



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**CHALLENGES AND PROSPECTS OF E-BANKING IN ETHIOPIAN
COMMERCIAL BANKS**

**BY
TEWODROS MULISA – MBAAF/0454/2008A**

**JANUARY, 2018
ADDIS ABABA ETHIOPIA**

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**A THESIS SUBMITTED TO ST. MARY’S UNIVERSITY SCHOOL OF
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APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies

Signature

Advisor

Signature

External Examiner

Signature

Internal Examiner

Signature

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Asmamaw Getie (Ass. Prof), all sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Name

Signature

St. Mary's University, Addis Ababa January, 2018

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor

Signature

St. Mary's University, Addis Ababa January, 2018

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ACRONYMS

| | |
|-----------|--|
| ATM | Automated teller machine |
| AB | Awash Bank |
| CBE | Commercial Bank of Ethiopia |
| DB | Dashen bank |
| DR | Disaster Recovery |
| E-banking | Electronic banking |
| EFTPos | Electronic fund transfer at point of |
| ETC | Ethiopia Telecommunication Corporation |
| ICT | Information Communication Technology |
| L/C | Letter of Credit |
| MCB | Multi-channel banking |
| NBE | National Bank of Ethiopia |
| NIB | Nib International Bank |
| NGN | Next Generation Network |
| NNOC | National network Operation center |
| SSL | Secure Sokate Layer |
| SWIFT | Society for Worldwide Inter-bank Financial Telecommunication |
| PC | Personal Computes |
| PDA | Personal Digital Assistant |
| POS | Point of sale |
| UB | United Bank |
| WB | Wegagen Bank |
| ZB | Zemen Bank |

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ABSTRACT

In the face of rapid expansion of electronic payment (E-payment) systems throughout the developed and the developing world, Ethiopian's financial sector cannot remain an exception in expanding the use of the system (Gardachew, 2010). The general objective of the study was to find out the challenges and prospects of E- banking in Ethiopian Commercial Banks. From this general objective, five specific issues were explored. An explanatory research design was employed to conduct this study. Both primary and secondary qualitative data were collected for the purpose of this study from the E-banking department of each selected commercial banks at the head office level and bank web sites respectively. The collected data was analyzed by using descriptive analysis such as tables and percentages. From the analysis of the collected data, the findings revealed that using E-banking banks provide different banking service to their customer. On the View point of the bank Cost reduction, coverage of wide geographical area, customer satisfactions are some of the benefits of using E banking. The driving forces that initiate banks to adopt E-banking services are : existence of high competition in the banking industry, desire to improve organizational performance, desire to reduce transaction cost, desire to cover wide geographical area, and desire to build organizational reputation are among others. Chances of risk, Lack of suitable legal and regulatory framework, absence of financial networks that links different banks, Low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet, security concerns are among the major challenges of E-banking service in the country. However, late adopter opportunities, improvement in the banking habit of the society, commitment of the government to facilitate the expansion of ICT infrastructure and willingness among banks to cooperate in building infrastructure are the major opportunities for the adoption of the system in the banking industry.

CHAPTER ONE

INTRODUCTION

1.1. Back Ground of the Study

According to Daniel (1999), electronic banking is electronic connection between the bank and customer in order to prepare, manage and control financial transactions. Sathye (1999) also asserted that electronic banking can be defined as a variety of the following platforms: (a) Internet banking (or online banking), (b) telephone banking, (c) television-based banking, (d) mobile phone banking, and (e) PC bank (or offline banking). In the opinion of Daniel (1999), E-banking is online banking (or Internet banking) which allows customers to conduct financial transactions on a secure website operated by their retail or virtual bank, credit union or building society.

The rapidly growing information and communication technology (ICT) is knocking the front-door of every organization in the world, where Ethiopian commercial banks would never be exceptional. In the face of rapid expansion of electronic payment (E-payment) systems throughout the developed and the developing world, Ethiopian's financial sector cannot remain an exception in expanding the use of the system (Gardachew, 2010). Technological innovations play a crucial role in banking industry by creating value for banks and customers, that it enables customers to perform banking transactions without visiting a brick and mortar banking system. On the other hand E-banking has enabled banking institutions to compete more effectively in the global environment by extending their products and services beyond the restriction of time and space (Turban 2008).

The increasingly competitive environment in the financial service market has resulted in pressure to develop and utilize alternative delivery channels. The most recently delivery channel introduced is online or electronic banking also known as e-banking (Daniel & Storey, 1997). Online or electronic banking systems give everybody the opportunity for easy access to their banking activities. These banking activities may include but not limited to: retrieving an account balance, money transfers between a users accounts, from a users account to someone else account, retrieving an account history. Some banks also allow services such as stock market transactions, and the submission of standardized accounting payment files for bank transfers to third parties (Claessens et al. 2002). It had been projected that more than 32 million households

globally were banking online by 2003 (Simpson, 2002). Banks and other financial institutions have moved to e-banking in their efforts to cut costs while maintaining reliable customer service (Kolodinsky and Hogarth, 2001).

It is evident that banks and other financial institutions in developed and developing countries are embracing e-banking. As technology evolves, different kinds of electronic banking systems emerge, each bringing a new dimension to the interaction between user and bank. They include Automated Teller Machine (ATM), mobile and Internet (online) banking, electronic funds transfer, direct bill payments and credit card (Gikandi and Bloor, 2010; Liaoa and Cheung, 2002). The use of these facilities is on the increase. For example, in Kenya and Singapore a recent survey indicates that there is steady increase in use of E-banking technologies such as Automated Teller Machine (ATM), mobile and Internet (online) banking, electronic funds transfer, direct bill payments and credit card (CBK 2008; Liaoa & Cheung, 2002). Among these E-banking facilities, the Automated Teller Machine (ATM) is the first well known and widely adopted system that was introduced to facilitate the access of the user to his banking activities (Nyangosi et al. 2009; Claessens et al., 2002)

As it is stated in different E-banking literature some of the problems related with E - banking services are: Low level of internet penetration and poorly developed telecommunication infrastructure. According to Jensen (2003), most countries in Africa, except South Africa, have Internet infrastructure only in their major cities. Lack of suitable legal and regulatory framework for E-commerce and E-payment is another impediment for the adoption of new technology in banking industry. 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 and 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 (Gardachew 2010). But risks related with security issue, lack of competition among local & foreign banks and social awareness on the E-banking system were not addressed. In order to encourage further E-banking adoption in

developing countries, a better understanding of the barriers and drivers impacting E-banking adoption is critical (Zhao *et al.* 2008).

Since, more studies are still required to understand the relevance of E-banking service in the country to identify areas in which the country lags behind that inhibit their E-banking adoption and diffusion. Therefore, to address the current gap in the literature, this study is designed to examine the E-banking adoption situation in Ethiopia and commonly focusing on the investigation of barriers and drivers of adopting E-banking system in Ethiopia and recommend appropriate actions to be taken to promote E-banking system in the country.

The remaining parts of the chapter are organized as follows. The second section presents statement of the problem. The third section sets out the research questions. The fourth section provides objectives of the study. The fifth section provides the highlighted research method adopted while the sixth section shows the scope and limitation of the study. The significance of the study is offered in the seventh section. Finally, structure of the paper is presented in the eighth section.

1.2 Statement of the Problem

When compared with the banking industry operated in developed country, without doubt 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 of 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 (Gardachew 2010). In E-banking system, information is electronically transmitted over wireless communication channels and the internet. These processes raise issues of how users are authenticated, how integrity of data is maintained and importantly the confidentiality of this data. One of the issues raised with adoption of new technology is Perceived risk or uncertainty about the outcome of the use of the innovation (Gerrard & Cunningham 2003).

Traditional banking is characterized by physical decentralization, with branches scattered around populated areas to give customers easy geographical access (Ainin *et al.*, 2005). E- Banking does away with the need for most visits to the bank. However,

according to Locket & Littler (1997), physical banks assure customers that their banks has substantial resource and guarantee the security of their savings. A study indicated that electronic banking has been available in the UK since the early 1980s. Despite the increasing use of E-banking was observed in Ethiopia, previous studies emphasize on the adoption, customer satisfaction to measure the efficiency of E-banking. The results of the research studies in general agreed that E-banking in Ethiopia is sluggish and less adaptable (Gardachew 2010).

It is not clear whether all customers want or are comfortable with electronic banking (Daniel & Storey, 1997). Technology is changing at a rapid pace making it difficult for both the customer and the bank to determine the best approach. Particular problems arise with trying to integrate new channels with legacy channels. It is for these reasons that academic research is needed in this newly emerging delivery channel (Daniel & Storey, 1997). Considering the low extent of development of ICT infrastructure in developing countries, when compared with the developed countries E-banking has not really been able to diffuse into society given the low rate of internet access (Banji & Catherine 2004). Therefore this study intended to identify factors that positively or adversely affect the E- banking service based on the research problems discussed above.

1.3 Research Questions

Based on the above stated objectives, the following research questions will be answered:

- What are the existing current practices and extent of E-banking service in Ethiopian commercial banks?
- What are the benefits of E-banking service from the view point of the commercial banks in Ethiopian?
- What are the driving forces towards the need for E-banking service in the banking industry?
- What are the major challenges for the service of E-banking in Ethiopian commercial banks?
- What are the existing opportunities for the adoption of E-banking service in Ethiopian commercial banks?

1.4 Objectives of the Study

1.4.1 General Objective

The main objective of the study is to find out the challenges and prospects of E-banking in Ethiopian Commercial Banks.

1.4.2 Specific Objectives

The specific aims of the study are:

- To explore the current practice and extent of E-banking service in Ethiopian commercial banks
- To find the benefits realized by banks in embracing and practice of E-banking to compliment their service delivery channels.
- To determine the driving forces towards E-banking service in the Ethiopia banking industry.
- To identify the major challenges for the adoption of E-banking service in Ethiopian commercial banks.
- To find the existing opportunities for the E-banking service in Ethiopian commercial banks.

1.5 Significance of the Study

The outcomes and results of this research will have potential value to financial institutions, particularly banks to understand the challenges and opportunities related with adoption of new technology and its advantages in providing service to their customers. In addition, this study expected to help other researchers who will be interested to conduct further study regarding the issue under investigated by providing use full information. Finally based on the factors found to be influencing bankers’ decision on E-banking system, the study may provide recommendations for banks about changes needed to accelerate adoption of the system to deliver service to customers through technological innovation.

1.6 Scope of the Study

The studies were conducted at five selected commercial banks in Addis Ababa Ethiopia. The Banks are Commercial Bank of Ethiopia, Dashen Bank, Awash Bank, Zemen Bank and Wegagen Bank. The banks are selected under the assumption that it has a better application of E-banking service than other commercial banks in Ethiopia.

The study laid emphasis on Challenges and prospects of E- banking service in Ethiopian commercial banks.

1.7 Organization of the Study

The research paper is divided into five chapters. Chapter one presents the introduction part, which contains, back ground of the study, statement of the problem, research questions, objectives of the study, significance of the study, scope & limitations of the study and significance of the research paper. In chapter two, a range of literatures review capture there to gather relevant information concerning online banking. In chapter three, detail of methodology follow to achieve result outline. It is including the study design, sampling, sampling technique and data analysis. Chapter four contain results and discussion from the study supported with findings from other research works. Chapter five focuses on main findings, conclusions and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to review the literature in the area of E-banking adoption and mainly focused on the barriers and drivers of adopting E-banking system. This review of literature establishes a framework, which can guide the study. The review has six sections. Section 2.1, presents the definition of E-banking followed by the evolution of E-banking system in section 2.2. E-banking systems in Ethiopia were presented in section 2.3, the literature on Importance of E-banking 2.4, while the empirical Characteristics of E-banking system is presented in section 2.5. The literature related with barriers and benefits of E-banking were presented in section 2.6.

2.1 Terms and Concepts of E-banking

The definition of Electronic banking (E-banking) varies amongst researchers partially because Electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Mols; 1998; Sathye, 1999).

Different authors have defined it in different ways based on their understanding of the application of electronic banking. According to Daniel (1999), electronic banking is electronic connection between the bank and customer in order to prepare, manage and control financial transactions. Sathye (1999) also asserted that electronic banking can be defined as a variety of the following platforms: (a) Internet banking (or online banking), (b) telephone banking, (c) television-based banking, (d) mobile phone banking, and (e) PC bank (or offline banking). In the opinion of Daniel (1999), E-banking is online banking (or Internet banking) which allows customers to conduct financial transactions on a secure website operated by their retail or virtual bank, credit union or building society. This implies that E-banking is a service that allows an account holder to obtain account information and manage certain banking transactions through a personal computer via the financial institution web site on the internet.

For many consumers, electronic banking means 24-hour access to cash through an Automated Teller Machine (ATM) or Direct Deposit of pay checks into checking or savings accounts (FTC, 2006). But electronic banking now involves many different types of transactions. Electronic banking, also known as Electronic Funds Transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another without the physical involvement of the bank personnel, rather than by cheque or cash. By using

Electronic fund transfer an account holder can use:

- Salary deposited directly into bank or credit union account
- Withdraw money from account through an ATM machine with a personal identification number (PIN), at any convenience, day or night.
- Settle utility bills and other regular payments
- Transfer money between accounts
- Order payment to government offices like tax and pension
- Conduct transactions at the point-of-sale, using a credit/debit card rather than cash, credit or a personal check
- Use computer and personal finance software to coordinate total personal financial management process, integrating data and activities related to income, spending, saving, investing, recordkeeping, bill-paying and taxes, along with basic financial analysis and decision making.

Another definition of E-banking is that .`E-banking is the use of a computer to retrieve and process banking data (statements, transaction details, etc.) and to initiate transactions (payments, transfers, requests for services, etc.) directly with a bank or with other financial service provider remotely via a telecommunications network (Yang 1997, p.2). It should be noted that electronic banking is a bigger platform than just banking via the internet.

E-banking can be also defined as a variety of platforms such as internet banking or (online banking), TV-based banking, mobile phone banking, and PC (personal computer) banking (or offline banking) whereby customers access these services using an intelligent electronic device, like PC, personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), kiosk, or touch tone telephone (Alagheband 2006, p.11). Different forms of E-banking system were discussed as follows.

2.1.1 Automated Teller Machines (ATM)

It is an electronic terminal which gives consumers the opportunity to get banking service at almost any time. To withdraw cash, make deposits or transfer funds between accounts, a consumer needs an ATM card and a personal identification number (PIN). ATM is also called 24-hour tellers are electronic terminals which give consumers the opportunity to bank at almost any time (FTC, 2006). ATM banking is one of the earliest and widely adopted retail E-banking services in Kenya (Nyangosi et al. 2009). It is described as a combination of a computer terminal, record-keeping system and Cash vault in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized records 24 hours a day (Rose, 1999).

To withdraw cash, make deposits or transfer funds between accounts, a consumer needs an ATM card and a personal identification number. Once the customer login, access to transactions are displayed on the screen. It offers several retail banking services to customers. They are mostly located outside of banks, and are also found at airports, malls, and places far away from the home bank of customers. They were introduced first to function as cash dispensing machines (Abor, 2004). Some ATMs charge a usage fee for this service, with a higher fee for consumers who do not have an account at their institution. If a fee is charged, it must be revealed on the terminal screen or on a sign next to the screen Rose (1999).

ATM services have a lot of advantages. They include increase in productivity during banking hours if the service is available in addition to the human tellers. They are cost-effective way of achieving higher productivity per period of time. According to Rose (1999), an ATM transaction is an average of about 6,400 per month compared to 4,300 for human tellers. Furthermore, it saves customers time in service delivery as alternative to queuing in bank halls, customers can invest such time saved into other productive activities (Abor, 2004). In addition, ATMs continue to serve customers while human tellers in the banking hall have stopped work, thereby increasing productivity for the banks.

2.1.2 Electronic Funds Transfer at Point of Sale (EFTPoS)

An Electronic Funds Transfer at the Point of Sale is an on-line system that allows customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases (at purchase points). A POS uses a debit card to activate an Electronic Fund Transfer Process (Chorafas, 1988). Point-of-Sale Transfer Terminals allow consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference, the money for the purchase is transferred immediately from your account to the store's account. Increased banking productivity results from the use of EFTPoS to service customers shopping payment requirements instead of clerical duties in handling cheques and cash withdrawals for shopping. Furthermore, the system continues after banking hours, hence continual productivity for the bank even after banking hours. It also saves customers time and energy in getting to bank branches or ATMs for cash withdrawals which can be harnessed into other productive activities (Abor, 2004).

Some banks issued international cards (such as American Express, Visa, MasterCard etc.) to their customers. Such cards can be used wherever accepted, and payment on the cards can only be done through an ordinary domiciliary account of the cardholder, or any other account that may be permitted. Some of these cards are credit or debit cards. The system allows consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference. The money for the purchase is transferred immediately from account of debit card holder to the store's account (Malak 2007).

2.1.3 Internet / Extranet banking

It is an electronic home banking system using web technology in which Bank customers are able to conduct their business transactions with the bank through personal computers. Internet banking is a new age banking concept. It uses technology and brings the bank closer to the customer. Internet banking refers to systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of banks website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Thulani et al, 2009). For those that have access to the internet and a computer all you need to do is proceed to your banks website and login.

2.1.3.1 Advantages of Internet Banking

- It removes the traditional geographical barriers as it could reach out to customers of different countries / legal jurisdiction.
- It has added a new dimension to different kinds of risks traditionally associated with banking, heightening some of them and throwing new risk control challenges.
- It poses a strategic risk of loss of business to those banks who do not respond in time, to this new technology, being the efficient and cost effective delivery mechanism of banking services.
- A new form of competition has emerged both from the existing players and new players of the market who are not strictly banks.
- Another advantage of Internet banking is that it is cost-effective. Thousands of customers can be dealt with at once. There is no need to have too many clerks and cashiers.
- The administrative work gets reduced drastically with Internet banking. Expenditures on paper slips, forms and even bank stationery have gone down, which helps raise the profit margin of the bank by a surprisingly large number.

2.1.4 Mobile Banking

Mobile banking is a service that enables customers to conduct some banking services such as account inquiry and funds transfer, by using of short text message (SMS).

Banks offer Internet banking in two main ways. An existing bank with physical offices can establish a Web site and offer Internet banking to its customers in addition to its traditional delivery channels. A second alternative is to establish virtual branchless or Internet-only, Bank almost without physical offices. Virtual banks may offer their customers the ability to make deposits and withdraw funds via ATMs or other remote delivery channels owned by other institutions (Furst & Nolle 2002,). In the context of this study E-banking were not considered as only transferring of service by using internet connection rather it considered as multi channel service provided through ATM, internet banking, Mobile banking (Modbirr system), point sale terminal and telephone banking.

2.1.5 Telephone Banking (Tele-banking)

It is a virtual banking that provides financial services for bank customers to perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit connected to automated system of the bank by utilizing Automated Voice Response (AVR) technology (Rose 1999). Tele-banking provides increased convenience, expanded access and significant time saving for bank customers. It has almost all the impact on productivity of ATMs, except that it lacks the productivity generated from cash dispensing by the ATMs. As a delivery conduit it provides retail banking services even after banking hours so that it accrues continual productivity for the bank.

2.1.6 Credit Cards

A credit card is a small plastic card issued to users as a system of payment. It allows its holder to buy goods and services based on the holder's promise to pay for these goods and services. The issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user (Mavri & Ioannou, 2006). A credit card is different from a debit card in that it does not withdraw money from the users account after every transaction. The issuer lends money to the consumer to be paid to the merchant. Holders of a valid credit card have the authorization to purchase goods and services up to a predetermined amount, called a credit limit. The vendor receives essential credit card information from the cardholder, the bank issuing the card actually reimburses the vendor, and eventually the cardholder repays the bank through regular monthly payments. If the entire balance is not paid in full, the credit card issuer can legally charge interest fees on the unpaid portion.

2.1.7 Debit Cards

A debit card (also known as a bank card or cheque card) is a plastic card that provides an alternative payment method to cash when making purchases. Functionally, it can be called an electronic cheque, as the funds are withdrawn directly from either the bank account or from the remaining balance on the card. In some cases, the cards are designed exclusively for use on the internet, and so there is no physical card (Mavri & Ioannou, 2006).

In many countries the use of debit cards has become so widespread that their volume of use has overtaken or entirely replaced the cheque and, in some instances, cash transactions. Like credit cards, debit cards are used widely for telephone and Internet purchases and, unlike credit cards, the funds are transferred immediately from the bearer's bank account instead of having the bearer pay back the money at a later date. Debit cards may also allow for instant withdrawal of cash, acting as the ATM card for withdrawing cash and as a check guarantee card.

2.2 The Evolution of E- banking System

Electronic innovation in banking industry can be traced back to 1970, when the computerization of financial institutions gained momentum (Malak 2007), However; a visible presence of this was evident to the customers since 1980, with the introduction of ATM. Innovative banking has grown since then, aided by technological developments in the telecommunications and information technology industry. The early decade of the 1990s witnessed the emergence of automated voice response (AVR) technology. By using the AVR Technology, banks could offer telephone banking facilities for financial services. With further advancements in technology, banks were able to offer services, through PC owned and operated by costumers at their convenience, through the use of intranet propriety software. The users of these services were, however, mainly corporate customers rather than retail ones (Sohail & shanmugham 2003). The security first network bank was the first Internet banking in the world that was built in 1995 in USA. After that some famous banks introduced their internet banking one after another, such as Citibank and bank of America.

2.3. E-banking system in Ethiopian Banking Industry

2.3.1 Banking History in Ethiopia

A reference to the Ethiopian history reveals that the first bank in the country, Bank of Abyssinia was founded during the regime of Emperor Menelik II in February 1905. Due to a foreign domination of its management (mainly the British), the then Bank of Abyssinia was forced to dissolve and in its place was established the Bank of Ethiopia in 1931 whose management was still left to foreigners due to the then lack of skilled manpower in the country. The Bank of Ethiopia was later replaced by the State Bank of Ethiopia soon after the war with Italy. The latter was the first bank in the country fully controlled and owned by the Ethiopian government. In the mean time, however,

a number of foreign banks had opened their branches in the country, most of them with an interest to have control over the nation's economy. It was the State Bank of Ethiopia that gave rise to the present Commercial Bank of Ethiopia (CBE) and National Bank of Ethiopia (NBE). During the Dergue reign, CBE had remained as the only participant in the country's commercial banking sector.

However, following the 1991 takeover by the present government and accompanying encouragement of private investment, a number of private banks have emerged in the country's financial sector. Accordingly, Monetary and Banking proclamation No.83/1994 and the Licensing and Supervision of Banking Business No.84/1994 laid down the legal basis for investment in the banking sector. Consequently, shortly after the proclamation the first private bank, Awash International Bank was established in 1994 (NBE, 2009).

2.3.2 Review of Commercial Banking Practices in Ethiopia

In Ethiopia, 16 private and three state owned banks are operating until the end of Nov.2015. Despite a rapid increase in the number of financial institutions since financial liberalization, the Ethiopian banking system is still underdeveloped compared to the rest of the world. The use of checks is mostly limited to government institutions, NGOs and some private businesses. The common banking functions provided by public and private banks in Ethiopia are deposit mobilization, credit allocation, money transfer and safe custody. Banks in Ethiopia are unable to improve customer service, design flexible and customized products, and differentiate themselves in a market where product features are easily cloned.

Ethiopian banking is unable to come from long way of being sleepy to a high proactive and dynamic entity. The Ethiopian banking industry as a whole has a network of 2,502 branches (Birittu, No.120), which is the lowest compared to the size of the country (1.1million square km) and number of population (more than 90 million) and this shows that the number of population being served by a single branch stood at around 34,373 (Birittu No. 120). With such highly scattered branch network and disintegrated working system it is hard to ensure efficient flow of financial resources and optimize the contributions of the entire financial system to the development processes.

2.3.3 E-banking System in Ethiopian

All banks in Ethiopia are too late to move with technological advancement and they should clearly chart out the time schedule for their integration and technological advancement.

Some of the banks even today do not have information websites, which can help them to provide at least the information on financial services offered by them (NBE , 2008/09). The giant state owned commercial bank of Ethiopia had been issued only 1,806,876 debit cards, and has mobile banking user of 290,383 and internet banking user 9,781.00 till Dec. 2014(Birittu no. 120). This is a very small number compared to the population size of the country and very scattered physical branch of the banks.

Banking organizations have been delivering electronic services to consumers and businesses remotely for years. Electronic funds transfer, including small payments and corporate cash management systems, as well as publicly accessible automated machines for currency withdrawal and retail account management, are global fixtures. However, the increased world-wide acceptance of the Internet as a delivery channel for banking products and services provides new business opportunities for banks as well as service benefits for their customers (BCBS, 2001). Notwithstanding the significant benefits of E-banking and its capabilities, it carries risks and challenges as which are recognized and need to be managed by banking institutions in a prudent manner.

The speed of change relating to technological and customer service innovation in E-banking is unprecedented. Historically, new banking applications were implemented over relatively long periods of time and only after in-depth testing. Today, however, many banks are experiencing competitive pressure to roll out new business applications in very compressed time frames, often only a few months from concept to production.

This competition intensifies the management challenge to ensure that adequate strategic assessment, risk analysis and security reviews are conducted prior to implementing new E-banking applications (BCBS, 2001).

E-banking increases banks' dependence on information technology, thereby increasing the technical complexity of many operational and security issues and

furthering a trend towards more partnerships, alliances and outsourcing arrangements with third parties, many of whom are unregulated. This development has been lead in to the creation of new business models involving banks and non bank entities, such as Internet service providers, telecommunication companies and other technology firms (BCBS, 2001).

The Internet is ubiquitous and global by nature. It is an open network accessible from anywhere in the world by unknown parties, with routing of messages through unknown locations and via fast evolving wireless devices. Therefore, it significantly magnifies the importance of security controls, customer authentication techniques, data protection, audit trail procedures, and customer privacy standards (BCBS, 2001). Other E-banking related problems are user error, bad internet connections, access problems and security issues. Most of these problems happen less to outweigh its benefits.

According to IMF data Ethiopia lag far behind from sub- Saharan African countries in terms of access of finance. (Birittu No.120) Product of the Ethiopian Banking sector did not fully benefit from the current technology advancement. Out of nineteen fully operating commercial banks there are only six of them commencing mobile banking as per the directive No FIS/01/2012? This show that the banking industry in Ethiopia backward in comparison with the current world banking industry advancement and out late offerings.

Nowadays, banks can use advanced technologies and internet, networks, payment cards, Automated Teller Machine (ATMs) and so on. This is one is of the prospects that enables banks to increase the efficiency and productivity. The banking business has continued realizing the advantages of the cutting-edge information and communication technology. It has become essential to effectively implement the appropriate technology to have faster decision support and effective data integration in the financial intermediary process and also to look for other avenues to augment income.

Concerning the industrial outlook, there are emerging initiatives to invest in electronic multi-service channels and also a tendency to optimally utilize the available resources in a consortium, which partly supports the effective implementation of the envisaged national payment system. Additionally, the ongoing efforts of emplacing the

electronic laws focusing on the retail banking business are expected to have a positive effect on the growth of the payment card business. These are other opportunities for banks to expand their activities and ultimately realize a second-generation reform in the Ethiopian financial sector (Dashen, 2009/10)

In this regard, commercial Banks are still at the early stage to implementing modern banking technology and value-added service provision. Withstanding the prevailing long attachment of branch-based service channel, which is perceived to lead the society to the appearance of E-banking in Ethiopia goes back to the late 2001, when the largest state owned, commercial bank of Ethiopia (CBE) introduced ATM to deliver service to the local users. In addition to eight ATM Located in Addis Ababa, CBE has had Visa membership since November 14, 2005. But, 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 E-payment system. As 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 E-Banking since 2006. (Gardachew 2010)

Dashen bank, a forerunner in introducing E-banking in Ethiopia, has installed ATMs at convenient locations for its own cardholders. Dashen " s ATM is available 24 hours a day, seven days a week and 365 days a year providing service to 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. In the year 2011 the payment card services have witnessed significant strides, Dashen " s ATM service expanded to 70 and 704 POS terminals (Annual report of the bank 2011). Available services on Dashen Bank ATMs are: Cash withdrawal, Balance Inquiry, Mini statement, Fund transfer between accounts attached to a single card and Personal Identification Number (PIN) change. Currently, the bank gives debit card service only for debit card.

The agreement signed by three private commercial banks to launch ATM and POS terminal 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. The following table 2.1 provides the E-banking services, which are available in the Ethiopia banking industries at present.

Table 2.1: E-banking Services

| Banks | E-banking services |
|--------------|--|
| CBE | Automated teller machine,(ATM) and Telephone bill payments, point of sales terminal(POS) |
| DB | Automated teller machine (ATM), Mobile Banking (Modbirr), point of sale (POS) terminals, Telephone banking |
| WB | Automated teller machine, (ATM), point of sale (POS) terminals and Telephone banking service. |
| ZB | Automated teller machine, (ATM), online banking. Point of sale (POS) terminals, internet banking, Mobile/phone banking |

Source: The researcher, 2012

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).

2.3.4 Challenges of adopting E-banking in Ethiopia

According to Gardachew (2010) Ethiopian banking industry faces numerous challenges to adopt E-banking system and grab the opportunities presented by ICT applications in general. The 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-commerce 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-commerce 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.
- Inadequate banking system.
- 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 institutions 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.

2.4 Importance of E-banking

Electronic banking systems provided easy access to banking services. The interaction between user and bank has been substantially improved by deploying ATMs, Internet banking, and more recently, mobile banking (Claessens et al. 2002). Electronic banking (E-banking) reduces the transaction costs of banking for both Small and Medium Enterprises (SMEs) and banks. SMEs need not visit banks for banking transactions, providing round the clock services (Cheng, 2006). Customers prefer E-banking for conveniences, speed, round the clock services and access to account from any parts of the world (Cheng, 2006). E-banking offers benefits to banks as well.

Banks can benefit from lower transaction costs as E-banking requires less paper work, less staffs and physical branches (Cheng, 2006). E-banking leads to higher level of customers' satisfaction and retention (Poatoglu & Ekin, 2001). E-banking reduces loan processing time as borrowers loan application can be viewed by loan processing and loan approval authority simultaneously (Smith & Rupp, 2003). Typically, loan applications received at branch level and send to head office for approval. This documents transfer to and from branch to head office consume much time and delay loan sanction period (Riyadh et al., 2009). The benefits of E-banking identified from the current literature are classified in two main categories - tangible and intangible.

2.4.1 Benefit from the Bank's point of View

According to a survey by Booz, Allen and Hamilton, an estimated cost providing the routine business of a full service branch in USA is \$1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM (Automated Teller Machine) banking and 1.5 cents for Internet Banking (Nathan 1999; Pyun et al., 2002). In Nordea, Finland, one online transaction costs the bank an average of just 11 cents, compared to \$1 for a transaction in a branch (Echikson, 2001). Average payment in internet bank or via direct debit cost 4 times less than payment in branch. On actual cost side (cost side in the bank point of view) direct debit payment cost 16 times less and payment in internet bank 7 times less than payment in branch. This indicate that E banking contribute a significant financial benefit to banks to which implement E banking. In addition to this E banking reduce the capital expenditure and staff cost of the bank.

2.4.2 Benefit from the customer point of View

The main benefit from the bank customer's point of view is significant saving of time by the automation of banking service processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of E banking for corporate customers' are

- Reduce costs in accessing and using the banking service
- Increased comfort and time serving

Transaction can be made even after banking hour without the physical interaction of the bank 24 hours a day. This increase the productivity of both the bank and the company

- Quick and continuous access of information and corporation will have easier access to information as, check multiple accounts at the click of a button, better cash management (Bank Away! 2001; Guru, 2002).

2.4.3 Economic Benefit

The impact of the new economy on the entire economy growth has been studied in several research projects. For example (Pohjola, 2002) shows that the contribution of the use of information communication technology to growth of output in the Finnish market sector has increased from 0.3 percent in early 1990's to 0.7 percent in late 1990's. Similarly, research conducted in Estonia (Arm and Vensel, 2001), bank customers use bank office on average 1.235 times per month, and wait in queue in bank office on average for 0.134 hours. Simple calculation shows that making payments using E banking facilities rather than in the banks office create overall economy savings in the amount of 0.93% of GDP (average distance to nearest bank office is 4.14 km (Arma and Vensel, 2001), which takes approximately 0.21 hours to travel.

2.5 Characteristics of E-banking

E-banking includes the systems that enable bank customers to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customer's access E-banking services using an intelligent electronic device, such as a Personal Computer (PC), Personal Digital Assistant (PDA), Automated Teller Machine (ATM), telephone (Ibrahim et al 2006).

2.6 Challenges and Prospects of E-Banking

2.6.1 Challenges of E-banking

According to M. M. Rahman (2008) in Bangladesh despite huge demand from the business community as well as the retail customers particularly the urban customers, electronic banking (e-banking) is still at a budding state due mainly to a number of constraints such as unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; sluggish ICT penetration in banking sector; insufficient legal and regulatory support for adopting e- banking and so on.

The concept of e-banking includes all types of banking activities performed through electronic networks. It is the most recent delivery channel of banking services, which is used for both business-to-business and business-to-customer transactions. However, in true sense, e-banking includes activities like payment of bills and invoices, transfer of funds between accounts, applying for a loan, payment of loan installments, sending funds to third parties via emails or internet connections regardless of where the client is located. Leow, Hock Bee (1999) state that the terms PC banking, online banking, Internet banking, telephone banking or mobile banking refers to a number of ways in which customer can access their banks without having to be physically present at the bank branch. Therefore, E-banking covers all these ways of banking business electronically. Since e-banking offers some smart services benefiting both banks and customers compared with traditional banking system, it has become imperative to make necessary room for banks to flourish E- banking. Among others, attractiveness of E-banking includes: it lowers transaction cost; provide 24- hour services; ensure increased security and control over transactions; reduces fraud risk; performs higher volume of transactions with less time; increases number and volume of value payment through banks; allows remote transactions facilities that replace physical presence of a customer in a bank branch and; increases transaction speed and accuracy. On the other hand, traditional banking is time-consuming and more costly and therefore, e-banking is replacing traditional banking all over the world.

In addition, an exploratory study that was conducted in Zimbabwe by Chitura Tofara (2008) indicated that incompatibility with the existing system, cost of implementation,

security concerns, lack of expertise, inadequate legislation and consumer acceptance are the major challenges of e-banking in the country's banking industry. The same challenges may also face by Ethiopian banking industries to implement the E banking facilities. But the good thing is that the benefited out weighted the challenges in many parameters. Specially country like Ethiopia which have a huge potential customers for such service coupled with a fast growing economy will be the main advantages of the banking service to offer different products with the help of technology to their customers. In addition, as investigated by Alhaji Ibrahim H. (2009) using exploratory study, the following are among the critical challenges of e-banking.

Lack of Technological Infrastructure – the implementation of e-payment is been impeded by unavailability of ICT infrastructure. Most rural areas where majority of small and medium scale industries are concentrated have no access to internet facilities and ICT Equipment

Costs – where available, the cost of ICT is a critical factor relative to per capital income. This makes the cost of entry higher compared to developed countries.

Regulatory and Legal Issues – inexistence of proper legal and regulatory framework

Non-readiness of banks and other stake holders (acceptability) – even though some have shown impressive willingness, some banks are still not fully ready to for this new payment regime.

Resistance to changes in technology among customers and staff due to:

- Lack of awareness on the benefits of new technologies
- Fear of risk among banks
- Lack of trained personnel in key organizations and
- Tendency to be content with the existing structures

People are resistant to new payment mechanisms;

- Security – where disclosure private information, counterfeiting and illegal alteration of payment data may be rampant.
- Frequent connectivity failure in telephone lines
- Frequent power interruption
- Wide spread Problem of internet connection

2.6.1.1 E-Banking Fraud

Convenience is the key reason of why millions of people are opting out of traditional banking for online banking. Banks also enjoy providing the option of online banking because they can save on operating costs. Most internet banking fraud occurs in a two-step process. Firstly, the offender must get their hands on the customer's account information, like their username and password. Secondly, the offender will use that information to move his victim's money to another account or withdraw it to make fraudulent purchases. For the first step, offenders often employ one of the many popular fraud schemes to obtain personal information. These fraud schemes include, but are not limited to:

- "Over the shoulder looking" scheme: involves the offender observing his potential victim making financial transactions and recording the personal information used in the transaction. "Phishing" scheme: stems from the two words "password" and "fishing." It entails sending E-mail spam and mail supposedly from the consumer's bank as a way to obtain the consumer's personal information, social insurance number, and in this case their online banking username and password (Kaleem & Ahmed, 2008).

2.6.1.1 Security Measures to Avoid E-banking Fraud

Kaleem and Ahmad (2008) argued that in undertaken E-banking transactions, customers are always concerned about hackers and anti-social elements. Hacking enables the unethical hackers to penetrate the accounts of online bankers, and spend their money. Availability of confidential information which is just secured by a user name and password makes it vulnerable to such threats. Most of the banks try to make their sites secured by implementing latest network security software. Learn to keep your cards, documents and passwords safe, and monitor your accounts to safeguard yourself from bank fraud committed through identity theft. Most importantly, find out how to protect your personal information to avoid identity theft from happening to you (BSP, 2006).

E-bankers should install virus scanners and keep them and their systems up-to- date especially PC banking. They should avoid practices that easily lead to security

hazards in particular they should not start up arbitrary executable attachments received via electronic e-mail. Users should check fingerprints of certificates against the fingerprints that are (should be) given by the bank on official paper documents (Claessens et al., 2002; BSP, 2006).

2.6.2 Prospects of E-Banking

According to M.s, M Rahman (2008) in Bangladesh e-banking is now a global phenomenon. Apart from the developed countries, the developing countries are experiencing strong growth in e-banking. The government's emphasis on setting up ICT park, raising allocation for developing ICT infrastructure, waiving taxes on computer peripherals and other measures including the automation program of banking sector and competition among the scheduled banks in improving customer services have accelerated the prospects of E-banking. The fact that the overall commercial banks branch in Ethiopia compared to the size of the population and the area of the country is very minimal, it creates a good advantage to expand E banking facilities and reach the wide spread population of the country through virtual banking system.

CHAPTER THREE

METHODOLOGY

In the previous chapter, the literature review, which shows the challenges and prospects of E-banking service in Ethiopian commercial banks and review of issues related with barriers and benefits of E-banking, has been presented. For the purpose of understanding all the content of this chapter, it is arranged as follows. Section 3.1 shows research design, the research Population and sampling techniques is presented in section 3.2 and followed by research data collection instruments in section 3.3, the research data collection procedure are shown in section 3.4. Finally the last sections, section 3.5 and 3.6 presents Data analysis methodology and limitations of the study.

3.1 Research Design

A qualitative approach is one in which the inquirer often makes knowledge claims based on constructivist prospective i.e. the multiple meanings of individual experiences meanings socially and historically constructed with an intent of developing a theory or pattern. Leedy and ormrod (2005) explains that a study categorized as qualitative, if its purpose is primarily to describe a situation, phenomenon, problem, or event. i.e., the information is gathered using variables measured on nominal or ordinal scales (that is, qualitative measurement scales); and an analysis is done to establish the variation in the situation, phenomenon or problem without quantifying it. McKerchar (2010) stated that, the qualitative approach views the world based on researchers interpretation, which may influenced by the researcher own views, beliefs, experiences, and existing knowledge. Qualitative researchers tend to use open-ended questions so that participants can express their views and meanings are constructed by human beings as they engage with the world they are interpreting (Creswell 2003). In all, 90 questionnaires were administered to the respondents from the selected commercial banks to solicit information concerning the E-banking service. Part of the information was also gathered from reports in the bank concerning E-banking services.

An explanatory research design was considered the most suitable approach in view of the nature of the problem being studied. According to Zikmund (2000), explanatory research is conducted to clarify and research a better understanding of the nature of the problem.

3.2 Population and Sampling Techniques

Sampling is the process of choosing, from a much large population, a group about which wish to make generalized statements so that the selected part represent the total group (Leedy, 1989; pp. 158). According to NBE, the total numbers of Commercial Banks which currently operate are 17 commercial banks. However, to undertake this research paper, the researcher purposely sampled five commercial banks, which are currently, render E-banking service and some technological innovation. These banks are Commercial bank of Ethiopia, Dashen bank, Zemen bank, Awash bank and Wegagen bank. The procedure used for drawing the sample from the available lists was based on the banks currently use different technological instruments to deliver service to customers (or based on their familiarity with technology). Thus, this research paper used purposive sampling method to draw the sample from the population.

The banking industry in Ethiopia were categorized in to two main blocks State owned banks and private-owned commercial banks, From each category four banks was used as a sample units that can be based on the managers responsible for E-banking and the total of 90 bank staff, were sampled to see their intention on the challenges and benefits of E-banking system in Ethiopian commercial banks. The researcher chooses to take 5 commercial banks; one state owned commercial bank and four private commercial banks as a sample, because it is often impossible or too much expensive to collect data from all the potential units.

3.3 Data Collection Instruments

The researcher relied on primary data sources. The primary sources involved self administered questionnaires and interview. The questionnaire was used because the researcher considered it to be more convenient as respondents could answer at their convenience. The questionnaire was developed by the researcher based on the research questions and the literature. Open-ended and closed – ended questions were used. The questionnaire began with an introductory statement, which specified the

purpose of the research as purely academic. Respondents were encouraged to be objective in their responses since they were assured of confidentiality.

3.4 Data Collection Procedure

The consent of all respondents was sought before they were included in the study. Each respondent was made to answer each question and then the appropriate answer ticked. Where the researcher is not sure of an answer, the researcher probed until answer provided is consistent. This procedure was repeated for each junior and senior staff respondents. To clear any doubts in the minds of respondents the purpose of the study was made known to respondents.

3.5 Data Analysis

Data from the structured self administered questionnaire was properly organized through data coding, cleaning and entering. Data processing was by statistical package for social sciences (SPSS). Descriptive statistics by percentages, figures and tables were generated from the software to establish relationship among variables. The relevant information was obtained in a standard form using tables, frequencies and percentages to analyze and interpret the information. The results were finally presented in tables. These were used to ensure easy understanding of the analyses.

3.6 Limitation

This study is believed to have certain constraints. Primarily, it is worth keeping in mind that the sample size of the study was limited to only 5 commercial banks in Ethiopia (i.e commercial bank of Ethiopia, awash bank, Dashen bank, zemen bank and Wegagen bank) and 90 bank staff selected from 5 commercial banks in Ethiopia.

CHAPTER FOUR

RESULTS AND DISCUSSION

In the previous chapter, the overall methodology, which was focused on research design, research approach, research strategy and the specific method of data collection and data analysis used in the study, has been presented. On the other hand this chapter presents the results and analysis of data collected via questionnaire. The remaining part of this chapter is organized as follows. Section.4.1 presents the overview of the chapter and followed by demographic information of the respondents in section 4.2, Section 4.3 presents the result and discussion regarding the challenges and prospects of E-banking adoption in Ethiopian commercial banks. Information regarding the perceived benefits/Drivers of adopting E-banking are presented in section 4.4. The last section summarizes the chapter.

4.1 Introduction

To find the major out puts of the study and to give important recommendations, the collected data should be analyzed and discussed, accordingly the analysis and important findings from the collected data are discussed below.

4.2 Analysis and discussion related to Objective I

As shown below table 4.1, almost all the banks accept the fewer branches Zemen bank. As the researcher purposely selects, all the respondents are from the department of E -banking and at managerial position of the respective bank. Except two of the respondents all these respondents have an experience of more than five years. In addition to the above listed respondents the questioner also distributed to in total it was 90 questioners was distributed. The non responding rate out of the total questioner is 10%. The sample size gives a full picture about the current status of E banking service in Ethiopia commercial banks. As mentioned earlier the survey conducted in the Head offices of selected banks which show the overall status of the banking activity throughout the country.

Table 4.1: Demographic characteristics of selected respondents

| Bank | Establishment Year G.C | Job Position | Experience | Gender | Education Status |
|--------------------------------------|---------------------------|--------------------------|------------|--------|------------------------|
| Commercial Bank of Ethiopia (CBE) | 1963 | Director of E-banking | 10+ | Female | 2 nd Degree |
| Awash Bank (AB) | 1994 | E-banking Head | 3 | Male | 1 st Degree |
| Dashen Bank (DB) | 1995 | Head E- banking | 5+ | Male | 2 nd Degree |
| Wegagen Bank WB | 1997 | E-banking Manager | 12 | Male | 1 st Degree |
| Zemen Bank (ZB) | 2008 | Coordinator | 2.5 | Male | 1 st Degree |

Source: From Questionnaire

As reported in the below table , among banks that are currently in operation in the country, four banks are providing banking products to their customer through electronic channels, the remaining awash Bank is under process to implement E banking to its customer in a full capacity. Even though awash bank is not providing e-banking, it gives ATM service only to its customer. Currently there are 17 private commercial banks and 2 state owned banks including the giant commercial bank of Ethiopia are operating in Ethiopia.

In addition, the table also indicated that E-banking service is in an infant stage in the country since most banks are not yet adopted the system and even those banks that are currently providing the services are commenced the system after 2006 and are not fully adopted the technology because of different challenges.

Table 4.2: Classification of banks according to their adoption time of E-banking

| Banks providing E-banking service | Year of Commencement |
|-----------------------------------|----------------------|
| Commercial bank of Ethiopia | 2001 |
| Wegagen Bank | 2014 |
| Dashen Bank | 2006 |
| Awash Bank | Under process |
| Zement bank | 2009 |

Source: From Questionnaire

As shown below table 4.3, Only Zemen bank offered 50 % of the listed services through its e banking channels. Even the giant state owned commercial bank of Ethiopia offered only six services out of listed 14 services. This implied that after all this year the banking industry in Ethiopia still not strong enough to implement the state of technology which available to current banking industries. Especially in the current status of globalization which products are easily cloned the competence of financial services in Ethiopia are questionable. Even Zemen bank which is considered as modern and bank of the sate of technology offered only 7 services. As all of us know Zemen bank was a fewer branch bank and it was considered as a virtual branched bank. Even though the bank opens branches recently, its vision was rendered technological supported service with its single branch.

As awash bank the largest and pioneers of private bank is providing ATM service only. 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.

Table 4.3: Current Practices and Extent of E-banking service in Ethiopia Commercial Banks

| Service Offered | CBE | Dashen Bank | Zemen Bank | Wegagen Bank | Awash Bank |
|-------------------------------|------------|--------------------|-------------------|---------------------|-------------------|
| Balance Enquiry | 1 | 1 | 1 | 1 | 1 |
| View account History | 1 | 1 | 1 | 1 | 1 |
| Order Pin code | 0 | 0 | 1 | 0 | 0 |
| Fund transfer within the bank | 1 | 1 | 1 | 1 | 0 |
| Settle utility bills | 0 | 0 | 0 | 0 | 0 |
| Print account statement | 1 | 1 | 1 | 1 | 0 |
| Send Message | 1 | 1 | 1 | 1 | 1 |
| Apply for loan | 0 | 0 | 0 | 0 | 0 |
| Open new account | 0 | 0 | 1 | 0 | 0 |
| Apply for credit card | 0 | 0 | 0 | 0 | 0 |
| Apply for insurance | 0 | 0 | 0 | 0 | 0 |
| Fund transfer across bank | 0 | 0 | 0 | 0 | 0 |
| Cash withdrawal | 1 | 1 | 1 | 1 | 1 |
| Apply for debit card | 0 | 0 | 0 | 0 | 0 |

Source: From Questionnaire

0 - for no

1- for yes

Dashen bank, a forerunner in introducing E-banking in Ethiopia, has installed ATMs at convenient locations for its own cardholders. The younger with fewer branches Zemen Bank launched multi-channel banking (MCB) services in Ethiopia, which includes ATMs, Internet Banking, Banking through Call Centre and SMS banking. These services introduced October 22, 2009, makes Zemen Bank the first in Ethiopia to introduce fully IT supported and 24/7 customers services to local bank customers. Currently all banks in the country offering ATM; call Centre, SMS and internet banking services all at the same time. Zemen's new services would enable customers of the bank to get the services listed in the above table. The launch of MCB is perfect

for business owners, individuals and even local and national institutions. Whether it's monitoring business account activities while away on a business trip, personal finance management at any time of the day, or the need to be informed with alerts/notifications based on one's account activities, bank users need to have more accessible ways of communicating with their bank.

The Multi-Channel Banking services were designed for bank customers that require easy access to the bank's facilities while they are On-The-Go. Zemen Bank designed and equipped each of the new services with a user friendly Amharic and English language support. Zemen Bank customers can access their account from their PC/Laptop, Mobile Phone, ATM, and through a direct phone call to the dedicated and customer friendly Zemen Bank Call Centre. The Multi-Channel Banking Services are free of charge to all Zemen Bank customers. ATM cards are also issued immediately and free of charge to all customers who open an account with Zemen Bank (Business in Ethiopia, 2009).

Finally, with respect to service charge, as per Dashen and Commercial bank of Ethiopia, customers being charged minimal amount based on amount of transaction on ATM service and point of sale terminals. However, all the services are free of charge at Zemen Multi channel banking services. In general, as shown in the above table the most dominant E-banking channel among those banks, which are currently providing the service is ATM card, which is the first generation of electronic banking channel, so from this it is possible to conclude that even banks that are providing the service did not sufficiently adopted the latest E-banking channel such as internet and mobile banking.

The operational issues listed in the table 4.4, below, related to E-banking service are discussed below: As per the data collected among banks that are currently providing the service, all banks are checking their links and interactive programs periodically for its accuracy and functionality since this helps banks to take corrective measures as soon as an operational error is happened in the system. To prevent the web site information from being altered, security measures like firewall and secure socket layer (SSL) are taking by all banks.

Even though, it is not satisfactory to make use of their passbook and checkbook are the procedures in place for when there is an interruption in the service of e-banking for customers. In Wegagen Bank there is a file over DR (disaster recovery) site when ever service is interpreted from the primary source it will switch to the DR Site. The DR Site is a file sources which work offline and update it whenever the service resume. Providing basic and refreshment training to employees help banks to provide quick, up to date and secured services to the customer.

With this regard, even if it is not sufficient as explained by the respondents during interview, all banks are providing E-banking training to their employees. Some of the staff does not have sufficient knowledge about E-banking. Addressing banking activities beyond the traditional trade area is one among the different driving forces of delivering banking products to the customer through electronic channels. With this regard, all banks have policies and procedures in place to address this activity. Using internet and mobile as a channel of service delivery is the implication of this activity because these channels can able banks to provide service for the customer at any place rather than branch based traditional service.

Table 4.4: Operational issues related to E-banking Service Adoption

| | Operational Issues | Banks | | | | |
|---|--|-------|-------------|------------|--------------|------------|
| | | CBE | Dashen Bank | Awash Bank | Wegagen Bank | Zemen Bank |
| 1 | Are links and interactive programs checking for accuracy and functionality? | 1 | 1 | 1 | 1 | 1 |
| 2 | Are security measures in place to prevent the web site information from being altered? | 1 | 1 | 1 | 1 | 1 |
| 3 | Does the bank have procedures in place for when there is an interruption in service of E- banking for customers? | 1 | 1 | 1 | 1 | 1 |
| 4 | Is electronic banking training | 1 | 1 | 1 | 1 | 1 |

| Operational Issues | | Banks | | | | |
|--------------------|---|-------|-------------|------------|--------------|------------|
| | | CBE | Dashen Bank | Awash Bank | Wegagen Bank | Zemen Bank |
| | provided to employees? | | | | | |
| 5 | Are any policies and procedures in place to address activities beyond the traditional trade area? | 1 | 1 | 1 | 1 | 1 |
| 6 | Does the bank have a target market or trade area for E-banking. | 1 | 1 | 1 | 1 | 1 |

Source: From Questionnaire and Interview

0 - Stand for No

1 - Stand for Yes

Finally, with respect to target market or trade area, all banks have target market area for their service. This can easily be checked by the location to which ATM machines are located and types of card offerings by the banks to different social groups based on different statuses. In addition to this, when each bank implements a given E-banking service, it has a target social group to whom it is expected to use a given service. For this, Mobile and agent banking are one indication.

The below table 4.5 shows that the respondents think whether E-banking has a role to expand bank services and increase its customer base. As indicated above, E-banking has minimal impact to expand services like paying utility bills, credit card facilities, loan applications, and customer loyalty programs, whereas for online account review and fund transfer services, expansion goes along with the implementation of internet banking.

Table 4.5:Upseling of Banking service using E banking Facility

| | Yes | No |
|--------------------------|-----|-----|
| Paying utility Bills | 35% | 65% |
| Credit card | 90% | 10% |
| Application for Loan | 20% | 80% |
| Fund transfer | 90% | 1% |
| Customer loyalty Program | 30% | 10% |

Sources: From Questioner

In connection to operational cost, E-banking reduces operational as well as branch operation costs. On this regard all respondents agree with that E-banking is cost efficient than paper based banking.

4.3 Analysis and Discussion Related to Objective II

Table 4.6: Benefits realized by banks from the adoption of E-banking service

| Banks | Benefits realized by banks from the adoption of E-banking service |
|--------------|---|
| CBE | Enhanced image, improvement Benefits organizational efficiency, and load reduction |
| DB | Attracting high value customers , enhanced image, improvement of organizational efficiency, high foreign currency earning, low risk of cash management and load reduction |
| WB | Attracting high value customers , enhanced image, and improvement of organizational efficiency |
| ZB | Attracting high value customers, enhanced image, larger customer coverage, improvement of organizational efficiency, better monitoring of their customer base, and load reduction |

Source: From Questionnaire and Interview

As reported in the table 4.6 above, all of the banks (100%) believe that providing banking products to the customer by using electronic channels have the benefit of building good image, load reduction that enables bank employees to focus on strategic issues instead of focusing on traditional activities and improvement of organizational performance through cost reduction (by avoiding paper work and by reducing the number of employees required) and adopting E-banking service as a means of service

delivery have the benefits as stated by each respective bank in the above table. In general, according to the respondents' response as listed in the above table, it is possible to conclude that delivering banking products through electronic channels made the bank benefited.

Even though, those banks that are currently providing E-banking service to their customer can get the different benefits as listed in the above table, the assumption of perceived relative advantage, perceived organizational performance, perceived customer relationship and perceived ease of use are the major perceived advantages of e-banking adoption among those banks which are not yet adopted the technology but are planned to adopt the system in the near future.

4.4 Analysis and Discussion Related to Objective III

As depicted in the above table 4.7, even though there are some sort of difference regarding the driving forces that initiate for the adoption of e-banking service in each bank, the existence of high competition in the banking sector, rapidly changing customers' needs and preferences, desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to build organizational reputation and desire to satisfy customers are the major common driving forces that initiate banks for the adoption of e-banking as a means of service delivery to their customers.

Therefore, from this it is possible to conclude that it is due to the existence of some driving forces in which banks are initiated to provide modern banking services to the customer. In addition, the table also implied that there are common driving forces that lead all banks to provide E-banking services.

Table 4.7: Driving forces that initiate banks to adopt E-banking services

| Banks | Driving forces |
|-------|---|
| CBE | Rapidly changing customers' needs and preferences, desire to improve organizational performance. Desire to improve the relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation and desire to satisfy customers. |
| DB | Existence of high competition in the banking industry , desire to Improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation, desire to satisfy customers, to keep the international banking standard and rapidly changing customers' needs and preferences. |
| WB | Desire to improve organizational performance, desire to improve the Relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation, desire to satisfy customers. |
| ZB | Existence of high competition in the banking industry, desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation, desire to satisfy customers and rapidly changing customers' needs and preferences |

Source: From Questionnaire and interview

4.5 Analysis and Discussion Related to Objective IV

According to table 4.8 shown below, even though there is some sort of difference among the challenges in each bank, chances of risk (such as **operation, security and reputation risk** as stated by all banks), Lack of suitable legal and regulatory framework that govern and regulate e-banking transaction in the country, absence of financial networks that links different banks, Lack of government initiation or lack of government prioritization , high cost of internet, Low level of internet penetration and poorly developed telecommunication infrastructure are the major common challenges for the adoption of E- banking service in the country's banking industry. Especially with respect to ICT infrastructure, even though ETC is expanding its internet and

mobile network services, the quality and sustainability of the network system is still very poor. The network access in Ethiopia is limited to major city. More than 80% of the country population is an agrarian population and located in the country side rural areas. In those areas the availability and efficiency of network is very limited. This problem coped with low computer illiteracy rate has a negative impact on the spread and development of E banking in the Ethiopian banking Industries.

Table 4.8: Challenges of E-banking service in Ethiopia Commercial Banks

| Banks | Major Challenges |
|-------|---|
| AB | Chances of risk, lack of suitable legal and regulatory framework, lack of government initiation or lack of government prioritization, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet and security issues |
| WB | High installation cost, chances of risk , lack of suitable legal and regulatory framework, high rate of customer illiteracy, non-readiness of banks to adopt system, lack of government initiation or lack of government prioritization, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet and security issues |
| CBE | Chances of risk , lack of trained and efficient staff in e-banking context, lack of suitable legal and regulatory framework, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure , high cost of internet and security issues |
| DB | Chances of risk , lack of trained and efficient staff in e-banking context, lack of suitable legal and regulatory framework, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet and security issues |
| ZB | Security issues, lack of public awareness on the use of E-banking service |

Source: From Questionnaire and Interview

Since the Ethiopian banking system is heavily dependent on the state-owned ETC to perform transactions and connect branches to their main office, Ethiopia Telecommunications Corporation's (ETC) failure to offer efficient services, is limiting banking services. Finally, even though it may be temporary, frequent power interruption is another challenge that affects the provision of e-banking service among those banks that are currently providing the service. Therefore, from the above

discussion it is possible to conclude that there are challenges for the adoption of E-banking service among those banks that are not yet adopted the system and for the sufficient adoption of the service from the viewpoint of those banks that are currently providing the service in the country.

4.6 Analysis and Discussion Related to Objective V

The below table 4.9, indicated the existence of some difference among the respondent of each bank regarding the different existing opportunities in the country for the adoption of E- banking. But late adopter opportunities, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia, commitment of the government to facilitate the expansion of ICT infrastructure and willingness among banks to cooperate in building infrastructure are common to all banks. With respect to cooperation among banks, the memorandum of understanding signed by three private commercial banks to launch an Automated Teller Machine (ATM) and Point of Sale terminal (POS) network in February 2009 is welcoming strategy to improve electronic payment system in Ethiopia. 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? In addition, the commitment of the government to strengthen the banking industry is a good opportunity for the adoption of E-banking service in the country because currently the national bank of the country is developing a project in cooperation with the World Bank in order to modernize the payment system of the country (Abiy D., 2008).

Table 4.9: Prospect of E-banking services

| Banks | Prospect of E-banking services |
|-------|---|
| CBE | Late adopter opportunities, s commitment of the government to facilitate the expansion of ICT infrastructure, improvement in the banking habit of the society , sustainable economic growth in the country, increment of tourist inflow to Ethiopia and willingness among banks to cooperate in building infrastructure |
| DB | Late adopter opportunities, commitment of the government to strengthen the banking industry, commitment of the government to facilitate the expansion of ICT infrastructure, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia and willingness among banks to cooperate in building infrastructure |

| Banks | Prospect of E-banking services |
|-------|---|
| ZB | Late adopter opportunities, commitment of the government to strengthen the banking industry, commitment of the government to facilitate the expansion of ICT infrastructure, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia and willingness among banks to cooperate in building infrastructure |
| WB | Late adopter opportunities, commitment of the government to facilitate the expansion of ICT infrastructure, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia and willingness among banks to cooperate in building infrastructure |
| AB | Late comers opportunities, commitment of the government to strengthen the banking industry, commitment of the government to facilitate the expansion of ICT infrastructure, improvement in the banking habit of the society, sustainable economic growth in the country, increment of tourist inflow to Ethiopia and willingness among banks to cooperate in building infrastructure |

Source: From Questionnaire and Interview

ETC has been exerting utmost efforts toward expansion of Next Generation Network (NGN) Information and Communication Technology (ICT) in the country. Expansion of the NGN Information and Communication Technology will enable the Corporation provide efficient and modern telecom services to the society and accelerate the development of school-net, woreda-net, agri-net, distance education, E-banking, e-medicine, dependable TV broadcasting, and other related services commercial banks in Ethiopia. In addition, in order to cope with the fast growth in the complexity of networks, services and their customer base, ETC has realized the need of a centralized National Network Operation Center (NNOC) that can improve the network performance and lower the time needed to locate and maintain faults.

Furthermore, it is able to ensure customers experience service quality and perceive the value of delivered service, and it also improves operational readiness for short time-to-market of new innovative services (Ma Zhiyong, Tewodros Hailemeskel, Li Xiaojin, 2008). Therefore, from the above discussion it is possible to conclude that there are good opportunities for the adoption of E-banking service adoption in Ethiopia Commercial Banks.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

This chapter as a whole presents the concluding remarks for the main findings in chapter four and important recommendations as per the main problems investigated in this research study respectively.

5.1 Summary of Findings

The main practice of E-banking among those banks that are providing the service have been for, balance inquiry, cash withdrawal, statement printing, PIN change, purchase goods or services, accessing his/her accounts 24/7 and funds transfers among others.

Important perceived benefits of using E-banking among those banks that are not currently providing the service but are planned to adopt the system were relative advantage, organizational performance, customer relationship and perceived ease of use.

The major driving forces that initiate banks to deliver banking services to the customer using electronic channels are existence of high competition in the banking industry, rapidly changing customers' needs and preferences, desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation, desire to satisfy customers and to keep the international banking standard among others.

Chances of risk, lack of trained and efficient staff in E-banking context, lack of suitable legal and regulatory framework, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet and security issues are the main challenges for adoption of E-banking in Ethiopian commercial banks. In addition, lack of customer awareness regarding the service is another challenge in order to provide the service

In general the finding of the study, offer other benefit for the adoption of E-banking, such as enhancing customer satisfaction, reduce the number of customers come to

banking hall, increase the productivity of banks, increase reliability and accessibility of banking service, creating good relationship between clients & bank and also used as a better information control.

5.2 Conclusion

This study aims at investigating the challenges and prospects E-banking service in Ethiopian commercial banks. At the same time this finding supports the study of Giglio(2002) and Robinson (2000).The other benefit found in the study were based on its usefulness in terms of time and cost saving. Based on the analysis made in chapter four and summary of findings the following conclusions are made on the assessment of the opportunities and challenges for the adoption of E-banking service in Ethiopian Commercial Banks.

ATM, Credit Card and debit card services, internet banking, mobile banking and other electronic payment systems are at infant stage (Gardachew 2010). The most dominant E-banking channel among those banks, which are currently providing the service is ATM card, which is the first generation of electronic banking channel, so from this it is possible to conclude that even banks that are providing the service did not sufficiently adopted the latest E-banking channel such as internet and mobile banking.

The main practice of E-banking among those banks that are providing the service have been for, balance inquiry, cash withdrawal, statement printing, PIN change, purchase goods or services, accessing his/her accounts 24/7 and funds transfers among others. E-banking service have the benefit of attracting high value customers, enhanced image, larger customer coverage, improvement of organizational efficiency, and load reduction etc from the view point of the bank.

As per the findings, the major driving forces that initiate banks to deliver banking services to the customer using electronic channels are existence of high competition in the banking industry, rapidly changing customers' needs and preferences , desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to cover wide geographical area, desire to build organizational reputation, desire to satisfy customers and to keep the international banking standard among others.

Chances of risk, lack of trained and efficient staff in E-banking context, lack of suitable legal and regulatory framework, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high cost of internet and security issues are the main challenges for adoption of E-banking in Ethiopian commercial banks. In addition, lack of customer awareness regarding the service is another challenge in order to provide the service. Therefore, from this, it is possible to conclude that there are challenges for the adoption of E-banking service among those banks that are not yet adopted the system and for the sufficient adoption of the service from the viewpoint of those banks that are currently providing the service in the country

In general, the findings of this study offer additional insights into the current E-banking adoption situation and its implications for E-banking growth in Ethiopia as an example of a developing country. Furthermore, the understanding of the barriers to E-banking adoption identified in this study may help to identify the best course of actions to promote its development. It will also be valuable to all banking industries of the country to increase their awareness and understanding of E-banking benefits.

5.3. Recommendations

E-banking system is a new financial evolution in Ethiopia, but it is an important issue, because it has a great impact on the whole banking system, at the same time its difficult and need a lot of efforts to be adopted and accepted by the banking industry, so it need a lot of efforts to succeed. Based on the above conclusion, the researcher recommends the following points:

- In order to successfully facilitate E-banking adoption in Ethiopia, it is advisable that National bank of Ethiopia, (NBE) urgently establish a clear set of legal frame works on the use of technological innovation in banking sector.
- For the successful implementation of E-banking system ICT infrastructure, is a major prerequisite, so government, needs to support banking sector by investing on ICT infrastructure development.

- Therefore, the national bank of the country in collaboration with all banks in the country advisable to prepare typical security technologies applicable to control system networks such as firewall, intrusion detection and prevention etc.
- Banks are advisable to pay special attention to deliver service to customers by using E- banking system, which can easily be accessible.
- To exploit the benefit of E-banking system, banking industry operated in Ethiopia needs to familiarize their customers with the processes and benefits of the system.

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APPENDIX

QUESTIONNAIRE

**St. Mary's University School of Graduate Studies Department of Accounting and
Finance**

MBA in Accounting and Finance Final Thesis Questionnaire

Dear Sir/Madam

My name is Tewodros Mulisa, MBA student in department of Accounting and Finance at St. Mary's University. The aim of this questionnaire is to identify the *challenges and prospects of E-banking service in Ethiopian commercial banks*. The information you provide in response to the items in the questionnaire will be used as part of the data needed for a study of *challenges and prospects of E-banking service in Ethiopian commercial banks*. The results of the study are anticipated to supply to the understanding of the basic challenges and benefits of providing new technology in delivering of service to customers in commercial banks of Ethiopia. I would like to assure you that the information you provide will be used only for the purpose of achieving academic award. Your involvement is regarded as a great input to the quality of the research results. Hence, I believe that you will enlarge your assistance by participating in the study. Your honest and thoughtful response is invaluable.

Thank you for your participation

Best regards,

Tewodros Mulisa,

MBA student at St. Mary's University

School of Graduate Studies

Department of Accounting and Finance

August, 2017

Please indicate the following by ticking (√) on the spaces in front of the response options

Bank Name: _____

Position: _____

Year of Establishment: _____

Work Experience: _____ years

Educational status

College Diploma First degree Second degree (Masters) PhD

1. Does your bank offer Internet or online banking facilities to customers?

Yes

No

2. What year did your bank commenced the use of E-banking?

3. What banking activities does your bank offer via E-banking?

| | Yes | No |
|---|--------------------------|--------------------------|
| i. Check Balance | <input type="checkbox"/> | <input type="checkbox"/> |
| ii. View account historical records | <input type="checkbox"/> | <input type="checkbox"/> |
| iii. Order Pin code, | <input type="checkbox"/> | <input type="checkbox"/> |
| iv. Transfer Fund with in the same bank | <input type="checkbox"/> | <input type="checkbox"/> |
| v. Transfer Fund across banks, | <input type="checkbox"/> | <input type="checkbox"/> |
| vi. Pay bills, | <input type="checkbox"/> | <input type="checkbox"/> |
| vii. Order/print account statement, | <input type="checkbox"/> | <input type="checkbox"/> |
| viii. Send message, | <input type="checkbox"/> | <input type="checkbox"/> |
| ix. Apply for loan, | <input type="checkbox"/> | <input type="checkbox"/> |
| x. Open account, | <input type="checkbox"/> | <input type="checkbox"/> |
| xi. Apply for credit/debit cards, | <input type="checkbox"/> | <input type="checkbox"/> |
| xii. Apply for Insurance | <input type="checkbox"/> | <input type="checkbox"/> |

4. Was huge investment involved in providing Internet banking services to your customers?

One Time Investment _____

Running cost (Estimated yearly average) _____

5. Will you say Internet banking has made it possible for your bank to expand its services to other areas of operations the bank was not initially offering?

| | Yes | No |
|--------------------------|--------------------------|--------------------------|
| Paying utility Bills | <input type="checkbox"/> | <input type="checkbox"/> |
| Credit Card | <input type="checkbox"/> | <input type="checkbox"/> |
| Online account review | <input type="checkbox"/> | <input type="checkbox"/> |
| Application for Loan | <input type="checkbox"/> | <input type="checkbox"/> |
| Fund transfer | <input type="checkbox"/> | <input type="checkbox"/> |
| Customer loyalty program | <input type="checkbox"/> | <input type="checkbox"/> |

6. In terms of operations and transaction costs, would you say E- banking has increased or decreased costs? _____

7. What do you think are the factors influencing adoption of E-banking in Ethiopian commercial banks?

| | Yes | No. |
|---|--------------------------|--------------------------|
| IT infrastructures | <input type="checkbox"/> | <input type="checkbox"/> |
| Attitude of the society towards E banking | <input type="checkbox"/> | <input type="checkbox"/> |
| The legal frame work of the country | <input type="checkbox"/> | <input type="checkbox"/> |
| Economical development of the country | <input type="checkbox"/> | <input type="checkbox"/> |
| Capacity of financial Institutions | <input type="checkbox"/> | <input type="checkbox"/> |
| Computer literacy rate | <input type="checkbox"/> | <input type="checkbox"/> |

8. Has the data made available to the bank by Internet banking helps the bank?

| | Yes | No |
|---|--------------------------|--------------------------|
| a. To tailor services to customers' needs? | <input type="checkbox"/> | <input type="checkbox"/> |
| b. To easy and facilitates loan processing procedure to customers? | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Help to increase loan provision to customers? | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Reduce cost for adverts since services offered are always available on the WWW page? | <input type="checkbox"/> | <input type="checkbox"/> |

9. If your organization started offering electronic banking services (or if you say yes for the above question):

A. Are links and interactive programs checked for accuracy and functionality?

A. Yes B. No if no, why? _____

B. Is security measures in place to prevent the web site information from being altered?

A. yes B. no if yes, what are they? _____

C. does the bank have procedures in place for when there is an interruption in service of E- banking for the customer?

A. yes B. no if yes, describe the procedures _____

D. Is electronic banking training provided to employees?

A. yes B. no

E. does the bank has a target market or trade area for e-banking?

A. yes B. no if yes what is it? _____

F. is any policies and procedures in place to address activities beyond the traditional trade area?

A. yes B. no if yes what are they? _____

G. what are the different benefits does the bank is realized by using e-banking channels?

| | Yes | No. |
|---|--------------------------|--------------------------|
| I. Attracting high value customers | <input type="checkbox"/> | <input type="checkbox"/> |
| II. Enhanced image | <input type="checkbox"/> | <input type="checkbox"/> |
| III. Increased revenue | <input type="checkbox"/> | <input type="checkbox"/> |
| IV. Larger customer coverage | <input type="checkbox"/> | <input type="checkbox"/> |
| V. Cost reduction | <input type="checkbox"/> | <input type="checkbox"/> |
| VI. Improvement of organizational efficiency | <input type="checkbox"/> | <input type="checkbox"/> |
| VII. Better monitoring of their customer base | <input type="checkbox"/> | <input type="checkbox"/> |

Others (explain) _____

H. If there is a difference in the implementation of e-banking service among the branches, what is the reason behind? _____

I. What are the different electronic channels through which the bank is delivering the service to its customers? You can choose more than once!

| | Yes | No |
|--------------------------|--------------------------|--------------------------|
| A. Internet banking | <input type="checkbox"/> | <input type="checkbox"/> |
| B. ATM | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Tele banking | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Mobile or SMS Banking | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Others _____ | | |

J. What are the different ATM and other cards available? You can choose more than once.

| | Yes | No |
|-----------------|--------------------------|--------------------------|
| A. Credit Card | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Salary Card | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Visa Card | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Student card | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Master card | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Debit card | <input type="checkbox"/> | <input type="checkbox"/> |
| G. Other _____ | | |

K What options are available to the customer once they have accessed e-banking?

You can choose more than once!

| | Yes | No |
|-----------------------------------|--------------------------|--------------------------|
| A. Fund transfer | <input type="checkbox"/> | <input type="checkbox"/> |
| B. New account set-up | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Insurance premium payment | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Credit application | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Balance inquiry | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Bill presentment and payment | <input type="checkbox"/> | <input type="checkbox"/> |
| G. Cash withdrawal | <input type="checkbox"/> | <input type="checkbox"/> |
| H. Purchase of goods and services | <input type="checkbox"/> | <input type="checkbox"/> |
| I. Utility payment | <input type="checkbox"/> | <input type="checkbox"/> |

J. Others/ mention it

L. Do you think that the bank has sufficiently implemented the system?

A. Yes

B. No

M Rate the risks which involved because of adopting / using electronic channels for delivering banking services?

| | Yes | No. |
|---------------------------------|--------------------------|--------------------------|
| A. Transaction/operational Risk | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Security Risk | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Compliance/legal risk | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Reputation Risk | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Strategic Risk | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Others _____ | | |

N. What measures you are taking to minimize this risk?

Thank you!

**St. Mary's University School of Graduate Studies Department of Accounting and
Finance**

MBA in Accounting and Finance Final Thesis Interview

Interview Questioner for Selected commercial Banks

1. Do you offer E-banking service to your customer?
2. Why? Why not?
3. What benefits the bank can maximize by offering E-banking service
4. How do you evaluate the legal ground towards E- banking service?
5. Do you believe E-banking is safer than paper based banking?
6. Which E-banking outlet you offer to your customer?
7. Does E banking bring the benefit that you aspire from it?
8. What is the major challenge to E-banking?
9. What possible opportunities are there to E banking?
10. Do you think there is enough infrastructures to offer E banking service in Ethiopia?