ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MASTER OF BUSINESS ADMINSTRATION

DETERMINANTS OF FINANCIAL PERFORMANCE OF INTEREST FREE BANKING BUSINESS OF ETHIOPIAN COMMERCIAL BANKS

Presented in Partial Fulfillment of the Requirements of the Degree of Master of Business Administration in Finance

By: Hadji Jemal Deybaso

Advisor: Temesgen Worku (Ph.D.)

January, 2021

Addis Ababa, Ethiopia

Statement of Declaration

I, the undersigned, hereby declare that this thesis entitled: Assessment on Determinants of financial performance of interest free banking business of Ethiopian commercial Banks; is the result of my own effort and study, prepared under the guidance of my advisor TemesgenWorku (PhD). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning degree.

Name HadjiJemalDeybaso

Signature _____

Date _____

Statement of Certification

This is to certify that **HadjiJemalDybaso**has carried out his research work on the topic entitled “Assessment on Determinants of financial performance of interest free banking business of Ethiopian commercial Banks”. The work is original in nature and is suitable for submission for the award of the degree of Master of Business Administration in Finance at the Addis Ababa University.

Advisor:

Name TemesgenWorku (PhD)
Signature _____
Date _____

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MASTER OF BUSINESS ADMINSTRATION

Declaration

This is to certify that the thesis prepared by **HadjiJemalDeybaso**, entitled “Assessment on Determinants of financial performance of interest free banking business of Ethiopian commercial Banks” and Submitted for partial fulfillment of the requirements for the degree of Master of Business Administration in Finance, compiles with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by:

- External Examiner :GidayGebrehiwot (PhD) Signature _____ Date _____
- Internal Examiner:HabtamuBerhanu(PhD)Signature _____ Date_____
- Advisor :TemesgenWorku (PhD) signature _____ Date _____

Abstract:

Interest free banking is among the emerging trends in the global economy and the fastest growing industry worldwide. It is a banking system which is in consonance with the spirit, ethos and value system of Islam and governed by the principles laid down by Islamic Shari'ah. It is started in Ethiopia on 2013. This study examines the determinants of financial performance of interest free banking business by commercial Banks in Ethiopia considering three internal(bank size, liquidity management and operating efficiency) and two external (Inflation and GDP) factors. Return on average asset as a proxy of profit will be used to measure financial performance. To achieve this objective, quantitative research approach and descriptive research design was used. The data obtained was from secondary source using annual financial reports. Five years panel datafrom 2015/16-2019/20 of four purposively sampled commercial banksthat are pioneer in starting the business and with a well organized data were examined by running regression analysis using E.Views software 9.0 from total population of eleven banks. Based on the findings of the study, liquidity management has positive and significant impact on the financial performance of Ethiopian Banks operating Interest free Banking business, while the rest variables have insignificant impact on financial performance of these banks.

Keywords: Interest free banking, Return on average assets, liquidity, bank size operating efficiency, GDP and inflation.

Acknowledgment

First of all, I would like to thank Allah the Almighty who helped me reach this step and is always with me in any of my undertakings. Secondly, I would like to extend my heartfelt thanks to my advisor, TemesgenWorku (PhD) for his unreserved guidance, direction and timely assistance in providing me with valuable comments and advice throughout the studyin this difficult period. At third, my sincere thanksgo to my family and my wife, my childrenand the whole family for their continuous support and encouragement towards my study. Finally I would like to express my deepest gratitude to friends, workmates and relatives who directly or indirectly take part in supporting and up lifting my journey towards this far.

Table of Contents

Acronyms

CBE	Commercial Bank of Ethiopia
CBs	Conventional Banks
EFY	Efficiency
GCC	Gulf Council Countries
GDP	Growth Domestic Product
IBs	Islamic Banks
IFB	Interest free Banking
IMF	International Monetary Fund
INN	Inflation
LDR	Loans to deposit ratio
LIQU	Liquidity
NBE	National Bank of Ethiopia
NIM	Non Interest Income
OE	Operating Expense
OLS	Ordinary Least Square
PROF	Profitability
ROA	Return on Asset
ROAA	Return on Average Asset
S.C	Share Company

List of Tables Table

CHAPTER ONE

1. Introduction

1.1 Background of the Study

Financial institutions have vital role for economic development of a country and banks contribute a lot towards this by mobilizing resources from those who have surplus and provide to those with shortage for investment serving a mediation functions. For sustainability of this function and overall economic growth, financial institutions in general and banks in particular need to perform well being competitive and profitable. Financial performance of organizations can be affected by internal factors within it and external (macro-economic) factors out of the organization's control according to Al-Tamimi&Hassan (2010).

Interest plays a major role in financial resource allocation in conventional banking. Banks pay interest to depositors and charge interest for loans advanced to clients. Money is used as a store of wealth and as a means of exchange also and both Islam and Capitalism agree on this. However, in Islam money is not viewed as a commodity which can be bought and sold at a profitunlike Capitalism according to Komakech(2018). It is the prohibition in Islamic thought of dealing in interest that necessitates for the development of an alternative financial system that serves the needs of Muslims according to Salah (2009).

Interest free banking, also commonly known as Islamic banking and is defined according to Moin (2013) as banking system that is undertaken in line with requirements of the Shari'ah(Islamic law) principles.Islamic banks provide commercial services to customers that comply with the religious injunctions of Islam that is free from interest (Ahmad; 1994), Kettell; 2011) and avoid unethical practices and participate actively in achieving objectives and goals of an Islamic economy according to Salah(2009).

Islamic financial sector has grown considerably in many Muslim and Non Muslim countries to satisfy a growing desire by customers who are seeking to conduct their financial affairs in accordance with Islamic Shari'ah (Salah 2009).

Islamic banking has been growing globally in Muslim and non Muslimcountries in which many countries are practicing dual banking system where Interest free banks operate along with conventional banks (Kerima2016). The number of commercial Islamic banks worldwide in 2019 reached 428 and total assets of global Islamic banking amounted to about 1.99 trillion U.S. dollars sharing about 6% of the total banking global Asset.(Islamic Financial Sector Facts and Statistics data published by AmnaPuri-Mirza on January 29, 2021).

In Ethiopia there are substantial numbers of Muslim populations. According to the central statistic Authority of Ethiopia census 2007(CSA, 2007), Muslims account for 34% of the total population of Ethiopia. The unavailability of alternative shari'ah compliant deposit and financing products in Ethiopia played a significant role in inducing financial exclusion and resulted in law bank usage in Ethiopia (Hailu, Kapusuzoglu, &Ceylan, 2019).

There was no legal framework that allows for establishment of Islamic finance in Ethiopia before 2008. Following the force for growing demand by Ethiopian Muslims and repeated request to the government by representatives for the establishment of Interest free banking service, a new proclamation No: 592/2008 was issued.

Interest free banking business was introduced/started in Ethiopia on March 2013 following National Bank of Ethiopia directive SBB/ 51/2011 that authorizes conventional Banks to undertake interest free banking business on window based modes based on proclamation number 592/08.

Oromia International Bank S.co is the first Bank that commenced operation of Interest free Banking business in Ethiopia on December 2013, this was followed by Commercial Bank of Ethiopia which started operation on February 2014.Since then, the business has been growing and is being adopted by other peer commercial banks. Currently (June 2020),

total of eleven (one state owned and ten private) banks out of 17 banks operating in Ethiopia (2 state owned & 15 private)have been availing interest free banking Business through dedicated window based model alongside with the conventional banking.

After a seven years of exclusive interest-free banking window practice in Ethiopia, the Banking Business Proclamation that amended Proclamation No. 592/2008, i.e., Proclamation No. 1159/2019 that authorize national Bank to issue directive on additional conditions of licensing, supervisions and requirements to establish interest free bank came into force.Following this, NBE issued directive number SBB 72/2019 dated 18/09/2019 that permits the establishment of full-fledged interest-free banking in Ethiopia directive replacing directive number SBB/51/2011.

Following this, Zemzem Bank SC. secured its license officially on October 12,2020 from NBE as first Ethiopian interest free Bank(ADDIS BIZ.com; October 22, 2020 and Hijra bank S.C has also got a green light to its founding board of directors(ADDIS BIZ.com; October 12, 2020). Additionally there are five full Islamic fledged Banks and ten conventional banks under establishment.(ADDIS BIZ.com; October 12, 2020).
Besides, some of the existing conventional banks have started opening separate Interest free branches in addition to the window service model.

Though interest free banking is growing from time to time in Ethiopia since its inception, the industry is still in at the beginning stage and it needs performance development so as to make a substantial influence on the economic development of the country. It would be difficult to manage banks and enjoy their benefits to the economy without understanding and managing determinants of bank financial performance. This raises a need to explore financial performance determinants of interest free banking business in detail to devise mechanism for improvement to remain competitive with sustainable growth playing expected role on the economic development.

1.2 Statement of the Problem

Since emerged, the international banking industry including Islamic one has experienced major worldwide revolutions in its operational environment due to the impact of deregulation, advances in information systems and technologies, globalization, and the subsequent global financial crisis (Athanasoglou, Brissimis& Delis 2008). A healthy and profitable banking sector is a priority for national authorities due to its contribution to the stability of the financial system and economic growth.

Interest free banking is among fastest developing business over the globe (IMF 2014) and Interest free banks continue to grow in size and complexity despite different challenges faced since emergence in the 1970s, having now become an essential part of the national and international financial services industry. There are more than 500 Interest free Banks that exist in sixty Muslim and non-Muslim countries with the total global financial asset in excess of $3 trillion at the end of 2017 (Basov & Bhatti 2016). According to IMF (2014), the Islamic financial assets market has grown at an annual average rate of 16% since 2006.
According to IMF (2015) interest free banking as a financial institution, has potential contribution to the public like financial inclusion especially of large underserved Muslim population, provide support to small and medium sized enterprises (SMEs) through its asset-backed financing scheme, and it is less risky as compared to the conventional banking system as a result of the risk sharing principle of the interest free banking system that prohibits speculation.

Moreover, deposits in Islamic banks particularly in Arabian Gulf countries are raising steeply Aden (2014). The study shows that the conventional banks are at risk of losing 30 to 40% of their Muslim customers in the coming decade as a result of the introduction of Sharia'h complaint banking products and services. This indicates that the interest free banking service has a great potential market to serve and prosper.

When we look at the Ethiopian financial industry, this potential could not be exception.

According to Sadisq Mohammed and Ibrahim Bushera (2020), there is notable opportunity for Interest free banking in Ethiopia. Besides, study by Tsion (2017) find out that there is

huge untapped opportunity of the IFB market to be exploited by financial service providers in Ethiopia to utilize the niche in offering IFB services. In addition, Mohammed (2012) found out that there is a bright prospect and huge opportunity of the interest free banking in Ethiopia. In addition, Teferi (2015) had studied about “Contribution of IFB to economic development and its prospect in Ethiopia‟ and result of the study shows that introduction of IFB has a potential to influence and enhance the economic development of the country through resource mobilization and employment creation by encouraging people to use the banking system apart from creating financial inclusion for the Muslim (target) population.

However, though it has untapped opportunity for the IFB services to prosper there are also many challenges that affect the IFB service to compete with the existing conventional banking system. In general, the challenges of IFB emanates from its unique nature and guiding principles. As a result, the Interest free banking business operates under dual constraints. Interest free banking is also governed by conventional governance and risk management rules in addition to regulatory mechanism laid down by Islamic Shari'ah (Henry and Wilson, 2004; Iqbal and Mirakhor; 2007) and it is natural to note that it faces stiff competition with the long existed conventional banks.

Though the banking industry in Ethiopia has been operating over a century, the interest free banking had not been practiced for a long time. So, according to Debebe (2015),one third of the Ethiopian populations were forced to use the conventional banking services regardless of the Islamic principles.

The number of banks providing interest free banking window service is continuously increasing. Within seven years time (2013-2020), out of the total 18 commercial banks in Ethiopia, 11 banks have joined the Interest-Free Banking window business market mobilizing total deposit of Br. 76 billion from customers and granting finance worth of Br. 17.7 billion to clients as of December 31, 2020 (NBE report). Following issuance of NBE directive SBB/72/2019 that authorize the establishment of full-fledged interest-free banking in Ethiopia, Zemzem Bank S.C had already secured license to be the first Full fledged interest free bank in Ethiopia. Hijra bank S.C had also secured approval of its board members, while five new entrant Banks with Full fledged IFB and ten conventional banks

are at pipe line. In addition, some conventional banks started providing to launch interest free banking services by subsidiary (branch) in addition to window services subsequent to issuance of the directive.

A number of researches have been conducted in developed and emerging market countries on various aspects of Interest free banking business. However, due to the newness of the concept to Ethiopia the IFB service is not yet well researched and there are still few literatures available. Among these, Mohammed (2012), Wondwosen (2012) Tsion (2017), Akmel (2015), and Kerima (2016), Sadisq, M. and Ibrahim, B. (2020) had studied the Prospects, Opportunities and Challenges of Islamic Banking in Ethiopia. And these studies found out that lack of awareness, regulatory, supervisory and institutional challenges, lack of support, gap in research and development in Islamic studies, lack of qualified human resource as well as wrongful association and perception of the service with specific religion are cited as the major challenges that the interest free banking services faced.

Finding of study made by Aman (2019) with topic " Interest-free window banking and finance in Ethiopia: Inception to expansion" using descriptive analysis of some Ethiopian Banks offering interest free banking service in a window model, indicate existence of an incredible growth of profitability by concluding the sector has a bright future in the country.

Gizachew (2019), had made a study with topic "Performance Assessment of Interest Free Banking of the state owned Commercial Bank of Ethiopia" but study about performance assessment ofInterest free Banking of all banks in Ethiopia (both private and state owned) operating the business is not studied.

Interest free banking business has been growing rapidly in Ethiopia. Since launch of the business in Ethiopia in March 2013 to December 31, 2020, a total of Br. 76 billion was mobilized and financing of Br. 17 billion was granted. A total profit (net of income tax) of Br 1.01 billion was generated for the period under study. Though there is a growth of the business in Ethiopia, It would be difficult to manage performance of banks and enjoy their benefits to the economy without understanding and managing determinants of bank financial performance. As none of the above studies had tried to examine the influence of

determinant factors of the financial performance of the interest free banking service providing banks in Ethiopia, this study therefore attempts to shed light in filling this research gap by assessing determinants of the financial performance ofinterest free banking business of Ethiopian commercial banks for the banks remain competitive and profitable in the segment.

1.3 Objective of the Study

1.3.1General Objective

The study's main goal is to look at how certain selected internal variables such as bank size, liquidity, operating efficiency and external variables like GDP and inflation, affect the financial performance of interest free banking business of Ethiopian commercial Banks.

1.3.2 Specific Objectives

- To assess the impact bank size has on financial performance of interest free Banking business of Ethiopian commercial banks.
- To explore the impact of liquidity management on financial performance of interest free Banking business of Ethiopian commercial banks.
- To identify the impact operating efficiency hason financial performance of interest free Banking business of Ethiopian commercial banks
- To assess the effect of GDP on financial performance of interest free Banking business of Ethiopian commercial banks
- To look at the effect of inflation on financial performance interest free Banking business of Ethiopian commercial banks

1.4 Research Hypothesis

Lundberg (1992) define hypothesis as a tentative generalization the validity of which remains to be tested. In its most elementary stage the hypothesis may be any hunch, guess, imaginative idea which becomes basis for further investigation.Based on theories and past empirical literatures, the following research hypotheses stated in alternative form were tested in the case of selected Ethiopian commercial banks operating interest free banking business for investigation.

H1:Size of the bank affects financial performance of Ethiopian commercial banks operating interest free banking business positively and significantly

H1: bank liquidity impacts financial performance Ethiopian commercial banks operating interest free banking businesspositively and significantly

H1: bank operating efficiency affects financial performance Ethiopian commercial banks operating interest free banking business negatively and significantly

H1: Inflation affects financial performanceEthiopian commercial banks operating interest free banking business negatively and significantly

H1: Growth domestic product affectsfinancial performance Ethiopian commercial banks operating interest free banking business positively and significantly.

1.5. Significance and Implications of the Study

The demand for interest free banking business in Ethiopia has been expanding and the operating manner has been showing change from window model to Full fledged Banks with more banks to join the sector.

As there is no previous study available in the literature on the area in context of Ethiopia, the study is expected to contribute theoretical knowledge on interest free banking financial performance in Ethiopia context serving as a start up for future researches. practically, the research provides input for the Banking sector and Bank managements to understand the determinants of profitability closely and devise appropriate strategy that improve performance and remain competitive in the business accordingly, for regulatory bodies to have better understanding in formulation of policy frame work that facilitate

performance of the industry and for investors ,it will add value in assisting to make informed decision of their investment.

1.6. Scope of the study

The study is limited to examining selected internal and external determinants of financial performance of interest free banking business of four commercial banks in Ethiopia for the period of covering from 2015/16- 2019/20 by using ROAA as proxy of profit and considering bank size, bank liquidity and bank operating efficiency as internal variables and GDP and Inflation as external variables.

1.7.Limitation of the Study

Interest free banking in Ethiopia is a recent phenomenon with not more than eight years service experience since launched in our country. Availability of data is one of the major limitations as most banks started the operation at full scale recently and do not have well organized recorded data to evaluate the performance of the IFB Business. This forced to take small sample size and exclusion of some variables that might have impact on return on average asset. Thus, only four years IFB performance data of four pioneer banks with adequate data and experience are taken for the study. All the Banks under sample provide the service with Islamic window along side with conventional banks forperiod under study and have also opened full fledged branches in 2019/ 2020 budget year. For the dedicated window service provided by the banks, resource sharing and cost allocation framework is not well established. Hence, fixed asset and other indirect costs could not be accounted properly.

1.8 Organization of the Study

The study is organized in five chapters. The first part is introduction of the paper. Chapter two presents review of the theoretical and empirical literatures of the study. The research methodology, design and methods used during data collection and analysis for the study will be presented in Chapter three. Chapter four presents data analysis, interpretation and presentation of the study. Chapter five finalizes the research with summary of findings, conclusion and recommendations.

.

CHAPTER TWO

2. Related Literature Review

2.1 Introduction

Literature review is foundation of any research activity. It helps to establish the theoretical framework and foundation of the field of study. It helps to summarize what is studied in the past and synthesize in a way that permits a new perspective. Hence, this chapter attempts to capture related literature on various theme that underline the topic of study.

The first part of the literature review discusses with the theoretical review that focused on Interest free banking concepts and definitions, history and development of interest free banking, underlying principles of interest free banking, Difference between Interest free Banking and Conventional Banking, Operating models of Interest free Banking, Interest Free Banking deposit and financing products, modern day infrastructure of Interest Free Banking.

The second part deals with concept of profit, profitability, measurements and determinants of bank performance. Discussion on the empirical studies will be made in the third part. The last part of the literature is about the conceptual frame work of the study variables that will be tested by the research based on the research hypothesis.

2.2 Interest free Banking Definition

Interest fee banking has different naming by different countries of the world practicing it. It is named as Non interest banking, participation banking, La-Riba/No –Riba, Ethical Banking, Social Banking and the like. The most commonly used naming worldwide is Islamic banking and most scholars use interest free banking and Islamic Banking interchangeably. Despite different naming, all terms are to refer banking system based on the concept and principle of Islamic economics and finance.

The definition of interest free Banking revolves around Islamic law. It is a system of financial activities consistent with shari'ah, based on Islamic principles which at the core refuse collecting and paying ofriba/interest, transaction involving uncertainty and speculation. (Ziaudin 1994) define Islamic Banking is as banking system which is in consonance the sprit,ethos and value system of Islam and governed by the principle laid down by Islamic Shari'ah.

2.2.1 History and development of Islamic Banking

During the period when western powers dominated the world, interest-based banking was considered to be the only way. If Muslims wanted to make use of the banking industry they had no choice but to adopt interest-based banking and by the mid-19th Century, almost all Muslim countries adopted the interest-based western financial system (Chachi, 2005), despite the charging of interest (riba) being the prohibition most often stated in the Qur'an(Holy book) in Islamic teaching.

This interest-based banking model had fuelled the rise of commercial and political dominance of the western economies. Interest was considered such an integral part of the economic model that no other form was considered necessary. The objections of other religions against the practice of interest began to be overruled, or ignored, and interest became the engine conventional economics.

The concept of having an economic model based on some other foundation than that of interest was not considered to be viable and was initially dismissed by academics of the age. In an attempt and continuous effort made to explore ways and means by which commercial banking could be organized on an interest-free basis, the idea of establishing an interest-free banking system gained impetus in the theoretical arena in the 1940s as milestone to modern Islamic finance (Alharabi, 2015).

The first attempt to establish an interest-free bank was commenced in the rural area of Pakistan in the 1950s.Later in the mid nineteen sixties, on 25th July 1963, Mit- Ghamar Islamic saving Bank (MGISB) came in to being in Egypt by El-Naggar(Chachi, 2005) in an experimental capacity with good start and is referred as the first experiment to show that

commercial banking activity could be organized on the basis of Islamic principles respecting the prohibition against riba and not indulging in interest.

The establishment of Pilgrims' Management and Fund institution of Malaysia, which is popularly known as Tabung Haji in 1963, with the intention of enabling Malaysia Muslims to save gradually to support their expenditure during the religious pilgrimages andmoney be spent on the pilgrimage could be untainted by riba/interest is cited as having important place for contribution in evolution of Islamic Banking.

Some years later, Nasser Social Bank was established in Cairo in 1971as the first Islamic bank in an urban setting. The establishment of the Islamic Development Bank (IDB) gave new momentum to the movement and the Dubai Islamic Bank was established in 1975 as next Islamic bank.

Since those early beginnings the growth in Islamic banking has been spectacular, with more than 500 Islamic Banks operating in sixty Muslim and Non Muslim countries (Basov & Bhatti 2016).

2.2.2 Underlying principles

`The operation of Islamic banking is based on principles of principles of shariah (Islamic law).So for any bank to be classified as Islamic bank, the following fundamental principles must be adopted initsoperations :(Al-Sultan; 1999), (Samad; 2004), (Abdul-Rahman; 2010):(Kettell; 2011) (Ismayil; 2012),(Bello &Abubakar; 2014), Alyu Abate (2016)andAssim Abdel- Razzaq(2018).

2.2.2.1 Prohibition of Interest (Riba) is in all transactions

The Islamic prohibition against riba, commonly known as interest is a defining characteristics of Islamic Banking. Islam forbids interest, in all its forms, in very clear, strong language and considers riba a serious sin.It is not Islam alone that prohibits interest. Aristotle, the Bible and the Jewish Torah all forbade profit or enounced interest as usury.

The word ‘riba’ is now commonly understood as meaning interest but the Shari’ah sees it as a much wider term, comes from the Arabic root-word with literal meaning ‘to increase’ or ‘to gain’(Latifa and Mervyn 2007). In Islamic terminology, riba means effortless gain, or the profit which is obtained without giving anything in exchange. So in the Qur’an the word riba means increment and covers both usury and interest charges on capital or debt.

The rationale for prohibiting riba is to foster an environment based on fairness and justice perspective as a fixed predetermined return to the lender regardless of the outcome of the borrower‘s course of action is viewed as unfair creating unjust outcome to the society.

2.2.2.2 The prohibition against Gharar (uncertainty)

The Arabic word Gharar means risk, uncertainty or hazard. It refers to the concept of not being certain about the terms or conditions relating to a transaction. According to the late Dr. Mustafa AlZarqa: ‘[the forbidden bai` al-gharar]. Ghararis the sale of probable items whose existence or characteristics are uncertain, the risky nature of which makes the transaction akin to gambling’.

The rationale behind the prohibition is to protect against poorly anticipated losses and the potential for disputes with regard to qualities of goods or, intentional or unintentional, incompleteness of information.Hence, under the prohibition of gharar in the Shari’ah, any Islamic banking transaction entered into should be free from hazard arising from uncertainty, risk or speculation about the ultimate outcome of a contract, the nature and/or quality and specifications of the subject matter of the contract and the rights and obligations of the parties.

2.2.2.3 Profit and loss sharing scheme

The Islamic economic finance system does not allow risk- free capital. There can be no gain without risk sharing which implies that if someone wishes to get a return on capital invested, the capital must also be exposed to the associated risks and the loss, if

any.This act will equitably distribute income, enhance social justice, and alleviate poverty.

2.2.2.4 Prohibited activities/transactions

Some business dealings are explicitly forbidden by Sahri'ahfor interest-free banks to engage in Products and services invested in by Islamic Banks must be permissible by the Shari'ah. Investing in or financing any business activity that involves alcohol, Tobacco, Pork, Gambling (Qimar) or interest bearing projects by Islamic Banking is not allowed to mention few.

2.2.2.5 Asset backed financing

Financial activity is linked to real economic activity. In the Islamic economic system, all operations of financial institutions must involve real economic assets in transactions which may be through sale or leasing or partnership based modes.

2.2.2.6 Compulsoryreturn on average assetment of Zakat

It is mandatory for an Islamic bank to return on average asset zakat and it is one of the five pillars of Islam.

2.2.2.7 Overseen by Shari'ah advisors

Every Islamic bank must be regulated by experts who will have to audit the operations of Islamic banks, its products and services to make sure compliance with requirements of Shari'ah guidelines.

2.2.3 Difference between conventional and Islamic Banking

Islamic banking and finance derived its practice from immutable principles deep rooted in the rulings of the Shari'ah legal code. Hence, it involves accounting, operation and financial norms that differ from its conventional banking counterparts (Assim Abdel- Razzaq; 2018). The main difference between the two is tabulated below:

Table 2.1 **comparison of conventional and Islamic Banks**

Islamic Banks	Conventional Banks
Based on principles of Islamic Shari'ah and low of land	Based on principle of low of land
It promotes risk sharing between provider of capital(investor) and user of funds(entrepreneur)	The investor/lender is guaranteed of a predetermined interest/return
Aims to maximize profit subject to Shari'ah restrictions	Un restricted profit maximization
In modern Islamic banking system, now it has become one of the service oriented function of Islamic banks to be a Zakat collection Center and they also return on average asset their Zakat	It does not deal with Zakat
Participation in the partnership business is their main function	Lending money and getting it with interest is the basic function.
Have no provision to charge any extra amount from defaulters except for compensation(it is given to charity) Rebates early settlement at the Bank's discretion	Charges additionalMoney (penalty and interest) and recognized as income of the bank
Return on average asset greater attention to developing project, appraisal and evaluations since it shares profit and loss	Since income from advances/loans is fixed,it gives little importance to developing expertise in project appraisal and evaluation.
Gives greater emphasis on the viability of the projects	Give greater emphasis on credit worthiness of the clients
Relationship to clients is that of partners, investors traders, buyers and sellers	Relationship is of creditor-debtor
depositors are guaranteed return on average assessment of their funds based on the principle of al Wadiah), however, based on Mudarabah concept, depositors have to share in loss position	A conventional bank has to guarantee all its depositors.
Both the bank and the customer have a stake on the financial activities and investments based on the Islamic law	Customers have no opportunity to choose where their money is invested
Money is viewed as not viewed as a commodity to traded	Money is viewed as a commodity to be traded

Adopted from Ahmed, (2006), Saidi (2007), Abdul-Rahman (2010), Duran & Garcia-Lopez (2012), Moin (2013), Mohammed (2012),Elgadi(2016),Debebe (2015), Ismayil (2012), Kerima (2016),Tewabech (2018) Institute of Islamic Banking and Insurance London,Untited Kingdom, Islamic Economic system Module 1 lesson 1.

2.2.4 Islamic Banking operating Model

According to Al-Jarhi and Iqbal (2001) as cited by Yewubdar (2018), the practice of Islamic banking, at present, takes one of the following forms:

2.2.4.1 Islamic window operating model

An Islamic window is a window within a conventional bank via which customers can conduct business utilizing only Shari'ah compatible instruments (Sole 2007). National Bank of Ethiopia(NBE) defines Interest free Banking window in its Directive no. SSB 51/2011 as Unit in conventional Bank that exclusively offersinterest free Banking Services.

Islamic Windows provides the best opportunity to building capabilities at the lowest costs as a starting point while the business is being developed and allows the Bank to build the infrastructure at an acceptable pace to further/larger infrastructure investments if there is a decision to expand the business into a subsidiary. According to Sole (2007), opening an Islamic window will require the bank to establish the appropriate firewalls to avoid the commingling of Islamic and conventional funds.

The advantage of this model is low cost as it operates on the infrastructure of the conventional banks, i.e, those Islamic products are sold directly by the existing branches and channels sales team.The disadvantage is that there is no autonomy of business decision which must be aligned with conventional products since it its dependent on the conventional bank. Islamic windows have been a more common practice in South East Asia and Western countries than in the Middle East, as a take-off platform for moving into the Islamic financial industry (Sole 2007).

2.2.4.2 Islamic Subsidiary operating Model

In this model the conventional bank develop a subsidiary to deliver shari'ah compliant banking products and services by establishing its own operating process and independent operating structure. This model is widely used by conventional banks in offering Islamic products and services. In this model, decisions are autonomous there exists more control of marketing and sales and branches, and the bank can chart its own course. However, still there will be influence from the parent as products and services offered are generally aligned to the products offered by the parents.

Subsidiaries are also dependent on the strategy of the parent Bank, where it can choose to invest heavily or adequately for the operations of its subsidiary (Gizachew 2109).

2.2.4.3 Full Fledged IslamicBanks

These are standalone Islamic banks that are not under influence of the conventional banking. Theoretically, Full Fledged Islamic Banks have the capacity of offering products to market, by securing approvals from Shari'ah Committees.

Full fledged Islamic banking creates room for innovation and experimentation of new structures. Nevertheless, they still governed by the financial ratios and controls for other types of banks and financial institutions, using conventional measuring tape which could lead to a "penalty" cost for doing business.

Costs of building the franchise, huge investment in infrastructure to achieve operational efficiency being competitive with the conventional banks are the main challenges for a Full Fledge Islamic Bank.

2.2.5 Islamic Banking Products

Introducing Major IFB Productsand services offer institutions to attract previously un banked customers and target groups.. According to Kerima (2016), Introduction of Islamic financial products and services globally has been in response to the growing need of a significant segment of the marketplace that refused to deal with interest-based instruments.The products are recognized based on the contracts instead of the commercial orientation (Kettell 2011).

2.2.5.1 Islamic Banking Deposit Products

According to Kettell (2011), in fund mobilization activity, Islamic banks depend on shareholders' funds, savings accounts current accountsand investment accounts. The investment deposit holders and the bank share the profit realized in accordance with their agreed upon ratio at the time of contract execution. The deposit in the current account is treated as if they are loans to the bank by the clients and doesn't bear any yield to the account holders. However, their principal is guaranteed by the bank.

According to Ziauddin (1994), Hassen& Lewis (2007) and Kettll (2011), Yewubdar (2018), the source of deposit mobilization of IFB products are shown as follows:

a) Unrestricted Investment Deposits (Unrestricted Mudaraba)

It is an earning deposit which is mobilized with the knowledge that bank acts as the Mudarib (manager) and invests the fund in any Shari'ah compliant manner without restriction and intervention of the capital provider. The profit from the investment will be shared as per agreement whereas loss will be beard by the depositor (capital provider). The bank has discretion to participate in the investment and can pool the money for its daily activities of the IFB business.

b) Restricted Investment Deposit (Restricted Mudaraba)

It is an earning deposit and the customer shall specify as to which particular sector of financing or investment activities the bank should engage. The resulting profit will be shared per agreement while loss will be shared by the capital provider (depositor).

c) Wadiah (Safekeeping) Deposit)

It is a non-earning f IFB deposit that operates under the contract of WadiahYadDhamanah (guaranteed custody).The bank accepts deposits from its customers to keep orcustody of the customer in safe way. Then the Bank uses the customer funds for investment after securing permission of customers to do so.

The customers may withdraw their balances at any time on demand on spot. Profit generated from the use of the customers‟ funds belongs to the bank. However, the bank can rewards the customers by declaring profits to themat its own discretion. Under the contract of Wadiah, Bank is not allowed to include in the contract or to promise any reward on the deposit received and depositors too cannot request any rewards on their savings from their Bank.

d) Demand Deposit (Amana Current Accounts)

Amana Current accounts are non-earning deposits that operate based on the principle of alwadiah, whereby the depositors are guaranteed return on average assetment or withdrawal of their funds on demand. The Bank will not invest funds from this account to profit and loss sharing ventures. As a result, current account holders do not receive return for depositing their funds.

2.2.5.2 Islamic Banking Financing Products

To accommodate the needs of Islamic banking, the industry has developed a number of transaction types that can be conducted without offending the Shari'ah. In Islamic finance, the term "loan" refers only to a benevolent loan (Qard al hassan), a form of financial assistance to the needy to be repaid free of charge. Other instruments of Islamic finance are not referred to as "loans' but rather as financing can be grouped into one of three types of financing modalities according to Institute of Islamic Banking and Insurance and Hussain, Shahmoradi, and Turk, (2015). These are:

a) **Participatory (profit and loss sharing**) – the bank and the customer share the risks and rewards of a project as partners under a partnership agreement.

b) **Non-participatory (non profit and loss sharing)** – the bank makes the object of the contract directly available to the client through either purchase or lease.

c) **Accessory(Fee based)** – miscellaneous services provided by a bank to its clients including such things as agency agreements for buying and selling shares, transferring funds, accepting demand deposits, etc.

d) **Qard Al Hassan loans or Amanah (Benevolent loan)**

It is a benevolent loan given to deserving customers by Islamic banks to alleviate poverty. The beneficiary is required by Shari'ah to return back only the principal amount to the Islamic bank. Audu Bello et al.(2014). In the case that the debtor does not return an extra amount to the creditor, this transaction is a true interest-free loan. This type of loan is considered by some Muslims as the type of loan types that does not violate the prohibition on 'riba', since it truly does not compensate the creditor.

Participatory (profit and loss sharing)

The principal transactions within this group are the mudarabah and musharakah.

Mudarabah (Silent Partnership)

It is a kind of partnership in which a bank gives money (Rabuul-maal) to another (Mudarib) to invest in commercial enterprises. The bank may provides its own direct funds as investor (rabbulMaal), or it may act as agent (mudarib) on behalf of other clients who wish to invest funds and the bank aggregates the investment funds and places them with the entrepreneur. The profit will be distributed per agreed ratio and the loss is assumed by the investor in monetary terms and management in service provided/effort terms.

Musharakah (Equity Partnership)

Musharakah is a similarpartnership arrangement but the bank does not act alone in investing in the project. In a musharakah, there are other direct investors, which may include the entrepreneur providing investment funds themselves as well as expertise or labor. Profits are shared according to a pre-agreed ratio but losses are shared on the same ratio as the capital investments. This sharing of profits in an agreed ratio enables the bank to take a higher proportion of profits in order that its investment may be returned earlier than other investors, so enabling the bank to exit the arrangement earlier than other investors. This arrangement (called a diminishing Musharakah) can be used by a client to finance the start-up of a business or to finance the purchase of real estate where the bank's share of the ownership gradually reduces.

Non-participatory types

These groups of transactions are used by banks to provide assets, or the use of those assets, directly to their clients. In general terms, the most common types are the Murabaha (cost plus sale), the Ijarah (lease), and the Salam and Istisna'a forward finance transactions.

Murabaha

The Murabaha is the most common Islamic banking form of financing. In this the client requests that the bank acquires some asset on their behalf and in turn the client will buy the asset off the bank either in cash or by return on average assetments over time, or any other agreed combination. The client and bank agree at the time of contract the amount of

profit that the bank will make out of the deal. This contract can be used either at a retail level, say to buy a car, or at a corporate level, to acquire a crane or real estate or similar.

Ijarah

Ijarah lease is generally similar to a conventional lease in form but there are some significant differences. The bank will acquire the asset (airplane, manufacturing equipment, building, etc) and give the client the right to use the asset (called the usufruct) in return for agreed lease payment. In an ijarahwaiqtina, the agreement contain an element of capital return on agreement such that at the end of the agreed lease period the bank has its capital amount fully repaid and the ownership transfers to the lessor (the party that was leasing it).

Salam

Salam means a contract in which advance payment is made for goods to be delivered later. Here, the seller got paid the full advance price during execution of Salam contractual agreement. In return for this, the seller promises to deliver certain particular products to the buyer at a later date.

Istisna'a

Istisna'a is a contract in which a commodity can be transacted before it comes into existence.

Salam and Istisna'a contracts are considered exceptions under the Shari'ah because they involved the purchase of something that at the time of the contract does not exist. The existence and possession of the item by the seller is normally a mandatory condition for a contract of sale but these two types of contracts are for the growth (Salam) or manufacture (Istisna'a) of the items. In both of these types of contract, the price paid maybe less than the current market price. The description, quantity and the quality must be clearly agreed in the contract.

Accessory (Fee based) Types

Accessory, or miscellaneous, group of contracts are those in which are neither participatory finance nor non- participatory, but the bank acts on a fee earning basis. An example of an accessory type of contract is an agency agreement (Wakalah) where the bank is appointed agent for the performance of specific duties, such as buying or selling shares. Another example would be a trust agreement (Amanah) agreement whereby the bank is appointed is appointed trustee and takes on a duty of care, or where the bank provides a guarantee (kafalah). In the contract of Kafalah, a third party becomes surety for the return on average assetment of debt if unpaid by the person originally liable. This may be the role taken by an Islamic bank.

2.2.6 Modern infrastructure of Interest free Banking

There have been a growing number of Islamic bodies and agencies that have been created either to promote and represent the growth of the Islamic finance importance in the world-order or to create standardization and harmony between the different regions of the Islamic financing community. The following are the major ones according to institute of Islamic Banking and Insurance London, Untited Kingdom training and leading center.

Accounting and Audit Organizations for Islamic Financial Institutions (AAOIFI)

Accounting and Audit Organization for Islamic Financial Institutions (AAOIFI) was established in 1990 in Bahrain.It is a body that prepares accounting, auditing, governance, ethics and Shari'ah standards for Islamic financial institutions and the industry. It has issued guidelines for the structure of an Islamic bank's Shari'ah Board, for the internal Shari'ah review process, and for the relationship between the Shari'ah Supervisory Board and the external auditors. It has also established its own Shari'ah who are cooperating in the development of Shari'ah standards and are seeking to harmonize regional Shari'ah rulings

AAOIFI has also worked with relevant parties all over the world with a view to having them globally adopted as benchmarks for the industry.

Islamic Financial Service Board(IFSB)

The IFSB was established in 2002 in Kuala Lumpur (Malaysia), is an international standard setting organization intended to develop regulatory standards to promote the soundness and stability of the Islamic financial services industryby issuing global risk management standards and principles for the Islamic banking, capital markets and insurance sectors. The IFSB now has over 100 members including 27 regulatory agencies and 78 financial institutions from 21 countries.

The main objectives of the IFSB are:

- promote development of a transparent and prudent and Islamic financial services industry
- To provide guidance on the effective supervision and regulation of institutions offering Islamic financial products

International Islamic Financial Market (IIFM)

International Islamic Financial Market (IIFM) was founded to establish an Islamic Capital and Money Market. IIFM's primary focus lies in developing and standardizing Islamic financial instrument structures, contracts, products and infrastructure with a view to creating a global Islamic Capital and Money Market, development of a global, Shari'ah-compliant primary and secondary capital and short term financial market.

Liquidity Management Centre (LMC)

The Liquidity Management Centre (LMC) was established in 2002 to facilitate the investment of the surplus funds of Islamic banks and financial institutions into quality short and medium term financial instruments structured in accordance with the Shari'ah principles.

The International Association of Islamic Banks (IAIB)

The International Association of Islamic Banks (IAIB) was formed in Jeddah in August 1997 to promote coordination and ties between Islamic banks with the aim of standardizing Islamic banking practices across various regions.

2.2.7 Concept of profit, profitability, significance and measurement

Profit is necessary not only for the existence but also for the expansion and diversification of an enterprise. Profit is the main goal for establishing a business concern. It is used as a yardstick for measuring the efficiency of a firm.

Profit refers to an absolute amount of excess of revenues over expenses. It is necessarily a residual sum and also non-contractual income. Hence it may be either positive or negative. According to Weston and Brigham,the word 'profit' has got different meanings to businessmen, accountants, economists, workers and tax collectors.

Profit is defined in a number of ways by economist, accountant and others according to its use and purpose. Broadly, there are three concepts of profit as shown below

- **Accountingprofit**

Accounting profit lies in the difference between the realized value of revenues and historic cost of expenses, and it may include items of capital gains. It may take several forms like gross profit, operating profit, net profit, non-Operating profit, profit before tax, profit after tax, etc.

- **Economic profit-** equalsaccounting profit minus the opportunity cost of the resources used in business.
- **Social Profit-** is the difference between social benefits and costs of a business.

Though the basic function of profit is to provide an incentive to the entrepreneur to produce what consumers want and make it available when they want it at the lowest

feasible cost, profit hasother purposes of measure of performance, as a premium to cover cost of staying in business, ensuring further supply of capital and social functions.as pointed by Peter Drucker.

Profit measures the net effectiveness and soundness of a business effort. A higher profit is an indicator that the business is being run successfully and effectively. It is true that profit is far from being a perfect measure ofbusiness efficiency, but it is probably the best indicator ofthe general efficiency ofa firm.

Though it is easy to measure profit for the entire life of a business,it is difficult in measuring the periodic profit of a going concern owing to the problem of allocating the cost to that period and various accepted accounting policies. Such difficulty also arises owing to the differential opinion of the accountants and economists with regard to the various concepts.

B.B.Howod and M.Upton defined the word profitability as the ability of an investment to earn to return on its use. Thus profitability is the ability of an organization to earn profits.Profitability is a composite concept relating the efficiency of an organization to earn profit. Profitability is the ability of the firm to generate earning according to Gibson and Boyer.

Profitability is distinguished from Profit. Profit is an absolutemeasure; it indicates the overall amount of profit earned by a transaction. Whereas, profitability is a relative measure, the ability to earn profit. (W. M. Harper). Accounting profitability measures the difference between revenue and cost, as a proportion of the input, i.e., investment.

Significance of Profitability and Measurement

The aim of a firm is to derive maximum profit.. It is very difficult for a firm to service without prospects and ability to earn adequate profit. Profitability is considered as the most powerful motive factor in any business. Therefore the overall objective of a business to earn at least a satisfactory return on the funds invested in it, consistent with maintaining a sound financial position (N.V Dave).Thus, measuring profitability of a business firm is found important.

Among all the techniques used in financial statement analysis, ratio analysis is the most powerful tool of financial analysis. The relationship between two accounting figures, expressed mathematically is known as a financial ratio or simply as a ratio(Pandey, I. M) financial ratio analysis for analyzing financial statement include Liquidity ratios, Leverage/capital structure ratios , Profitability ratios and Turnover ratios.

Profitability ratios can be broadly divided as Profitability in relation to sales and Profitability in relation to investment. Profitability in relation to sales includes the gross profit margin, opening profit margin, net profit margin, etc., while profitability in relation to investment includes return on total assets, return on net assets, return on shareholders' equity, earning per share, etc. To make ratios more powerful, they have to be further interpreted and compared.

2.2.8 Determinants of Bank performance

Performance of banks can be determined mainly byinternal and external factors.

Internal factors are individual bank specific characteristics that affect banks performance and are primarily affected by management decisions made internally. Whereas, external factors are macro economicfactors that impact the profitability of banks and are outside of the company's control.

Liquidity Management,Management efficiency,Bank Size, Asset QualityEarnings Ability and Capital Adequacyare among the internal factors that are used widely.

According to (Deepak &Abebaw, 2011), the external factors, they have a relatively small impact on the profitability of Ethiopian banks. Several external factors have been suggested as impacting financial performance like GDP, inflation,interest rate, foreign exchange rate, regulation, Tax rate, market concentration.

2.2.9 Measurement of Bank performance

According to Hassan (2012), evaluating bank performance is a complex process that involves assessing interaction between the environment, internal operations and

external activities. Demez, Ustaoğlu and İncekara (2018) had also mentioned that due to the complexity of the process and the need for considering a wide range of elements and variables, performance measurement particularly in the banking sector is not an easy task.

Regulators usually used a popular measurement called CAMEL framework to evaluate financial health and performance of financial institutions and uses financial ratios. This CAMEL framework uses five factors as Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity.

Regarding the measurement of the Interest free banks, the failure of the bank could not only due to inadequacy of the above mentioned CAMEL factors but also as a result of the non-compliance of the Shari'ah principles according to Al-Jarhi and Iqbal, (2001).The uses of financial ratios, calculated through the bank's accounting statements, are found common in the many literatures.

Talam (2014), Elgadi (2016) and Mabonga (2016) had usedthree major categories of financial ratio (profitability, liquidity and credit risk management) to measure the performance of the interest free banking. Various financial ratios are mentioned as a measure of financial performance of companies. These ratios can be grouped under five broad categories namely Profitability, Liquidity, Risk and Solvency, Capital Adequacy and Operational Efficiency. Hassan; 2005, Kablan&Yousfi; 2011, (Akhter, Raza, Orangzab and Akram; 2011, Salami and Adeyemi; 2015, (Alghfais; 2017), Awan; 2009), Khan; 2013), Khan, Ahmad, Rahman and Haleem; 2018)

Profitability Ratio: it is one of the most frequently used tools of financial ratio analysis that measures the managerial efficiency that shows banks overall efficiency and performance. It can be measured using:

- Return on Assets (ROA): measures the amount of profit earned relative to the firm's level of investment in total assets i.e. ROA = Net Profit/Total Assets. Return on Equity (ROE) = net profits/equity. It shows a rate return on base capital, i.e., equity capital. The higher the ROE, the more efficient is the performance.

- Cost to Income Ratio (COSR) = total cost/total income. Cost incurred per birr generation of income or in other words, income generated per birr cost which is considered to be one of the best indices for measuring economic efficiency or profit performance. The lower the COSR ratio, the better is the profitability performance of a bank.

Liquidity Ratio: it is used to determine the ability and capacity of a financial institution to meet its short-term debt obligations. Liquidity ratios attempt to measure a company's ability to return on average asset off its short-term debt obligations. The higher liquidity ratios mean bank has larger margin of safety and ability to cover its short-term obligations.

In other words, according to Samad (2004), liquidity is the life of a commercial bank. So, the higher the amount of liquid asset for a bank, the greater is the liquidity of the bank. So, commercial banks must hold sufficient liquidity. Liquidity ratio can be measured by total loans to total asset ratio (TLTA), liquid assets to total deposit ratio (LATD) and loans to deposit ratio (LDR). According to Moin (2013), bank with low LDR is considered to have excessive liquidity, potentially lower profits, and hence less risk as compared to the bank with high LDR. However, high LDR indicates that a bank has taken more financial stress by making excessive loans and also shows risk that to meet depositors‟ claims bank may have to sell some loans at loss.

Capital Adequacy Ratio: Bank’s capital amount expressed as percentage of its risk weighted credit exposures is measured by this ratio. It indicates the healthiness of financial institution to shock withstanding losses. It can be calculated as:

Capital Adequacy Ratio (CAR) = Capital / Risk-weighted Asset.

Risk and Solvency Ratio: The solvency ratio indicates whether a company’s cash flow insufficient to meet its short-term and long-term liabilities. A bank is solvent when the total value of its asset is greater than its liability.

Operational (Efficiency) Ratio: it is used to analyze how efficiently and effectively a company is using its resources to generate sales and increase shareholder value (Moin;

2013). It measures managerial efficiency in generating operating revenues and controlling its operating expenses.

There are several ways of measuring operational efficiency of a bank. According to Iqbal (2001) and Moin (2013), the ratio of cost to income or Total Operating Expenses / Total Operating Revenue is used to evaluate the operational efficiency of banks. Lower OE is preferred over higher OE as lower OE indicates that operating expenses are lower than operating revenues.

2.3 Empirical Review

This part provides a summary of previous research conducted on the factors that influence the performance of Islamic banks.The empirical works done on the determinants of bank performance have focused on either a panel of countries or on an individual country. Despite having undergone considerable developments during the last two decades, empirical evidence on the performance of the Islamic banking sector is still in its infancy, especially compared with the conventional banking (El-Gamal&Inanoglu 2005).

Majority of studies on Islamic bank performance look at both internal and external factors when evaluating their performance. The determinants of Islamic banking performance studies conducted in panel country,a single country, and studies made in Ethiopia are reviewed as follows.

2.3.1 Panel Countries Empirical review

The study of Hassan & Bashir (2003) and Bashir (2003) analysed how bank characteristics and the overall financial environment affect the performance of Islamic banks byutilizing worldwide bank-level data during 1994-2001. In both studies, the variables of macroeconomic environment, financial market structure, and taxation are controlled. The finding show that high capital and loan-to-asset ratios lead to higher profitability.

Bashir (2003) examined performance of Islamic banks using internal & external variables using worldwide bank data and finding indicate that other things being constant: tax affect bank measure of bank performance in a negative way whereas macroeconomic condition impact bank performance measure positively. In addition, the correlation between profitability and overhead is found strong and positive as per the result.

Haron 2004 examined the effects of different factors that contribute towards the profitability of IBs with a sample of 14 banks. He found that bank level factorsliketotal expenditures, funds invested in Islamic securities, liquidity and profit-sharing ratio percentagebetween the bank and the borrower of funds are highly correlated with the level of total income received by the IBs. Interest rates, market share and bank size also exhibited similar effects as external factors. According to the finding, factors that play a significant role in influencing profitability of Islamic banks include:total capital and reserves funds deposited into current accounts, Pofit-sharing percentage between bank and depositors and money.

Ghazali (2008) provided international evidence about the bank-specific and macroeconomic determinants of Islamic Banks profitability, using 60 Islamic banks data from 18 countries across the world from 2002 to 2007. Regression analysis was used that relate bank profitability ratios to different explanatory variables. Profitability of Islamic Banks profitability measured by return on assets (ROA), return on equity (ROE) and net noninterest margin (NIM) proxies. Seven variables are drawn from the conventional banking literature as proxies for bank-specific and macroeconomic factors. Result of the finding indicated capital strength and efficiency factors as main determinants of profitability; existence of significant positive relationship between profitability measures of IBs and macroeconomic variables such as GDP growth and inflation. The findings also revealed that the determinants of IBs' profitability are similar to those of the CBs, indicating the potential suitability of many ofthe tools and techniques employed in conventional banking to Islamic banks also.

Masood, Masood & Ashraf (2012) investigated the bank-specific and macroeconomic profitability determinants of Islamic banks in 12 different countries during 2006-2010.

using a balanced panel data regression model and found that that:-

Assets size affects profitability positively and significantly inferring that banks of larger assets get higher profitability.

The capital adequacy, loans to assets and asset management results leads to a positive and significant relationship with profitability proxies of return on assets (ROA) and return on equity (ROE). Loan loss provision of IBs is found lower than CBs. Non-performing loans have negative impact on profitability of banksdue to credit volume and assets quality effect banks financial matters. Gearing ratio has positiveeffect on return on assets and affects the return on equityprofitability measurenegatively.

The relationship between financial risks and return on asset is positive and significant leading the higher profitability of banks and financial risk has negative impact on the equity side. Thus, risk taken by IBs is assumed to be more compared with CBs. By using deposits as leverage type and shared risk with depositors, IBs achieve higher profitability.The Impact of the real GDP towards banks profitability as proxy of ROA is negative and positive on ROE. The Impact of inflation, liquidity, deposits and operating efficiency is found insignificant on the profitability of banks.

(Smaoui& Salah 2012) studied the impact of bank-specific and the macroeconomic environment factors onIslamic Banks profitability in the GCC. Utilizing a large panel data of 44 Islamic Banks over the period 1995-2009, they found that higher capital, better asset quality, and larger size lead to higher profitability, while higher Cost Income Ratio (CIR) leads to lower profitability. They also reported that good macroeconomic conditions have a positive impact on the profitability of Islamic Banks

2.3.2 .Individual countries Empirical Review

The study conducted by (Saleh &Zeitun 2006) on fianacial performance of Jordan Islamic Banks usiningprofitmaximisation, capital structure, and liquidity tests found that the efficiency and ability of selected banks have increased, and both have expanded their investment and activities and had played a major role in financing projects in Jordan.

(Wasiuzzaman&Tarmizi 2010) focused on the financial performance of 16 Malaysian IBs over the period 2005-2008. The ROAA represents the profitability ratio, and OLS was used to find the determinants of ROAA. The empirical results of the study show that the positive determinants were found to be liquidity, operational efficiency, GDP and inflation, while asset quality and capitalization affected the banking earnings inversely

Rahaman& Akhter 2016) explored the bank-Specific Factors Influencing Profitability of IBs in Bangladesh during 2009-2013 using linear multiple regression analysis. He reported that bank-size and deposit have a significant negative impact on the return on assets (ROA) which is the proxy for IBs' profitability, while equity is found to have a significant positive impact. However, loan and expense management is found to be insignificant in affecting the profitability of the banks

(Chowdhury 2015) distinguished between the importance of bank-specific and macroeconomic factors for the profitability of 11 Malaysian IBs using the pooled ordinary least square method for the period 2007 to 2013. The finding revealed thatinternal factors the efficiency ratios (overhead costs) has negative and significant impact on Islamic banks profitability whereas equity financing affects profitability of IBs positively and significantly.Impact of Credit risks and Liquidity risks Variables on the profitability of the IBs is found insignificant.

The effect of factors inflation (Macro economic factor)is reported positive and significant impact on the return on assets while savings on gross national income impacts Islamic Banks performance significantly.

The study made by MuhammdAsadullah (2017) on profitability determinants of Islamic banks in Pakistan for period ranging from 2006-2015 using return on asset as proxy of profit and GDP, Size, Inflation & Liquidity as independent variables, shows that size has negative whereas liquidity has positive impact on Islamic banks profitability. the effect of Inflation (INF) and Gross Domestic Product (GDP) found insignificant on profitability of the Islamic banks of Pakistan during the study period.

Abu Hanifa Md. Noman(2015) investigated theimpact ofinternal and external profitability factorsof Islamic banks in Bangladesh for period coverig 2003 to 2013. The study

considered ROAA, ROAE and NIM while ROAA is found more preferred profitability indicator for the Islamic banks in Bangladesh. The impact cost efficiency, loan ratio credit risk and capitalization Islamic Banks profitability in Bangladishis found negativeand statistically significant.

AdemAnbarb (2011) studied the effect of profitability determinants (internal and external) of Turkey Islamic Banks from 2002 to 2010.The finding revealed that that asset size and non-interest income affects bank profitability positively and Significantly. Whereas, the impact of loans under follow-up and credit portfolio sizeon bank profitability is found negative and significant. The effect of real Interest rate (macro economic variable) the real interest rate on performance of banks show positive.

Nur Amirah BintiSamail et.al(2018)This investigated the determinants of the financial performance of 12 Islamic banking in Malaysia for six years which were from the year 2010 until 2016., measured based on return on asset (ROA), while the independent variables examined were capital adequacy (CA), asset quality (AQ), and liquidity management (LM). The findings revealed that there is a significant relationship between asset quality and liquidity management towards the performance of Islamic Banking in Malaysia. However, there is insignificant relationship between capital adequacies towards the performance of Islamic Banking in Malaysia.

ShaistaWasiuZZamman and Ayu Bit Ahmad Tarmizi (2009) have examined internal factors andexternal determinants of 16 commercial and Public Islamic banks/window in Malaysia for period 2005-2008 using ROAA as a proxy to profitability and dependent variables such as capitalization, asset quality ,liquidity and operational efficiency was used macro economic variables inflation and growth domestic product was used. the finding reveals inverse relationship of capital and asset quality with profit. However,liquidity and operational efficiency impacts profitability positively. The effect of inflation and GDP on profitability is positive.

2.3.3 Empirical Review in Ethiopian Context

Interest free banking (IFB) service started in 2013 and it is a recent phenomenon to the banking industry in Ethiopia and to the researchers in particular. Because of this, the empirical studies conducted in the area are very limited. The studies conducted so far centers on the challenges and opportunities of adopting interest free banking and are reviewed as follows:

Mohammed (2012) conducted research on “Prospects, Opportunities and Challenges of Islamic Banking in Ethiopia‟before the practical implementation of the IFB service in Ethiopia, and identified potential challenges of the service like lack of awareness, regulatory and institutional challenges, lack of support, gap in research and development in Islamic studies, lack of qualified human resource as well as wrongful association of the service with specific religion and the global terrorism.

Kerima(2016) „Challenges on Interest Free Banking Services‟ and (Tsion) 2017 about „Challenges and opportunities of interest free banking in Ethiopia‟ respectively, had conducted their research and their findings show various operational and institutional challenges that could be solved by different stakeholders.

The study made by Akmel in 2015 about “challenges and prospects of Islamic banking for resource mobilization in Ethiopian commercial banks‟ concluded that Islamic banking service will bring additional capacity in the economy in connection with additional resource for banks, investment opportunity, reaching unbanked customers and employment opportunities in the country through effective mobilization and allocation of capital. Besides, a research by Debebe (2015) on factors affecting customers‟ use of IFB in Ethiopia found out that 100% of IFB account holders were all Muslims, there is lack of customers‟ awareness and misconception regarding the benefit the IFB service and the bank is not going as planned since it is new for the industry.

Teferi (2015) has also studied about “Contribution of IFB to economic development and its prospect in Ethiopia‟ and concluded that IFB is deemed to play an integral role in

Ethiopia in catalyzing the economic development subject to many efforts required by various stakeholders.

The study by Abraham(2017) concluded that, attitude, religious belief, social influence and perceived financial cost (pricing) are found to be influential factors that influence customers Customers‟ Intention to Use Interest Free Banking Products. whereas employees product knowledge, underlying Shari'ahprinciple and training are significant factors that can affect employees product knowledge.

Aman(2019) studied on" Interest-free window banking and finance in Ethiopia: Inception to expansion" using descriptive analysis of some Ethiopian Banks offering interest free banking service in a window model indicate existence of an incredible growth of profitability by concluding the sector has a bright future in the country.

The result of study by Suadiq, M. and Ibrahim, B. (2020) on Interest free banking in Ethiopia: prospects and challenges indicated that Islamic finance has a notable opportunity in Ethiopia. Unbanked huge customers, lofty demand, the profitability of IFB windows indicate the prospects. While negative perception toward Islamic finance, legal framework challenges like the exclusiveness of banking business activity, limitation on investment of banks, tax system and unavailability of controlling mechanism .

However, none of the above studies had tried to examine the influence of determinants internal and external factors on the financial performance of the interest free banking service providing banks in Ethiopia.

Generally, based on the above reviewed empirical literatures many studies have been conducted in different countries and evaluated the performance of Islamic banks using internal and external factors. Based on the above reviewed empirical evidences in panel and individual countries, the empirical results vary significantly, since both datasets and environments differ. There exist, however, some common elements that allow a further categorization of the determinants.

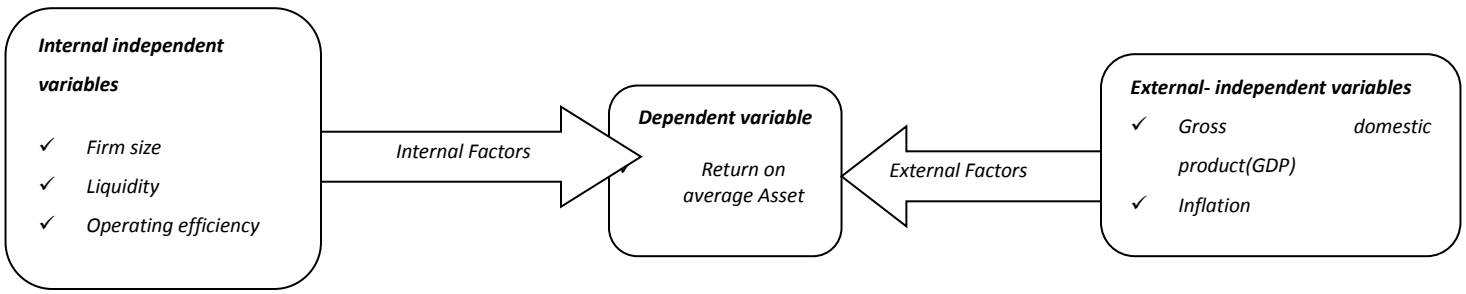
2.3.4 Conceptual framework

The objective of this research is to evaluate the effect of internal and external determinants of financial performance of interest free banking business by commercial Banks in Ethiopia to have better understanding using the variables based on various related theories and empirical literatures using Islamic Banks financial performance measurement tools.

As in Conventional Banks, Islamic Banks profitability can be measured by ROA and ROE, though there are other additional measurement aspect of Islamic Banks in respect to Shari'ah compliance in which the principle of the business centered. Generally, ROA ratio is an indicator of bank's capacity to generate profits from its assets despite the off-balancesheet activities that may affect neutrality. The ROE ratio reflects the bank's ability to generate shareholders' return on equity. ROE equals ROA times the total assets-to-equity ratio. The latter forms as an equity multiplier and measures financial leverage. Therefore, Banks with higher equity (lower leverage) is expected to generate higher ROA, but lower ROE. Since an analysis of ROE ignores the risks related to the high leverage which is usually defined by regulation, ROA emerges as the optimal ratio for the evaluation of bank profitability. This study will useROAA dependent variable financial performance measurement as proxy of profitability since profits are a flow variable generated during the year to achieve objective of the study.

The independent variables used are internal and external. The internal variables are Size, operating efficiency, liquidity, while the external Variables are Inflation and growth domestic products.

Conceptual framework diagram



Source: by Author

2.3.5 Summary and Knowledge gap

The literature reviews that are discussed so far showed that, profitability of Islamic Banks are determined by internal bank specific factors such as Firm size, liquidity, operating efficiency , Asset quality deposit among others and external variables such as real GDP growth and inflation. The empirical studies also suggest that profitability determinants of Islamic banks vary across countries and regions with different results. Therefore, there is a continuous debate on the key profitability determinants of Islamic banking in different countries.

Interest free banking has been growing with most countries around the world rendering the service. In our countries, since launched in 2013, the number of Banks providing the service has been increasing. Besides, the operating model being followed at the country has taken new shape allowing Banks to avail the service with dedicated window model up to opening of Full-fledged Islamic Banks. In line with this, some banks started providing the service by opening full-fledged interest free branches (which is a step in adopting Subsidiary model) apart from availing the service in a Window based Operating model along with conventional branches .What is more, Zamzam Islamic bank S.C has already secured license on October 12,,2020 to undertake Full fledgedIslamic Banking, while other five Islamic banks are on the verge to join with full fledged Islamic Banking. Besides, there are seven conventional Banks under process to join the industry and with strategy to part in interest free banking service in window based or subsidiary model as herald in their advertisement at different times thorough Medias.

Thought different studies were conducted in Ethiopia in relation to Interest free Banking, none of the studies had tried to examine the influence of determinants internal and external factors on the financial performance of the interest free banking service providing banks in Ethiopia to the best knowledge of the researcher.

Thus, this study therefore attempts to fill this research gap and would help to acquire recent information about determinants of profitability of Interest free banking business, increase knowledge/ understanding for better decision and future similar researches in the area.

CHAPTER THREE

RESEARCH DESIGN AND METHEDOLOGY

3.1 Introduction

The purpose of this chapter is to present the research design to be adopted, data collection and analysis methods to be followed in conducting the study to attain the desired research objective.

3.2 Research Design

A research design is simply the framework or plan for a study that is used as a guide in collecting and analyzing the data. It is a blueprint that is followed in completing a study by collection, measurement and analysis of data. Based on the objective the researcher wants to achieve, it is critical to evaluate and choice the appropriate research design to be adopted so as to help in satisfy the research objective (Admas et al., 2007).

Research design facilitates thefunctioning of the various research operations smoothly, helps in enhancing efficiency of research by providing ample information with minimum cost and effort moreover, it helps the researcher organizing information in better way and identify any inadequacies and flaws easily.

Descriptive research design deals with explaining characteristics of a particular or group of individual/s. Hence, in order to achieve the desired research objective, descriptive research design was used for the study by taking balanced panel data.

3.3 Research Approach Adopted

The most common research approaches are quantitative, qualitative and mixed researches.The quantitative data research tests objective theories, measures and analyzes statistical data to evaluate the relationship among variables so as to arrive at quantifiable conclusions(Creswell, 2009).

Hence,the study adopted quantitative research approach to examine the effect of bank specific and macroeconomic factors on financial performance of commercial Banks Ethiopian providing interest free Banking business.

Panel data is a data type that includes cross sectional information that captures individualvariability and time series information (that capture dynamic adjustment (Brooks 2008).

The research approach used for the study is quantitative with descriptive research design considering balanced panel data to evaluate the regression result analysis on the profitability determinants of interest free banking business of Ethiopian commercial banks.

3.4 Research Method

3.4.1Sources of Data

The study will be conducted by gathering secondary data from the audited financial statements and other documents of commercial banks under study and National bank of Ethiopia annual report, on site collection of data, National Bank of Ethiopia, different journals and articles. Regression of the data collected was done using E-Views 9 software.

3.3.2Population of the study

All the commercial banks in Ethiopia that have been providing IFB business service are target population of the study. There are eleven (One state owned and ten private)commercial banks operating interest free Banking business in Ethiopia as of June 30,2020 according to National Bank of Ethiopia report as tabulated below:

3.1 List Banks providing Interest Free Banking Business (IFB)

Name of commercial Bank	IFB starting Year
Oromia International Bank	2013
Commercial Bank of Ethiopia	2014
United Bank S.C	2015
Wegagen Bank S.C	2015
NIB bank S.C	2015
Cooperative Bank of Oromia	2015
Abay Bank S.C	2016
Awash International Bank S.C	2016
Bank of Abyssinia	2017
Dashen Bank S.C	2018
Bunna International Bank	2019

Compiled from the annual report of the banks

3.3.3. Sampling Technique

The eleven commercial banks operating Interest free banking business in Ethiopia, started operation at different times and have different experience in the business segment. The researcher tried to include all the banks to arrive at better result using unbalanced panel data and minimize any bias as a result of exclusion. However, during data collection, it was unable to obtain data to the required level as some banks neither disclosed their performance on annual reports, nor have organized financial performance record. Moreover, some are not started the financing service. Summary is tabulated here below:

IFB financial performance data status of Banks operating IFB business as of June 30,2020.

Name of commercial Bank	IFB starting Year	Expected financial performance data	Data disclosed on annual report/availed per request	Remark
Oromia International Bank	2013	2013/2014-2019/2020	All	All the data are available on the Banks annual report
Commercial Bank of Ethiopia	2014	2015/2016-2019/2020	All	Partly available on annual reports and the remaining was availed on request
United Bank S.C	2015	2015/2016-2019/2020	All	All the data are available on the Banks annual report
Wegagen Bank S.C	2015	2015/16-2019/20	2019-2020	Disclosed on annual report and report shows no existence of prior record. Started financing on 2020.
NIB bank S.C	2015	2015/16-2019/20	None	Data could not be obtained while contacted. Financing service is not started.
Cooperative Bank of Oromia	2015	2015/16-2019/20	All	All the data are available on the Banks annual report
Abay Bank S.C	2016	2017/18-2019/20	None	Neither disclosed and could not be obtained when contacted. Financing service is not started.

Awash International Bank S.C	2016	2017/18-2019/20	None	Neither disclosed and could not be obtained when contacted.
Bank of Abyssinia	2017	2017/18-2019/20	None	Not disclosed and could not be obtained when contacted
Dashen Bank S.C	2018	2017/18-2019/20	All	Disclosed on Annual report.
Bunna International Bank	2019	-	None	under early stage

Source: Compilation by the Author

Hence, NIB, Awash, Abysinia and Abay Bank S.C were excluded as data could not be obtained. Thus,available data of the rest six Banks namely Oromia International Bank S.C, Commercial bank of Ethiopia, Cooperative Bank of Oromia, United Bank S.C ,Dashen bank S.C and Wegagen bank S.C was considered as representative sample of the population and regressed using Eviews 9.0 software. However, result of regression analysis, shows violation of normality and hetroskedasity assumptions.

Following this, Dashen and Wegagen Banks(with less year data) were excluded and Balanced panel data of Oromia International Bank, Cooperative Bank of Oromia, Commercial Bank of Ethiopia and United Bank S.C were selected purposively based on data availability, disclosure, experience and level of involvement.

3.3.4 Method of Data Collection

For the purposes of this study the data has been collected using secondary sources that will be extracted from the audited financial statement of the banks, from National Bank of Ethiopia annual reports, and other published documents and on site data collection.

3.3.5. Data Analysis Method

Quantitative research method was used in the study and the data collected using secondary source was analyzed using econometric software (E-views 9 version). A multiple linear regression model and t-statistic was employed toevaluate theinfluence of the dependent variableson the financial performance of sampled banks.

The study used balanced panel data and the collected panel data was analyzed using descriptive statistics research design, correlations and multiple linear regression analysis. Mean values and standard deviations was used to examine data trends for period covering 2015/16 to 2019/20 G.C of the sampled banks. To look at the relationship between the dependent variable and Independent variables,correlation matrix was also used. For this study, Operating Least Square regression analysis was used to estimate and test causal relationship between profitability of the banks and its determinants.

3.4 Description of variables, Measurement and Hypothesis

Different variables are used for different studies based on factors such as the theoretical back ground, empirical evidence of related research findings that the variables have significant or no impact, nature of the study, geographical location,data availability, context of the country, the operating industries,inconsistency of research result and the like.The Variables selected in this study are based on theoretical background, previous relevant studies, and availability of data for variables. There are also other variables that are excluded from the study after selected due to the fact that adding of more of these variableshad no impact on the result of the study.

Dependent Variable

Return on average asset :(ROAA)

The dependent variable used in this study is Return on average asset and it measures the amount of profit earned relative to the firm's level of investment in total assets i.e. ROAA = Net Profit/Total Assets.

Independent Variables

The independent variables included are bank specific as well as external variables.

The bank specific variables aresize, deposit, operating efficiency, liquidity, while the external Variables are Inflation and growth domestic products.

Asset Size

According to economic theory, if an industry is subjected to economies of scale, the institution will produce in less effective cost .Hence it is expected that if size increases, profitability increases. It is other discussion that more than optimal limit of production,

profitability decreases and costs (expenses) increases.

Economies or diseconomies of scale in the market are accounted by the bank size. According to Short (1979, Haslem (1968), Short (1979), Bourke (1989), Molyneux and Thornton (1992) Bikker and Hu (2002) and Goddard et al. (2004), all link bank size positively with profit suggesting that profitability increases as size increases. However, other researchers suggest that little cost saving can be achieved by increasing the size of a banking firm (Berger et al., 1987), which suggests that eventually very large banks could face scale inefficiencies.

Studies of Abbas et al (2016), Asma et al (2011),Haron (2004),Pasiouras et al (2007),Srairi (2009) found that size has positive significant impact on profitability of Islamic banks. Al-Tamimi (2005) concluded that bank size has significant relation with ROA.

According to Berger et al.(1987) increasing bank size results in little cost saving suggesting that very large banks could face eventual scale inefficiencies. Bashir (2003) found that size has negative impact on the profitability of banks. Wasiuzzaman and Ahmed Tarmizi (2010) did not find a significant relationship between size and profitability of banks.

Size of the bank is measured by natural logarithm of total Assets and the study expects positive relation between Asset size and profitability. In line with the economic theory, this study proposes banks size to have positive relation with profitability.

H1: Size has positive and significant impact *on financial performance of interest free banking business of Ethiopian commercial banks*

Growth Domestic Product

According to theory of Francis (n.d.), increase in growth will result in increment of profitability of Islamic banks. It is easily understandable that if economy produce more goods and services than there will be excess inflow of cash in the market which will be deposits in banks through which they earn more profit through investment in Shari'ahcompliant business.

Scott and Arias (2011) found that GDP has positive relationship with profitability of banks. Sufian (2011) found that the impact of GDP on ROA is mixed. It was found that the coefficient of GDP was negative, but it becomes positive when we have power over for both the crisis and calm periods. Khrawish (2011) found that there is a negative impact of GDP and inflation with ROA and ROE. Evans Ovamba (2014) analyzed the effect of macroeconomic variables on commercial banks profitability in Kenya. It was the case study of Equity Bank Limited. The result showed that GDP has positive insignificant effect on profitability. SehrishGul et al (2011) found that (GDP) has positive relationship with ROA. WhereasDietrich et al (2009) found positive relationship between GDP and profitability of banks.

In support of theFrancis (n.d.), and finding of Shrishgul et al (2011) and Dietrich et.al. (2009), this study expects positive relation between growth domestic product and Return on average asset by measuring growth domestic product by economic growth of the country.

H1: GDP has positive and significant impact on financial performance of interest free banking business of Ethiopian commercial banks

Liquidity

Guru &Eichengreen and Gibson (2001), Bourke, (1989), Bashir, (2000). Liquidity is one of the important determinants of bank profitability. According to Eichengreen and Gibson (2001), the higher profitability could be expected if we tied up fewer funds in liquid investments. Haron (2004)found that liquidity has positive relationship with the profitability of Islamic banks measuring liquidity as total financing to deposit ratio. Bourke (1989) found positive relationship between liquid assets and bank profitability. Molyneux et al (1992) found evidence of negative relationship between liquidity and profitability of banks. Asma et al (2011) found that there is no relationship between liquidity and profitability of the Malaysian banks.Profits are expected to be higher, when more deposits are transferred into loans . Hence, it is predicted a positive relationship between this ratio and profitability.

H1: Liquidity has positive and significant impact on financial performance of

interest free banking business of Ethiopian commercial banks

Inflation

As per the theory of Perry (1992), Islamic banks could not predict the inflation and therefore t it has reduced its profitability. It is easily understood that if inflation increases than consumer will consumed more and save less therefore deposits will decline. In result, the profitability of banks decreases.

Driver et al (2009) Inflation affects companies' pricing behavior. SehrishGul et al (2011) inflation (INF) shows the direct relationship with ROA. Saksonova and Solovjova (2011) authors concluded that Inflation (INF) had negative relationship with profitability (ROA). Waseem et al (2014).

There is a positive relationship between Inflation and Profitability of banks. Alfani et al (2013) found that inflation does not have a significant impact to the banking profitability. Scott et al (2014) The empirical analysis indicated that Inflation and bank size of Nigeria observed to have had insignificant impact on banks' profitability in the study period. The study made by Mahmoodet.al (2014) on factors that affect profitability of Islamic banking industry indicates that inflation significantly affects Islamic banking profitability. In support of the theory of perry and findings of Wassem et.al (2014), the study expects expected negative relationship between inflation and financial performance of Ethiopian Commercial Banks operating Interest free banking business.

H1: ***Inflation has negative and significant impact onfinancial performance of interest free banking business of Ethiopian commercial banks***

Operating Efficiency

Operating Efficiency which can be measured by various ratios produced mixed results. Kosmidau et.al (2005) and Heffernan and Fu (2008) used the cost to income as their operational efficiency ratio and found a negative relationship with profitability. On the other hand, Bashir (2000), Athanasoglu et.al (2006), vong and Hoi (2009) used the ratioof operatingexpense to assets as their proxy and found a significant relationship with

profitability. The measure used for operating efficiency in the study is the ration of operating income to operating expense and expects positive relationship between operating efficiency and profitability.

H1: Operating e*fficiency has negative and significant impact on financial performance of interest free banking business of ethiopian commercial banks*

Table 1 variable, definition and expected signs.

Variables	Symbol	Operational Definition	Expected Sign
Dependent Variable			
Return on average Asset	ROAA	Net income/Total assets	NA
Independent Variables			
Bank Size	SIZE	Natural logarithm of total Assets	+
Liquidity	LIQU	Financing /Deposit	+
Operating Efficiency	EFY	Operating expense/ operating income	-
Growth Domestic Product	GDP	Annual growth rate of the economy	+
Inflation	INF	Annual general consumer price index	-

- (+) if the independent variable increase), the dependent variable will also increaseand vice versa.
- (-) if the independent variable increase dependent variable will decrease increase and vice versa.

3.6 Model Specification

Financial performance is affected by internal and external factor. With respect to the hypothesis stated above, the main point is to understand the relationship and impact of understanding of relationship that exists between independent variable s and each of the independent variables and their impact that had been identified through literatures and theories. Other factors that are not explicitly included in the model were captured by the error term in the model.

According to Gujarati (2004), Panel data has advantage in addressing broad range of

issues as it contains more information that incorporates variability among crossection and across time

the study adopted the Operating least square regression model to investigate impact the determinants of bank specific and macro-economic variables,.

$$Y_{it} = \alpha + \beta X_{it} + u_{it}$$

The subscript "I" denote the cross- section and "t" t the time-series dimension. $Y_{it}$is the dependent variable, α is intercept term, β is coefficient that represents the slope of the independent variables and X_{it} is a vector of the independent variables for bank i in time t, t= 1, T; i = 1, N and U_{it} is error term.

Thus, the general model which consists all of the variables in testing of the study hypotheses is;

$ROAA_{it} = \beta_0 + \beta_1$ SIZE) $it + \beta_2$ (LIQU) $it + \beta_3$ (EFCY) $+\beta_4$ (INF) $it + \beta_5$ (GDPR) $+\delta i$

Where;

- ***ROAA $_{it}$:*** *return on average asset of net income to total asset to net income of* i^{th} *bank on the year t.*
- ***(SIZE)*** *: natural logarithm of total assets of ith bank on the year t.*
- ***(LIQU)****: the rate of loan to financing of* i^{th} *bank on the year t.*
- ***(GDP)****; growth rate in Ethiopia on the year t*
- ***(EFY)****: the rate of operating expense to operating income of* i^{th} *bank on the year t.*
- ***(INF):*** *is the inflation rate in Ethiopia on the year t.*
- ***δi****: is disturbance term on individual specific effect.*
- ***β$_0$****: is constant.*

CHAPTER FOUR

4 DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents descriptive analysis, correlation analysis between variables,results ofdiagnostic test of the classical linear regression model assumption and and discussions on regression analysis.

4.2 Descriptive Statistics Analysis

Return on average asset of commercial banks operating interest free banking business is the dependent variable used in this study and asset size of banks (SIZE), liquidity (LIQU), operating efficiency (EFY), inflation(INF) and growth domestic product (GDP)are independent variables.

Tab 4.1Dependent and independent variables -Descriptive statistics summary

	ROAA	INF	LIQ	SIZE	GDP	EFCY
Mean	1.8245	12.8920	28.0715	14.6233	8.3800	36.0248
Median	1.6253	12.6000	28.0807	14.8080	8.0000	14.8031
Maximum	5.26253	20.1600	61.6382	17.2970	10.1000	207.986
Minimum	-0.12844	7.4000	0.0000	11.3400	7.1000	0.04387
Std.Dev.	1.79743	4.49976	22.0463	1.4569	1.0846	50.6664
Observation	20	20	20	20	20	20

Source: Eviews 9.0 outputs and estimation of research data 2015/16 -2019/20

The result of the descriptive statistical analysis in the table indicates average results and standard deviation of the variables. Result of the analysis indicates that:-

- Average return on asset as a measurement of profitability was 1.82%. The minimum value of average return on asset is –0.12% and it implies that there is a banks who incurred a loss of br. O.12 to from Br. 1 investment on average.
- Inflation showed 7.4%, 20.16%, 12.89%, and 4.50% of minimum, maximum, mean and standard deviation values in respective order.

- Liquidity, measured as a percentage of total financing to deposit. It ranges from minimum value of 0% to a maximum of 61.6% with 28 % mean value of 28% and 22% standard deviation.The percentage of zero (0%) indicates that there is a bank without availing financing to its clients with in the study period.

- Asset size of banks indicates mean value of 14.62% and standard deviation of 1.46% with a minimum of 11.34% and maximum of 17.29%.

- Growth domestic product measured as growth rate of the economy has a mean of 8.38% and standard deviation of 1.08%. itranges from its minimum value of 7.1% to its maximum 10.1%.

- Efficiency, that was measured using total operating expense divided by total income, has a mean of 36% with standard deviation of 50%.it ranges from a minimum of 0.04 % to a maximum of 207 %.

4.3 Correlation Analysis

According to (Gujarat, 2004), the main objective in correlation analysis is to measure the degree of linear association or strength between two variables. The coefficient of correlation ranges from -1 to +1. If the correlation between two vaibles is -1, it implies perfect negative relationship, if +1 then perfect positive relationship,0 implies no correlation.

Tab 4.2 Dependent Variable-Correlation Matrix

	ROAA	SIZE	LIQ	OPE	INF	GDP
ROAA	1					
SIZE	0.0857	1				
LIQ	0.899	0.0636	1			
OPE	-0.5024	-0.5038	-0.5306	1		
INF	0.2540	0.4518	0.4059	-0.3155	1	
GDP	-0.06133	-0.1607	-0.1930	-0.1271	-0.5543	1

Source: EViews 9.0 output result (2015/16– 2019/20)

The result shows that, operating efficiency, and Growth Domestic product are negatively correlated with Return on average asset implying that as these independent variables increase, return on average assets decrease and vice versa. On the other hand, size, liquidity and inflation are positively correlated with return on average assets.

That means these independent variables increases, the dependent variable (return on average asset) also increases.

4.4 Testing Assumptions of Classical Linear Regression Model (CLRM)

The following diagnostic test were done in order to ascertain validity, consistency and reliability of the model

4.4.1 Normality Test

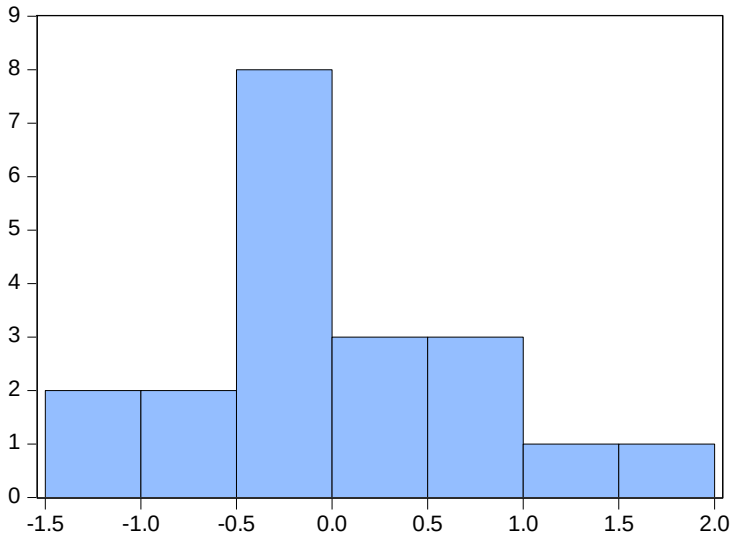
A normal distribution is anticipated to have a kurtosis coefficient of 3 and Skwness coefficient of 0Kurtosis measures how far the tails of the distribution. The extent to which a distribution is not symmetric about its mean value is measured by Skewness.

Jarque-Bera formalizes this by testing the residuals.

For the normality assumption hold true(residuals are normally distributed),histogram should be bell shaped,kurtosis must not be by far large from 3 and Jarque-Bera statistic would not be significant and P-value should be greater than 0.05 in oreder not to reject the null hypothesis of normality at 5% significance level(Brooks 2008).

Analysis of the data resulted in P-value of 0.99, higher than the significance level of 0.05, showing that the data is normally distributed.

Tab 4.3: ***Test for Normality***



Series: Residuals	
Sample 1 20	
Observations 20	
Mean	4.33e-16
Median	-0.087909
Maximum	1.544553
Minimum	-1.478431
Std. Dev.	0.731989
Skewness	0.001767
Kurtosis	3.014398
Jarque-Bera	0.000183
Probability	0.999908

Source: Views 9.0 output result (2015/16 – 2019/20)

4.4.2 Multi-co Linearity test

This refers situation where there exists highly correlation of independent variables among themselves inwhich the regression model fits the data well, but none of the independent variables has a significant impact in predicting the dependent variable (Gujarati, 2004).

Adding or removing of variable from the regression wouldn't cause change on the value of other coefficients if there is no relationship between the independent variables. However, this is not the case in reality as between explanatory variables will be non-zero and a small degree of association is expected.

There exists overlapping, there is overlapping or sharing of predictive powerwhen independent variables are multi collinear and this makes, the panel regression results to show significant variables as insignificant variables by increasing P-value (as t-statistics value will become lower following increase in P-value).

Different level of correlation was suggested by manyAuthors to judge for multi co Linearity presence . Correlation coefficient about 0.8 or more(pair-wise or zero-order coefficient between two repressors is out of the recommended range of multi co-linearity which is -0.8 or 0.8), is existence of serious problem for multi collinarity(Gujarati, 2004).

Result of the data analysis test for of multi co-linearity existence among the independent variables isshown in the correlation analysis matrix below.

Tab 4.4: Independent Variables-Correlation Matrix result

	SIZE	LIQ	OPE	INF	GDP
SIZE	1				
LIQ	0.0636	1			
OPE	-0.5038	-0.5306	1		
INF	0.4518	0.4059	-0.3155	1	
GDP	-0.1607	-0.1930	-0.1271	-0.5543	1

Source: Eviews 9 output result (2015/16 – 2019/20)

The results of correlation matrix above indicates existence of the highest correlation of (0.55) between inflationand growth domestic product. The next higher correlation is between operating efficiency and inflation which is (0.53).this indicates non existence of , series pair-wise correlation equal to or exceeding 0.8 which suggests no serious problem of multi co-linearity in the study model.

4.4.3 Test for Hetroscedacity

For the existence of homoscedasticity, the variance for the error terms is assumed to be constant. If the errors do not have a constant variance, it is said to be heteroscedastic. the White's test was used for testing homoscedasticity.The result of the analysis for the test shows both –F- and χ2 Chi Square (LM) versions of the test statistic give the same conclusion for no evidence for the presence of hetroscedasticity, as the p value for F-Statistics and x2 is 0.23and 0.2 respectively which is higher than 0.05.

Tab 4.5: Test for Heteroskedasticity: White

F-statistic	1.565879	Prob. F(5,14)	0.2332
Obs*R-squared	7.173259	Prob. Chi-Square(5)	0.2081
Scaled explained SS	3.540201	Prob. Chi-Square(5)	0.6173

Source: Eviews 9.0 Output Result (2015/16 – 2019/20)

4.4.4 Test for Autocorrelation

The assumption here is that the errors are uncorrelated one another or the covariance between the error term has to be zero. If there exists autocorrelations in the residuals, ther result of the regression analysis then the statistical inferences leads to a wrong conclusion.. If the errors are not uncorrelated with one another, it would be stated that they are auto correlated or that they are serially correlated.

Plotting for the residuals and looking for any patterns is the first step in testing whether the error series from an estimated model are auto correlated or not. Nevertheless, thegraphical method has problem to interpret in practice. The better test is application of a formal statistical test called Breusch-Goldfrey serial correlation LM test.This test is more general and allows for both AR and MA error structures as well as the presence of lagged regress as an independent variable according to Guajarati(2004).

Table 4.6: Serial Correlation LM Test- Breusch-Goldfrey

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.152751	Prob. F(2,12)	0.3484
Obs*R-squared	3.223238	Prob. Chi-Square(2)	0.1996

Source: Eviews version 9.0 Output Result (2015/16- 2019/20)

Breusch-Goldfrey Serial Correlation LM Test results in an F-statistic of 1.152 with a p-value of 0.3484 and chi-square version shows 3.22 with a p-value of 0.1996,indicating no auto correlation in the residuals.

4.4.5 Test for Error Term Average Value is Zero

The assumption is that that average value of errors is zero. According to Brooks (2014), for this assumption will never be violated if a constant term is in the regression equation. Since the regression equation has a constant term the average value of the error term is expected to be zero.

4.5 Regression results Analysis and Interpretation

4.5.1 Regression result Analysis

The regression equation is

$ROAA_{it} = \beta_0 + \beta_1 SIZE)\ it + \beta_2 (LIQU)\ it + \beta_3 (EFY) + \beta_4 (INF)\ it + \beta_5 (GDPR) + \delta i$

Return on average asset is the dependent variable whereas size, liquidity, operating efficiency, inflation and Growth domestic product are independent variables

The result for the ordinary least square regression model that evaluates the impact of independent variables on dependent variables in assessing the determinants of profitability of Ethiopian commercial banks operating Interest Free banking business is depicted in the table below.

.

Table 4.7: Ordinary Least Square Regression Model –result

Dependent Variable: ROAA
Method: Least Squares
Date: 01/30/21 Time: 09:51
Sample: 1 20
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.775830	5.519591	-0.140559	0.8902
INF	-0.093447	0.116105	-0.804844	0.4344
OPE	-7.97E-05	0.006756	-0.011791	0.9908
LIQ	0.079682	0.012156	6.555224	0.0000
GDP	-0.072939	0.439457	-0.165974	0.8706
SIZE	0.149236	0.185946	0.802574	0.4356

R-squared	0.834153	Mean dependent var	1.824483
Adjusted R-squared	0.774922	S.D. dependent var	1.797425
S.E. of regression	0.852741	Akaike info criterion	2.762603
Sum squared resid	10.18034	Schwarz criterion	3.061323
Log likelihood	-21.62603	Hannan-Quinn criter.	2.820916
F-statistic	14.08306	Durbin-Watson stat	1.433909
Prob(F-statistic)	0.000049		

Source: views 9.0 output (2015/16-2019/20)

4.5.2 R-Squared, Adjusted R-Squared, F-Statistic and interpretation

4.5. 2.1 R-Squared and its interpretation

The R-Square is the most common goodness of fit statisticand is the square of the correlation between the values of the dependent variable and the corresponding fitted values from the model.(Brooks, 2008). It indicates how much variation in the dependent variable is accounted for by the regression mode.

R2 lie between zero and one, with a higher R2 implying, everything else being equal, that the model fits the data better. According to Brooks (2008), a value of R2 close to 1 indicates that the model explains nearly all of the variability of the dependent variable about its mean value, while a value close to zero indicates that the model fits the data poorly.R2 becomes one if the regression result fits perfectly and it becomes zero if it fits no better than the mean value of the dependent variable.

Muijs(2004) used rule of thumb for values of R2 as : R2 = 0.1 means poor fit, 0.11= < R2=< 0.3 as modest fit, for R2 value 0.31=<R2=<0.5, moderate fit and for value of R2>0.5 as strong fit.

The result of the regression model of the study depictsR-squared coefficient of 0.83415 indicating strong fit explanatory power of the modelimplying that 83.41% of variation in ROAA is explained by the selected explanatory variables (Size, liquidity, Operating efficiency, inflation and Growth Domestic product)jointly.

4.5.2.2Adjusted R-Squared and its interpretation

R2 as a goodness of fit measure has problems that it will never ever falls if more repressors are added to the regression Brooks (2008). To address this problem, a modification to the R-Square known as adjusted R-Square is used. According to Brook (2014), the adjusted R-Squared indicates us how much variance in the dependent variable would be accounted for if the model had been derived from the population which the sample was taken. Since adjusted R2 considers loss of degree of freedom related with adding additional variable, using it gives better interpretation to look at the explanatory power of the model.

AdjustedR2 can be interpreted as the fraction of the variance of the dependent variable explained by the independent variables. Adjusted R2 result of the study is 77.49% shows that the model is strongly fit for predicting interest free banking financial performance of Ethiopian commercial banks using ROAA as a proxy, indicating that77.49% of changes that occur in the dependent variable are attributable to the independent variables jointly.

4.5.2.3 F-Statisticsand its interpretation

The F-statistics is used for testing the fitness of the model. For a model to be considered fit, a recommended value of F-statistics result should be greater than 5. The F-statistic regression result of the study as shown in table 4.7 above is 14, a greater value than 5 indicating that the model is fit for estimation.

Besides, F-statistics also tests for the joint effect of all independent variables on the dependent variables. A corresponding p-value of zero to the test statistic indicates that the null hypothesis that all the slope parameters are jointly zero should be rejected even at 1% significancelevel. This implies that all selected independent variables can jointly affect ROAA of Ethiopian commercial banks operating Interest free banking business.

4.5.3 Interpretation of Regression Results

Beta shows the level of influence of each of the explanatory variable on the explained variable. Beta coefficient of the regression output can bepositive or negative.Positive beta coefficient shows a positive effect of the independent variable on the dependent variable, whereas negativecoefficient indicates that the effect of the independent variable on dependent variable being negative. It tells us that other things being equal, when independent variable increases/decreases by one unit on average, the dependent variable increases/decreases by beta amount but the independent variables should be statistically significant.

As shown from the above table of regressionout put, asset size and liquidity have positive effect on return on average asset while inflation, Growth domestic product and operating efficiency have negative effect.

a) Size on Return on Average Asset(ROAA)

The result shows that the relationship between size and return on average asset is positive with coefficient of 14.9% but the relationship is statistically insignificant. Size has a coefficient of 0.149, which means keeping other things constant, on average a 1% increase in size results in an increase of return on average asset by 14.9 % and the relationship is statistically insignificantat5% significant level. The result supports the findings of Wasiuzzaman and Ahmed Tarmizi (2010) Abbas et al (2016), Asma et al (2011),Haron (2004),Pasiouras et al (2007),Srairi (2009) and MohammudAbusallah (2017).

b) Liquidity (LIQU) on return on average asset(ROAA)

Liquidity measures the amount of deposits that bank could handle in order to use it as a financing toward customers.

The result of the analysis shows that liquidity has positive and significant impact on return on average asset explaining that, an increase in loan deposit ratio results in the increase in return on average asset. Liquidity has a coefficient 0.079 which is significant at 1% significance level. It has positive and significant relationship with profitability of Ethiopian commercial Banks Operating Interest free banking business measured by return on average asset.

A liquidity coefficient of 0.079 implies that, other things remain constant, on average a 1% increase in liquidity, results increases of return on average asset by 0.079 % and the relationship is statistically significant at 1% significance level. The result of the study is consistent with the findings of Haron (2014)Eichengreen and Gibson (2001), Mohammed Asadullah (2017)

c) Operating Efficiency on return on average asset

the operating efficiency provides information on the efficiency of management regarding expenses relative to income. The coefficient of efficiency is negative and statistically insignificant. The estimated coefficient value of efficiency is -7.9 with p-value of 0.99.

This implies that, other factors being constant, on average a 1% decrease in expense, results in increase of return on average asset by 7.9% and the relationship is statistically insignificant.This indicates that the commercial banks in Ethiopia Operating Interest free banking have much to profit if they are able to exercise efficient cost management practices.

d) Inflation (INF) on return on average asset (ROAA)

The result shows that the coefficient value of inflation is 0.43 and p-value of -0.093.This tells us that relationship between Inflation and return on average asset is negative and insignificant. Keeping other things constant, on average a 1% increase in inflation, decreases return on average asset by 0.43% and the relationship is statistically insignificant,indicating thatinflation does not have a direct impact on the profitability (ROAA) interest free banking business of the listed commercial bank in Ethiopia. The study of Alfani et al (2013) and Scott et al (2014) and Mohammud, A. (2017) found the same result.

e) Growth Domestic Product on return on Average asset.

The coefficient for Growth domestic product has a value of -0.073% and P value of 0.87 shows., the relationship between growth domestic product and return on average asset is negative andinsignificant per the result of the regression analysis, suggesting that growth domestic product does not have a direct influence on profitability of Ethiopian commercial banks operating interest free banking business. The result is inconsistent with previous studies of Evans, O. (2014),SehrishGul et al (2011) scott and Aria(2011) and the result confirms the finding of Mohammed, A.(2017).

From the independent variables used in the study, liquidity is appeared to be statically significant, implying that it has a direct impact on profitability of Ethiopian commercial Banks operating IFB business. Asset Size, efficiency, inflation and Growth Domestic product variables found to be statistically insignificant which implies that these variables do not have a direct influence on the profitability of the listed commercial bank in Ethiopia operating interest free banking business.

4.5.4 Summary

This chapter discussed the results of the study regarding to the determinant of profitability determinants of interest free banking business of commercial Ethiopian Banks.

Descriptive statistics for the data was made and test for the assumption underlying the Classical linear regression model was checked for autocorrelation, multi-co linearity hetroscedasticity and for normality. From result of the test, non existence of violation of the assumptions was ascertained.

The result of the study indicates that bank return on average asset of Ethiopian commercial Banks operating Interest free banking business was mainly determined by Liquidity .summary of the finding id depicted in below table.

Table 4.8: Expected and actual signs of explanatory variables on the dependent variable

S. No	Dependent Variables	Expected Sign and Impact	Actual Sign and Impact
1.	Liquidity	Positive and significant.	Positive and significant
2.	Size	Positive and significant	Positive and insignificant
3.	Operating efficiency	negative and significant	Negative and insignificant
4.	Inflation	Negative and significant	Negative and insignificant
5.	Growth Domestic Product	Positive and significant	Negative and insignificant

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The studyhas of objectivedetermining which bank-specific variables and macroeconomic specific indicators had significant influence on return on asset of interest free banking operating Ethiopian commercial banks. OLS regression was run on a sample of four Ethiopian private banks operating interest free banking business. Asset size, liquidity, efficiency were bank selected factors in the study while inflation and growth domestic product were macroeconomic factors. While testing the impact of the five explanatory variables on the return on average asset, the conclusion reaches is that only one variable, liquidity can significantly explain the financial performance of commercial Banks in Ethiopia operating Interest free banking business.Four variables: size, efficiency, inflation and growth domestic product appeared to be statistically insignificant (do not have direct impact on profitability)

Thought Size has positive relationship with the financial performance, it does not significant in affecting the financial performance of interest free banking business of Sampled Ethiopian commercial banks for the study period. This is because commercial banks in Ethiopia operating Interest free Banking business are engaged less in interest free financing and investmentactivities given the level of asset they held, indication of idle resource.

Liquidity has positive and significant impact on financial performance of interest free banking business of commercial banks. This implies that banks that granted more financing, have more financial performance.In other words, when more deposits are transformed to financings, higher profit level is made by Banks.

Operating efficiency has no impact on the financial performance of banks. This is because, c*ostof funding is minimalsince no payment is paid for depositor of Wadi'ah saving and Qard accounts that have safe custody natures. In addition,* there is*lack of cost sharing framework for shared resources and indirect costs for window operation of the business alongwith the conventional*.

The macro economic variables Inflation and Growth domestic product have insignificant impact on financial performance of listed Ethiopian commercial banks operating interest free banking business for the study period. This can be relates to the early stage of the business.

5.2 Recommendations

Based on the findings of the study, it is recommended that Ethiopian Commercial Banks operating IFB business should increase their liquidity(as measured by financing to deposit ration) in order to enhance their financial performance.

Besides, based on the result of bank size, it is recommended these banks should also focus more on expansion ofinterest free banking activities by deploying their idle resource in accordance with their size which is increasing from time to time in order to achieved full benefits of economies of scaleso as to improve their financial performance.

Commercial Banks in Ethiopia operating on IFB business should establish resource sharing and cost allocation frame work for the window operation of the business so as to have proper management of cost and better decision in resource allocation.

5.4 Suggestions for Further Studies

The main aim of focus of this studyis identifyinginfluential factors of profitability of commercial banks operating interest free banking business using some variables. Nevertheless,due to unavailability of data and some services and products not launched yet, some variables that is assumed to have impact were not included in this study. Thus it is to recommend for similar study be made and extend the analysis by:

- considering large sample period and more number of banks including the new full fledged interest free and conventional emerging banks
- Considering additional variables like capital adequacy, Shari'ah Advisory board, financing risk, Shari'ah compliance risk, non -performingfinancingand participatoryfinancing.

References

- Abu Hanifa,M. (2015). Profitability of Islamic Banks in Bangladesh: An Empirical Study
- Assimabldel, R. (2018). The determinants of Islamic Banking profitability
- Alghfais, M. (2017). A Comparative Study between Islamic and Conventional Banks-The case of Saudi Arabia: A Binary Logistic Regression Approach, Saudi Arabian
- Abdul, R.(2013).Analyzing performance determinants: Conventional versus Islamic Banks in Pakistan
- Akmel (2015). challenges And Prospects Of Islamic Banking For Resource Mobilization In Ethiopian Commercial Banks
- Alharabi, (2015).Interest free banking in Ethiopia :prospects and challenges
- Al-Sultan (1999).Financial characteristics of conventional Banks and Interest free banks
- Alyu, A. (2016). The Regulation and Supervision of Interest-Free Banking in Ethiopia
- Al Jarhi - and Iqbal (2001). Analysis of Functions performed by Islamic Bank: A Case of Pakistan
- Akhter,et.al(2011). Performance Efficiency of Islamic Banking:
- Ali, S.(2012). Profitability of Interest-free vs. Interest-based Banks in Turkey
- Basov & Bhatti (2016). Islamic Finance in the Light of Modern Economic Theory
- Bolton (2005.) Why Islam has prohibited Interest & Islamic Alternatives for financing, First Ethical
- Brooks(2014).Introductory econometric for finance
- Creswell (2009).Research Design ,quantitative, qualitative mixed methods
- Debebe, A. (2015).Factors Affecting Customers to Use Interest Free Banking in Ethiopia, An MBA Thesis submitted to Addis Ababa University, Department of Accounting
- Dawit (2015). Determinants of commercial banks financial performance in Ethiopia
- Deepak &Abebaw(2011). Determinants of banks profitability.

- Gizachew, A. (2019). Assessment on Interest Free Banking Performance of the Commercial Bank of Ethiopia
- Elgadi(2016). Assessing the financial performance of Islamic Banks:he case of sudaneese banks
- Habtamu, N.(2012) Profitability Determinantsof Private Commercial Banksin Ethiopia: An Empirical
- Hussain, Shahmoradi, and Turk, (2015). An overview of Islamic finance
- Assim Abdel, R.(2018). The determinants of Islamic banks profitability
- (Latifa and Mervyn 2007). Islamic banking
- Gujarati, D. (2004). Basic Econometrics. 4th Edition, McGraw-Hill Companies.
- Hassan & Bashir(2003). Determinants of Banks' Profitability: Evidence from EU 27 Banking Systems
- Haron (2004). Determinants of IslamicBanks Profitability
- Imad, Z. Ramadan (2011). Bank-Specific Profitability Determinants of Islamic Banks: Empirical Study of the Jordanian Market
- Lgadi, E. (2016). Assessing the Financial Performance of Islamic Banking: The case of Sudanese banks, thesis submitted to University of East London, School of Business and Law
- Institute of Islamic Banking and Insurance London,Untited Kingdom, Islamic Economic system Module 1 lesson 1.
- Juan,S. (2007).Introducing Islamic Banks into Conventional Banking Systems
- Jemal,N. (2018). Practices and Challenges of Commercial Banks I Ethiopia operating Interest Free Banking Windows. A research project paper submitted to Addis Ababa University Department of Business Administration
- Kerima, A. (2016).Challenges on Interest Free Banking Services: The Case of Commercial Bank of Ethiopia
- Komakech(2018). Loan portfolio under the Islamic banking system: an analysis of the law in uganda
- kenya and the regulatory challenges facing the industry
- Kettell (2011). Introduction to Islamic banking and finance
- Kablan&Yousfi; (2011). Efficiency of islamic and conventional banks in countries

with islamic banking

- Omar,M.(2018). Effect of internal factors on the financial performance of commercial banks of Kenya offering Islamic banking service
- Muhammd, A.(2017). Determinants of profitability of Islamic banks of Pakistan – Acase study on Pakistan's Islamic banking sector.
- Masood & Ashraf (2012). Bank specific and macroeconomic profitability determinants
- Mohammed (2012). Islamic Banking: Prospects, Opportunities and Challenges in Ethiopia
- N D P Rini et.al(2018). Determinants of Islamic Banks' Profitability in Indonesia
- National Bank of Ethiopia,Licensing And Supervision of Banking Business Directives to Authorize the Business of Interest Free Banking, Directives Number SBB/51/2011 and SBB 72/2019
- SBB/72/2019 :Directive To Licensee and Authorize Interest Free Banking BusinessPanayiotis P. Athanasoglou et.al (2005). Bank-Specific, Industry-Specific And Macroeconomic Determinants Of Bank Profitability
- Rusydiana, A. & Al Parisi (2016). the measurement of Islamic bank performance: a study using maqasid index and profitability
- SHIGEO PRASASTI PURNA (2018).The Determinants Of Profitability On Fullfledged Islamic Bank And Islamic Window Bank In Indonesia And Malaysia
- Shaista, W. (2011). Profitabilty of Islamic Bank in Malaysia: An Emprical Analysis
- Siddiqi, M. (2006). Theory and Practice of Islamic Banking and Finance in: A Survey of State of the Art, Islamic Economic Studies, Vol. 13, pp. 1-48. 88
- Samad(2004).erformance of Interest Free Islamic Banks vis-à-vis Interest-Based Conventional Banks of Bahrain
- Salah ,A. (2009).Factors that led to the emergence of Islamic banking in Kenya and the regulatory challenges facing the industry
- Sadisq, M.& Ibrahim, B. (2020). Interest Free Banking in Ethiopia: Prospects and Challenge.
- Teferi, M. (2015). Contribution of IFB to economic development and its prospect in Ethiopia: An EMBA Thesis submitted to Addis Ababa University, Department of

management.

- Tsion,T. (2017). Challenges and Opportunities of Expansion of Islamic Banks in Ethiopia: Case of Commercial Bank of Ethiopian Dire Dawa Interest Free Branch
- Ustaoğlu and İncekara (2018).Balancing Islamic and Conventional Banking for Economic Growth: Empirical Evidence from Emerging Economies

Appendices

ApendixI : Raw Data

Bank name	Time	ROAA	OPE	SIZE	LIQ	GDP	INF
coperative Bank of Oromia S.co	2016	0.000	207.986	11.340	0.000	8.000	9.700
coperative Bank of Oromia S.co	2017	0.731	0.044	13.105	4.721	10.100	7.400
coperative Bank of Oromia S.co	2018	0.627	40.369	14.612	16.366	7.700	14.600
coperative Bank of Oromia S.co	2019	1.722	15.192	15.425	44.042	9.000	12.600
coperative Bank of Oromia S.co	2020	3.946	5.673	15.673	61.638	7.100	20.160
Commercial Bank of Ethiopia	2016	0.04	82.429	14.970	4.123	8.000	9.700
Commercial Bank of Ethiopia	2017	0.23	36.613	15.622	4.852	10.100	7.400
Commercial Bank of Ethiopia	2018	0.10	46.557	16.099	1.890	7.700	14.600
Commercial Bank of Ethiopia	2019	0.09	32.881	16.985	2.438	9.000	12.600
Commercial Bank of Ethiopia	2020	0.35	12.507	17.297	10.209	7.100	20.160
Oromia International Bank S.C	2016	2.648	31.455	14.061	44.225	8.000	9.700
Oromia International Bank S.C	2017	5.001	17.645	14.697	50.333	10.100	7.400
Oromia International Bank S.C	2018	5.263	8.525	14.919	52.634	7.700	14.600
Oromia International Bank S.C	2019	4.238	11.071	15.264	45.506	9.000	12.600
Oromia International Bank S.C	2020	3.905	6.612	15.189	61.327	7.100	20.160
United Bank S.C	2016	-0.128	126.695	12.687	11.578	8.000	9.700
United Bank S.C	2017	1.529	13.756	13.073	25.430	10.100	7.400
United Bank S.C	2018	2.073	5.489	13.478	30.732	7.700	14.600
United Bank S.C	2019	1.754	4.583	13.811	44.862	9.000	12.600
United Bank S.C	2020	2.377	14.415	14.159	44.524	7.100	20.160

Appendix II: Result for the regression

Dependent Variable: ROAA
Method: Least Squares
Date: 01/30/21 Time: 09:51
Sample: 1 20
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.775830	5.519591	-0.140559	0.8902
INF	-0.093447	0.116105	-0.804844	0.4344
OPE	-7.97E-05	0.006756	-0.011791	0.9908
LIQ	0.079682	0.012156	6.555224	0.0000
GDP	-0.072939	0.439457	-0.165974	0.8706
SIZE	0.149236	0.185946	0.802574	0.4356

R-squared	0.834153	Mean dependent var	1.824483
Adjusted R-squared	0.774922	S.D. dependent var	1.797425
S.E. of regression	0.852741	Akaike info criterion	2.762603
Sum squared resid	10.18034	Schwarz criterion	3.061323
Log likelihood	-21.62603	Hannan-Quinn criter.	2.820916
F-statistic	14.08306	Durbin-Watson stat	1.433909
Prob(F-statistic)	0.000049		

Apendix III: Test for Hetroscedacity :White

Heteroskedasticity Test: White

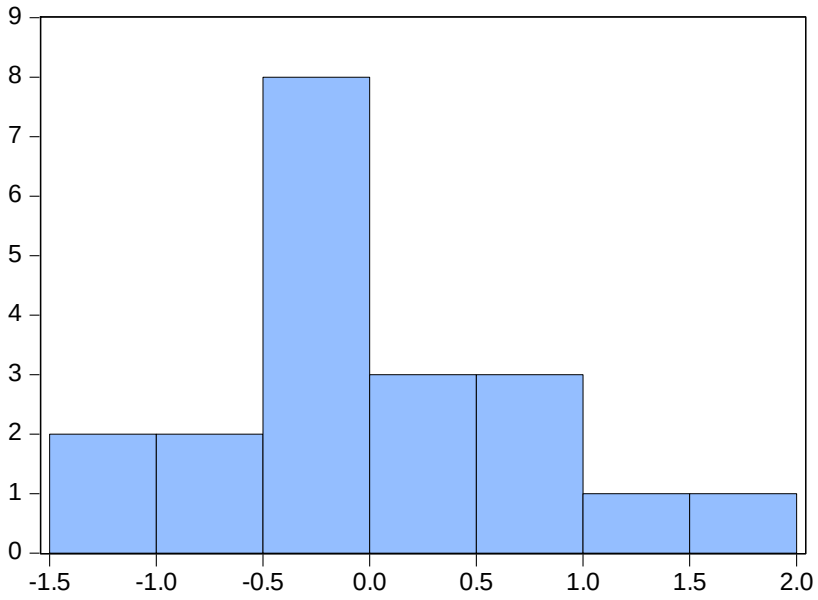
F-statistic	1.565879	Prob. F(5,14)	0.2332
Obs*R-squared	7.173259	Prob. Chi-Square(5)	0.2081
Scaled explained SS	3.540201	Prob. Chi-Square(5)	0.6173

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/30/21 Time: 05:55
Sample: 1 20
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.615709	1.794190	0.343168	0.7366
LIQ^2	0.000381	0.000152	2.510405	0.0250
INF^2	-0.004263	0.002635	-1.617843	0.1280
SIZE^2	0.003217	0.005165	0.622808	0.5434
OPE^2	1.96E-06	2.24E-05	0.087322	0.9317
GDP^2	-0.006920	0.015438	-0.448238	0.6608

R-squared	0.358663	Mean dependent var	0.509017
Adjusted R-squared	0.129614	S.D. dependent var	0.741213
S.E. of regression	0.691511	Akaike info criterion	2.343450
Sum squared resid	6.694626	Schwarz criterion	2.642170
Log likelihood	-17.43450	Hannan-Quinn criter.	2.401763
F-statistic	1.565879	Durbin-Watson stat	2.379651
Prob(F-statistic)	0.233172		

Appendix IV: Test for Normality



Series: Residuals	
Sample 1 20	
Observations 20	
Mean	4.33e-16
Median	-0.087909
Maximum	1.544553
Minimum	-1.478431
Std. Dev.	0.731989
Skewness	0.001767
Kurtosis	3.014398
Jarque-Bera	0.000183
Probability	0.999908

Appendix v: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.152697	Prob. F(2,12)	0.3484
Obs*R-squared	3.223113	Prob. Chi-Square(2)	0.1996

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 01/30/21 Time: 05:59
Sample: 1 20
Included observations: 20
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.491973	6.115539	-0.571000	0.5785
INF	0.096431	0.135564	0.711337	0.4905
GDP	0.315846	0.498278	0.633876	0.5381
OPE	0.003879	0.007330	0.529198	0.6063
SIZE	-0.042671	0.186207	-0.229160	0.8226
LIQ	0.004034	0.012579	0.320709	0.7539
RESID(-1)	0.414312	0.296121	1.399133	0.1871
RESID(-2)	-0.423900	0.377369	-1.123305	0.2833

R-squared	0.161156	Mean dependent var	7.53E-16
Adjusted R-squared	-0.328170	S.D. dependent var	0.732031
S.E. of regression	0.843639	Akaike info criterion	2.786990
Sum squared resid	8.540716	Schwarz criterion	3.185283
Log likelihood	-19.86990	Hannan-Quinn criter.	2.864741
F-statistic	0.329342	Durbin-Watson stat	1.969454
Prob(F-statistic)	0.925682		

Appendix VI: Ethiopian Banks providing Interest Free Banking Business

1. Oromia International Bank
2. Commercial Bank of Ethiopia
3. United Bank S.C
4. Wegagen Bank S.C
5. NIB bank S.C
6. Cooperative Bank of Oromia
7. Abay Bank S.C
8. Awash International Bank S.C
9. Bank of Abyssinia S.C
10. Dashen Bank S.C
11. BunnaInternatinal Bank S.C