St. Mary's University

School of Graduate Studies

Department of MBA Accounting and Finance

DETERMINANTS OF PRIVATE COMMERCIAL BANKS PROFITABILITY DURING GTP I PERIOD

BY

BELEN ZEWDU

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This is to certify that the thesis prepared by Belen Zewdu, entitled: *Determinants of Private Commercial Banks Profitability During GTP I Period* and submitted in partial fulfillment of the requirements for the degree of MBA in Accounting and Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by:

Internal examiner: Name: - Dr. Zenegnaw Abiy Signature _____ Date _____

External examiner: Name: - Dr Habtamu Birhanu Signature _____ Date _____

Advisor: Name: - Assmamaw Getie (Asst. Prof) Signature _____ Date _____

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Declaration

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

Declared by:

Name: Ms. Belen Zewdu

Signature: - _____

Date: June**,** 2016

ENDORSEMENT

This thesis has been submitted to St. Mary's University school of graduate studies for examination with my approval as a university advisor.

Assmamaw Getie (Asst. Prof. _____

Advisor Signature

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Abstract

The major objective of the study is to find out the major determinants of private commercial banks profitability in GTP implementation period i.e. 2011 to 2015. The study classifies the explanatory variables in to bank specific/internal factors, Sector specific and macroeconomic variable to empirically test the determinants of private commercial banks profitability. The study has taken one of the top policy issues; the obligation to purchase government securities, and analyzed its impact on profitability measure, ROA. It has used panel data from 2011 to 2015 of thirteen private commercial banks which were at least operating in the industry for the last five years with a total of 65 observations and all relevant data were collected using a structured documentary review of the annual reports of the sample banks and national bank of Ethiopia. The collected data were analyzed using Eviews-8 software and a panel fixed effect model regression was adopted to capture the effect of each explanatory variable on profitability of banks represented by ROA. The study used 12 explanatory variables namely, bank size, intermediation, expense management, funding cost, credit risk, liquidity, NBE bill purchased, market share, market development, real GDP growth and inflation rate. The study found that, bank size, expense management, NBE bill purchase has a positive significant impact on commercial banks profitability. Furthermore credit risk, funding cost and market share affect commercial banks profitability negatively.

List of tables

Abbreviations

CBE- Commercial Bank of Ethiopia

GDP- Growth domestic product

GTP- Growth and Transformation Plan

FDI- Foreign Direct Investment

MDGs- Millennium Development Goals

MOFED- Ministry of Finance and Economic Development.

NBE – National Bank of Ethiopia

NIM - Net Interest Margin

OECD- Organization for economic cooperation and development

ROA- Return on Asset

ROE -Return on Equity

SSA -Sub-Sahara African

UNDP- United Nation Development Program

Contents

Chapter One

Introduction

1.1 Background of the study

In developing countries government articulate various growth and development plans so as to develop and transform their nation's economic status and social welfare. Ethiopia, like any other developing countries is planning and implementing various development strategies. The main development agenda of the Ethiopian government is poverty eradication. There is a wide national consensus on the priority agenda of eradicating poverty and the policies and strategies pursued to address such a development priority. The ministry of Finance and economic Development accordingly coordinated the design and implementation of the Sustainable Development and Poverty Reduction Program (SDPRP), which covered the year 2002/3 to 2004/5 and A Plan for Accelerated and Sustained Development to End Poverty (PASDEP), that run from 2005/6 to 2009/10. After this Growth and Transformation Plan (GTP I) has been adopted for with clear objectives and targets through wide public participation at both the federal and regional level. Currently, the government of Ethiopia is under execution of the second GTP I program which is an extension GTP I. The plan spans 2010/11–2014/15 and were aimed at sustaining rapid, broad and equitable economic growth, and achieving the Millennium Development Goal (MDG). The longer-term objective is to eradicate poverty, bring about structural transformation of the economy and reach a middle-income status by 2020–25 (MOFED 2010).

The GTP I plan seeks to ensure sustainability of growth by pursuing its objectives within a stable macroeconomic framework. Among its strategic pillars are: sustaining rapid and equitable economic growth; maintaining agriculture as a major source of economic growth; creating conditions for industry to play a key role in the economy; enhancing expansion and quality of infrastructure and social development; building capacity and deepening good governance; and promoting gender and youth empowerment and equity (Ibid).

The structural transformation of the country is pursued through scaled-up public investments, such as in roads, railroads, hydro-electric generation plants, sugar factories, housing, and other projects. The strategy also assumes maintaining high share of fiscal spending to support human capital development, including through education, and technical and vocational trainings. The

government planned to finance these projects from difference sources like domestic revenue which includes tax and non-tax sources of income. One of the non-tax sources of finance is the financial sector. The financial sector in general and Banking business specifically as one subset of the economy is expected to play a crucial role in the realization of the Growth and transformation plan. A healthy and vibrant economy requires a financial system that moves funds from people who save to people who have productive investment opportunities (MoFED 2010).

The main role of a financial system is to assist the flow of funds. If a financial system is efficient and able to collect sufficient deposit from its customers and able to advance for investors, then it will show profitability improvements by increasing volume of funds flowing from savers to borrowers and by providing better quality services for consumers in commercial banks side (Gomez, 2008). Hence banking business is necessary for trade and industry and it is one of the great agencies of development.

Today commercial banks play a crucial role in the economic development of any country. The same holds true for Ethiopia. In an attempt to liberalize and make the financial sector competitive, the Ethiopian government issued monetary and banking proclamation in 1994 which allow the participation of the private banks in the market (NBE, 1994). Currently as a result of increasing trade and economic activities, the significance of commercial banks increase considerably. By seeing the expansion of commercial activities and attractive profitability of the banking business, now the number of commercial banking business participant with in the country reach 18 (NBE, 2014).

The banking industry in Ethiopia is one of the most profitable businesses in the financial sector of the country providing a higher rate of return to their shareholders. Commercial banks make their profits primarily by issuing loans. In this modern and dynamic world no business is carried out without loan. That is why most business borrows a major or portion of their capital. The second large portion of commercial banks income is earnings obtained from the engagement in the international trade services. Development of international banking came initially from the desire of banking service with growth of international trade. Commercial Banks engage in

international banking to serve the needs of their customers who participate in import and export trades and which generate profit for them (Machiraju, 2003).

The performance of commercial banks can be affected by internal and external factors (Flamini, C., Valentina C., McDonald, G., Liliana, S. (2009)). These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which basically are influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks.

1.2 Statement of the Problem

In any plan of economic development, finance occupies a position of strategic importance. No economic development is achieved without a reliable source of fund for financing development. A very important characteristic of an under-developed economy is deficiency of capital for financing their mega projects resulted from insufficient saving made by the community (Source).

Ethiopia, as many developing countries has planned and implemented different growth and development strategies. Currently, the country is under the implementation of the growth and transformation strategic plan phase II which is an extension of the previous GTP I. To realize this strategic plan, the government articulated different mega projects, like GERD, sugar factories, fertilizer factories, railway projects and other which requires a huge amount of finance.

To finance mega projects government has sought domestic resource mobilization as meant to reach the end. To this effect, the governing organ of banks issued directive number (MFA/NBEBILLS/001/2011) which orders commercial banks to purchase 0.27 Birr of a new NBE bill, with a maturity period of five years and 3% interest payment per annum, for every Birr of private sector new loan disbursement starting from April, 2011. In addition to the bill purchase requirement, under same directive, NBE has introduced a new regulation obligating commercial banks loan portfolio to constitute 40% short term loans, whose maturity period is less than or equal to one year and 60% medium and long term loans out the total loan portfolios,

which in turn has a significant influence on private banks income generating capacity through the impairment of loanable fund.

An increasing heavy burden of the uncertain global economic environment which put a burden on the local economic state in the form of declining export earning in line with the decline in the export earnings for coffee, the county's major export item, aggravated foreign currency shortage of the country. This intern put another challenge on private commercial banks income generating capacity from their international banking operation.

The other phenomena observed in the banking industry is, an increasing number of private commercial banks with in the country while they are unable to enlarge their market share. Rather they share the existing market with high competition. As the researcher can observe that, the newly emerging private banks grow rapidly than the existing one as a result of inter transfer of bankable customer among banks rather than finding new market. Large number of customers with existing private bank transfers their bank facilities to newly emerging private banks.

Ample of research works were done to identify determinants of private commercial banks profitability. However, as far as the researcher knowledge, there is scanty research that had been done on this area particularly on GTP I implementation period and its impact is not measured on private commercial banks profitability. This has necessitated the investigation to find out the main factors that determine the profitability of Ethiopian private commercial banks profitability during the GTP I implementation period.

Because it has been six years after the implementation of NBE Bill purchase directive and it has five year maturity period, it is the right time to measure its impact at this time. Therefore, this study try to investigate the major determinants of private commercial banks profitability during the implementation of the growth and transformation plan period by incorporating NBE bill purchase directive and measures its impact on private commercial banks profitability for the last five years.

1.3 Basic Research Questions

As per the above described problems, the researcher answer the following research questions

- Does the implementation of NBE Bill purchase directive affect the private commercial banks profitability? If so, to what extent.
- What are the macroeconomic determinants of private commercial banks profitability during the GTP I implementation period?
- What are the significant bank specific determinants of private commercial banks profitability during the GTP I implementation period?
- Do the industry specific factors, NBE bill purchase directive, market share and market development determined private commercial banks profitability?

1.4 Research Hypotheses

The research undertaken the following hypotheses

- *H1: There is positive relationship between Bank size and private commercial bank profitability*
- *HO2: There is positive relationship between capital adequacy and private commercial bank profitability*
- *HO3: There is negative relationship between funding cost and private commercial bank profitability*
- *HO4: There is positive relationship between expense management and private commercial bank profitability*
- *HO5: There is positive relationship between intermediation and private commercial bank profitability*
- *HO6: There is negative relationship between liquidity and private commercial bank profitability.*
- *HO7: There is negative relationship between credit risk and private commercial bank profitability.*
- *HO8: The implementation of NBE bill purchase directive has negative effect on private commercial banks profitability.*
- *HO9: There is positive relationship between market share and private commercial banks profitability*

- *HO10: There is positive relationship between market development and private commercial banks profitability*
- *HO11: There is positive relationship between Rate of GDP and private commercial bank profitability.*
- *HO12: - There is positive relationship between inflation rate and private commercial bank profitability.*

1.5 Objectives of the study

1.5.1 General Objective

The general objective of the study is to investigate the major determinants of private commercial banks profitability during the implementation Growth and Transformation period I.

1.5.2 Specific Objectives

Beside the general objective this research has the following specific objectives.

- To examine the major internal factors that determines private commercial banks profitability during GTP I implementation,
- Try to capture the effects of NBE bill purchase directive, market share and market development in private commercial banks profitability.
- Try to measure the impact of GDP growth rate and inflation rate on the private commercial banks profitability

1.6 Significance of the Study

The research paper will provide full and comprehensive information about the factors that determine private commercial banks profitability during the five year Growth and Transformation Plan period and it shades light on the effects of the newly introduced NBE bill purchase directive on private commercial banks profitability. It will be also useful to indicate, the possible measure that shall be adapted by private commercial banks and gives useful information for policy makers regarding the subject matter and evoke them to take corrective measures for this specific industry discussed. Finally it will serve as a base for other researchers who are interested to scale up the research work.

1.7 Scope of the Study

The scope of the study is restricted to the assessment of the internal, external and macro-economic factors affecting profitability during GTP I implementation period of thirteen private commercial banks in Ethiopia and that have operated in the industry at least for five years (2011-2015**).**

1.8 Limitations of the Study

The first limitation of the study emanate from the sources of data i.e. The research only consists of secondary data and the second one is lack of previous research works which mainly focuses on NBE bill purchase directive implementation.

1.9 Organization of the Paper

The research paper has five chapters. The first chapter mainly deals with the introduction part, which include introduction, statement of the problem, research question, research hypothesis, objective of the study, significant of the study, scope of the study and limitation of the study. The second chapter deals with review of related literatures, which states theoretical as well as empirical explanations from various references and try to state the research. Chapter three and chapter four present about the research approach and research methodology and detail of data presentation, analysis and interpretation respectively. Finally, the last chapter, chapter five presents the conclusion and suggestion part.

Chapter Two

Review of Related Literature

The broad functions of a commercial bank are borrowing (deposit) and lending (advance), agency functions like collection and payment of cheques and bills on behalf of the customers and finally general utility services like receiving valuable securities for safe custody besides underwriting of shares.

Belayneh (2011), says the concept of modern banking has shifted from the traditional passive commercial role towards the active role of contributing to the social welfare of the country by accelerating the process of economic development.

According to Wendy and Colin (2003), the role of commercial banks lies in accelerating investment and growth in a developing economy. The banks are considered as the nerve centers of economies and finance of a nation and the barometer of its economic perspective.

As noted in Tregena (2009) applied in banking the market power hypothesis posits that the performance of bank is influenced by the market structure of the industry. There are two distinct approaches within the market power theory; the Structure-Conduct-Performance (SCP) and the Relative Market Power (RMP) hypotheses. According to the SCP approach, the level of concentration in the banking market gives rise to potential market power by banks, which may raise their profitability. Banks in more concentrated markets are most likely to make „abnormal profitability their ability to lower deposits rates and to charge e higher loan rates as a results of collusive (explicit or tacit) or monopolistic reasons, than firms operating in less concentrated markets, irrespective of their efficiency (Tregenna 2009). Unlike the SCP, the RMP hypothesis posits that bank profitability is influenced by market share. It assumes that only large banks with differentiated products can influence prices and increase profits. They are able to exercise market power and earn noncompetitive profits (Tregenna 2009).

Theoretically factors affecting bank profitability are mainly divided into two categories as internal and external variables. The internal (bank-specific factors) are factors that are related to internal efficiencies and managerial decisions. As stated in the above section the efficiency

theory highly assume as bank performance is influenced by those internal factors that are related to internal efficiencies and managerial decisions. Such factors include determinants such as bank size, capital adequacy, liquidity risk, operational efficiency (expenses management), management efficiency, employee efficiency and funding cost. On the other hand, the capital asset pricing theory assumes as bank profitability is a function of external market factors.

Bank profitability is sensitive to macroeconomic conditions despite the trend in the industry towards greater geographic diversification and larger use of financial engineering techniques to manage risk associated with business cycle forecasting. Generally, higher economic growth encourages banks to lend more and permits them to charge higher margins, as well as improving the quality of their assets (Athanasoglou et al. 2005) for the Greek banking industry.

2.1 Overview of Growth and Transformation Plan

The main development agenda of the Ethiopian government is poverty eradication. All the country's development policies and strategies are, therefore, geared towards this end. Effective implementation of these police and strategies in an integrated and comprehensive manner at various levels of government administration is key for eradicating poverty and dependence on food aid in a shorter period of time. (MOFED, 2010)

To eradicate Poverty and its incidence on the nation the government has sought rapid economic growth as a means to reach the end. To achieve this broad objective, the current government of Ethiopia has been adopting different medium and long term development strategies since 1991, like ADLI and PASSDEP and the recent Growth and Transformation Plan. Currently the government is under implementation of the GTP phase II, which is an extension of GTP I.

Objectives of GTP

The GTP has been carried out having the following objective of

1. Maintain at least an average real GDP growth rate of 11% and attain MDGs.
2. Expand and ensure the qualities of education and health services and achieve MDGS in the social sector.

3. Establish suitable conditions for sustainable nation building through the creation of a stable democratic and developmental sate
4. Ensure the sustainability of growth by realizing all the above objectives with a stable macroeconomic framework.

Issues for the financial sector.

It was planned to strength the financial sector with the aim of establishing an accessible, efficient and competitive financial system. The main purpose of the initiative was to increase domestic saving so as sustain the fast and sustainable growth required to provide resource for the expand and improving public services.

A significant emphasis were given to the expansion and improvement of modern banking through strengthening the IT and telecom infrastructure targeting the finical system. During the GTP plan period an introduction and expansion of modern payments systems of electronic banking such as, Card banking, internet banking, mobile banking and agent banking is exhibited during the plan period. In addition an increased number of branch opening showed both at the state owned and private banks.

To implement the GTP both direct and indirect monetary instruments were applied as appropriate. The government developed and implemented initiatives to encourage domestic saving and investment. The government tried to keep real interest rate at zero, however if tailed to keep at zero. Non-traditional sources of revenue mobilization such as bond sales to citizens at home and to the Diaspora. Introduce social security services for private organization employees, compulsory third party insurance, and mortgage investment.

Financing the plan

Financing social and economic development program is essential for the realization of the objectives stated in the GTP. Allocation of finance is based on the medium term Macro Economic Fiscal Framework, an instrument used by the government to frame resource expectations from domestic and external source and allocate resource to key sector in the line with the overall development objectives of the country (MOFED, 2010).

The financing arrangements of the programs was proposed 30% from own sources of development enterprise and 70% from domestic and external borrowing. Accordingly the NBE has introduced NBE bill market in April, 2011 so as to mobilize resources from commercial banks to fiancé priority sectors identified by the government as a key for the long-term growth of the economy. Since its commencement the bill market has collected birr 37.4 Billion from private commercial banks.

As per the NBE annual report of 2015, in addition to the bill market the government has introduced corporate bond, through its mega project agents of, EEPCO, Ethio-Telecom, railway corporation, Housing Development agency. Accordingly, the state owned CBE has bought a corporate bond of birr 152.7 bln during the plan period.

2.2 NBE Bill purchase as development finance tool

NBE bills purchase directive is a regulatory policy issued by National Bank of Ethiopia in April 2011. The directive requires private banks to purchase NBE bills equivalent to 27 percent of any new disbursements (The World Bank, 2013). The bills have annual interest rate of three percent and maturity period of five years (NBE, 2013). According to the directive, all banks should participate in the financing of priority sector projects to bring sustainable economic development. Its main Objective is to get adequate funds for priority sectors' project to bring about sustainable economic development.

2.3 Commercial Banks

Commercial banks are financial intermediaries raise fund primary by issuing checkable deposits (deposits on which checks can be written), saving deposits and time deposits (deposits with fixed terms to maturity) and use these funds to make commercial, consumer and mortgage loans (Mishkin, 2004).

2.4 History of private banks in Ethiopia

The introduction of modern banking history in Ethiopia starts in 1905 upon the establishment of Bank of Abyssinia. However the strong financial sector in Ethiopia established after National Bank of Ethiopia is established in 1963. The Bank used to carry out dual activities, i.e. commercial banking and central banking until Commercial bank of Ethiopia took over the

commercial banking activities. The first privately owned bank, Addis Ababa Bank S.C, is established on Ethiopians initiative and started operation in 1964. However, monetary and banking proclamation in 1976 came into force to adoring without the existence of private banks Later, monetary and banking proclamation No.83/1994 and the Licensing and Supervision of Banking Business No.84/1994 laid down the legal basis for investment in the banking sector. Consequently after the proclamation the first private bank, Awash International Bank is established in 1994. Since then a number of banks is established. Unite the year 2000 G.C the number of private banks was thirteen including the first private bank and thus are Dashen Bank and bank of Abysinia in 1995, Wegagen Bank in 1997, and United Bank in 1998, Nib International Bank in 1999. Currently in Ethiopia there are 16 private banks and 2 public owed commercial banks excluding Development bank of Ethiopia (NBE, 2014).

2.5 Banks profitability

2.5.1 Conceptual Framework of Profitability

An examination of the theoretical definition of profit provides the most general guide. Profit is a simple residual concept but its level is determined by the complex interaction of a multitude of factors (Nugent, 1998). There are some theoretical explanations for relationships between regulation, ownership structure, balance sheet structure and profitability. Besides other objectives, the aim objective of regulation and supervision in the banking is to overcome the moral hazard problem in the banking sector.

Without any regulation, politicians assume that value-maximizing banks take on more risks than which is optimal and acceptable for depositors. Whilst risk taking is beneficial for average individual banks, one bank failure is highly undesirable for depositors and may spill over to the entire banking sector. Regulation that requires minimum capital ratios would likely negatively influence profitability as regulation constrains value-maximizing banks in risk taking and in reaching an optimal capital structure. Furthermore, according to Saunders and Cornett (2008) the net regulatory burden could also negatively influence bank performance. The net regulatory burden equals the cost minus the benefits of regulation. Costs of regulation are e.g. compliance referring to fulfillments of obligations imposed by law, costs of preparing reports and statements to regulators, or costs of being restricted from an optimal portfolio or capital structure.

Research on the determinants of bank profitability has focused on both the returns on bank assets and equity, and net interest rate margins. It has traditionally explored the impact on bank performance of bank-specific factors, such as risk, market power, and regulatory costs. More recently, research has focused on the impact of macroeconomic factors on bank performance (Valentina Flamini, et al, 2009).

A company remains in operation because it expects to make profits. Once that expectation is confirmed unattainable, the most rational decision is to close shop or exit the business. Three indicators, namely: Net Interest Margin (NIM), Return on Assets (ROA) and Return on Equity (ROE) were identified by Ahmed (2003) to be widely employed in the literature to measure profitability. However, there are divergent views among scholars on the superiority of one indicator over the others as a good measure of profitability.

On the other hand there are some theories that can be applied to measure banks profit other than ROA, ROE and NIM. According to Standard asset pricing models arbitrage should ensure that riskier assets are remunerated with higher returns. These risks can be banks specific risk which means liquidity, foreign currency, credit, management inefficiency, capital inadequacy and etc which can be solved by itself. The other, Non-diversified risk (Systematic risk) like risk associated with macroeconomic environment, natural disaster, political instability, government regulations and supervision of Bank (Ibid).

External factors are said to be the factors that are beyond the control of the management of commercial banks. The external determinants of commercial banks profitability are indirect factors, which are uncontrollable, but have an enormous impact on bank's profitability. According to Karkrah and Ameyaw (2010) macroeconomic variables has been a major components of the external profit determinants in most studies. The most external factors that have been presented in most studies includes competition/market share/firm size, inflation, GDP growth, and interest rate

2.5.2 Empirical Reviews

Profitability of the banking sector is a subject that has received a lot of attention in recent years. However a fewer studies have looked at bank performance in developing economies as well as in Ethiopia. Using bank level data for 80 developing countries in the 1988–95 periods, Demirgüç-Kunt and Huizinga (1998) analyze how bank characteristics and the overall banking environment affect both interest rate margins and bank returns. In considering both measures, this study provides a decomposition of the income effects of a number of determinants that affect depositor and borrower behavior, as opposed to that of shareholders. Results suggest that macroeconomic and regulatory conditions have a pronounced impact on margins and profitability.

Using accounting decompositions, as well as panel regressions, Al-Haschimi (2007) studies the determinants of bank net interest rate margins in 10 Sub-Sahara African (SSA) countries. He finds that credit risk and operating inefficiencies (which signal market power) explain most of the variation in net interest margins across the region. Macroeconomic risk has only limited effects on net interest margins in the study.

Using 389 banks data from 41 SSA countries to study the determinants of bank profitability Valentina Flamini, et al. (2009) find that apart from credit risk, higher returns on assets are associated with larger bank size, activity diversification, and private ownership. Bank returns are affected by macroeconomic variables, suggesting that macroeconomic policies that promote low inflation and stable output growth do boost credit expansion. The results also indicate moderate persistence in profitability. Causation in the Granger sense from returns on assets to capital occurs with a considerable lag, implying that high returns are not immediately retained in the form of equity increases. Thus, the paper gives some support to a policy of imposing higher capital requirements in the region in order to strengthen financial stability.

Damena (2011) examined the determinants of Ethiopian commercial banks profitability. The study applied the balanced panel data of seven Ethiopian commercial banks that covers the period 2001- 2010. The paper used Ordinary Least Square (OLS) technique to investigate the impact of some internal as well as external variables on major profitability indicator i.e., ROA.

The estimation results showed that all bank-specific determinants, with the exception of saving deposit, significantly affect commercial banks profitability in Ethiopia. Market concentration was also a significant determining factor of profitability. Finally, with regard to macroeconomic variables, only economic growth exhibits a significant relationship with banks‟ profitability.

2.5.2.1 Studies in Ethiopia

Using the standard static as well as dynamic models, Yigremachew (2008) tries to find systematic evidence on the determining factors for the corporate profitability of private commercial banks in Ethiopia. The study utilizes data on balance sheet as well as income statement account items of all the domestic private banks, which have at least been operational since 1999/00 fiscal year. In effect six private commercial banks have been included in his survey. All in all, the study results indicate that interest and non-interest income and interest expense are the main determining factor for the profitability of private banks in Ethiopia. It also indicated that fixed asset investment, capital adequacy ratio and employees' productivity has significant role on private bank's profitability where macroeconomic conditions such as inflation and tax have significant unfavorable impact on operational performance of private banks.

Habtamu Negussie (2012) investigates determinants of private commercial banks profitability in Ethiopia by using panel data of seven private commercial banks from year 2002 to 2011. The study used quantitative research approach and secondary financial data are analyzed by using multiple linear regressions models for the three bank profitability measures; Return on Asset (ROA), Return on Equity (ROE), and Net Interest Margin (NIM). Beside this the study used primary data analysis to solicit mangers perception towards the determinants of private commercial banks profitability. The empirical results shows that bank specific factors; capital adequacy, managerial efficiency, bank size and macro-economic factors; level of GDP, and regulation have a strong influence on the profitability of private commercial banks in Ethiopia.
Those research works shows that how banks profitability influenced by various factors, specifically internal and external one.

Tesfaye Borou (2014) in assessing the effect of sector specific policy measures on bank performance taking one of the top policy issues; the requirement to purchase government securities, and analyzing its impact on profitability measure, ROA using panel data evidence from 2007-2013 of eight middle size private banks with a total of 56 observations found that exposure to government bills has negative significant relationship with performance.

Eden Kebede (2014) in assessing the impact of national bank regulation on banks performance using three regulatory measures, NBE bill purchase directive, credit cap and reserve requirement for the sample of six private commercial banks data collected for a period covering 2004 to 2013 using panel data regression found that NBE bill purchase and credit cap had significant negative impact on profitability of private commercial banks.

Shibru Amsalu (2015) in assessing the implication of regulatory policy measures namely NBE bill purchase directive on the development of private commercial banks in Ethiopia using descriptive research approach employing questionnaire, key informant interview and document surveying found that NBE bills purchase directive have negative implications on loanable fund, income and expense, profit, Capital and reserve, and deposit of Private commercial banks. Furthermore he found that implication of the directive implied on expense of private banks via increasing overall expenses. Finally he conclude that, the NBE bills purchase directive has negative impact on almost all performances of private commercial banks, which further has negative implications on the development of private commercial banks.

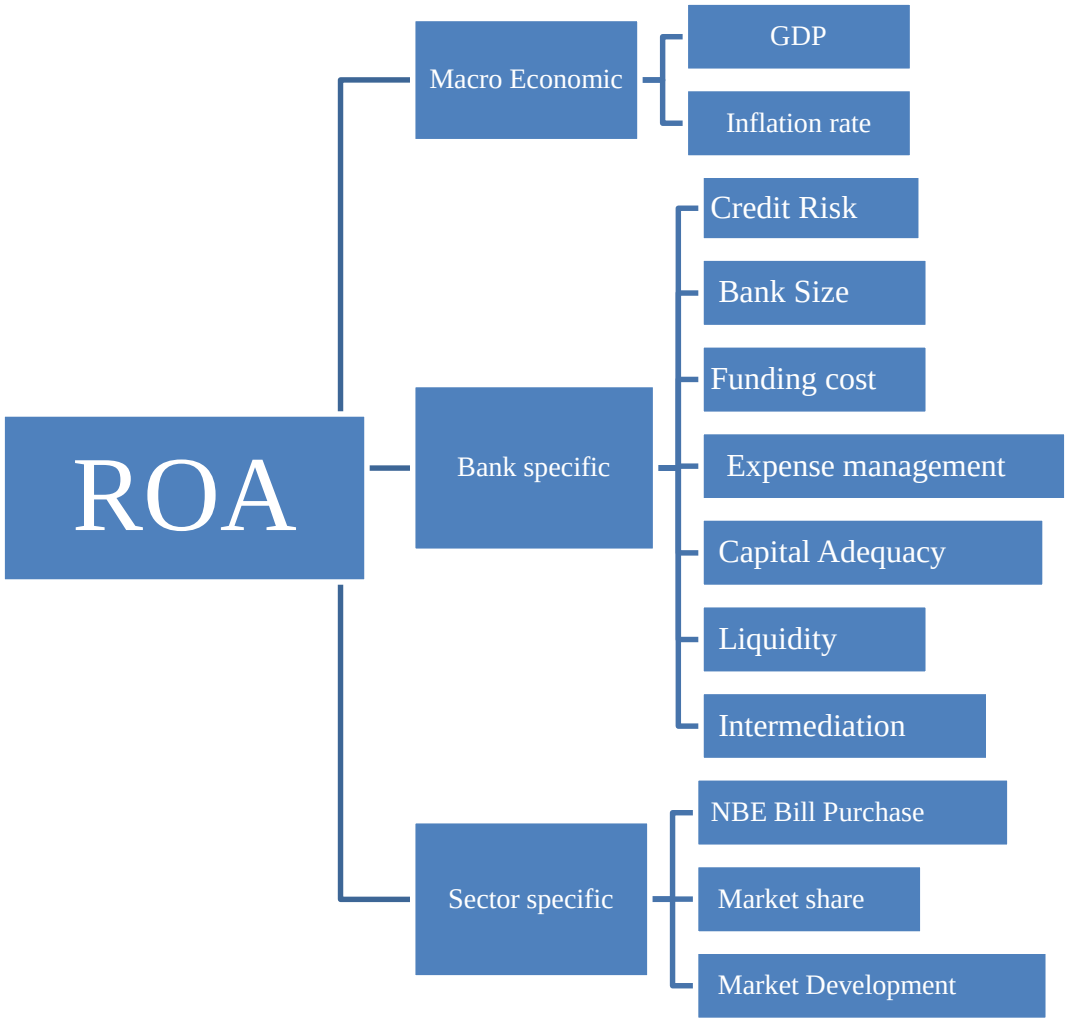
2.6 Research gap

There are plenty of research works done in analyzing the determinants of Ethiopian commercial banks profitability in general and private commercial banks in specific. The reviewed literatures identified different factors that determine the private commercial banks profitability, broadly classifying them as bank specific factors, industry or sector specific factors and macroeconomic factors. Furthermore, as to the researchers knowledge three researches were conducted regarding the issue during the GTP implementation period giving a special emphasis to one NBE policy measure, NBE bill purchase directive. The three researchers try to measure the impact of the policy measure using data until, 2013 while the policy measure introduced to the sector in April 2011. In my opinion three years is not much enough to measure the impact, at least a five year data should be collected to measure impact.

The state banks, mainly commercial bank Ethiopia, are the main agent that facilitates the domestic resource mobilization efforts of the government along with Development Bank of Ethiopia. The bank aggressively adopting branch expansion strategy. Such Situation escalates the level of competition among banks in mobilizing deposits. Hence, the state banks are currently under pressure to collect deposits on behalf of the state to finance the huge developmental activities of the country. Likewise the private Commercial Banks of Ethiopia have to compete with the state banks to get enough loanable funds to stay competitive, become profitable and generally fulfill the business objectives of their respective shareholders through diversifying their deposit base. However, the reviewed researches overlooked the determining factor, competition between commercial banks in deposit, mainly the private ones.

It's to be recalled that, the implementation of GTP I period is elapsed in June 2015. Previously there was no research work tried to capture the determinants of private commercial banks profitability during GTP I implantation period. Therefore, this research try to add some knowledge on the existing stock of knowledge on determinants of commercial banks profitability by assessing the impact of GTP I implementation and incorporating the stiff competition exist between existing private commercial banks measuring through individual banks market share and banking sector development.

2.6 Conceptual framework



Chapter Three

Research Methodology

3.1 Research design and Methodology

The purpose of this research is to identify the major factors that determine private commercial banks profitability during the Growth and Transformation Plan implementation period. As such variables may have quantitative nature the research employed quantitative approach.

This part of the research also presents the methodology employed in the actual research. The section presents the sources of data employed in the study, the samples chosen with regards to the banks studied and the reason why they are selected. This section also concentrates on the chosen profitability determinants and the justification of the explanatory variables. Finally, the model adopted in the study in order to be able to analyze and discuss the solution to the research question and arrive at a conclusion.

3.1.2 Quantitative approaches

The researcher used panel data for the last five years from secondary data sources obtained mainly from the annual reports of the sample banks, over the period from 2011 to 2015 G.C. The study used balance sheet, cash flow and income statement figures by focusing on the banks capital adequacy, bank size, credit risk, intermediation, liquidity, expense management, NBE bill purchase and funding cost, as internal determinants of profitability for private commercial banks. On the other hand, for the external determinants i.e. industry sector and, data on GDP and inflation over the periods 2011 to 2015 are used.

3.2. Model Specification

The conducted research employ econometric model in order to tackle the case at hand. Econometrics may be defined as the quantitative analysis of actual economic phenomena based on the concurrent development of theory and observation, related by appropriate methods of inference. Econometric model is chosen, because it provides us numerical measure of the relationship between the dependent and independent(s) variables; hence it show us by how much the dependent variable will go up or down as a result of a certain change in the independent

variable(s) which help us to identify the major causes that influence the dependent variable. As a statistical instrument to analyze the determinants of commercial bank's profitability, prior researches has used linear regression model as a tool for the analysis in their study. Therefore this study employ a linear regression model to quantify the relationship exist between the dependent and independent variable and strictly follow the assumption of classical linear regression model and various diagnostic Test are employed.

3.3. Definition and Measures of variables

Profitability

Using ratio in analyzing profitability is commonly used in research regarding banks profitability. Whiliam Benten (2012) claims that the use profitability ratios are not influenced by changes in price levels. And it is said to be the most appropriate way of measuring profitability as one make use of time series analysis. This is because the real value of profits cannot be affected by the varying inflation rates. For one to realize how well a bank is performing it is much more useful to consider return on assets (ROA) and return on equity (ROE). For the purpose of this study, ROA is used as measure for profitability of banks; it is obtained by dividing net income to total asset.

3.3.1 Explanatory Variables

3.3.1.1 Bank Specific determinants

Liquidity (Availability of Loanable Fund)

Bank for International Settlements (2008), defines liquidity as the ability of bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity risk arises from the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans.

Commercial banks generate the largest part of their income from interest income obtained from their loan and advances. Loans are the largest segment of interest bearing assets. Other things being constant, the more the deposits that the bank has the more portion of it are transformed into loans, the higher the level of profit will be, therefore, it is expected to have a positive relationship with bank performance. For the purpose of this study, the ratio of liquid asset to total deposit of the bank during the fiscal years is used to capture data for the liquidity ratio (Birhanu 2011).

Bank size

The size of the bank is included as a control variable to account for size related economies and diseconomies of scale. Financial intermediation theory predicts the efficiency benefits related to bank's size, due to economic of scale. This could imply lower cost for larger banks that they may retain as higher profits if they do not operate in a very competitive environment (Flamini, Mcdonal & Schumacher, 2009). Guru, Staunton & Balashanmugam (2000) suggest that large banks have grater loans and greater product diversification and accessibility to asset markets, which may not be available for smaller banks. Thus the researcher expects a positive sign for this variable & the researcher use the logarithm of total asset as a proxy measure (**Mohammad and Saad, 2011).**

Capital Adequacy

Capital plays a vital role in supporting safety and soundness of banks (Flamini, Mcdonal & Schumacher, 2009). Banks with high capital to assets ratio could be considered relatively safer in the event of loss or liquidation. Guru, Staunton & Balashanmugam (2000) indicated that capital adequacy requirement would increase the capital assets ratio and thus reduce the risk. This may induce banks to absorb more risk in their investment in the hope of maximizing return. Moreover, Naceur and Goaied (2001) suggest that the higher capital to assets ratio, the lower the need for external financing and therefore, higher profitability. The researcher use the ratio of equity capital to assets as a proxy of bank capital and the researcher expect positive relation.

Funding cost

Samuel (2013) cited in his research that the interest rate paid by commercial banks for the funds that they deploy in their business, the cost of funds is one of the most important input costs for a financial institution, since a lower cost will generate better returns when the funds are deployed

in the form of short term and long-term loans to borrowers. The spread between the cost of funds and the interest rate charged to borrowers represents one of the main sources of profit for most financial institutions. The most common ratio used to examine funding costs is the ratio of interest expenses on deposits to total deposits. Macroeconomic theory states that there is a negative relationship between funding costs and profits because a lower cost will generate better returns for banks that make profits off of the loans to borrowers. Dietrich and Wanzenried (2011) find a negative relationship between this ratio in Switzerland, and Lindblom et al (2010) find that decreasing rates during crisis periods have lowered funding costs for banks in Sweden. This result is in line with the theory that banks adjusted their deposit rates in line with declining market rates. Therefore, the researcher uses the ratio of interest expense on deposits to total deposits and expects negative relationship with the bank's profitability.

Intermediation

The important function of banks is financial intermediation which is the process of indirect finance where by banks link lenders or savers and borrowers or spenders (Mishkin, 2004). Bank loans are expected to be the main source of income and are expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits (Abebaw, 2011). The researcher use ratio of Bank's loans and advances to liquid asset as a proxy for measure of financial intermediation and the researcher expect positively relation with the bank's profitability.

Expenses management

Expense management is one of the significant determinants of banks' performance. Naifer (2010) suggests that the higher the expenses management the higher the efficient the bank, which could affect bank profit positively. The researcher use the ratio of operating income/non-interest income/ to operating expense as a proxy for expenses management and expect positive significant result.

Credit Risk

As financial intermediary banks exist to channel funds from depositors to borrowers as long as they extend loan to borrowers, banks are exposed to credit risk. It can be defined as loss arises from the refusal or inability of a borrower the amount borrowed up on the agreed terms and conditions. According to Vong and Hoi Si Chan (2008), if banks operate in more risky environments and lack the expertise to control their lending operations, it will probably result in a higher loan-loss provision ratio. Therefore, as indicated by Athanasoglou et al. (2005), banks would increase profitability by improving screening and monitoring of credit risk and such policies. It is measured by the ratio of loan loss provisions over total loans and advances. The governing organ of the financial institutions, NBE under its directive, directive number SBB/43/2008 for Asset Classification of Development finance institutions orders that, commercial banks not to incorporate or recognize interest income gained from Non-performing loans in their income statement, in addition they obliged to hold a provision for Non-performing loans based up on a predetermined loan status, which ultimately lowers commercial banks profitability.

Empirically, credit risk is commonly measured by either using provision for loan loss or Non-performing loan to the gross loan amount. For the purpose of this study the researcher uses the ratio of Provision for doubtful loans and advances to loan and advance of the bank to measure credit risk and it is expected to affect bank's profitability negatively, the higher the ratio, the higher provision the bank made, which in turn negatively affect bank's profitability.

Liquidity

In Ethiopia, National Bank exercises control over the banking sector through issuance of directives pertaining formation and operation of a banking business. Most of the directives on operation aim at reducing risk of liquidity and solvency in the banking system. According to Devinaga Rasiah (2010) the reason behind this regulation is to make sure that the commercial banks always possess enough liquidity in order to be able to deal with bank runs. He further argue that a bank assume the status of highly liquid only if it has been able to accumulate enough cash and have in possession other liquid assets as well as having the ability to raise funds quickly

from other sources to be able to meet its payment obligation and other financial commitments on time.

Further, Devinaga Rasiah (2010) argued that lower returns on liquid assets and excessive fund which has not been invested may also negatively affect the profitability of banks. And because of this, liquidity management serves as an important determinant of commercial bank profitability. It may not be prudent for commercial banks to hold huge amount of an idle funds because it deprive the banks of income and profitability. This is because the more the banks turn funds into loans or invest them the more its accumulate income and profit.

3.3.1.1 Sector Specific Determinants

Market Share

Devinaga Rasiah (2010) cited in Whilliam Bentan (2012) included market share in their studies in measuring determinants of commercial banks profitability in Ghana during the period of 2008 financial crisis. Market share could be included in the profitability model as an external determinant because if commercial banks could be able to expand their market share then they may be able to increase their income as well hence profit. This is because the ability to increase market share requires selling more so in the case of banking if commercial banks are able to offer more loans to more customers then they stand a greater chance of increasing interest income as well as profits.

To capture the effect of market share on profitability, Devinaga Rasiah (2010) stressed that as both deposits and loans represent commercial banks output, one has to make a choice between deposits and assets to be used as proxy of bank market share. However, he argued that the fact that assets components may also comprise of investment in securities and subsidiaries with which they might be the same across all commercial banks, the choice of deposits for the measurement of market share is considered to be more impartial. Therefore the study used the ratio of banks total deposit to the industry total deposit to measure market share of each bank in the industry and it is expected to affect the bank's profitability positively.

Market Development

Banking sector development plays an important role in the economy. When the market becomes more competitive, banks need to adapt different strategies in order to retain profitability. The concept of the development of the banking market is a multi-dimensional concept and is not easy to

find a single definition of this process as it is an interrelated process that includes improvements in the quantity and quality of financial services. Some of these dimensions are related to the mobilization of savings, credit granting and risk management, bank to people ratio and others.

Samuel (2015) in assessing determinants of Ethiopian commercial banks used the ratio of total asset of the industry to GDP to measure banking sector development. He found that, banking sector development has significant positive impact on banks profitability. This study also follows the measure used by Samuel (2015) to capture the effects of banking sector development on banks profitability.

NBE bill Purchased

As per the recent regulation introduced by the NBE as a way to finance the development activities of the nation and as monetary policy intervention mechanism, the NBE ordered private banks to purchase 27% bill out of the newly loan disbursed.

According to Shibiru (2014), the implications of bills purchase directive of NBE negatively reflected on almost all private commercial banks' performances/activities consequently on the development of private commercial banks. Hence, the on and off balance items like Loanable fund, income and expense, profitability, liquidity, asset and capital and reserves were affected by the directive. The directive negatively affected the Loanable fund of private commercial banks by reducing their Loanable fund largely, which brought multiplier effect on other loan related variables. These include upward revision of lending rate, dissatisfaction of loanee customers, and change in loan portfolios of banks, reduction of loan and advance market share and prohibition of financing priority sectors.

To this end, the study used logtihrm of NBE bills purchased during the fiscal year adopted from, Eden (2014). The researcher expects negatively and significant impact of this variable on private commercial bank's profitability.

3.3.1.3 Macroeconomic Determinants

Economic Growth (GDP)

Among the major economic factor that determines private commercial banks profitability is, the level of economic growth which is measured by the real GDP growth rate. The higher economic growth may lead to a greater demand for both interest bearing and non-interest bearing financial services sector Athanasoglou (2005) and Kosmidou (2008). This research incorporates GDP growth as an explanatory variable as a proxy for economic growth and has positive impact on banks profitability.

Inflation

Another macroeconomic variable which affect the cost of financial intermediation and out of the control of bank's management, is Inflation. This variable included in many researchers model in analyzing the determinants of commercial bank's profitability. However, there is no consensus in its impact on private commercial bank's profitability. Some researcher found that in the period of higher inflation banks get more profit, due to the fact that, discretion for setting lending interest rate is at the hands of commercial banks, when the period experience inflation they accordingly adjust their lending interest, by doing this they protect their expected rate of return from the loan they extend to customers. However, other researchers found that, inflation has negative effect on banks profitability. The pre-determined sign for the effect of inflation on banks profitability is to be positive relation with profitability.

Table 1: - Description of the variables and their expected relationship

Variables	Measures	Denoted by	Expected Impact
Dependent Variable			
Return on asset	Profitability Net income/Total Asset	ROA	
Independent Variables			
Bank Specific determinants			
Bank Size	Log of total asset	BSIZE	+ve
Capital Adequacy	Ration of Total Capital to Total Asset	CAQ	+ve
Funding Cost	Ration of Interest Expense to Total Deposit	FUC	-ve
Expense Management	Ration of Non-interest income to Operating Expense	EXPMGT	+ve
Intermediation	Ratio of Loan and advance to liquid asset	INTRM	+ve
Liquidity	Ratio of Liquid Asset to total deposit	LIUQ	-ve
Credit Risk	Ratio Non-Performing Loan/Total Loan	CRI	-ve
Sector specific			
Market share	Ratio of Bank's deposit/total industry deposit	MKTS	+ve
NBE Bill Purchase	Log of amount of NBE bill purchased	LOGNBE	-ve
Market Development	Ratio of Industry's total asset/GDP	MKTD	+ve
Macro-Economic factors			
Economic growth	% annual GDP Growth	GDP	+ve
Inflation	Annual inflation rate	INFR	+ve

Model specification

$$ROA_{it} = C + \alpha 1BSIZE_{it} + \alpha 2CAQ_{it} - \alpha 3FUC_{i} + \alpha 4EXPMGT_{it} + \alpha 5INTRM_{it} - \alpha 6LIUQ_{it} - \alpha 7CRI_{it} + \alpha 8MKTS_{it} - \alpha 9LOGNBE_{it} + \alpha 10MKTD_{it} + \alpha 11GDPG_{it} + \alpha 12INFR_{it} + \varepsilon_{it}$$

***Where*:**

ROA *= the dependent variable (Profitability of banks)*

C *= Constant Term*

$\alpha 1$- $\alpha 12$ *are coefficients of the explanatory variables.*

BSIZE **=** *Bank Size*

CAQ **=** *Capital Adequacy*

***FUC** = Funding cost*

***EXPMGT** = Expense management*

***INTRM**= Intermediation*

***LIUQ** = Liquidity of the bank*

***CRI** = Credit Risk*

***MKTS** = Market Share*

***LOGNBE** = NBE bill Purchase*

***MKTD** = Market Development*

***GDP** = GDP growth rate*

***INFR** = Inflation Rate*

3.4 Population of the study

In this research, the target population is the banking sector in Ethiopia specifically the private commercial banks. Currently, Ethiopia consists of 14 Private Commercial banks. Dashen Bank S.C (DB), Awash International Bank S.C (AIB), Wogagen Bank S.C (WB), United Bank S.C (UB), Nib International Bank S.C (NIB), Bank of Abyssinia S.C (BOA), Lion International Bank S.C (LIB), Cooperative Bank of Oromia S.C (CBO), Berehan International Bank S.C (BIB), Buna International Bank S.C (BUIB), Oromia International Bank S.C (OIB), Zemen Bank S.C (ZB), Abay Bank(AB), Addis International Bank (ADIB), Debub Global Bank(DGB) and Enat Bank (EB).

3.5. Sampling Frame

Sixteen private commercial banks are the total population of the research study. Banks whose operating age is greater than five years included in the sample and those banks whose age is less than five years is excluded from being selected as a sample. Out of which the sixteen private commercial banks, thirteen which start the operation on or before 2011 are taken as a sample. The samples are selected using non probability or purposive sampling, on the basis their year of establishment. Therefore, the matrix for the frame is 13 private commercial banks multiplied by 5 years (5*13) that includes 65 observations.

3.6 Data collection method

In order to analyze the determinate factors of bank specific variables, computed ratios for thirteen private Commercial banks for five consecutive years .i.e. from 2010/11 to 2014/15 EFY were collected from an audited financials report of private commercial Banks. Macro-economic variables, macroeconomic data were collected for the same years mainly gathered from the records held by NBE through structured document review. Conducting appropriate data gathering instruments helped researcher to combine the strengths and amend some of the inadequacies of any source of data to minimize risk of irrelevant conclusion. Consistent and reliable research indicates that research conducted by using appropriate data collection instruments increase the credibility and value of research findings (Koul 2006).

The researcher uses only secondary data sources obtain from all internal and external sources the banks like annual reports of each bank, executive manager's interview with magazines, internet browser and different books available.

In order to meet the research objective, the researcher collects all relevant financial data from the sample banks. The data is obtained from the bank's annual audit report, NBE annual magazine, banks website and others sources convenient to the researcher. Moreover, in order to analyze the relationship that exists between profitability and macroeconomic variables, macroeconomic data are collected from NBE through structured documentary review.

3.7 Data analysis

The study uses regression analysis to capture and empirically measure the effects of the independent variables on private commercial banks profitability and using the regression result to analyze the present conditions and the main factors that determine private commercial banks profitability during the GTP I implementation period and finally draw conclusion and recommendation. The collected data first structured as per the designed model using Excel sheet then process it using Eviews version 8 statistical software.

EViews provides sophisticated data analysis, regression, and forecasting tools on windows based computers. With EViews you can quickly develop a statistical relation from your data and then use the relation to forecast future values of the data. Areas where Eviews can be useful include:

scientific data analysis and evaluation, financial analysis, macroeconomic forecasting, simulation, sales forecasting, and cost analysis.

In order to strictly follow the assumption of classical linear regression, various diagnostic tests are employed: taste of Normality, Durbin Watson Test of Serial Correlation, Test of Heteroskedasticity and test of model Specification using R^2 so as to achieve the objectives of the researcher study as well as to answer the research question and Hypotheses.

Chapter four

Data presentation and discussion

This chapter of the study explains and discusses the results and findings of the study based on the collected and analyzed data. Furthermore this part of the study provides interpretation of the regression result and different classical linear regression diagnostic test outputs. The main objective of the study is to pin point out the factors that determined private commercial banks profitability in Ethiopia during the Growth and Transformation Plan implementation period and to measure empirically the effect of NBE bill purchase directive. To this end the research used both descriptive and regression analysis to analyze the gathered data. The descriptive statistics summarizes the main variables of the study such as mean, maximum, minimum and standard deviation. In this research, the researcher used panel fixed effect regression model which is used to test whether one or more independent variables influence a dependent variable and if this effect is positive or negative. The research was studied based on panel data, where all the variables are observed for each cross-section and each time period. The study has both time series and cross section dimension covering the period from 2011 to 2015 and a cross section segment which considered thirteen Ethiopian private commercial banks, that, includes ABB, AIB, BOA, BIB, BUIB, CBO, DAB, LIB, NIB, OIB, UNB, WEB and ZEB.

4.1 Diagnostic test (Test results for the classical linear regression model assumptions)

It is prudent that to cheek weather all the classical linear regression assumptions are kept intact prior to a depth regression analysis and interpretation. In the research the following diagnostic test were employed and whose result is presented here.

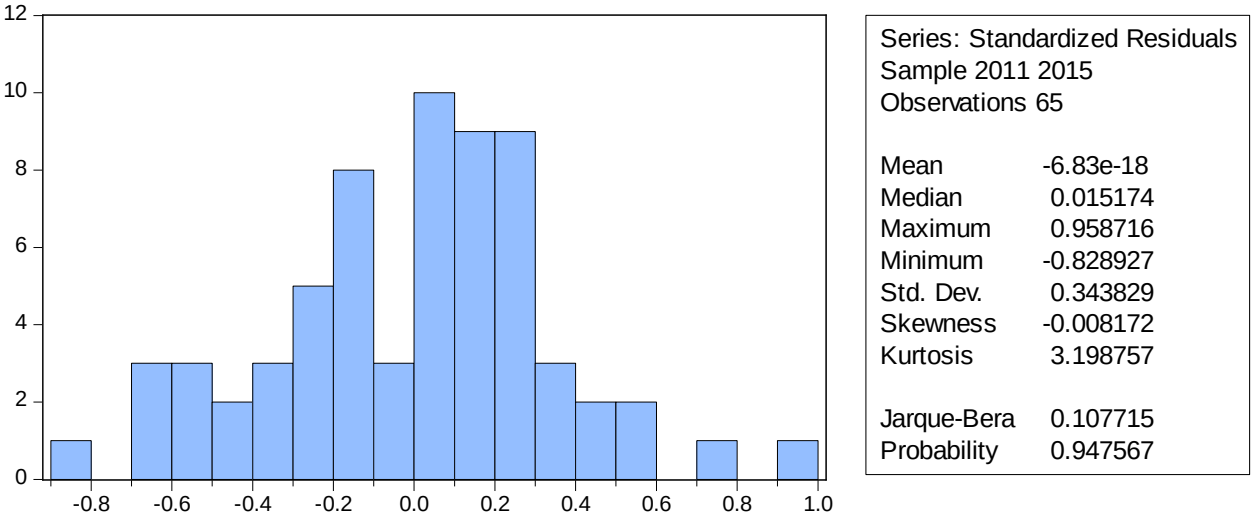
a. Normality

One of the assumptions of linear regression analysis is that, the residual are normally distributed, at the mean of zero and standard deviation of one. Chris Brooks (2008) noted that in order to conduct hypothesis test about the model parameter, the normality assumption must be fulfilled.

In the this research model, the mean is approximately 0 and the coefficient of Kurtosis is 3.19, and the Jarque-Bera statistic had a P-value of 0.94, which is greater than 0.05 implying that the

data is consistent with a normal distribution assumption. Therefore, the researcher concludes that the error terms of the model are normally distributed and hence there is no problem of normality. Therefore, the researcher used graphical methods of testing normality of the analysis as shown in the graph below, it can be noted that the distribution is normal, indicating that the data confirms to the normality assumption. Because the residuals are normally distributed around its mean, the histogram is bell-shaped.

Graph 1: - Normality Distribution



b. Heteroscedasticity

According to Gujjirati (2004) one of the important assumptions of the classical linear regression model is that the variance of each disturbance term u_i, conditional on the chosen values of the explanatory variables, is some constant number equal to σ2. This is the assumption of homoscedasticity, or equal (Homo) spread (Scedasticity), that is, equal variance. Furthermore Brook, 2008 stated that, if residuals don't have a constant variance (not homoscedastic), they are said to be Hetroskedastic. In this study Hetroskedastic test were employed, according to the test result no evidence of Hetroskedasticity were observed as per the Breusch-pagan-Godrey result table below.

In this study as shown in table 4.1, both the F-statistic and Chi-Square versions of the test statistic gave the same conclusion that there is no evidence for the presence of

Heteroskedasticity, since the p-values were in excess of 0.05. The third version of the test statistic, "Scaled explained SS", which as the name suggests is based on a normalized version of the explained sum of squares from the auxiliary regression, also gave the same conclusion that there is no evidence for the presence of Heteroskedasticity problem, since the p-value was considerably in excess of 0.05.

Table 2: - Heteroskedasticity test result

Heteroskedasticity Test: Breusch-Pagan-Godfrey

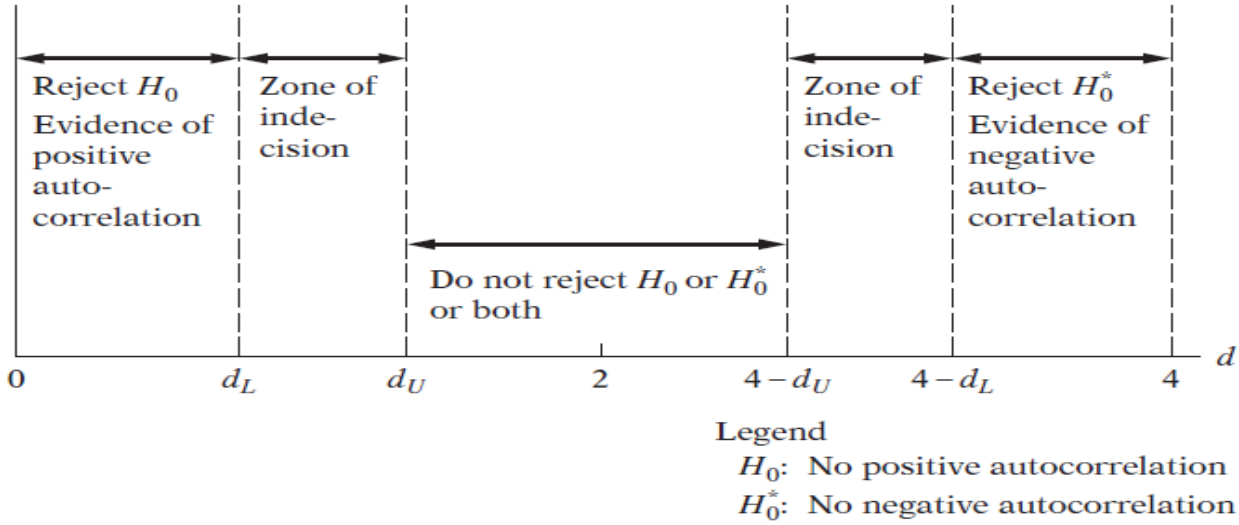
F-statistic	9.740588	Prob. F(12,52)	0.0959
Obs*R-squared	65.18239	Prob. Chi-Square(12)	0.0640
Scaled explained SS	65.74745	Prob. Chi-Square(12)	0.0617

c. Autocorrelation

The term autocorrelation may be defined as "correlation between members of series of observations ordered in time [as in time series data] or space [as in cross-sectional data]. In the regression context, the classical linear regression model assumes that such autocorrelation does not exist in the disturbances of error terms Guajarati (2004).

According to Guarati (2004), there are various ways of detecting autocorrelation in regression analysis, graphical, run test and the Durbin-Watson. Among these techniques, Durbin -Watson technique is the popular one.

According to Guajarati (2004), in the Durbin-Watson test of autocorrelation there is no unique critical value that will lead to the rejection or the acceptance of the null hypothesis that, there is no first-order serial correlation in the disturbances ui. However, Durbin and Watson were successful in deriving a lower bound d_L and an upper bound d_U lies outside these critical values, a decision can be made regarding the presence of positive or negative serial correlation. Moreover, these limits depend only on the number of observations N and the number of explanatory variables and do not depend on the values taken by these explanatory variables.



Source: - Guajarati (2004)

The study has 65 observations (5 year *13 banks) i.e. were used in the model. Moreover, there were 12 independent variables and an intercept term in the model. Therefore, the relevant critical values for the test are d_L= 1.053, d_U = 1. 845, i.e., for 65 observations and 12 independent variables. The Durbin-Watson test statistic of 2.40 is between the indecision region where the null hypothesis of no autocorrelation is not rejected/no rejection region/. It is possible since the Durbin-Watson Statistics (D-W stat.) from the regression result shows that 2.40 which is approaching to 2 and hence no evidence for the presence of autocorrelation.

Table 3: - Measure of good fit of the model & DW test of autocorrelation

Effects Specification

Cross-section fixed (dummy variables)			
R-squared	0.814404	Mean dependent var	2.791619
Adjusted R-squared	0.703046	S.D. dependent var	0.798101
S.E. of regression	0.434913	Akaike info criterion	1.456381
Sum squared resid	7.565968	Schwarz criterion	2.292684
Log likelihood	-22.33238	Hannan-Quinn criter.	1.786356
F-statistic	7.313398	Durbin-Watson stat	2.405636
Prob(F-statistic)	0.000000		

d. Multicollinearity

In order to examine the possible degree of Multicollinearity or correlation among the explanatory variables, correlation matrixes of the explanatory variables were calculated and resulted the as per the table below. According to Gujarat (2004), if the correlation between two independent variables is more than 0.8 there is a series problem of Multicollinearity problem in the model. As shown in the correlation matrix table, most of the explanatory variables have correlation below 0.68 which is less than 0.8 which is the benchmark. Therefore, the researcher concludes that there is no problem of Multicollinary between the explanatory variables and explained variables in the estimated model or perfect correlation between the explanatory variables.

Table 4: - coefficient of correlation Matrix

Covariance Analysis: Ordinary
Date: 06/22/16 Time: 03:43
Sample: 2011 2015
Included observations: 65

Correlation	BSIZE	MKTD	INFR	GDP	MKTS	INTRM	CRI	LIUQ	EXPMGT	LOGNBE	CAQ	FUC
BSIZE	1.000000											
MKTD	0.424715	1.000000										
INFR	-0.132124	-0.196393	1.000000									
GDP	-0.081715	-0.247012	-0.675424	1.000000								
MKTS	0.680372	0.043435	-0.151848	0.178255	1.000000							
INTRM	-0.036771	-0.053924	-0.064823	0.038592	-0.004607	1.000000						
CRI	0.140561	-0.071481	-0.053429	0.101268	0.086830	0.107560	1.000000					
LIUQ	-0.406949	-0.442769	-0.092397	0.263521	-0.177550	0.486477	-0.047578	1.000000				
EXPMGT	-0.043158	-0.372995	0.087753	0.121745	0.088966	0.298545	0.639434	0.182673	1.000000			
LOGNBE	0.681851	0.351077	-0.082352	-0.091689	0.617740	-0.091076	0.178738	-0.542936	0.017003	1.000000		
CAQ	-0.637497	-0.194646	-0.003327	0.059790	-0.378362	-0.197554	-0.182643	0.143509	-0.149699	-0.595694	1.000000	
FUC	0.487108	0.663260	-0.166023	-0.050104	0.197159	0.029479	-0.124045	-0.527482	-0.389695	0.500650	-0.124295	1.000000

4.2 Descriptive Statistics

	ROA	BSIZE	MKTD	INFR	GDP	MKTS	INTRM	CRI	LIUQ	EXPMGT	LOGNBE	CAQ	FUC
Mean	2.791619	22.43675	0.516414	16.36000	10.12000	0.021494	2.791960	2.182601	45.74695	132.8639	19.78345	15.32436	163.6680
Median	2.762140	22.68502	0.536221	8.100000	10.20000	0.012940	2.746946	1.698208	38.65429	118.0824	20.07032	15.06144	147.6382
Maximum	5.248692	23.95053	0.636726	38.00000	11.40000	0.095253	9.548240	9.686220	285.4604	370.8290	21.26641	34.49289	440.6095
Minimum	-0.831130	19.93994	0.383875	7.300000	8.600000	0.000303	0.231086	0.105223	13.78161	55.41121	16.24622	9.079387	36.31497
Std. Dev.	0.798101	0.927032	0.084974	12.05176	0.917912	0.019848	1.216312	1.665588	36.55311	59.39943	0.951078	4.341396	82.20681
Observations	65	65	65	65	65	65	65	65	65	65	65	65	65

Table 5: - Descriptive statistics

As the researcher can see from the above table, for the last five years thirteen banks included in the sample has been enjoying an average of profitability of 2.79% as measured by the ratio of net income to total asset. Furthermore the most profitable bank included in the sample has been 5.2% return on asset; to the contrary the least profitable bank included in the sample has incurred a loss of 1% as compared to its total asset. The standardization of 0.79% tells us as there is little variation in profitability for the banks included in the sample. funding of the private commercial banks have higher standard deviation showing it is highly deviated from the mean.

4.3 Correlation coefficient

According to Gujarati (2004), coefficient of correlation is a measure of the degree of linear association between two variables. And Correlation analysis measure the strength or degree of Linear association between two variables and tells us about the relationship that exist between two variables, both in terms of direction and magnitude. Are the two variables correlated highly or weakly, positively or negatively?

As one easily infer from the table presented above, the dependent variable profitability measured ROA i.e. the ratio of net income to total asset is highly positively correlated to expense management as compared to other explanatory variables in the model, with a correlation of 0.56, which tells us the ratio of banks other income to their operating expense increases, the bank's profitability also move on the same direction with expense management ratio. The dependent variable ROA also move to the same direction with the explanatory variables with bank size, LogNBE, credit risk, market share and intermediation with a correlation of 0.32, 0.30, 0.20, 0.16 and 0.07 respectively, revealing that when banks asset increase, the profitability of bank also show a tendency to increase, it also tells us when banks market share as computed by the ratio of bank's deposit to the industry deposit increase, the profitability of the bank also move in the same increasing direction.

The capital adequacy of banks as measured by total capital to total asset negatively correlated with profitability of banks indicated by the correlation of -0.32. Banks profitability also negatively correlated with real GDP growth and liquidity of the bank measured by the ratio of liquid asset to total deposit, telling us as the banks are more liquid they are losing the income they obtain in the form of interest had they lend it to borrowers.

4.4 Model selection between Fixed or Random Effect Model

This study used panel data models where the random and fixed effect models could be used to estimate the relationships among variables. It is also necessary to determine whether the fixed effect or random effect approach is appropriate. A common practice is to make the choice between both approaches is by running a Hausman test. To conduct a Hausman test, the number of cross section should be greater than the number of coefficients to be estimated. In this study, the number of cross section is 13 banks included in the sample and the number of coefficients of the explanatory variables is 12.

To decide between which model to use from random effects and fixed effect model, researchers often rely on the Hausman (1978) specification test (e.g., Greene 2008, 208-209) cited Tom S. Clark, et al (2014). The Hausman test is designed to detect violation of the random effect modeling assumption that the explanatory variables are Orthogonal to the unit effects. Under the null hypothesis of orthogonality, H is distributed chi-square with degrees of freedom equal to the number of regressors' in the model. A finding that $p < 0.05$ is taken as evidence that, at conventional levels of significance, the two models are different enough to reject the null hypothesis, and hence to reject the random effects model in favor of the fixed effects model (Gujarati 2004).

In this study as seen in the result table below, the Hausman test clearly rejects the null hypothesis to use the random effect model by seeing the P-Value 0.0073 is less than 0.05. As a result, the researcher can reject the REM in favor of FEM. And hence, the researcher chooses fixed effect model is more appropriate to estimate.

Table 6: - Hausman Test result

Correlated Random Effects - Hausman Test
Equation: FINAL_HAUSMAN_TEST
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	27.174072	12	0.0073

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BSIZE	2.225314	0.485803	0.225075	0.0002
MKTD	-5.976890	0.638687	3.827734	0.0007
INFR	0.026452	-0.002634	0.000058	0.0001
GDP	0.254525	-0.079305	0.007175	0.0001
MKTS	-4.557779	-6.546063	1.006428	0.0475
INTRM	0.295824	0.044254	0.007326	0.0033
CRI	-0.202938	-0.191442	0.000454	0.5896
LIUQ	-0.005783	-0.000826	0.000005	0.0269
EXPMGT	0.006458	0.011193	0.000003	0.0050
LOGNBE	0.133060	0.008887	0.006102	0.1119
CAQ	0.072618	-0.010405	0.000975	0.0079
FUC	-0.003388	-0.001165	0.000000	0.0009

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/22/16 Time: 02:15
Sample: 2011 2015
Periods included: 5
Cross-sections included: 13
Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BSIZE	-51.12828	12.73855	-4.013665	0.0003
MKTD	2.225314	0.519808	4.281033	0.0001
INFR	-5.976890	2.353251	-2.539844	0.0151
GDP	0.026452	0.012926	2.046481	0.0473
MKTS	0.254525	0.171299	1.485853	0.1452
INTRM	-4.557779	4.671281	-0.975702	0.3351
CRI	0.295824	0.123376	2.397739	0.0213
LIUQ	-0.202938	0.054626	-3.715083	0.0006
EXPMGT	-0.005783	0.003924	-1.473807	0.1484
LOGNBE	0.006458	0.002486	2.597640	0.0131
CAQ	0.133060	0.192352	0.691752	0.4931
FUC	0.072618	0.039788	1.825139	0.0755
BSIZE	-0.003388	0.001654	-2.048471	0.0471

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.814404	Mean dependent var	2.791619
Adjusted R-squared	0.703046	S.D. dependent var	0.798101
S.E. of regression	0.434913	Akaike info criterion	1.456381
Sum squared resid	7.565968	Schwarz criterion	2.292684
Log likelihood	-22.33238	Hannan-Quinn criter.	1.786356
F-statistic	7.313398	Durbin-Watson stat	2.405636
Prob(F-statistic)	0.000000		

4.5 Results of Regression

As stated in the beginning of this paper, the main objective of this paper is to pin point out the key determinants of private commercial banks profitability during GTP I implementation period focusing on thirteen selected private commercial banks. In order to achieve the objective, data were collected through structured documentary review of the annual reports of the private commercial banks and NBE so as to obtain a reliable data for further analysis for the period covering from 2011 to 2015. All pertinent data for bank specific and sector specific variables were collected from the annual audit report of the banks and for macro-economic variables from annual report of NBE were consumed to obtain the data.

In order to examine the determinant of banks profitability during the GTP I implementation plan period of sample Ethiopian commercial banks panel fixed effect regression model were estimated. The regression analysis enables the researcher to empirically test the proposed hypothesis and measure the impact of the explanatory variables included in the model. In the model, one independent variable ROA a proxy for Private commercial banks profitability was regressed on 12 explanatory variables. Thus, the relationship between profitability and the explanatory variables were examined by the fixed effects model in this study. The result obtained by the panel fixed effect model is reported in the table below

Table 7: - fixed effect regression result

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/21/16 Time: 02:52
Sample: 2011 2015
Periods included: 5
Cross-sections included: 13
Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-51.12828	12.73855	-4.013665	0.0003
BSIZE	2.225314	0.519808	4.281033	0.0001***.
MKTD	-5.976890	2.353251	-2.539844	0.0151**
INFR	0.026452	0.012926	2.046481	0.0473**
GDP	0.254525	0.171299	1.485853	0.1452
MKTS	-4.557779	4.671281	-0.975702	0.3351
INTRM	0.295824	0.123376	2.397739	0.0213**
CRI	-0.202938	0.054626	-3.715083	0.0006***
LIUQ	-0.005783	0.003924	-1.473807	0.1484
EXPMGT	0.006458	0.002486	2.597640	0.0131***
LOGNBE	0.133060	0.192352	0.691752	0.4931
CAQ	0.072618	0.039788	1.825139	0.0755*
FUC	-0.003388	0.001654	-2.048471	0.0471**

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.814404	Mean dependent var	2.791619
Adjusted R-squared	0.703046	S.D. dependent var	0.798101
S.E. of regression	0.434913	Akaike info criterion	1.456381
Sum squared resid	7.565968	Schwarz criterion	2.292684
Log likelihood	-22.33238	Hannan-Quinn criter.	1.786356
F-statistic	7.313398	Durbin-Watson stat	2.405636
Prob(F-statistic)	0.000000		

The above table shows that the coefficient determination of both R-square and the adjusted R-square which tells the explanatory power of the combined bank specific, industry specific and macro variables included in the in determinants of private commercial banks profitability during the GTP I execution period model produces an explanatory power of about 70.3% in the variation in private commercial banks profitably during the plan period the remaining, 29.7% change in the variation of private banks profitability is explained by other factors which are not included in the profitability model.

Thus, the variables included in the model jointly are good in explaining variation in Ethiopian private commercial banks profitability during the GTP I execution period. The null hypothesis of F-statistic (the overall test of significance) that the R^2 is equal to zero was rejected at 1% level of significance as the p-value was sufficiently low. F value of 0.000 indicates strong statistical significance, which enhanced the reliability and validity of the model.

Based on the regression result among the twelve explanatory variables included in the model, seven variables had statistically significant impact on private commercial banks profitability with a varying level of confidence interval. Out of the seven internal or bank specific variable included in the model five of them had statistically significant impact on profitability, out of which bank size and credit risk/asset quality are highly statistically significant impact on banks profitability at 1% level of significance with a p-value of 0.0001 and 0.0006 respectively. Funding cost, expense management and intermediation had also a significant impact on ROA at 5% level of significance with a p-value of 0.0471, 0.0131 and 0.0213. Furthermore, capital adequacy is also had a significant impact on banks profitability at 10% level of significance with a p- value of 0.0755. Among the three sector specific variables LogNBE, market share and market development captured in the model, only market development had a statistically significant impact on banks profitability. Furthermore the model were incorporated two macro-economic variables, one of them had statistically significant impact on banks profitability at 5% level of significance with P-value of 0.0473, i.e inflation rate. Finally the sector specific variable LogNBE, which measure the exposure of private commercial banks to mandatory bill purchase directive, had insignificant impact on commercial banks profitability.

4.6 Discussion of regression results of explanatory variables

In this part of the study addresses the detailed analysis of the results of explanatory variables along with their relative importance in determining private commercial banks profitability. In addition in this discussion the statistical significance of the explanatory variables to explain the dependent variable ROA analyzed and the results also compared with previous research work.

And hence the result of regression analysis is presented here under in the order of bank specific variables, industry specific variables and macro-economic variables.

Bank Size

Using common bank measure logarithm of Total Asset which indicates bank size has positive and statistically significant value for banks profitability during GTP I period. The possible justification for this can be the larger the bank (in terms of size) cost of doing business can be lower because of economics of scale. Large banks have grater loans and greater product diversification and accessibility to asset markets, which may not be available for smaller banks. This result is consistent with research made before in Ethiopian banking industry by Samuel (2015). Based on our result the researcher fail to reject the hypothesis that states bank size and profitability have positive relationship.

Capital Adequacy

The other variable capital adequacy which is the ratio of total capital to total asset indicates positive and statistically significant at 90% confidence interval. During GTP I period those banks with higher capital to asset ratio got larger return. Especially during GTP I period, rivalry among commercial banks for deposit has been shown. If the bank has its own source of finance to provide its products at lower cost, it don't need to collect deposit with relatively higher cost as one of the most spending of banks are in the form of interest expense. Hence, the proceed from lending interest and interest on deposit (in diffract form like fixed, time and demand deposit) is larger for those banks with higher capital to asset ratio. Based on this the researcher fail to reject its hypothesis that capital adequacy has positive relation with profitability.

Intimidation

Intermediation is the most important function of commercial banks and mostly the largest portion of income earned by commercial banks is supposed to be from loan and advances. The empirical result of our regression model shows the same. The regression model shows that intermediation has positive impact on banks profitability. In the study period, income earned from loan and advance are one of the major determinates of profitability. Based on the result, the

researcher fail to reject the research hypothesis that Intermediation and bank profitability has positive relationship.

Liquidity

One would expect the impact of Liquidity as measured by liquid asset to total deposit on profitability is negative and significant. However, even if the coefficient of liquidity was negative as expected, it was not statistically significant even at 10% significance level (p-value= 0.1484), revealing that the impact of liquidity on banks profitability is negligible. Moreover, the insignificant parameter indicates that the liquidity structure does not affect Ethiopian banks profitability. Thus the hypothesis that states there is a negative relationship between liquidity risk and profitability can be fail to reject but its impact is not significant.

The result is in line with previous studies result of Samuel (2015) and Tesfaye (2014) found a negative relationship between liquidity and profitability of commercial banks in Ethiopia. This result shed light on the issue when liquid ratio of banks is high, banks are handling excess amount of liquid asset in their balance sheet or their deposit amount is very low. This in turn affect the profitability of the bank, if they are excessively liquid they are forgoing the income that is to be generated in the form of interest income, had they converted the liquid asset in to loan through extending loan to borrowers. In Ethiopia, the governing organ of the financial institution, NBE controls the liquidity position of banks, thought the its reserve requirement directives, under the latest revised reserve requirements issued in 2015 banks are obliged to be liquid at least at 5%. Since the liquidity of the banks are controlled by NBE. The researcher can conclude that, liquidity has no significant impact banks profitability.

Credit Risk

Credit risk as measured by the ratio of non-performing loan to outstanding total loan and advance is one of the top strategic issues in any given bank. Since the effective management of credit risk benefit the bank more. Those banks who managed their credit risk efficiently earn a higher rate of return. Bank managements always strive to keep the credit risk as much as very

low, meaning the ratio of NPL to total asset should be kept in minimum, since credit risk or higher portion of non-performing loan adversely affect the income of the bank.

Hypothesis 7 of the study stipulates the negative relationship that is between the credit risk and profitability of banks. The regression result confirmed that expectation. The coefficient and P-value of the variable, credit risk,-0.20 and 0.0006 tells that as credit risk has a negative significant impact on private commercial banks profitability. This implies that an increase in the ratio of nonperforming loans to gross loans, certainly 20 percent lead to a decrease in profit as measured by ROA.

The finding was in consistent to the results of Amedmikeal Abera (2012), Samuel Alemu (2015) and Eden Kebede (2014). Therefore one can conclude as the credit risk or asset quality of banks which is measured by the ratio of nonperforming loans to total loans was a key driver of profitability of commercial banks in Ethiopia.

Expense management

It is well known that, the other was of increasing profitability other than increasing income is cutting costs. Those banks who administer their costs can enhance their profitability. Currently in Ethiopian private banks are giving a due emphasis in cutting cost which contributes its role in the improvement of profitability.

Hypothesis 4 of the study was stipulated a positive relationship between expense management and profitability of commercial banks. The regression result ascertains the hypothesis as there is a positive relationship between the dependent variable and explanatory variable, expense management. Even if it has a positive relationship and significant at 5%, tells us its impact on profitability is greater. This finding was consistent with finding of Samuel Alemu (2015).

Funding cost

Dietrich and Wanzenried (2011) find a negative relationship between this ratio in Switzerland, and Lindblom et al (2010) find that decreasing rates during crisis periods have lowered funding costs for banks in Sweden. This result is in line with the theory that banks adjusted their deposit rates in line with declining market rates. Based on the research finding, even if it is related is negatively relate with profitability the coefficient of funding cost is -0.003388 almost zero.

Sector specific variables

NBE Bill purchase

The major objective of the study was to pin point out the major determinants of commercial banks profitability during GTP I implementation period with a special emphasis given to the sector specific policy measure introduced during the period, NBE bill purchase directive and try to measure its impact on private commercial banks profitability.

As per the regression result of the estimated model, the logarithm of NBE bill purchased as a proxy of private commercial banks exposure to bill purchase has positive and insignificant effect on private commercial banks profitability during the period which is out of the expected sign and magnitude. One may expect a negative significant impact of the bill purchase directive on private commercial bank profitability. However, the regression result of the estimated model based on the collected data declared that, rather than hampering the profitability of private commercial banks, exposure to NBE bill contribute a certain part for the profitability of banks with a lesser magnitude. This is mainly because, previously private commercial banks were excessively liquid holding huge amount of liquid asset at their balance and zero interest earning account at national bank of Ethiopia, hence the bill purchase directive seemingly contributed positively by earning a three percent interest rate based on the amount they purchased.

Furthermore, the bill purchase directive forced private banks to think out of the box form conventional income generating activity mainly through extension of loan and advance. Currently they are highly engaged in the activates which generate of fee based incomes, like

issuance of different guarantees, international trade services, electronic banking and other new products which are not based on loan and advances .

In addition private commercial banks currently charging a higher amount interest rate as compared government owned commercial banks, through tremendously increasing the price of their asset. i.e interest rate so as to recover some part of interest income they forgone in investing the NBE bill using their discretionary power vested by national bank of Ethiopia under its directive number NBE/INT/10/2011 to freely set the interest rate.

Market development /banking sector development

Banking market development as measured by the ratio of industry's total asset to GDP development has significant impact on growth at the firm, industry and country level. Specifically, Demirgüç-Kunt and Maksimovic (1998) show that firms in countries with large banking sectors grow faster than predicted by individual firm characteristics.

Regarding the regression result of the banking sector development, this study reveals that, there is a negative relationship between banking sector development and profitability of private commercial banks profitability during the GTP I implementation period with a coefficient of 5.9768 and a P-value of 0.0151. as the sector becomes more developed participant in the sector grow in terms of size and their asset, this is evidenced from the existing private banks, currently the asset of these banks are showing a tremendous growth and the relative percentage contribution of the service sector in general and the banking sector in specific is showing an increment. This situation led banks to intensify their competition and lower their profitability.

This result is consistent with empirical findings of and Demirgüç-Kunt and Huizinga (1998) indicate that banking sector development has a significantly negative impact on bank profitability. They argue the cause of this to be that there is more intense competition in well-developed banking market in their study of financial structure and bank profitability.

Samuel (2015) used banking market development in his study of the determinants of private commercial banks profitability and he used the ratio of total asset of the industry to GDP as a proxy and found that banking market/sector development has a significant negative impact on profitability of commercial banks general.

Market share

It is usual to expect a positive and significant relationship between market share and profitability. As market the relative market share of a banks increase ultimately the researcher expect an increase in profitability. in this study market share measured by the ratio of bank's deposit to total industry's deposits, as the ratio a certain bank increase it is getting a higher share of the market and it becomes more profitable. However, even if the theoretical explanation provides a positive relationship between market share and profitability, the regression result failed to confirm the theory. The coefficient of market share in the regressed ROA model is negative and it is statistically insignificant to explain profitability in Ethiopian private commercial banks during the GTP I plan period. This mainly due to the relative share of all the sixteen private banks in Ethiopia market share is less than by far from the industry's giant government owned bank, commercial bank of Ethiopia's market share, which possess about 65% of the market share for the fiscal year ended last 2015 whereas the other fifteen banks possess 35% of the total market share.

The result also suggest that the intense competition and rivalry that existing among the existing private commercial banks in Ethiopia. Now a day commercial banking's are in stiff competition, they are snatching customers one other rather than finding a new bankable customer. Furthermore, the increased number of new market participant exhibited during the period leads the shrinking in market share for the pre-established private commercial banks.

Regarding previous studies result, as to the knowledge of the researcher no one incorporated market share in the study of commercial banks profitability model in Ethiopia. However the, study of Whilliam Bentam (2012) used market share as an explanatory variable in his study

determinants of private commercial banks profitability in Ghana and found that market share has insignificant negative relationship with profitability.

GDP

Looking at the effect of one major macroeconomic Variable GDP, has a positive impact on private commercial banks profitability with a coefficient of 0.25, however it is not statistically significant. This result supports the argument that in a rapidly growing economy every sector benefited from the growth in general and the financial sector in specific. In a very stimulated and expanding economy business agents both private and government needs a sophisticated, need meeting, dependable financial services in the form of finical intermediation, international trade and other banking services. The result of this study is consistent with findings of Amedmikeal Abera (2012), Whilliam Bentam (2012, Tesfaye Boru (2014) and Samuel Alemu (2015).

Inflation rate

High inflation rate is associated with higher costs as well as higher income. If a bank's income rises more promptly than its costs, inflation is expected to exert a positive effect on profitability. On the other hand, a negative coefficient is expected when its cost increase faster than its income (Eden 2014). Based on the research finding inflation rate has positive and significant impact between private commercial banks profitability at 5% level of significance and P-Value of 0.0473.

Chapter five
Conclusion and Recommendation

5.1 Conclusion

The main objective of this research paper was to find out the major determinants of private commercial profitability in GTP I implementation period. To screen the determinants, bank specific variables like bank size, capital adequacy, expense management, intermediation, credit risk, funding cost, and liquidity, banking sector specific variables like market share, market development and implementation of NBE bill purchase directive and macroeconomic variables inflation rate and GDP growth rate were taken.

Panel data were used for the sample thirteen private commercial banks data from 2011 to 2015. The data were presented and analyzed using descriptive and regression analysis using E-Views statistical software. Before analyzing the raw data normality test, Multicolliniarity test, autocorrelation test and Heteroscedasticity test were applied to follow OLS regression assumption model. The researcher also uses Hausman test whether to use fixed effect or random effect approach and fixed effect model was the best fit tor the researcher.

Using fixed effect model, bank specific variables, Bank size, capital adequacy expense management and intermediation have positive significant impact on the private commercial banks profitability. The other bank specific variables credit risk; Liquidity and funding cost have to the opposite negative significant impact on the banks profitability. Most of the bank specific variables found to be significant.

On the other hand, banking specific variable NBE bill purchase, market development and market share variables result positive, negative and positive impact on private commercial banks profitability respectively. Therefore, based on the result of the estimated model of private commercial banks profitability the researcher can conclude that, the major sector specific variable introduced during the growth and transformation plan implantation period has a positive impact towards the profitability of private commercial banks. However its impact level is very minimal

Lastly, the macro economic variables, inflation rate positive significant and GDP growth rate has positive insignificant effect on private commercial banks profitability during the growth and transformation plan period.

5.2 Recommendation

Based on the research findings the researcher would like to suggest the following

Private commercial banks should exert an extra effort to their deposit mobilization activities and should widen the customer bases by attracting customers with different types of services.

Private commercial banks should see other source of income generating activities through the development of new and sophisticated commercial banking services which in turn help them to diversify their income base other than the conventional way generating a huge amount of income from financial intermediation. Services Like introducing and expanding different electronic, card and internet banking, fund management activities, agency services like collecting fees for different large service giving companies such as Ethio-telecom, Ethiopian airlines and others.

Private Commercial banks should focus on highly on expense management activities so as to enhance their profitability and thorough the introduction and adoption of different technologies. For example introducing a paperless technology, this significantly cut administrative cost.

By articulating and implementing a prudent credit risk management banks can significantly reduce the percentage of non-performing loan in their asset portfolio, which in turn plays its role in improving profitability of banks significantly.

Finally, even if the result of the study suggests that NBE bill purchase directive has a positive impact on profitability for the periods considered. Its long run effect different from this result. Therefore, the researcher recommend NBE to revise the 3% interest rate at least equivalent to the minimum saving rate stated, 5%, this does not lead commercial bank to incur the lost, at least it covers the cost they incur to mobilize the deposit.

5.3 Future area of investigation

This study tries to factor out the major determinant of private commercial banks of Ethiopia during the growth and transformation plan period giving a special emphasis to the sector specific variable, NBE bill purchase directive. In doing so the data were collected only for the five years plan period and analysis made only for the period, no comparison is made for the pre and post policy intervention periods. Therefore future research should be conducted with the objective of comparing and contrasting factors that determine private commercial banks profitability with the inclusion of other relevant variables.

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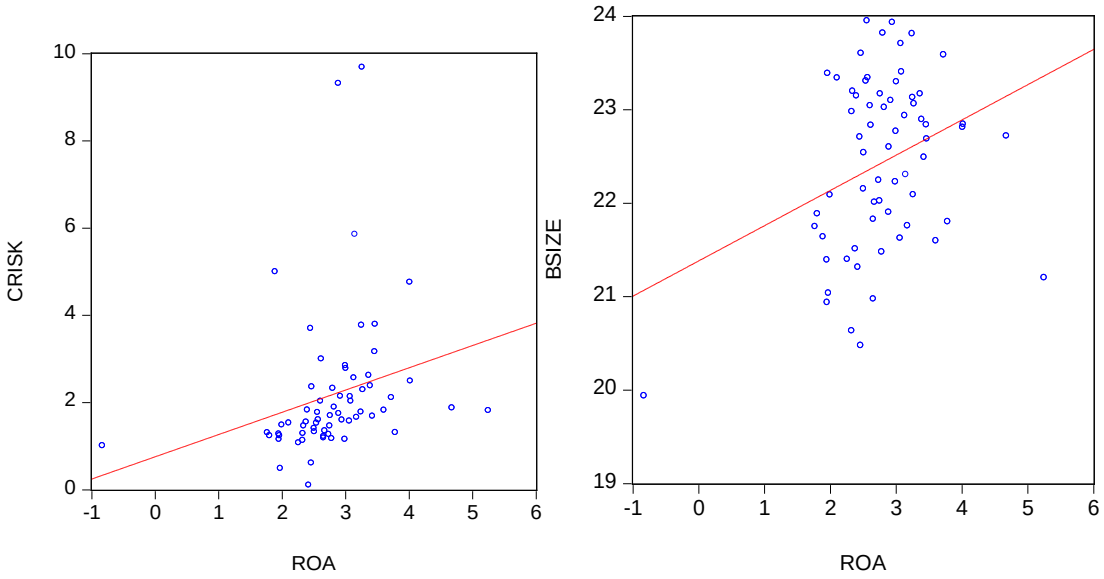
Annex I

Graphs of Correlation Coefficient between the dependent variable and each independent variables



Annex II: - List of Private Commercial Banks in Ethiopia

S.No.	Bank Name	Year of Establishment (in GC)	Year Operation Started (in GC)
1	Awash international Bank S.C	1994	1995
2	Dashen Bank S.C	1995	1996
3	Bank of Abyssinia S.C	1996	1997
4	Wegagen Bank S.C	1997	1998
5	United Bank S.C	1998	1999
6	Nib International Bank S.C	1999	2000
7	Cooperative Bank of Oromia S.C	2004	2005
8	Lion International Bank S.C	2006	2007
9	Zemen Bank S.C	2008	2009
10	Oromia International Bank S.C	2008	2009
11	Buna International Bank S.C	2009	2010
12	Berhan International Bank S.C	2009	2010
13	Abay Bank S.C	2010	2011
14	Addis International Bank S.C.	2011	2012
15	Debub Global Bank S.C	2012	2013
16	Enat bank S.C	2012	2013

Source: - NBE