be found on the websites of traditional banks. These include functional budgeting and forecasting tools, financial planning capabilities, investment analysis tools, loan calculators and equity trading platforms. In addition, they offer free online bill payments, online tax forms and tax preparation.
- Mobility: Internet banking also includes mobile capabilities. New applications are continually being created to expand and improve this capability or smart-phones and other mobile devices.
- Transfers: Accounts can be automatically funded from a traditional bank account via electronic transfer. Most direct banks offer unlimited transfers at no cost, including those

destined for outside financial institutions. They will also accept direct deposits and withdrawals that the customer authorizes such as payroll deposits and automatic bill payment.

□ Ease of use: Online accounts are easy to set up and require no more information than a traditional bank account. Many offer the option of inputting the customer's data online or downloading the forms and mailing them in. If the customer runs into a problem, he has the option of calling or e-mailing the bank directly.

□ Environment friendly: Internet banking is also environmentally friendly. Electronic transmissions require no paper, reduce vehicle traffic and are virtually pollution-free. They also eliminate the need for buildings and office equipment.

2.6.2 Automated Teller Machine (ATM)

An automated teller machine or automatic teller machine (ATM) is an electronic computerized telecommunications device that allows a financial institution's customers to directly use a secure method of communication to access their bank accounts, order or make cash withdrawals (or cash advances using a credit card) and check their account balances without the need for a human bank teller. Many ATMs also allow people to deposit cash or cheques, transfer money between their bank accounts, top up their mobile phones' pre-paid accounts or even buy postage stamps. On most modern ATMs, the customer identifies him or herself by inserting a plastic card with a magnetic stripe or a plastic smartcard with a chip that contains his or her account number. The customer then verifies their identity by entering a pass code, often referred to as a PIN (Personal Identification Number) of four or more digits. Upon successful entry of the PIN, the customer may perform a transaction. The growth of ATM's has rapidly grown in the public places around the globe.

2.6.3 TELE BANKING

Undertaking a host of banking related services including financial transactions from the convenience of customers chosen place anywhere across the GLOBE and anytime of date and night has now been made possible by introducing on-line Tele banking services. By dialing the given Tele banking number through a landline or a mobile from anywhere, the customer gets the following facilities

- Automatic balance voice out for the default account.
- Balance inquiry and transaction inquiry in all

- Inquiry of all term deposit account
- Statement of account by Fax, e-mail or ordinary mail.
- Cheque book request
- Stop payment which is on-line and instantaneous
- Transfer of funds with CBS which is automatic and instantaneous
- Utility Bill Payments
- Renewal of term deposit which is automatic and instantaneous
- Voice out of last five transactions.

2.6.4 SMART CARD

A smart card usually contains an embedded 8-bit microprocessor (a kind of computer chip). The microprocessor is under a contact pad on one side of the card. Think of the microprocessor as replacing the usual magnetic stripe present on a credit card or debit card. The microprocessor on the smart card is there for security. The host computer and card reader actually “talks” to the microprocessor. The microprocessor enforces access to the data on the card.

The chips in these cards are capable of many kinds of transactions. For example, a person could make purchases from their credit account, debit account or from a stored account value that's reload able. The enhanced memory and processing capacity of the smart card is many times that of traditional magnetic-stripe cards and can accommodate several different applications on a single card. It can also hold identification information, which means no more shuffling through cards in the wallet to find the right one -- the Smart Card will be the only one needed. Smart cards can also be used with a smart card reader attachment to a personal computer to authenticate user. Smart cards are much more popular in Europe than in the U.S. In Europe the health Insurance and banking industries use smart cards extensively. Every German citizen has a smart card for health insurance. Even though smart cards have been around in their modern form for at least a decade, they are just starting to take off in the U.S.

2.6.5 DEBIT CARD

Debit cards are also known as check cards. Debit cards look like credit cards or ATM (automated teller machine) cards, but operate like cash or a personal check. Debit cards are different from

credit cards. While a credit card is a way to "pay later," a debit card is a way to "pay now." When you use a debit card, your money is quickly deducted from your checking or savings account. Debit cards are accepted at many locations, including grocery stores, retail stores, gasoline stations, and restaurants.

2.6.6 E-CHEQUE

- E-Cheque is the electronic version or representation of paper cheque.
- The Information and Legal Framework on the E-Cheque is the same as those of the paper cheques.
- It can now be used in place of paper cheques to do any and all remote transactions.
- An E-cheque work the same way a cheque does, the cheque writer "writes" the e-Cheque using one of many types of electronic devices and "gives" the e-Cheque to the payee electronically. The payee "deposits" the Electronic Cheque receives credit, and the payee's bank "clears" the e-Cheque to the paying bank. The paying bank validates the e-Cheque and then "charges" the check writer's account for the check

OTHER FORMS OF ELECTRONIC BANKING

- Direct Deposit
- Electronic Bill Payment
- Electronic Check Conversion
- Cash Value Stored, Etc.

2.7. Benefits of Electronic Banking

Banks just like other businesses are tuning to information technology to improve business efficiency, service quality and attract new customers. The most important factors encouraging consumers to use online banking are lower fees followed by reducing paper work and human error. Subsequently electronic channels can lead to lower transaction costs which are very competitive (Claessens and Kliengbiel, 2000). Conducting business outside the normal branch working hours has also been a factor that has been considered convenient for bankers. According to Jayawardhena and Foley (2000) each ATM has the capacity to carry out the same, essentially routine, transactions as do human tellers in branch offices but at half the cost and with a four to

one advantage in productivity. Thus banks can provide customers convenient, inexpensive access to the bank 24 hours a day and seven days a week.

Increased availability and accessibility of more self-service distribution channels help bank administration in reducing the expensive branch network and associated staff overheads. A reduction in the percentage of customers visiting the banks with an increase in alternative channels of distribution will also minimize the queues in branches (Thornton and White, 2001). According to Thornton and White (2001) this ultimately leads to improved customer satisfaction. Jayawardhena and Foley (2000) observe that electronic banking increases competition within the banking system and also from non-bank financial institutions. Electronic banking also increases the power of the customer to make price comparisons across suppliers quickly and easily and as a consequence this pushes prices and margins downward. Observes that banks are responding to electronic banking differently and that those which see electronic banking as a complement and substitute to the traditional channels achieved better communication and interactivity with the customers. Online banking extends the relationship with the customers through providing financial services right into the home or office of customers (Robinson, 2000). Support the view that technology can improve service quality for banks and enhance customer satisfaction and loyalty. Provision of high quality services may also lead to high profit consumers for the bank. E-banking customers do not face problems of handling a lot of money, submission of utility bills and waiting in a long queue for services.

2.7.1. Benefits from the bank point of view

The first benefits for the banks offering Internet banking services is better branding and better responsiveness to the market. Those banks that would offer such services would be perceived as leaders in technology implementation. Therefore, they would enjoy a better brand image. The other benefits are possible to measure in monetary terms. The main goal of every company is to maximize profits for its owners and banks are not any exception. Automated e-banking services offer a perfect opportunity for maximizing profits.

2.7.2. Benefits from the customers' point of view

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of e-banking for corporate customers are as follows (Bank Away! 2001; Gurău, 2002):

- **Reduced costs** in accessing and using the banking services.
- **Increased comfort and timesaving** transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- **Quick and continuous access to information.** Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.
- **Better cash management.** E-banking facilities speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments are available on Internet sites of Estonian banks. For example, it is possible to manage company's short-term cash via Internet banks in Estonia (investments in over-night, short- and long term deposits, in commercial papers, in bonds and equities, in money market funds).

Private customers seek slightly different kind of benefits from e-banking. In the study on online banking has found that providing faster, easier and more reliable services to customers were amongst the top drivers of e- banking development. The main benefits from e-banking for private customers are as follows (Bank Away! 2001)

- **Reduced costs.** This is in terms of the cost of availing and using the various banking products and services.
- **Convenience.** All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- **Speed.** The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- **Funds management.** Customers can download their history of different accounts and do a “what-if” analysis on their own PC before affecting any transaction on the web. This will lead to better funds management.

2.8. Challenges of E-banking

The ability to adopt global technology to local requirements: An adequate level of infrastructure and human capacity building are required before developing countries can adopt the global technology for their local requirements:

□the ability to strengthen public support for e-finance: Historically, most e-finance initiatives in developing countries have been the result of cooperative efforts between the private and public sectors. For example, Singapore's successful Trade Net system was a government-sponsored

project. If the public sector does not have the necessary means to implement the projects it is essential that cooperative efforts between public and private sectors, along with the multilateral agencies like the World Bank, be developed to facilitate public support for e- finance related initiatives.

□ Confidentiality, integrity and authentication are very important features of the banking sector and were very successfully managed the world over in pre-internet times. Communication across an open and thus insecure channel such as the internet might not be the best base for bank-client relations as trust might partially be lost.

□ E-Banking has created many new challenges for bank management and regulatory and supervisory authorities. They originate not just from increased potential for cross border transactions but also for domestic transactions based on technology applications which raise many security related issues.

□ there are some serious implications of international e-banking. It is a common argument that low transaction costs potentially make it much easier to conduct cross-border banking electronically. For many banks, cross- border operations offer an opportunity to reap economies of scale. But cross-border finance also needs a higher degree of cross-border supervision. Such cooperation may need to extend to similar supervisory rules and disclosure requirements (for efficiency and to avoid regulatory arbitrage) and some harmonizing of legal, accounting and taxation arrangements.

□ The flip side of this technological boom is that electronic banking is not only susceptible to, but may exacerbate, some of the same risks—particularly governance, legal, operational, and reputational—inherent in traditional banking. In addition, it poses new challenges. In response, many national regulators have already modified their regulations to achieve their main objectives: ensuring the safety and soundness of the domestic banking system, promoting market discipline, and protecting customer rights and the public trust in the banking system.

□ new methods for conducting transactions, new instruments, and new service providers will require legal definition, recognition, and permission. For example, it will be essential to define an electronic signature and give it the same legal status as the handwritten signature. Existing legal definitions and permissions—such as the legal definition of a bank and the concept of a national border—will also need to be rethought.

2.9. E-banking challenge in Ethiopia

Banking in Ethiopia faces numerous challenges to fully adopt and adapt E-Banking applications and seize the opportunities presented by ICT applications in general. According to Garede worku Key Challenges for E-Banking applications are:

- **Low level of internet penetration and poorly developed telecommunication infrastructure:** Lack of infrastructure for telecommunications, Internet and online payments impede smooth development and improvements in e-banking in Ethiopia. Most rural areas of the country, where the majority of small and medium businesses are concentrated, have no Internet facilities and thus are unable to engage in e-banking activities.
- **Lack of suitable legal and regulatory framework for e-commerce and e-payment:** Ethiopian current laws do not accommodate electronic contracts and signatures. Ethiopia has not yet enacted legislation that deals with e-commerce concerns including enforceability of the validity of electronic contracts, digital signatures and intellectual copyright and restrict the use of encryption technologies.
- **Political instabilities in neighboring countries:** Political and economic instabilities in Somalia, Southern Sudan, and Eritrea are threatening traits that do not provide a very conducive environment for e-banking in Ethiopia. Political instabilities inevitably disturb smooth operations of business and free flow of goods and services.
- **High rates of illiteracy:** Low literacy rate is a serious impediment for the adoption of E-Banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-Banking, they should not only know how to read and write but also possess basic ICT literacy.
- **High cost of Internet:** The cost of Internet access relative to per capita income is a critical factor. Compared to the developed countries, there are higher costs of entry into the e-commerce market in Ethiopia. These include high start-up investment costs, high costs of computers and telecommunication and licensing requirements.
- **Absence of financial networks that links different banks (Banks are not yet automated):** Most of the banking-transactions currently taking place use credit and debit cards supplied by Visa and MasterCard. For conducting e-banking, the use of credit or debit cards is mandatory thus requiring the need for specialized systems which are not currently available.

- Frequent power interruption: Lack of reliable power supply is a key challenge for smoothly running e-banking in Ethiopia.
- Resistance to changes in technology among customers and staff due to:
 - Lack of awareness on the benefits of new technologies,
 - Fear of risk,
 - Lack of trained personnel in key organizations,
 - Tendency to be content with the existing structures,
 - People may be resistant to new payment mechanisms
 - Cyber security issues: Cyber security is a global challenge that requires global and multi-dimensional response with respect to policy, socio-economic, legal and technological aspects. E-banking applications represent a security challenge as they highly depend on critical ICT systems that create vulnerabilities in financial institutions, businesses and potentially harm banking customers. It is imperative for banks to understand and address security concerns in order to leverage the potentials of ICTs in delivering E-banking applications.

2.10. Empirical studies related with E-banking challenges and prospects

Some related studies are conducted by different researchers in different parts of the world. However, there are limited numbers of studies conducted in Ethiopia on the implementation of technological innovation. Specifically, Gardachew (2010) conducted research on the opportunities and challenges of E-banking in Ethiopia. The aim of his study was focused on analyzing the status of electronic banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. The author conducted a survey on the existing operating style of banks and identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks. According to Gardachew (2010), Opportunities offered by ICT through e-learning programs and Commitment of the governments on development of ICT infrastructures is considered as drivers of using E-commerce and E-payment systems.

Wondwossen and Tsegai (2005) also studied on the challenges and opportunities of E-payments in Ethiopia; their objective was studying of E-payment practices in developing countries, Africa and Ethiopia. The authors employs interview and on site observation to investigate challenges to E-payment in Ethiopia and found that, the main obstacles to the development of E-payments are, lack of customers trust in the initiatives, Unavailability of payment laws and regulations particularly for E-payment, Lack of skilled manpower and Frequent power disruption. According to Wondwossen and Tsegai (2005), an adequate legal structure and security framework could foster the use of E-payments, which is contradicting with the finding of the previous study. On the other hand the study conducted by Daghfous and Toufaily (2007) on the success and critical factors in adoption of E-banking by Lebanese banks. The research was conducted on the factors that can lead to success the adoption of E-banking and the other factors that can constitute as barrier to its adoption, it focus on the organizational, structural and strategic factors which can accelerate or, on the contrary, slow the adoption of this electronic mode of distribution and communication by the banks, through analyzing the case of the Lebanese market. In order to test the validity of the theoretical framework, structured survey was used, interview questionnaire that was given to E-banking managers or to information technology managers of all the banks on the official list of institutions operating on the Lebanese market, with a total of 57 banks, 31 of them operate internationally and 26 are strictly local were used to gather data. The results of their study shows that the organizational variables (bank size, functional divisions, technical staff, technical infrastructure, perceived risks, decision makers` international experience and mastery of innovation) are variables which exert significant impact on the adoption of E-banking, among the structural characteristics, the result revealed that internal technological environment of the bank is a very important factor in determining the adoption of E-banking, also the result shows that banks which are developing in the international scale are more likely to adopt E-banking innovations.

In general, review of empirical studies show that understanding the practice of e-banking in Commercial Bank of Ethiopia, Ethiopia, and Africa and on the other world. The study mostly deals about the opportunity and challenges of e-banking practices. Some studies also deals about the critical success factors in e-banking is important for banking industry because it would potentially help to improve their strategic planning process. The main obstacles and barriers the oppose e-banking practice are the concern of security, privacy of information and technology

investment cost. The literature also indicates that according to the customers there are different factors related to the service itself and how to be accepted and used by the customers, which differs from country to country.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

Under this chapter; conceptual framework adapted/adopted from previous studies, the subjects/participant of the study; research design, target population, sample and sampling technique, instruments of data collection, procedures of data collection, and data analysis techniques. Sullivan (2001) states that descriptive technique of a research is used to discover facts or descriptive reality to snatch of phenomenon under investigation. He explained descriptive research is “a picture or accounts of what exist sometimes summarized in numbers, percentage or other statistics” and is characterized by the prior formation of specific research question or hypothesis. As a result a researcher select descriptive research is pre planned and structured the research design specifies the methods for selecting the source of information and for collecting data for real sources.

3.1 Research Design

The research method in this study is descriptive survey type. *Descriptive research* includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. This method is chosen because it is a sound to identify and explain investigations of challenges and prospects of implementing electronic banking in commercial bank of Ethiopia.

The researcher designed through an iterative process of designing of structural questionnaires for respondents in their respective areas. Therefore, research design to the respective parties help for the success of the subject study on clarify, completeness, and relevance of questions in relation to the issues and concepts which were addressed on the statement of the problem. Data is gathered in such a way that 150 employees of commercial bank of Ethiopian and 150 CBE customers. The reason for selecting 150 customers, and 150 staffs, for proportional for large population of commercial bank of Ethiopia staffs and customers. Data collection is done only in Addis Ababa through randomly selected branch and within the branch the selection technique is simple give questionnaire for those who are clerical staff and active and literate customers. There are twelve branches are randomly selected those are: Aradagiorgis branch, Yared branch, Aratkillilo branch, 18 Mazoria branch, Abunepetros branch, Urael branch, Gedam sefer branch,

Sidist killo branch, mehalketema branch, Dejachwube, Rasdesta branch and Kidistemariam branch. The reason for focusing in Addis Ababa is first e-banking service in commercial bank is almost similar (central administration about the service of e-banking) in urban and city except network and electric power difference. The second one economical reason, there is high cost of research due highly scattered (very far from one branch to another branch) of rural branches.

The research design for the study was grouped and categorized based on the service provider and service receiver in two parts: thus are employees and customers of commercial bank of Ethiopia. Questionnaires are prepared for both customers and employees of commercial bank of Ethiopia.

The first part of the questionnaires was designed to gather information from staffs about the qualification of the staff, benefits of e- banking for bank, customer and economy, the attitude of customers about e-banking, the best means of awareness to customers, the challenges of adopting e-banking in the bank, the cost, loading and timing of transaction processing, external factor such as, network, electric power interruption

The second part of the questionnaires was designed to access the experience of customers with regards to the challenge and prospects of e-banking and with experience pertaining to electronic payments, the types of electronic banking service use, awareness level of customers about e-banking, the security level, attitudes, and challenges of e-banking .

3.2. Target Population

The total population of this study is the submission of the literate account holder customers, branch manager, manager customer service, senior customer service officer, customer service officer, junior officer, and other commercial staff members at Addis Ababa city. Branches at Addis Ababa city categorize in to four districts those are: north Addis, East Addis, South Addis, and West Addis Districts.

Based on the number of customers they serve and amount of transaction they handle, the branches in Commercial Bank of Ethiopia are classified in to four different grades from grade

one to grade four. But in Addis Ababa city branches classified from grade two to grade four only, grade one branch open only out of Addis Ababa. From the purpose of the study, branches from all the three grade levels of the four districts are selected. The total population of the study is literate and active account holding customers and branch employees and management.

3.3. Sample and Sampling Technique

Researchers usually draw conclusions about large groups by taking a sample. A Sample is a segment of the population selected to represent the population as a whole. Ideally, the sample should be representative and allow the researcher to make accurate estimates of the thoughts and behavior of the larger population. Designing the sample calls for three decisions:

Who will be surveyed? (The Sample)

- The researcher must determine what type of information is needed and who is most likely to have it. How many people will be surveyed? (Sample Size)
- Large samples give more reliable results than small samples. However it is not necessary to sample the entire target population. How should the sample be chosen? (Sampling)
 - Sample members may be chosen at random from the entire population (probability sample)
 - The researcher might select people who are easier to obtain information from non probability sample.

The needs of the research project to determine which method is most effective. A list of all sampling units those are available for selections at the stage of sampling process were identified and sampling frames were prepared. Besides the respondents who have been conduct an question with the participants of the studies is customers and employees of commercial bank of Ethiopia. The customers participated in this study are the ones with an active saving and current account holder literate customers who were being served at one of the sampled branches when the study was being conducted.

3.4. Instruments of Data Collection

The instruments of data collection include questionnaires, observation and reading. Essentially the researcher must ensure that the instrument chosen is valid and reliable. The validity and reliability of any research project depends to a large extent on the appropriateness of the instruments. The appropriateness of questionnaires is due to easiness, simply collect basic

information based on the interest of the respondents. For these study questionnaires are the most important instrument to gather basic information.

Questionnaires: this is a data collection instrument mostly used in descriptive surveys. This is a systematically prepared form or document with a set of questions deliberately designed to elicit response from respondents or research informants for the purpose of collecting data or information. Questionnaires prepared for both customers and employees of commercial bank of Ethiopia, the structure of the questions are those in which some control or guidance is given for the answer. This is described as closed ended form because the questions are basically short, requiring the respondent to provide a multiple choice options from which the respondent selects the answer closer to their own opinion. The respondent's choices are limited to the set of options provided.

3.5. Procedures of Data Collection

Methods of data collection procedures are in financial institution depend very much on the nature of the topic of research objective and scope of the study. Availability of finance, time accessibility and facilities also influence the selection of the method to be used for data collection. However, in the present study it is self that any single method is bound to have only a limited relevance in meeting the overall objectives of the project; hence different tools shall be used to collect the data so as to develop a near accurate understanding of the topic of research.

The main tool of data collection is the questioner schedule used to collect data from employees and customers of commercial bank of Ethiopia, and schedules will be pre-tested. After that the interview schedule is standardized and finalized. The interview schedules are containing mostly close ended questions though same open ended questions shall also be included. Sample selection is both Random and non- Random sampling techniques. Simple random sample selections is to select branches whereas within the branch any employees who are a target population and customers who is active , literate, e- banking user and customers of commercial bank of Ethiopia.,

3.6. Methods of Data Collection

Data is collected through preparing questioners for target groups for commercial bank of Ethiopia employees and customers by researcher and filling of pre-coded questionnaires by

respondent. The respondents were filling the questionnaires' using a pre- tested questioner's. Restructuring is done using sufficient number of non-sample respondent in order to suitably modify the questions for smooth administration.

Qualitative data collection also collected through observation and discussion with the target group and individuals formally and informally to develop constructs of the concept to strengthen the Qualitative data tell the point of saturation and the feelings of employees and customers. To conduct this study both primary and secondary data are used. Data's related with bank information and literature using secondary data was collected from books, articles, websites and reports of the bank. These data helped in to introducing the concept of e-banking, the theoretical framework designed for the study, implied the research gap existed etc.

3.7. Data analysis technique

As the studies type is descriptive, the type of technique preferred for the data analysis is descriptive statistics. Data is analyzed using different Qualitative statistical procedures and methods .The statically tools that is used to analyze the data includes simple descriptive statistics, Such as frequency, mean, table pie chart, graph and percentage. Based on results of Qualitative data analyzed and upon articulation of various ideas and opinion from employees and give appropriate conclusion and recommendation was drawn. The Qualitative data partly analyzed on spot during data collection not to lose fresh memory and to be able to identify the gaps to be covered through subsequent data collection. The Quantitative data analysis was carried out with different steps.

- First summarized on a data summery sheet
- Editing, coding and verification then subsequently entered into computer
- Finally the data was analyzed with statistical procedures

3.8. Ethical Consideration

An obvious form of student misconduct is plagiarism. Copying or quoting directly from source material without providing quotation marks or crediting the source is a fundamental issue of ethical part of the researcher. A more indirect form, but equally improper is paraphrasing material or using an idea that is not properly introduced and documented (i.e., no reference citation provided) leads the quality of research as well as researcher. The Department of Education requires following the student conduct and disciplining. But there is a lacking for

direct monitoring. Thus, it is not implemented yet. Therefore, strong recommendation has been made for effective action against plagiarism and such unethical practices immediately. The researcher was considering the following ethical values and approaches while collecting both primary and secondary data for considering thesis. When preparing questioners the researcher clearly explains the purpose of the questionnaire's and the right to accept or refuses to participate in any times of the research activity when collecting data. Show the purpose of the study and clearly stating in the introduction of each questionnaires'' also the research was told that the respondents were not written their name or any form of their identity about it.

CHAPTER FOUR

4. FINDING AND DISCUSSION

4.1. Introduction

This chapter examines the finding and discussions of gathered information from the field. Data was collected through questionnaires, the findings from the questionnaires have been presented through two parts, the first one is from staffs of commercial bank of Ethiopia and the second part is customers of commercial bank of Ethiopia. In total three hundred twenty four questionnaires were administrated to the respondents but, the valid filling of the questionnaires are three hundred only. For customers of commercial bank of Ethiopia one hundred sixty seven questionnaires' distributed and only one hundred fifty only the valid one, for staffs one hundred fifty seven distributed and one hundred fifty only collected.

A descriptive analysis was used to present and interpret the data collected on various variables of challenge and prospects of e-banking. Frequent tables and graphs along with percentages are employed to analyze the response of bank staffs and customers of commercial bank of Ethiopia. Microsoft excel package was used for tables, graphs, pie charts and word processing of the research report.

4.2. Finding and Discussions from bank staffs

4.2.1. Demographic Characteristics

The general information such as, gender, age, educational qualifications, job position and work experience for staffs of commercial bank of Ethiopia. This background data are analyze and presented as follows.

I. Gender profile of respondents

The frequency distribution of the gender profile of the respondents is given in table 4.1 below. The table shows that 86 of the respondents, representing 57.3% are male and 64 respondents representing 42.7% are female. The table shows the gender distribution for male staffs are larger than the female staffs.

4.1. Gender of the staff

	Gender		
	male	female	total
frequency	86	64	150
Percentage	57.3%	42.7%	100%

Source: own survey, 2015

II. Age profile of respondents

The frequency table of age profile of respondents is given below table 4.2 below. The table shows that 8 respondents, representing 5.3% are their age under 20 years, 127 respondents, representing 84.70% are there age between 21- 30 years, 14 respondents , representing 9.30% there are between 31-40years, 1 respondents, representing 0.7% are there age above 50 years. This indicates that 90% of the staff's age is lies up to 30 years shows the largest staff is very young and the age above 50 year is only 0.7% very small old staff exist.

Table 4.2 age profile of the staff

	Age				total
	under 20 years	21-30 years	31-40 years	above 50 years	
Frequency	8	127	14	1	150
Percentage	5.30%	84.70%	9.30%	0.70%	100%

Source: own survey, 2015

III. Educational qualification profile of the staff

The frequency table of educational qualification profile of the respondents is given table 4.3 below. The table shows that 9 respondents, representing 6% of the staff are diploma or below educational profile, 134 respondents, representing 89% are degree holder, 7 respondents, representing from the total sample 5% are master's degree holder on the other hand there is no PhD holders from the samples. The data shows the largest part of the respondent is degree holder, there is small number on the less educated and more educated in academics way. With the banks selection criteria minimum requirement on average fell degree level.

Table 4.3 educational qualification profile of the staff

	Educational qualification				total
	diploma or below	degree	masters	PhD	
frequency	9	134	7	-	
percentage	6%	89%	5%		100%

Source: own survey, 2015

IV. Work experience

The frequency table of work experience profile of the respondents is given table 4.4 below shows that 70 respondents, representing 46.70% of the staff their experience are 0-2 years, 50 respondents, representing 33.30% of the sampled staff are their experience lies between 2-5 years, 17 respondents, representing 11.30% of the sampled staff their experience between 5-10 years and 13 respondents, representing 8.70% are their experience above 10 years. To see the overall experience of the staff 80% of the staff's experience less than or equal to 5 years, the remaining staff experience is above 5 years. 17 respondents, representing 11.30% of the sampled staff their experience between 5-10 years and 13 respondents, representing 8.70% are their experience above 10 years. To see the overall experience of the staff 80% of the staff's experience less than or equal to 5 years, the remaining staff experience is above 5 years.

Table 4.4 Respondents' experience in the bank

Respondents' experience in the banking sector		
years of experience	Frequency	percentage
0-2 years	70	46.70%
2-5 years	50	33.30%
5-10 years	17	11.30%
above 10 years	13	8.70%
Total	150	100%

Source: own survey, 2015

V. Job position of the staff in the bank

From table 4.5 below shows that 35 respondents, representing 23.30% of the sampled staff is junior officer, 90 respondents, represents 60% of the staff are customer service officer, 12 respondents, represents 8% of the staff are senior customer service officer, 8 respondents

represents 5% are manager customer service officer and 5 respondents from the total sample covers 3.7% are managers and above in position. As data indicates the large number of staff is customer service officer and junior officer they cover 83.30% from the total sampled staff.

Table4.5 job position of the staff

Position of the respondents in bank		
Position	frequency	Percentage
junior officer	35	23.30%
customer service officer	90	60%
senior customer service officer	12	8%
customer service manager	8	5%
manager and above	5	3.70%
Total	150	100%

Source: own survey, 2015

The trained and competent staffs

The competent and capable of employees of commercial bank of Ethiopia about e- banking in the view of the staff’s show in table 4.6 below. According to the data 52% of the staff agree the skill, qualification and trained of the employees of commercial bank of Ethiopia about electronic banking. On the other hand only 3.3% staffs believe that the employees of commercial bank of Ethiopia does not know how about electronic banking or strongly disagree about the skill, and qualification of the employees. From the total 23 respondents, represents 15.3% of the sampled data neutral about the skill and qualification of employees about e-banking, 25 respondents, 19 respondents, represented from the total sampled staffs 12.7% believe that commercial bank of Ethiopia’s employees highly trained, skillful and competent about electronic banking.

Table 4.6 well qualified and competent employees

The skill and qualification of employees in the view of the staffs					
	strongly	Agree	neutral	disagree	strongly disagree

	agree				
frequency	19	78	23	25	5
percentage	12.70%	52%	15.30%	16.70%	3.30%

Source: own survey, 2015

The commonly used electronic banking services

In Ethiopia even if there is no high level of electronic banking service, there is a sign to grow electronic banking service in recent time. The largest share of e-banking in Ethiopia taken by commercial bank of Ethiopia, from which CBE, there are more than four basic e-banking services given for the customers those are, ATM(Automatic Teller Machine), POS(Point of Sales), internet banking and mobile banking with a combination of all. As shown in table 4.7, the largest proportion of e-banking service in CBE is automatic teller machine rank the first one, the second one is point of sale, the least service is given for internet banking. The reason for ATM's large number of service provider is due to the pioneer, e-banking instrument used in Ethiopian banking industry, as a result almost all customers of the bank know about the purpose and function of ATM. Internet banking is the least due to low computer user, unavailability of internet in most areas, and the banks launched more recent times.

Table 4.7 types of e-banking and their rank in commercial bank of Ethiopia

rank of electronic banking service in commercial bank of Ethiopia				
types of e-banking	first	second	third	forth
ATM	96%	4%	-	-
POS	2%	57%	39%	1%
internet banking	-	2%	12%	86%
mobile banking	2%	37%	48%	13%

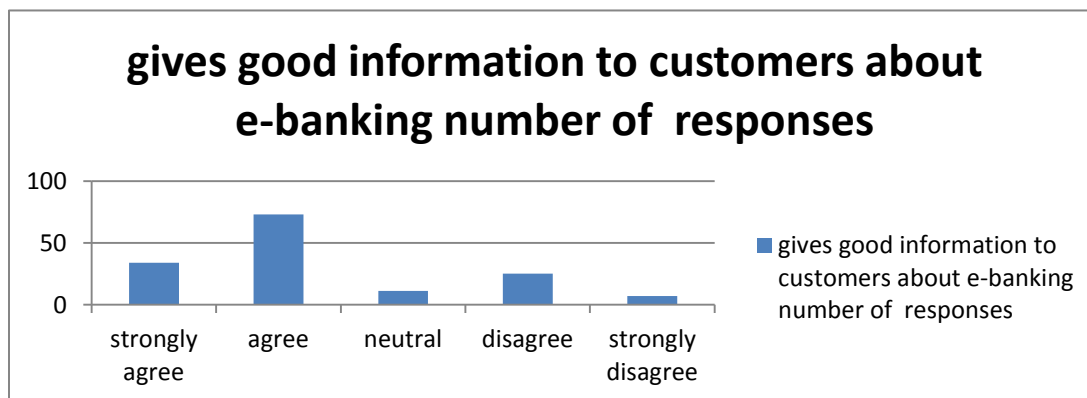
Source: own survey (2015)

Banks responsibility to give information about e-banking

Commercial bank of Ethiopia try's to give information, for customers about electronic means by so many ways, in graph 4.1 shows the staff of commercial bank of Ethiopia believe about

information display for customers accordingly. 36 respondents, represents 22.7% strongly agree the banks give good information for customers about electronic banking, 73 respondents, represents 48.7% agree giving of information about e-banking for customers, 11 respondents, represents 7.3% neutral the banks aware for their customer. On the other hand some staffs says that there is no give any information for customers even for staffs there is no any awareness about e-banking. Accordingly 25 respondents, represent 16.7% disagree they believe that the bank is not give awareness for customers, 7 respondents, represent 4.6% strongly disagree about awareness for the customers of the bank.

Graph 4.1 Aware of customers about e-banking



Source: own survey, 2015

The best means of aware of customer’s about e-banking

Commercial banks of Ethiopia use so many advertising mechanisms to announce their product, and services for his customer. In table 4.8 shows below that TV advertising is the best means of advertising which covers 51.3% from the total advertising mechanism, 22 respondents, represent 14.7% says brusher and pamphlets are the best means of advertising mechanism, 38 respondents, represent 25.3% believe that personal contact is the best means, only 2% is believe that sponsoring is good mechanism to advertising electronic banking. 8 respondents, represent 5.4% believe sales promotion is a good means to advertise. There is no respondent magazine is the best means of advertising. As a result TV advertising is reach all societies easily and with least advertising cost, and personal contact also give detail information about electronic banking but it is costly and only takes place if the customers comes to the bank otherwise it is difficult.

Table 4.8 advertising mechanism

advertising mechanism	frequency	Percentage
TV advertising	77	51.30%
brusher and pamphlets	22	14.70%
personal contact	38	25.30%
Sponsoring	2	1.30%
Radio	3	2%
Magazine		
sale promotion	8	5.40%
Other		

Source: own survey, 2015

Characteristics of customers to aware about e-banking

For applying of new technology in Ethiopia the users of technology did not accept actively rather accept the technology slowly compared with the worlds. In commercial bank of Ethiopia context the adoption of electronic banking as follows the following. In table 4.9 shows that 81 respondents represent 54% of the characteristics of customers are interested to use electronic banking when after the employees of the bank giving awareness about e-banking. 18 respondents, represent 12% says customers are reluctance when to give information about e-banking, 43 respondents, represent 28.7% says customers are indifference whatever the way to aware about electronic banking there for there is a cost to aware customers. Only 8 respondents, represent 5.3% says when to give awareness the customers are aggressively rejected about electronic banking. Finally according to the data customers of commercial bank of Ethiopia is interested to use when new technology exist due that the banks invest his effort to aware e-banking for customers by a best means of advertising without tired.

Table 4.9 characteristics of customers to aware e-banking

characteristics of customer when aware about e-banking		
characteristic's	frequency	Percentage
Reluctance	18	12%

interested to use	81	54%
Indifference	43	28.70%
aggressively rejected	8	5.30%
other characteristic's	-----	-----
Total	150	100%

Source: own survey, 2015

4.2.2. Attitudes of Staffs about E-banking

Staffs of CBE believe that various agreement level with various attitudes of about e-banking. In table 4.10 shows 103 respondents, represent 68.7% strongly agree with e-banking is a best means to reduce customers overload, 41, respondent's, represent 27.3% agree about the best means of reducing customer overload, 5(3.3%) respondents neutral and only 1 respondents disagree about e-banking with related to reduction of customer overload. In general more than 96% of the respondent accepts e-banking is a best means of reducing customer overload in commercial bank of Ethiopia.

When to use e-banking especially mobile and internet banking transaction takes place other than branches, it may in home, office and other places, for to that various respondents' answer as follows, 76 respondents, represent, 50.7% strongly agree about Banking transactions can be performed from the comfort of the home or office or from the place a customer's wants to, 60(40%) respondents agree, 13(8.6%) neutral and only one respondents disagree about e-banking Banking communication can be performed from the comfort of the home or office or from the place a customer's wants to.

Commercial bank of Ethiopia design various strategies, and products to achieve his vision, more than 89% staffs agree about e-banking is the best means with compared to traditional banking to achieve CBE, s vision, 15 respondents, represent 10% neutral about E-banking is the best means with compared to traditional banking to achieve CBE, s vision(world class bank by the year 2025 g.c) and only one respondents disagree e-banking is better than traditional banking to achieve CBE's vision.

Table 4.10 attitudes of staff about e-banking

Attitude of staff's about e-banking	strongly agree	Agree	neutral	Disagree	strongly
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									disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
E-banking is the best means to reduce customer over load.	103	68.7%	41	27.3%	5	3.3%	1	0.7%	-	
Banking transactions can be performed from the comfort of the home or office or from the place a customer's wants to.	76	50.7%	60	40%	13	8.6%	1	0.7%		
E-banking is the best means with compared to traditional banking to achieve CBE, s vision.	104	69.3%	30	20%	15	10%	1	0.7%		
Customers can be quick and continuous access to information.	47	31.3%	63	42%	22	14.7%	16	10.7%	2	1.3%
It is difficult to be confident on the security of manmade technology for monetary activity	20	13.3%	52	34.7%	33	22%	35	23.3%	10	6.7%
Application of new e-banking lead banks staff to make more transaction error since it is new for the staff.	13	8.7%	33	22%	41	27.3%	41	27.3%	22	14.7%
Banking information technology will add new responsibilities on employees.	65	43.3%	63	42%	9	6%	10	6.7%	3	2%

Source: own survey, 2015

According to table 4.10 above shows, 47 respondents, represent 31.3% strongly agree about Customers can be quick and continuous access to information using electronic banking, 63 respondents, represent 42% agree e-banking for customers quick and continuous access of information about their account, and bank information. 22(14.7%), neutral Customers can be quick and continuous access to information, 16(10.7%) disagree and 2(1.3%) strongly disagree about Customers can be quick and continuous access to information.

Electronic banking rise questions related to security issue, various staffs says as follows with related to security, 20 respondents, represent 13.3% strongly agree e-banking is difficult to be confident on the security of manmade technology for monetary activity, 52(34.7%) agree using e-banking technology is difficult to confident on the security, 30% of the respondents does not

accept electronic banking is difficult to be confident on the security of manmade technology for monetary activity and the others neutral related to security issue.

Banking information technology will add new responsibilities on employees and create banks staff to make more transaction error since it is new for the staff, in table 4.10 shows 65 respondents represent 43.3% strongly agree Banking information technology will add new responsibilities on employees, 63(42%), 9(6%), 10(6.7%) and 3(2%) says agree, neutral, disagree and strongly disagree respectively about new responsibility due to new e-banking technology.

To summarize the attitude of staffs in table 4.11 below about e-banking, the critical points that staffs are strongly good attitude about e-banking is the best means of reducing customer overload in branches and head office with a mean 4.64(from 5) , next e-banking is the best means with compared to traditional banking to achieve CBE's vision with a mean 4.58, the third good attitude is that Banking transactions can be performed from the comfort of the home or office or from the place a customer wants to, and the least good attitudes of staffs about electronic banking is Application of new e-banking lead banks staff to make more transaction error since it is new for the staff this indicate that e-banking does not lead transaction error for staffs. Overall the attitudes of staffs indicate that 3.97 from 5 shows greater than average (3) concludes electronic banking is a good image in the mind of staffs of commercial bank.

Notes number of response, response measurement, given that accordingly strongly agree=5. Agree=4, neutral=3, disagree=2, and strongly disagree=1

Table 4.11 mean of staffs attitude

Attitudes of staffs about e-banking	Number of response	Mean	rank
1. Banking information technology will add new responsibilities on employees	150	4.18	4
2. e-banking is the best means to reduce customer over load	150	4.64	1
3. Banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.	150	4.41	3
4. e-banking is the best means with compared to traditional banking to achieve CBE's vision	150	4.58	2
5. Customers can be quick and continuous access to information	150	3.91	5
6. It is difficult to be confident on the security of manmade technology for monetary activity.	150	3.25	6
7. Application of new e-banking lead banks staff to make more transaction error since it is new for the staff	150	2.83	7
The average mean of attitudes	150	3.97	-----

Own survey, 2015

4.2.3. Challenges to adopt e-banking for customers of commercial bank of Ethiopia

There is a challenge with related to new information system or electronic banking adoption, table 4.12 below shows, as the following. According to the data the customers are not aware of the different features of electronic banking service in commercial bank of Ethiopia. 80 respondents, represents, 53.3% agree with customers are lack of awareness on the benefits of electronic banking, 49 respondents, represents 32.7% from the total sample strongly agree customers about lack of awareness on e-banking, 9 respondent(6%) neutral the awareness of the customers about e-banking. On the other hand 8(5.3%) respondents disagree about customer's lack of awareness about e-banking, 4 respondents, represents 2.7% strongly disagree about lack awareness of customers for electronic banking.

The acceptance of new payment mechanism and technology in commercial bank of Ethiopia by customers are as follows express accordingly. 33 respondents, represents 22% strongly agree the resistance of customers about new payment mechanism and technology, 51 respondents,

represent 34% agree the resistance of customers about new payment mechanism. on the other way 37 respondents, represent 24.7% from the total data neutral about the acceptance and resistance of customers about new payment mechanism and technology, 8 respondents, represents 5.3% disagree, 4 (2.7%) respondents strongly disagree about the resistance of customers about the payment mechanism and technology. The new payment mechanism and technology is for this paper ATM for withdraw, transfer and check balance, mobile and internet banking is for transfer from one account to other account, sent remittance for the other party, check balance and order check. POS used to purchase goods and services and other purposes. To see the above means of payment mechanism and technology is resist by customers, the data shows 56% of the respondents accept for the resistance of customer for new technology.

Cyber security problems in commercial bank of Ethiopia according to data states as follows. 52 respondents, represents 35.7% agree the existence of cyber security problem, 43 respondents, represent 28.7% says there no information about the problem of cyber security issues problem (neutral), 33 respondents, represent 22% strongly agree the cyber security issues problem in commercial bank of Ethiopia. 18 respondents, represents 12% says disagree about cyber problem, 8 respondents, represents 5.3% strongly disagree about the problem of cyber problem in commercial bank of Ethiopia.

From the challenges electric interruption is one of a serious problem to smoothly running of e-banking. According to data 74 respondents, represent 49.3% from the sample strongly agree about the serious challenges of electric power interruption, for a day to day operation related with electronic banking specially automatic power consumer such as, ATM, and POS. 51 respondents, represent 34% agree the existence of electric power interruption creates a serious problem for effectively implementation of electronic banking service in commercial bank of Ethiopia, 9 respondents, represent 6% neutral about the problem of electric power interruption. 5.3% and 5.4% of the respondents disagree and strongly disagree respectively about the serious challenges of electric power for the adoption of electronic banking service. As shown the below table 4.12, High installations cost of technology for e-banking are agreed by 50 respondents, represent 33.3% from total data, 46 respondents, represent 30.7% strongly agree about high cost of installation for e-banking technology, such as, purchase ATM machine, POS and other materials and techniques support for implementation of electronic banking.

Table 4.12 challenges to adopt e-banking

Challenges in adoption of e-banking	strongly agree		Agree		neutral		Disagree		strongly disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Customers are lack of awareness on the benefits of e-banking.	49	32.7%	80	53.3%	9	6%	8	5.3%	4	2.7%
Customers of CBE are resistant to new payment mechanism and technology.	33	22%	51	34%	37	24.7%	25	16.7%	4	2.7%
Cyber security issues problem.	29	19.3%	52	34.7%	43	28.7%	18	12%	8	5.3%
Electric interruption is a serious problem to smoothly running of e-banking.	74	49.3%	51	34%	9	6%	8	5.3%	8	5.4%
High installations cost of technology for e-banking	46	30.7%	50	33.3%	34	22.7%	9	6%	11	7.3%
Network failures are serious problem to smoothly running of e-banking	90	60%	43	28.7%	8	5.3%	9	6%		
Top management negative attitude towards new technology.	9	6%	26	17.3%	36	24%	39	26%	40	26.7%
Lack of suitable legal and regulatory framework for electronic service.	31	20.7%	48	32%	38	25.3%	22	14.7%	11	7.3%
Most users of banking service are not literate enough to understand the usage of e-banking service.	47	31.3%	64	42.7%	18	12%	14	9.3%	7	46.7%

Source: own survey, 2015

34(22.7%) respondents neutral about the cost of installation for e-banking, 9 respondents , represents 6% disagree the cost associated with installation of e-banking and 11(7.3%) respondents strongly disagree the installation cost of technology for e-banking.

To summarize the challenges of e-banking in the view of staffs accordingly below in table 4.13. The Network failures are serious problem to smoothly running e-banking highest compared to other challenges on average 4.43 (5), the next serious challenge according to respondents Electric interruptions are a serious problem to smoothly running e-banking with mean 4.17 , the third related with other challenges Customers are Lack of awareness on the benefits of e-banking. According to data

top managements are not negative attitude related with electronic banking; this shows technology is highly supported by top management.

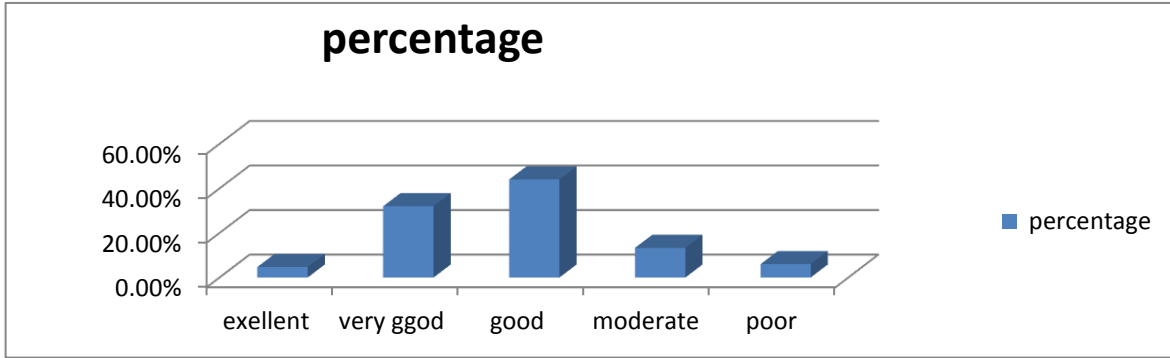
Notes number of response, response measurement, given that accordingly strongly agree=5. Agree=4, neutral=3, disagree=2, and strongly disagree=1

Table 4.13 Challenges of e-banking for staffs of CBE

Challenges of e-banking for staffs of CBE	Number of response	Mean	Rank
1. Customers are Lack of awareness on the benefits of e-banking.	150	4.08	3
2. Customers of CBE are resistant to new payment mechanisms and technologies.	150	3.56	6
3. Cyber security issues problem.	150	3.51	7
4. Electric interruptions are a serious problem to smoothly running e- banking.	150	4.17	2
5. High installation cost of technology for e-banking	150	3.74	4
6. Network failures are serious problem to smoothly running e- banking.	150	4.43	1
7. Top managements negative attitude towards new technology.	150	2.50	9
8. Lack of suitable legal and regulatory framework for electronic service.	150	3.44	8
9. Most users of banking service are not literate enough to understand the usage of e-banking service.	150	3.73	5

Own survey, 2015

The overall performance of commercial bank of Ethiopia about e-banking is shown below graph 4.2 shows below. According to the data 66 respondents, represents 44% of the respondents their attitude about performance of electronic banking in commercial bank of Ethiopia is good, 48 respondents, represents 32% from total sample says the performance of e-banking is very good, 20 respondents, represent 13.3% from the total sample of the staff believe that the performance of e-banking in commercial bank of Ethiopia is moderate, 9 respondents, represent 6% says the performance of e-banking is poor on the other hand 7 respondents , represent 4.7% believe that the performance of e- banking in commercial bank of Ethiopia is excellent. In general from the data the performance of the bank with related to electronic banking is good.



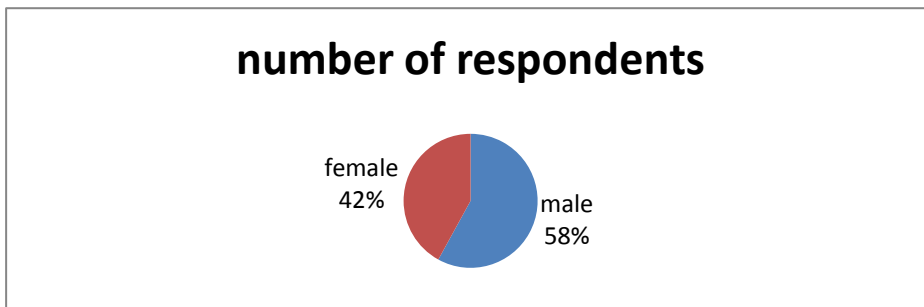
Source: own survey, 2015

4.3. Finding and Discussions from bank customers

4.3.1 Demographic information of customers

The general information's about customers of commercial bank of Ethiopia include: gender, age, educational qualification, and their job are describe, analyze and presented as follows.

Pie chart 4.1 gender of the customers



Source: own survey, 2015

I. Gender of customers

According to the data 87 respondents, represent 58% of the sampled customers are male and the remaining 63(42%) are female. When to see proportion of male and female, male respondents are large in number this shows a largest proportion of customers of commercial bank of Ethiopia is male and electronic banking service users are also males are cover the largest proportion.

II. Age profile of customers

According to table 4.14 124 respondents, represent 82.7% their age is below or equal to 30 years, 22 respondents, represent 14.7% of the sampled respondents age is between 31-40 years, only fore respondents represent 2.6% are there age is between 41-50 and there is no respondent as their age is above 50 years. As a result more than 97.4% of the respondent’s age is below or equal to 40 years.

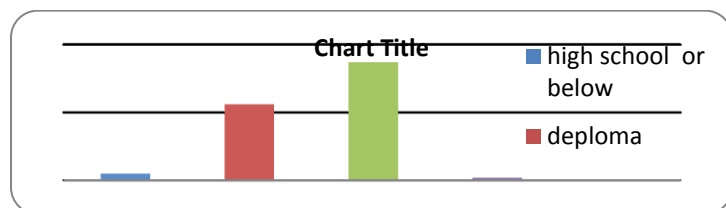
Age	Frequency	Percentage
below or equal to 30	124	82.70%
31-40 year	22	14.7%
41-50 years	4	2.6%
51-60 years	-----	-----
above 60 years	-----	-----
	150	100%

Source: own survey, 2015

III. Profile of educational level of customers

The level educational background of customers mentioned in graph 4.3 below. According to the respondent from 150 respondents, 5 respondents, represent 3.3% their educational qualification is secondary or less, 56 respondents, represent 37.3% are their educational level is diploma, 87 respondents, represent 58% of the respondent degree holder, 2 respondents, represent 1.4% only masters holder, unfortunately there is no PhD holder from 150 respondents. This data shows that the largest proportion of the respondent is means level of educational background that is degree.

Graph 4.3 level of educational background of customers



Source: own servey, 2015

IV. Profile of customers job

Customers of commercial bank of Ethiopia involved in various work environment and jobs in table 4.15 below shows, the largest proportion of customers involved in government employment, 126 respondents, represent 84% government employee, 5 respondents, represent 3.3% work in private organization, 19 respondents, represent 12.7% work their own job, there is no customers without job.

Job	Frequency	Percentage
government employee	126	84%
private employee	5	3.30%
self-employee(own job)	19	12.70%
no job	-----	-----
Total	150	100%

Source: own survey, 2015

Years of e-banking service provided by customers

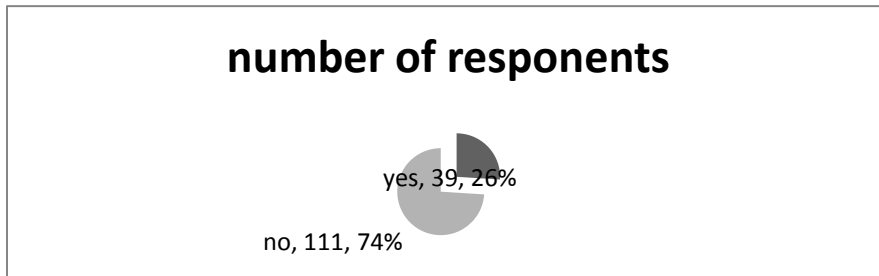
E-banking technology in Ethiopia is a recent phenomenon, except ATM introduce in 2001 by a leading government owned commercial bank of Ethiopia, the other e-banking technology is start operation in recent time. According to table 4.16 below no respondent not use e-banking, even if there is not effective knowledge about e-banking, 55 respondents, represent 36.7% are served less than one year, 56 respondents, and represent 37.3% served 1-3years, only 39 respondents, represent 26% use e-banking effectively more than three years.

years of service in CBE	frequency	Percentage
still not use	0	0
less than 1 years	55	32%
1-3 years	56	35.30%
more than 3 years	39	26%

Source: own survey, 2015

Customers of commercial bank of Ethiopia sometimes customers of other private and government bank customer in pie chart 4.2 shows below. 39 respondents represent 26% open account and e-banking service other than commercial bank of Ethiopia and 111 respondents, represent 74% are not account in other banks.

Pie chart 4.2 serves other than CBE



Source: own survey, 2015

Electronic service access gain in commercial bank of Ethiopia by customers

In commercial bank of Ethiopia more than four e-banking package services lounged those are: mobile banking, ATM(Automatic teller machine), POS(Point of sale), internet banking, internet banking and alert, here if the customers use either mobile banking or internet banking alert is a pre-condition to serve those products. There are 126 respondents, represent 84% are users of ATM, 19 respondents, represent 12.7% serve by POS, 34 respondents, represent 22.7% moving their account using mobile banking with a connection of alert, 24 respondents , represent 16% operate using internet banking. To conclude results of below customers response, ATM users are large in number, because ATM is a pioneer banking product in Ethiopia and customers are adopt the purpose, function and service of ATM. While POS users are must be a customer of ATM, because POS, dose not works without ATM card.

Table 4.17 e-banking service access in CBE

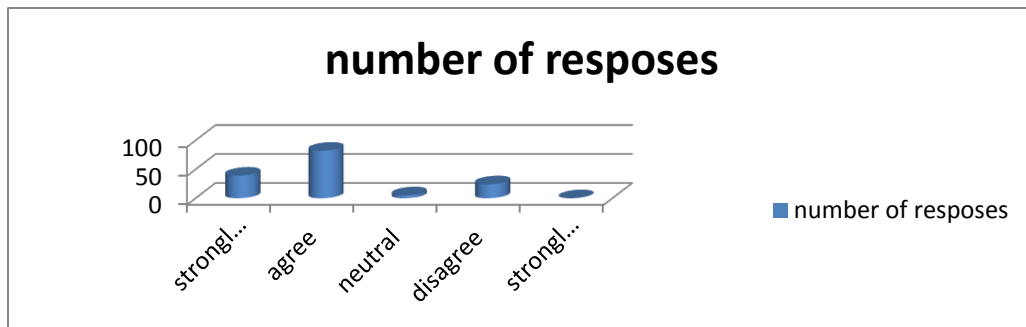
ASSESSMENT ON CHALLENGES AND PROSPECTS OF E-BANKING IN THE CASE OF COMMERCIAL BANK OF ETHIOPIA		
TYPES OF E-BANKING	NUMBER OF USERS	PERCENTAGE
ATM	126	84%
POS	19	12.70%
mobile banking	34	22.70%
internet banking	24	16%
Alert	36	28%

Source: own survey, 2015

Convenient place of e-banking service specially ATM and POS in the view of customers

In Ethiopia there is a number of ATM and POS machine exist in various shops, mall, government organization, private organization, hotels, service areas, industry areas, petroleum service areas, and branches. In graph 4.3 below see the attitudes of customers about the existence of POS and ATM in conveniences place. According to the data 39 respondents, represent 26% strongly agree the existence of POS and ATM at correct place, 82 respondents, represent 54.7% agree the existence of e-banking machines, five customers neutral for the convenience places of ATM and POS, on the other hand 24 respondents, represent 16% disagree the convenience place of ATM and POS machine. The overall results of below data shows 80.7% of the respondents accept the setting of e- banking machine at achievability places, this indicate planting of ATM and POS are highly studied.

Graph 4.3 levels of agreement for location of ATM and POS



Source: own survey, 2015

The best means of aware of customer’s about e-banking

As we know Commercial banks of Ethiopia use so many advertising mechanisms to announce his product, and services for his customer. The customers also think and choice the best means of knowing new information about electronic banking in table 4.18 below shows, accordingly.

From total respondents 83 respondents, represent 55.3% are TV advertising is the best means of advertising, 24 respondents, represent 16% agree that brusher and pamphlet are best means of announcing for customers, 36 respondents, represent 24% agree that direct contact with bankers are best means of knowing e-banking, 7 respondents, represent 4.7% believe that hearing information from colleagues is a best means, 17 respondents, represent 11.3% says radio is a best instrument to announce about e-banking, 2 respondents, represents 1.4% believe that sales promotion is a best means, 12 respondents, represent 8% magazines and news are good for announcing about e-banking.

Means of Advertising	number of response	Percentage
TV advertising	83	55.3%
Brusher and Pamphlet	24	16%
direct contact with bankers	36	24%
hearing from your colleague	7	4.7%
Radio	17	11.3%
sales promotion	2	1.4%
magazines and news	12	8%

Source: own survey, 2015

4.3.2. Attitudes of customers about e- banking

The attitude of customers about e-banking is different with varies condition, at various environment, in table 4.19 below shows, in the following way. 64 respondents, represent 42.7% strongly agree about Attitudes of electronic banking technology supports collaboration and sharing of information, 64 respondents, represent 42.7% also agree with e-banking support collaboration and sharing of information, 5 respondents, represent 3.3% neutral the important of e-banking for sharing information , seventeen respondents disagree the important of sharing information and there is no respondents strongly disagree about e-banking for support collaboration and sharing of information.

Attitudes related to e-banking service for better managing of financial transaction shows 34 respondents, represent 42% strongly agree for better management of financial transaction, 69(46%) agree, 10 respondents represent 6.7% neutral for the purpose of managing financial

transaction using e-banking, 8 respondents, represent 5.3% disagree about e-banking service for financial transaction and there is no customers strongly disagree about the service of e-banking for managing financial transaction.

E-banking technology helps customer for quickly access account, reduce time spending in the bank and other services, according to data in table 4.17, seventy two respondents, represent, 48% are strongly agree about quick access of account balance and other account related operation, 56 respondents, represent 37.4% agree about quick access of account, 12 respondents, represent 8% neutral about quick access of account using e-banking, only 10 respondents did not accept the functions of e-banking for quick access of account. The times spending in bank is a serious issue for some customers for other it is not a matter, but the existence and launching e-banking there is rest for customers form different dimension one is reduce time spending in the ban. In table 4.17 shows 68 respondents, represent 45.3% strongly agree e-banking reduce time spending, 48 respondents, represent 32% agree about reduction of time to use electronic banking, only 22 respondents represent 14.7% did not accept the time and space reduction through using e-banking. In general more than 77% agree electronic banking is a best means to reduce time and space spending, therefore commercial bank Ethiopia tries to expand e- banking service in order to satisfy his customer and more smooth relation with customers in the future.

Table 4.19 attitudes of customers about e-banking

Attitudes of customers	Strongly agree		Agree		neutral		Disagree		Strongly disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Electronic banking technology support collaboration and sharing of information.	64	42.7%	64	42.7%	5	3.3%	17	11.3%	-----	-----
E –banking services help me to better manage finance transactions	63	42%	69	46%	10	6.7%	8	5.3%	-----	-----
I can quick and continuous access to information about my account.	72	48%	56	37.4%	12	8%	5	3.3%	5	3.3%
E-banking technology eliminates times and space constraint.	68	45.3%	48	32%	12	8%	15	10%	7	4.7%

Source: own survey, 2015

Summarization of attitudes of customers about e-banking positive attitude almost in all existed parameters, with this e –banking services helps to customers for better manage finance transactions, the next very good attitude is can quick and continuous access to information about

my account, and the least is e-banking technology eliminates times and space constraint. In general customers of commercial bank positive attitude for adoption of electronic were banking for further development of banking industry. According to data the average respondents attitude is 4.29 this show far greater than an average 2.5 these leads to conclude almost all customers are strong positive attitude about commercial bank of Ethiopia electronic banking lunching.

Notes number of response, response measurement, given that accordingly strongly agree=5. Agree=4, neutral=3, disagree=2, and strongly disagree=1.

Table 4.20 summarized Attitudes of customers about e-banking

Attitudes of customers about e-banking	Number of responses	mean	rank
1. Electronic banking technology support collaboration and sharing of information.	150	4.17	3
2. E –banking services help me to better manage finance transactions	150	4.71	1
3. I can quick and continuous access to information about my account.	150	4.23	2
4. E-banking technology eliminates times and space constraint.	150	4.03	4
Average attitudes or means	150	4.29	

Source: own survey, 2015

4.3.3 Challenges of e-banking for customers of commercial bank of Ethiopia

Innovation and adopting of new technology may be creates security problem, in table 4.21 show, 29 respondents, represent 19.3% the sample strongly agree Security is a serious problem when to use e-banking, 60 respondents, represent 40% agrees security is serious problem to use e-banking, 22(14.7%) neutral about security, 32 respondents disagree security problem, rather electronic banking leads more personalize and easily control of account and bank information without risk, 22(14.7%) believes neutral about security, 39(26%) respondents did not accept the existence of security problem.

There is Cost using electronic banking services charges especially ATM (automatic Teller machine) according to table 4.18 below 24 respondents, represent 16% strongly agree with Electronic banking cost of service charge is high especially ATM, 32 respondents, represent 21.3% agree costs of e-banking service charge, 22(14.7%) neutral about costs of e-banking

service charge, 49 respondents, represent 32.7% disagree costs of e-banking service charge especially ATM, and 23(15.3%) respondents strongly disagree costs of e-banking.

The other serious problem for challenging of e-banking is electric interruption and network failures according to table 4.21 below data 39 (26%) and 77 (51.3%) strongly agree about electric interruption and network failure respectively a serious problem to use electronic banking, 64 (42.7%) and 45(30%) agrees the problem of electric and network failure respectively. Obstacle of language is a serious problem for customers of commercial bank of Ethiopia, according to table 4.21 the data shows 20 respondents, represent 13.3% strongly agree about problems of language to use e-banking, 46 respondents, represent 30.7% says Languages are an obstacle to use e-banking due to that the banks try to localize the language, especially for internet and mobile banking, 27 respondents neutral the matter of language for serving electronic banking, the remaining 38% of the respondents does not accept language is a serious problem for serving e-banking.

Table 4.21 Challenges to adopt e-banking

Challenges to adopt e-banking	Strongly agree		Agree		neutral		Disagree		Strongly disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Security is a serious problem when to use e-banking	29	19.3%	60	40%	22	14.7%	32	21.3%	7	4.7%
Electronic banking cost of service charge is high especially ATM	24	16%	32	21.3%	22	14.7%	49	32.7%	23	15.3%
Lack of suitable, legal and regulatory framework for electronics services.	12	8%	59	39.3%	47	31.3%	20	13.4%	12	8%
Electric interruptions are a serious problem to use e-banking.	39	26%	64	42.7%	27	18%	20	13.3%	-----	
The dynamic changes of information technology are serious challenge for understanding e-banking	39	26%	61	40.7%	15	10%	27	18%	8	5.3%
Network failures are serious problem to use e-banking.	77	51.3%	45	30%	16	10.7%	----	-----	12	8%
Languages are an obstacle to use e-banking	20	13.3%	46	30.7%	27	18%	41	27.3%	16	10.7%
Inadequate banks staff skill exist in commercial bank of Ethiopia about-banking	24	16%	56	37.3%	34	26.7%	17	11.3%	19	2%

Source: own survey, 2015

Skills and knowhow of a staff is a big matter for effective adoption of e-banking in commercial bank of Ethiopia , according to table 4.21 above 24 respondents represent, 16 % strongly agree inadequate skill of staff exist in CBE, 56 respondents, represent 37.3% agree Inadequate banks staff skill exist in commercial bank of Ethiopia about-banking . This shows really there is a serious problem in commercial bank staffs about the skill and knowhow about e-banking, therefore the bank try to train, educate both in job and off job training for his staffs.

To summarize the challenges of e-banking for customers in table 4.22 below shows that all challenges are serious except service cost of e-banking especially ATM, but it also above average means greater than 2.5. Network failures are the most serious challenge for customers to use e-banking, the next serious challenge is electric interruptions are a serious problem to use e-banking.

Notes number of response, response measurement, given that accordingly strongly agree=5. Agree=4, neutral=3, disagree=2, and strongly disagree=1.

Table 4.22 means of challenges of e-banking for customers

Challenges of e-banking	Number of respondents	mean	rank
1. Security is a serious problem when to use e-banking.	150	3.48	4
2. e-baking's Cost of service charge is high especially ATM.	150	2.9	8
3. Lack of suitable legal and regulatory framework for electronics services.	150	3.26	6
4. Electric interruptions are a serious problem to use e- banking.	150	3.81	2
5. The dynamic change in information technology are a serious challenge for understanding about e-banking	150	3.64	3
6. Network failures are serious problem to use e- banking.	150	4.17	1
7. Languages are an obstacle to use e-banking	150	3.09	7
8. Inadequate banks staff skill exist in commercial bank of Ethiopia about e-banking	150	3.33	5

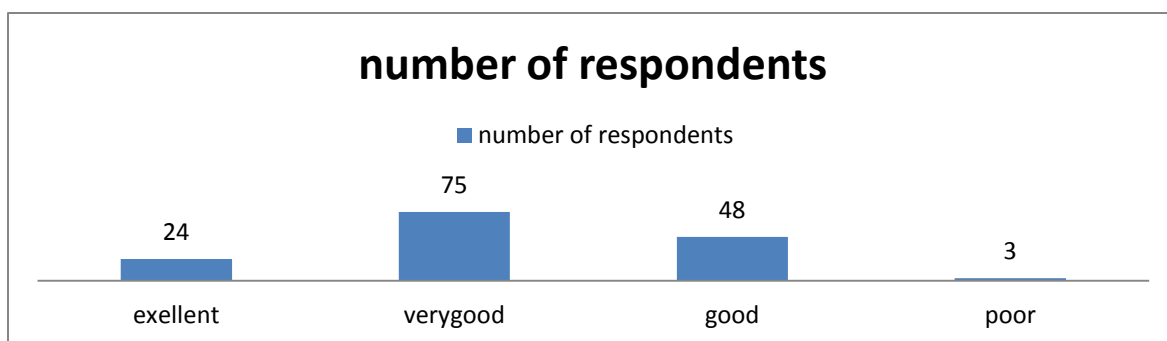
Source: own survey, 2015

Overall performance of commercial bank of Ethiopia in the view of customers

The overall performance e- banking in commercial bank of Ethiopia in the view of customers sees in graph 4.4 below. According to the data 24 respondents, represent16% believes excellent

the performance of e-banking in commercial bank of Ethiopia, 75 respondents, represent 50% agree the performance of e-banking is very good, 48 respondents, represent 32 % believes good about performance e-banking in CBE, only 3 respondents believe the performance of electronic banking in commercial bank of Ethiopia is poor. In general 98% of the respondents agree performance of e-banking in commercial bank of Ethiopia is good and above, due to this the banks try to expand more services, competitive with other banks and achieve the banks vision without any failure.

Graph 4.4 overall performance of CBE according to customers



Source: own survey, 2015

Summary of findings and discussion

Electronic banking is considered as the key driving force around the world. Due to a pervasive and steadily growth of the information and communication technology the world banking industry is entering into new phenomena of unprecedented form of competition supported by modern information and communication infrastructure. In the Ethiopia banking system is very far back compared to the rest of the world. But recently Ethiopians banking industry flourishes and start to use electronic banking. In the case of commercial bank of Ethiopia the banks try to introduce themselves in new technologies and electronic banking system form traditional banking environment. These study focus as above as follows, attitudes of customers and staffs of the bank about e-banking, challenges of e-banking, the best means of advertising, opportunities of e-banking, demographic character of the respondents and the overall performance. According to the data various variables show that electronic banking is a good means to smooth running and performing of banking business and achievement of the vision of the bank.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

The e-banking revolution has fundamentally changed the business of banking by scaling borders and bringing about new opportunities. In Ethiopia the banking industry is underdeveloped and therefore there is an all immediate need to board on capacity structure preparations and modernize the banking system by employing the state of the art technology and internalizing new banking technology as being used anywhere in the world. However, now in Ethiopia banks have rapidly introduced and innovative of e- banking technologies and e-banking services in recent years. Almost all banks have invested in expanding and improving the IT systems and a number of new e-banking services have been developed.

All major banks have declared e-banking as one of the core strategies for the future developments. At the same time, e-banking acceptance depends probably on bank service quality, customer preferences and satisfaction determine. In the case of commercial bank of Ethiopia electronic banking is underdeveloped, but the growing rate is very fast compared to previous times. CBE now providing the following e-banking service, those are: ATM (Automatic Teller Machine), POS (Point of Sale) machine, internet banking and mobile banking. From above e-banking lists ATM is used in commercial bank of Ethiopia for the past ten years 2005 G.C even if launched in 2001. Internet and mobile banking is recent history for CBE and also for other commercial banks.

5.1 Conclusions

Various papers, articles, and business news says various conclusion about e-banking. Various opportunists and challenges also exist to adopt for new e-banking technologies.

According to the previous data the researcher conclude in the following way:

5.1.1 Overall e-banking performance in commercial bank of Ethiopia

Commercial bank of Ethiopia is one of the fastest growing of capital and profitability of financial institution in Ethiopia. For which the one pillar is introducing themselves for new technologies and payment mechanism. **Attitudes** of staffs and customers of CBE accept the overall performance of e-banking is in good health due to: existence of e-payment instruments such as ATM and POS are at convenience place, and number of e-banking services is large in number compared with other commercial banks. Customers of commercial bank of Ethiopia

good attitude about e –banking services help to better manage finance transactions, can quick and continuous access to information about their account, and Electronic banking technology support collaboration and sharing of information.

5.1.2 Prospects of e-banking

Due to innovation and adoption of new technology creates an opportunity for banking industry. In commercial bank of Ethiopia electronic banking give various opportunities for customer and employees of the bank. The following lists are important points of prospects of e-banking from pervious finding and discussion parts.

- ❖ Banking transactions can be performed from the comfort of the home or office or from the place a customer’s wants to. When Customers of commercial bank of Ethiopia use e-banking technology, especially internet and mobile banking, they control their account, transfer remittance, and find location of ATM, stop payment order, get daily exchange rate and other bank and banking information can be served 24 hours a day. If use ATM and POS, a service provide reach around a machine and give service whatever the time including holiday and night without any restriction can be served.
- ❖ E-banking is the best means to reduce customer loading burden. Electronic banking un substitutable role for reducing customer overload in branches, when educated and e-banking users are served using e-banking technology, the only comer in branch is only uneducated, serves can’t be given by e-banking and those who are not use e-banking.
- ❖ E-banking technology helps customer for quickly access account, reduces time spending in the bank and other services. Customers who Users of e-banking reduce time that spend in branch, because he/she use e-banking does not need to come branches. Easily access account without support of banker simply, the customer consider the bank exist in your mobile or ATM card.
- ❖ E-banking service is better managing of financial transaction. Customers can be check their history of different accounts and do a “what-if” analysis on their own mobile (computer) or ATM card before affecting any transaction on the bank. This will lead to better funds management.

5.1.3 Challenges of e-banking

There are a lot of challenges discussed in the previous chapter are related with e-banking, those are:

- ❖ Customers of CBE are resistant to new payment mechanism and technology. The reason for resistance of new technology is unknown fear in the minds of the customers this leads a big challenge to penetrate the market through electronic banking in Ethiopia.
- ❖ Electric interruption is a serious problem to smoothly running of e-banking. Due interruption of electric power, hinder the smooth function e-banking for example, ATM and POS does not work when there is no electric power supply, even mobile and internet banking also slow or does not work effectively.
- ❖ Network failures are serious problem to smoothly running of e-banking. One of the serious challenge for commercial bank of Ethiopia's daily activities of e-banking service and traditional banking is network failure, due network interruption customers are not interested to use e-banking rather they hold their cash on hand, especially at the time of serious cash needs the customers does not confidence on network. Due to that customer's choice the best means of accessing cash is by holding in pocket or on hands.
- ❖ Languages are an obstacle to use electronic-banking. Services provide especially mobile banking and internet on English is a serious problem for customers. Customers who are not more educated (high school or below) not smoothly running using website and even in a simple dial up of *889# for farther as much as they need all services of electronic banking.
- ❖ Inadequate banks staff skill exists in commercial bank of Ethiopia about-banking. When customers ask staffs about e-banking the staff tells about electronic banking function and benefits well, but actually the staffs are not know how it runs especially about services of internet banking.

5.2 Recommendation

Electronic -banking service is a new financial progression in Ethiopia, but it's an key issue, because it has a great impact on the whole banking activity, at the same time it's difficult and need a lot of efforts to be adopted and accepted by customers and staffs of commercial bank of Ethiopia, so it need a lot of efforts to achieve something.

The researcher recommends in the following way:

- Consider the capacities and skills, know-hows of the customers about e-banking, especially languages. Languages are a basic instrument to understand everything, there for the bank try to localize the language for internet banking and mobile banking in order to understand more about e-banking and function well.
- Choice the best means of advertising mechanism for the customers, consider those who live in city and those who live in rural area. More focus on the content of word, and ways of advertising is a sensitive issue for customers. The bank tries to reduce the gap between what the bank says and what actually done about advertising.
- Control the interruption of electric power and network failure even if those are external factor, the bank try to choice other option in order to keep the interests of his customer.
- The bank instruct his employees about electronic banking in detail, especially recently lunched products such as , internet banking, and mobile banking , how it work in website and a dial up mechanism, when it is crucial and better than traditional banking and on other issues.
- To exploit the benefit of E-banking system, banking activity operated in commercial bank Ethiopia needs to familiarize their customers with the processes and benefits of the system.
- Educate customers in detail about E-banking technology helps customer for quickly access account, reduces time spending in the bank and other services. Customers who Users of e-banking reduce time that spend in branch, because he/she use e-banking does not need to come branches.

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APPENDIX

School of Graduate Studies master of Business Administration in Accounting and Finance

Questionnaires for customers of commercial bank of Ethiopia

Dear Respondents:

The objective of this questionnaire is to secure the necessary and relevant first-hand information that may be useful to conduct a research project regards “**assessment on the challenges and prospects of e-banking: in the case of commercial bank of Ethiopia**” in partial fulfillment of the requirements for the award of **Master of Business Administration in Accounting and Finance**, Therefore, your response in this regard helps a lot to undertake the study smoothly. The findings are strictly to be used academic purpose only. The student who is a researcher appreciates in advance for your cooperation and spending your valuable time in filling and to participate in the study.

Alayu Chernet

MBA in Accounting & finance student

Tel. +251910615982/0926766967

Email: alayuchernet@cbe.com.et

Read the statement and to what extend do you agree with them marking (√) in the box.

General information

6. **Gender:** Male Female
7. **Age :** Less than 30 years 30 – 40 years 41 – 50 years 51- 60 years more than 61 years
8. **Educational Level:** Secondary school or less Diploma degree Master PhD
9. **Job Title:** Government Employee Private Employee own work no job

Study related question

N.B For below questionnaires the term **e-banking** means including of **ATM** (automatic teller machine), **POS** (point of sale), **internet banking** and **mobile banking**

10. How long have you use e-banking services? Still not use Less than 1 year
 1-3years More than 3 years
11. Do you use e-banking service other than commercial bank of Ethiopia? Yes no if
 yes state the name of the bank.....
12. Which electronic banking services that you can access from commercial bank of Ethiopia (if
 more than one service you can tick more than one)? ATM POS mobile banking
 internet banking alert
13. I believe I have full access using e-banking service of CBE if I want to: strongly agree
 agree neutral disagree strongly disagree
14. I have a good attitude towards commercial banks of Ethiopia's e-banking service:
 Strongly agree agree neutral disagree strongly disagree
15. The bank services in e-banking especially ATM and POS are at convenient places:
 Strongly agree agree neutral disagree strongly disagree
16. What are the best means of knowing new information about electronic banking for you? by
 TV advertizing brusher and pamphlet direct contact with bankers hearing
 from your colleague radio sales promotion magazines' and news
 if other's
17. You are positively think if commercial bank of Ethiopia adopt new e-banking technology
 (other than today's lunched technology): Strongly agree agree neutral
 disagree strongly disagree

Read the statement and to what extend do you agree with them marking (√) in the box.

	Strongly agree	agree	neutral	disagree	Strongly disagree
Attitudes of customers					
18. Electronic banking technology support collaboration and sharing of information.					
19. E –banking services help me to better manage finance transactions					
20. I can quick and continuous access to information about my account.					

21. E-banking technology eliminates times and space constraint.					
Challenges of e-banking					
22. Security is a serious problem when to use e-banking.					
23. e-banking's Cost of service charge is high especially ATM.					
24. Lack of suitable legal and regulatory framework for electronics services.					
25. Electric interruptions are a serious problem to use e-banking.					
26. The dynamic change in information technology are a serious challenge for understanding about e-banking					
27. Network failures are serious problem to use e-banking.					
28. Languages are an obstacle to use e-banking					
29. Inadequate banks staff skill exist in commercial bank of Ethiopia about e-banking					

30. The Overall position of commercial bank of Ethiopia about the performance of e-banking service: *excellent* *very good* *good* *poor*

31. If any comment.....

Thanks for your cooperation

School of Graduate Studies master of Business Administration in Accounting and Finance

Questionnaires for staff of commercial bank of Ethiopia

Dear Respondents:

The objective of this questionnaire is to secure the necessary and relevant first- hand information that may be useful to conduct a research project regards “**assessment on the challenges and prospects of e-banking; in the case of commercial bank of Ethiopia**” in partial fulfillment of the requirements for the award of **Master of Business Administration in Accounting and Finance**, Therefore, your response in this regard helps a lot to undertake the study smoothly. The findings are strictly to be used academic purpose only. The student who is a researcher appreciates in advance for your cooperation and spending your valuable time in filling and to participate in the study.

Alayu Chernet

MBA in Accounting & finance student

Tel. +251910615982/+251926766967

Email: alayuchernet@cbe.com.et

Read the statement and to what extend do you agree with them marking (√) in the box.

General information of respondents

8. **Gender** : male female
9. **Age**: under 20 years 20-30 year 31-50 years 51years above
10. **Educational qualification**: diploma or below degree masters PhD
11. **Position**: junior officer CSO SCSO CSM manager and above
12. **work experience**: 0-2 years 2-5 year 5- 10 year above 10 years

Study related question

13. Do you believe that your bank has highly trained well qualified and competent employee about e-banking? strongly agree agree neutral disagree strongly disagree

14. Order them which electronic banking is very commonly used to least used in commercial bank of Ethiopia (give number 1 highly used to 4 least used).

ATM Internet banking.....
 Mobile banking..... POS

15. Do you believe that the bank gives good information about e-banking for your customer?

Strongly agree agree neutral disagree strongly disagree

16. What do you believe that the best means of aware customers' about electronics banking?

by TV advertizing brusher and pamphlet personal contact sponsoring
 Radio magazine sale promotion others.....

17. When to see customers what characters show about e-banking when you give awareness about e-banking? Reluctance interested to use indifference
 aggressively rejected if other character state it

18. I have a good attitude towards commercial banks of Ethiopia's e-banking service:

Strongly agree agree neutral disagree strongly disagree

Read the statement and to what extend do you agree with them marking (√) in the box.

	Strongly agree	agree	neutral	disagree	Strongly disagree
Attitudes of staffs about e-banking					
19. Banking information technology will add new responsibilities on employees					
20. e-banking is the best means to reduce customer over load					
21. Banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.					
22. e-banking is the best means with compared to traditional banking to achieve CBE's vision					
23. Customers can be quick and continuous access to information					
24. It is difficult to be confident on the security of manmade technology for					

monetary activity.					
25. Application of new e-banking lead banks staff to make more transaction error since it is new for the staff					
Challenges of e-banking					
26. Customers are Lack of awareness on the benefits of e-banking.					
27. Customers of CBE are resistant to new payment mechanisms and technologies.					
28. Cyber security issues problem.					
29. Electric interruptions are a serious problem to smoothly running e- banking.					
30. High installation cost of technology for e-banking					
31. Network failures are serious problem to smoothly running e- banking.					
32. Top managements negative attitude towards new technology.					
33. Lack of suitable legal and regulatory framework for electronic service.					
34. Most users of banking service are not literate enough to understand the usage of e-banking service.					

35. The overall performance of electronic banking system of commercial bank of Ethiopia?

Excellent very good good moderate poor

36. If any comment.....

Thanks for your cooperation!!!