THE EFFECTS OF INVESTMENT ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN ETHIOPIA

A Thesis submitted to the school of graduate studies of Jimma University in partial fulfilment of the requirements for the award of the degree of Master of Science in Banking and Finance

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JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF BANKING AND FINANCE

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CERTIFICATE

This is to certify that the thesis entitles "effects of investment on the financial performance of commercial banks *in Ethiopia",* submitted to Jimma University for the award of the Degree of Master of Science in Banking and Finance (MSc) and is a record of bonafide research work carried out by Mr. *Kano Bula* , under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institution for the award of any degree or diploma.

Main Adviser's Name	*Date*	*Signature*
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DECLARATION

I hereby declare that this thesis entitled "*effects of investment on the financial performance of commercial banks in Ethiopia",* has been carried out by me under the guidance and supervision of Dr. Demise Haile Gebreal and MissGadise Gazu.

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institution.

Researcher's Name	Date	Signature
_____	_____	_____

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May the favour and Grace of God be with you all

Abstract

This thesis investigates the effect of investment on the financial performance of commercial banks in Ethiopia. The objective of this study was to investigate the Effect of Investment on the Financial Performance of commercial banks in Ethiopia. This aimed investment improves the financial performance of commercial banks or not. The analysis considered the presence of different commercial banks i.e. public and private commercial banks. The study used a sample of 8 commercial banks out of 17 from 2006 to the 2020 year financial statements. The fixed effect regression technique and correlation were used to analyze the data using the econometric package stata 16 software. The sampled data was also presented and analyzed by using descriptive statistics by mean, standard deviation, maximum and minimum. The dependent variable used to estimate commercial bank's performances were return on equity. The researcher used Investment in the national bank of Ethiopia bill purchase (NBE BILL), Investment in foreign bank deposit (FBD), Investment in equity (IE), and Investment in fixed asset (FAI) as independent variables. The researcher also used capital adequacy ratio, inflation and GDP as control variables. The study finds that commercial banks performance measurement i.e. ROE has a strong and significant relationship with investment in foreign bank deposit and investment in equity. On the other handinvestment in national bank of Ethiopia bill has a negative and significant effect on return on equity. Investment in fixed assets has also shown insignificant and negative effect at 5% level of significant. Furthermore, capital adequacy ratio has positive and significant effect on return on equity. In addition inflation and GDP has insignificant and positive effect on return on equity. So the study recommended commercial banks are advised to invest in equity & foreign bank deposit in order to enhance the financial performances.

Keywords; Investment, Financial Performance, Commercial Bank

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List of Acronyms

CA Capital Adequacy

CLRM Classical Linear Regression Model

EI Equity Investment

FA Fixed Asset

FD Foreign Deposit

FEM Fixed Effect Model

GDP Growth Domestic Product

INF Inflation

NBE National Bank of Ethiopia

NBEB National Bank Bill purchase

OLS Ordinary Least Square

REM Random Effect Model

ROE Return on Equity

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

The financial system plays a primary role within the economic process and development of a country.The importance of a well-ordered financial sector lies within the reality that ensures domestic resources mobilization, making of savings, and investments within the sectors. Actually, this financial system is that the system by which a country desires the foremost profitable and efficient sectors to form more productive bases for future growth(Abate & Mesfin, 2019).). The many functions of a financial system aren't only to shift funds from savers to investors but also to form sure that funds are being transferred to the sectors which are most vital for an economy. Bank performance gets an excellent deal of consideration within the finance economyliterature bearing in mind that banks function a critical role within the economy(Ongore and Kusa,2013).Banks are important parts of a nation's. In their conventional role as financial intermediaries, banks make sure the transmission of funds from surplus to deficit units and serve to satisfy the demand of those who need funding. Banks facilitate spending and investment, which fuel growth within the economy. However, despite their important role within the economy, banks are nevertheless vulnerable to failure. Banks, like all other businesses, can go bankrupt. However, unlike most other businesses, the failure of banks, especially very large ones, can have far-reaching implications. The investment decision is one of the key decisions for the management of any organization.They are a significant decision for a corporation since they're hypothesized to influence its valuable by influencing profitability and risk(Alslehat & Altahtamouni, 2014).

Investment decisions largely include acquisition,modernization,extension, and replacement of the long–term assets.The investment decision that a firm makes is significant in firms financial performance hence making it effective for a firm to be competitive and efficient it's to form investment decision key to the business administration(Virlics, 2013)

The theoretical perspective on how investment and financial performance relate has also advanced over years. The Q theory of investment asserts that a firm need to invest when it expects the investment to bears profits then forth an efficient assets markets valuation of the

firm incorporates such prospects(Erickson & Whited, 2000)Thus, the sole things thatdetermine firm's investment are the existence of investment opportunities that are profitable.(Balfoussia & Gibson, 2016).The theory supported resources suggest that in order for firms to accumulate competitive advantage they ought to implement unique investment which is rare,valuable,cannot be imitated, and non-substitutable(store, 2015). As long because the anticipated revenue from an investment is above the chance cost of capital, investments are going to be useful and undertaken by the firm(Warström & Niemelä, 2015).Investment plays a really significant role within the financial performance of banks. Commercial banks invest their resource so as to earn a return that will enable them to enhance their financial performance(Njiiri, 2015). Commercial banks normally invest in government securities, which include government treasury bills and bonds. Other investments of banks mainly include investment, which is listed in security exchange or shares privately companies and bond issued privately by other firms. An addition to debentures and common stock, commercial banks also invests in subsidiaries, associates, joint ventures et al. miscellaneous investment which are either directly purchased or acquired through takes over's, merging or consolidation(Ismail, 2010). Additionally,commercial banks also invest in land properties like commercial buildings, residential land , and other sorts of land (Levišauskait, 2010).

In Ethiopia, commercial banks dominate the financial sector. In a country where the financial sector is dominated by commercial banks, any failure in the sector has a huge implication on the economic growth of the country. This is due to the fact that any bankruptcy that could happen in the sector has a domino effect that can lead to bank runs, crises and bring overall financial crisis and economic problems. However, a substantial amount of studies have not been conducted to investigate the status of effects of investment on the financial performance of the Ethiopian banking system according to the researcher's knowledge. This research examined the internal and external factors that effect of investment onthe financial performance of the Ethiopian commercial bank's industry from the period 2006-2020.Moreover, the current banking failures in the developed countries and the bailouts thereof motivated this study to evaluate the effects of investment onthe financial performance of Commercial banks in Ethiopia. Thus, to take protective and qualifying measures, there is a dire need to understand the effect of investment and the performance of banks.

1.2 .Statement of the Problem

In the dynamic globalized world, Commercial Banks play a crucial role as financial mediators within the economic development of the state. Banks collect financial resources from individuals and organizations and redistribute it to others so as to have further benefit. They do so if they get the necessary earnings to hide the operational cost they incur. That is to mention, for a sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial presentation of Banks rewards the shareholders for their investment. This, in turn, gives confidence for additional investment and brings about economic growth. On the other hand, poor bank performance may lead to banking failure and crisis which have a negative consequence on economic growth (Ongore & Kusa, 2013).The commercial banking trend is around the world has witnessed rapid changes. Competition is tough thus forcing banks to heighten their effectiveness and competition by raising their performance (Jha & Hui, 2012).With growing competition globally banks are directing their energies on investment to create value for shareholders so as to survive extreme competition (irung, 2013).However, the decision to invest is subjective and a wrong decision investment can leads companies even tobankruptcy. So investment decisions are very risky and uncertain on whether the cost incurred to invest will be recouped and profit gained within the specified time period (Virlics, 2013).

In Ethiopian economy, commercial banks have enlarged and opened many branches over the past few years. During the last decade, the banking sector of Ethiopia has experienced a major transformation in terms of investment and geographic distribution due to the financial sector reform and liberalization act of 84/1994 (Fedlu, 2015). This has resulted in an extremely tremendous increase in deposit liabilities and in turn, a rise in the volume of an investment portfolio. As explained by (Michael et al., 2012). The three main types of non-banking activities that must be considered are securities, insurance, and real estate (fixed asset) activities. These activities will direct banks to earn additional profit that leads banks performance higher.Due to the matter fact thatthe national bank of Ethiopia had a directive for commercial banks in Ethiopia limit on investment. Commercial banks has a mandatory to purchase national bank bill from NBE equivalent to 27% of new loan disbursement issued at an interest rate of three-per cent as well as a banks aggregate equity investment in all non bank business,including insurance companies,shall not exceed 10% of its networth. In addition to this no commercial banks shall invest 10% of its net worth in real estate

acquisition and development other than for their own business premises without approval of that national bank (NBE directive No.SBB/60/2015 as well as it can invest their excess cash at foreign deposit bankinvestment. (NBE, 2004).

As far as the researcher's knowledge, a single study corresponding with this research is conducted by (AKALU, 2016). About the effect of investment on the financial performance ofcommercial banks in Ethiopia and the finding reveal that investment in foreign deposit, the fixed asset had a positive relationship with performance of commercial banks and investment in equity, NBE bill had a negative relationship with performance of commercial banks in Ethiopia.However, such studies are few and there is a need for further investigation. Besides, macroeconomic factors such as real growth rate in GDP and general rate of inflation were evidenced to be highly associated with investment thereby affecting the ability of commercial banks to generate profit ;(Pasiouras & Kosmidou, 2007). (Ali, Akhtar, & Ahmed, 2011)widely described that rapid economic growth increases profitability in a large number of countries and movements in general activity are likely to generate direct impacts on the profitability of banks.(Pasiouras & Kosmidou, 2007)explained that the effect of inflation can substantially undermine the stability of the financial system. Furthermore,there is inconsistency in the findings of the previous studies conducted in this research title. For instance,(kuri,2014)(Abdikadir, 2017).showed that investment in equity had a positive and significant relationship with the financial performance of commercial banks.On the other hand,(AKALU, 2016)(Biniyam, 2018) showed that equity investment had a negative and insignificant relationship with the performance of commercial banks. Also (Abdikadir, 2017).showed fixed asset had a negative and insignificant relationship with performance of commercial banks; however,(Olantunji and Adegbite,2014),(AKALU, 2016)(Biniyam, 2018)showed fixed asset has a positive and significant relationship with performance of commercial banks. Sothis study proves which variables have positively affected and which variables have negatively affected the financial performance of commercial banks. And fill the above-explained knowledge gap by providing information about the firm specific, and macro-economic factors that affects financial performance by examining the untouched ones, replicating the existing and utilization of the model by using ROE as a measure for commercial banks‟ financial performance . This research also tries to include recent year’s financial statements of all commercial banks‟.As result, it worthwhile to investigate the effects of investment on the financial performance of commercial banks so as to determine

whether an investment has an impact of either reducing or increasing the overall financial performance of the commercial banks operating in Ethiopia.

1.3. Research Hypothesis

Hypotheses are predictions about the outcome of the results that have capable of being tested by scientific methods that relate independent variables to some dependent variable. Therefore, in order to achieve the objective of the study, the hypotheses were developed regarding the effects of investment on the financial performance of commercial banks in Ethiopia based on different empirical research and theoretical reviews made. The hypothesis developed by the study was based on empirical evidence and the theory of different researchers.

As far as NBE bill purchase is concerned several studies tried to its influence on commercial banks performance, like (AKALU, 2016), (Eden,2014),(Shibiru,20140),(Tesfaye,2014) showed NBE bill has a negative and significant effect on the performance of commercial banks. Based on it, this study develops the following hypothesis;

H1; NBE bill has negative effects on the financial performance of commercial banks.

Concerned in foreign deposit investment (AKALU, 2016) showed foreign deposit investment has positive and significant effects on the performance of commercial banks. Based on it, this study develops the following hypothesis.

H 2; foreign deposit has positive effects on the financial performance of commercial banks.

As far as fixed asset concerned several studies try to its influence on commercial banks performance for instance (Olatunji and Adegbite,2014)(AKALU, 2016), (Biniyam, 2018)showed fixed asset has positive and significant effects on the performance of commercial banks. However, (Abdikadir, 2017)found that fixed asset has a negative and insignificant relationship with the performance of commercial banks. Based on it, this study develops the following hypothesis.

H 3; fixed asset has positive effects on the financial performance of commercial banks.

Concerned in equity investment several studies tried to its influence on commercial banks performance for instance,(Kuri,2012) and (Abdikadir, 2017) showed equity investment has positive and significant effects on the performance of commercial banks but studies conducted by (Biniyam, 2018) and (AKALU, 2016) showed equity investment has negative and insignificant effects on the performance of commercial banks. As indicated above, a result of researches shows different results, but the researcher assumes that based on the majority of the literature result, this study develops the following hypothesis.

H 4; equity investment has a negative effect on the financial performance of commercial banks.

1.4. Objective of the Study

1.4.1. General Objective

The general objective of the study is to analyze the effect of investment on the financial performance of commercial banks in Ethiopia.

1.4.2. Specific Objectives

The specific objectives of the study are;

1. To examine the effect of NBE bill purchase on the financial performance of Commercial banks.
2. To scrutinize the effect of foreign bank deposits on the financial performance of commercial banks.
3. To examine the effect of equity investment on the financial performance of commercial banks.
4. To analysis the effect of fixed asset investment on the financial performance of commercial banks.

1.5. Scope of the Study

The scope of the study limited to assess the effects of investment on financial performance of commercial banks in Ethiopia. By using fifteen years (2006-2020.C) audited financial statements of each commercial bank. The study comprised all commercial banks which have at least fifteen years data. As a result, out of the seventeen commercial banks in Ethiopia including the largest government owned bank Commercial bank of Ethiopia, Awash international bank S.c., Bank of Abyssinia, Dashen bank, Wegagen bank, United bank , Nib international bank and Cooperative bank of Oromia. The study used one dependant variable return on equity (ROE) ,and four independant variables were national bank bill purchase ,foreign bank deposit investment ,fixed asset investment and equity investment. In addition the study used three control variables were capital adequacy,inflation and GDP. As the result, these variables could explain the topic properly by referring to previous empirical works.

1.6. Significant of the Study

This study will provide benefit for the banking sector on the National Bank of Ethiopia regulationlimitation on the area of investments and the effect of the regulation affect their financial performance that will be earned from investment. In addition, the research will give importance points to this sector to act on their investment policy by using the opportunities that NBE allowed them and how to manage their investment portfolio without rejecting the regulation. Findings from this study will also help national bank of Ethiopia to improve the investment regulation without making the policy highly restrictive. Furthermore, the study will help other researchers as a source of reference and an initial point for those who want to make further study on the area of commercial bank investment.

1.7. Limitation of the study

Secondary data for fifteen years (2006-2020) collected from all sampled commercial banks in Ethiopia. In addition, the study focuses on firm-specific variables as well as macroeconomic variables under this study. Thus, the primary limitations are the scope and sample size.

The analysis and its derived conclusions based on the secondary data sources (i.e. mainly on published annual reports of all commercial banks in Ethiopian), both the dependent and Independent variables proxies by numbers from these past data sources. Hence, the historical data may not reflect the current and future economic situation

1.8. Organization of the Study

The research paper is organized into five chapters. Chapter one is an introduction part, which includes back ground of the study, the statement of the problem, objectives of the study, hypothesis ,scope, significance, and limitation of the study are presented. Chapter two is a review of literature in which theories, empirical evidence, and conceptual framework are identified. Chapter three contained research methodology where research design, research approach, population, sampling method, sample size, sources of data, data analysis technique, model specification, variable definition were covered. Chapter four focused on the results and discussion in which the findings results that are interpreted. Finally, Chapter five brought to an end the research with conclusion and possible recommendation

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Theoretical Literature

A comprehensive review of published and unpublished works in the areas of investment and the performance of commercial banks is made to develop and identify the problem, to develop research hypothesis and so as to come up with appropriate research methods. It also comprises various researchers point of view on related research works from the context of various countries. Therefore, the literature review is organized and presented in two sections. The first section discusses the theoretical literature about investment and the performance of commercial banks from different perspectives and the second section presented empirical literature.

2.1.1 Overview of banking history in Ethiopia

The first bank called Bank of Abyssinia was inaugurated in Feb. 16, 1906 following the agreement that was reached in 1905 between Emperor Minilik II and Mr. Ma Gillivray, representative of British owned commercial bank of Egypt marked the introduction of recent banking in Ethiopia. The Bank was totally managed by the Egyptian commercial bank .Within the primary fifteen years of its operation, Bank of Abyssinia opened branches in several areas of the country. In 1906 a branch in Harar (Eastern Ethiopia) was opened at an equivalent time of the inauguration of Bank of Abyssinia in Addis Ababa . Another at Dire Dawa was opened two years later and at Gore in 1912 and at Dessie and Djibouti in 1920. Mac Gillivray, the representative and negotiator of Bank of Egypt, was appointed to be the Governor of the new Bank and he was succeeded by H Goldie, Miles Backhouse, and CS Collier were in change from 1919 until the bank‟s liquidation in 1931. Generally, in its short period of existence, Bank of Abyssinia had been completing limited business like keeping government accounts, some export financing and undertaking various tasks for the govt . Moreover, the Bank faced enormous pressure for being inefficient and purely profit motivated and reached an agreement to abandon its operation and be liquidated so as to disengage banking from foreign control and to form the institution responsible to Ethiopia's credit needs. Thus by 1931 Bank of Abyssinia was legally replaced . The new Bank, Bank of Ethiopia, was a purely Ethiopian institution and was the primary indigenous bank in Africa (NBE, 2009/10,) and established by a politician decree

on August 29, 1931 with capital of £750,000. Bank of Egypt was willing to abandon it's on cessionary rights reciprocally for a payment of British pound 40,000 and therefore the transfer of ownership happened very smoothly and the offices and personnel of the Bank of Abyssinia including its manager, Mr. Collier, being retained by the new Bank. Ethiopian government owned 60 percent of the entire shares of the Bank and every one transactions were subject to scrutiny by its Minister of Finance.Bank of Ethiopia took over the commercial activities of the Bank of Abyssinia and was authorized to issue notes and coins. The Bank with branches in Dire Dawa, Gore, Dessie, DebreTabor, Harar, agency in Gambella and a transit office in Djibouti continued successfully until the Italian invasion in 1935. During the invasion, the Italians established branches of their main banks namely Banco di Italia, Banco di Roma, Banco di Napoli and Banco Nazionale del lavoro and began operation in the main towns of Ethiopia. However, all of them ceased operation soon after liberation except Banco di Roma and Banco di Napoli which remained in Asmara. In 1941 another foreign bank, Barclays Bank, came to Ethiopia with British troops and arranged banking services in Addis Ababa , until its withdrawal in 1943. Then on 15th April 1943, the depository financial institution of Ethiopia commenced full operation after 8 months of preparatory activities. It acted because the financial institution of Ethiopia and ha d an influence to issue bank notes and coins because the agent of the Ministry of Finance. In 1945 and 1949 the Bank was granted the only right of issuing currency and deal in foreign currency. The Bank also functioned because the principal full service bank within the country and engaged altogether commercial banking activities. The State Bank of Ethiopia had established 21 branches including a branch in Khartoum, Sudan and a transit office on Djibouti until it ceased to exist by bank proclamation issued on December, 1963. Then the Ethiopian Monetary and Banking law that came into force in 1963 separated the function of commercial and central banking creating National Bank of Ethiopia (NBE) and commercial Bank of Ethiopia (CBE). Moreover it allowed foreign banks to operate in Ethiopia limiting their maximum ownership to be 49 percent while the remaining balance should be owned by Ethiopians.

There were two other banks operational namely Banco di Roma S. C. and Bank of di Napoli S.C. that later reapplied for license according to the new proclamation each having a paid up capital of Eth. Birr 2million.The first privately owned bank, Addis Ababa Bank S.C., was established on Ethiopians initiative and began operation in 1964 with a capital of two million in association with National and Grindlay Bank, London which had 40 percent

of the entire share. In 1968, the original capital of the Bank rose to 5.0 million and until it ceased operation,it had 300 staff at 26 branches.

There were other financial institutions operating within the country just like the Imperial Savings and residential Ownership Public Association (ISHOPA) which specialized in providing loans for the development of residential houses and to individuals under the guarantee of their savings. There was also the Saving and Mortgage Corporation of Ethiopia (SMCE) whose aims and duties were to accept savings and trust deposits account and provide loans for the construction, repair and improvement of residential house, commercial and industrial buildings and perform all activities associated with mortgage operations. On the other hand, there was a bank called agricultural bank that provides loan for the agricultural and other relevant projects established in 1945. But in 1951the investment bank of Ethiopia replaced it. In1965, the name of the bank once more hanged to Ethiopian Investment Corporation Share Company and therefore the capital was raised to Eth. Birr 20 million, which is fully paid up. However, proclamation No. 55 of 1970 established the agricultural and Industrial Development bank Share Company by taking over the asset and liability of the former Development Bank and Investment Corporation of Ethiopia .

Following the declaration of socialism in 1974 the government extended its control over the whole economy and nationalized all large corporations. Organizational setups were taken so as to make stronger institutions by merging people who perform similar functions. Accordingly, the three private owned banks, Addis Ababa Bank, Banco di Roma and Banco di Napoli Merged in 1976 to make the second largest Bank in Ethiopia called Addis Bank with a capital of Eth. birr 20 million and had a staff of 480 and 34 branches. Before the merger, the foreign participation of those banks was first nationalized in early 1975. Then Addis Bank S.C. and full service bank of Ethiopia were merged by proclamation No.184 of August 2, 1980 to make the only full service bank within the country till the establishment of personal commercial banks in 1994. The full service bank of Ethiopia commenced its operation with a capital of Birr 65 million, 128 branches and three ,633 employees. The Savings and Mortgage Corporation S. C and Imperial Saving and Home Ownership Public Association were also merged to form the Housing and Saving Bank with working capital of Birr 6 million and all rights, privileges, assets and liabilities were transferred by proclamation No.60, 1975 to the new bank Proclamation No. 99 of 1976 brought in to existence the Agricultural and Industrial Bank, which was formed in 1970 as a 100 percent state ownership, was bought under the umbrella of the National Bank of

Ethiopia. Then it was reestablished by proclamation No. 158 of 1979 as a public finance agency possessing judicial personality and named Agricultural and Development Bank (AIDB). It was entrusted with the financing of the economic development of the Agricultural, Industrial and other sectors of the national economy extending credits of medium and long-term nature as well as short-term agriculturalproductionloans.

The financial sector that the socialist oriented government left behind constituted only three banks and every enjoying monopoly in its respective market, the subsequent was the structure of the world at the top of the era: The commercial bank of Ethiopia (NBE), the full service bank of Ethiopia (CBE) and Agricultural and Industrial Development Bank (AIDB).Following the autumn of the Dergue regime in 1991 that ruled the country for 17 years under the rule of command economy, the EPRDF declared a liberal economy system. In line with this, Monetary and Banking proclamation of 1994 established the commercial bank of Ethiopia as a judicial entity, separated from the govt and outlined its main function. 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 issued private equity holders began to join the Ethiopian banking industry and as of (January, 2015) eighteen commercial banks are operated and out of this sixteen are private owned.

2.1.2The neo classical theory of investment

This theory originates from Jorgenson (1963). The theory draws its fundamental from the maximization of utility and wealth of a firm over time ((Warström & Niemelä, 2015).In the neoclassical theory, investment is seen as a distributed lag function of variations in the required capital. The required or desired capital here acts as a function to the output level, user capital cost and output price (Twine, Kiiza, & Bashaasha, 2015). The theory presupposes that investment is a function of cost of capital and the firms output. Additionally, the theory contends that the capital and labour ratios adapt to the relative changes in price (Virlics, 2013).The neoclassical theory of investment is premised on preposition that agents can make numerical probabilities and probability distribution of the expected returns.In the investment models, the firm is seen to be neutral to risks, and capital cost causes the risk (Virlics, 2013).The neoclassical arguments assume that firm managers act in the best interest of firms stakeholders.It also assumes managers and external suppliers of funds have the same information regarding the quantity and quality of investment opportunities available to the firms. These assumptions serve as a point of departure for models that demonstrate the

potential importance of internal funds in the investment decision (Ismail, 2010).For this study, the neoclassical theory will be employed to explore whether investment maximize the wealth and utility of the owners of the firms.

2.1.3The Q Theory of investment

This theory originated from (Tobin, 1969). The Q- theory is an extension of the neoclassical theory since it incorporates the adjustment costs as explanations for outputs losses. According to theory, firms choose investment levels, which maximize the estimated current firm value (Twine et al., 2015).The theory presupposes that the market estimation of equities is the major element of investment by firms. Thus, investment decision is stirred when financing sources are highly priced in the market place than it would cost to create it (Erickson & Whited, 2000)

This theory relates to investment rate as Q function where Q refers to market value ratio of new added investment resource to their replacement cost. This investment theory suggests the metric q ,which is the ratio between a unit of physical capitals market value and its value of replacement ,done to recap the existence \ absence of opportunities for investments for a precisefirm(Eklund,2013). Tobin reason that, when the capital adds marginal units to a firm value more than it costs to obtain it, thatis, q is greater than 1; installing new capital will be profitable to the precise firm. Hence $1> q$ indicates that the firm should accrue more capital (i e. embark on extra investment) and vice versa (Balfoussia & Gibson, 2016).According to the theory, investment decision depends on the marginal Q level, defined as the imminent investment marginal returns over the existing marginal investment cost. The Q theory also argue that if the firms value of the market is more than the cost of replacement of capital firms will choose to invest until the value of capital equals the replacement costs, thus optimizing capital stock (Warström & Niemelä, 2015).In this study, the Q theory of investment will be explored to explain whether the investment levels chosen by a firm maximizes its current value.

2.1.4The accelerator model of investment

The model originated from (Clark, 1917)but its application in business cycle was advanced by Samuelsson (1939). The model shows investment to be a function of growth of output only assuming that the wanted capital stock is achieved in every period of time.The model assumes that capital demand depends on the acceleration of that demand and not with the demand volume for the finished product (Twine et al., 2015). The arithmetical value between

the increases in investment relations as result of income increases. If national income or output remaining constant, the net investment that is induced will be positive (Loof and Heshmeti, 2008).The accelerator is an advanced model of the neoclassical investment theory which the price changes have been cut to the constant coefficients (Eklund, 2013). The accelerator model shows the relationship between capital and output as determined by a production function, and the cost of effects of capital that captures the substitutability among the capital and other production factors.The accelerator model focus on growth output as the main element of investment choice (Twine et al., 2015).This model shows that, a firm plan to add to the capitalstock perperiod, that is, invest so as to make partial alterations account for the gap between the wanted stock of capital and the current stock of capital Eklund (2013). For this study, the accelerator model will be applied to explain whether investments accelerate the value of the firm.

2.1.5 The Agency Theory

(Jensen & Meckling, 1976)were the first people to suggest the agency theory in a theory of the firm based upon conflicts of interest between various parties such as shareholders, corporate managers and debtors. However since then, the finance theory has developed both theoretically and empirically to allow a fuller investigation of the problems caused by divergences of interest between shareholders and corporate managers. The Agency theory indicates that agency problems arise because of the impossibility of perfectly contracting for every possible action of an agent whose decisions affect both his own welfare and the welfare of the principal. (McColgan, 2001)further argues that despite its faults, with respect to agency conflicts, the modern corporation appears to be the most popular form of corporate organization. Perhaps this can largely be attributable to the evolution of governance mechanisms designed to limit the scope of these problems. Pension schemes may be considered as agents of the members. They are entrusted with money that belongs to the members for them to manage on their behalf. This theory implies that the pension schemes are only agents who need to act for the benefit of the owners who are the contributors to the pension schemes. The pension schemes may have other divergent interests to pursue but the main purpose of their existence is to create value for the contributors. The contributors have a right to decide how their savings into pension schemes are invested and accessed including early ace.

2.1.6 Resource Dependency Theory

This theory was developed by (Salancik & Pfeffer, 1978).The theory is based on the assumption that environments are the source of scarce resources and organizations are dependent on these finite resources for survival. A lack of control over these resources thus acts to make uncertainty for firms operating in that environment. Organizations must develop ways to exploit these resources, which are also being sought by other firms, in order to ensure their own survival. They established factors that have significant influence on the level of dependence an organization has on particular resources. The first factor relates to overall importance of the resource to the firm; second is the scarcity of the resource. The scarcer a resource is that the more dependent the firm becomes. Finally, another factor influencing resource dependence is the competition between organizations for control of that resource. Together, all three of those factors act to influence the level of dependence that an organization has for a specific resource. Resource dependence theory also infers that a firm's strategic options are determined to a great extent by the environment. Since firms are dependent on the environment for resources, they need to enact strategies that would allow them to acquire these resources. Therefore, the external environment has already been determined for these firms, and they experience little strategic choice (Salancik & Pfeffer, 1978).

2.1.7 The Capital Asset Pricing Model

The background of CAPM was the study of the influence of investor behaviour on asset prices. The result of that study was a theory of asset valuation in an equilibrium situation, drawing together risk and return, which is the CAPM (Lintner, 1966).Several authors have contributed to the model, first and foremost (Sharpe, 1964)but also (French, 2003).The CAPM is the first model to introduce the notion of risk into the valuation of assets. It evaluates both asset returns in connection to market returns and the sensitivity of the security to the market (Amenc & Le Sourd, 2005).CAPM is in principle a method to calculate the rate of return which it is normal to demand of an asset of a certain nature. The search for the normal rate of return is divided into two parts according to CAPM. On the one hand, a risk-free rate is found. On the other hand, the rate of return on a risky asset is found, constituting the risk premium.

In CAPM the standard deviation of a single asset does not matter greatly, rather the effect of the asset on the systematic risk of the portfolio to which the asset is added. The main concern is the conjunction between the rate of return of the efficient portfolio and a single asset. If the

conclusion of the CAPM is that the correlation between the rate of return of the portfolio and an asset is high, then it is appropriate to demand a high risk premium of that asset. If the correlation is low, on the other hand, only a low risk premium should be demanded .(Sciubba, 2006)

2.1.8. Slack Resources Theory

This theory equates an organization to a living organism that struggles to survive amid turbulence from the environment within which it operates. Slack is a cushion of actual or potential resources which allow an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy, as well as to initiate changes in strategy with respect to the external environment. The theory suggests that slack performs four main functions in an organization. The first function of slack is acts as an inducement to members. The second function of slack is to act as a resource for conflict resolution. The third is function of slack is to act as an insulation to protect the organization from environmental turbulence. Finally, slack can be a facilitator of strategic behavior, which allows the firm to experiment with new strategies such as introducing new products and entering new markets (Tan et al, 2003). Organizational slack can be split into absorbed and unabsorbed slack. The latter refers to resources that are currently not committed to any activity hence can easily be redeployed to another activity depending on the environmental requirements. This gives the management greater discretion on how to commit the resources and it can impact on the performance of an organizationThe absorbed slack refers to excess costs in the organization and these are usually very difficult to redeploy (Veronica, 2013).

2.2. Empirical Literature Review

In this section empirical studies that have been made regarding on the effect of investment on performance of commercial banks.

AKALU (2016).on the effect of investment on banks performance in Ethiopia and interprets the result by relating with the regulations. The study used balanced panel model in examining the regression model and collect data from eight commercial banks covering the period of eleven consecutive years, 2005-2015. The study used one dependent variable ROE, four independent variables that are fixed asset investment, foreign deposit, equity investment and NBE Bill purchase and one control variable capital adequacy. The regression result show that fixed asset investment and foreign deposit had a positive and significant effect on performance of banks. On the other side NBE Bill purchase had a negative and significant effect on the performance of commerce banks. The control variable also had a negative and

significant effect on the performance of commercial banks. One of the independent variable equity investments had negative and insignificant effect on banks performance. The research concluded that investment plays a significant role on the performance of Ethiopian commercial banks.

Franciso (2010) studied on the effect of equity investment on banks profitability. The research objective was analyzes the influence of equity investments on banks‟ profitability in a panel data of 24 OECD countries. He used time series and cross-country data derived from balance sheets and income statements of commercial banks in OECD countries, as available from the Bank Profitability database published by the OECD. The results show that bank equity investments have a positive effect on net interest income and on net income. This positive influence remains the same after controlling for the potential increase of bank risk that higher equity investments can originate. Thus, the highest profitability that portfolio theory suggests for banks with higherequity investments does not disappear after considering the highest provisions and capital ratios that these banks are obliged to keep. The positive influence on net interest income is consistent with the view that banks can use their shareholder position in non-financial firms to obtain benefits in the lending relationship that they usually keep with firms in which they also take equity. In fact, the positive influence on banks interest margin is the main benefit of the bank equity investments because we do not observe differences in banks' profitability caused by capital losses or gains derived from equity transactions.

Bouheni, Ameur, Cheffou, and Jawadi (2014)Studied on the effect of regulation and supervision European banking profitability and risk. The research objective was in investigation of the relationship between regulation, supervision, profitability, and stability is not very well developed, although the relative literature has increased, particularly after the recent global financial crisis. The aims this paper was to fill the gap, while investigating the impact of regulatory and supervisory policies on profitability and risk using recent data and appropriate econometric methodology. In particular, they apply panel data modelling to test whether restrictions on bank activities, capital requirement, deposit insurance, supervisors‟ power, and supervisory authority independence have an impact on the stability and profitability of the biggest European banks. Their data was collected first an original database collected from the World Bank by Barth et al. (2001, 2004, 2006, 2008). Second, they focus on an interesting and original sample including the ten largest European banks in the selected European countries (France, Germany, UK, Spain, Italy, and Greece) over the period 2005 to

2011. By using different approaches they conclude that, the paper investigates the effects of regulatory and supervisory policies on profitability and risk-taking for a large sample of the biggest European banks in a context of financial crisis and economic downturn from 2005 to 2011. Using an original sample of regulatory, supervision and profitability proxies, the study carried out and back tested a panel data regression model. The findings offer interesting results the show that increasing European banking regulations and supervision could improve banks‟ profitability and decrease their risk taking, the restrictions on banking activities decreases profitability, while capital adequacy and the deposit insurance system increases banks‟ profitability, reinforcing supervisors‟ powers reduces risk taking and promotes banking stability. These results can have different policy implications for bankers as well as for regulators in terms of improving regulatory measures and adapting them to the banking environment and financial context.

Another study made by Michael et al. (,2012) on Regulation and Its Effect on Banking Industry Structure and Performance: Some Cross-Country Evidence. The measures of bank activity regulation that the study consider in the paper are securities (SEC), insurance (INS) and real estate activities (REA). These measures specify the degree to which the national regulatory authorities allow banks to engage in each respective activity. In particular, these measures quantify the degree of regulatory restrictiveness for each activity on a scale from one to four, with larger numbers representing greater restrictiveness. These types of regulation determine the degree to which a bank may diversify its business operations as well as capitalize on any synergies that may arise from complementary activities. They concluded that restrictions on bank activities tend to yield more government ownership, less private credit, and a larger fraction of nonperforming loans. The effect on concentration is unclear, with different activity constraints yielding different results. Having an implicit deposit insurance scheme reduces bank concentration, foreign ownership, and private credit. Stricter entry requirements reduce government ownership of banks. Restrictions on ownership only affect concentration. In particular, restricting non-financial firms from owning banks reduces concentration, while restricting banks from owning non-financial firms increases concentration.

Study conducted by Karemera (2013).on the “relationship between regulation and financial performance of Rwanda commercial banks”. The objective of the study is to establish the relationship between regulation and financial performance of commercial banks in Rwanda. The findings of his study in some areas concur with past studies while in others it contradicts

past findings by other scholar. Capital requirement may not explain the financial performance due to the fact that the total asset increase more than the equity and this can lead to the to the low rate of profitability of the commercial banks. The equity of all the commercial banks has been increasing but this does not contribute to the increase of return on assets may be because of the increase of total assets in the particular period. Liquidity ratio has shown that it does not at all explain financial performance of commercial banks in Rwanda. The negative relationship between management efficiency and financial performance is most likely to have been come from the highest increase of total assets in that period. Particularly in this period The cost of construction was very high to almost all the commercial banks in Rwanda consequently this has increased the total assets of the banks.

Study conducted in Nigeria on the title of Investment in fixed asset and firm profitability empirical evidence from the Nigerian banking sector by Nigeria and Nigeria (2014).The objective of the study as to examine the effect of investment in fixed asset on profitability of selected Nigerian banks and to analyze analyses the significant components of fixed assets investment of Selected Nigerian Commercial Banks, examines the relationship between fixed assets values and Return on Investment (ROI) and determines the effect of fixed assets investment on Net profits of sampled Nigerian commercial banks. The study result showed that investment in fixed assets has significant positive relationship to the performance of the sampled banks. Investments in fixed assets have strong and statistical positive impact on the profitability of banking sector in Nigeria. In order to improve bank profitability there should be efficient management of fixed assets.

As studied byKipleting (2016) on the effect of investment diversification on the financial performance of commercial banks in Kenya, the main purpose of this study was to investigate the effect of portfolio diversification on the financial performance of commercial banks in Kenya. The specific objectives was to: investigate the effect of insurance investment on the financial performance of commercial banks in Kenya, establish the effect of government securities on the financial performance of commercial banks in Kenya, determine the effect of real estate investment on the financial performance of commercial banks in Kenya and to establish the effect of buying shares on the financial performance of commercial banks in Kenya. This study adopted exploratory research design because it was trying to explain the cause relationship between independent variable and dependent variable. The population of interest in this study consisted of 40 commercial banks. A sample of 40 operational commercial banks in Kenya was studied. Secondary data was collected using data collection

sheets as the main data collection tool and interview schedule as the primary data. In line with the above study conducted by Mathew (2016), data collection sheets were used to collect data guided by the objectives of the study. The data collected was analyzed using Explanatory and inferential statistics with help of SPSS package version 20 inferential statistics were done through ANOVA and multiple regressions. The study concluded that a majority of the banks over the years have in practice employed the use of insurance investment on the financial performance of commercial banks in Kenya. The study recommended that banks should focus its work to promote the confidence in portfolio diversification, and develop marketing policies that encourage its use.

Veronica (2013) studied on the relation between investment & financial performance of insurance companies in Kenya. The research objective was to establish the relationship between investment and financial performance of insurance companies in Kenya. The researcher uses 45 insurance companies in Kenya as target population. Out of the total population secondary data was collected from 32 insurance firms. She used Multivariate regression and correlation analysis. The results show that investments in real estate, certificates of deposit, Government securities, corporate bonds and stocks have a significant impact on the financial performance of the insurance companies since the variables have major effect on financial performance.

Kuria (2012)studied on the relationship between investment in intangible asset and financial performance of commercial banks in Kenya. The objective of his study was to establish the relationship between computers fixed assets and financial performance of commercial banks in Kenya and to investigate the relationship between investment in intangible assets and financial performance of commercial banks in Kenya. Qualitative approach was used in order to gain a better understanding and possibly enable a better and more insightful interpretation of the results from the qualitative data. The study concludes that there was a positive correlation between increase in investment in intangible assets and increase in computer assets and the increase in financial performances of commercial banks in Kenya in the year 2006 to 2011. An increase in intangible assets evidently leads to an increase in commercial banks financial performances during the 5 year period of study. In this paper, we explored the impact of intangible assets and increase in computer assets on commercial banks „financial performance. The significant relationship between investment in assets and operating performance remains strong after controlling for other firm characteristics. He found that banks with higher intangible assets and higher computer assets tend to earn higher net income returns that gradually increase during the period.

Study conducted by Biniyam (2018)on the effect of investment on financial performance of insurance company in Ethiopia. The study used a sample of 9 insurance out of 17 from 2006 to 2016 year financial statements. The random effect regression technique and correlation was used to analyse the data using the econometric package Eviews software. The study used one dependent variables return on asset and four independent variables that are Investment in fixed asset (IFA), Investment in government securities (IGS), Investment in equity (IE) and Investment in fixed time deposit (FTD) as independent variables. The researcher also used insurance size and liquidity ratio as control variables. The study finds that insurance performance measurement i.e. ROA has a strong and significant relationship with Investment in fixed asset and investment in government securities. On the other hand investment in equity has a negative and insignificant effect on return on asset. Investment in government security and fixed assets has also shown significant and positive effect. However, investment in fixed time deposit has a positive and insignificant effect on return on asset.

Furthermore insurance size and liquidity ratio has a significant and positive effect on return on asset. So the study recommended insurance companies are advised to invest in fixed asset & Government Securities in order to enhance the financial performances.

Kebede (2014)studied on The Impact of National Bank Regulation on Banks Performance: Evidence from the Private Banks of Ethiopia". Start her study by the general objective of examine the impact of National Bank regulation on private banks performance in Ethiopia. The conclusion of her study is that NBE-Bill purchase has negative and significant effect on banks performance measured through both Return on Asset and Net Interest Margin. The researcher concludes that investment in NBE Bills results a negative impact due to the lesser amount of interest rate compared to the amount of interest rate if the amount invested on the Bill was invested on other investments. Change in reserve requirement has negative and significant effect on the banks cost of intermediation measured through Net Interest Margin.

This is due to the reason that banks reserve which is hold by National Bank of Ethiopia do not generate any return since it doesn't bear any interest at all. Credit cap has negative and statistically significant effect on banks performance measured through both Return on Asset and Net Interest Margin. The researcher concludes that credit cap has a negative impact on banks performance and this is due to since there was credit ceiling any bank cannot give the amount of loan above that ceiling so the interest income generated from loans will decrease but the bank will pay an interest expense for the depositors no matter what amount the banks get an interest income from the loan.

yodit (2012) with the use of in depth interview made on exploratory research to investigate on the implication of NBE bill Purchase on performance of private commercial banks in Ethiopia and found out that the directive affects the bank's profitability in an adverse manner. The directive states that banks should purchase 27% based on their total disbursement with disregard to the nature of loan, which have revolving nature and are also short term, would aggravate the liquidity problem. But taking into consideration the deposit structure of the banks into account if the banks shift to loan term maturing loan in order to avoid the aggravated problem of liquidity with such revolving loans the banks would be faced with asset liability mismatch. The directive as can be seen excludes the state owned bank which create an unfair ground for competition between the privateer and state owned banks specifically CBE. The directive preferential treatment hence, resulted in the shift of customers from the private banks to public banks as a result reduce the private banks market share in the industry while increasing the already strong market share of CBE. In addition, the directive is also a barrier to new entrants. The directive is also push the private banks to change both their deposit as well as loan structure.

The study carried out by Mohana and Tekeste (2012)was to explore the key determinants of profitability of commercial banks operating in Ethiopia by using unbalanced panel data set of banks over the period 1999/00-2008/09. They used internal factors like capital adequacy, liquidity, credit risk, loan portfolio, asset quality, and expense management and external factors related to the industry and the macroeconomic factors within which the banks operate. Moreover ROA was used as dependent variable. In their analysis the fixed effects model is used to control the unobservable bank specific characteristics. The result of the study reveals that Capital adequacy (equity to asset ratio), diversification (non-interest income to total income) and bank size (log of total assets) are among the internal factors that have positive and significant impact on the profitability of Ethiopian commercial banks. Moreover, the loan loss reserve to total loans is also found to have negative impact on profitability though it is statistically insignificant. In addition to this, liquidity and operational efficiency are among the internal factors that negatively affect the profitability of the banks. Finally, the macroeconomic factors have insignificant impact on the commercial banks profitability in Ethiopia.

The purpose of the study made by Habtamu (2012) is to investigate determinants of private commercial banks profitability in Ethiopia by using panel data of seven private commercial banks from year 2002 to 2011. He 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). He applied fixed effect regression model to investigate the impact of capital adequacy, asset quality, managerial efficiency, liquidly, bank size, and real GDP growth rate on major bank profitability measures i.e., (ROA), (ROE), and (NIM) separately. Beside this, he 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.

The main objective of the study made by Birhanu (2012) is to examine the effect of bankspecific, industry-specific and macroeconomic determinants of Ethiopian commercial banking industry profitability from the period 2000 - 2011 by using OLS estimation method to measure the effects of internal and external determinants on profitability in terms of average return on asset and net interest margin. The result reveals that, all bank-specific determinants, with the exception of bank size, expense management and credit risk, affect bank profitability significantly and positively in the anticipated way. In addition to this, no evidence is found in support of the presence of market concentration. Finally, from macroeconomic determinants GDP has positive and significant effect on both asset return and interest margin of the bank. But interest rate policy has significant and positive effect only on interest margin.

Amdemikael (2012), Carried out study to examine the bank-specific, industry-specific and macro-economic factors affecting bank profitability for eight commercial banks operating in Ethiopia covering the period of 2000-2011. He adopts a mixed research approach by combining documentary analysis and in-depth interviews. He used ROA as a dependent variable and capital strength, operational efficiency, income diversification, liquidity risk, bank size, asset quality, industry concentration level, real GDP growth and inflation as independent variables. The findings of the study show that capital strength, income diversification, bank size and gross domestic product have statistically significant and positive relationship with banks‟ profitability. On the other hand, variables like operational efficiency and asset quality have a negative and statistically significant relationship with banks‟ profitability. However, the relationship for liquidity risk, concentration and inflation is found to be statistically insignifican.

Belayneh (2011)Examine the impact of bank-specific, industry specific and macroeconomic determinants of Ethiopian commercial banks profitability that covers the period 2001- 2010

by applying the balanced panel data of seven Ethiopian commercial banks. He used the ROA as a dependent variable and capital, size, loan, deposits, noninterest income, noninterest expense, credit risk, market concentration, economic growth, inflation and saving interest rate as independent variables. The estimation results show that all bank-specific determinants, with the exception of saving deposit, significantly affect commercial banks profitability in Ethiopia. Market concentration is also a significant determining factor of profitability. Finally, with regard to macroeconomic variables, only economic growth exhibits a significant relationship with banks‟ profitability

Study conducted by nahom (2015) on the title of determinants of banks performance of private commercial banks in Ethiopia, analyzed on the determinants of banks performance by classifying his independent variables on bank specific factors and macroeconomic factor and significant determinant of performance among the banks specific and macroeconomic variables. His banks specific variables are capital adequacy, liquidity and asset quality and the external variables are real GDP growth rate, annual inflation rate, internal rate, NBE bill purchase. He used two dependent variables to measure banks performance they are return on equity and net interest margin. And he concludes that capital adequacy from banks specific factors and NBE bill purchase from macroeconomic factors was the major determinate of bank performance as measured by return on equity. And liquidity, real GDP growth rate, annual inflation rate and NBE bill purchase are the major determinants of banks performance as measured by net interest margin.

Another study conducted by Shibiru (2014)) on the assessment of the implication of regulatory policy on the development of private commercial banks in Ethiopia in case of NBE bill purchase directive. The objective of his study was to assess the implications of NBE bills purchase directive on the development of private commercial banks in Ethiopia. The conclusions of his study were, 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. The study also revealed the directive has negative implications on the expense of the private commercial banks via increasing the expenses of private commercial banks. Likewise, the study revealed that the negative implication of bills purchase directive on the profitability, liquidity, and capital and reserve of private commercial banks. The directive has no implication on the asset size of private commercial banks since the bills are one of the elements of asset of private commercial banks; however, it affected the potential growth of rate of assets and asset portfolio of banks. The assessment also disclosed, the couples of positive implications that directive had,

enhancing branch expansion of private commercial banks and forcing them to develop new products, services and system to attract customers. He also conclude that the implications of the directive was rated as significant on asset, capital and reserve, branch expansion and very significant on liquidity, income, Loan able fund and overall development of private commercial banks.

Tesfaye (2014) made research on the impact of policy measures on Ethiopian private banks performance on the case of government bill purchase. The major theme of the study is to assess the effect of sector specific policy measures on bank performance. The study has taken one of the top policy issues; the requirement to purchase government securities, and analyzed its impact on profitability measure, ROA. The study finds that exposure to government bills has negative and significant relationship with performance. Nevertheless, the magnitude is not severe. Even the pre and post policy periods comparison revealed a relatively better profitability record for private banks during times of policy restrictions. Hence, the bill seems contributed positively to performance via moping the excess liquidity holding of banks or providing an opportunity for private banks to invest their excess funds in government securities than the customary practice of holding their liquid asset in zero earning accounts at the National Bank of Ethiopia.

The study focused on historical impact of the bill measure and it can serve as initial work to further pursue on the impact of policy measures on the long run performance of Banks.

Taddesse (2015) made a research on the Investment of Accounting information system and performance of Private commercial banks in Ethiopia in financial terms, so by testing the impact of the investment on AIS on some performance measures of financial common and traded such as return on assets (ROA), and return on equity (ROE) and productivity as a key proxy of financial metrics for the performance of private banks. His study adopted model for the study of panel research design to realize a stated objective. His study was employed quantitative research approach by using both primary and secondary data gathered from managers and financial statement of private commercial banks respectively.

For primary data researcher were made discussion between head of accounting and finance particularly designated accounting clerk of each bank at the head office level in order to get the separated ledger cost of Infrastructure, software and IT service. The overall result obtained from the regression model indicates that investment on AIS has positive significance impact on performance of Private commercial Banks in Ethiopia to an important extent with some improvement observed from implementation of appropriate software and quality of

services which leads the performance of AIS‟s on infrastructure. The independent variables (components of AIS) used in order to achieve the objectives stated were; Infrastructure, software and related service. Size factor was also taken into consideration which was represented by the total Asset Investment of each private Banks in order to control its effect on interpretation.

2.3.Conclusion and knowledge gap

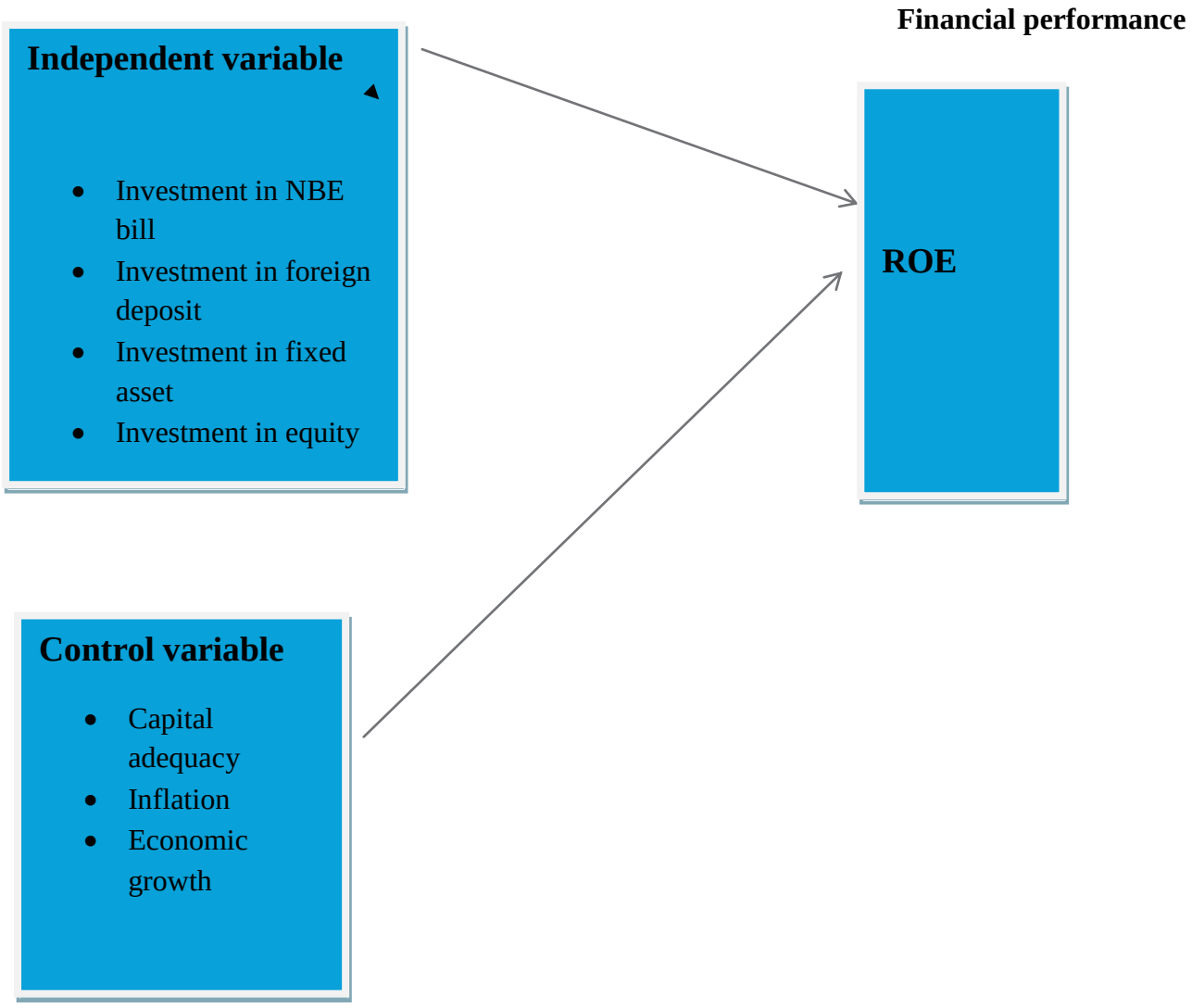
Even though, the aforementioned empirical review tried to demonstrate different findings as per their study area and countries context, it does not necessarily mean that it would replicate elsewhere. Moreover; the target population or frame of reference, and research methodology is different among countries and researchers. In addition, in the above studies revealed mixed results, which ones conclusion contradicts with another.

On the above stated literature review some studies founds that there is a positive and significant relationship between investment and commercial banks performance and other studies founds that there is a negative and significant relationship between investment and commercial banks performance. But as reviewed the related literature, research on the effect of investment on financial performance of commercial banks on Ethiopian banking industry is very scarce. So the researcher intends to work on the effect of investment on performance of Ethiopian commercial banks. Therefore by taking into account above stated issues the researcher seeks to investigate the effect of investment on performance of commercial bank in Ethiopia .

2.4. Conceptual Frame Work

From the theoretical and empirical literature reviews, the following conceptual framework of the study is developed by the researcher**.**

Figure 2. 1conceptual framework or model of the study



CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter deals with the research methodology used to carry out the research. This study's aimis to assess the effect of investment on commercial banks' performance. It comprises research design, researchapproach, and target population,sampling technique, method of data collection, presentation and analysis, variable definition and measurement, and model specification of the thesis.

3.1. Research Design

Cooperet al. (2003) discussed that explanatory studies unlike descriptive studies, go beyond observing and describing the condition and tries to explain the reasons for the phenomenon. Thus, explanatory research design used in this research because the study identified the cause and effect of investment on commercial banks' financial performance which is appropriate for the objective of the study.

3.2. Research approach

The quantitative aspect of the research method aimed to obtain data needed to explain the relationship between the effects of investment on commercial banks' financial performance in Ethiopia. Hence, a survey design (structured review of documents) is applied for this study. A survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population.

3.3. Population of the Study

The study populations are commercial banks registered by NBE. Currently, there are seventeen commercial banks in Ethiopia that are one government-owned and sixteen privately owned commercial banks these are ; Commercial bank of Ethiopia, Awash International bank S.c., Bank of Abyssinia, Dashen Bank, Wegagen Bank, United Bank , Nib International Bank , Cooperative Bank of Oromia,Abay Bank,Addis International bank,Berhan international Bank,Bunna International Bank,Debub Global Bank,Oromia International Bank, Lion Bank, Enat Bank,and Zemen Bank

3.4. Sampling techniques

This study includes all banks operating in Ethiopia as a population of the study. However, banks that operate less than fifteen years were not taken since those banks have no experience and have no data for fifteen years. Due to this reason, by using the purposive sampling technique from 17 Commercial banks operating in Ethiopia this study took eight banks which are established prior to 2006 G.C. which is listed on the below Table 3.1.

SAMPLE COMMERCIAL BANKS

Table 3. 1 Sampled commercial banks

Name of Commercial Banks	Year of establishment			
1.Commercial Bank of Ethiopia	1	9	6	3
2.Awash International Bank	1	9	9	4
3. Dashen Bank	1	9	9	5
4.Bank of Abyssinia	1	9	9	6
5. Wegagen Bank	1	9	9	7
6. United Bank	1	9	9	8
7.Nib International Bank	1	9	9	9
8.cooperative bank of Oromia	2	0	0	5

The above table 3.1 is supposed to be representative of the banking sector of Ethiopia in this study

3.5. Types and Sources of Data

This study obtained the necessary data through secondary data. This research used secondary sources of data. Secondary data on all of the commercial banks in Ethiopia are obtained from commercial banks' audited financial statements and annual reports filed with NBE through document review. Furthermore, secondary data are collected from books, journals, and websites.

3.6.Data analysis

To achieve the objective of the study, the study only concentrated on quantitative analysis. Hence, the researcher used an econometric model to identify and measure the effect of investment on commercial banks' performance in Ethiopia and used the Ordinary Least Square (OLS) method using Stata 16 econometric software package for the study. According

to Brooks (2008) regression is concerned with describing and evaluating the relationship between a given variable (usually called the dependent variable) and one or more other variables (usually known as the independent variables. Thus, the researcher adopted panel data regression model to examine effect of investment on commercial banks financial performance in Ethiopia.

As stated by Brooks (2008) panel data is favoured for situation often arises in financial modelling where we have data comprising both time series and cross-sectional elements. In addition, we can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time-series or pure cross-sectional data alone Accordingly, the study model focused on panel data technique that comprises both cross-Sectional elements and time-series elements; the cross-sectional element is reflected by eight sampled Ethiopian commercial banks and the time-series element is revealed by the period of study (2006-2020). Therefore, the panel data would be analysed using descriptive statistics, correlations and linear regression analysis. The rational for choosing Ordinary Least Square (OLS) is that, if the Classical Linear Regression Model (CLRM) assumption should true, then the estimators determined by OLS will have a number of desirable properties, and are known as Best Linear Unbiased Estimators (Brooks, 2008). Diagnostic checking is done to test whether the sample is consistent with the following assumptions. According to Brooks (2008), the assumptions of ordinary least squares are:

I. The errors have zero mean (E (ut) = 0)

II. Variance of the errors is constant (Var (ut) = $\sigma 2 < \infty$)

III.Test for Normality (ut $\sim$N (0, $\sigma 2$)

IV. Multicollinearity Test

If all the above assumptions are consistent with the sample, stata result will be accurate and reliable. The following tests are done in this research to test the above assumptions.

I. The errors have zero mean (E (ut) = 0)

Relay on Brooks (2008), the first assumption required is that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated.

II. Variance of the errors is constant (Var (ut) = $\sigma 2 < \infty$) (heteroscedasticity)

According to Brooks (2008), the variance of the errors is constant this is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be heteroscedastic. If heteroscedasticity occur, the estimators of the ordinary least square method are inefficient and hypothesis testing is no longer reliable or valid as it will underestimate the variances and standard errors. There are several tests to detect the Heteroscedasticity problem, which are Park Test, Glesjer Test, Breusch-Pagan-Goldfrey Test, White's Test and Autoregressive Conditional Heteroscedasticity (ARCH) test. In this study, the popular white test was employed to test for the presence of heteroscedasticity. The hypothesis for the Heteroscedasticity test was formulated as follow;

H0: There is no Heteroscedasticity problem in the model.
H1: There is Heteroscedasticity problem in the model

$\alpha = 0.05$
Decision Rule: Reject H0 if p-value is less than significance level. Otherwise, do not reject H0.

III.Normality (ut ~N(0, σ2)
As per Brooks (2008) normality tests are used to determine if a data set is well-modeled by a normal distribution. With the normality assumption, ordinary least square estimation can be easily derived and would be much more valid and straight forward. This study used Jarque Bera Test (JB test) to find out whether the error term is normally distributed or not. The hypothesis for the normality test was formulated as follow:
H0: Error term is normally distributed
H1: Error term is not normally distributed

$\alpha = 0.05$
Decision Rule: Reject H0 if p-value of JB tests less than significance level. Otherwise, do not reject H0.

IV.Multicollinearity
According to Brooks (2008), Multicollinearity will occur when some or all of the independent variables are highly correlated with one another. If the multicollinearity occurs, the regression model is unable to tell which independent variables are influencing the dependent variable. This study used high pair-wise correlation coefficients method to test the presence of multicollinearity problem in a regression model, because it shows the correlation of independent variables between each other one by one. Malhotra (2007) stated that

multicollinearity problems exists when the correlation coefficient among explanatory variables should be greater than 0.75. However, Brooks (2008) mentioned that if thecorrelation coefficient along with the independent variables is 0.8 and above, multicollinearity problems will be existed.

3.7.Variable and measurements

❖Dependent Variable

Profit is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. Therefore to measure performance the dependent variable was used profitability. To calculate the profitability of commercial banks there are variety of ratios used. For this research ROE used because to identify & measure from which investment can get higher return.

- Return on Equity (ROE) is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. ROE is what the shareholders look in return for their investment. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by (Khrawish & Al-Sa'di, 2011)that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. It represents the rate of return earned on the funds invested in the bank by its stockholders. ROE reflects how effectively a bank management is using shareholders' funds. Thus, it can be deduced from the above statement that the better the ROE the more effective the management in utilizing the shareholders capital.

The Independent Variables

NBE Bill Purchase

NBE-Bill was introduced in April 4, 2011 NBE has issued new directive which requires private commercial banks to allocate assets amounting to 27% of their total disbursement for priority sector financing . The banks are forced to redirect their disbursement to the purchase of NBE bill which earns 3% interest (yodit, 2012). This represent amount of forced bill purchase by a bank, which is measured as total amount of investment in NBE-Bills. NBE

request banks to invest significant amount of their return on the government bill. This study was examine the effect of this bill purchase and the bank's profitability.

Equity Investment

National bank of Ethiopia gave permission to commercial banks to invest their income on different non-banking companies share with limited percentage. These companies can be insurance company or other share companies. The banks invest on this business in order to collect an additional income from interest payment. It is measured by the total amount of investment on insurance company share and other share companies stock. The study was examine on the effect of amount invested on equity purchased and the bank's profitability.

Fixed Asset Investment or property investment

National bank of Ethiopia has allowed banks with limited percentage of amount to invest on fixed assets, this refer to the business of buying and developing properties consistence of houses and other building for facilitating their own operation or for reseal. It is measured by the total amount of investment on fixed asset. This research was examine the effect of investment in fixed asset on profitability.

Foreign Bank Deposit

Banks are permitted to deposit their excess cash in other foreign banks in order to facilitate their services and also to generate an additional interest income. Deposit is measured by the total amount of money that the bank's deposit in foreign banks in a given time. This study was examine on the effect NBE regulation on the banks foreign deposit and the interest income they generate on bank's performance.

Control Variables

Capital Adequacy

This measures capital strength of the banks. The ratio of Equity to total Asset is employed as a measure for bank Capital Adequacy. This measures the percentage of the total asset that is financed with equity capital. Capital adequacy therefore describes the sufficiency of the amount of equity that can absorb shocks that banks may experience. It is expected that the higher the Equity to Asset ratio, the lower the need for external funding and therefore the higher the profitability of the bank. Bank with higher capital to asset ratio are considered

relatively safer and remained profitable even during economically difficult times. Conversely, banks with lower capital adequacy are considered riskier relative to highly capitalized banks Sufian and Chong (2008). Considering the fact that capital adequacy may have an ambiguous effect on profitability, theoretical expectation of capital adequacy remains a puzzle to be answered by empirical investigation.

Inflation

Inflation reduces the purchasing power of each unit of currency, which leads to increases general price of goods and services over time. Inflation is a general increase in the overall price level of the goods and services in the economy (Hadush, 2015). Expected inflation is taken into account when actuaries set actuarially fair premiums and in this case inflation itself is unlikely to seriously impact on the performance of insurance companies. Nevertheless, if inflation is significantly greater than expected, it could cause insurance companies financial difficulty. For instance, unexpected inflation makes real returns on fixed-rate bonds lower than expected. As a consequence, profit margins of insurance companies are compressed and financial performance is accordingly impaired (Browne, Carson, & Hoyt, 1999). The inflation could affect commercial banks‟ financial performance by influencing both their liabilities and assets.

Economic growth (GDP)

Growth domestic product is a macroeconomic variable and tells the total value of goods and services produced in a given nation over a specified period of time usually a year. GDP growth is indicative of overall business conditions and hence capacity to insurers (Hussain, 2015). Economic growth is an increase in the production of economic goods and services, compared from one period of time to another. The poor economic conditions can reduce investment of once country. This will have effect the performance of companies (Biru, 2017).

Table 3. 2 Variable measurement and expected sign

Variable	Measure	Notation	expected sign

Firms financial performanc	Net profit before tax/total ec	ROE	
National bank of Ethiopia bill	natural log total NBE investment	NBEB	–
Foreign deposit	natural log total foreign bank deposit investment	FBD	+
Fixed asset	Natural log total fixed asset	FA	+
Equity investment	Natural log total equity investment	EI	–
	Control variable		
Capital adequacy	Equity to total asset ratio	CAR	–
Inflation	Yearly average rate	INF	–
Economic growth	Yearly GDP	GDP	+

3.8. Model Specification

Objective isto establish whether investment affects the financial performance of the commercial banks in Ethiopia. Return on equity is consider as a measure for financial performance and therefore, used as the dependent variable whereas national bank bill purchase, foreign deposit, fixed asset and equity investment is considered as independent variable and capital adequacy ratio, inflation and economic growth as control variable

ROE = f (NBEB, FBD, FA, EI, INF, GDP, CAR)

Upon linearization and parametization the model is specified as;

ROE $i_t = \beta_0 + \beta_1 NBEBi_t + \beta_2 FBDit + \beta_3 FAi_t + \beta_4 EIi_t + +\beta_5 INFi_t + \beta_6 GDPi_t + \beta_7 CARi_t + \varepsilon i_t$……..1

Where,

ROEi_t= return on equity

$$\beta o = intercept$$

$$\beta 1 - \beta 7 = coefficients parameters$$

NBE$i_{t=}$national bank of Ethiopia bill i_{at}time t

FBD$i_{t=}$foreign deposit i at time t

FA$i_{t=}$ fixed asset i at time t

EI$i_{t=}$ equity investment i at time t

CAR$i_{t=}$ Capital adequacy ratio i at time t

INF$i_{t=}$inflation rate at time t

GDP$i_{t=}$gross domestic product at time t

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter presents the resultsand discussion. This study used the annual financial report, where all the variables are observed for each cross-section and each time period. The study has a time series segment spanning from the period 2006 up to 2020 and a cross section segment which considered eight commercial banks in Ethiopia. Accordingly, the result of descriptive statistics, correlation analysis, the test of CLRM assumption, and a result of the regression analysis were presented in the following sub-sections.

4.1. Descriptive statistics

The descriptive statistics is presented below.As indicated in the below Table, the financial performance measured by (ROE) shows that Ethiopian commercial banks have achieved on average a positive net income over the last fifteen years. From the total sample, the mean of ROE 20.7% with a maximum of 60.25% and also a minimum of 1.5%. Regarding the standard deviation, it means the value of ROE deviate from its mean by 11.8% which indicate there was low variation from the mean.

Regarding independent variable national bank bill investment of the commercial banks and its relationship with financial performance, natural logarithm of total national bank bill investment is used as proxy. The mean of the natural logarithm of total national bank bill investment was 20.37. National bank bill investment of commercial banks was dispersed from its mean value (i.e. 20.37) with the standard deviation of 1.9.The maximum and minimum values were 22.99 and 14.65 respectively.

The second independent variable used in the study was foreign deposit investment of the commercial banks and its relationship with financial performance, natural logarithm of total foreign deposit investment is used as proxy. The mean of the natural logarithm of total

foreign deposit investment was 20.02. Foreign deposit investment of commercial banks was dispersed from its mean value (i.e. 20.02) with the standard deviation of 1.63. The maximum and minimum values were 23.99 and 15.60 respectively.

The third independent variable used in the study was equity investment of the commercial banks and its relationship with financial performance, natural logarithm of total equity investment is used as proxy. The mean of the natural logarithm of total equity investment was 18.30. Equity investment of commercial banks was dispersed from its mean value (i.e. 18.30) with the standard deviation of 2.73. The maximum and minimum values were 26.98 and 14.26 respectively.

The fourth independent variable used in the study was fixed asset investment of the commercial banks and its relationship with financial performance, natural logarithm of total fixed asset investment is used as proxy. The mean of the natural logarithm of total fixed asset investment was 19.64. Fixed asset investment of commercial bank was dispersed from its mean value (i.e. 19.64) with the standard deviation of 2.12. The maximum and minimum values were 25.99 and 15.42 respectively.

The external variable used in the study was inflation and its relationship with financial performance. The mean of the inflation was 15.77%. Inflation was dispersed from its mean value (i.e. 15.77%) with the standard deviation of 9.41%. The maximum and minimum values were 36.4% and 2.8% respectively. In addition GDP and its relationship with financial performance. The mean of the GDP was 9.77%. GDP was dispersed from its mean value (i.e. 9.77%) with the standard deviation of 1.55%. The maximum and minimum values were 11.8% and 6.1% respectively. Finally, the capital adequacy and its relationship with financial performance. The mean of the capital adequacy was 8.14. Capital adequacy was dispersed from its mean value (i.e. 8.14) with the standard deviation of 4.3. The maximum and minimum values were 24.13 and 7.9 respectively.

Table 4. 1Descriptive statistics

Variable	Observation	Mean	Std.deviation	Minimum	Maximum
ROE	120	0.2073	0.118	0.0150	0.6025
NBE BILL	120	20.375	1.902	14.65	22.997
FBD	120	20.0279	1.638	15.6072	23.995
EI	120	18.303	2.732	14.267	26.980

FAI	1	2	0	1	9	.	6	4	2	.	1	2	6	1	5	.	4	2	9	2	5	.	9	9	8
INF	1	2	0	0	.	1	5	7	7	0	.	0	9	4	1	0	.	0	2	8	0	.	3	6	4
GDP	1	2	0	0	.	0	9	7	7	0	.	1	5	5	0	.	0	6	1	0	.	1	1	8	
CAR	1	2	0	8	.	1	4	1	4	.	3	6	9	8	0	.	7	9	8	5	2	4	.	1	3	5

Source: - annual report of sample commercial bank computed using stata 16 (2006-2020)

4.2 Correlation Analysis

Correlation measures the degree of linear association between variables. Values of the correlation coefficient are always ranged between +1 and -1. A correlation coefficient of +1 indicates that the existence of a perfect positive association between the two variables, while a correlation coefficient of -1 indicates perfect negative association. A correlation coefficient of zero, on the other hand, indicates the absence of relationship (association) between two variables (Brooks, 2008). As indicated in the below correlation matrix, national bank bill has strong negative relationship with GDP for the last 15 years. And foreign bank deposit has strong positive relationship with fixed asset investment. Equity investment has moderate positive relationship with fixed asset investment and fixed asset investment has moderate negative relationship with GDP.

Table 4. 2Correlation Analysis of Variables

	ROE	NBE bill	FBDE	IFAI	INF	GDP	CAR
ROE	**1.000**						
NBE bill	**-0.1321**	**1.000**					
FBD	**0.4446**	**0.2635**	**1.000**				
EI	**0.2964**	**0.4287**	**0.5890**	**1.000**			
FAI	**0.3361**	**0.3784**	**0.6197**	**0.4782**	**1.000**		
INF	**0.0645**	**-0.2307**	**0.0036**	**-0.1609**	**-0.0435**	**1.000**	
GDP	**0.1726**	**-0.6386**	**-0.1646**	**-0.4085**	**-0.3584**	**-0.1269**	**1.000**
CAR	**0.8667**	**-0.1462**	**0.4240**	**0.3910**	**0.4208**	**0.0392**	**0.0633**	**1.000**

Source: - annual report of sample commercial bank computed using stata 16 (2006-2020)

4.3. Regression model tests

For valid hypothesis testing and to make data available for reliable results, the test of assumption of regression model is required. Accordingly, the study has gone through the

most critical regression diagnostic tests consisting of normality, multicollinearity, heteroskedasticity, and model specification tests accordingly.

4.3.1 Model Selection (Random Effect versus Fixed Effect Models)

As Brooks (2008) referring on his book, there are broadly two classes of panel estimator approaches that can be employed in financial research: fixed effects models and random effects models. The choice between both approaches is done by running a Hausman test. Thus, to determine whether the fixed effects are necessary or not this study run the Hausman specification test as recommended by Brooks (2008) and others. The hypothesis for the model selection test was formulated as follow;

H0: Random effects model is appropriate.

H1: Fixed effects model is appropriate.

$\alpha = 0.05$

Decision Rule: Reject H0 if P value is less than significant level 0.05. Otherwise, do not reject H0.

Table 4. 3Hausman test

variable	(b) fe	(B) re	(b-B) difference	Sqrt(diag(v b-v B))
Nbebill	-0.0099163	-0.0066745	-0.0032418	0.0018254
Fbd	0.0120443	0.0122354	-0.0001912	0.0020567
Ei	0.010985	0.0094279	0.0015571	0.0021214
Fai	-0.008345	-0.005072	-0.0032729	0.0032303
Inf	0.05188805	0.0682334	-0.016353	.
Gdp	0.8752998	1.15635	-0.2810505	0.144036
car	0.0240566	0.0244042	-0.0003476	0.0009783
b= consistent under Ho and Ha;obtained from xtreg				
B = inconsistent under Ha, efficient under Ho;obtained from xtreg				
Test Ho: difference in coefficients not systematic				
Chi2(7) = (b-B)'[(v b-v B)(-1)](b-B) = 19.11				
Prob>chi2 = 0.0079				
(v b-v B is not positive definite				

Source: annual report of sample commercial bank computed using stata 16 (2006-2020)

The Hausman model selection test for this study has a p-value of 0.0079 for the regression models. Thus, the null hypothesis which is random effect model appropriate was rejected and the study used the fixed effect model.

4.3.2 Tests for the Classical Linear Regression Model (CLRM) assumptions

To maintain the data validity and robustness of the regressed result of the research, the basic classical linear regression model (CLRM) assumptions must be tested for identifying any misspecification and correcting them so as to argument the research quality (Brooks,2008). There are different CLRM assumptions that need to be satisfied and that are tested in this study, which are: errors equal zero mean test, heteroscedasticity, normality, multicollinearity and model specification test.

I. The errors have zero mean (E(ut) = 0)

This part shows the test for the assumptions of classical linear regression model (CLRM) namely the error have zero mean, heteroscedasticity, normality and multicollinearity.

Relay on Brooks (2008), the first assumption required is that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated. Hence, study's regression model has included a constant term, so that this assumption was not violated.

II Test for heteroskedasticity assumption (var(ut) = σ2 <∞)

As indicated by Brooks (2008), this assumption requires that the variance of the errors to be constant. If the errors do not have a constant variance, it is said that the assumption of homoscedasticity has been violated. This violation is termed as heteroscedasticity. In this study test was used to test for existence of heteroscedasticity across the range of explanatory variables. As show in below Table, when heteroskedasticty test was made there is evidence for the presence of heteroscedasticity, since the chi^2 p-value is statistically significant at 5%, the model has heteroskadisticity problem. So, original pooled OLS regression is no more efficient. In order to solve heteroskedasticity problem the study used robust fixed effect model.

H0: The variance of the error is homoscedasticity

H1: The variance of the error is heteroscedasticity

Table 4. 4Heteroskedasticity test

Breusch –pagan /cook –weisberg test for heteroskedasticity
Ho: constant variance
Variables: fitted values of roe
Chi2(1) = 7.65
Prob > chi2 = 0.0057

III.Test for multicollinearity

It is tested using VIF (variance inflation factor). By rule of thumb VIF>10 implies multicollinearity is a series problem .That is, there is interdependence among explanatory variable (one explanatory variable is a function of others). If VIF value is < 10 multicollinearity is not a problem implies there is no interdependence among explanatory variables. Table 4.5 below shows the multicollinearity test result. Since all the VIF values are less than 10 then, the data used has no multicollinearty problem.

Table 4. 5Multicollinearity

Variable	VIF	1/VIF
NBE bill	2.72	0.368006
FBD	1.96	0.510249
EI	1.90	0.525378
FAI	2.02	0.494777
INF	1.31	0.760620
GDP	2.60	0.384930
CAR	1.67	0.599799
Mean VIF	2.03	

Source: - annual report of sample commercial bank computed using stata 16 (2006-2020)

IV .Test for normality (errors are normally distributed (ut ~ N(0,+2))

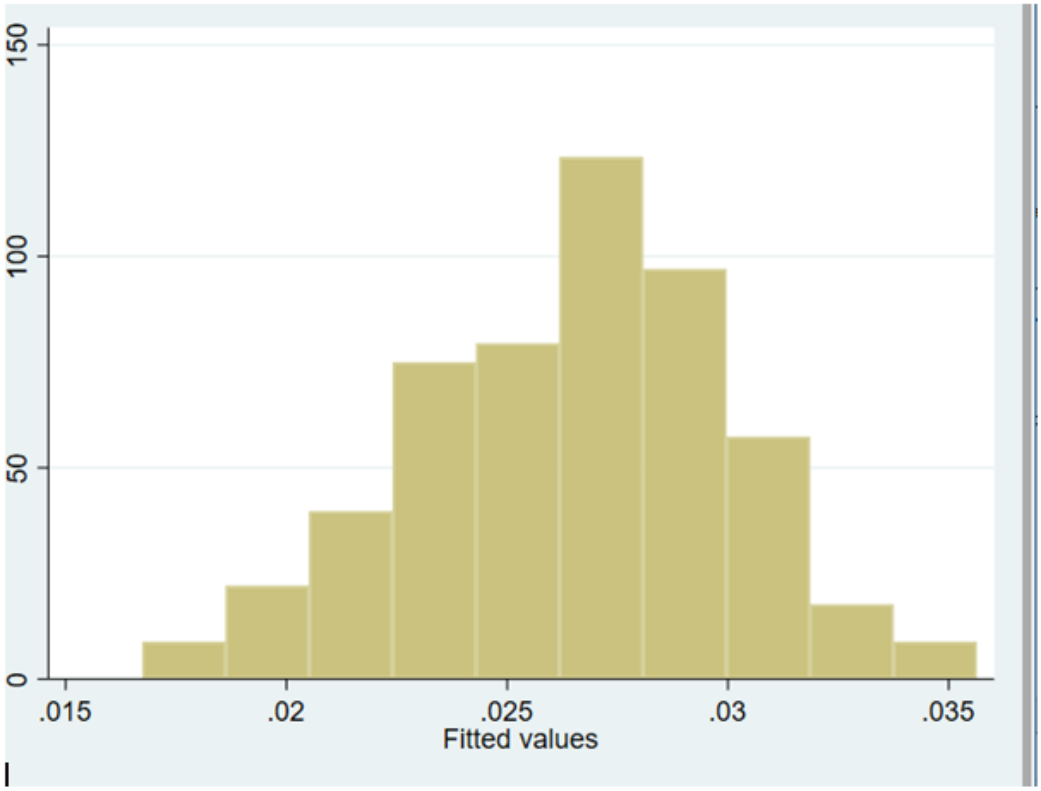
The normality test was made by using Anderson-darling (Skewnesskurtosis)

And Shapiro-Francia and Chapiro-Wilk tests

Table 4. 6Normality test

Variable	observation	W	V	Z	Prob >Z
Residual	1 2 0	0.99275	0.697	-0.807	0.79025

Figure 4. 1normality figure



As shown in figure 4.1 since, the histogram is bell-shaped and the Shapiro wilk statistic is not significant. This means that the p-value given at the bottom of the normality test screen should be bigger than 0.05 to not reject the null of normality at the 5% level so, the residuals are normally distributed in this study, concluded that there is no the problem of normality on ROE model.

4.4. Resultof Regression Analysis

This section presents the empirical findings of the study. To identify the appropriate methodology, the study performed Hausman test. It is used to test whether fixed-effect model

versus the random effect model is the best model. Therefore, the test results show that fixed effect model is appropriate as the test. Under the following regression result the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P- Valueindicates at what percentage or precession level of each variable is significant. The R-square value measures how well the regression model explains the actual variations in the dependent variable(Brooks,2008).R- square statistics and adjusted –square statistics of the model was 79% and 78% respectively. The adjusted R –square value 78% indicates the total variation of banks performance was explained by the variable in the model. Thus these variables collectively, are good explanatory variable to identify the effect of investment on banks performance.

In the regression result, FBD, EI, INF, GDP and CAR, have a positive impact on ROE and NBE bill and FAI has a negative impact on ROE. On the other NBE bill, FBD, EI and CAR are significant impact on return on equity. This is because the P value of the stated variables is less than 5% significance level valued 0.028, 0.021, 0.028, and 0.0000 for NBE BILL, FBD, EI and CAR respectively. However , FAI,INF and GDP have insignificant impact on return on equity because of the P value is greater than 5% significant level, value 0.146,0.393 and 0.108 for FAI,INF and GDP respectively.

Discussion

$$ROE_t = -0.2018 - 0.0099NBEBILL_t + 0.012FBD_t + 0.0109EI_t - 0.00834FAI_t + 0.05188INF_t + 0.8752GDP_t + 0.0240CAR_t + \varepsilon$$

National bank bill (NBE BILL) and return on equity (ROE)

Table 4.7 below depicted that, the relationship between NBE bill and ROE is negative and significant. More specifically the coefficient between NBE bill and ROE is -0.0099163 with a p-value of 0.028 .This result implies that the national bank bill has anunfavourable effect on the return on equity of commercial banks in Ethiopia. As result the first hypothesis (H1) that national bank bill has negative and significant effect on financial performance of commercial banks in Ethiopia is not rejected. The result of this study is consistent with the result of(AKALU, 2016) ,Eden (2014), Yodit (2012) and Tesfaye (2014) that NBE bill has negative and statistically significant relationship with financial performance of banks.

Holding other independent variables constant at their average value, when national bank bill (NBE bill) increased by one percent, return on equity (ROE) of sampled Ethiopian

commercial banks would be decrease by 0.99%, and statistically significant at 5% of significance level.This affect banks investment in different ways:- First and for most banks are profits seeking organization and their first priority is to generate income. The main area for the banks to generating income is giving loan to creditors and collecting higher amount of interest. This regulation limits banks capacity to give loan to creditor because NBE collects 27% of their total disbursement in bill purchase. Secondly As indicated in different prior research the interest rate that is 3% is the small Eden (2014) and Shibiru (2014). The rate is even smaller than what banks paid as interest to their depositors that is 5%. The effect of the interest rate directs the banks investment to be negative.

The other suggestion is that due to the higher amount of money invested in bill purchase the banks are losing their benefit if it would have been invested in relatively high interest bearing investment. If banks lend their money to borrowers with in interest rate of 12%15% they can generate higher interest income but NBE bill only generate 3% return which result in 9%-12% opportunity cost. Even though the government implements this regulation to support other prior sector finance it decrease the loan facility that the banks can give to private investors. This will limit the amount of money that banks can give to private investors. Due to this the private investors will be discourage to involve in huge investment area. This lead to a decrease in the overall investment in the country. Finally NBE implement this directive on private commercial banks in this case the commercials banks of Ethiopian that is the only government banks can rise it capital. Even though CBE purchase other government bills with different interest rate and maturity date it does not obligated to purchase this bill. So CBE can invest this money to other area of investment or can lend the money to customers. This leads CBE market share to increase in the market and decrease private bank level of competition, this beings more government owned banking system.

Foreign bank deposit bank (FBD) and return on equity (ROE)

Table 4.7 presented that, the relationship between FBD and ROE is positive and significant. More specifically the coefficient between FBD and ROE is 0.012043 with p- value of 0.021. This result implies that the foreign bank deposit has a favourable effect on the return on equity of commercial banks in Ethiopia. As a result the second hypothesis (H2) that foreign bank deposit has positive and significant effect on financial performance of commercial banks in Ethiopia is not rejected. The result of this study is consistent with the result of

(Ghassan, Talal, Khalaf, & Yaseen, 2015) and (AKALU, 2016)that FBD has positive and statistically significant relationship with financial performance of commercial banks.

Holding other independent variables constant at their average value, foreign bank deposit (FBD) increased by one percent, return on equity (ROE) of sampled Ethiopian commercial banks would be increase by 1.2 percent and statistically significant at 5% level of significant.The implication of this result is that the national banks of Ethiopia do not restrict banks on the amount of money that they can deposit on foreign banks. But the banks should report there amount of deposit on their liquidity position report every week (NBE directive NO SBB/57/2014). This freedom allows the banks to deposit there excess cash, that do not affect their liquidity on foreign banks in order to earn an additional interest income. This implies that banks with more foreign deposit might have earning much more interest income. When Ethiopian banks have started to deposit their money on foreign banks the liquidity position increase that they can decrease the risk of liquidity.

Foreign deposit is one of an investment area that Ethiopian commercial banks are permitted to involve. As indicated in the above regression result amount of foreign deposit has a significant effect on banks profitability in a positives way. When the amount of deposit increases the performance of the banks also increase. This increase in performance can be seen in many ways:- First to deposit money in foreign banks the Ethiopian banks should open an account on foreign banks. Opening of accounts lead them to become a customer of that banks and will have all the opportunity to receive services that the foreign banks give to its customers and have safe and secure global access to their money. Secondly depositing money in foreign banks can links the Ethiopian banks to engage in international market and easily facilitates letter of credit to his customer. This situation give the banks opportunity of expand their service in order to deliver to their customers. The banks will communicated with foreign bank on payment and delivery of goods on behalf of their customers. Giving this service will lead banks to earn higher profit. Finally According to NBE one of the liquid assets on banks is foreign deposit. If the bank invested on foreign deposit it leads to decrease liquidity risk. So an increase in bank liquidity ratio will decrease credit risk of banks. On the other side banks with higher liquidity ratio will give loan to their customers and earn higher interest income.

Equity investment (EI) and return on equity (ROE)

Table 4.7 below depicted that, the relationship between EI and ROE is positive and significant. More specifically the coefficient between EI and ROE is 0.010985 with a p – value of 0.028.This result implies that the equity investment has favourable effect on the return on equity of commercial banks in Ethiopia. As result the third hypothesis (H3) that equity investment has negative and insignificant effect on financial performance of commercial banks in Ethiopia is rejected. The result of this study is consistent with the result of Kuri(2012) and Abdikadir(2017) that equity investment has positive and statistically significant relationship with financial performance of commercial banks.On the other hand the result of this study isnot consistent with the result of Biniyam(2018), Eskdar(2016) and Tsion(2018) that equity investment has negative and statistically insignificant relationship with performance of commercial banks.

Holding other independent variables constant at their average value, when equity investment (EI) increased by one percent, return on equity (ROE) of sampled Ethiopian commercial banks would be increased by 1.09 %, and statistically significant at 5% of significance level.The possible reason for the positive and significant association between EI and ROE could be attributed to the fact that; First the control banks risk which is carried out by the authorities under provision and banks capital regulation does not outweigh the higher returns obtained from investment in banks performance, and Bank shareholding allows the banks to take advantage of its lending relationship with the firm .In fact this is the main benefit of the bank equity investment because ,the researcher do not observe differences in banks profitability caused by capital gains or losses derived from equity transaction .Boyd et al (1998) also suggest an additional reason for a positive influence of equity investment on banks performance based on the idea that bank equity positions on non-financial firms strengthen the banks' ability to extract surplus from borrowers.

Fixed Asset Investment (FAI) and Return Equity (ROE)

Table 4.7 belowpresented that, the relationship between FAI and ROE is negative and insignificant. More specifically the coefficient between FAI and ROE is -0.008345 with a p-value of 0.146.This result implies that the fixed asset investment has unfavourable effect on the return on equity of commercial banks in Ethiopia .As a result the fourth hypothesis (H4) that fixed asset has positive and significant effect on financial performance of commercial banks in Ethiopia is rejected. The result of this is study consistent with the result of Abdikadir(2017) that fixed asset has negative and statistically insignificant relationship with

financial performance of commercial banks. On the other hand this result is inconsistent with the result of Olantuji and Adegbite(2014), Akalu(2016), Biniyam(2018) and Tsion(2018) that fixed asset investment has positive and statistically insignificant relationship with performance of commercial banks.

Holding other independent variables constant at their average value, when fixed asset (FA) increased by one percent, return on equity (ROE) of sampled Ethiopian commercial banks would be decreased by 0.83 percent and statistically insignificant at 5% level of significant. The national bank of Ethiopia has a directive on the investment of fixed asset like building and land. No bank shall invest more than 10% of its net worth in real estate acquisition and development other than for own business premises without approval of that national bank (NBE directive No.SBB/60/2015.The relationship is negative and insignificant, this could be attributed to the fact that; The commercial banks choice of investment on fixed asset investment is based on the price and pressure from manufacturing rather than quantity and utility. As well as the commercial banks cost of maintenance and repair of fixed asset might be high. This may lead to fixed asset reduced the profitability of commercial bank.

Control variable

Inflation and ROE

Table 4.7 below depicted that, the relationship between INF and ROE is positive and insignificant .More specifically the coefficient between INF and ROE is 0.0518805 with a p-value of 0.393. This result implies that inflation has favourable effect on the return on equity of commercial banks in Ethiopia. This result is consistent with the findings of Ongore (2013) ,Othori (2013),Jamsmine (2011) that inflation has positive and insignificant relationship with financial performance of commercial banks.

Holding other independent variables constant at their average value, when inflation(INF) increased by one percent, return on equity (ROE) of sampled Ethiopian commercial banks would be increased by 5.18%, and statistically insignificant at 5% of significance level.The possible reason for the positive association between INF and ROE could be attributed to the fact that, a price level which is changing at constant proportional rate, fully anticipated and acted up on by all economics actors act as a good signal to commercial banks for investment decision.

GDP and return on equity (ROE)

Table 4.7 below depicted that, the relationship between GDP and ROE is positive and insignificant. More specifically the coefficient between GDP and ROE is 0.8752998 with a p-value of 0.108. This result implies that the growth domestic product has favourable effect on the return on equity of commercial banks in Ethiopia .This result is consistent with Roa and Lakew(2012),(imad z ramadan 2011),Ongore (2013) that GDP has positive and insignificant relationship with performance of commercial banks. Holding other independent variables constant at their average value, when GDP increased by one percent, return on equity (ROE) of sampled Ethiopian commercial banks would be increased by 8.75%, and statistically insignificant at 5% of significance level

Capital Adequacy (CA) and return on equity (ROE)

Table 4.7 below depicted that, the relationship between CAR and ROE is positive and significant. More specifically the coefficient between CAR and ROE is 0.024056 with a p-value of 0.000.This result implies that the capital adequacy has favourable effects on the return on equity on equity of commercial banks in Ethiopia. This result is consistence with Chris (2010), (Ayele, 2012),Mohammad and Tekeste (2012) and Birhanu (2012) that capital adequacy has positive and statistically significant relationship with performance of commercial banks. On the other hand this result is inconsistent with (Allen N Berger, 1997),(Aremu, 2013) that capital adequacy has negative and statistically significant relationship with performance of commercial banks.Holding other independent variable constant at their average value ,when capital adequacy increased by one percent ,return on equity (ROE) of sampled Ethiopia commercial banks would be increased by 2.4%, and statistically significant at 5% of significance level.

Table 4. 7Robust Fixed effect Regression Result

Variable	Coefficient	Std.error	t statistic	p>(t)	(95% conf.interval)	
NBE bill	-0.0099163	0.0035787	-2.77	0.028	-0.0183785	-0.001454
FBD	0.0120443	0.0040665	2.96	0.021	0.0024284	0.0216601
EI	0.010985	0.0039798	2.76	0.028	0.0015741	0.0203958
FAI	-0.008345	0.0050987	-1.64	0.146	-0.0204014	0.0037115
INF	0.0518805	0.0569636	0.91	0.393	-0.082817	0.1865779
GDP	0.8752998	0.4754672	1.84	0.108	-0.2490016	1.999601
CAR	0.0240566	0.0024365	9.87	0.000	0.0182953	0.0298179
CONS	-0.2018541	0.210619	-0.96	0.369	-0.6990445	0.2953364

R-squared =0.79 **F-statistic = 61.41**

Adjusted R- Squared 0.78 **prob (F-statistic) = 0.0000**

Source: - annual report of sample commercial bank computed using stata 16 (2006-2020)

Table 4. 8 Summary of hypothesis testing

Variables	Exprcted result	Actual result	Decision
National bank bill	Neg and sign	Neg and sign	Accept
Foreign bank deposit investment	Pos and sign	Pos and sign	Accept
Equity investment	Neg and sign	Pos and sign	Reject
Fixed asset investment	Pos and sign	Neg and ins	Reject

Where,pos = indicates positive ,sign = significant ,neg = negative , ins = insignifica

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

The preceding chapter presented the results and discussion, while this chapter deals with conclusions and recommendations based on the findings of the study. Accordingly this chapter is organized into two subsections.

5.1. Conclusion

The main objective of this study is to investigate the effect of investment on the financial performance of commercial banks in Ethiopia based on panel data analysis on the period from 2006 to 2020.Specifically the researcher examined the effect of bank specific (internal) and macroeconomic (external) on effect of investment on financial performance of commercial banks . The bank specific variable include national bank bill, foreign bank deposit, equity investment ,fixed asset and capital adequacy. The macroeconomic variable on the other side include gross domestic product and inflation. The bank specific data was collected from audited annual financial reports of the sampled commercial banks and macroeconomic data were collected from the national bank of Ethiopia .

Descriptive statistics,correlation analysis, and fixed effect regression model were used to identify and examine the effect of investment on financial performance of commercial banks in Ethiopia by using return on equity and advance as dependent variable . Before performing the regression analysis,the five CLRM assumption of the mean value of error term is zero ,homoscedasticity,model spefication,absence of multicollinearity and normality were tested and fulfilled in this study.Hausman test was used to choose the appropriate model and a fixed effects model was chosen. For analysis,Stata version 16 was used.

Concerning the regression result measured by return on equity ,Investing in foreign deposit has a positive and significant effect on the performance of commercial banks. This implies that when banks increase the amount of foreign deposit it increases their performance as well as Equity investment has positive and significant effect on the performance of bank. This is due to the level of percentage that the government allowed banks to invest in other companies stock and the banks willingness in investing on other companies share. On the other hand NBE bill purchase has a negative and significant effect on the performance of commercial banks. This implies that when banks increase the amount of NBE bill it decrease their performance and Fixed asset investment has an insignificant effect on the performance of commercial banks. This implies that fixed asset investment has a indirect relationship with

performance. As banks invested on fixed asset like building and other intangible assets either for their business or in other industries they can earn less profit.Finally concerning control variable capital adequacy has a positive and significant effect and inflation as well GDP has positive but insignificant effect on the performance of commercial banks.

5.2. Recommendations

Based on the major findings of the study, the researcher indicated the following recommendations.

NBE requires each bank to purchase bill which is 27% of their total loan with 3% interest rate. This regulation affects banks profitability, therefore it is suitable if policy makers minimize either the percentage of total loan required to purchase the bill or increase the interest rate paid for the bill. In addition the analysis indicated that foreign deposit were significant related to performance of banks. So Ethiopian commercial banks with excess cash should deposit their money on foreign banks in order to generate additional income and also to get addition experience and service with foreign banks. The analysis indicated that equity investment were significant related to performance of commercial banks. So, Ethiopian commercial banks should invest in equity investment in order to generate additional income.

The result examined that capital adequacy ratio has positive and significant association with financial Performance of commercial banks. For this reason, commercial banks should work to have high capital adequacy ratio to minimize the need for external funding by maximize their net asset, for instance selling additional stock for the existing as well as new shareholders.

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APPENDIX

APPENDIX 1. ; Descriptive Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
roe	120	.2073751	.118749	.0150692	.60258
nbebill	120	20.37597	1.90209	14.6549	22.9978
fbd	120	20.0279	1.638009	15.60727	23.9955
ei	120	18.30399	2.732487	14.2678	26.98023
fai	120	19.64651	2.126876	15.42495	25.99854
inf	120	.1577333	.0941042	.028	.364
gdp	120	.0977933	.0155573	.061	.118
car	120	8.141355	4.369875	.7985454	24.13554

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APPENDIX 2. Correlation Analysis

	roe	nbebill	fbd	ei	fai	inf	gdp
roe	1.0000						
nbebill	-0.1321	1.0000					
fbd	0.4446	0.2635	1.0000				
ei	0.2964	0.4287	0.5890	1.0000			
fai	0.3361	0.3784	0.6197	0.4782	1.0000		
inf	0.0645	-0.2307	0.0036	-0.1609	-0.0435	1.0000	
gdp	0.1726	-0.6386	-0.1646	-0.4085	-0.3584	-0.1269	1.0000
car	0.8667	-0.1462	0.4240	0.3910	0.4208	0.0392	0.0633

	car
car	1.0000

APPENDIX 3. Hausman Test

. hausman fe re

	Coefficients (b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
nbebill	-.0099163	-.0066745	-.0032418	.0018254
fbd	.0120443	.0122354	-.0001912	.0020567
ei	.010985	.0094279	.0015571	.0021214
fai	-.008345	-.005072	-.0032729	.0032303
inf	.0518805	.0682334	-.016353	.
gdp	.8752998	1.15635	-.2810505	.144036
car	.0240566	.0244042	-.0003476	.0009783

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 19.11
Prob>chi2 = 0.0079
(V_b-V_B is not positive definite)

APPENDIX 4. Test of Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of roe

chi2(1) = 7.65
Prob > chi2 = 0.0057

APPENDIX 5. Test of Normality

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swilk residual
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Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
residual	120	0.99275	0.697	-0.807	0.79025

APPENDIX 5. Robust Fixed effect Regression

roe	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
nbebill	-.0099163	.0035787	-2.77	0.028	-.0183785	-.001454
fbd	.0120443	.0040665	2.96	0.021	.0024284	.0216601
ei	.010985	.0039798	2.76	0.028	.0015741	.0203958
fai	-.008345	.0050987	-1.64	0.146	-.0204014	.0037115
inf	.0518805	.0569636	0.91	0.393	-.082817	.1865779
gdp	.8752998	.4754672	1.84	0.108	-.2490016	1.999601
car	.0240566	.0024365	9.87	0.000	.0182953	.0298179
_cons	-.2018541	.2102619	-0.96	0.369	-.6990445	.2953364
sigma_u	.03288494					
sigma_e	.0510986					
rho	.29287021	(fraction of variance due to u_i)				

APPENDIX 6. Test of Multicollinerity

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. vif
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Variable	VIF	1/VIF
ei	2.39	0.418343
gdp	2.27	0.440051
nbebill	2.21	0.451969
fbd	2.20	0.455242
fai	2.10	0.476994
car	1.70	0.588396
inf	1.31	0.763645
Mean VIF	2.03	