



SEEK WISDOM, ELEVATE YOUR INTELLECT AND SERVE HUMANITY!

Addis Ababa University  
አዲስ አበባ ዩኒቨርሲቲ



***THE IMPACT OF LIBERALIZATION ON THE BANKING SECTOR IN  
ETHIOPIA***

BY:

**NAHOM BEYENE**

**A thesis submitted to the Collage of Business and Economics in  
partial fulfillment of the requirements for the Degree of Master  
in Business Administration**

**COLLAGE OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF MASTERS OF BUSINESS ADMINISTRATION**

**JULY, 2021**

**ADDIS ABABA, ETHIOPIA.**

***THE IMPACT OF LIBERALIZATION ON THE BANKING SECTOR IN  
ETHIOPIA***

**BY:  
NAHOM BEYENE**

**A thesis submitted to the Collage of Business and Economics in  
partial fulfillment of the requirements for the Degree of Master  
in Business Administration**

**COLLAGE OF BUSINESS AND ECONOMICS  
DEPARTMENT OF MASTERS OF BUSINESS ADMINISTRATION**

**ADVISOR: TAKELE FUFA (Ph.D.)**

**JULY, 2021  
ADDIS ABABA, ETHIOPIA.**

## **Declaration**

I, the undersigned, declare that this thesis entitled as 'The Impact of Liberalization on the Banking Sector in Ethiopia' is my original work, has not been presented for degree in any other university and that all sources of materials used for the thesis have been duly acknowledged.

Declared by:

Confirmed by Advisor:

Name: Nahom Beyene

Name: Takele Fufa

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## **Certification**

This is to certify that Mr. Nahom Beyene has carried out his research work on the topic entitled 'The Impact of Liberalization on the Banking Sector in Ethiopia. The work is original in nature and is suitable for the submission for the reward of MBA Degree of AAU.

**Advisor:**

**Takele Fufa (Ph.D)**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Addis Ababa University**  
**COLLAGE of Business and Economics**  
**Department of Masters in Business Administration**  
**(MBA)**  
**Graduate Program**

**The impact of Liberalization on the banking sector in Ethiopia**

**By:**

**Nahom Beyene**

**Approved by of Board of Examiners**

\_\_\_\_\_

**Advisor Signature**

\_\_\_\_\_

**Examiner Signature**

\_\_\_\_\_

**Examiner**

**Signature**

## ABSTRACT

*liberalization in the form of direct and portfolio investment in the banking sector was officially announced by the government in 2019, the study investigates how this major policy shift after more than seven decades will affect domestic banks that are currently in operation in the country. With a largely cordoned off sector domestic banks have become the pillars of the financial scene in Ethiopia and the paper utilizes quantitative and inferential analysis to analyze how this paramount sector would be impacted once the policy is undertaken, utilizing econometric models and stratifying the population in different homogeneous strata the study identifies how banks would react to foreign competition and supplements that analysis with the study of important ratios indicating where the sector currently stands and if it can withstand the competition heading its way. Results from the analysis indicate that banks that were established early on before the year 2000 to be exact perform much better on many scales and are largely affected by micro economic factors while latter established banks show a volatile performance and are affected largely by macro-economic factors. The fact that even better performing banks can't meet the international standards and recent banks show volatility indicate that time is needed for banks to adjust their stances for the competition and a mix of the Polish and French approaches would best suit this demand but any policy that is undertaken must be done in a prudent and intentional manner so that rational and proactive decisions can be made.*

## ACKNOWLEDGEMENTS

I am are over helmed in all humbleness and gratefulness to acknowledge my depth to all those who have helped me to put these ideas, well above the level of simplicity and into something concrete.

First, I would like to thank GOD for helping me complete this research, I would also like to express my special thanks of gratitude to my advisor Dr. Takele Fufawho gave me the golden opportunity to do this wonderful research on the topic,which also helped me in doing a lot of Research and i came to know about so many new things. I am really thankful to them.

Any attempt at any level can 't be satisfactorily completed without the support and guidance of my parents and friends.

I would like to thank my parents who helped me a lot in gathering different information, collecting data and guiding me from time to time in making this research, despite of their busy schedules, they gave me different ideas in making this project unique.

## Contents

ABSTRACT.....	i
ACKNOWLEDGEMENTS .....	ii
List of tables.....	v
List of figures.....	vi
List of acronyms .....	vii
1. CHAPTER ONE: INTRODUCTION.....	1
1.1. Background of the study.....	1
1.2. Statement of the problem .....	5
1.3. Objectives of the study .....	6
1.3.1. General objective .....	6
1.3.2. Specific objectives.....	7
1.4. Significance of the study.....	7
1.5. Scope of the study .....	8
1.6. Limitation of the study.....	9
1.7. Organization of the study .....	9
2. CHAPTER TWO: LITERATURE REVIEW .....	10
2.1. Introduction .....	10
2.2. Theoretical review .....	10
2.3. Empirical review.....	19
2.4. Identification of research gap.....	23
2.5. Conceptual framework .....	24
3. CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY .....	26
3.1. Methodology.....	26
3.2. Research design .....	26
3.3. Data type and source .....	27
3.4. Data collection and instruments.....	29
3.5. Data analysis .....	29
3.6. Model specification.....	30
3.6.1. Dependent variable.....	30
3.6.2. Independent variables .....	31
3.7. Hypothesis.....	34
3.8. Sampling.....	35

4. CHAPTER FOUR: FINDINGS AND DISCUSSIONS.....	40
4.5. The current standing of the banking sector in ethiopia and Liberalization policy .....	50
4.5.1. Performance of banking sector in ethiopia .....	50
4.5.2. Types of liberalization that could be undertaken.....	62
4.6. Government policy before and after liberalization .....	66
4.7. What banks could do to perform well under liberalization.....	69
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS.....	71
5.1. Conclusion.....	71
5.2. Recommendation.....	72
References .....	74
Annex .....	77

## **List of tables**

Table 4.1: Stratum one.....	36
Table 4.2: Stratum two.....	37
Table 4.3: Stratum three.....	38
Table 4.4: Stratum four.....	39
Table 4.5: Micro economic ratios for sample one .....	40
Table 4.6: Regression analysis for Addis international bank .....	41
Table 4.7: Micro economic ratios for sample two .....	44
Table 4.8: Regression analysis for Oromia international bank.....	44
Table 4.9: Micro economic ratios for sample three .....	46
Table 4.10: Regression analysis for united bank .....	46
Table 4.11: Micro economic ratios for sample four .....	48
Table 4.12: Regression analysis for awash international bank.....	49

## List of figures

Figure 4.1: Deposit growth for awash bank .....	51
Figure 4.2: Return on asset for awash bank .....	52
Figure 4.3: Liquidity ratio for awash bank .....	53
Figure 4.4: Deposit growth for united bank S.C. ....	54
Figure 4.5: Return on asset growth rate for united bank.....	55
Figure 4.6: Liquidity ratio for united bank .....	56
Figure 4.7: Deposit growth for Oromia international bank.....	57
Figure 4.8: Return on asset for Oromia international bank.....	58
Figure 4.9: Liquidity ratio for Oromia international bank .....	59
Figure 4.10: Deposit growth for Addis international bank .....	60
Figure 4.11: Return on asset for Addis international bank .....	61
Figure 4.12: Liquidity ratio for Addis international bank.....	61

## List of acronyms

CAR	Capital adequacy ratio
DEP	Deposit
EPS	Earning per share
GDP	Gross domestic product
LIQ	Liquidity
INF	Inflation
ROA	Return on asset
UEP	Unemployment

# CHAPTER ONE: INTRODUCTION

## 1.1. Background of the study

Since its genesis the banking sector has been one of the most important parts of the financial sector, and over its existence it has grown so large that it in most parts of the world it has become a Pseudo name for the financial sector gulling up the rest of the sector. This is especially true in developing countries where the banking sector is the undisputed king of the aforementioned sector, although there are plethora of reasons for these the main reasons appear to be the lack of infrastructure (i.e. good networking, financial markets and etc.), lack of knowledge and government policy (Cole, 2014). And it's up on the last of the reasons that this particular study has focused on, although it can be argued that all three of the reasons including the first two are related to government policy this study only focusses on the effects of current and especially future government policy with regard to this important sector. Before delving deep in to the ins and outs of current and future policy to get the full context under which policy change might occur it's important to understand the history and development of banking in Ethiopia and the world at large.

Contrary to popular belief there is no agreed up on date where banking or banks started arachnological evidence from places like ancient China, Rome and the Greek-Macedonian city sates seem to indicate primitive forms of banking existed even before the utilization of currency, where by merchants in the larger cities and towns would lend and deposits agreed up on mediums of exchange like animal skin, crops and precious metals from traveling merchants or citizenry around their respective areas. Although similar forms of banking existed in the aforementioned places and elsewhere around the world including the many empires of Africa banking culture didn't develop with the same pace everywhere while banking practices in places like China remained largely unchanged up until recently (i.e., the 18<sup>th</sup> century) empires like Rome completely transformed the banking system and norms (Smith, 2013). According to Ken Stephens the chef editor of the popular online business news website marketreview.com the Romans were the first culture to institutionalize banking, taking it from the temples to formal banks, backed by the full power of the law. The law was certainly on the side of the bankers in

the early days, with non-payment of debts a crime, as well as debts being passed along to one's descendants, sometimes for several generations. Ken proceeds to state that this form of banking started to decrease the influence and power of money lenders in the Roman empire, especially during the transition from the Roman empire to the Holy Roman empire where because of high interest charges the Catholic Church became a paramount part of life at that time outlawed money lending, what would be known as loan sharking today under the sin of usury but the church picked up the mantle of lending and ran with it becoming for centuries the largest lender in the western world.

Although laying down the ground work for what is to become modern banking the many characteristics of the banking that are known to as today weren't present during Roman and Holy Roman times, the many features that make today's banks powerful and profitable were invented and developed during the Renaissance in the Italian states. The first regular institution resembling what we call a Bank, was established at Venice, nearly seven hundred years ago the Republic being engaged in war, and falling short of funds, had recourse to a forced loan. The contributors to that loan, were allowed an annual interest of four per cent on the sums they had been obliged to lend (Hildreth, 2001).

During these periods of banking each kingdom, city state, country or empire followed their own rules, methods and regulations when it came to banking but as time went on and ideals of the different academic movements such as the Renaissance and the Enlightenment which unlike the former focused on academic contributions more than artistic ones started to gain attraction throughout Europe and the new world what would later become the Americas, this led to the formalization of many important subjects one of which was economics. The man credited with being the father of this subject Adam Smith was an ardent supporter of an ideology that is known as laissez-faire simply put this economic principle advocated for no intervention in the banking sector as well as all other sectors of the economy at large claiming that the invisible hand (i.e. the forces of demand and supply) would even out any issue in the economy and this principle gained attraction in the rising power of the time U.S.A and as this country continued to grow and get richer and become the super power of the world this system of banking also became dominant as a result of that (Georgeta, 2012).

The last of the major theories that affected banking in a major way was socialism where by banks became a government institution where by their actions were planned and coordinated along with the larger economy although on the surface this might seem a great idea along with many aspects of socialism implementing it became extremely difficult and led to mediocre performances by banks under such system and with collapse of the soviet union in 1991 and China adopting a more open economic policy under Deng Xiaoping in the late 1970s this type of banking has all but despaired with a few exceptions nearly all countries have more or less opened up this sector even those accused of following stringent banking policies have some schemes to encourage private investment in the sector (Brown, 2015). As the above pages indicate the study focuses on the banking sector and how a proposed shift of policy in Ethiopia could affect the performance of the sector.

With the history of the sector in mind the question of the study will become the author hopes a bit clearer, as one can assume since the collapse of communism the issue of liberalization and its particular impact on the banking sector have become a major issue throughout the world and Ethiopia is no exception. One important point to point out before proceeding is the nature of liberalization that is being studied here, in the context of the study at hand liberalization is the allowing of foreign banks to operate freely in the economy along domestic ones.

The importance of the banking sector for the economy of the country can't be understated and as it will be pointed out in subsequent pages because of these importance the different governments of Ethiopia over the history of banking in the country all followed different levels of protection for the sector but now their seems to be a policy shift with liberalization taking the center stage in most policy decisions and since the policy can led to the growth of the domestic aspect of sector or its demise the author was highly integrated to find out how domestic banks would cope with international competition if it was to be allowed as being discussed currently in power circles. As the sector is quiet important several studies have been conducted related to the issue at hand, one of the more unique studies attempts to analyze the reasoning behind the following of a more closed approach to the sector largely using a qualitative methods the author attempts to reason on why liberalization is necessary and states, It is found that financial sector liberalization in Ethiopia is very low in comparison with some neighboring countries and the sector remains poor and under developed (Assefa, 2016), although the reasoning methods of the study stated

could be argued it provides a good insight in to the minds of policy makers and their reasoning's for their policy decision makings. In the same manner as the aforementioned study (i.e., qualitative research) another author Arnaldo Mauri tries to link historical development of the country with banking development and the respective policy choices of different governments of the country the author claims the most important point of banking in Ethiopia is the establishment of a wholly Ethiopian banks and puts as the following the early bank with its client base being largely made up of wealthy Ethiopians and foreigners didn't have the intended impact on the economy a few years later, disappointed by the behavior of this bank, mainly devoted to profit-making rather than promoting economic development, the Emperor supported the establishment of a wholly Ethiopian bank, the Society Nationale d'Ethiopie pour le Developpement de l'Agriculture etdu Commerce. (Mauri, 2003).

While the above-mentioned authors attempted to elaborate policy decisions through qualitative methods other authors endeavored to explain the impact of such a policy through quantitative methods a good example of this would-be Kozo Kiyota who in a 2007 study attempted to use a quantitative method to show the potential positive outcomes of liberalizing the sector.

In addition to these authors other authors like Abdullahi Dahir Ahmed and Sardar M. N. Islam in 2007, Dani Rodrik in 2015 and Jan Kregel in 2010 all explained in different manners the effect of liberalization on banking. Although the conclusions and recommendations of these studies differ from each other sometimes in fundamental ways most seem to agree that the time of liberalization, government policy through and after liberalization and efficiency of the local sector are of paramount importance to the success of the policy. These findings have been taken in to consideration by the author of the study while analyzing and interpreting the collected data. With the findings of the aforementioned papers in mind the author attempts to analyze how the allowing of foreign competition in to the sector which till now is compromised of only domestic banks will affect the performance of the domestic banks, this banks although some argue not to the expected extent have grown over the last 15 years and currently employ thousands and contribute millions in taxes and hence the impact of any policy decision on this entities must be studied carefully and its exactly that this study hopes to do.

Although some of these studies are in the same vein as this one there are several important gaps these study has attempted to fill the first one is the time gap most of these studies where printed

in the last decade, meaning there is a significant time gap where the performance of the sector in many ways has changed and with it government policy towards it and most of the studies didn't accompany this, the second gap is most of the studies that directly address Ethiopia are/where constructed in a qualitative manner and the author hopes to focus on quantitative approach where the results of the study are supported by a concrete numerical data base and the third factor is this study has taken in to mind is the different policy direction of the government whereas the pervious studies where conducted in years where government policy was more or less directed towards a closed sector the current government policy seems to favor opening up the economy and hence whereas previous studies treated the idea of liberalization as a distant thought this study treated it as an inevitability.

## 1.2. Statement of the problem

Since the collapse of communism in 1991 with the demise of the Soviet Union and the subsequent establishment of the world trade organization (i.e. WTO) in 1995 the issue of liberalization including liberalization of the financial sector have taken center stage with most of the western world agreeing that it's the only way to move forward for nations in a globalized world economy and on the other side of the spectrum, developing and some developed nations argue that there needs to be protection for certain sectors so that their growth is unimpeded and aren't crushed by a far larger foreign competition.

With finance spear headed by the banking sector growing in importance over the last three decades its liberalization has become a point of contention, but as the years went on the argument morphed from should we liberalize to how should we liberalize as most of the world came in to consensus that closed off economies are worst for it. But the argument hasn't diminished with the aforementioned agreement, the type and time of liberalization became a sore point of contention. The experience of central and some eastern Europeans and east Asian countries are used as a glaring example by western thinkers and agencies that opening up a country's banking and financial sectors will lead to massive growth and enlarged access to the population of the country to these services, on the other hand more left leaning thinkers point out the examples of near east, central Asia and Russia as examples that this policy will lead to the downfall of domestic economic forces.

Ethiopia for the last 80 plus years through three different governments has usually stayed on side of caution and chose to close most of its economy including the banking sector to foreign competition. Although the decision to close of the economy in the past differs in severity and scope in accordance with the government in power the fact that all three governments of recent memory chose this path seem to indicate a preservation of some sort with regard to liberalization. With a policy of reclusiveness especially in banking the norm for many years the issue of liberalization seems to have been firmly in the rearview mirror, this all changed in 2019 with the government announcing that it will allow direct and portfolio investment in the sector. Since this will be the first time in over seventy years foreign banks will be allowed to operate in the country how the domestic banks will be affected is yet known, but as the sector has become one of the most important in the last two decades its quiet imperative that the impact of any policy be analyzed especially those that will transform the sector quietly severely like liberalization and its exactly that this study will do, analyzing how this policy would affect the domestic sector and what liberalization policy would best suit the current form of the sector.

### 1.3. Objectives of the study

#### 1.3.1. General objective

As stated in the previous pages the issue of liberalization is a highly politicized one throughout the world and in a country where political divisions run deep issues like liberalization become even more contentious and even small things like data interpretation can highly be affected by personal and political views but in this study the author to the best of his abilities has attempted to distance his personal political views from the study and produce a study where the data and results take center stage.

With that being said the objective of the study can broadly and simply be said to be as analyzing how liberalization would affect the local banking sector in Ethiopia and what policies can minimize the effect of such a policy.

### 1.3.2. Specific objectives

With the above objective withstanding, to specify a little further below are points that can be said to be the major objectives of the study:

- To assess the impact of liberalization on the performance of domestic banks in Ethiopia.
- To recognize different potential liberalization policies that could be undertaken with the current form the domestic banking sector in mind.
- To identify supplementary government policies that can smoothen the effects of the policy for domestic banks.
- To examine what banks could do to become competitive once the policy is undertaken.

### 1.4. Significance of the study

This particular study doesn't promise a new discovery or an ideological revolution it promises to fill a gap that the author found while reviewing several documents in relation with this particular topic and that gap is the effect of liberalization on one of the most important sectors of the country, in the near future policy makers will be faced with an important decision on whether the financial sector which is spear headed by the banking sector should be liberalized or not the author hopes that although the chances are slim a policy maker will have a chance to read this study and have an additional knowledge or a different perspective from what he/she has at the time on that particular policy decision. Another group of people that the author hopes have an audience with the study are people in the banking sector especially those in higher up decision-making rankings the author hopes through the study they have an understanding of the potential impact of liberalization on their sector in general and their respective banks in specific. When it comes to the practical significance of the study most revolve around the government, an individual or group of individuals that are tasked with conducting or designing the policy might come across this paper and discover how different banks are currently performing, how they might react to liberalization and weather or not with the current form of the sector if liberalization is recommended and if the policy decision is unavoidable what type of liberalization would best protect the interest of the sector and the economy.

The author hopes that by reading this document the aforementioned parties have a better or a new perspective on the policy decision being discussed, especially since this policy decision can deal an amazing boost or a devastating blow to the sector in question.

### 1.5. Scope of the study

As stated in the above pages this particular study has solely focus on the banking sector and the potential impact of liberalization on it and the reason for this as attempted to be explained in the above pages is, the fact that different sectors of the same economy or even economic segment might react differently to liberalization( Hanson and Ramachandran,2004) and analysis of all the sectors that are painted with a broad brush as finance requires a large amount of time and resource which aren't available to the author currently and the second reason why the scope of the study is limited to the banking sector is the simple fact that in Ethiopia the banking sector dominates the financial segment of the economy as pointed out by the national bank of the country which in turn is a major pillar of the service sector of the country which arguably has overtaken the agricultural sector as the largest sector of the economy and hence when banking sneeze the economy catches a cold, making the analysis of this particular sector important.

The author has utilized data from banks that were established in the early days of the sector in the country to the more recent ones, the reasoning behind this is first to have a linear data set which has made the variables utilized in the model more stable and accurate which has allowed the study to understand trends of the sector and make an accurate predication of the future. LIQ (liquidity) has been used as an indicator of performance of the banks since according to Investopedia it shows how much investors are able to repay their debts, although it has its short comings it's one of the best indicators of performance utilizing currently across the world.

In addition to these quantitative scopes, the study has also presented theoretical justifications for different policy standings with regard to liberalization since hundreds and even in some cases thousands of policy choices exists the study has not utilized policies or theories that are to the right of Chicago school of thought and to the left of Keynesians school of thought, this has allowed the study to focus on well accepted theories that are within the main stream of financial and economic thinking.

## 1.6. Limitation of the study

With regards to limitation of the study the first limitation the study faced is major shift in policy occurring during the time in which this study being compiled or afterward since the government in the past has said that the policy of choice might be privatization and not liberalization and in such a case most of the findings of the study cannot and should not be generalized to the policy choice, although the study could easily be generalized for the banking sector it might prove a challenge to utilize the findings of this paper as an indictment of the entire financial sector, since as elaborated in the above pages of the study different sectors react differently to liberalization, a limitation in generalization might also be faced when dealing with banks that have niche client bases those banks might not be affected by international competition and hence applying the findings of this paper to this banks might be unfruitful.

## 1.7. Organization of the study

The research study has been prepared in five chapters. The first chapter is introduction; which includes back ground of the study, statement of the problem, objectives, methodology, significance of the study, scope and limitation of the study. Literature review is second chapter and the third chapter includes methodology, computations and results obtained have been discussed in chapter four and finally chapter five presents the summary, conclusion and recommendation of the study.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1. Introduction

As attempted to be explained in the above pages the issue of liberalization with regard to the financial sector or with economy at large has been a contentious one for some time now, especially as highlighted by the study after the collapse of communism and as a result there are a plethora of documents, books and other wise that attempt to explain or elaborate different viewpoints with regard to this topic. Although, because Ethiopia for the many decades usually followed a relatively closed financial sector there aren't many documents that outline liberalization and/ or its effect on the country's different sectors but regardless the author below has presented theories and documents that are the most relevant to this study.

### 2.2. Theoretical review

With a contentious issue such as liberalization there are bound to be many theories, but a less known fact is that there are a number of theories with regard to banks as well, many of them deal with the types of banks and how they should and are operating and these theories come in handy later on when analyzing the type of competition that domestic banks might face when liberalization ensues and how they might react to liberalization once that policy is undertaken, the dominance or absence of certain types of banks is highly indicative of the sector and were its stand (Hughes, 2013) as it can be understood from the statement the prominence of certain type of banks and the absence others can be highly symptomatic on the development level of the sector and how it might react to liberalization and its quiet useful to understand the different types of banks that currently operate in the country. The most popular theories according to Adam Barone a well-respected financial analyst and academic classify banks in to three broad categories before the classifications are stated there are some points that must be understood and they are explained in the subsequent paragraphs.

There are three cardinal points to take from the classification of banks with relation to Ethiopia and these are the fact that there is no distinguishable difference between banks that claim to

focus on retail and those that claim to focus on commerce/cooperatives, the lack of difference in the service being provided has largely blurred the line between the two types of banks to a point where attempting to classify banks along this line will prove to be futile (Assefa, 2016), although this might make the generalization of the findings of the paper easier, the lack of specialization among local banks makes them easy prey for international competitors and forces the authorities to look for a one fits all policy, which usually fails making liberalization a tedious task (Ahmed and Islam, 2010).

The second point that can be observed from the classification is the lack of an investment bank this can be attributed to a lack of experience, recently established banks and the absence of a financial market without which exercising such type of banking is extremely difficult although is doable (Georgeta, 2012), although this might appear to be an insignificant point to dwell on, the presence of investment banks usually facilitates the development and growth of financial markets which is imperative if local banks are to survive in a competitive sector, the absence of such markets are one of the major reasons why shock therapy form of liberalization failed in Russia and their presence is largely accredited to the success of the same policy in the Baltic states (Hanson, 2014). The last point with regard to this classification is the classification of the commercial bank of Ethiopia, although it might be an extreme stretch to call it a sort of mini central bank, its trend and practices affects the entire market although it could be argued that this is the case simply because the bank is more efficient than its competition the fact that the government is its owner and it nearly has a monopoly on all government related works has caused some simmering unhappiness among the private banking industry in the country but due to these privileges the commercial bank of Ethiopia enjoys it seems to be a member of an exclusive club of local banks that might survive a foreign competition. With the above points pointed out the classifications are as follows:

- Retail banks: these are the most popular type of banks throughout the world and in Ethiopia. They offer what can be described as regular banking services such as deposits, loans, mortgages and foreign currency exchange services, although popular throughout the world and extremely rare in Ethiopia some banks of such kind also help their clients with wealth management, this type of banks will likely face the stiffest competition once the policy under question is implemented, banks in developing nations that operate in

and around banking services that can be referred to as retail are usually the ones that face the most difficulty with liberalization and globalization ( Brown, 2017), with most banks in Ethiopia falling under this umbrella with policy of liberalization they will likely face difficulty.

- Commercial banks: sometimes are referred to as cooperate banks, contrary to popular belief commercial and retail banks are not the same, although the term is erroneously and freely used as exchangeable in Ethiopia the latter focuses on as its name indicates on commercial entities while the former focuses on individual services. Although there are banks in Ethiopia that claim to be retail or commercial their services are basically indistinguishable from their counterparts that claim otherwise, with deeper ties to their customers and larger business dealings commercial banks prove to be more resilient than their retail counterparts when it comes to globalized competition (Brown, 2017).
- Investment banks: largely focused on corporate clients these types of banks are non-existent in Ethiopia, they are complex institutions that are heavily skewed towards investment and other financial transaction like mergers and bundled mortgage trading and usually operate with regards to large amounts of money the biggest of these banks are located in wall street New York or the city in London (Macallan, 2015). These types of banks became infamous in the late 2000s as they were largely held responsible for causing the 2008 financial collapse and the subsequent depression that would become to be known as the great depression of 2009.
- Central banks: according to the aforementioned expert the last type of banks are central banks, operating on a different weave length they are not bound by market forces like the above stated forms of banking in the classical sense, this is because most of these banks are government held and have the sole aim of stabilizing the financial sector through open market operation (i.e. Currency stability, controlling inflation and monetary policy) in Ethiopia the previously mentioned central bank of Ethiopia reigns in this position and some of the most famous central banks of the world include Federal Reserve Bank in the U.S, the European Central Bank in the EU and the Bank of England in the same sake country.

Although spawning a multitude of theories that differ in their basic premise with regard to liberalization, nearly all seem to agree that liberalization is defined as reducing or minimizing

government role, intervention and/or bureaucratic red tape (Macadams,2017) and this definition also holds true with regard to the banking sector. Although this definition seems simple enough since liberalization is heavily attached to economic principle what appear to be simple definitional differences like between reducing or minimizing can have a large impact when it comes to policy decisions. All major economic principles have theories or inclinations when it comes to liberalization and since to understand where Ethiopia lies in the ideological spectrum and where the current government seems to want to take it, it's important to understand the major theories and their principles when it comes to liberalization, some of the most important economic principles and their views on liberalizations are presented as follows:

- Capitalism: arguably tracing its history to the origin's ancient human civilizations, capitalism really came in to its own in 1776 when the man known to history as the father of economics published, *An Inquiry into the Nature and Causes of the Wealth of Nations* or simply known as *wealth of nations* (Appleby, 2010). According to the website Investopedia smith's argument in this book can be simply summarized as that people promote public interest through economic choices a free-market force that became known as the "invisible hand." This economic book will have significant effect over the years morphing initially in to the classical school of thought with contribution from the likes of David Ricardo and Jean-Baptiste Say and ending up in neo liberalism which advocates for utter economic liberalization, because of the aforementioned thoughts and standings of this ideology its adherents usually frown up on any sort of restrictions and usually support a totally open economy and the same holds true for their stance on the banking sector. Although initially implemented in a limited way during emperor Haile Selassie and the EPDRF government a total capitalistic model has never been implemented in Ethiopia in the banking sector or the economy as a hole, this is a point that is usually a sticking point in the country with those who support international competition claiming that the sector is largely closed and needs more competition to reinvigorate it while others claim that when one overlooks the absence of international players the sector is largely open. It's important to note

here that not all forms of capitalism adhere to total liberalization and a more radical version of this school of thought is discussed below.

Another iteration of this ideology that is currently popular around the world is neo liberalism, and is discussed briefly below

- Neo-liberalism: born in the 1980s during the rain of Ronald Regan and Margert thatcher in the US and UK respectively the idea was highly popularized by a Chicago university professor known as Milton Friedman. Drawing their philosophical standing from neo classical economics they advocated for a free-market economy lead by the private sector, in this ideology the idea of government intervention is considered as a disruptor to the markets so it wasn't acceptable by its protagonists (Harvey, 2012). This ideology emphasizes the need for a strong and vibrant private sector and holds finance and banking especially as an impeccable part of this sector, they believe that competition among the banks will lead to a natural equilibrium interest rate (Clayton, 2014). This particular mode of thinking has never been realized in Ethiopia, even today where arguably the banking sector has much more freedoms the current status quo is far from being identified as a liberal one, but some have given the current government some slack for its perceived attempt to walk to this direction this is because throughout the world this particular ideology is facing massive backlash because of a multitude of factors.

An ideology tracing its roots to the right but with a little different view would be Keynesianism and is discussed briefly below:

- Keynesianism: introduced during the great depression this economic school of thought other than supporting free capital movement presented a radical departure from the aforementioned school of thoughts, introduced by the famous British economist John Maynard Keynes in the 1930s it advocated for large government expenditure in the economy, this found massive popularity among the countries of the day who were struggling with the great depression, but this idea would come under massive scrutiny with the rise of neo-liberalism and would dwindle away to obscurity but this ideology or school of thought would make a comeback in the

1980s and 90s with the rise of neo-Keynesianism (Brainer, 2020). Since this school of thought is the brain child of a single person its standing on a lot of issues is quite clear and this is also true for banking, in their article public banking and post-Keynesian economic theory published on international journal of political economy the authors Wesley C. Marshall & Louis-Philippe Rochon point out that Keynes placed a great deal of emphasis on the role of banks in monetary productive systems. For instance, Keynes states that “banks hold the key position in the transition from a lower to a higher scale of activity. With this emphasis on banking Keynes advocated for a free market with government intervention since he believed that market forces are inherently unstable it’s the sort of policy, we have had for the last three decades a heavy-handed central bank mixed with a free market, but as anyone can notice from the lack of foreign banks in the country the major difference between this school of thought and the one implemented in the country is the lack of international competition. Although Keynes himself didn’t lay out plans for liberalization neo-Keynesians like Dani Rodrik have suggested a slow and gradual liberalization of the sector coupled with a strong monetary policy.

Although the economic right possesses much more school of thoughts and ideologies than the above mentioned, these are the most relevant to this study. Now to check the other side of the isle, the economic left also contains a couple of major thoughts in relation to liberalization, let’s start with the most famous socialism:

- **Socialism:** contrary to popular belief socialism wasn’t founded by Fredrik eagles or Karl Marx its founding blocks were laid during the French revolution in 1789 and surprising of most was it was first adopted as an official manifesto by the American labor party, with the above statements in mind it would be extremely wrong to assume that Karl Marx and Fredrik eagles didn’t play a significant role in the growing of the ideology, simply put the ideology advocates for a government regulated economy although this idea has morphed throughout the years some times to mean communal ownership and sometimes mere economic regulation and this ideology looks very favorably towards government regulation although there isn’t a universal method recommended by the ideology its simply

advocates for higher government regulation in the economy to lift the masses as they like to call them towards higher living standard (Rowman & Littlefield, 2015). Banks were frowned upon by this school of thought. Marks as one of his tenants to his ideology insisted that credit should be monopolized by the state in simple words no private banks, this was embraced by the communist government in Ethiopia where as stated in the above pages some banks were merged while others were expelled in order to achieve the stated goal, some in the country wrongly argue that the allowing of international competition would present a shift from a policy that resembles a socialist one but this isn't true as a slow process of liberalization was already under way for the past decades in Ethiopia.

- Communism: as stated above socialism since its inception has morphed in to different forms and one of the most famous and usually wrongly used interchangeably with socialism is communism, communism is a radical interpretation of the creeds of socialism made famous during the 19th and 20th because of the workers movement in Europe and America and the Russian revolution of the 1920s the ideology calls for communal ownership of resources and a planned economy and a major aspect of the economic block of communism was centralization and monopoly of credit and means of production, this was to be used as an antidote for the fragile market forces that were quailed in countries that followed this ideology government expenditure was of paramount importance helping the government provide important services throughout the economy (Panitch, 2015). Although calling themselves communists including in Ethiopia there has never been a true communist state or system in the world so it's particularly difficult to state or even speculate the fate of banking under such a system but if the extreme forms of socialism witnessed throughout the world is anything to go by the picture might be bleak, since there is a call for communal ownership most probably banks will be reduced to nothing more than large vaults.

In more recent times a comparatively new economic ideology has come to be popular especially in developing countries and this mixed economy:

- Mixed economy: it's quite hard to explain mixed economic system in a single phrase or paragraph since each country has its own iteration and application for it but most

seem to agree that it can be defined in two major ways, the first being a system that combines private enterprise and public enterprise and the second being a blend of state intervention and free enterprise, advocated by social democrats in western Europe after the second world war it has been the most dominant ideology in our country for the last two decades (Young,2019). At its core the ideology advocates that certain important sectors of the economy should remain in government hands or be protected and some should be allowed to be held by private enterprise. The EPDRF government that followed this ideology seems to have determined that banking was one of these sectors although their efficiency can be argued the sheer number of banks that are currently operating or have licenses pending seem to indicate a level of success to this system and it's from this point that the country would move forward by taking one of the most difficult steps in liberalization allowing foreign competition.

Although most of the time discussed as a monolithic policy decision liberalization with in its self has different variations and/or forms some of the most prominent and the ones that will likely be applied in ethiopia are the following:

- Shock therapy: this approach largely advocated for by neo liberals is an infamous one with Russia's economy largely being desimated in the early 90s, although because of the Russian example is an important one similar policy decisions have yielded much better results in Baltic states but an important lesson could be learned from the Russian policy about government prudency. The reformers of Russian regime change did not take a gradual approach of adjustments toward a successful socioeconomic transition. The state failed to create market-supporting institutions and instead rather proceeded with an ambitious program of synchronized application of policy changes and the economic liberalization. Lack of market-supporting institutions and an underdeveloped legal system in Russia have been the key tools through which politically well-connected managers and politicians themselves seized the opportunity and established ownership of former state-owned enterprises (Smole, 2013).
- Gradual liberalization: a policy largely advocated by contemporary economists, the policy advocates for a paced liberalization with each country deciding its stroke, the policy was largely adopted in east asian countries (Davis, 2018). A major example of

this policy in action would be China, from 1978 to 1992 China experienced gradual liberalization with a fairly stable price level. Important aspects of China's dualistic banking and pricing policies could well be adopted in other transitional socialist economies (McKinnon, 2015).

There are a lot more theories related to the issue of banking and liberalization, but the author only mentioned the ones he assumed are significant to the study and as it can be seen there are multitude forms of banking and hence local banks might face different types of competitors, ones the sector is opened up and the higher level of contention around the subject might be a result of the form of liberalization since even it as explained above possess different forms.

An important theory that must be kept in mind for this particular study is the theory of proxy since it will be deployed in the analysis aspect of the study, in statistics, a proxy or proxy variable is a variable that is not in itself directly relevant, but that serves in place of an unobservable or immeasurable variable. In order for a variable to be a good proxy, it must have a close correlation, not necessarily linear, with the variable of interest (Frost, 2019). To these end several variables like liquidity and return on asset will represent performance of the bank in question and its investment (i.e., Profitability) habits respectively.

### 2.3. Empirical review

The policy of liberalization with regard to allowing non domestic competition to participate in the banking market was raised from time to time for many years but only recently with the government announcing that it intends to allow foreign competition did the policy take center stage, and hence not a lot of studies addressed the issue in the Ethiopian context but some of the more relevant ones are presented below:

Tefera Assefa (2016): in his study the author attempts to understand and analyze the different justification presented by concerned parties to as why the sector shouldn't be liberalized. Stating that financial liberalization is an integral part of economic liberalization and to the way of market based economic activity he identifies six criteria's that one might use in order to conclude that the banking sector is liberalized and he states them as the elimination of credit controls, the deregulation of interest rates, free entry into the banking sector, bank autonomy, private ownership of banks, and the liberalization of international capital flows the author then proceeds to state that most of this criteria's are lacking in Ethiopia. Using qualitative analysis, he then proceeds to proclaim that because of the lack of banking infrastructure especially in rural areas the justifications presented by different parties can't be accepted. Although the author in this study attempts to understand the justifications of policy makers of the time on why the status quo should remain he doesn't specify what would be the benefits and/or the negative effects of liberalizing the sector and falls short in that aspect, the study doesn't also point out if allowing international competition in to the sector would improve the infrastructure of banking and how this policy would affect domestic banks and it's this particular issues that this study will focus on. This study unlike the one being reviewed will also provide quantitative analysis so that the conclusion that will draw up on are concrete, which is another gap faced by the aforementioned study which nearly to totality utilize qualitative methods making some of the conclusions that are drawn questionable.

Kozo Kiyota (2007): in this study the author tries to put forward cases for liberalizing the entire financial sector but especially the banking sector, the author first puts forward issues and factors in his words that are hampering the growth of the sector, the first of this as claimed by the author is the non-competitive nature of the sector with what seem to the contented nature of the local

banks in the country with what they had profit and market share wise and the author further elaborates by stating that because no foreign banks participate in the sector there is no need for the banks in the sector to improve up on their services and take risks and another issue identified by the author that was and is hampering the growth of the sector is strong capital controls, some of which have gotten worse since the publishing of this study and the last reason put forward as hinderance to the development of the sector by the author is the dominance of government controlled banks in the economy, this the author continues discourages risk taking because a sub-par return might lead to market share losses to the government held juggernauts. Because of these reasons and others, the author recommends liberalization by allowing foreign participation in the sector and the privatization of state-owned banks. This study also falls to the pitfalls of the above study that was reviewed due to the fact that the study has little qualitative aspects and some of the theories that were drawn up on to the reach its conclusions are out dated and the banking environment to a certain extent has also changed with more banks competition in the sector has increased, the author of the study also doesn't consider some of the negative consequences of financial liberalization and doesn't provide any insight in to how the policy recommendations should be addressed, some of the findings of the paper especially those that relate to inflation are contradictory to those accepted as norms and these factors will be kept in mind and addressed by the author in this study.

Abdullahi Dahir Ahmed and Sardar M. N. Islam (2010): the authors of this study try to identify the basis and the necessary assumptions for financial liberalization to have the desired impact on the economy. They point out that many studies inspired by the seminal study of McKinnon (1973) and Shaw (1973) that pointed out that liberalization of this sector will lead to interest rates achieving their natural equilibrium and the same policy might lead to a better allocation of resources through the forces of demand and supply. The authors proceed to state that without much basis, that a liberalized banking sector will have a higher interest rate which will incentivize the public to save at a higher level, and this higher level of saving according to the study will lead to a higher and better investment since with higher saving banks will have more resources to lend out to their customers, the authors after this statements state that the assumptions, there will be a strong response of savings to the rate of interest and higher interest rates are expected to increase financial intermediation must be met in order to achieve the adhered results and in conclusion the authors explain that if such conditions are met

liberalization should go ahead. Although the authors of these study leave a strong theoretical frame work for any one that might want to analyze the case for liberalization, one of their basic assumptions namely that there will be a strong response of savings to the rate of interest has become difficult to prove since the Japanese economic stagnation and south European debt crisis and these might make some of their conclusions a little shaky. Gap wise the study doesn't address the issue of what will be the effect of liberalization once the laid-out criteria are met for liberalization and whether or not different forms of liberalization should be applied to different levels of reaction and lastly the paper largely ignores how banks already in the market would be affected by the policy to interest rates and this will be analyzed by the study at hand.

Dani Rodrik (1987): although this study mostly deals with liberalization in a general sense of the economy, the fact that it does in a Keynesian frame work and also deals with the sector in question has induced the author to mention it here. The author in this study assumed that there is unemployment and inefficient utilization of resources available and it is under such conditions that he assumes there will be liberalization, although he goes in to detail with regard to the effect of liberalization on trade and the general economy, when it comes to banking he states that since most of the time markets don't correct themselves, a point which has been repeatedly proven after the study was published, the overly optimistic point of view that if liberalized the sector will somehow achieve its natural interest equilibrium might not be true according to the study, the author recommends that a slow and meticulous liberalization with the central bank having a close eye on the sector is the way to go, especially in countries and economies where resource management is low and market reaction to events slow. In relation to the study at hand this particular study although analyzing to a certain extent the effect of liberalization on the banking sector and even commenting on how liberalization should take place it doesn't delve deep in to the potential ramifications of this policy choice on the banking sector and since the study was published because of globalization countries that followed gradual liberalization faced some of the same issues that their counterparts also faced and it's this gaps the author hopes to fill.

Jan Kregel (2008): the author in this study taking the case of Latin America critics the push by the world bank and IMF in to forcing countries to liberalize their capital markets which include the banking sector. The author starts by pointing out that although usually stated to the contrary liberalization of the aforementioned markets weren't part of the Washington Consensus, these

where a set of ten economic principles promoted by the IMF for developing countries. After such mentions the author puts forward his strongest arguments against liberalization by stating that the principal theories that make up the basis for liberalization the major of which is that demand and supply will fix everything that is wrong in the market are fundamentally flawed and states that their difficulty to be proven right has been noticed as far back as the 1960s. The author proceeds to take several examples in form of nation states in Latin America that have under gone such policies and are worst for it. The above reviewed study puts forward a case against liberalization especially the form of liberalization promoted by the IMF and world bank although the study puts forward strong examples of countries that faced difficulties because of liberalization there isn't a deep analysis of what went wrong and right and usually employees theories to justify findings of the study and the paper largely skews to the political aspects of the policy and fails to mention the success stories of east Asia as a counter point to those is latin america , although some theoretical findings of the study will be employed by the author of these particular study, the study at hand will use quantitative analysis to observe the potential impacts of liberalizing the banking sector which is largely avoided by the study under review.

Daniela Georgeta and Maria-Lenuta Ciupac-Ulici (2012): this study limiting its sample largely to eastern and central Europe tries to analyze the effect of liberalization on the banking sector, setting its time frame largely after the collapse of communism. Using a quantitative approach, they tried to understand how a successful liberalization could be pulled off. They appoint out that in most cases liberalization or its speed aren't the problem but rather the lack of prudent monetary policy while the liberalization takes effect and where some countries had prudent policies the speed of implementation was lackluster causing mass economic fallout, but they identified several cases of successful liberalization of the sector where its efficiency and size actually increased once restrictions were lifted the authors would proceed to point out that several characteristics were shared among such cases and these as identified by the study where: a cautious approach to new market access for new banks; commercial bank model adopted was a competitive type, it was not based on regional or sector segmentation; debt loans were handled transparently by regulatory policies with government financial intervention; capital account liberalization was slow and cautious, there have been developed explicit systems of deposit protection, the important role of privatization to foreign strategic investors, good banks governance, regulation and supervision. The authors would state that even in such cases interest

rate volatility had been noticed. The reviewed study's analysis of eastern European countries will be quite helpful to the case being studied in this study and the author hopes to use the similar quantitative methods to analyze the effect liberalization might have on the banking sector in Ethiopia.

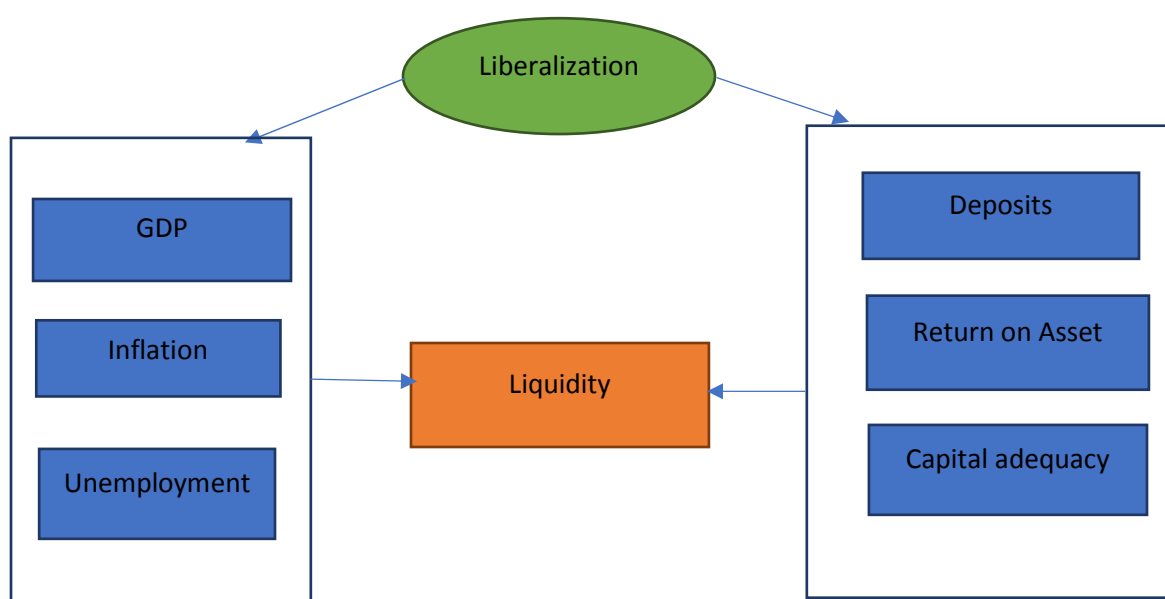
J. Hanson and S. Ramachandran (2004) : in this article the authors use a largely qualitative approach intertwined with different metrics to identify and point out the different success and failures of liberalization of finance that were largely undertaken in the late 90s and early 00s. the authors mention several meaningful statics to show that progress had been made since the polices came to implementation but admits that the optimistic views of the 90s hadn't come in to fruition but unlike some other authors mentioned above, the authors of this study didn't put the blame on the policy its self but rather countries not taking enough structural reforms they points out that the freeing of interest rates and credit allocation increased resource mobilization. But the persistence of the former institutional framework meant that resource allocation improved less rapidly. They sate that if countries improved their economic and legal frame works the fruits of liberalization will be reaped in the future, although the findings being largely consistent with other studies the study largely falters when it comes to macroeconomic elements and for the most part largely ignores them instead focusing on regulations and other sector specific issues. The author of the study at hand hopes to use the policy recommendations of the reviewed study to analyze policy changes that should be undertaken along with the liberalization aspect and supplement it with quantitively data to analyze the effect of such set policy.

## 2.4. Identification of research gap

In the process of reviewing research studies, articles and educational documents to be presented in this study the author discovered a plethora of theories and concepts that link in some way or another between the performance of certain sectors and liberalization policies of governments. Those studies especially those focused on Eastern European countries tend to be more detailed the reason for this as put forward by one of the authors is because of the dichotomy of the policy in the region where the tremendous success of Poland is counter waited with the utter failure of Russia with regard to liberalization, while reviewing this study the author noticed that the

studies established a clear connection with the policy choice and the performance of many sectors including the banking one. Although similar studies were constructed and published with regard to liberalization and the banking sector in Ethiopia and with regard to Ethiopia most if not all discuss the generalized principle and not how the policy could affect the performance of the sector per se and don't usually establish a direct link between the policy and its potential effect on the sector specifically and this is the knowledge gap this study aims to fill by clearly stating the connection between liberalization and the performance of the sector and how it might be impacted if the authorities go through the policy.

## 2.5. Conceptual framework



As it can be seen from the conceptual frame work there are a multitude of factors that impact the effect of liberalization with relation to the banking sectors performance which is proxied by liquidity, a study conducted Trenca and Anuta in 2015 presents strong empirical evidence proving that liquidity is one of the best proxies out there for performance, on the right side there are micro economic factors that directly affect the sector are presented and most of the time these factors are within the reach of the banks them selves and nearly all banks tend to

focus their policies and efforts on improving and maintaining these factors since the rest of the variables are out of their hands.

On the left side are presented factors that are macroeconomic in nature and tend to affect not only the banking sector but the entire the economy as well, and hence banks usually don't tend to focus on them and usually attempt to work with or around them. The aforementioned variables are a concern of government policy with a ministry usually dedicated to them but have a massive impact on the sector and lastly the policy of liberalization although not directly affecting performance of the banks it will affect them through affecting the micro and macro variables and hence is bound to have a major impact on the performance of the sector, the diagram was inspired by a study done by Singh and Sharma in 2015 in which they inquired about how liquidity is impacted in the banking sector variables were added and removed to fit the study at hand.

When it comes to the diagram the variables presented in either side of liquidity meaning GDP, unemployment, inflation, liberalization, deposits, return on asset and capital adequacy are independent variables while liquidity a proxy for performance is the dependent variable.

## CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

### 3.1. Methodology

As stated in the above pages the issue of liberalization is a hotly contested one with seemingly every scholar, school of thought and political manifesto having its own view on the matter making it nearly impossible to be covered in a single study, the complexity is even compounded up on more when one recognizes that different sectors within the same economy might have different reactions to the same liberalization policy. This is why only the banking sector is covered in this study, this is because other financial sectors like insurance and micro finance might have a totally different reaction to liberalization when compared to the banking sector and attempting to analyze all would be a paramount task for a single author.

The study has utilized quantitative research approach meaning the author has used numerical data collected from secondary sources to analyze the effect of the policy in question on the banking sector, the study has also utilized statistical tools and compared them to other countries to identify where the sector currently stands and what types of policies should hence be followed, the main tool of analysis for this study is an econometric model that has been constructed by the author to regress the collected data in order to have a clear picture of the potential impact of liberalization. The model has gone through the conventional tests like the F-test for the model itself and t-test for the variables. Although some aspects of qualitative reasoning might be used in order to explain the outcome of the different variables and their meaning this in no way should be interpreted as making the study qualitative or mixed this is done out of necessity.

### 3.2. Research design

The study has followed a correlational design meaning the study has studied the effect of the independent variable in this case liberalization on the dependent variable which is the performance of the banking sector with a mix of descriptive and explanatory design. Since the policy hasn't been adopted yet and there is no logical way to quantify the effect of

liberalization, the study has instead analyzed the effect of the independent variable (i.e., liberalization) on other independent variables and how they in turn they affect the dependent variable. This has been coupled with an inferential analysis that analyzes the potential outcomes government policies that could be followed, this method the author hopes have provided a good insight in to the potential outcomes of liberalization on one of the largest sectors of the economy.

When it comes to sampling plan the study utilized stratified random sampling, the population as elaborated up on earlier is domestic banks that are currently in operation in the country after samples were selected from each strata the author proceeded to collect data that relate to Liquidity, Customer deposits, Profitability and Bank capital. Some of the banks provided the author with computed results but for the bulk of variables the author had to compute the values himself, all the values that were utilized were computed from data that was collected through out the entirety of the selected banks existence most of these data were collected from annual reports while others were provided by the banks themselves through spreadsheets.

The computed values were then regressed along other macro-economic variables that were collected from different sources, after the results of the regression were observed since the study is a structural one and not treatmental the author observed how the policy change would affect the different independent variables and how they in turn would affect the dependent variable in question. Once this was complete the author analyzed different important ratios to the banking sector and how the local ones stand when set against international standards and banks from neighboring countries and depending on these standings the author proposes viable liberalization policies.

### 3.3. Data type and source

There are two aspects of analyzing liberalization and those are the theoretical/ideological and statistical, the former most of the time is used by different governments as a justifying tool to validate their policies and usually involves citing different scholars, school of thoughts and political ideologies that kneel to their own political inclinations (i.e. capitalism vs socialism or left vs right) and this inclinations in relation to the potential liberalization is discussed in

the subsequent pages, with regard to data collection since most theoretical/ideological stances and documents are readily available it shouldn't be much of a challenge, the author has attempted to select to the best of his abilities the most respected and well known authors and scholars and their views and predication when it comes to liberalization, this should take a small part of the study since there is no ideological argument currently with the government openly supporting the western/right wing policies.

When it comes to the latter aspect of the analysis (i.e., statistical) data collected from secondary sources within the country or international organizations is utilized, the macroeconomic data was collected from the international monetary fund's official website and local sources like Ethiopian economic association while the microeconomic variables were collected from the annual reports of the banks in question, in order to statically estimate what the outcome of the policy in question might ensue and to come up with a concrete steady document there is a need for reliable data and relevant evidence to be collected, assembled and analyzed properly. Henceforth the author utilized the following sources of data to conduct the study, and these specifically are:

- Different information published by Ethiopian Economic Association.
- Annual reports by the Ethiopian Statistical Agency.
- Reports of the word bank and the international monetary fund, the world bank and other international organization.

As can be seen from the above paragraphs the study has mostly utilize secondary data collected from different sources, be it for the theoretical/ideological or for the statistical aspects of the study, these secondary sources be it for the macro or micro variables have helped the author address the objectives of the study. The author has made sure that this source and reliable and trustworthy to the best of his abilities. when it comes to the banks that are be utilized in this study it is a sample that consist the best performing and the oldest banks and the most recent this is because due to factors like first movers advantage need to be analyzed.

### 3.4. Data collection and instruments

In any research document the data is of paramount importance, with this understanding the author of this particular study has attempted to the best of his abilities to make sure that the data's collected are of the highest authentication, this doesn't mean the author would vouch for every single data, this is because the issue is quite politicized and data manipulation might have occurred especially in those data that are of long time ago, so in order to collect the required data from selected sources, the researcher had designed facilitation forms suitable to extract relevant secondary data from Ethiopian Economic Association, and central statistical agency and appropriate websites for the study. In addition, the author has collected data from the banks themselves mostly from their annual reports and some he requested and the banks have obliged, some of the data that was needed like return on asset or liquidity required additional computation which the author did. The data that were collected in line with formulas that were utilized to compute the different ratios that were employed in the regression and ratio analysis

In addition, for those aspects of the study where the analysis of the ideological standings becomes necessary the author has tried to represent the most accepted or widely highly regarded documents or scholars and has left out extreme points of view, in order to find which documents exactly fit this narrative the author has looked in to citing's of books in addition to reviews and statements about the author from reliable sources.

### 3.5. Data analysis

Although the author in the above pages stated that there is an analysis of ideological standings with regard to liberalization this in no way or form mean that the study or even a significant portion of it is qualitative, the above-mentioned analysis was utilized in order to support potential future policies or the way to move forward. The main part of the analysis is statistical, econometric to be exact, with this regard the author constructed an econometric model that captures bank performance in Ethiopia, the model is going to be a linear regression so as to capture the potential change in bank performance when the sector is opened up, the study is a structural one meaning since liberalization is yet to be undertaken

the policy is going to be studied through other variables and how those variables affect the dependent variable, the author has also utilized important ratios to the banking sector and analyzed them and how they stand compared to standards throughout the world and utilizing the results the author looks at practical liberalization policies that could be undertaken. The author plans to go through documents and theories in order to best identify dependent and independent variables that will best capture the performance of banks in the country when liberalization is kicked in to motion. A rough example of this model would be:  $Linc = \alpha + Lgdp + Lint + Lpop + \sigma + \epsilon_t$

This in no way is an accurate representation of the model that is to be utilized but a rather simple illustration of what it might actually look like later on in the study, the actual model is presented as follows.

### 3.6. Model specification

As stated in above pages of this study, this particular research study is a quantitative one and to achieve this set goal the study has deployed econometric models to analyze the potential effects of liberalization on the banking sector in Ethiopia, the model is largely based on Singh and Sharma's model which was utilized by the authors in their paper analyzing banking performance that was published in 2015. And as in any econometric model the models utilized in this study have dependent and independent variables and below is a list of the variables in question and the theoretical reasoning for their selection.

#### 3.6.1. Dependent variable

As the title of the study eludes the main aim is to comprehend the effects of liberalization on the banking sector and to do so has the study has deployed an econometric model, since the policy is yet to be deployed what is commonly regarded as structural approach of econometric regression will be utilized, this approach specifies a class of theory-based models of, chooses the one within the class that best fits the data and uses it to evaluate policies through simulation (Llull, 2016). The above-mentioned approach best fits this study since the policy is yet to be implemented, the

dependent variable in this model is liquidity, meaning it's the proxy utilized to represent the performance of the banking sector is the aforementioned variable.

There are several variables that can be utilized to measure the performance of the sector, chief among these include variables like EPS (earning per share), ROA (return on asset) and NIM (net interest margin). The reason why EPS wasn't selected was because it does not consider the opportunity cost of capital and can be manipulated by short-term actions (Bhattacharyya,2007). Return on asset was found to be by the author a better proxy for a dependent variable, profitability which is further elaborated up on subsequent pages, while NIM is a better proxy/indicator out of the two it to can be manipulated and hence the author decided to go with liquidity.

- Liquidity: Liquidity is a measure of the cash and other assets banks have available to quickly pay bills and meet short-term business and financial obligations (Henson, 2019). Meaning if a bank becomes illiquid it can't pay its customers and hence goes out of business, so remaining liquid is one of if not the most important task of a bank. One thing that shouldn't be confused here is the term illiquid is sometimes used to indicate banks and other institutions to have the assets but are frozen for some reason in this study the term illiquid is used to indicate insolvency.

The reason for the selection of liquidity as a proxy for performance of banks is, first it's the minimum requirement for a bank to stay afloat and second it encompasses other indicators with in it, for example bad lending practices of a bank could lead to failed loans and when these type of loans amass they lead to illiquidity a good example of this would be the 2008/09 financial crisis another example would be bad investments which lead to failed or below par returns the outcomes of these activities could be captured by NIM and EPS respectively but both can be captured by liquidity.

### 3.6.2. Independent variables

Here again there is another important distinction that needs to be made and these is between independent variables that are sector specific (i.e., micro) and variables that affect the entire economy (i.e., macro), the first list of variables mentioned below are sector specific and the latter ones are general economic factors.

### *3.6.2.1. Sector specific independent variables*

1. Customer deposits: deposits are one of if not the most important source of funding for banks. The bank must provide cash to the customer whenever funds are withdrawn; if not withdrawn, however, banks will typically use the funds as investments or loans to other customers until the depositor makes a withdrawal (Lacoma, 2017). As it can be understood from the above statement banks must provide any withdrawal requirement of their customers and even rumors of the inability to do so might lead to bank run and total bankruptcy and this necessitates those banks maintain certain level of liquidity to meet such requirements (Bonner, 2013).
2. Profitability: there is a significant connection among bank liquidity ratios and return on assets, return on equity and net profit margin (Waleed,Pasha,Tobin, 2015). Out of the ratios that indicate the profitability, return on asset will be utilized as a proxy for profitability in this study, this is because its data are readily available. Here also the exact nature of relationship between the two variables (i.e., profitability and liquidity) is contentious while some authors claim that higher profits will lead to higher liquidity reserves others claim that higher profits are usually achieved through risky long-term investments and this means at any given time during the investment period liquidity is low.
3. Bank capital: Bank capital is the difference between a bank's assets and its liabilities, and it represents the net worth of the bank or its equity value to investors (Hayes, 2020). Capital is needed to allow a bank to cover any losses with its own funds. A bank can keep its liabilities fully covered by assets as long as its aggregate losses do not deplete its capital (Svitek, 2001). For this particular independent variable capital adequacy ratio (i.e., CAR) will be used as a proxy.

### *3.6.2.2. Macro-economic factors*

1. Gross domestic product (GDP): GDP is the most widely used measurement of the performance of an economy and as anyone can guess it affects the banking sector

quiet significantly and the vice versa also holds true, the 2008/09 financial crisis is a good example. The relationship between GDP and liquidity usually tends to be reverse, Madhi, (2017) states that with the growth of gross domestic product: borrowers reduce their debt during expansionary phases and increase the demand for loans in recessions.

2. Inflation: this term is used to explain a constant rise in general price over a period of time in a certain economy. The relationship between inflation and liquidity is well summarized by Nyakira (2014) when he states that inflation reduces the real value of money, and thus makes the liquidity constraint more binding. As it can be understood from this statement the relationship between inflation and liquidity in most cases is inverse.
3. Unemployment: this is a term used to explain an economic phenomenon in which people willing and able to be employed aren't, although there are several types and versions of unemployment the above stated broad definition will be utilized for this study. When it comes to the relationship between this variable and the dependent one an increase in the unemployment rate can be translated into an increasing of non-performing loans and thus lowering bank liquidity. An increase in public deficit will involve increasing bank loans and thus will decrease liquidity (Trenca, Petira and Anuta, 2013), although there are some articles that claim that unemployment is good for liquidity since people will attempt to withdraw as little as possible most of such theories are refuted.

Several important points about the model are, first there are a lot more factors that might have an impact on liquidity (i.e., proxy for performance) some of whom like monetary policy, policy and political stability and economical and/or sectoral crises are discussed below but not in quantitative manner because it's difficult to capture this factors mathematically, the second point is the reason why proxy variables were utilized for the dependent variable and sector specific independent variables and not for the macroeconomic variables is because the macroeconomic variables have numerically accepted values and thus don't necessitate a proxy, the third point is that the fact that in the model it can be seen that there is no liberalization variable although this

might raise some eye brows the reason for these absence is the fact that the policy is yet to be undertaken and hence to capture it numerically is borderline impossible but its effect can be and is captured by the other independent variables, these process is known as bench marking, the significant independent variables affect performance and liberalization in turn affects these independent variables allowing the study to capture the effect of liberalization on the banking sector numerically.

$$LIQ_{it} = \alpha_{it} + \beta_1 DEP_{it} + \beta_2 ROA_{it} + \beta_3 CAR_{it} + \beta_4 GDP_{it} + \beta_5 INF_{it} + \beta_6 UEP_{it} + \varepsilon_{it}$$

*Variable description*

- LIQ: liquidity (i.e., proxy for performance)
- DEP: deposits
- ROA: return on asset (i.e., proxy for profitability)
- CAR: capital adequacy ratio (i.e., proxy for bank capital)
- GDP: gross domestic product
- INF: inflation
- UEP: unemployment
- $\varepsilon$ : error term
- *i* and *t* : represent bank and year accordingly

### 3.7. Hypothesis

With the model specified the next crucial step is the specification of the hypothesis that relate to the study at hand. A hypothesis is an educated guess not on known data. Similarly, the hypothesis should be written before one begins the experimental procedures not after the fact (Davis, 2010) and for the study at hand they are coined as the following, the initial statements represent the null hypothesis and they are represented with  $H_0$ , while the subsequent statements represent the alternative hypothesis and is represented by  $H_1$ .

$H_0$ : liberalization will not have an impact on the banking sector in ethiopia.

$H_1$ : liberalization will have a negative impact on the banking sector in ethiopia

### 3.8. Sampling

Sampling is one of the most important aspects of any research study, an important character of any sample is that in sampling we assume that samples are drawn from the population and sample means and population means are equal. A population can be defined as a whole that includes all items and characteristics of the research taken into study. However, gathering all this information is time consuming and costly. We therefore make inferences about the population with the help of samples (statistics solutions, n.d). And in the particular case of this study the population pool is a list banks that operate in the country currently.

The type of sampling that is utilized in this study is a mixture of stratified sampling and simple random sampling what is commonly regarded as stratified simple random sampling, this type of sampling entails a proportion from strata of the population is selected using simple random sampling. For example, a fixed proportion is taken from every class from a school (statistics solutions, n.d). The list of banks that currently operate in the country is listed in the annex part of the study. The reason for the selection this method is so that the impact of age could be analyzed and if simple random sampling was to be deployed an over representation of certain types of banks might occur and this might over or under represent the performance of the sector, since its most likely that for various reasons banks that were established early on will likely be better performers and latter established banks will likely be lagging the stratification of this banks in to their groups will ensure that each type of bank is included in the study.

An imperative point that must noticed is that a few important banks aren't listed in the population list and these include the national bank of Ethiopia and Development Bank of Ethiopia the reason for their exclusion from the population is in the case of the national bank of Ethiopia it acts as a central bank and isn't actively involved in commercial activities and usually focuses on monetary policy, while the latter ones are government controlled banks although this might raise a comparison between the stated banks and another government controlled bank (i.e. commercial bank of Ethiopia) the latter is operated as the name indicates as a commercial entity while the formers are usually operate to subsidize certain sectors of the economy, while

development bank of Ethiopia focus on subsidies and loans for mostly infrastructural projects agricultural and industrial development bank as the name indicates focuses on agricultural and industrial projects and because of these attributes the aforementioned banks are expected not to largely be impacted by the liberalization as its expected that they will have the full backing of the state, a policy that might affect these type of banks is privatization and that's a different and mutually exclusive police when compared to liberalization.

As stated in the above pages the sampling method deployed in this particular study is a stratified simple random sampling, and the first step with regard is portioning the population in to different subgroups. One of the most important characteristics of stratified simple random sampling is that the population is partitioned into relatively homogeneous groups called strata and a simple random sample is selected from each stratum (Anderson, 2020). To this effect banks were sub grouped into five-year periods of establishment starting from 1990, this would mean a bank belonging to the fist strata (i.e., banks established between 1990-1995) would be between 25 to 30 years old and subsequent stratum would represent further decline in the age of the banks. The main aim behind this method of sampling rather than just selecting several banks randomly is to check the effect of the age of the bank on its performance and how this difference is age and performance affect the banks and the sectors future after liberalization is undertaken, each stratum represents 5 years starting from 1990. Five years where selected because the population is more evenly distributed in this time frame and most institutions plan a head for five years in Ethiopia be it governmental or private making this cut off point ideal to check if there is a major policy shift with regard to the bank in question, although some starts are larger than others since most banks in each strata are largely similar this shouldn't have much an impact and the results from the samples could easily be generalized to the respective starts.

Table 4.1: stratum one

stratum one	
name of the bank	year of establishment
COMMERCIAL BANK OF ETHIOPIA	1942
AWASH INTERNATIONAL BANK S.C.	1994
DASHEN BANK S.C.	1995

This stratum represents banks that were established right after and around the time after private players were allowed in to the banking sector in the early 90s, of course the exception here is the commercial bank of Ethiopia which was established back in 1942 during the reign of emperor Haile Selassie, but since the bank is so dominant in the sector excluding it from the population or giving it its own stratum will undoubtedly negatively affect the study, this being said that there is a chance that the bank might not be selected because simple random sampling will be deployed after the stratification process is complete. The banks in this stratum are expected to perform well even after the policy of liberalization is enacted because they had first movers' advantages and are expected to have a lot more market outreach and dominance.

Selected sample: Awash international bank S.C.

Table 4.2: stratum two

stratum two	
name of the bank	year of establishment
BANK OF ABYSSINIA	1996
WEGAGEN BANK S.C.	1997
UNITED BANK S.C.	1998
NIB INTERNATIONAL BANK S.C.	1999

This particular stratum will represent banks that were established a little bit latter after the opening up of the sector for domestic private players, but still were established within the decade of the aforementioned policy. These banks are believed to be reputable in the market and have a comfortable hold in the market, although this might seem trivial in many other countries one evidence that can be utilized here as proof is the fact that all three banks in this stratum have or are constructing multi-level buildings for utilization as their head offices in Addis Ababa, this might be an indicator that the aforementioned banks have done well in recent years that they felt merited enough to construct these buildings.

Selected sample: United Bank S.C.

Although separated in to two different strata the banks with the exception of the commercial bank of Ethiopia, in stratum one and two are expected to contain largely similar characteristics as

they are the product of the same time periods, but the fact that banks that are assigned to stratum one had almost five years of nearly untapped market makes in an interesting case and the author wanted to understand how and what affected the performance of these banks because of their early start and how it still affects them. As for the banks that were established/formed after the turn of the millennium which are presented in subsequent stratum the author expects that they will face a different kind of market and competition because by this point six banks had entered the market and were operational and the author expects this difference will be reflected in the models that will be presented in ensuing pages.

Table 4.3: stratum three

stratum three	
name of the bank	year of establishment
COOPERATIVE BANK OF OROMIA S.C.	2005
LION INTERNATIONAL BANK S.C.	2006
OROMIA INTERNATIONAL BANK S.C.	2008
ZEMEN BANK S.C.	2008
BERHAN INTERNATIONAL BANK	2009
BUNNA INTERNATIONAL BANK S.C	2009

Here are presented banks that were established between 2005 to 2009 these banks faced a different reality than those that were established in the late 90s, these banks had to contend with increased competition, an increasingly demanding customer base and the rise of mobile and electronic banking, these and other factors might have a significant impact on the nature of the banks. Two things might catch one's eye while looking at this stratum and these are the large number of banks that were established within this time period and the lack of new banks between 2000 to 2005 and this are represented by the largeness of the stratum for the former and the lack of one for the latter. This largely has to do with GDP growth as in the time period of 2005- 09 the country was experiencing rapid GDP growth and this as explained in the above pages has the effect of making the banking sector as a whole more profitable and hence larger number of banks, a higher GDP growth causes firms' loans and deposits to increase and make bank's net interest income and loans losses to improve. Also, a higher GDP growth implies a higher disposable income, and lower unemployment and reduce defaults on consumer loans number (Sara, 2017) the reverse also holds true. This fact might have enticed investors to increase their investment in this particular sector.

Selected samples: Oromia international bank

Table 4.4: stratum four

stratum four	
name of the bank	year of establishment
ABAY BANK S.C.	2010
ADDIS INTERNATIONAL BANK S.C.	2011
ENAT BANK S.C	2011
DEBUB GLOBAL BANK S.C	2011

These are banks that were established by the turn of the decade and faced all the challenges of the banks that are in stratum three and some more. These banks will likely be the first victims of liberalization as they are facing stiff competition from local competitors and the addition of foreign competitors to the mix might simply deliver the final blow to these banks. But banks in these strata have the opportunity to change one of their major down sides that being their relatively young age in to a major advantage they can do these by making their selves more flexible, since these banks are young the likely hood of a rigid and uncompromising way of thinking and doing business might not have formed and this might allow them to adjust to the situational need of the moment. This being said its these types of banks that might need the most assistance from the government once the policy is put in to place.

Selected sample: Addis international bank

With the samples selected and the model specified the next step is to collect data and commence the regression to understand how liberalization will affect the performance of the banking sector in ethiopia.

## CHAPTER FOUR: FINDINGS AND DISCUSSIONS

### 4.1. Data collection and analysis

Addis international bank: with the sample from the last stratum, representing the most recent bunch of banks selected the next step that was necessary was the computation of the ratios that made up the micro aspect of the econometric model and the ratios for this particular bank are presented in the following table:

Table 4.5: Micro economic ratios for sample one

YEARS	DEP	ROA	CAR	LIQ
2011-12	100%	2.85%	20.02%	49.70%
2012-13	165%	4.00%	24.50%	61.20%
2013-14	37%	4.10%	24.20%	67.50%
2014-15	40%	3.90%	26%	64.70%
2015-16	41%	4.10%	25.40%	68%
2016-17	45%	3.10%	22.28%	70.50%
2017-18	29%	3.00%	22.17%	73.80%
2018-19	34%	3.30%	20%	74.50%
2019-20	16%	3.60%	21.50%	73.80%

- DEP: percentile growth in deposits from the previous fiscal year
- ROA: percentile growth in return on asset from the previous fiscal year
- CAR: percentile representation of capital adequacy ratio for the fiscal year (calculated through proxy).
- LIQ: percentile representation of a liquidity ratio for the fiscal year in question.

All the ratios seem to be within reasonable range of the averages without any outliers and hence the micro aspect of the model didn't seem to have any issues, this was combined with macro aspect and the model was regressed utilizing Stata 14.2 and the results are presented as follows.

The actual presentation of the regressions is presented in the annex part of the study. While regressing the author faced issues with multicollinearity, after checking the VIF (i.e., Variance inflation factor) the author removed the colirated variables and re-regressed the model to check if more vraibales became significant which they did, so in the table below what is presented is the

significant variables that were obtained from different regressions and variables that were found to be insignificant across the multiple regressions are presented as well, while the regressions themselves are presented in the annex:

Table 4.6: regression analysis for Addis international bank

Variable	Coefficient	Std. error	t-statistics	prob
CAR	-0.5598486	0.892206	-0.63	0.575
ROA	1.74683	1.880819	0.93	0.376
DEP	-0.104571	0.047847	-2.19	0.081***
GDP	-0.2765065	0.4228876	-0.65	0.549
UNEMP	-80.67221	17.01744	-4.74	0.009*
INF	-0.4419042	0.1294469	-3.41	0.027**
CONS	2.436074	0.3239586	7.52	0.002*
<hr/>				
R-squared	0.9669	F-statistic	0.0046	
Adj R-squared	0.9255			

Source: author generated, Stata version 14.2

\*, \*\* and \*\*\* represent significance at 1%, 5% and 10% respectively

The first thing to point out is the R-squared which is around 0.97 or 97%, meaning around 97% of the variation in the dependent variable is captured or explained by the model which is very good by any measure. The F-statistics also show quite a low value of 0.0046 which is significant at 1%, this result shows that the model is fit and can accurately capture the variations in the dependent variable.

From the regression it can be seen that inflation is significant at 5% confidence interval meaning that there is enough evidence to suggest that it has a significant impact on performance of banks which is represented through liquidity in the model. The coefficient shows a value of -0.441, which is in line with the established mode of thinking and hence the coefficient tells us that a 1% increase in inflation will lead to -0.441% decrease in liquidity. This result has a good theoretical standing as stated above inflation reduces the real value of money, and thus makes the liquidity constraint more binding (Nyakira, 2014). Although the coefficients provide a good picture about

the relationship between liquidity and inflation, since the dependent variable was a proxy another layer of analysis is necessary, although the model clearly points out the relationship between the variables the exact relation between inflation and liberalization isn't clear cut, the effect of financial liberalization on rate of inflation and the movements of the nominal exchange rate proves ambiguous, and hinges critically on the relative responsiveness of the credit-induced effects on aggregate demand and aggregate supply (Gupta, 2007). In the economic literature, many economists agree on the harmful nature of financial repression for inflation and economic growth.

Nevertheless, other economists continue to consider it as one of the cheapest means of financing economically. They argue that financial repression helps to maintain the financial viability of the banking system, reduces the costs of financing the budget deficit, avoids inflation and promotes growth (Lassoued, 2018). Although both the aforementioned school of thoughts are still prevalent in recent years the idea of sustained liberalization in relation to inflation has become popular meaning following the South Korean model, what that entails will be discussed below but if the government were to follow the shock therapy approach and liberalize instantly the likelihood of an inflationary problem is likely high and as it can be seen from the model this will entail a decrease in liquidity jeopardizing the entire sector.

From the same regression it can be seen that unemployment is also significant at 1, the coefficient of the independent variable shows a value of -80.67 meaning unemployment has a massive 81% effect on liquidity, to be exact a mere 1% increase in unemployment will lead an 81% decrease in liquidity. This is aligned with major theories in contemporary finance and economics which states unemployment has a significantly negative impact on liquidity. Greater unemployment reduced capital and hampers liquidity creation (Horváth, 2014). This fact can be seen by the events that transpired 2008/09 where western economies were brought to the brink of collapse and some actually did because large banks faced a crisis of liquidity, although the aforementioned financial crisis and its subsequent depression is a complicated issue a decade on most analysts agree that the match under this tinder box was lit when several countries in the western hemisphere experienced a sudden rise in unemployment which prevented borrowers from repaying their loans and this snowballed in to the infamous crisis known to us today.

As in with inflation the relationship between unemployment and liberalization must be pointed out, again there are some disagreements but most agree that the relationship between financial liberalization and the fall in labor income and the rise of unemployment in developing since 1990s isn't an accident, volatility in international financial markets is currently perhaps one of the most harmful factors for enterprises and labor in developing countries (Hoeven, 2006). As it can be seen from the above statement liberalization will lead to higher interconnectivity with international markets and their volatility might lead an increase in unemployment just as in other developing nations, the most ideal solution is to have a vibrant, well informed and independent policy decision making process that is in tune with international and national economic forces weather that will be the case will have to be seen.

One can also see that deposits are significant at 10%, the coefficient on the aforementioned variable shows a value of -0.1, indicating that an increase in customer deposits will lead to a fall liquidity to be exact, a 1% increase in deposits will lead to a fall in liquidity of 0.1%. Although at first sight the result might seem bizarre, Dinger (2009) studied emerging economies for the period of 1994 to 2004 and found that as the deposit rate increases bank liquidity decreases. Although there is a significant and negative relationship between deposit increase and liquidity, as shown by multiple studys the effect of deposits on liquidity is quite small and even in some cases like that of Moussa (2015) the variable was found to be insignificant. Again, another layer of analysis is required to understand the relationship between liquidity and performance via deposits, if the liberalization policy is carried out properly true interest rate might be achieved and this might encourage the populace to increase deposits and this as it can be seen from the model has a negative impact on liquidity but this can only be achieved with open market competition with minimal government intervention which is highly unlikely in Ethiopia.

The last variable that warrants an analysis is the constant variable, which is significant at 1% and its coefficient show a value of 2.43. This indicates that if things were to remain the same liquidity will increase by 2.43%. The rest of variables are insignificant meaning there isn't enough evidence to show that the relation among the variables isn't just coincidence. This isn't to mean this will be the case for every sample and stratum just for this one.

Form the results we can see that liberalization will likely have a negative impact on banks represented in stratum four, meaning the most recent banks. This can be noticed by the fact that

all the significant variables are negative and with the exception of deposits all the other significant variables will likely rise causing disturbance in the market.

Oromia international bank: this is a bank that is selected from stratum three, this stratum that represents banks that were established in between 2005-09, these banks are expected to fare better than the banks that were represented by stratum four. And similar to stratum four the micro aspect of the model needed to be computed and are represented in the table below:

Table 4.7: Micro economic ratios for sample two

YEARS	DEP	ROA	CAR	LIQ
2008-09	27%	2.50%	13.75%	38.65%
2009-10	28%	2.75%	14.20%	41.78%
2010-11	31%	2.90%	15.08%	44.95%
2011-12	39%	3%	15.70%	43.36%
2012-13	44%	3%	14%	48.16%
2013-14	64%	4%	12.16%	53.15%
2014-15	60%	3.75%	10.43%	51.25%
2015-16	17%	3%	13%	61.71%
2016-17	44%	2.75%	12.40%	61.37%
2017-18	48%	4.70%	12.13%	58.45%
2018-19	33%	3.60%	13%	65.41%
2019-20	4%	3.20%	18%	73.28%

Analyzing the ratios there isnt any ratio that could be said to be an outlier, all the ratios seem to be within a reasonable range. The same Marco elements as before were used here as well.

Table 4.8: regression analysis for Oromia international bank

Variable	Coefficient	Std. error	t-statistics	prob
CAR	1.858362	0.9577849	1.94	0.100
ROA	-2.424665	2.956681	-0.82	0.444
DEP	0.0765474	0.047847	-2.19	0.593
GDP	-0.2875972	1.525492	-0.19	0.857
UNEMP	-95.6304	17.76565	-5.91	0.004*
INF	-0.4865992	0.1106358	-4.40	0.005*
CONS	2.74427	0.4127549	6.62	0.001*
R-squared	0.9336	F-statistic	0.0018	
Adj R-squared	0.8782			

Source: author generated, Stata version 14.2

\*, \*\* and \*\*\* represent significance at 1%, 5% and 10% respectively

From the above the regression, it can be seen that again the R-square is very high showing a value of 0.9336 or 93.36% these as in before shows that 93.36% variation in the dependent variable is captured by the independent variables although lower than the first regression it is still very high. Looking at the F-statistic once more it can be seen that its low indicating once more the model is fit for this regression as well.

Looking at the significant variables once more it can be noticed that all the significant variables are macro-ones, inflation is significant at 1% indicating that a 1% increase in inflation will lead to a fall of -0.48% in liquidity this is the similar to the findings that were noticed in the first regression which isnt surpassing since the two stratum that provided the samples represent banks that were founded after 2005 so there is bound to be some similarities, given this fact it's no surprise the effect of liberalization on banks in stratum three is quiet similar to those of stratum four meaning when liberalization is undertaken the likeliness of inflationary pressure is possibly high leading to a reduced performance by the banking sector.

In this regression as well, unemployment has a massive impact on performance with a 1% rise in unemployment leading to a -95.63% reduction in liquidity, since the value and the sign of the coefficient are largely similar the same reasoning utilized in regression one also holds here for why the coefficient has such a large value and its relationship with liberalization. The last significant coefficient is the constant that shows that with other factors remaining the same liquidity will increase by 2.74. Since the most of the results between this regression and the previous regression are the same it can be concluded that the negative impact of liberalization will probably be felt in this stratum as well but to a lesser extent since deposits are insignificant in the second regression.

United bank S.C.: united bank represents banks that were established after some time five to ten years to be exact after the collapse of communism in the country, these banks are expected to fare better than banks that were represented in stratum three and four. This is because they are expected to have an early mover advantage and of course the experience that is gained by more than two decades of market participation. As always, the micro ratios are presented below:

Table 4.9: Micro economic ratios for sample three

YEARS	DEP	ROA	CAR	LIQ
2002-03	87.23%	1.44%	19.45%	61.19%
2003-04	86.49%	1.65%	14.26%	79.49%
2004-05	61.38%	1.87%	11.63%	80.63%
2005-06	49.42%	2.01%	11.96%	80.81%
2006-07	30.01%	2.05%	16.48%	77%
2007-08	45.37%	2.11%	14.39%	75.17%
2008-09	47.98%	2.31%	11.24%	78.17%
2009-10	30.67%	2.47%	10.81%	80.13%
2010-11	28.38%	2.51%	11.66%	78.51%
2011-12	11.40%	3.64%	12.53%	76.90%
2012-13	19.11%	3.54%	12.25%	81%
2013-14	16.61%	3.68%	13.44%	78.99%
2014-15	25.55%	3.91%	11.88%	82.51%
2015-16	16.20%	4.05%	17%	78.61%
2016-17	30.01%	4.17%	16%	80.73%
2017-18	29.63%	4.41%	17.85%	82.34%
2018-19	26%	4.69%	12.03%	81.36%
2019-20	19.45%	5%	12.95%	80.69%

Again, looking at the ratios there are no surprises, for a bank of this caliber all the ratios seem to be within a reasonable range.

Table 4.10: regression analysis for united bank

Variable	Coefficient	Std. error	t-statistics	prob
CAR	-0.9935772	0.3285886	-3.02	0.009*
ROA	2.571044	0.9289731	2.77	0.015*
DEP	0.1145035	0.093255	1.23	0.245
GDP	0.8141417	1.051294	0.77	0.455
UNEMP	-0.0294106	0.01858285	-1.58	0.142
INF	-0.030111	0.0865072	-0.35	0.027**
CONS	0.7069773	0.1437876	4.92	0.000*

R-squared 0.5637 F-statistic 0.0074

Adj R-squared 0.4702

Source: author generated, Stata version 14.2

\*, \*\* and \*\*\* represent significance at 1%, 5% and 10% respectively

From the regression we can see that although the R-square has decreased it isn't so low that it would warrant a worry, we have a very low F-value showing us that there is no issue relating to the model itself, this can be seen from the fact that the model is significant at 1%.

Analyzing the independent variables, we can see that CAR is significant at 1%, looking further in to the variable its coefficient shows a value of -0.99 or around -1% this indicates that an increase of 1% in CAR will lead to a fall of -1% in liquidity. Although the finding might seem wired at first sight, the idea that an increase in CAR having a negative impact on liquidity has actually been found by Bunda and Desquillet (2008) who found out a significant and negative impact of capital adequacy on bank liquidity. And there is good evidence that support the idea that liberalization will lead to high CAR as capital inflow will in all likelihood increase but unless the rise is sharp and sudden one the low coefficient shows that the impact of liberalization with regards to CAR and hence further on liquidity of banks in the stratum in question is low. Another variable that was significant in the model was the macro variable of inflation as it can be seen from the regression its significant at 1%, the coefficient value is -0.459 this indicates that a 1% rise in inflation will lead to 0.459% fall in liquidity, the result is the same as the other strata and hence all the above analysis also holds true here.

ROA which is significant at 1% and has a coefficient of 2.57 or around 2.6% this indicates that a 1% increase in ROA will lead to 2.6% rise in liquidity. As competition increases the likelihood that in the short run ROA might fall is quite high especially if there is no assistance from the government but at the same time an increase in competition might lead to an efficient bank which in the long run might have once again high ROA even after liberalization. The last significant variable is the constant one which indicates that *ceteris paribus* liquidity will rise by 0.706%, the rest of the variables are insignificant. One major result to notice from this stratum is that banks are affected mostly by micro factors that to some extent they could manage themselves indicating that these banks have an established customer base and the fact that the coefficients of the variables being low indicates that the banks are relatively stronger than the two strata analyzed before and hence can/may perform better if liberalization were to occur in the near future.

Awash international bank S.C.: this bank is meant to represent the banks that are believed/hoped to put up the most resistance and flourish after liberalization takes place. As mentioned above

these banks are banks that were established within a few years after the collapse of communism in the country, and hence banks with in this stratum are at least two decades old and this gives them among other things first movers advantage and a larger market share and this hopefully will translate to a better performance once the sector is opened up. The analysis for this particular stratum follows the same footsteps as the other three and the ratios are presented as the following and seem to be within reasonable rage for a bank of these size.

Table 4.111: micro economic ratios for sample four

YEARS	DEP	ROA	CAR	LIQ
2000-01	46.44%	1.25%	10.12%	73.57%
2001-02	10.09%	1.54%	11.62%	76.29%
2002-03	26.78%	0.64%	9.76%	75.90%
2003-04	29.29%	0.92%	8.41%	75.24%
2004-05	29.26%	1.47%	8.28%	74.82%
2005-06	27.52%	1.50%	8.06%	75.91%
2006-07	23.34%	2.57%	9.28%	76.02%
2007-08	25.28%	2.65%	10.09%	73.34%
2008-09	51.14%	3%	10.66%	74.33%
2009-10	22%	2.74%	10.63%	72.03%
2010-11	25%	3.27%	12.04%	72.72%
2011-12	19%	5.10%	12.57%	73.28%
2012-13	37%	5%	11.61%	73.59%
2013-14	23.66%	5.54%	11.74%	72.85%
2014-15	21%	5.97%	12.66%	77.38%
2015-16	24.20%	6.10%	12.63%	77.94%
2016-17	35%	6.07%	13.91%	78.15%
2017-18	40%	7.59%	11.75%	82.73%
2018-19	36%	7.90%	12.96%	83.78%
2019-20	19%	8.84%	13.41%	83.20%

Table 4.12: regression analysis for awash international bank

Variable	Coefficient	Std. error	t-statistics	prob
CAR	-1.551137	0.642695	-2.41	0.031**
ROA	1.898371	0.5781312	3.28	0.006*
DEP	-0.0175422	0.0682241	-0.26	0.801
GDP	-1.921894	0.6848537	-2.81	0.013*
UNEMP	3.214087	3.027427	1.06	0.308
INF	-0.0409367	0.0649902	-0.63	0.540
CONS	0.8810596	0.1273502	6.92	0.000*

---

R-squared 0.6953    F-statistic 0.0076  
 Adj R-squared 0.5547

Source: author generated, Stata version 14.2

\*, \*\* and \*\*\* represent significance at 1%, 5% and 10% respectively

Looking at the same important indicators as before, the R-squared indicates a value of 0.695 or 69.5% indicating that the model captures around 69.5% variation in the dependent variable, Looking at another important variable the F- value, it indicates a value of 0.0076 which indicates that the model is significant at 1% which is the standard agreed upon level of significance. Looking at the independent variables one can see that GDP, ROA and the constant are significant at 1% while CAR is significant at 5%. This level of significance indicates that a 1% increase in CAR will lead to 1.55% fall in liquidity, the second significant variable is significant is ROA which shows that a 1% increase in ROA will lead to a 1.8% rise in liquidity the two relations with liquidity have already been discussed in the above pages. GDP is also significant at 1% signifying that a 1% rise in GDP will lead to a -1.9% fall in liquidity, this is because as GDP grows people will likely borrow money from banks to invest leading to a fall in liquidity for banks and with regard to liberalization when the sector is opened up there would definitely be a boost for GDP in the short run leading to fall in liquidity but the long run effect will depend on government policy. The reaction to liberalization from startum three and four are quite similar indicating that banks that were established before and after the turn of the millenia will react to liberalization differently.

## 4.5. The current standing of the banking sector in Ethiopia and Liberalization policy

With the analysis of the econometric model now complete the next crucial step is the analysis of the current form/status of the banking sector and what kind of liberalization policy would best suit the sector and allow it to grow and compete with the looming foreign competition. The sector is represented by the same samples that were chosen from the above four starts that were used in the econometric analysis that represent the different time periods of the banking sector in the country. The same samples were utilized so as to have a coherent analysis and the results from the two aspects of the study could be compared and contrasted.

In the analysis that will follow important variables like deposit growth, return on asset and liquidity will be analyzed in a different light to that of the econometric aspect, as here all the aforementioned variables will be analyzed individually and compared to their counterparts across the world. This is done to have a good image of sector so as it would be easier to select a liberalization policy that is best suited to the sector.

### 4.5.1. Performance of banking sector in ethiopia

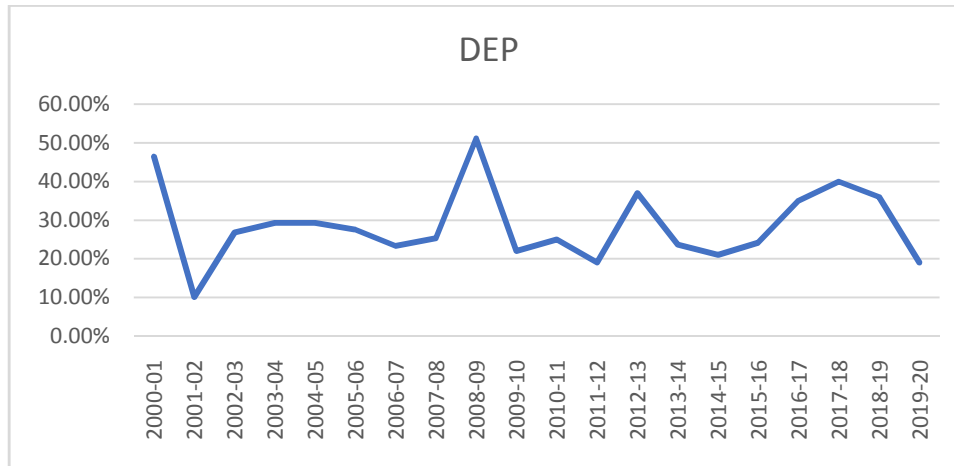
As stated in the above pages there around 17 banks that operate in the country excluding those that work exclusively to support certain sectors. Out of the 17 one is government owned while the rest are private corporation. These banks have been divided in to four stratum based on their age so that there is understanding of the effect of age on the sector and the selected samples from these stratum are: Awash international bank S.C., United bank S.C., Oromia international bank S.C. and Addis international bank S.C. through the analysis of this banks the authors will show the current standing of the entire sector in the country.

#### Awash international bank S.C.

As one of the earliest private banks that were established and as one of the most profitable awash international bank is one of the most important banks in the country. With the bank's branches exceeding 400 and with its customer base numbering above 2 million the bank is expected to put up a brave resistance against the larger foreign banks. With this being said let's look at the specifics of the bank and how it holds up against international standings.

## Deposit growth

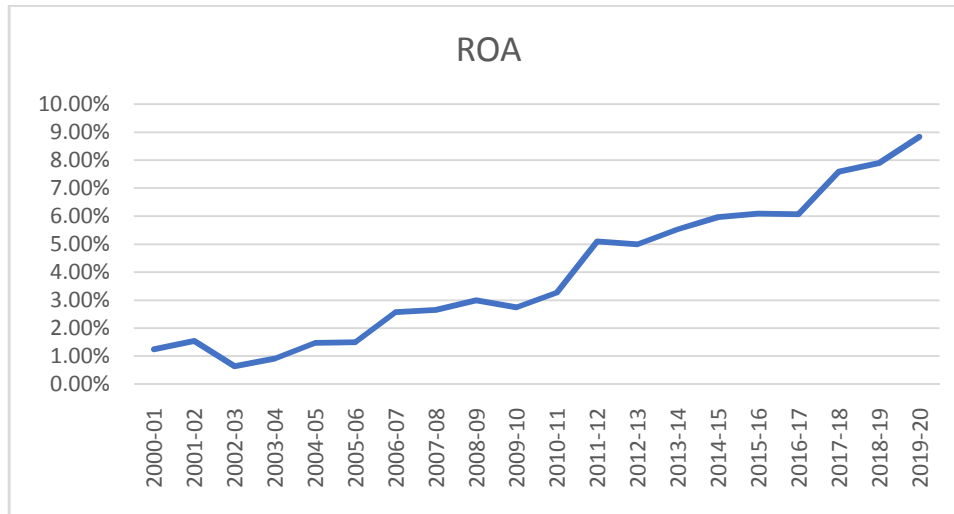
Figure 4.1: deposit growth for awash bank



The above graph shows the growth of deposits over the last two decades, it can be seen that in the initial years of the 21<sup>st</sup> century the growth was massive reaching around 46% this will remain unmatched right until 2008-09 where with a policy of expansion by the bank deposit will reach an all-time high of 51% but this quickly declines to reach the mid-twenties for the subsequent years. The growth of deposits for the bank over the two decades averages out at around 28.55%, although an acceptable rate while looking at the figure alone, considering the fact that the bank operates in a country that has a population of more than 110 million, with large parts of it still having no access to banks one expects a bank of this caliber to perform better. As a comparison a bank known as Equity bank that operates in the neighboring nation of Kenya has averaged according to its website around 22% growth is deposit for the last decade although lower than awash banks 28.55%, one must consider that Kenya has a population that is half that of Ethiopia's and the bank competes with 44 banks 13 of which are foreign owned this puts the bank in a tough spot but performs nearly as well as awash bank that a larger population to pull from with less domestic completion and on foreign ones.

## Return on asset

Figure 4.2: return on asset for awash bank

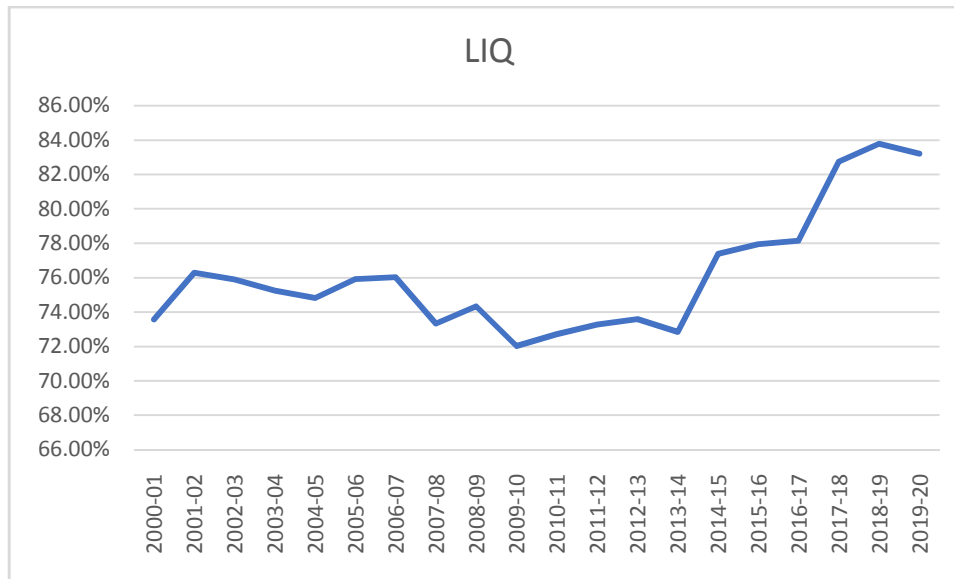


The above graphs show, the ROA or return on asset for awash bank, it can be seen that except for a dip here and there the banks maintain a good ROA ratio which basically an indicator of management efficiency and their ability to effectively utilize the resource they possess on their balance sheets. Unlike deposits which are affected heavily by population and other factors some of which are outside the control of the bank. ROA presents us with a ratio and hence the variable can be compared to international standards to this regard, Speights (2021) states that an ROA of 5% or better is typically considered a good ratio while 20% or better is considered great. Awash bank for the last two decades has had an ROA of 3.4% which falls short of the 5% bench mark but the ROA of the bank has increased over the last five years ending the most recent fiscal year at an admirable rate of 8.84%.

## Liquidity

Liquidity is one of the most if not the most important factors for a bank, this is for obvious reasons because if a bank can't pay back its customers deposits especially and any sort of external debt generally, a bank run that might affect not only the bank but the entire sector might occur and will be disastrous for everybody involved as shown in Argentina in the mid-2000s. To this effect an acceptable liquidity ratio for a bank is around 80% to 90% (Murphy,2020).

Figure 4.3: liquidity ratio for awash bank



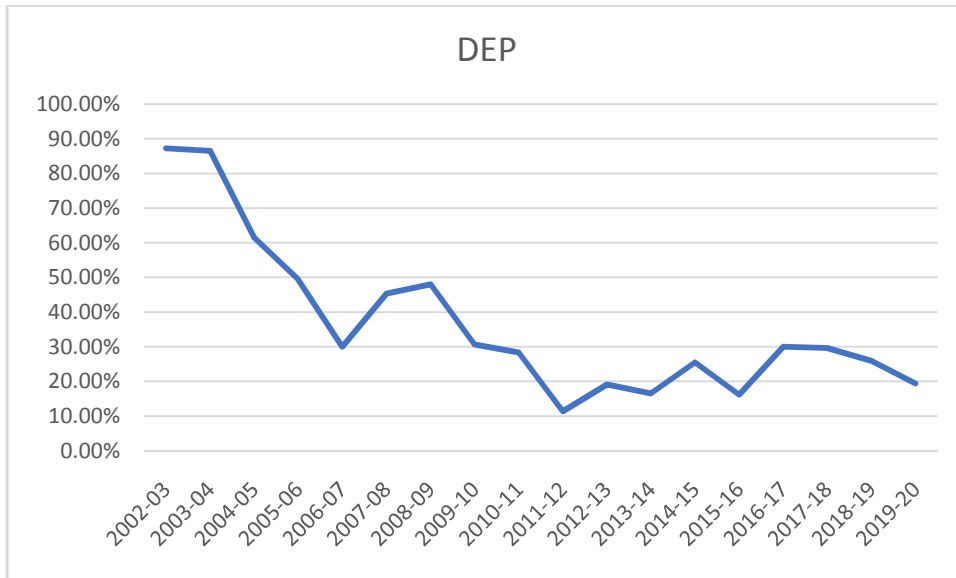
With the above facts in mind awash bank manages around 76.15% liquidity ratio although not bad its isnt great either. Although with a ratio this high the possibility of a bank facing a liquidity crisis is quiet low.

### United bank S.C.

Selected from the second stratum this bank is expected to perform as good as banks that are part of the first stratum, although established a few years after the first private banks were established like that of awash bank, the bank faced little competition for some time. On its official website the bank claims that it has 339 branches and 9 sub branches and employs around 6,536 workers on permanent and contract bases. An important note with regard to this bank is the fact that the bank has recently undergone internal reforms like management structure and rebranding, this wasdone as stated in the banks most recent annual report in an attempt to improve the performance of the bank, so some the variables that are mentioned below might experience a dip or a rise in subsequent years.

## Deposit growth

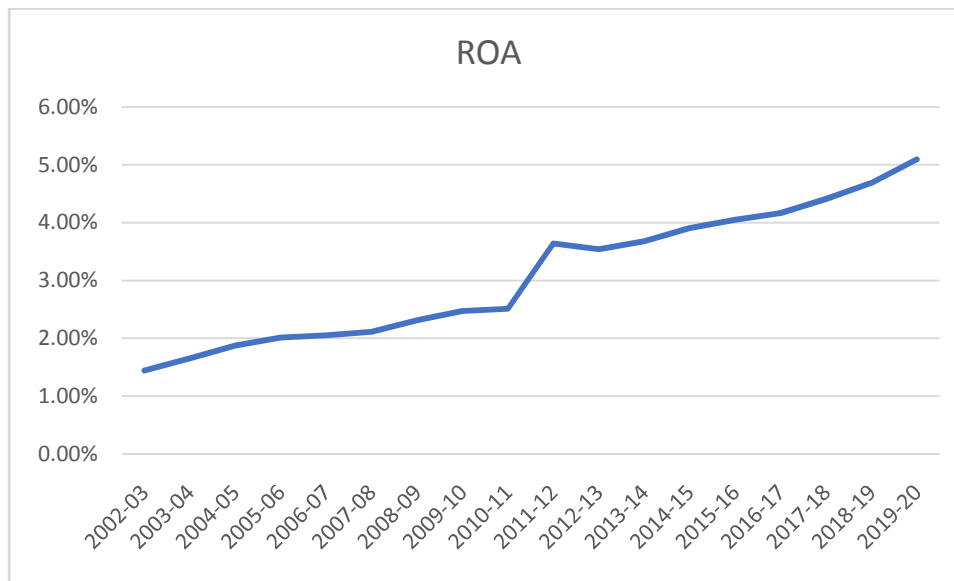
Figure 4.4: deposit growth for united bank S.C.



As the bank was established in the late 90s it can be seen that in the early 2000s the bank enjoys a massive increase in deposits reaching an all-time high of 87% growth rate of deposits in 2002-03, but after that the bank experiences a steady decline until it stabilizes in the range of the high teens to mid-twenties. The bank for the last two decades has averaged a deposit growth rate of 36.71% which can be considered acceptable given the fact that awash bank had averaged 28.55% and the Kenyan counterpart had achieved 22%. But again, the fact that most of the country don't have adequate banking and remains an untapped market and the low number of competitors takes away somewhat from this good growth rate.

## Return on asset

Figure 4.5: return on asset growth rate for united bank

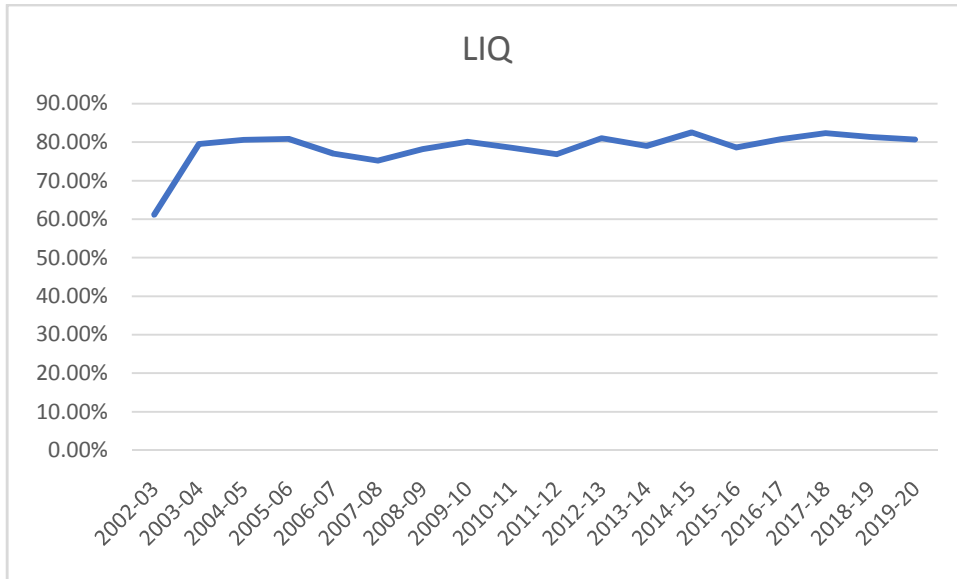


As one of the more important indicators of a bank performance it's good to see that united bank as maintained an uninterrupted growth rate since the start of the millennia, but a look at the graph solely will give a deceiving image of the performance of the bank with this regard, by using the same criteria as before (i.e., the 5% cut off point) once again one can see that united bank also fails averaging a rate of 3% for the last two decades falling well short of the requirement and achieving a lower rate than awash whose rate was 3.4%. but since the bank has restructured recently and has a growing rate one could assume if everything goes well the bank will surpass the aforementioned rate in the next few years.

## Liquidity

As stated above the importance of this particular ratio can never be understated, with a misspell with this issue leading to collapse of banks. With this being said the bank maintains a consistent ratio, with the average for the last two decades closely resembling the ratio of awash bank standing at around 76.5%. The bank maintains its liquidity ratio at a consistent ratio quiet well the only minor fluctuations are the start of the 2000s.

Figure 4.6: liquidity ratio for united bank

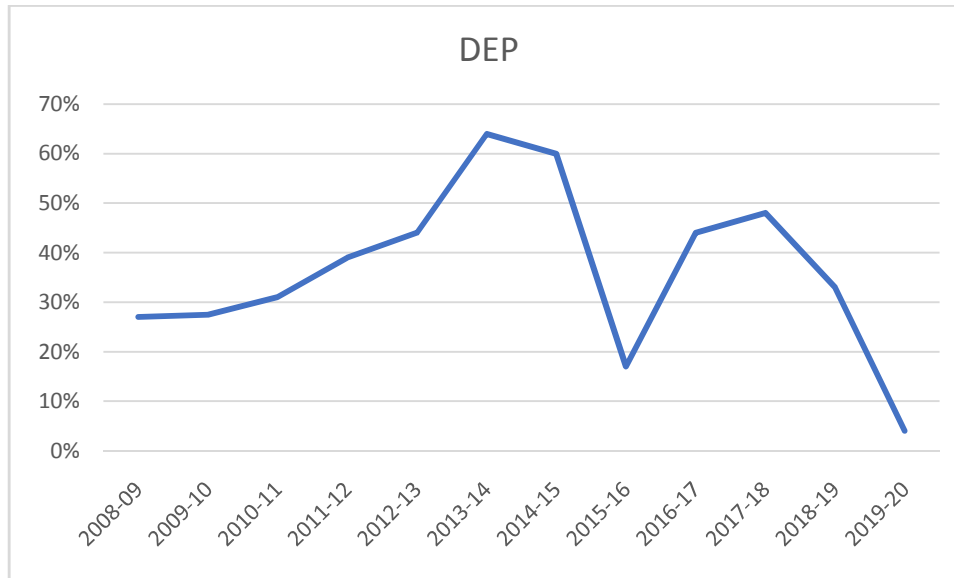


### Oromia international bank S.C.

Selected from stratum three this bank will represent those banks that were established more recently but had the to get a foothold in the market. Although bearing the name of Ethiopia's largest state the bank has office all across the country and is quickly growing. The banks official website states that the bank has more than 300 branches across the country, which is quite respectable when compared to the aforementioned banks that had at least a decade of market participation before the established of the mentioned bank.

## **Deposit growth**

Figure 4.7: deposit growth for Oromia international bank

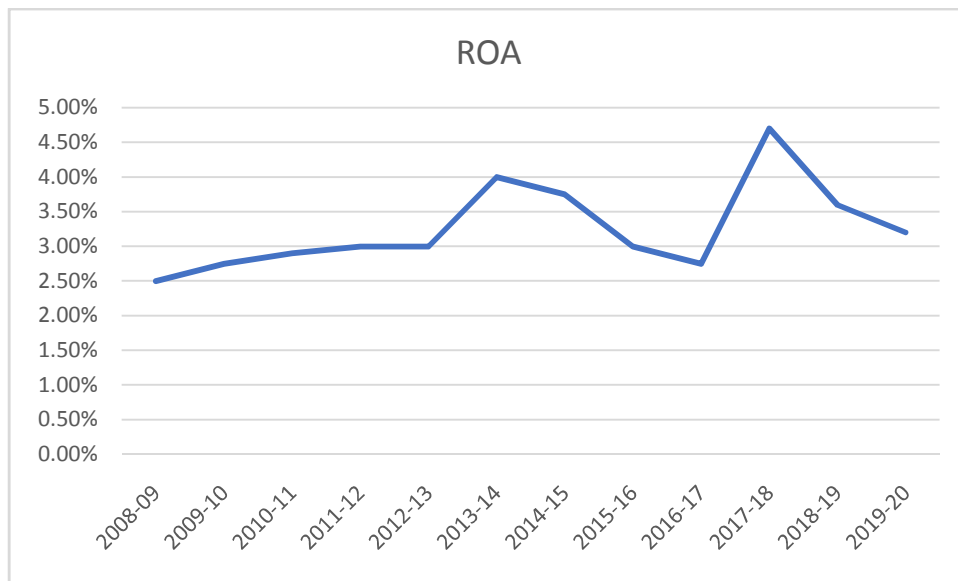


For a bank that was established just 12 years ago the bank shows volatile deposit growth starting at 27% the bank unlike their local counterparts start to witness growth in deposits contrary to the rest who experienced a sharp rise and a steady fall, the sturdy growth in deposit goes on to reach an all-time high of 64% in 2013-14 which was good by any standard. The bank was able to maintain this rate the subsequent year as well but starts to witness a sharp decline the next year and starts to recover once more, to again experience another sharp fall and currently the growth in deposit growth stands at 4% which is quiet low even when compared to domestic banks. For the last 12 years the bank maintained an average growth in deposit of 36.5%, although in the margin of other local banks the volatility the bank experienced is quiet concerning.

## **Return on asset**

Contrary to deposit growth return on asset of the bank seem to show some what stable growth, indicating that the volatile nature of deposit growth isnt an inditing nature of the bank, but again also shows a minor volatility that isnt experienced by the other banks. Were as the other banks start relatively with small ROAs Oromia international bank stagnates after it enters the market and starts to witness a relatively minor ups and downs.

Figure 4.8: return on asset for Oromia international bank



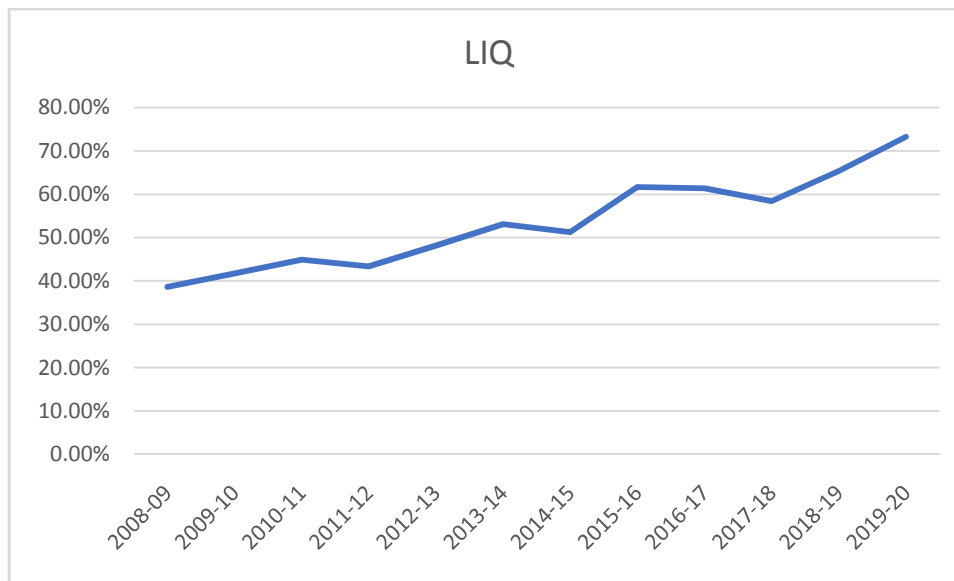
The bank is able to hold an average of 3.26% ROA for the last 12 years it was on the market, although failing to meet the 5% threshold the bank is able to have a higher ROA than that of united bank indicating the bank is a more efficient utilizer of resources. But again, this achievement is tainted by the volatile nature of the performance as the ships that hold steady usually travel the longest.

### **Liquidity**

Differing from the above ratios the bank when it comes to liquidity has experienced a stable growth when it comes to liquidity and when one considers the paramount importance of this particular ratios the fact that the bank is experiencing a constant and uninterrupted growth is a good indicator.

With this being said the banks average liquidity ratio is quiet low, the lowest out of the three. This can be traced to the volatile nature of the deposits of the bank with deposits being the most liquid asset. The bank averaged 53.46% liquidity which falls short of the 80% cut point that indicates weather the ratio is good or not, and the ratio when compared to the other banks is low as well with awash averaging 76.15 % and united averaging 76.5%.

Figure 4.9: liquidity ratio for Oromia international bank



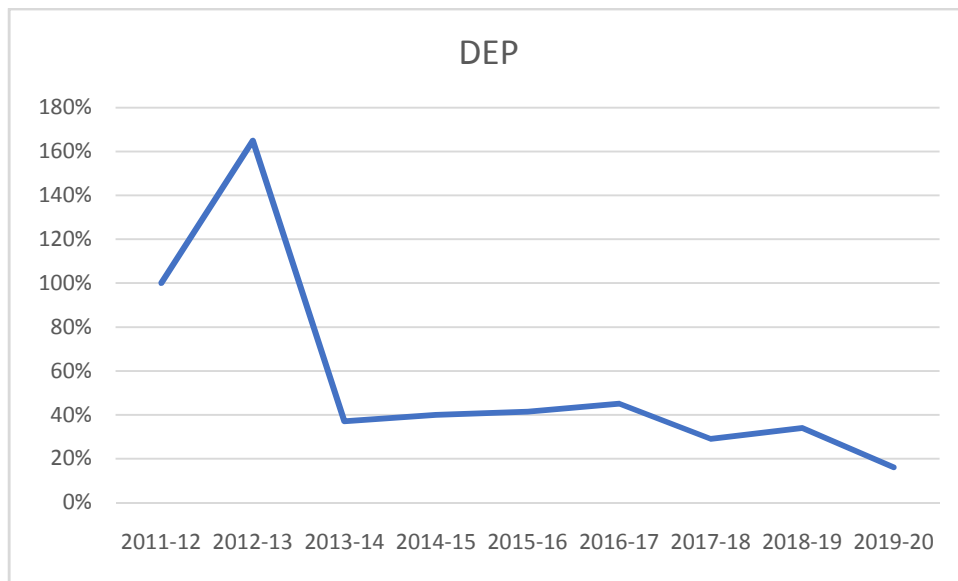
### Addis international bank

Founded in 2012 Addis international bank is one of the smaller banks in the sector, the bank claims that its main objective is to help the “unbanked” citizen and to do this the bank claims that it has consciously diversified its ownership, meaning while most banks are owned by a group of wealthy individuals Addis international bank claims to be owned by all types of owners ranging from iddirs to individual citizens. If and when liberalization is undertaken its banks like Addis international bank and the other banks like it in stratum four that will likely have a difficult time coping with the new market structure.

#### **Deposit growth**

As the bank is just 8 years old it might not be able to raise large amounts of deposits in absolute terms, but since the bank claims that its primary target is the unbanked citizens, the bank should have at least an acceptable percentile growth when it comes to deposits.

Figure 4.10: deposit growth for Addis international bank

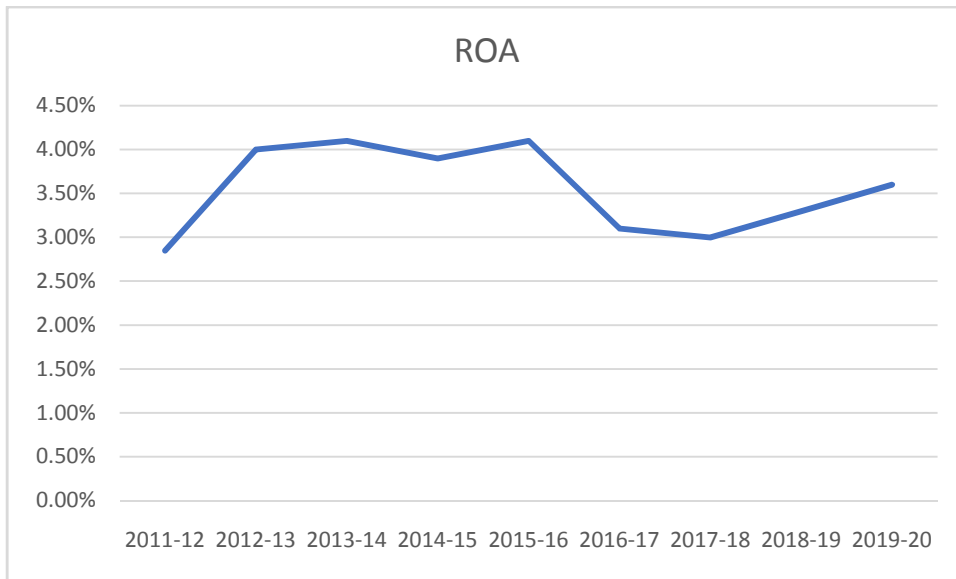


As it can be seen from the above graph in the initial years of the operation the bank showed an impressive growth, reaching an all-time high 165% growth rate in deposits in 2012-13. Although the rate indicates a sharp decline in subsequent years it would have been quiet irrational to expect a bank to maintain that level of deposit growth for a long period of time. The bank for some time now had a relatively stable growth rate of deposit although as the other banks mentioned above it has shown a decline in recent years. The bank throughout its 8 years of existence has averaged 63.37% deposit growth rate which quiet high in fact it's the highest and by some mile but since the bank is still a new bank to have a full picture of its performance one might have to wait for some time.

### **Return on asset**

Here once again since the bank and the stratum it represents are new the ratios might be high and the same is expected to happen with return on asset, as seen for the other banks presented above, in the initial years ROA tend to be high or tend to increase rapidly and starts to stagnate or fall but since the bank is question is new it has yet to experience this trend.

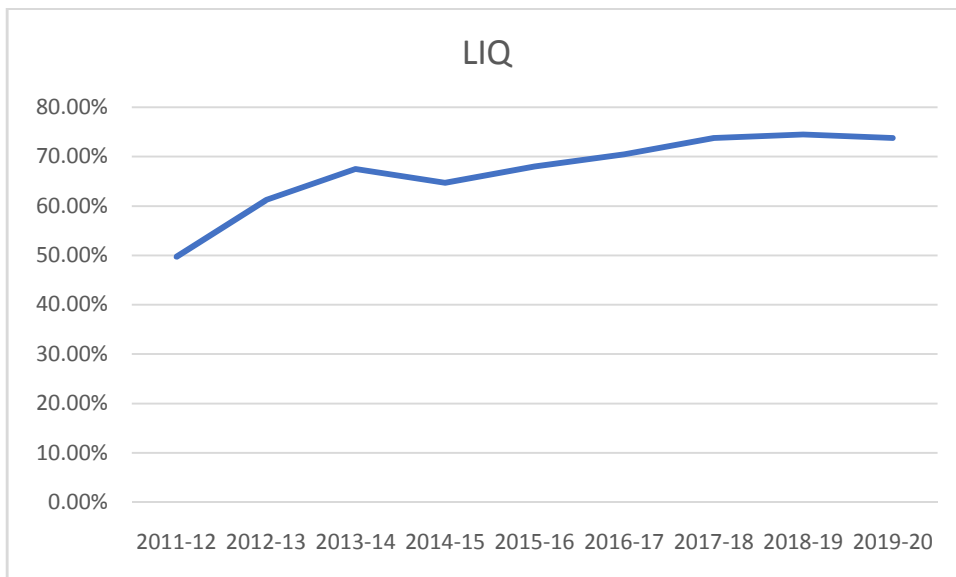
Figure 4.11: return on asset for Addis international bank



As expected, the bank experiences quiet a high ROA and is largely maintained at a high level up until the most recent fiscal year. Although not to take away from the management’s ability of efficient utilization of the bank’s resources and selection of good investment opportunities the most likely reason that the bank has achieved an average ROA of 3.99% which again is the highest of the bunch that have been reviewed is most likely down to its short market participation.

### Liquidity

Figure 4.12: liquidity ratio for Addis international bank



With the importance of liquidity being clear the bank maintains an average 75.46% which is near to the acceptable threshold of 80%. When one considers the age of the bank the fact that in recent years it has been able to maintain a rate in the 70% region is quite impressive.

From the above analysis it can be seen that performance across the strata vary indicating that age has an impact on the performance of the sector, with the earlier banks (i.e., banks represented in stratum 1 and 2) showing a more stable performance across the board although most of the time not being able to meet the international standards they will have to adhere too if they are to survive in a liberalized sector. While the most recent banks (i.e., banks represented in stratum 3 and 4) show either a volatility in performance or are at their initial growing phase, indicating they might face difficulty facing international competition. With this notion established the next crucial point is to determine what kind of liberalization would best fit the aforementioned circumstance as to contrary to popular belief there are different types of liberalization methods all with their perks and short falls.

#### 4.5.2. Types of liberalization that could be undertaken

Although lumped together as a singular and monolithic decision there are several different routes a government can take with regard to liberalization, some of the types nicknamed after the countries that implemented it (i.e., the Polish model, the Russian model or the Korean model) the outcomes of these policies have varied from various levels of success to total failure and some of the prominent types of liberalization are discussed below:

The Polish approach: although there is no universal agreed up on road to approach liberalization nearly all experts agree that Poland went about it the right way after being grid locked by two subsequent occupations by Nazi Germany and the Soviet Union respectively, in 1989 the Poles were finally free to blaze their own path and they were in dire straits with the collapse of the Soviet Union most of their economic activities had sized or was reduced but to their credit they didn't panic and introduced a series of reforms that liberalized their entire economy and the banking sector was one of the first to be liberalized and opened to competition they did this by, a policy of gradual privatization, accompanied by continued efforts by government to develop financial markets, has proved a relatively successful strategy for transition. Polish policy makers managed to successfully combine fast price and external liberalization with strong regulatory

regimes in the 1990s (Driffill and Mickiewicz, 2004). Although as stated above there isn't any blue print for a successful liberalization but the method that Poland followed has been universally praised and several other countries have followed in the same footsteps and have achieved varying levels of success.

The Russian approach: contrary to the Poles the Russian approach has become synonyms for its unmitigated disaster and basically killing the Russian economy. Although till this day the reason for the failure of the tariff reck of an economic policy followed by Russia in the 1990s is still argued by scholars most seem to agree that the zealous attempt by the part of president Boris Yeltsin to step away from the communist model followed by the Eurasian nation since the Bolshevik revolution of 1923 was to blame and led to hurried liberalization that included the privatization of state banks to few wealthy people that till this day led to the sector being dominated by oligopolies. A 2005 IMF working study puts what happened to the world's largest nation in those turbulent days as, Improvements in equity and bond market regulation began in the 1990s and also proved difficult to implement. Even improving trading rules was difficult because of the difference between the interests of buyers and sellers, on the one hand, and the short run interests of market operators, on the other.

Also, difficult to resolve has been the conflict between the interests of majority and minority shareholders. Attempts to create markets overnight have had only limited success not only in cases of limited regulation. The same study proceeds to state that because of the aforementioned zealous approach to the issue unlike the Polish model little to none considerations were given to regulations which led to practically the blundering of the country. Commonly the Russian approach is referred to as the shock therapy approach although this approach has better success stories like in the Baltic states.

The Korean approach: when this study refers Korea it's to indicate south Korea not the north as that part of the peninsula is still communist. The Koreans followed a slow liberalization process that started in the early 1980s and ended in 1992 with the liberalization of interest rates, what makes the Korean model unique isn't only the fact that it took the better part of two decades to be completed but selected private banks were given immense support from the government and they

were given the opportunity to invest in what they saw fit and if things didn't pan out usually the government was right there with the necessary support to make sure that the selected banks didn't go under, but the Korean government of the time didn't do this with impunity they coupled these approach with a well laid liberalization plan. As stated above this took several decades but the simple fact that the banks knew that there would be a time where foreign competition would operate kept them on their toes and by the time the anticipated competition arrived Korean banks were among the best in East Asia. This raises an important point that's is how did these banks get financed without causing inflationary issues, the answer to this important issue is in Korea, the de facto rapid liberalization of short-term borrowings in the early 1990s, both internationally and internally, led the heavily leveraged corporations to be increasingly financed by short-term inflows and through less regulated intermediaries. In the run-up to joining OECD, Korea had opened its capital account by freeing short-term foreign borrowings, but left longer term borrowings subject to restrictions in an attempt to limit total capital inflows (Cho, 2001).

The above three were and still are among the most popular models of liberalization in the 20th and 21st centuries and the Ethiopian government is most likely to select one of the three options, as they are the most tested and trusted approaches. Important points to note about the above list is that the list isn't an exclusive one meaning there are other approaches that might be deployed in the country like the Chinese model where firms need a local partner to operate in the country and the examples put forward for each approach are simply based on popularity meaning there a lot of other countries that followed slow liberalization or/and shock therapy.

With the penitential policy decisions laid out and with the performance of the banking sector analyzed the, one can examine the what type of liberalization would best fit the sector in its current form. Of course, as stated above there are quite a large number of liberalization policies that the government could undertake and all of them might have positive, negative or mixed outcomes.

There are several criteria's that must be full filled to ensure that the selected policy whatever it might be has even the slightest chance of success and this are:

Independent policy making: a policy decision of this magnitude must be made in a fact based, scientifically driven and expert led method/way otherwise even if the policy sounds solid on study its implementation might be troublesome, a good example of this would be the aforementioned case of Russia where political maneuvers and ties, personal wealth and individual rivalries led to a disastrous outcome. Although at first sight the failure of the country might appear as a result of policy mistakes the same policies have done wonders to the neighboring nations of Estonia and Lithuania condemning the above-mentioned issues as the real reason for the failure of liberalization in that country.

Economic and political stability: these factors are of paramount importance to any nations economic and societal development but when decisions of this caliber are made there are new lime lights that are laid on these issues. If any policy decision is to become successful their needs to be a general agreement that it's the right step to take otherwise if the policies are always under question, suspension and are implemented halfheartedly their doom is quite certain. And the policies must be conducted under a positive political atmosphere since most likely this polices to bear fruit will require time and, in that time, if a government is changed and revokes the policies this could hurt the sector quiet badly.

Open and transparent relationship with stake holders: self-explanatory players in the sector before and after the policy is undertaken must be able to freely and easily communicate with the necessary bodies to voice their concerns and worries and recommend improvements. Dealings between this parties and the government must be clear for the public to see and for it to scrutinize them if it wishes to.

With the assumption that the policy will be undertaken under such circumstances because without its failure is largely guaranteed. The author recommends that the government utilize a mixture of the korean and polish approaches, the korean approach would quiet suit the current circumstances of ethiopia as the nation isnt moving away from a totally closed economy utilizing the shock therapy might cause wide spread damage to the sector, but with the way the Koreans liberalized a lot of the unnecessary pitfalls could be avoided this is because the korean government informed its banks at the start of the 1980s that the sector will be open to foreign competition in 15 years this gave the banks ample time to prepare themselves and also allowed the government to assist the banks which it deemed worthy which gave them additional head way to prepare for the inventible competition from international competitors. As seen in the

above pages currently the performance of Ethiopian banks is to par with international standards with newer banks showing lack of consistency in performance but if the government was to give them a period of time for preparation most banks might get their acts together and might perform well. Although sounds fail proof there are some instances where this policy didn't pan out well, Marcus Andrews (2012) found out that during the liberalization period of India in the late 80s and early 90s although given time some of the larger banks didn't adequately prepare with most banks underestimating the size of the task. And it's because of this reason the author recommends that the korean approach be coupled with the polish approach, where by the government continuously supported the banks even after liberalization had been undertaken this might ruffle some feathers from the international competition but might be necessary for the survival of local banks.

#### 4.6. Government policy before and after liberalization

To ensure that the liberalization policy proceeds without much issues and benefits the entire economy just not the sector it must be supplemented with other policies (Williams,2017). These policies can be before and/or after the policy is implemented, although ultimately when push comes to shove each bank will have to decide and implement its own policies and decisions that it deems fit for itself but the government will have to intervene especially in the years before the policy is undertaken and in the early days of the policy (Wilson,2010).

Since no two economies are the same the policies that are followed by one country can't be implemented by another and expect to have the same outcome, but when one looks at the different ratios that are presented above, there really are only several options that policy makers could undertake and there are some policies that seem to be prevalent in most success stories of liberalization and these are:

The initial points are policies that could/should be taken before liberalization is undertaken:

- Easing capital controls: unfortunately, capital controls have worsened in recent years comminating in a cap on cash with drawl, although arguments about increasing the use of electronic banking and decreasing crime can be made without the necessary know how and infrastructure the controls have only made the task of banks more difficult. And in addition, capital controls prevent the flow of capital to where it is most profitable and

most efficient. It forces domestic investors to gain a lower rate of return on investment and have a lower income (Pettinger,2020). If the current forms of capital control aren't relaxed soon it will hinder the ability of local banks to effectively prepare for the competition that will arrive with the relaxation of the sector, this will also affect deposit growth and as it can be seen from the above presentations deposit growth has stagnated across the board in domestic banks.

- Credit directing: this is meant to refer to the government incentivizing lending's towards certain sectors especially the productive ones (i.e., agriculture and industry) this is done through different policies like tax breaks, default payment insurance and other policies that might help steer credit to these parts of the economy and this policy also will help banks to specialize making them harder to be picked off by the competition. This done for:
  - ❖ first to assist the economy grow by providing highly needed capital to these important sectors.
  - ❖ second these sectors are much safer than those of the consumption sector this is to mean lending's that are directed towards consumption utilities like that of cars which take up the bulk of lending's in the Ethiopian banking sector.
  - ❖ third these sectors especially agriculture is where most of the unbanked citizens work so this will provide much needed banking services to this section of the population and
  - ❖ lastly since in the early days of liberalization most foreign banks will likely focus on urban centers domestic banks will have time to establish new customer bases in these neglected aspects of the country.
- Allow fair competition between domestic banks: as it stands one bank the commercial bank of Ethiopia has a massive advantage over the rest of the lot, this is because it is government owned although that within its self might not be an issue as long as its efficient which to a certain degree it is but the issue starts with the favoritism that it receives from the government nearly all government contracts are paid through the mentioned bank, all payments to the government including tuition for Addis Ababa university are made through this bank, this has stifled out competition in the banking service that relate to the government and in a country where the government is a major participant in the economy this puts the other banks at a major disadvantage. If this policy

was to be relaxed and people were allowed to utilize banks of their choosing while interacting with the government this might encourage the other banks in the sector to become efficient in order to attract this lucrative aspect of the sector.

Some policies that could be undertaken after liberalization has been undertaken are:

Providing assistance to banks: once the liberalization takes place more likely than not banks will start to fail and it's during this crucial time the government will need to step in and assist those banks that might go under but have shown promise, this assistance might come in the form of tax holidays, subsidies and direct bailouts. How and when to intervene to assist banks that require it will have to be decided on a case-to-case basis but with the number of local banks that are in the pipeline works to enter the market and the likely strong competition that will be put forward by foreign banks it is most likely that the government will need to let some of local banks fail but if the government follows a Laissez-faire policy most banks might fail within a few years and this might spell disaster for the sector.

Allowing banks to operate as they deem fit: currently the national bank of Ethiopia imposes great pressure on local banks setting strict guidelines to how they should and can operate, of course when one considers that the sector isn't yet developed a strong argument could be made that the sector currently needs a guiding hand, but although having effective regulation is important in this sector some of the restrictions that are in place are stifling innovation a good example of this is the fact that the national bank requires banks to have a certain number of branches but this is challenging for banks that want to cater to let's say people with higher income like that of Zemen bank who wanted to operate out of only a single branch but were forced to open several others by the national bank. These restrictions can be further noticed by the absence of investment banks in the country which isn't currently allowed all banks that operate in the country must be commercial ones but if international competition is to be allowed local banks must be allowed to act as investment banks as well.

Although all the above policies and more can soften the blow to local banks it's important to note that for them to be effective they must be done in a prudent manner as mentioned above even the solidest of plans will fail, if they aren't implemented well. Banks that will be assisted must be selected very carefully and without any bias, political considerations must stay clear while these decisions are made and decisions need to be made technocratically.

## 4.7. What banks could do to perform well under liberalization

As stated earlier although the government might implement some policies to help banks compete when liberalization policy is undertaken. Ultimately, it's the bank themselves that will have to pick up the slack if they want to survive once the gates to the markets are open. There are several important policies banks currently operating in the market can undertake if they are to survive after the policy is undertaken and some these are:

- **Mergers:** currently the most widely discussed policy is merging banks of similar caliber, this would mean that banks with similar capital and client bases would merge to form larger banks. This policy is currently being implemented in India where eight banks are merging to form three large banks in the hopes that, they would provide ample competition to the international banks currently dominating the sector in India. These would provide a simple and quick solution to the issue of competition as larger banks can have an improved scale, efficiency and team upgrade (Deely,2016) and when one considers the number of banks that are currently in the pipe works this policy would seem the best out of the bunch. With this being said some banks have resisted this policy claiming that there is a difference between of goals, policy and practices between them and their counter parts and indeed this is the most difficult aspect of any merger but of banks especially.
- **Increase productivity:** although mergers might provide a somewhat of a solution, the real challenge even if the mergers take place is the productivity level of local banks. Currently with the absence of international banks and a local bank that would be deemed as a trail blazer competition and hence productivity among local banks has stagnated, banking services that are considered as basic in the rest of the world like credit cards, adequate number of ATM machines and online banking are quiet at their infancy in Ethiopia and if an international bank where to enter the market and provide these services adequately their likely be an exodus of clients from local banks. A positive note here is that several local banks like United bank, Nib bank and Buna bank have undergone restructuring weather these restructurings will have an impact on their performance will have to be seen.

- Be prepared to make changes: although the core practice of banks has largely remained the same since the early 17<sup>th</sup> century, flexibility is a key feature of successful banks throughout the world. The issue of flexibility becomes even more important when there is high level of competition in the market, worldwide market leaders like HSBC and City bank are always evolving in an attempt to continue their grip on the sector, they participate in. These is a character sorely missing from local banks in Ethiopia as banks usually set the same goals some of which are ambiguous and attempt to achieve them even if some of the goals don't have much impact on greater scheme of things. Markets and trends are always changing and if local banks are able to adopt to these changing needs quickly and efficiently, they might have a chance against the competition that awaits them.

Although there are other policies banks can follow to improve their chances against international competition, the policies usually tread the aforementioned trends and those can be simply summarized as merge with other similar banks, if possible, improve productivity through up-to-date banking practices and be flexible to meet the need of the day.

## CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

### 5.1. Conclusion

Liberalization of the financial sector in general and the banking sector in particular have been a point of contentions in Ethiopia for some time with some economist and industry insiders advocating for it while others appealed that it would spell disaster for the frail local sector, but the issue seem to have been settled with the government in 2019 announcing that the sector would be liberalized in the new future although the announcement was short on details and didn't specify when and how the sector would be liberalized it sent the sector in to overdrive. To this end the study wanted to answer the question of how liberalization would affect the banking sector in Ethiopia, to understand what kind of liberalization policy would best suit the current form of the sector and how government and banks policies could impact their performance once the policy is undertaken.

In an attempt to answer the aforementioned questions, the study utilized econometric models, statistical tools and inferential analysis and discovered that the reaction of local banks and their ability to compete will be different across their age groups (i.e., period of participation) this can be seen from the fact that important ratios indicate that banks that were established before the year 2000 have better standings in the sector although they themselves fall short when compared to international standards, these results show that if international competition were to be allowed with the current form of local banks the domestic sector will most likely falter under the weight of competition.

The regressions on the other hand indicate that once again there is a bifurcation of banks before the year 2000 and after with the banks established before 2000 being largely impacted by micro factors while banks established after being affected by macro variables. Results from the regression through structural policy analysis indicate that currently the negative aspects liberalization (i.e. allowing foreign competition) are higher than the potential benefits, in addition to the different impacts on domestic banks that have been discussed above for the benefits of the type of liberalization being discussed to be achieved there needs to be prudent government policy, strong financial markets and competitive local banks most of which aren't

available and hence it can be confidently be said that currently liberalization by allowing foreign competition will have a negative impact on the sector. If policy makers deem it necessary to go through with the policy in question banks must be given some time to adjust their form so that they can meet the competition head on and the current form of the banks indicate that a gradual liberalization policy that mimics a mix of Korean and Polish approaches would best fit the sector and would likely allow quiet a number of domestic banks to survive the ordeal.

## 5.2. Recommendation

With the findings laid out several recommendations can be stated, as to have a responsible, effective and prudent liberalization policy that could help the sector and the national economy grow and evolve to modern standards. An important point to note here is the fact that there is practically no chance that all banks currently operating and hoping to operate in the future will survive the liberalization encounter as not all banks will have the necessary effectiveness needed to improve and meet the necessary standards, with this point established here are some recommendations as to how the sector could be liberalized:

- Give banks time to adjust: empirical results from the econometric model and statistical analysis both indicate that banks currently operating in the sector need time to adjust, although banks represented by samples from stratum one and two are faring better than their local counterparts they are yet to be on the level of international standards but a look at the graphs presented in the analysis part of the study indicates that important ratios are growing indicating given the right amount of time banks of these kind can meet the necessary standards to put up an effective competition against the international competitors, while banks in stratum three and four show volatile performance indicating they need time to establish a customer base, rapid liberalization without giving banks time to adjust as can be seen from the models will lead to the sector being negatively affected. The given time must be pre-defined so as banks can adequately take the necessary steps to meet their goals.
- Independent policy decision making must be the norm: when this important policy decision is made, it's imperative that the policy and all its aspects are made through an independent body that isnt involved in the political aspect of the country, although this

might seem difficult to achieve in a country like Ethiopia it's absolutely crucial that this be the case as political consideration will likely make the decision making process inefficient which can't be afforded in an important decision like liberalization, the experience of other countries that has been discussed in the above chapters indicate that whatever the policy if decision making isn't prudent and independent any policy will likely fail the comparison between Russia and the Baltic states is a major example.

- Follow a slow liberalization process: as stated in the other aspects of the study the what would best fit the current standing of the banking sector in Ethiopia is a mix of the Polish and Korean models, while the first gave time to local banks to adjust themselves by allowing a few banks to enter the sector a few banks at a time the latter gave an ample time before the policy was undertaken so that local banks had time to adjust themselves to the inevitable. This would be a good fit for the Ethiopian sector as both policies or preferably a mixture of the two would give banks to prepare and accumulate ample know how to have a fair chance of survival and to thrive, policy makers who are in charge of planning and implementing this policy must take in to consideration that even the banks that are performing on the highest caliber domestically don't meet the minimum standards utilized internationally and hence exposing the sector to shock therapy will likely lead to its demise.

## References

- Ahmad Waleed, Ahmad Tisman Pasha, Adeel Akhtar (2015), Exploring the impact of liquidity on profitability: evidence from banking sector of, *Journal of banking and commerce*.
- Abdullahi Dahir Ahmed and Sardar M. N. Islam, (2010), *The theory of financial liberalization: an assessment*, Physica Heidelberg.
- Arnaldo Mauri, (2010), *The Short Life of the Bank of Ethiopia*, *Economica*
- Alen Davis, (2010), *A Strong Hypothesis*, *Journal of International economics*
- Adam Hayes, (2020), *Bank Capital*, Investopedia
- Boukef Jlassi, Nabila and Hamdi, Helmi, (2015), *The relationship between financial liberalization, Financial Stability and Capital Control: Evidence from a multivariate framework for developing countries*, *MPRA Studys*
- Daniela Georgeta Bejua and Maria-Lenuta Ciupac-Ulici, (2012), *The impact of financial liberalization on banking system*, *Procedia economics and finance*
- Dani Rodrik, (1987), *Trade and capital-account liberalization in a Keynesian economy*, *Journal of International Economics*
- David R. Anderson, (2020), *Sample Survey Methods*, *Britannica*
- Foluso A.Akinsola and Nicolas M.Odhiambo (2017), *The impact of financial liberalization on economic growth in sub-Saharan Africa*, *Cogent Economics & Finance*
- Gaytán, A., and Johnson, C.A, (2002), “A Review of the Literature on Early Warning Systems for Banking Crises”. *Central Bank of Chile Working Studys*
- Hermes. N and Nhung. V, (2008), *The Impact of Financial Liberalization on Bank Efficiency: Evidence from Latin America and Asia*, *Applied Economics*
- Haseeb Zaman Babar & Gul Zeb, (2011), “CAMELS Rating System for Banking Industry in Pakistan” *Master Thesis. Umea Sanrol of Business*

- John Driffill and Tomasz Mickiewicz, (2004), The Order of Financial Liberalization: Lessons from the Polish Experience, Davos working study
- Jan Kregel, (2008), Financial Liberalization and Domestic Policy Space: Theory and Practice with Reference to Latin America, Palgrave Macmillan
- J. Hanson and S. Ramachandran, (2004), Financial Liberalization: What Went Right, What Went Wrong?, world bank
- Koeva, P, (2003), The performance of Indian banks during financial liberalization, IMF Working study
- Kozo Kiyota, (2007), The Case for Financial Sector Liberalization in Ethiopia, Gerald R. Ford School of Public Policy
- Luc Laeven, Lev Ratnovski, Hui Tong (2014), Bank Size, Capital Requirements, and Systemic Risk: some International Evidence, International Monetary Fund
- Ioan Trenca, Nicolae Petira and Emilia Anuta, (2013), impact of macro-economic variables up on the banking system liquidity, proccedia economics and finance
- Martin Svitek (2001), Functions of bank capital, Bratislava
- Madhi (2017), The Macroeconomic Factors Impact on Liquidity Risk: The Albanian Banking System Case, European Journal of Economics and Business Studies
- Michel J. Henson, (2019), What is the difference between a bank's liquidity and its capital, theUnited States federal reserve
- Njie. M. (2006), The impact of financial liberalization on bank spreads in Malaysia, Journal of Economic Cooperation
- NBER working study, (2007), Has Globalization Changed Inflation, working study
- Staikouras, C & Wood G ,(2003), "The determinants of European bank profitability' InternationalBusiness & Economics Research Journal
- Patrick Nyakira (2014), The relationship between inflation rates and liquidity of commercial bankin Kenya, university of Nairobi

Rangan Gupta, (2007), Financial Liberalization and the Dynamics of Inflation, Nominal Exchange Rate, and Terms of Trade, Indian Economic Review

Rolph van der Hoeven, (2006), Financial Openness and Employment: The Need for Coherent International and National Policies, International Labor Office

Tefera Assefa (2016), Financial Sector Liberalization in Ethiopia: Resistance, Justification and Its Credibility, Ambo university

Tahar Lassoued, (2018), The effect of Financial Liberalization and Inflation on Poverty, International Research Journal of Finance and Economics

Tyler Lacombe (2017), The Importance of Bank Deposits in the Money Supply,

sapling.com

Virginie Terraiza (2015), The effect of bank size on risk ratios:

Implications of banks' performance, procedia economics and finance

## Annex

### Annex1: regression results for Addis international bank

Source	SS	df	MS	Number of obs	=	10
				F(6, 3)	=	16.58
Model	.052882804	6	.008813801	Prob > F	=	0.0212
Residual	.001594796	3	.000531599	R-squared	=	0.9707
				Adj R-squared	=	0.9122
Total	.0544776	9	.006053067	Root MSE	=	.02306

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DEP	.0422888	.0309691	1.37	0.265	-.0562688	.1408464
ROA	3.184633	3.069163	1.04	0.376	-6.582813	12.95208
CAR	-.5598486	.892206	-0.63	0.575	-3.399246	2.279549
GDP	-.2834158	.4592407	-0.62	0.581	-1.744925	1.178093
INF	-.5120477	.1795709	-2.85	0.065	-1.083522	.0594269
UENP	-75.95674	19.9449	-3.81	0.032	-139.4303	-12.48317
_cons	2.418829	.3527784	6.86	0.006	1.296131	3.541527

Variable	VIF	1/VIF
CAR	6.13	0.163245
UENP	4.86	0.205719
INF	3.81	0.262584
ROA	3.56	0.280733
DEP	3.41	0.293183
GDP	2.47	0.405481
Mean VIF	4.04	

Source	SS	df	MS	Number of obs	=	10
				F(5, 4)	=	23.36
Model	.052673492	5	.010534698	Prob > F	=	0.0046
Residual	.001804108	4	.000451027	R-squared	=	0.9669
				Adj R-squared	=	0.9255
Total	.0544776	9	.006053067	Root MSE	=	.02124

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ROA	1.74683	1.880819	0.93	0.406	-3.475161	6.968821
DEP	.0388006	.0280625	1.38	0.239	-.0391134	.1167147
GDP	-.2765065	.4228876	-0.65	0.549	-1.450631	.8976176
UENP	-80.67221	17.01744	-4.74	0.009	-127.9202	-33.42422
INF	-.4419042	.1294469	-3.41	0.027	-.8013065	-.0825019
_cons	2.436074	.3239586	7.52	0.002	1.536621	3.335527

## Annex 2: regression results for Oromia international bank

Source	SS	df	MS	Number of obs	=	12
				F(5, 6)	=	16.87
Model	.117111329	5	.023422266	Prob > F	=	0.0018
Residual	.008331111	6	.001388518	R-squared	=	0.9336
				Adj R-squared	=	0.8782
Total	.12544244	11	.011403858	Root MSE	=	.03726

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CAR	1.858362	.9577849	1.94	0.100	-.4852532	4.201977
ROA	-2.424665	2.956681	-0.82	0.444	-9.659402	4.810073
DEP	.0765474	.1356134	0.56	0.593	-.2552866	.4083814
UENP	-104.994	17.76565	-5.91	0.001	-148.465	-61.523
INF	-.4865992	.1106358	-4.40	0.005	-.7573153	-.2158832
_cons	2.734427	.4127549	6.62	0.001	1.724452	3.744401

Variable	VIF	1/VIF
DEP	4.25	0.235222
CAR	2.84	0.352733
ROA	2.78	0.360116
UENP	2.08	0.479799
INF	1.37	0.731148
Mean VIF	2.66	

Source	SS	df	MS	Number of obs	=	12
Model	.116720603	5	.023344121	F(5, 6)	=	16.06
Residual	.008721837	6	.001453639	Prob > F	=	0.0020
				R-squared	=	0.9305
				Adj R-squared	=	0.8725
Total	.12544244	11	.011403858	Root MSE	=	.03813

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CAR	1.448534	.6738889	2.15	0.075	-.2004122	3.097481
ROA	-1.132752	2.722169	-0.42	0.692	-7.793659	5.528156
GDP	-.2875972	1.525492	-0.19	0.857	-4.020342	3.445147
UENP	-95.63401	21.37471	-4.47	0.004	-147.936	-43.33199
INF	-.4599355	.119594	-3.85	0.009	-.7525715	-.1672996
_cons	2.587266	.4747087	5.45	0.002	1.425696	3.748836

### Annex 3: regression results for united bank

Source	SS	df	MS	Number of obs	=	18
Model	.025050924	6	.004175154	F(6, 11)	=	3.43
Residual	.013383721	11	.001216702	Prob > F	=	0.0368
				R-squared	=	0.6518
				Adj R-squared	=	0.4618
Total	.038434645	17	.002260861	Root MSE	=	.03488

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CAR	-.80666	.4139248	-1.95	0.077	-1.717702	.1043823
ROA	3.066506	1.558735	1.97	0.075	-.3642458	6.497257
DEP	.1145035	.093255	1.23	0.245	-.0907494	.3197563
GDP	.8141417	1.051294	0.77	0.455	-1.499741	3.128024
UENP	-.0294106	.0185825	-1.58	0.142	-.0703103	.0114891
INF	-.030111	.0865072	-0.35	0.734	-.2205121	.1602901
_cons	.7069773	.1437876	4.92	0.000	.390503	1.023452

Variable	VIF	1/VIF
DEP	6.12	0.163435
ROA	4.55	0.219848
UENP	3.98	0.251015
GDP	2.00	0.500252
CAR	1.56	0.639864
INF	1.16	0.865275
Mean VIF	3.23	

Annex 4: regression results for awash bank

Source	SS	df	MS	Number of obs	=	20
				F(6, 13)	=	4.94
Model	.016338343	6	.002723057	Prob > F	=	0.0076
Residual	.007158743	13	.000550673	R-squared	=	0.6953
				Adj R-squared	=	0.5547
Total	.023497085	19	.001236689	Root MSE	=	.02347

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
CAR	-1.551137	.642695	-2.41	0.031	-2.939595 - .1626791
ROA	1.898371	.5781312	3.28	0.006	.6493942 3.147347
DEP	-.0175422	.0682341	-0.26	0.801	-.1649531 .1298686
GDP	-1.093649	.7148907	-1.53	0.150	-2.638077 .4507781
UENP	3.214087	3.027427	1.06	0.308	-3.326271 9.754444
INF	-.0409367	.0649902	-0.63	0.540	-.1813395 .0994662
_cons	.8810596	.1273502	6.92	0.000	.6059363 1.156183

Variable	VIF	1/VIF
ROA	7.45	0.134271
CAR	4.34	0.230632
UENP	3.77	0.265393
GDP	2.04	0.489180
INF	1.91	0.523625
DEP	1.57	0.638777
Mean VIF	3.51	

Source	SS	df	MS	Number of obs	=	20
				F(3, 16)	=	2.79
Model	.008067692	3	.002689231	Prob > F	=	0.0743
Residual	.015429393	16	.000964337	R-squared	=	0.3433
				Adj R-squared	=	0.2202
Total	.023497085	19	.001236689	Root MSE	=	.03105

LIQ	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
DEP	-.0164892	.0810775	-0.20	0.841	-.1883657 .1553874
INF	-.0150617	.0683268	-0.22	0.828	-.1599079 .1297846
GDP	-1.921894	.6848537	-2.81	0.013	-3.373719 -.4700686
_cons	.9261523	.0647712	14.30	0.000	.7888434 1.063461

Annex 5: macro-economic variables utilized in all the regressions

YEARS	INF	UENP	GDP
2000-01	0.66%	3.28%	8.17%
2001-02	-8.24%	3.13%	8.10%
2002-03	1.65%	2.94%	8.13%
2003-04	17.76%	2.72%	8.87%
2004-05	3.26%	2.50%	9.75%
2005-06	12.94%	2.37%	8.67%
2006-07	12.31%	2.27%	8.97%
2007-08	17.24%	2.21%	9.45%
2008-09	44.39%	2.21%	8.26%
2009-10	8.47%	2.34%	8.85%
2010-11	8.14%	2.34%	8.26%
2011-12	32.01%	2.30%	9.65%
2012-13	23.38%	2.28%	6.99%
2013-14	7.46%	2.25%	8.17%
2014-15	6.89%	2.22%	8.56%
2015-16	9.57%	2.20%	8.66%
2016-17	6.63%	2.17%	6.30%
2017-18	10.68%	2.12%	8.47%
2018-19	13.83%	2.08%	6.01%
2019-20	15.84%	2.08%	6.21%