Addis Ababa University

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The effect of foreign exchange risk management practice on financial performance of private commercial banks in Ethiopia

By

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Statement of declaration

I, Sirak Tadesse, declare that this thesis entitled “the effect of foreign exchange risk management practice on financial performance of private commercial banks in Ethiopia” submitted in partial fulfillment of the degree of Masters of Business Administration in Finance is an outcome of my own effort and study and that all sources of materials used for the study have been duly acknowledged. I have produced it independently except for the guidance and suggestion of the thesis advisor.

I also declare that this thesis is my original work and has not been presented for a degree in any other university.

Sirak Tadesse

Signature

Date:

Addis Ababa University

School of Graduate studies

This is to certify that the thesis prepared by Sirak Tadesse entitled: **The effect of foreign exchange risk management practices on financial performance of private commercial banks in Ethiopia** and submitted in partial fulfillment of the requirements for the degree of masters of Business Administration in finance complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

Approved by:

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External examiner: _____ signature_____ date_____

Advisor: Temesgen Worku (PhD)_____signature_____ date_____

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List of Acronyms

BCBS: Basel Committee on Banking Supervision

BIS: Bank for International Settlements

BoD: Board of Directors

GDP: Gross Domestic Product

FX: Foreign Exchange

IMF: International Monitory Fund

NBE: National Bank of Ethiopia

NEER: Nominal Effective Exchange Rate

NR: Non Residence

REER: Real Effective Exchange Rate

ROA: Return on Asset

ROAA: Return on Average Asset

VaR: Value at Risk

Abstract

Exchange rate is one of the macroeconomic variables that could influence banks profitability; it may affect directly or indirectly. Foreign exchange risk arises when a bank holds asset or liability in foreign currencies and impacts the earnings and capital of banks due to fluctuations in the exchange rates. The objective of the study was to examine the effect of foreign exchange risk management practice adopted by private commercial banks in Ethiopia on their financial performance. An explanatory research design was used for the study, with the target population of all the 16 private commercial banks in Ethiopia. The study used both primary and secondary source of data for the analysis. The primary data was collected by use of questionnaires and five point likert scales was used. The secondary data was collected by use of published reports as audited financial statements of private commercial banks. For this study there are four independent variables: FX policies and procedures, management information system, internal control system, the role of top management and uses financial performance (ROA) as a dependent variable. The researcher employed research analysis tool STATA. Regression analysis was used in the study and the results of the study were presented using tables and graphs. The research result found FX policies and procedures; internal control system and the role of top management have positive significant effect on financial performance of private commercial banks whereas, management information system was found to have positive but statistically insignificant effect on financial performance of private commercial banks. The study recommended private commercial banks to have continuous review of foreign exchange risk management practice they adopt and should give more attention to risk management in order to derive greater benefit from their risk management efforts.

Key words: Bank, Foreign exchange, Risk management, Financial performance, Ethiopia.

CHAPTER ONE
INTRODUCTION

1.1. Background of the study

Banks play a critical role in economic development of countries. They channel funds from depositors to investors through their financial intermediation role. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. In order to provide a sustainable intermediation services in the economy and reasonable reward for the shareholders, banks need to be profitable. They can do so, if they generate necessary income to cover their operational cost. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth (Ongore and Kusa, 2013).

Banks can be affected by internal and external factors which can be classified into bank specific (internal) and macroeconomic variables (Ongore and Kusa, 2013). The internal factors are the individual bank characteristics that affect the profitability of banks and these factors are basically influenced by the decision of management and board. The external factors are a sector wide or country wide factors, which are beyond the control of the company. Generally, the bank specific factors may relate to a bank's overall managerial practices on different operational aspects of the bank while the external factors are related to the industry and macroeconomic variables; within which the bank operates Exchange rate is one of the macroeconomic variables that could influence banks profitability; it may affect individual banks directly and/or indirectly. It directly affects the banks through the structure of assets and liabilities denominated in foreign currency, off balance sheet exposure, and non-asset based services (Martin and Mauer, 2003).When assets and liabilities are invoiced in foreign currency, exchange rate variations directly affect the values of the assets and the liabilities in terms of domestic currency, through recognition of gain or loss. The direct effect occurs when the banks do not hold the same amount of foreign currency assets and foreign currency liabilities. The indirect effects of the exchange rate on the banks performance can be channeled through its effect on the demand for loans, the extent of competition, and other aspects of banking conditions (Chamberlain etal., 1997).Exchange rate variation might affect the price of domestic products, import, export, and FDI etc. This in turn

might influence banks portfolio and operation in different ways. Some studies (Rao and Lakew, 2012; Kanwal and Nadeem, 2013; Pan and Pan, 2014; Ongore and Kusa, 2013; kiganda, 2014) have examined the effect of these internal and external factors on the banks profitability. However, very few of these studies have assessed the impact of exchange rate (one of the macroeconomic factors) on banks profitability.

The return on Assets magnitude relation (ROA), conjointly referred to as revenue on investment, is a crucial profitableness magnitude relation as a result of it measures the potency with that the corporate is managing its investment in assets and utilizing them to get profit. It measures the quantity of profit attained relative to the firm's level of investment in total assets. The return on asset ratio is a key to the asset management category of monetary ratios (Brealey *etal,* 2008). Dufey (2005) contend that risk management departments that lack well trained personnel to man the departments are less effective and therefore the company was other time is susceptible to such currency risks.

Foreign exchange risk arises when a bank holds asset or liability in foreign currencies and impacts the earnings and capital of banks due to fluctuations in the exchange rates. no one can predict what the exchange rate will be in the next period it can move in either upward or downward direction regardless of what the estimates and predictions where. This uncertain movement is undesired and unanticipated direction. The commercial bank is exposed to foreign exchange risk only up to the extent to which it has not hedged or covered its position. Wherever there is any uncertainty that the future exchange rates will affect the value of financial instruments, there lies the foreign exchange risk of a commercial bank (Sabri, 2011).

Due to the growth of international trade of the country and the depreciating trend of home currency may lead banks for FX risk. Foreign Exchange risk does not lie where the future exchange rate is predefined by using different instruments and tools by the bank. The function and process of risk management in banks is complex, so the banks are trying to use the simplest and sophisticated models for analyzing and evaluating the risks. In a scientific manner, banks should have expertise and skills to deal with the risks which are involved in the process of integration. These necessity calls for comprehensive assessment on foreign exchange risk management practice and its effect on banks financial performance lays the justification of this study.

1.2. Statement of the Problem

Business organizations and firms operate in an environment that is characterized by numerous variables. These variables are dynamic in nature two calls for corporate planning and management of foreign exchange risk in an organization in order to cope with the challenges facing foreign exchange risk management. It is widely acknowledged today that the rate, magnitude and complexity involves in the management of risk has not been able to achieve their desired goal over the years the translation involving the use of foreign exchange has increased so also the increase in the risk involves in foreign exchange transaction. The problem is how to effectively manage these foreign exchange risks. With accumulated transactions using foreign currency, the fluctuations in exchange rates tend to cause vital foreign exchange risk. Therefore, the management of the forex risk ultimately affects the performance of the bank (Mbutor, 2010).

Risk management as commonly perceived does not mean minimizing risk; rather the goal of risk management is to optimize risk reward trade off. Successful risk taking with the essence of risk management, is not avoiding or eliminating risk but deciding which risks exploiting, which ones to let pass through and which ones to avoid or hedge. As risk is inherent particularly in financial institutions and banking organizations risk management is important for banking institutions. Whenever a commercial bank deals in foreign currency, it is exposed to risk of exchange rate. When these transactions are done on behalf of customers, the risk is also transferred to them and the bank has no exposure. Bank's assets & liabilities in foreign currencies or assets and liabilities in other countries give rise to foreign exchange risk which has to be managed by the bank (Sabri, 2011).

All banks in Ethiopia are indirectly involved in international trade by providing international banking services for their customers. And thus, the importance of foreign exchange risk management cannot be neglected for banking industry. Because Commercial banks, actively deal in foreign currencies holding assets and liabilities in foreign denominated currencies, are continuously exposed to foreign exchange risk. Foreign exchange risk exposure of a commercial bank occurs during a period in which the bank has a foreign currency open position, both on and off-balance sheet, in spot markets (NBE, 2010) Because of the fast-changing nature of a bank's transaction volume and the complexity of risk management, banks engaged in transaction must

have market risk measurement and management systems that are conceptually sound and that are implemented with high integrity.

There are lots of literatures have been carried out addressing different types of risks particularly in the banking industry. Most of the literatures on foreign exchange risk management practices of banks in Ethiopia are in a different ways. For instance, the impact of exchange rate on profitability of commercial banks in Ethiopia (Tadesse, 2015); financial risks and profitability of Commercial banks (Eneyew, 2013); assessing determining factors of Best Risk Management Practice of Ethiopian Commercial Banks (Worku, 2016) and most of the studies suggest that exchange rate has statistically significant negative impact on the profitability of commercial banks in Ethiopia. And many other studies are conducted outside the country Foreign Exchange Risk Management in Commercial Banks of Pakistan (Sabri, 2011), the effect of foreign exchange risk management on the financial performance of commercial banks in Kenya (Dons, 2014). But these studies did not explain about the practices of foreign exchange risk management in private commercial banks in Ethiopia and its effect on their financial performance.

Due to the fast growth of the import and export business volume of the country in which commercial banks play an intermediary role may increase the exchange rate risk exposure of the Ethiopian commercial banks. This is due to the fact that the banks may hold large amount of foreign currency reserve to meet the demands of their customers. Additionally, as already known that Ethiopian Birr has been continuously depreciating against major hard currencies and this depreciating trend may leads to foreign exchange risk but the way of private commercial banks foreign exchange risk management practices and its relationship with banks financial performance (profitability) is not clearly known.

It is therefore, the researcher found the foreign exchange risk management practice as an interesting topic and essential to have better understanding about it and its effect on financial performance of commercial banks in Ethiopian. By referring the national bank of Ethiopia (NBE) risk management guideline the research tries to identify the effects of foreign exchange risk management practice such as (policies & procedures, management information system, internal control and roles of top management) on the financial performance of commercial banks which is measured by ROA.

1.3. Research Questions

Based on the above statement the study was guided by the following research questions:

1. What are the methods and practice used by commercial banks to manage foreign exchange risk?
2. What is the relationship between foreign exchange management procedures and financial performance of private commercial banks in Ethiopia?

1.4. Objectives of the study

1.4.1. General objective

The general objective of the study is to examine the effect of foreign exchange risk management practice on private commercial banks financial performance in Ethiopia.

1.4.2. Specific objectives

Specifically the study has the following objectives

1. To examine the effect of foreign exchange risk management policies and procedures on the financial performance of commercial banks
2. To examine the effect of management information system regarding foreign exchange risk management on financial performance of commercial banks.
3. To examine the effect of internal control system regarding foreign exchange risk management on financial performance of commercial banks.
4. To examine the effect of top management role regarding foreign exchange risk management on the financial performance of commercial banks

1.5. Research hypothesis

An efficient and healthy banking system is a prerequisite for sustainable economic growth of a country. In this context, effective risk management practices enable the banking industry to have effective financial performance, to build public trust and confidence in the institutions which is necessary for mobilizing private savings for investment to facilitate economic growth. Therefore, an effective risk management framework is a prerequisite for banks to achieve their own business objectives and also play their role in the economic growth of the country. The main

elements of FX risk management framework that apply to banking institutions are FX policies & procedures, FX management information system, internal control system , active involvement of the Board of Directors(BoD) & senior/top management in the formulation and oversight of risk management processes. Ideally, banks risk management framework should strive to cover the full spectrum of risks by analyzing them from both business and enterprise level perspectives. Each banking institution should tailor its risk management (Ashraf, 2014). Based on the research questions and objectives of the study, hypothesis is developed and tested to show the degree of relationships between financial performance (ROA) and each of the four FX risk management practices.

Hypothesis to be tested were:

H_1= policies and procedures of foreign exchange risk management has significant effect on financial performance of commercial banks.

H_2= management information system regarding foreign exchange risk management has significant effect on financial performance of commercial banks.

H_3= Internal control system regarding foreign exchange risk management has significant effect on financial performance of commercial banks.

H_4= the role of top/senior management on foreign exchange risk management has significant effect on financial performance of commercial banks.

1.6. Scope of the study

The study is conducted in all sixteen private commercial banks operating in Ethiopia. The main area covered by this study is foreign exchange risk management practice adopted by private commercial banks in Ethiopia and focus on its relationship with financial performance of private commercial banks.

1.7. Significance of the study

The intended contribution of this paper is to increase the knowledge in the area of foreign exchange risk management. The analysis is assumed to serve as a modest start and contributes to the existing knowledge.

The results of this study are believed to increase knowledge about foreign exchange risk management. The literature, findings and recommendations will complement the existing knowledge on foreign exchange risk management. It will offer an insight in to how foreign exchange risk management affects financial performance of commercial banks. It also adds to existing literature on the subject area and stimulates further exploration in the area.

The study result may also be a useful input for bank regulators and supervisors to induce banks to have proactive exchange rate risk management strategy that will have positive effect on banks profitability. This study will contribute its share to the scantly available literature on the Ethiopian banking sector.

1.8. Organization of the paper

This study divided into five chapters. Chapter one is the introduction part, which contains background of the study, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study and organization of the research paper. Chapter two presents a review of the literature, with a focus on the theoretical & empirical literature. Whereas, Chapter three introduces the research methodology, which in turn includes the choice of research design, data type sources and collection. Chapter four presents the data analysis & results discussions of the study. Finally, Chapter five presents the conclusions and recommendations based on the study findings.

CHAPTER TWO
LITERATURE REVIEW

2.1. Foreign Exchange market Concept

The foreign exchange market is an over-the-counter (OTC) marketplace that determines the exchange rate for global currencies. Participants are able to buy, sell, exchange and speculate on currencies. Foreign exchange markets are made up of banks, forex dealers, commercial companies, central banks, investment management firms, hedge funds, retail forex dealers and investors (Michael, 2006).

The foreign exchange market – also called forex, FX, or currency market – was one of the original financial markets formed to bring structure to the burgeoning global economy. In terms of trading volume it is, by far, the largest financial market in the world. Aside from providing a venue for the buying, selling, exchange and speculation of currencies, the forex market also enables currency conversion for international trade settlements and investments. According to the bank for international settlements (BIS), this is owned by central banks, trading in foreign exchange markets average $5.1 trillion per day in April 2016 (BIS, 2016).

The value of country's currency depends on whether it is a "free float" or "fixed float". Free floating currencies are those whose relative value is determined by free market forces, such as supply/demand relationships. A fixed float is where a country's governing body sets its currency's relative value to other currencies, often by pegging it to some standard. Free floating currencies include the USD, Japanese Yen and British Pound, while examples of fixed floating currencies include the Chinese Yuan & Indian Rupee (BIS, 2016).

One of the most unique features of the forex market is that it is comprised of a global network of financial centers that transact 24 hours a day, closing only on the weekends. As one major forex hub closes, another hub in a different part of the world remains open for business. This increases the liquidity available in currency markets, which adds to its appeal as largest asset class available to investors (Michael, 2006).

2.2. Risk management framework in banks

An efficient and healthy banking system is a prerequisite for sustainable economic growth of a country. In this context, effective risk management practices enable the banking industry to build public trust and confidence in the institutions which is necessary for mobilizing private savings for investment to facilitate economic growth. On the flip side, inadequate risk management practices in the banking industry would result in bank failures leading to erosion of public confidence in the industry having adverse implications for the economic growth. Therefore, an effective risk management framework is a prerequisite for banks to achieve their own business objectives and also play their role in the economic growth of the country. Ideally, banks' risk management framework should strive to cover the full spectrum of risks by analyzing them from both business and enterprise level perspectives. Each banking institution should tailor its risk management program to its need and circumstance, (Ashraf, 2014), Risk management framework in banks) he explains the main elements of a risk management framework that apply to banking institutions irrespective of their size and complexity of business:

First and foremost, effective risk management framework demands active involvement of the Board of Directors (BoD) and senior management in the formulation and oversight of risk management processes. Accordingly, they should provide strategic direction and approve the overall business strategies and significant policies of their institutions, including those related to managing and taking risks, and should also ensure that senior management is fully capable of managing the activities that their institutions undertake (Ashraf, 2014).

Second, adequate Policies, Procedures, and Limits need to be defined by an institution's directors and senior management to tailor their risk management policies and procedures to the types of risks that arise from the activities the institution conducts (Ashraf, 2014).

Third, adequate Risk Monitoring and Management Information Systems need to be developed for effective risk monitoring and to identify and measure all material risk exposures. Consequently, risk monitoring activities must be supported by information systems that provide senior managers and directors with timely reports on the financial condition, operating performance, and risk exposure of the institution (Ashraf, 2014).

Fourth, establishing and maintaining an effective system of controls, including the enforcement of official lines of authority and the appropriate separation of duties such as trading, custodial, and back-office is one of management's more important responsibilities. A properly structured system of internal controls promote effective operations and reliable financial and regulatory reporting, safeguards assets, and helps to ensure compliance with relevant laws, regulations, and institutional policies. Given the importance of appropriate internal controls, the results of audits or reviews should be adequately documented, as should management's responses to them (Ashraf, 2014).

Fifth, the Risk Management Function should be institutionalized to supervise overall risk management at the bank. Ideally, overall risk management function should be independent from those who take or accept risk on behalf of the institution (Ashraf, 2014).

On the other hand Basel Committee on Banking Supervision, 2013 guideline indicates that a bank should have a comprehensive risk management framework for all material risks inherent to the life cycle of an FX transaction, including principal risk, replacement cost risk, liquidity risk, operational risk and legal risk. The framework should reflect the size, nature, complexity and risk profile of the bank's FX activities; provide mechanisms that properly identify, measure, monitor and control associated risks; and integrate into the overall risk management process (BCBS, 2013).

Policies and procedures

The board should approve and oversee how effectively management implements the bank's risk policies, including policies for managing all of the risks associated with FX settlement. Policies and procedures should be comprehensive, consistent with relevant laws, regulations and supervisory guidance and provide an effective system of internal controls. Policies and procedures should be clearly documented. Once established, policies should be periodically reviewed for adequacy based on changes to financial markets and internal business strategies (BCBS, 2013).

Limit structure

A bank should set formal, meaningful counterparty exposure limits for FX trading and settlement that include limits for principal risk and replacement cost risk. In particular, the size and duration

of principal exposures that arise from non-PVP settlements should be recognized and treated equivalently to other counterparty exposures of similar size and duration. Limits consistent with the bank's risk appetite should be established by the credit risk management department, or equivalent, on a counterparty basis. Usage should be controlled throughout the day to prevent trades that would create principal and replacement cost exposures that exceed these limits. Exceptions to established limits should be approved in advance (prior to trading) by the appropriate authority in accordance with established policies and procedures (BCBS, 2013).

Management information systems and key risk indicators

A bank should have sufficiently robust systems to capture measure and report on FX settlement-related exposures on a bank-wide basis, across business lines and counterparties. The sophistication of systems should reflect the risk profile and complexity of the bank. Timely reports should be provided to the bank's board and senior management and include appropriate key risk indicators and risk issues that could result in a potential loss (BCBS, 2013).

Fails management

A bank should ensure that its framework identifies FX fails and captures the full amount of the resulting FX settlement-related risks as soon as practicable, to allow senior management to make appropriate judgments regarding the nature and severity of the exposure (BCBS, 2013).

Escalation procedures

A bank should clearly define, in its policies, the nature and types of incidents that would constitute issues requiring escalation to, and approval by, senior management or the board. There should be clear and detailed escalation policies and procedures to inform senior management and the board, as appropriate, of potential FX issues and risks in a timely manner, and seek their approval when required. This should include, but not be limited to, exceptions to established limits and fails management (BCBS, 2013).

Internal audit and compliance program

A bank should have an independent and effective internal audit function that can evaluate the effectiveness of management's efforts to control or mitigate the risks associated with settling FX transactions. Internal audit should have an independent reporting line to the bank's board, or audit committee of the board, audit staff with the necessary expertise and experiences on the

subject, and sufficient status within the bank to ensure that senior management responds appropriately to findings and recommendations. In addition, a bank should have an effective compliance function that manages compliance-related matters associated with settling FX transactions. The board should exercise oversight of the management of the compliance function (BCBS, 2013).

2.3. Banks foreign exchange risk management in Ethiopia

Risk-taking is an inherent element of banking and, indeed, profits are in part the reward for successful risk taking. In contrary, excessive, poorly managed risk can lead to distresses and failures of banks. Risks are, therefore, warranted when they are understandable, measurable, controllable and within a bank's capacity to withstand adverse results. Based on this concept National bank of Ethiopia (NBE) directed all banks to apply foreign exchange risk management program based on the "Bank risk management guideline 2010" which is presented as follows.

Foreign exchange rate risk management

Exposure to this risk mainly occurs during a period in which the bank has a foreign currency open position, both on- and off-balance sheet, in spot markets. It is a risk of volatility due to a mismatch, and may cause a bank to experience losses as a result of adverse exchange rate movements during a period in which it has an open on or off-balance sheet position in an individual foreign currency. Movements in exchange rates may adversely affect the value of a bank's foreign currency open positions. Currently, banks are allowed to take open positions in foreign currencies subject to regulatory limits set by the NBE. The potential for loss arises from the process of revaluing foreign currency positions in Birr terms. When banks have an open position in a foreign currency (where assets in a currency do not equal liabilities in that currency), the process of revaluation normally shall result in a gain or loss. The gain or loss is the difference between the aggregate change in the Birr equivalent value of assets denominated in the foreign currency and the aggregate change in the value of liabilities and capital denominated in that currency (NBE, 2010).

Whether the bank incurs a gain or a loss depends upon both the direction of the exchange rate change and whether the bank is net long or net short in the foreign currency. When the bank has a net long position in the currency, revaluation shall produce a gain if the value of

the currency increases. A loss results if the value of the currency decreases. Conversely, a net short position shall produce a loss if the foreign currency's value increases. A gain results if it decreases (NBE, 2010).

Board and Senior Management Oversight

The Board of Directors is ultimately responsible for the bank's exposure to foreign exchange risk and the level of risk assumed. The board should: approve broad business strategies and policies that govern or influence the management of foreign exchange rate risk of the bank; establish tolerance levels in respect of foreign exchange rate risk; establish clear levels of delegation within the foreign exchange management function; ensure that senior management has a full understanding of the foreign exchange rate risk incurred by the bank; ensure that the bank has adequate human and physical resources for the management of foreign exchange rate risk; establish a proper organizational structure for foreign exchange rate risk management function; establish clear levels of delegation for issues related to the management of foreign exchange rate risk management; ensure that the bank's management adopts procedures to enable the achievement of the objectives set out in the strategy and policies; ensure that foreign exchange risk is adequately measured, monitored and controlled; effectively communicate the strategies and policies to all relevant bank personnel; and Periodically re-evaluate significant risk management policies as well as overall business strategies that affect the foreign exchange rate risk exposure of the bank (NBE, 2010).

Senior management is responsible for the day-to-day management of the bank's exposure to foreign exchange risk. Senior management should: develop procedures and practices that facilitate the implementation of the broad foreign exchange rate risk management strategy and policies adopted by the board; undertake the management of foreign exchange rate risk in accordance with the delegated authority developed by the board; develop measures that shall facilitate the measurement, monitoring and control of foreign exchange rate risk; implement a system of internal controls that shall serve as an effective check over the measures used to manage foreign exchange rate risk; ensure that internal audit reviews the foreign exchange rate risk management system on an on-going basis; ensure compliance with any relevant NBE directives on the management of foreign exchange rate risk; develop lines of communication to ensure the timely dissemination of foreign exchange risk management policies and other foreign

exchange rate risk management information to all individuals involved in the process; and Develop an effective system of reporting to the board on issues related to the management of foreign exchange rate risk (NBE, 2010).

Policies and Procedures

Banks should have written policies governing activities in foreign currencies. The purpose of these written policies is to communicate the expectations of senior management and the board of directors to the management and staff. The policies should be reviewed and approved by the board of directors (NBE, 2010).

For management and control purposes, banks must make a clear distinction between foreign currency exposure resulting from dealing and trading operations and exposures due to a more traditional banking business involving on and off-balance-sheet exposures denominated in a foreign currency. Currency risk management involving dealing/trading operations must be an information-intensive, day-in/day-out process under close scrutiny by senior management and a risk management committee. In general, policies and procedures should: reflect the tolerance limits for foreign exchange risk established by the board; determine, within the limitation set by law, the types of foreign exchange products and services that the bank shall provide and the intended scope of dealing activity; adequately measure, monitor and control foreign exchange risk; establish limits to govern various aspects of the management of the foreign exchange operations including (Net open position limits by currency, and for all currencies combined at the end of the day (overnight limit) and at any time during the day (intra-day limit), using an acceptable aggregation method, Limits on counterparty exposure, and Settlement limits (both outright and within the context of counterparty exposure limits); and Establish rules for accounting standards that should be used in revaluing foreign currency positions and the frequency with which such revaluations should be undertaken for management and accounting purposes (NBE, 2010).

There should be a clear indication of the specific procedures and approvals necessary for exceptions to policies, limits and authorizations.

For accounting purposes, revaluations generally should be performed at the time of any required periodic reporting to the National Bank of Ethiopia. For management information

purposes, more frequent revaluations should be performed, depending on the size and relevance of the foreign currency positions. Finally, the policies should establish revaluation standards that preclude the deferral of losses on foreign exchange positions for internal reporting purposes (NBE, 2010)

Measuring Monitoring and Control

The potential loss that an open position might produce should be estimated. To directly estimate loss potential, management determines the size of the loss that would be incurred should the exchange rate moves against the bank's open position. To make this estimate, management makes one or several assumptions about potential adverse exchange rate movements. It computes the loss that would be incurred by revaluing the banks open position at this hypothetical exchange rate. The size of the potential loss produced in this manner is subjected to a limit. The limit might be expressed in terms of the nominal amount of the loss, or in terms of a certain percentage of a benchmark, such as projected earnings or total capital. Normally, management's principal goal is to provide strong assurance that foreign exchange losses shall not substantively diminish the total earnings of the bank (NBE, 2010).

Management Information System

Accurate and timely information systems are critical to the management of foreign currency positions, and for ensuring compliance with relevant risk limits. Banks should devote the resources necessary to generating such information. Standardized reports should be designed to communicate the information regarding open foreign exchange positions, liquidity positions and counterparty exposures. Positions and exposures should be prepared and verified by persons not responsible for transacting foreign currency business. (NBE, 2010) At the minimum, reports available should include: net overall and intra-day positions by currency; maturity distribution by currency of foreign currency assets, liabilities and off-balance sheet contracts; outstanding contracts by settlement date and currency; total value of outstanding contracts, at spot rate; profit and loss, totals and comparison to previous day's; market value of off-balance sheet accounts; aggregate dealing limits; and Limit or line excesses (NBE, 2010).

Internal Controls

Banks should implement a system of internal controls to ensure that their arrangements for managing foreign exchange rate risk are working effectively. The system should ensure that the bank's foreign exchange activities are undertaken within the prescribed risk tolerance limits, and that all established procedures, and practices are being followed. The internal audit function of the bank should review and assess the foreign exchange risk management process. It shall also be necessary for management to establish and implement procedures governing the conduct and practices of foreign exchange traders/dealers (NBE, 2010).

The internal audit should ensure that foreign exchange traders/dealers observe their instructions and the code of behavior required of them and that accounting procedures meet the necessary standards of accuracy, promptness and completeness. The board audit committee can greatly enhance the quality of reports and the reasonableness of foreign exchange risk management information supplied to the board, the management and the NBE (NBE, 2010).

2.4. Factors Affecting Foreign Exchange

Political Stability

The political stability of the country or countries that use a foreign currency influences how risky it is to hold their currency. Countries with long-standing, stable governments like the United States and Japan are likely to enjoy relatively stable currency values. On the other hand, countries that experience political turmoil such as frequency changes in government leadership, protests, riots and civil wars may experience greater fluctuations in the value of their currency. For example, the value of currency in Somalia drops suddenly when a new political faction attempts to take power. Unexpected political, economic, social and environmental events that affect foreign nations are an ever present risk in foreign currency trading (Abor, 2005).

Inflation and Interest Rates

Inflation is the rate at which prices increase in an economy, which is another factor that makes it risky to hold foreign currency. If inflation rises in one country it can make their currency value fall with respect to currencies in other countries that do not experience the same increase in inflation. Inflation is difficult to predict and based largely upon expectations and the monetary

policy of the government. For instance, if a certain country decided to print a large amount of new currency to pay off debts, it would likely lead to inflation which could cause the value of the currency to decline rapidly. Interest rates can also influence currency values. If interest rates are high in a certain country, it tends to increase the demand for their currency and increase the currency's value. If the foreign nation decides to reduce interest rates, it can cause demand for the currency to fall resulting in a declining currency value (Routledge & Peter, 2004).

Fraud

foreign currency trading has the potential to yield large profits in short periods of time, which attracts predators that attempt to defraud hopeful FOREX investors. According to the U.S. Commodity Futures Trading Commission (CFTC), if you are solicited by a company that claims to trade foreign currencies, it may be an attempt at defrauding you. The commission recommends that investors steer clear of opportunities that sound too good to be true, offer high, guaranteed returns, or claim that investments carry little or no risk (Abor, 2005).

Differentials in Inflation

As a general rule, a country with a consistently lower inflation rate exhibits a rising currency value, as its purchasing power increases relative to other currencies. During the last half of the twentieth century, the countries with low inflation included Japan, Germany and Switzerland, while the U.S. and Canada achieved low inflation only later. Those countries with higher inflation typically see depreciation in their currency in relation to the currencies of their trading partners. This is also usually accompanied by higher interest rates (Routledge & Peter, 2004).

Differentials in Interest Rates

Interest rates, inflation and exchange rates are all highly correlated. By manipulating interest rates, central banks exert influence over both inflation and exchange rates, and changing interest rates impact inflation and currency values. Higher interest rates offer lenders in an economy a higher return relative to other countries. Therefore, higher interest rates attract foreign capital and cause the exchange rate to rise. The impact of higher interest rates is mitigated, however, if inflation in the country is much higher than in others, or if additional factors serve to drive the currency down. The opposite relationship exists for decreasing interest rates - that is, lower interest rates tend to decrease exchange rates (Abor, 2005).

Current-Account Deficits

The current account is the balance of trade between a country and its trading partners, reflecting all payments between countries for goods, services, interest and dividends. A deficit in the current account shows the country is spending more on foreign trade than it is earning, and that it is borrowing capital from foreign sources to make up the deficit. In other words, the country requires more foreign currency than it receives through sales of exports, and it supplies more of its own currency than foreigners demand for its products. The excess demand for foreign currency lowers the country's exchange rate until domestic goods and services are cheap enough for foreigners, and foreign assets are too expensive to generate sales for domestic interests (Routledge & Peter, 2004).

Public Debt

Countries will engage in large-scale deficit financing to pay for public sector projects and governmental funding. While such activity stimulates the domestic economy, nations with large public deficits and debts are less attractive to foreign investors. The reason a large debt encourages inflation, and if inflation is high, the debt will be serviced and ultimately paid off with cheaper real dollars in the future. In the worst case scenario, a government may print money to pay part of a large debt, but increasing the money supply inevitably causes inflation. Moreover, if a government is not able to service its deficit through domestic means (selling domestic bonds, increasing the money supply), then it must increase the supply of securities for sale to foreigners, thereby lowering their prices. Finally, a large debt may prove worrisome to foreigners if they believe the country risks defaulting on its obligations. Foreigners will be less willing to own securities denominated in that currency if the risk of default is great. For this reason, the country's debt rating is a crucial determinant of its exchange rate (Abor, 2005).

Terms of Trade

A ratio comparing export prices to import prices, the terms of trade is related to current accounts and the balance of payments. If the price of a country's exports rises by a greater rate than that of its imports, its terms of trade have favorably improved. Increasing terms of trade, shows greater demand for the country's exports. This, in turn, results in rising revenues from exports, which provides increased demand for the country's currency (and an increase in the currency's value). If

the price of exports rises by a smaller rate than that of its imports, the currency's value will decrease in relation to its trading partners (Abor, 2005).

Economic Performance

Foreign investors inevitably seek out stable countries with strong economic performance in which to invest their capital. A country with such positive attributes will draw investment funds away from other countries perceived to have more political and economic risk. Political turmoil, for example, can cause a loss of confidence in a currency and a movement of capital to the currencies of more stable countries (Routledge & Peter, 2004).

2.5. Foreign Exchange Risk Concept

Foreign Exchange risk arises when a bank holds assets or liabilities in foreign currencies and impacts the earnings and capital of bank due to the fluctuations in the exchange rates (Sabri, 2011). Exchange rate can move in either upward or downward direction at any time. This uncertain movement poses a threat to the earnings and capital of banks. The direct foreign exchange risk can be either Transactional or it can be Translational. Transactional risk, as the name implies is because of transactions in foreign currencies and translational risks is an accounting risk arising because of the translation of the assets held in foreign currency. The indirect exchange rate risk is basically emanated from economic exposure which reflected through demand for bank loan and the bank loan performance. According to Sabri (2011) foreign exchange risk of a bank comes from its very trade and non-trade services. Foreign Exchange Trading Activities (Saunders & Cornett, 2008 cited in Sabri, 2011) include: The purchase and sale of foreign currencies to allow customers to partake in and complete international commercial trade transactions, The purchase and sale of foreign currencies to allow customers (or the financial institution itself) to take positions in foreign real and financial investments, The Purchase and sale of foreign currencies for hedging purposes to offset customer (or financial institution itself) exposure in any given currency, To purchase and sale of foreign currencies for speculative purposes based on forecasting or expecting future movements in Foreign Exchange rates.

The bank is exposed to foreign exchange risk only up to the extent to which it has not hedged or covered its position. In some of the above mentioned trade activities (the first two activities),

banks play a role on behalf of customer and the foreign exchange risk is transferred to the customer as the bank takes agency role. Third activity of bank involves hedging and there is no risk in this as well as the bank has hedged its risk by pre-determining the exchange rate with other financial institutions using different financial instruments. The fourth one involves the risk which may result in the gain or loss due to unexpected outcome.

Brucaite and Yan (2000) define exchange rate risk as the magnitude and likelihood of unanticipated changes in exchange rate. The increased volatility of international markets generates increased financial risk to the companies. Exchange rate change is one of the financial risks where the increased volatility is reflected to the greatest extent. Jacques (1981) defines foreign exchange risk as the risk that an entity will be required to pay more (or less) or receive less (or more) than expected as a result of fluctuations in the exchange rate between its currency and the foreign currency in which payment must be made. Foreign exchange risk is the additional variability experienced by a firm in its worldwide consolidated earnings that results from unexpected currency fluctuations.

Saunders and Cornett (2008) explain that the potential size of a financial institution's foreign exchange exposure can be measured by analyzing the asset, liability and currency trading mismatches on its balance sheet and the underlying volatility of exchange rate movements. The larger the firm's net exposure in a foreign currency and the larger the foreign currency's exchange rate volatility, the larger is the potential loss or gain to a firm's earnings. The underlying concept of foreign exchange volatility reflects fluctuations in the demand for and supply of a country's currency. Foreign exchange rate will appreciate in value relative to other currencies when demand is high or supply is low and will depreciate in value when demand is low or supply is high. Lee (2003) observes that exchange rates have been volatile ever since the breakdown of the Bretton Woods system of fixed exchange rates in the early 1970s. Occasional exchange rate crises have also led to sudden and significant exchange rate changes. Lee (2003), states that there have also been major changes in exchange rates as the result of shifts in monetary policies. Firms have therefore had to come to terms with ever-present and sometimes very significant exchange rate risk.

Each bank has to be in a position to meet its own foreign currency demand on time, there are liquidity risks and there are also interest rate risks; for dealings in the forward foreign exchange

market. Since exchange rate movements correlate with movements in relative interest rate, a mismatched currency position and a mismatched inherent position may frequently not be independent (Lee, 2003) .

2.6. Foreign exchange risk exposure

The general concept of exposure refers to the degree to which a company is affected by exchange rate changes. Quite simply, an asset, liability or income is said to be exposed to exchange risk when a currency movement will change, for a better or for worse, its functional currency value. Exposure is thus a neutral concept signifying that a company has assets, liabilities or income streams denominated in currency other than its base currency. The risk element is that the currency movements my produce variability, in the value of assets, liabilities, and incomes. Foreign exchange rate fluctuations affect banks both directly and indirectly. The direct effect comes from banks' holdings of assets (or liabilities) with net payment streams denominated in a foreign currency. Foreign exchange rate fluctuations alter the domestic currency values of such assets. This explicit source of foreign exchange risk is the easiest to identify, and it is the most easily hedged (Sabri, 2011).

2.6.1. Types of foreign exchange exposure

There are commonly three different types of FX exposures discussed in the literature, translation, transaction and Economic exposure. It is most conventional that to classify foreign exchange exposure into there. There are three distinct types of foreign exchange exposures that global firms may face as a result of their international activities.

1. **Transaction Exposure**

The simplest kind of foreign currency exposure which anybody can easily think of is the transaction exposure. As the name itself suggests, this exposure pertains to the exposure due to an actual transaction taking place in business involving foreign currency. In a business, all monetary transactions are meant for profits as its end result. There are all the chances of that final objective getting hampered if it is a foreign currency transaction and the currency market moves towards the unfavorable direction. The sensitivity of "realized" domestic currency values of the company's contractual cash flows denominated in foreign currencies to unexpected exchange rate changes. In international trade, the risk that exchange rates will change after a

company has agreed to a transaction but before it is accomplished, such that it adversely affects the transaction. The risk of loss caused by changes in currency exchange rates when a company's payables and receivables are denominated in a foreign currency. Such exposures are managed through derivatives to hedge against changes in currency exchange rates and reduce transaction exposure (Brealey, 2008).

2. Translation Exposure

This exposure is also well known as accounting exposure. It is because the exposure is due to the translation of books of accounts into the base/functional/reporting currency. Translation activity is carried out on account of reporting. It makes sense also as the translated financial statements show the position of the company as on a date in its base currency. According to Leyila, (2015) assets and liabilities that are translated at the current exchange rate are considered to be exposed; those translated at a historical (pre change) exchange rate will remain their historical values and hence are regarded as not exposed. Since only those items translated at current exchange rate are exposed to exchange risk, the question of which items should be translated at which rate is a vital one in determining accounting exposure. Four principal translation methods are identified to translate foreign currency to home currencies (Leyila, 2015).

1. Current/Non current Method. All current assets and current liabilities are translated at current exchange rates.
2. Monetary/Non-Monetary Method: All monetary assets and liabilities are translated at current exchange rates.
3. Temporal Method: Same as monetary/non-monetary method but inventory may be translated at current exchange rate if it is shown at market value.
4. Current Rate Method: All balance sheet and income statement items are translated at current exchange rate.

The exchange rate risk associated with companies that deal in foreign currencies or list foreign assets on their balance sheets. The greater the proportion of asset, liability and equity classes denominated in a foreign currency, the greater the translation risk. Harvey explains translation exposure/accounting exposure is the risk that a company may suffer a reduction in value because a change in exchange rates reduces the value of its accounts or assets denominated in foreign currencies. That is, if a particular currency in which a company has some assets denominated

decreases in value, the value of those assets also decreases with respect to the company's main currency (Leyila, 2015).

3. Economic Exposure

Economic exposure is the extent to which a firm's market value, in any particular currency, is sensitive to unexpected changes in foreign currency. Currency fluctuations affect the value of the firm's operating cash flows, income statement and competitive position, hence market share and stock price. Currency fluctuations also affect a firm's balance sheet by changing the value of the firm's assets and liabilities, accounts payable, accounts receivables, inventory, loans in foreign currency, investments in foreign banks; this type of economic exposure is called balance sheet exposure(Leyla, 2015). The impact and importance of this type of exposure are much higher compared to the other two. Economic exposure directly impacts the value of a firm. That means, the value of the firm is influenced by the foreign exchange (Leyila, 2015).

The value of a firm is the function of operating cash flows and the assets it possesses. The economic exposure can have bearings on assets as well as operating cash flows. Identification and measuring of this exposure is a difficult task. Although, the asset exposure is still measurable and visible in books but the operating exposure has links to various factors such as competitiveness, entry barriers, etc which are quite subjective and interpretation of different experts may be different (Leyila, 2015).

These three types of foreign currency exposures are very important to understand for any commercial banks involved in international business. Analyzing the exposure to foreign exchange helps have the right view of the firm's business and therefore take informed decisions.

2.7. Financial Performance concept

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of businesses and generate revenue. This term also use as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operation, operating income or cash flow from operation can be used as well as total unit of sales. Most of the time return on asset (ROA) is

used as a good measurement of financial performance of a company which tells as how efficiently the company generating income by using its total asset (Brealey, 2008).

Financial performance of a company is a good indicator of the effectiveness of managing different types of risks that a company faces and ability of using available resources to generate income. Return on asset gives investors a reliable picture of managements' ability to pull profit from the asset and projects in to which it chooses to invest. The metric also provides a good line of sight in to net margins and asset turnovers. The Return on Assets ratio (ROA), also called return on investment, is an important profitability ratio because it measures the efficiency with which the company is managing its investment in assets and using them to generate profit. It measures the amount of profit earned relative to the firm's level of investment in total assets. The return on assets ratio is related to the asset management category of financial ratios. The calculation for the return on assets ratio is: Net Income/Total Assets (Brealey, 2008).

2.8. Foreign Exchange Risk Management

Risk management prevents an organization from suffering unacceptable loss that can cause failure or can materially damage its competitive position. Balancing risk and return is not an easy task as risk is subjective and not quantifiable, whereas return is objective and measurable. Risk management should be a continuous and developing process which runs throughout the organization's strategy and the implementation of that strategy. This reinforces the fact that risk management structures and related strategies should be embedded in a bank's culture and not be dependent on just one or two people. It must translate the strategy into tactical and operational objectives, assigning responsibility throughout the organization with each manager and employee responsible for the management of risk (Sabri, 2011).

The prime motive of foreign exchange risk management is the protection of the underlying business from foreign exchange risk. It is that risk to the business which must be managed. Profit can never really be the prime motive for foreign exchange risk management in a corporate. There is really a very thin line dividing the objective of cost reduction or profit motive. The first task in determining the most suitable system for managing foreign exchange exposures is to clarify corporate objectives in this area. The objectives generally outlined below form the base for strategies and technical models (Brealey, 2008).

NSP Treasury Risk Management Services Ltd (2016), try to under list area that needs clear management regarding foreign exchange risk for maintaining core cover to total exposures. Periodical evaluation of un hedged exposures, having market intelligence and identification of seasonal factors, are very crucial. Risk management is a discipline at the core of every financial institution and encompasses all the activities that affect its risk profile. It involves identification, measurement, monitoring and controlling risks to ensure that; the individuals who take or manage risks clearly understand it, the organization's risk exposure is within the limits established by Board of Directors, risk taking decisions are in line with the business strategy and objectives set by Board of Directors, the expected payoffs compensate for the risks taken, risk taking decisions are explicit and clear, sufficient capital as a buffer is available to take risk (Sabri, 2011).

The acceptance and management of financial risk is inherent to the business of banking and banks' roles as financial intermediaries. Risk management as commonly perceived does not mean minimizing risk; rather the goal of risk management is to optimize risk-reward trade -off. Notwithstanding the fact that banks are in the business of taking risk, it should be recognized that an institution need not engage in business in a manner that unnecessarily imposes risk upon it: nor it should absorb risk that can be transferred to other participants. Rather it should accept those risks that are uniquely part of the array of bank's services (Sabri, 2011).

Most literatures argue that Banks can manage their foreign currency risk in different ways. One of the techniques by which foreign exchange risk can be mitigated is hedging. It is way by using which a bank eliminates or minimizes its risk exposure. Hedging can be done using different ways (Sabri, 2011).

1. Foreign Currency Assets & Liabilities Matches: It is a hedging techniques by which commercial banks matches its assets and liabilities in foreign currencies to ensure a profitable spread by dealing in foreign currency.
2. Hedging through Diversification of Foreign Asset-Liability Portfolio: It is a hedging technique by which commercial Banks try to mitigate the foreign currency risk on its individual currency by holding multicurrency Asset-Liability Positions. Holding assets and liabilities in various foreign currencies does not reduce the risk of the portfolio of assets and liabilities of a bank alone but also significantly lower the cost of capital. The

main reason for this is the differential inflation and interest rates in different countries. Almost all commercial banks hold such type of multicurrency asset-liability portfolios (Sabri, 2011).

3. Hedging using Derivatives: A commercial bank uses foreign currency derivatives to hedge foreign exchange risk. There are different kinds of foreign currency derivatives, these are: Foreign Currency Futures, Foreign Currency Swap, Foreign Currency Options and Foreign Currency Forward Contracts (Sabri 2011).

Foreign exchange is, of course, the exchange of one currency for another. Trading or dealing in each pair of currencies consists of two parts, the spot market, where payment is made right away (in practice this means usually the second business day), and the forward market. The rate in the forward market is a price for foreign currency set at the time the transaction is agreed to but with the actual exchange, or delivery, taking place at a specified time in the future. While the amount of the transaction, the value date, the payments procedure, and the exchange rate are all determined in advance, no exchange of money takes place until the actual settlement date. This commitment to exchange currencies at a previously agreed exchange rate is usually referred to as a forward contract (Sabri 2011).

Whenever a commercial bank deals in foreign currency, it is exposed to risk of exchange rate. When these transactions are done on the behalf of customers, the risk is also transferred to them and the bank has no exposure. Bank's assets & liabilities in foreign currencies or assets and liabilities in other countries give rise to foreign exchange risk which has to be managed by the bank.

For management and control purposes, banks must make a clear distinction between foreign currency exposure resulting from dealing and trading operations and exposures due to a more traditional banking business involving on and off-balance-sheet exposures denominated in a foreign currency. Currency risk management involving dealing/trading operations must be an information-intensive, day-in/day-out process under close scrutiny by senior management and a risk management committee (Michael, 2016).

A bank has a net position in foreign currency and is exposed to currency risk when its assets and its liabilities are not equal in a given currency. Banks should have written policies to govern their

activities in foreign currencies and to limit their exposure to currency risk and therefore to potential incurred losses (Allen, 2003).

After identifying the types of exchange rate risk and measuring the associated risk exposure, a firm needs to decide whether or not to hedge these risks. In international finance, the issue of the appropriate strategy to manage (hedge) the different types of exchange rate risk has yet to be settled (Jacque, 1996). In practice, however, corporate treasurers have used various currency risk management strategies depending on the prevalence of a certain type of risk and the size of the firm (Allen, 2003).

Allen (2013) as cited by Michael (2016) indicated that the best practice for exchange risk management asserts for currency risk management decisions, firms with significant exchange rate exposure often need to establish an operational framework of best practices. These practices or principles may include:

1. Identification of the types of exchange rate risk that a firm is exposed to and measurement of the associated risk exposure. This involves determination of the transaction, translation and economic risks, along with specific reference to the currencies that are related to each type of currency risk. In addition, measuring these currency risks - using various models (e.g. VaR) - is another critical element in identifying hedging positions. It is one of the newer risk management tools. Value at Risk (VaR) indicates how much a firm can lose or make with a certain probability in a given time horizon. VaR summarizes financial risk inherent in portfolios into a simple number. Though VaR is used to measure market risk in general, it incorporates many other risks like foreign currency, commodities, and equities (Michael, 2016).
2. Development of an exchange rate risk management strategy. After identifying the types of currency risk and measuring the firm's risk exposure, a currency strategy needs to be established for dealing with these risks. In particular, this strategy should specify the firm's currency hedging objectives – whether and why the firm should fully or partially hedge its currency exposures. Furthermore, a detailed currency hedging approach should be established. It is imperative that a firm details the overall currency risk management strategy on the operational level, including the execution process of currency hedging, the

hedging instruments to be used, and the monitoring procedures of currency hedges (Michael, 2016).

3. Creation of a centralized entity in the firm's treasury to deal with the practical aspects of the execution of exchange rate hedging. This entity will be responsible for exchange rate forecasting, the hedging approach mechanisms, the accounting procedures regarding currency risk, costs of currency hedging, and the establishment of benchmarks for measuring the performance of currency hedging. (These operations may be undertaken by a specialized team headed by the treasurer or, dealer.)
4. Development of a set of controls to monitor a firm's exchange rate risk and ensure appropriate position taking. This includes setting position limits for each hedging instrument, position monitoring through mark-to-market valuations of all currency positions on a daily basis (or intraday), and the establishment of currency hedging benchmarks for periodic monitoring of hedging performance (usually monthly).
5. Establishment of a risk oversight committee. This committee would in particular approve limits on position taking, examine the appropriateness of hedging instruments and associated Value at Risk (VaR) positions, and review the risk management policy on a regular basis (Michael, 2006).

2.9. Hedging Strategies and Techniques

Hedging as the taking of a position acquiring, either cash flow, an asset, or a contract that will rise or fall in value to offset a fall or rise in the value of the existing position. Hedging can also be defined as all actions taken to change the exposed positions of a company in one currency or in multiple currencies (Prindl, 1976). Kyte (2002) notes that macro hedging is done on the whole portfolio while micro hedging is on an individual product level. Saunders and Cornett (2008) defines on- balance- sheet hedging involves making changes by directly matching its foreign asset and liability book the on-balance-sheet assets and liabilities to protect financial institution profits from risk. Off-balance-sheet hedging involves no on-balance-sheet changes but rather involves taking a position in forward or other derivative securities to hedge foreign exchange risk (Saunders and Cornett, 2008).

Fatemi and Glaum (2000) proposes that firms that aim to reduce or eliminate exchange risk can hedge individual foreign exchange positions by a counter balancing transaction in the forward

markets, with a currency option or with another hedging instrument (micro hedge approach). Alternatively, the firm can first identify its net position in a given currency by subtracting expected cash outflows (short positions) from expected cash inflows (long positions) of the same time horizon. Since the effects exchange rate changes have on long and short positions cancel each other out, only the net position is effectively exposed to exchange risk, and hence only this net exposure needs to be considered for hedging (macro hedge approach). The macro hedge approach reduces the number and volume of the hedging transactions (Fatemi and Glaum, 2000).

Avoidance

According to The Integrated Risk Management Paradigm, avoidance occurs when decisions are made that prevent a risk from even coming into existence. Risks are avoided when the organization refuses to accept the risk for even an instant Saunders & Cornett (2008). While avoidance is the only alternative for dealing with some risks, it is a negative rather than a positive approach. If avoidance is used extensively, the firm may not be able to achieve its primary objectives. For this reason, avoidance is, in a sense, the risk management technique of last resort. Avoidance should be used in those instances in which the exposure has catastrophic potential, and the risk cannot be reduced or transferred. Generally, these conditions exist in the case of risks for which both the frequency and the severity are high.

Risk Sharing

According to Eiteman (1997) risk sharing means that the seller and buyer agree to share the currency risk in order to keep the long term relationship based on the product quality and supplier reliability, so they will not destroy the long term relationship just because of the unpredicted exchange rate change. Brucaite and Yan (2000) note that the risk sharing arrangement is intended to smoothen the impact, on both parties, of volatile and unpredictable exchange rate movements.

Diversification

Brucaite and Yan (2000) suggest diversification of both operating and financial policies. The firm can diversify its operations through, such branches of its activity as, sales, location of production facilities, raw material sources, while financial policy diversification can be done using funds in more than one capital market and in more than one currency. Saunders & Cornett (2008) note that diversification across many assets and liability markets can potentially reduce

the risk of portfolio returns and cost of funds. To the extent that domestic and foreign interest rates or stock returns for equities do not move closely together over time, potential gains from asset-liability portfolio diversification can offset the risk of mismatching individual currency asset-liability positions.

Natural hedging

According to Brucaite and Yan (2000), matching, also called natural hedging, is a way to decrease currency exposure by covering cash outflows by inflow in the same currency. The advantages of natural hedging is that transaction exposure can be effectively covered without any transaction cost and it also offers a particular advantage to companies, which are subject to exchange rate control regulation that constrains their activities in the foreign exchange market. For example, it provides an acceptable solution to the problem where it is apparent that an exposure exists but there is no "coverable exposure" as such defined for purposes of exchange control. Bradley and Moles (2000), state that operational hedging involves firms in decisions as to the location of their production facilities, sourcing of inputs, the nature and scope of products, the firm's choice of markets and market segments, and strategic financial decisions, such as the currency denomination of the firm's debt. The objective is to match the input and output sensitivities so as to reduce the degree of exposure.

Payments netting

Brucaite and Yan (2000), highlight that the netting system is often based on a re-invoice centre establishment, where each separate subsidiary deals only with its own currency, leaving all the transaction exposure to re-invoicing centre. There are some advantages of re-invoice centre: it is easy to control the overall firm's activity when all the currency exposure is netted in one place, thus ensure that the firm as a whole follows a consistent policy, lower transaction cost because of the centralized netting system and each subsidiary can concentrate on what they are specialized in. The major drawback is that it insulates the internal suppliers from their ultimate external customer market, which will mislead the firm to set suboptimal pricing and other commercial decisions. This system is used in international transactions by multinational companies and involves reducing fund transfers between affiliates to only a netted amount. It requires the firm to have a centralized organization of its cash management. As a result, measurable costs such as the cost of purchasing foreign exchange, the opportunity cost of the float (time in transit) and other

transaction costs with inter-affiliate cash transfers are minimized or eliminated. The payoff from multilateral netting systems can be large relative to their expense (Shapiro, 2002).

Leading and lagging

Shapiro (2002) defines leading and lagging as an adjustment in the timing of payment request or disbursement to reflect future currency movements. He asserts that a lead strategy involves attempting to collect foreign currency receivables early when a foreign currency is expected to depreciate and paying foreign currency payables before they are due when a currency is expected to appreciate. A lag strategy involves delaying collection of foreign currency receivables if that currency is expected to appreciate and delaying payables if the currency is expected to depreciate. Madura and Fox (2007) highlight that leading and lagging involves accelerating payments from weak-currency countries to strong-currency countries and delaying inflows from strong-currency to weak-currency countries. The firm must be in the position to exercise some control over payment terms. Leading and lagging is a zero-sum game; that is, while one party benefits, the counterpart loses and this might lead to loss of business. Leading and lagging can be done in many ways including tightening or extending credit, early or late settlement of inter-subsidiary accounts, reinvesting funds or repatriating them, adjusting transfer prices and dividend payments.

Cross Hedging

According to Shapiro (2002), cross hedging occurs when for some reason the common hedging techniques cannot be applied to the first currency and can be done by using futures contracts on another currency that is correlated with the one of interest. A cross hedge is not a perfect hedge but can substantially reduce exposure. Madura and Fox (2007) assert that the firm identifies the currency that can be hedged and its correlation to the currency that cannot be hedged. The more highly correlated the currencies, the more effective the strategy.

Overseas Loan/ Foreign currency denominated debt

Bradley and Moles (2000) suggest that a possible reason for the popularity of foreign currency denominated debt is the flexibility that it provides. One advantage is that it is an add-on to the asset liability management process. In addition, the creation of a financial liability within normal capital structure parameters only has a small impact on the firm's existing or future business operations. Given the existence of early call or redemption provisions on debt and the currency

swaps market it is also relatively easy to modify the exposure at a later date. Furthermore, foreign currency denominated debt might be considered a hybrid strategy having features of both operational and financial hedging which would explain its popularity.

Money Market Hedge

Yeager & Seitz (1989) observe that Money Market (Balance Sheet) Hedging is widely used to control translation risk, although it can be used to control transaction risk. Essentially, a company strives to have net financial assets in each currency exactly equal to financial liabilities in that currency. Giddy & Dufey (1995) explain that the cost of the money market hedge should be the same as the forward or futures market hedge, unless the firm has some advantage in one market or the other. The money market hedge suits many companies because they have to borrow anyway, so it simply is a matter of denominating the company's debt in the currency to which it is exposed. If a money market hedge is to be done for its own sake, the firm ends up borrowing from one bank and lending to another, thus losing on the spread. This is costly, so the forward hedge would probably be more advantageous except where the firm had to borrow for ongoing purposes anyway (Giddy & Dufey, 1995).

Borrowing Policy

Madura and Fox (2007) observe that for many firms, the exposure of their profits to exchange rate changes will be predictable as the pattern of trade will not change greatly. For such companies such knowledge will over time guide their choice of currency in which to borrow. The currency disposition of the borrowings is used as a partial, long term hedge of the cash flows arising from investments overseas and as a hedge against any future business.

Pricing strategy

Brucaite and Yan (2000) observe that the pricing strategy and demand sensitivity to competitors' price are two important factors, which affect the firm's exchange exposure. Therefore, it would be logical to presume that if a flexible pricing strategy is set, then the firm can handle the exchange rate exposure easily. There still exist some costs associated with pricing changing policy; such as: long term customer relationship and the customer's loyalty to the firm.

2.10. Effect of Foreign Exchange Risk Management on Financial Performance

Although there is a growing literature linking foreign exchange risk management to company performance there is, equally, a growing diversity of results. The diversity of results can be partly explained by differences in the theoretical perspectives applied, selected research methodologies, measurement of performance and conflicting views on general employee involvement in decision making and, in part, to the contextual nature of the individual firm (Carter et al, 2003). Even studies based on the integrative models of employee involvement; incorporating different theoretical perspectives and various employee attributes, provide inconclusive results, suggesting that currency risk management has, at least, an indirect effect on company performance (Adler and Dumas, 2010). Previous research studies have provided a link between currency risk management and firm performance (Ankrom, 2007) with very little conclusive results. Others (Lee, 2010) have shown that firms that have robust currency risk management frameworks have higher firm performance. The main characteristics of good risk management identified in these studies include; leadership of the risk team, adequate compensation of the risk team and compliance with laws & best practice. There is a view that companies with risk management departments are better corporate performers. In recent times on the contrary, emphasis has geared towards general employee training in currency risk management. Dufey (2005) contend that risk management departments without well trained personnel to man the departments are less effective and the company will many a time be prone to such currency risks. The use of foreign exchange management strategies results in reduced foreign exchange exposure hence minimal losses. According to Carter et al (2003) changes in 6 exchange rate can influence a firms current and future expected cash flows and ultimately, stock prices. The direction and magnitude of changes in exchange rate on firms value are a function of a firm‟s corporate hedging policy which indicates whether the firm utilizes operational hedges and financial hedges to manage currency exposure and the structure of its foreign currency cash flows. Stacy and Williamson (2010) examine risk management and performance in a sample of firms in 14 companies listed on the Johannesburg stock exchange. They find that better risk management is associated with better performance in the form of Tobin's q and ROA.

2.11. Review of empirical studies:

Foreign exchange risk arises when a bank holds assets or liabilities in foreign currencies and impacts the earnings and capital of bank due to the fluctuations in the exchange rates. No one can predict what the exchange rate will be in the next period. According to Popper (1996) exchange rate fluctuations affect banks both directly and indirectly. The direct effect comes from banks' holdings of assets (or liabilities) with net payment streams denominated in a foreign currency. Foreign exchange rate fluctuations alter the domestic currency values of such assets. This explicit source of foreign exchange risk is the easiest to identify, and it is the most easily hedged. He further explained that a bank without foreign assets or liabilities can also be indirectly exposed to currency risk because the exchange rate can affect the profitability of its domestic banking operations. For example, consider the value of a bank's loan to an exporter. An appreciation of the home currency might make it more difficult for the exporter to compete against foreign firms. If the appreciation thereby diminishes the exporter's profitability, it may also diminish the probability of timely loan repayment and, correspondingly, the profitability of the bank. As the exchange rate is linked to foreign competition, to the demand for loans, or to other aspects of banking conditions; it will affect even "domestic" banks. Similarly, Mbutor (2010) mentioned that owing to information asymmetries, depreciation in exchange rate might cause lending to decline in two different ways. First, if such depreciation worsens borrowers' balance sheets, then the default risk will been large and banks would shy away from making loans. On the other hand, if banks are exposed to short term liabilities in foreign currencies, then such liabilities will be amplified to the tune of the extent of depreciation of the local currency and any other associated costs, thus, dampening their potential to create credit. Likewise, using a bank's loan to an exporter as an example, Chamberlain et al. (1997) demonstrate that banks that perfectly hedge their accounting exposure could still be exposed to significant foreign exchange risk if exchange rate movements significantly affect cash flows, competitiveness, and credit risk of banks' customers (i.e. indirect or economic exposures). This indicates that the sources of foreign exchange risk of banks are far more than just their holdings of net foreign assets.

Wong et al (2008) indicated that the direct effect of individual banks exchange rate exposure can be discerned largely from their accounting data, while the indirect exposure, which arises from impacts of exchange rate fluctuations on the economy in general and banks' customers in

particular, is more subtle. Foreign exchange risk also may be linked to other types of market risk, such as interest rate risk. Interest rates and exchange rates often move simultaneously. So, a bank's interest rate position indirectly affects its overall foreign exchange exposure. The foreign exchange rate sensitivity of a bank with an open interest rate position typically will differ from that of a bank with no interest rate exposure, even if the two banks have the same actual holdings of assets denominated in foreign currencies. Therefore, the vulnerability of the bank as a whole to foreign exchange fluctuations depends on more than just its holdings of foreign exchange (Popper 1996). Generally, Foreign exchange rate movements could be an important source of risk for banking institutions. In the worst case, large foreign exchange losses may lead to bank failures. In the literature, a large number of empirical works have been carried out to examine the foreign exchange exposure of banks. However, most of these studies mainly focused on banking markets which are well developed market, by comparison, studies focusing on less developed banking markets are relatively scant.

According to different studies (Rao and Lakew (2012), Kanwal and Nadeem (2013), Pan and Pan (2014), Ongore and Kusa (2013), kiganda (2014)), the factors that affect the profitability of a bank could be broadly classified as bank specific or internal and external factors. The bank specific factors relate to a bank's overall managerial practices on capital structure, liquidity management, credit risk, loan portfolio management, expense management and diversification of a bank's line of products or activities. The external factors generally relate to the industry and macroeconomic variables within which the bank operates. The external factors include factors related to the level of competition in the industry to which the bank belongs (concentration), barriers related to entry to and exit from the industry, the pace of economic growth, the nature of the regulation and supervision of the banking industry, inflation, financial deepening, and monetary and physical policies, among others. The external factors can be further classified in to industry specific factors and macro-economic factors. Macroeconomic factors that affect the bank performance include GDP, inflation rate, exchange rate etc (Rao and Lakew (2012).

Kanwal and Nadeem (2013) and Pan and Pan (2014)) indicated that the change in these macroeconomic factors affect the profitability of commercial banks in different extent and magnitude. For example, Kanwal and Nadeem (2013) in their study of the impact of Macroeconomic variables on the profitability of listed commercial banks in Pakistan, have found

that; GDP has positive insignificant impact on the ROA of the bank, but insignificant negative impact on ROE while Inflation rate on the other hand, has a negative link with all profitability measures (ROA, ROE). Overall, the selected macroeconomic factors are found to have a negligible impact on earnings of commercial banks. However, the impact of exchange rate on the banks profitability was not assessed in this study. In contrast, Pan and Pan (2014) in their study of the impact of macroeconomic factors on the profitability of China's commercial banks found that macroeconomic factors do have a substantial influence to the earning power of commercial banks. Economic growth, inflation, interest rates and money supply growth have positive correlations with bank profitability. Again this study didn't address the impact of exchange rate variation on the banks profitability. There are also other studies conducted on the impact of macroeconomic factors on the banks profitability. However, as indicated by the result of the two studies cited above, the findings on the impact of macroeconomic variables on banks profitability are not consistent. Most of these studies hadn't assessed the impact of exchange rate on the banks profitability as one of the Macroeconomic variables. However, there are other studies which tried to investigate the impact of exchange rate variation on the banks profitability; the empirical findings of these studies are summarized as follows.

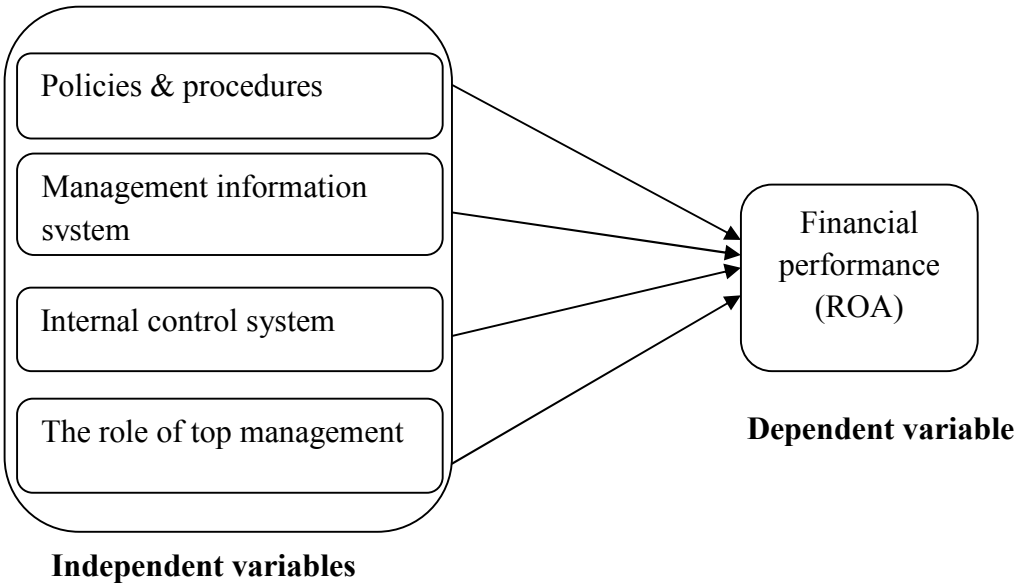
Kiganda (2014) undertook a study to examine the effect of Macroeconomic Factors on Commercial Banks Profitability in Kenya with Equity Bank Limited in focus. He analyzed the effect of macroeconomic factors (real GDP, inflation and exchange rate) on the profitability of equity bank limited by taking data for the period of 2008 to 2012. The profitability of the bank (dependent variable) is represented by ROA. The results indicated that macroeconomic factors (real GDP, inflation and exchange rate) have insignificant effect on bank profitability in Kenya at 5% level of significance. The study concludes that macroeconomic factors including exchange rate do not affect bank profitability in Kenya. Dietrich and Wanzenried (2011) carried out a study to identify the factors that influence the profitability of commercial banks in Swaziland for the period 1999 to 2006 by taking data from 453 banks. They used ROAE (return on average equity) and ROAA (return on average asset) alternatively as dependent variables and considered eleven bank specific and five industry-specific and macroeconomic factors as explanatory variables in their analysis. The study found a positive and significant relationship between bank profitability (measured in terms of ROAA) and equity to total assets and GDP growth rate,

whereas bank size and cost to income ratio were found to be negatively and significantly associated with bank profitability.

Taiwo and Adesola (2013) examined the effect of exchange rate on the performance of Nigerian banks for the period between 1970- 2005. They used two different dependent variables: ratio of loan loss to total advance and capital deposit ratio to represent the performance of the bank. The effect of exchange rate on these two proxies of bank performance was empirically tested with two different modes. The regression results for the model tested the relation of loan loss to total advance and exchange rate revealed that there exist a positive relationship between exchange rate and loan loss which may explain the tendency of bank to accumulate bad loans as a result of fluctuating exchange rate. The result of the second model indicated that capital deposit ratio does not have significant relationship with exchange rate. Another study on Nigeria bank by Osuagwu (2014), found that exchange rate is significant as a determinant of bank profitability through return on equity

2.12. Conceptual framework

Based on the existing theories and ideas in the literature, the research formulated an inclusive conceptual framework. This framework illustrates the interaction between the independent variables (FX risk management practices) and dependent variable (ROA).



Source: compiled by researcher

CHAPTER THREE
RESEARCH METHODOLOGY

3.1. Introduction

This chapter outlines the overall research methodology used to carry out the research. It explain the research design that was adopt, study population, sample selection, data source, research instruments used in the study, variable measurement, data processing, presentation and analysis and ethical consideration made during data collection.

3.2. Research Design

The primary focus of the study is to examine the effect of Foreign Exchange Risk Management practice on financial performance of private commercial banks in Ethiopia. This study adopted a quantitative research approach by using both primary and secondary source of data. Quantitative approach uses statistical method in describing patterns of behavior and generalizing findings from samples to population of interest, and employs strategies of inquiry such as experiments and surveys (Creswell, 2003)

In order to answer the statement of the problem and meet the research objectives, the researcher used explanatory research design. Explanatory research design tries to establish cause-and-effect relationships. The primary purpose of explanatory research design is to determine how events occur and which ones may influence particular outcomes. Explanatory studies are characterized by research hypothesis that specify the nature and direction of the relationship between or among variables being studied (Dowson & Bob, 2006).

Since the sample size is relatively small, self-administered questionnaires is used to collect relevant data pertaining to foreign exchange risk management practice and secondary data to measure commercial banks financial performance (profitability).

3.3. Population and sampling technique

The target population consisted of all 16 private commercial banks currently operated in Ethiopia. The study uses census approach to pick all the 16 private commercial banks in Ethiopia given that the population is not large and it allows the researcher to gain accurate and comprehensive information. Since the population was small, no sampling was done.

3.4. Source of Data

The research employed both the primary and secondary data from published results and self administered questionnaire. Primary data was collected from 80 respondents (i.e. 5 respondents from each bank) who work in risk and compliance management department of all private commercial banks by use of self-administered questionnaires to employees. The intention of using the data from the primary source is to get perception of factual information on issues of the management of foreign exchange risk. The questionnaire is prepared and developed by considering foreign exchange risk management issues which is explained on National bank of Ethiopia (NBE) risk management guideline. The questionnaire is comprises the 5 likert scale: 5=strongly agree, 4=agree, 3=neutral, 2=disagree and 1=strongly disagree. And Secondary data is obtained from manuals, periodic reports of banks & publications. private Banks annual reports of 2016/17 and 2017/18 fiscal year was used as secondary source of data to compute return on asset (ROA) of each private commercial banks and the two year (2016/17 and 2017/18) average ROA of each private commercial banks was used as secondary data for this research.

3.5. Data Analysis

The study involves an assessment of foreign exchange risk management practices and established the relationship between foreign exchange risk management practices and banks financial performance (profitability) of the private commercial banks in Ethiopia. Descriptive statistics used included the measures of central tendency, the frequency distributions, mean and line graphs that describe the data. The quantitative data on the management of risk was measured in real values by normalizing. Data collected from the survey are sorted, edited and coded to have the required quality and accuracy. It was then enter into STATA for generation of frequency tables, charts, correlations and regressions. Multiple linear regression analysis is used to examine the magnitude of influence of the independent variables on the respective dependent variables. The regression model is a multivariate model stating the banks ROA as a function of the selected foreign exchange risk management practices.

3.6. Analytical Model

The regression function that includes the dependent variable and independent variables can be written as;

$Y= \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+ \beta_4X_4+ \varepsilon$

The regression model is a multivariate version declaring the commercial banks ROA as a function of the selected foreign exchange risk control practices.

Dependent variable

Y = ROA (return on asset) of the banks, which is a profitability measure

Independent variables

X_1= policies and procedures

X_2= management information system

X_3= internal control system

X_4= the role of top management

E = error term

The independent variables $x_1, x_2, x_3, x_4,$ are the foreign exchange risk management practices used for this study and measured using the various questions posted to the respondents in the questionnaire. The questions use a 5 factor likert scale wherein the respondents have been supposed to signify their stages of response to the various questions asked. The dependent variable financial performance is measured by average return on asset (ROA) of last two fiscal years (2016/17 and 2017/18).

3.7. Variable clarification

Dependent variable

Return on asset (ROA) – indicates haw effectively a bank manages its asset to generate income and it is computed as banks after tax profit over total asset.

Independent variables

Policies and procedures: – Banks should have written policies and procedures governing activities in foreign currencies. For management and control purpose, banks must make a clear distinction between foreign currency exposure resulting from dealing and trading operations and exposures due to a more traditional banking business involving on and off balance sheet exposures denominated in foreign currency. Currency risk management involving dealing/trading operations must be an information intensive, day–in/ day-out process under close scrutiny by senior management and a risk management committee (NBE, 2010).

Management information system: - accurate and timely information management systems are critical to the management of foreign currency positions, and for ensuring compliance with relevant risk limits. Banks should devote the resource necessary to generate such information. Standardized report should be designed to communicate the information regarding open foreign exchange positions, liquidity positions and counterparty exposures. Positions and exposures should be prepared and verified by persons not responsible for transacting foreign currency business (NBE, 2010).

Internal controls: - banks should implement a system of internal controls to ensure that their arrangements for managing foreign exchange risk are working effectively. The system should ensure that the banks foreign exchange activities are undertaken within the prescribed risk tolerance limits, and that all established procedures, and practices are being followed (NBE, 2010).

The role of senior management:- senior management is responsible for the day to day management of the bank's exposure to foreign exchange risk (NBE, 2010).

3.8. Test of significance

An F – test was used in assessing to what degree set of independent variables, determines the variation in the dependent variable (effectiveness of the model as a whole in explaining the dependent variable. T-test and P-test were used to assess the level of significance for the individual regression constraints (assessing whether the individual coefficients are statistically significant. The significance of the regression model was set at 95% confidence interval and 5% level of significance.

3.9. Reliability and validity of the study

Reliability is defined as the degree to which measures are free from error and therefore yield consistent results and applies to measure when similar results obtained over time and across situations. When the outcome of measuring process is reproducible, the measuring instrument is reliable. The process of survey, the questionnaire sent to the pilot to ensure the questionnaire is understandable and acceptable. In addition, the empirical data analyzed with STATA for windows, which is possibly the most widely used computer software for the analysis of quantitative data. Therefore, this research can be safely said to be highly valid.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1. INTRODUCTION

This chapter covers the presentation, analysis and interpretation of data collected from primary and secondary source. A survey has been carried out using the attached questionnaire (annex 1) with the goal of assessing the effect of foreign exchange risk management practice in private commercial banks in Ethiopia. In addition to the questionnaires, secondary data or documents that are related to the research were used in the presentation and analysis.

The chapter begins by discussing the foreign exchange market in Ethiopia and followed by the results of demographic characteristics of respondents and results of different issues of the foreign exchange risk management practices adopted by private commercial banks surveyed. The last section presents the results on the connection between the FX risk management practice and the financial performance of private commercial banks in Ethiopia.

4.2. Foreign Exchange Market in Ethiopia

A foreign exchange market is a market where a convertible currency is exchanged for another convertible currency. In the transaction or execution of conversion, one currency is considered domestic and the other is regarded as foreign, from a certain geographical or sovereign point of view, so is the term foreign exchange derived. As long as national states or blocs of national states that adopt their own currencies exist, foreign exchange markets will persist to serve business, non-business, and sometimes, political needs of business firms, governments, individuals, and international organizations and institutions. Forex market refers to the activities of major international banks that engage in currency trading. These banks act as intermediaries between the true buyers and sellers of currencies i.e. governments, businesses, and individuals. These banks will hold foreign currency deposits and stand ready to exchange these for domestic currency upon demand. The level and movements in the exchange rate have been a matter of policy concern for central banks of most countries, including that of Ethiopia, as erratic changes in the exchange rate not only undermine the goal of price stability but also reduce real output, trade, capital flows and investment. These considerations often prompt central banks to intervene in the foreign exchange market so as to influence exchange rate developments. In a free floating

exchange rate regime, the total pressure in the foreign exchange market is reflected in observed changes in exchange rate.

At the other extreme, in a fixed exchange rate regime, foreign exchange market conditions are completely captured by changes in reserves. But, in mixed exchange rate regimes such as in a managed floating, a part of the pressure is absorbed by a change in exchange rate and a part by changes in reserves. Under such circumstances, neither the reserve changes nor the exchange rate movements capture the extent or nature of the exchange market disequilibrium. This calls for the precise measurement of pressures in the foreign exchange market.

4.2.1. Foreign exchange regulations in Ethiopia

According to the national bank of Ethiopia establishment (as amended) proclamation No. 591/2008 (here in after the proclamation), the national bank of Ethiopia, which is accountable to the prime minister, is the major government organ that regulates foreign exchange transaction in Ethiopia. The mandates of national bank of Ethiopia in relation to foreign exchange includes,

1. To formulate and implement exchange rate policy
2. To maintain and administer the international reserve of Ethiopia. The reserve is managed to cover payments of imports, payments of foreign debt commitments and payments of basic services.
3. To set limits on gold and silver bullion and foreign exchange assets which banks and authorized dealers can hold.
4. To set limits on net foreign exchange position and on the terms and external indebtedness of banks and other financial institutions
5. To accept deposits of any kind from foreign sources
6. To act as banker, fiscal agent and financial advisor to the government
7. To take such steps to establish, modernize, conduct, monitor, regulate and supervise payments clearing and settlement systems
8. To exercise such other powers and functions to execute its purpose as central banks customarily perform
9. To monitor foreign exchange transactions of banks, insurance companies and other financial institutions through onsite inspection and offsite surveillance.

Base on its power to issue directives the NBE has enacted several directives on the regulation of foreign exchange. The directives determine the conditions, limitations and circumstances under which a person/entity can possess and utilize foreign currency or instruments of payments pertaining to foreign exchange. Moreover, the directives regulate the terms and conditions for transfer of foreign currency to and from Ethiopia especially in relation to export and import.

Under Article 296,5 and 13 of the proclamation foreign exchange means any foreign currency (any currency other than the Ethiopian legal tender); cheques, bills of exchange, promissory notes, drafts, securities, and other negotiable instruments, expressed in foreign currency; and bank balances in account held in foreign currency or assets in the form of foreign account crediting or set-off arrangements, expressed or payable in foreign currencies provided they are acceptable by the national bank.

Who can engage in foreign exchange transaction?

According to article 20(1) of the proclamation, there are three ways a person/entity could engaged in a foreign exchange transaction. The first is a person/entity may be an 'authorized dealer' which means that such person/entity other than banks is authorized by NBE to engage in foreign exchange transaction. The second way is through authorized banks which can engage in foreign exchange transaction. Third, a person or entity may have a special permission of NBE to engage in foreign transaction. From these three ways, banks are mostly used to settle a foreign exchange transaction commitment.

Retention and utilization of foreign currency for exporters

According to NBE Directive No- FXD/48/2017, "forex retention account" shall mean foreign currency accounts maintained by eligible exporters of goods and services and recipients of inward remittances in accordance with the provisions of these directives.

Individuals and/or enterprises (Non-Resident Ethiopian and Non-Resident foreign Nationals of Ethiopian origin) may open a foreign currency account in any of the authorized commercial banks in Ethiopia and shall present the necessary documents to open an NR Foreign currency account in domestic banks such as Application forms properly filled and signed by the account holder, valid passport and/or identification card of foreign nationals of Ethiopian origin of the

applicant, certificate of ownership entitlement for the organization and/or article and memorandum of association. Applicants who could not be physically present to open the NR account in the domestic banks shall use the Ethiopian embassies, correspondent banks or remittance service providers nearby to prove their identities.

Banks are required to maintain foreign currency accounts in three types of currency only (US Dollar, Pound sterling and Euro). Banks may accept deposits in other convertible currencies that include Canadian dollar, Saudi Riyal, Japanese Yen, Australian Dollar and UAE Dirham but, these other currencies shall be converted to any of the three currencies (USD, POUND and EURO) at spot exchange rate based on the preference of the account opener.

An authorized bank is allowed to open foreign exchange retention accounts for eligible exporters of goods & services and in ward remittance.

Directive No- FXD/48/2017 states that an exporter has a right to retain their foreign exchange earnings but only through retention accounts. In plain word, an exporter can obtain the foreign currency which is paid to him by the buyer, provided that he/she has a retention account in any one of the banks authorized by the NBE.

There are two types of foreign exchange retention accounts (current accounts) which are designated as “foreign exchange retention account A” and “foreign exchange retention account B”. Such accounts shall only be credited from export of goods & services and incoming transfer made for inward remittance recipients. An exporter with an account A can retain 30% of the account balances for an indefinite period of time. On contrary, an exporter with account B can retain 70% of the account balances for up to 28 days. After the 28 days, any balance will automatically be converted in to local currency in the next working day by the customer’s bank using the prevalent buying exchange rates. Note that, the exporter must give a written authority, which should clearly stipulate the type of account to be opened, for the bank.

Local merchants or entities may also create a retention account, provided that they are authorized by the NBE, to collect credit card/debit card/prepaid card/payments for goods and services they sell; and cash notes for goods and services they sell such as hotels, duty free shops, airline ticket offices and travel agents, tour operators, and shops operating at the airports on the airside.

authorized banks operating foreign exchange retention accounts shall send to national bank of Ethiopia (NBE) the aggregate balances of foreign exchange held under retention account "A" and "B" on monthly basis.

Foreign currency hold limits

According to article 3 of NBE Directive No.FXD/49/2017, no person residing in Ethiopia is allowed to hold foreign currency for more than 30 days since the date of acquisition and/or declaration of the foreign currency. Thus, any person residing in Ethiopia can not possess a foreign currency for more than 30 days. Further, a person residing in Ethiopia entering in to the country from abroad carrying foreign exchange currency exceeding USD 1,000 or equivalent in any other convertible foreign currency should declare by using foreign currency customs declaration from prepared for this purpose on arrival at airport or any other entry point in to the country. On the other hand, any person not residing in Ethiopia who enters in to the country carrying foreign currency exceeding USD 3,000 or equivalent in any other convertible foreign currency should declare the foreign currency in his possession by using foreign currency customs declaration from prepared for this purpose on arrival at airport or any other entry point.

In relation to the permissible amount of foreign currency for travel abroad, there are also two major rules. The first is that any person residing in Ethiopia is allowed to carry him foreign currency for which he can produce a bank advise or a foreign currency customs declaration. Second, any person not residing in Ethiopia who is travelling abroad and carry with him foreign currency exceeding USD 3,000 or the equivalent in other convertible foreign currency is required to produce a bank advice or a foreign currency customs declaration declared at the entry point.

4.2.2. Developments in foreign exchange markets

Developments in nominal exchange rate

According to National Bank of Ethiopia (NBE) annual report of 2017/18 fiscal year, the weighted average exchange rate of birr in inter-bank foreign exchange market depreciated by 16.5% on annual bases and reached birr 26.1082/USD. In the retail foreign exchange market, the average buying and selling rates of the birr at forex bureaus both depreciated by 16.7% and 16.6% respectively, with spread margin of 1.91%.

The real effective exchange rate (REER) of the birr has been appreciating since 2010/11 as a result of higher domestic inflation relative to that of the country major trading partners. During 2017/2018, the REER however, depreciated by 5.9% due to the devaluation measure taken in October 2017. Similarly, the nominal effective exchange rate (NEER) of the birr has been depreciated by 10.9% on nominal basis.

Foreign exchange transactions

According to national bank of Ethiopia (NBE) annual report of 2017/18, USD 12.5 million was traded in the inter-bank foreign exchange market which was 0.4% lower than last year. All the foreign exchange traded in the inter-bank market as supplied by National Bank of Ethiopia. Meanwhile, forex bureaus of commercial banks purchased foreign exchange to the tune of USD 320 million showing a 0.6% marginal increase over the preceding year. Their foreign exchange sales rose by 40.2% to USD 270.2 million.

The Ethiopian foreign exchange market was characterized by depreciation pressure. This depreciating trend of the home currency may affect the economic performance of different sectors and as a result, the performance of commercial banks might also be indirectly affected. Generally, the variation in exchange rate could result from demand and supply pressure and/or policy decision of the country. Once occurred, variation in exchange rate may affect a number of macroeconomic factors and industries, particularly the banking industry.

4.3. The demographic characteristics of the respondents

In Table 4.3, the demographic information of respondents is presented. These include gender, educational background, work experience and educational qualification of the respondents. As shown in the table below, 55 of the respondents were male which represents 68.75% of the total respondents, while 25 were females which are 31.25% of the total respondents. Considering the years of work experience group of the respondents, the higher number of the respondents has the experience of 6-10 years, which represents 56.25%, followed by 1-5 years of work experience and above 10 years of experience, which represents 27.5% and 16.25% of the total respondents respectively. Considering educational background 50 respondents has BA Degree and 30 respondents have Masters which represents 70% and 30% respectively.

Table 4.3 Demographic characteristics of respondents

Variable		Category	Frequency	Percent (%)	Cumulative %
Gender	Valid	Male	55	68.75%	68.75%
		Female	25	31.25%	100%
		Total	80	100%	
Years of work experience	Valid	1-5 years	22	27.5%	27.5%
		6-10 years	45	56.25%	83.75%
		10-15 years	13	16.25%	100
		Total	80	100	
Educational qualification	Valid	BA/BSC Degree	50	62.5%	62.5%
		Masters	30	37.5%	100%
		Total	80	100	

Source: STATA data analysis output

4.4. Foreign exchange risk exposure

The respondents were asked to indicate and rank which exposure are the bank faces translation exposure, transaction exposure and economic exposure.

Table 4.4 Foreign exchange risk exposure

Variable		Rating	Frequency	Valid percent	Cumulative percent
Translation exposure	Valid	Most frequently	48	60%	60%
		Frequently	32	40%	100
		Less frequently	-	-	
		Total	80	100	
transaction exposure	Valid	Most frequently	4	5%	5%
		Frequently	20	25%	30%
		Less frequently	56	70%	100
		Total	80	100	
economic exposure	Valid	Most frequently	-	-	-
		Frequently	36	45%	45%
		Less frequently	44	55%	100
		Total	80	100	

Source: STATA data analysis output

As shown in table 4.4, 48 respondents answered the banks faces translation exposure most frequently, which represents 60% and 32% of the respondents answered the bank faces

translation exposure frequently. 56 respondents answered the banks faces transaction exposure less frequently, which represents 70% and 20 respondents answered the bank faces transaction exposure frequently and 4 respondents answered most frequently, which represents 25% and 5% respectively. 44 respondents answered the banks faces economic exposure less frequently, which represents 55% and 45% of the respondents, answered the bank faces economic exposure frequently.

4.5. National bank of Ethiopia (NBE) foreign exchange directive related issues

It was necessary to ask the respondents to indicate the extent that the bank can manage their foreign exchange risk through NBE directives that relate to foreign exchange issues.

Restriction on foreign currency customer's deposit accounts to USD, EUR, GBP and JYP types of currency emerged that 47.5% of the respondents rank it to the level of large extent. This restriction does not allow the bank to open customer's deposit account other than captioned currencies. On the issue of interest on nonresident fixed foreign currency account (the directive states that the interest rate to apply on the fixed deposit is 50% of LIBOR rate), 47.5% of the respondents rank it to the level of small extent 52.5% rank it not at all. Computation of overall open foreign currency position 57.5% of respondents ranked to the level of some extent and 42.5% ranked to the level of large extent. Overall open foreign currency position limits emerged by banks ranked to the level of large extent with percentage of 60% and 40% rank to the some extent level. On the issue of Squaring of foreign exchange positions (according to NBE directive No.sbb/23/97 "squaring a foreign exchange rate" shall mean the buying from or selling of foreign exchange to any other participants in the interbank foreign exchange market in order to eliminate any position above the limit set i.e. the overall open foreign currency position of each bank at the close of business each day shall not exceed 15% of its total capital.) 60% of respondent rank at not at all. And on the issue of daily report on foreign currency position 60% of respondents ranked at the level of large extent and 37.5% rank at large extent, the rest 2.5% on some extent.

This implies that private commercial banks seriously apply the NBE foreign exchange directive to manage or mitigate foreign exchange risks. As we can see from the result some of the directives are used to manage foreign exchange risk at large extent and some of the directives are

used at some extent and this indicates that all banks are required to apply the NBE directives but the level of usage and implementation of the directives in order to manage foreign exchange risk is vary in private commercial banks due to different scenario of the banking operational activities in each banks.

Table 4.5 descriptive statistics of NBE foreign exchange directives related issues.

Statements		Rating	Freq.	Valid percent	Cumulative percent
Restrictions of foreign currency customer's deposit accounts to USD, EUR, GBP and JPY types of currency	Valid	V. large extent	-	-	-
		Large extent	38	47.5%	47.5%
		Some extent	42	52.5%	100%
		Small extent	-	-	
		Total	80	100%	-
Interest on non-resident fixed foreign currency account	Valid	large extent	-	-	-
		Some extent	-	-	-
		Small extent	3	47.5%	47.5
		Not at all	42	52.5%	100
		Total	80	100	
Computation of overall open foreign currency position	Valid	V. large extent			
		Large extent	34	42.5%	42.5%
		Some extent	46	57.5%	100
		Small extent	-	-	
		Total	80	100	
Overall open foreign currency position limits	Valid	V. large extent	-	-	-
		Large extent	48	60%	60%
		Some extent	32	40%	100
		Small extent	-	-	-
		Total	80	100	
Squaring of foreign exchange positions.	Valid	V. large extent	-	-	-
		Small extent	32	40%	40%
		Not at all	48	60%	100
		Total	80	100	
Daily report on foreign currency positions	Valid	V. large extent	30	37.5%	37.5%
		Large extent	48	60%	97.5%
		Some extent	2	2.5%	100
		Small extent	-	-	-
		Total	80	100	

Source: STATA data analysis output

4.6. The importance of FX risk management

On the table below there are summarized results of respondents' response on the different issues about the importance of FX risk management. The respondents are asked to express their level of agreement or disagreement of different importance of foreign exchange risk management for the financial performance of commercial banks in Ethiopia. (1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree)

Table 4.6 the importance of FX risk management

	Statement		2	3	4	5	mean	SD
Q11	The effective management of foreign exchange risk is critical to your banks performance	Freq		2	36	42	4.5	0.55
		perc		2.5%	45%	52.5 %		
Q12	Foreign exchange risk management is essential to Minimize foreign exchange loses	Freq		2	28	50	4.6	0.54
		perc		2.5%	35%	62.5 %		
Q13	Foreign exchange risk management is essential to Reduce the volatility of cash flows	Freq		26	46	8	3.77	0.61
		perc		32.5%	57.5%	10%		
Q14	Foreign exchange risk management is essential to Protect earnings fluctuations	Freq		56	24	-	3.3	0.46
		perc		70%	30%	-		
Q15	Foreign exchange risk management is essential to Increase profitability	Freq		4	44	32	4.35	0.57
		perc		5%	55%	40%		
Q16	Foreign exchange risk management is essential for Adequacy of the foreign currency reserves	Freq		2	38	40	4.47	0.55
		perc		2.5%	47.5%	50%		
Q17	Foreign exchange risk management is essential to maintain liquidity	Freq		46	34	-	3.42	0.49
		perc		57.5%	42.5%	-		
Q18	Application of FX risk management techniques reduces costs or expected losses to banks	Freq		42	38	-	3.47	0.50
		perc		52.5%	47.5%	-		

Q19	Effective FX risk management is one of the main objectives of your bank	Freq		8	54	18	4.12	0.55
		perc		10%	67.5%	22.5 %		
Q20	There is significant board and senior management involvement in the FX risk management in your bank	Freq		6	44	30	4.3	0.60
		perc		7.5%	55%	37.5		
Q21	It is important to continuously review and update risk management practices.	Freq		6	44	30	4.3	0.60
		perc		7.5%	55%	30%		
Q22	There is a common understanding of foreign exchange risk management across the bank	Freq		46	34	-	3.42	0.49
		perc		57.5%	42.5%	-		
Q23	Banks makes periodic and systematic assessment of transaction, translation, and economic exposure	Freq		10	50	20	4.72	0.54
		perc		12.5%	62.5	25%		
Q24	Banks forecast appreciation and depreciation of relevant currencies during their planning horizon	Freq	44	34	2	-	2.47	0.55
		perc	55	42.5%	2.5%	-		
Q25	A bank financial decisions are influenced by its foreign exchange decisions	Freq		46	34	-	3.42	0.49
		perc		57.5%	42.5	-		
Q26	The banks staff's expertise levels towards foreign exchange risk management is adequate	Freq		34	46	-	3.57	0.49
		perc		42.5%	57.5			

Source: STATA data analysis output

As shown in Table 4.6, 52.5% of respondents strongly agree on the effective management of foreign exchange risk is critical to banks performance and 45% are agree on this statement. 62.5% of the respondents are strongly agreed on the statement of Foreign exchange risk management is essential to minimize foreign exchange losses.

57.5% of the respondents are agreed on the statement of Foreign exchange risk management is essential to Reduce the volatility of cash flows while 32.5% of the respondents answered neutral

for this statement in general it has a mean value of 3.77. 70% of the respondents answered neutral for the statement of Foreign exchange risk management is essential to protect an earnings fluctuation that means most of the respondents are not sure about its importance to protect earning fluctuation.

55% of the respondents are agreed on the statement of Foreign exchange risk management is essential to Increase profitability and 40% answered strongly agree. In general it has a mean value of 4.35 so we can say that FX risk management has importance to increase profitability of private banks in Ethiopia.

50% of the respondents are strongly agree that Foreign exchange risk management is essential for Adequacy of the foreign currency reserves while 47.5% are agree on this statement. 57.5% of the respondents are neutral on the statement Foreign exchange risk management is essential to maintain liquidity which means that most of the respondents are not sure whether FX risk management is essential to maintain liquidity or not.

For the statement of Application of FX risk management techniques reduces costs or expected losses to banks 52.5% of the respondents are answered neutral and 47.5% of them are answered agree. 67.5% of the respondents are answered agree that Effective FX risk management is one of the main objectives of their bank and 22.5% are strongly agree. 55% of the respondents are agree that there is significant board and senior management involvement in the FX risk management in their bank and 37.5% are strongly agree the rest answered neutral.

55% of the respondents are agreed on the importance of continuously review and update risk management practices and 37.5% are answered strongly agree. 57.5% of the respondents are answered neutral for the statement of There is a common understanding of foreign exchange risk management across the bank. 62.5% of the respondents are agree that Banks makes periodic and systematic assessment of transaction, translation, and economic exposure and 25% of the respondents are strongly agree. This indicates that there is periodic and systematic assessment of FX risk exposure in private commercial banks in Ethiopia.

For the statement of Banks forecast appreciation and depreciation of relevant currencies during their planning horizon 55% of the respondents are disagree and 42.5% are neutral about that.

This indicates that most of the time private commercial banks in Ethiopia did not forecast appreciation and depreciation of relevant currencies in their planning horizon.

57.5% of the respondents are answered neutral that bank financial decisions are influenced by its foreign exchange decisions and 42.5% are answered agree. 57.5% of respondents are agree that The banks staff's expertise levels towards foreign exchange risk management is adequate and 42.5% are neutral about that. This indicates that the staff's expertise level towards FX risk management is adequate in most of private commercial banks in Ethiopia.

The result implies that foreign exchange risk management practices has many importance for the effective achievement of financial performance in private commercial banks such as to minimize foreign exchange losses, to reduce the volatility of cash flows, to protect earning fluctuations, to increase profitability, for adequacy of foreign currency reserves so we can conclude that as it have many importance for banks they should give more attention on the proper and sustainable implementation of foreign exchange risk management practices.

4.7. Foreign exchange risk management practice

4.7.1 Policies and procedures

Banks should have written Policies and procedures governing activities in foreign currencies. The purpose of these written policies is to communicate the expectations of senior management and the board of directors to the management and staff. For management and control purpose, banks must make a clear distinction between foreign currency exposure resulting from dealing and trading operations and exposures due to a more traditional banking business involving on and off balance sheet exposures denominated in foreign currency. Currency risk management involving dealing/trading operations must be an information intensive, day–in/ day-out process under close scrutiny by senior management and a risk management committee. (NBE, risk management guideline 2010)

The following Table 4.7.1 shows the summarized results of respondents' response for the different issues of FX policies and procedures.

Table 4.7.1 summary of survey findings for FX policies & procedures issues

	Statements	Rank	freq	Perc.	Cum	mean	SD
Q27	The bank Fx risk management policies and procedures clearly reflect the tolerance limits for foreign exchange risk	disagree	-	-	-	3.75	0.58
		Neutral	26	32.5	32.5		
		Agree	48	60	92.5		
		St. agree	6	7.5	100		
		Total	80	100			
Q28	The bank Fx risk management policies and procedures adequately measures, monitor and control foreign exchange risk	Disagree				3.61	0.49
		Neutral	31	38.75	38.75		
		Agree	49	62.25	100		
		St. agree	-	-			
		Total	80	100			
Q29	The bank Fx risk management policies and procedures determine the types of foreign exchange products and services that the bank shall provide and the intended scope of dealing activity	Disagree				4.43	0.63
		Neutral	6	7.5	7.5		
		Agree	33	41.25	48.75		
		St. agree	41	51.25	100		
		Total	80	100			
Q30	The bank Fx risk management policies and procedures establish limits to govern various aspects of management of foreign exchange operations (net open position limits by currency, limits on counterparty exposure and settlement limits)	Disagree				4.35	0.61
		Neutral	6	7.5	7.5		
		Agree	40	50	57.5		
		St. agree	34	42.5	100		
		Total	80	100			
Q31	The bank Fx risk management policies and procedures establish rules for accounting standards that should be used in revaluating foreign currency positions and the frequency with which such revaluations should be undertaken for management and accounting purposes.	Disagree				3.53	0.54
		Neutral	39	48.75	48.75		
		Agree	39	48.75	97.5		
		St. agree	2	2.5	100		
		Total	80	100			
Q32	The bank Fx risk management policies and procedures are helpful for governing activities in foreign currencies	Disagree				4.5	0.59
		Neutral	4	5	5		
		Agree	32	40	45		
		St. agree	44	55	100		
		Total	80	100			
Q33	The bank continuously reviews and updates foreign exchange risk management policies and procedures.	Disagree				3.62	0.51
		Neutral	31	38.75	38.75		
		Agree	48	60	98.75		
		St. agree	1	1.25	100		
		Total	80	100			

Source: STATA data analysis output

As shown in Table 4.7.1, 60% of the respondents agree that Fx risk management policies and procedures clearly reflect the tolerance limits for foreign exchange risk in their bank and 32.5% are answered neutral. 62.5% the respondents agree that Fx risk management policies and procedures adequately measures, monitor and control foreign exchange risk in their bank and 37.5% are answered neutral. This indicates that the highest percent of respondents agree that FX policies and procedures are clearly reflect the tolerance limit for foreign exchange risk and adequately measures, monitor and control foreign exchange risk of the banks.

51.25% of the respondents strongly agree that Fx risk management policies and procedures determine the types of foreign exchange products and services that the bank shall provide and the intended scope of dealing activity and 41.25% are agree on this statement. On the other hand 50% of the respondents agree that their bank Fx risk management policies and procedures establish limits to govern various aspects of management of foreign exchange operations (net open position limits by currency, limits on counterparty exposure and settlement limits) and 42.5% are answered strongly agree.

For the issue of Fx risk management policies and procedures establish rules for accounting standards that should be used in revaluating foreign currency positions and the frequency with which such revaluations should be undertaken for management and accounting purposes 48.75% of the respondents are answered neutral and also 48.75% are answered agree the rest 2.5% are strongly agree. 55% of the respondents strongly agree on Fx risk management policies and procedures are helpful for governing activities in foreign currencies of the banks and 40% answered agree. 60% of respondents agree that the bank continuously reviews and updates foreign exchange risk management policies and procedures and 38.75% are answered neutral.

The main purpose of written policies and procedures is to have to have smooth work flows and to have clear ways to communicate the expectations of senior management and the board of directors to the management and staff. The result indicates that most of the respondents answered agree on the statements of foreign exchange policies and procedures issues this implies that private commercial banks have well prepared and organized policies and procedures for foreign exchange risk management, so this helps the banks to have better and effective achievements on financial performances.

4.7.2 Management information system issues

Accurate and timely information management systems are critical to the management of foreign currency positions, and for ensuring compliance with relevant risk limits. Banks should devote the resource necessary to generate such information. Standardized report should be designed to communicate the information regarding open foreign exchange positions, liquidity positions and counterparty exposures. Positions and exposures should be prepared and verified by persons not responsible for transacting foreign currency business. (NBE, 2010)

As shown in Table 4.7.2, 60% of the respondents agree on Accurate and timely information systems are available to the management of foreign currency positions, and for insuring compliance with relevant risk limits but 37.5% are neutral. 62.5% of respondents agree on Designed standardized reports is used to communicate the information regarding open foreign exchange positions, liquidity positions and counterparty exposures and 37.5% are answered neutral. This indicates that private commercial banks in Ethiopia uses designed standardized report and accurate & timely information systems are available for management.

56.25% of respondents strongly agree on the designed report gives sufficient information about net overall and intra-day positions by currency and 41.25% are agree but the rest 2.5% are neutral. 47.5% of the respondents strongly agree on the designed report produces enough information about maturity distribution by currency of foreign currency assets, liabilities and off-balance sheet contracts and 46.25% are agree on this statement. This means there is a well designed management information system which provide sufficient and detail information about foreign currency in most of private commercial banks in Ethiopia.

For the statement of the designed report gives sufficient information about total value of outstanding contracts by settlement date and currency 60% are answered neutral and 40% are agree. 58.75% of the respondents strongly agree on Management information system gives timely information about profit and loss, totals and comparison to previous days and 38.75% agree. On the other hand 60% of respondents agree on Management information system helps to know aggregate dealing limits and 36.25% are answered neutral.

The result shows that most of the respondents are agree and strongly agree on the statements of management information issues this indicates that there is well prepared and well developed

management information system in private commercial banks. This implies management information system helps banks to have better financial performance achievements due to Accurate and timely information management system are critical to the management of foreign currency position and for insuring compliance with relevant risk limits.

Table 4.7.2 summary of survey findings for management information system issues

	Statements	Rank	freq	Perc.	Cum	mean	SD
Q34	Accurate and timely information systems are available to the management of foreign currency positions, and for insuring compliance with relevant risk limits	disagree				3.65	0.53
		Neutral	30	37.5	37.5		
		Agree	48	60	97.5		
		St. agree	2	2.5	100		
		Total	80	100			
Q35	Designed standardized reports is used to communicate the information regarding open foreign exchange positions, liquidity positions and counterparty exposures	disagree				3.62	0.48
		Neutral	30	37.5	37.5		
		Agree	50	62.5	100		
		St. agree	-	-			
		Total	100	100			
Q36	The designed report gives sufficient information about net overall and intra-day positions by currency	disagree				4.53	0.54
		Neutral	2	2.5	2.5		
		Agree	33	41.25	43.75		
		St. agree	45	56.25	100		
		Total	80	100			
Q37	The designed report produces enough information about maturity distribution by currency of foreign currency assets, liabilities and off- balance sheet contracts.	disagree				4.41	0.60
		Neutral	5	6.25	6.25		
		Agree	37	46.25	52.5		
		St. agree	38	47.5	100		
		Total	80	100			
Q38	The designed report gives sufficient information about total value of outstanding contracts by settlement date and currency	disagree				3.4	0.49
		Neutral	48	60	60		
		Agree	32	40	100		
		St. agree	-	-			
		Total	100	100			
Q39	Management information system gives timely information about profit and loss, totals and comparison to previous day's	disagree				4.56	0.54
		Neutral	2	2.5	2.5		
		Agree	31	38.75	41.25		
		St. agree	47	58.75	100		
		Total	80	100			
Q40	Management information system helps to know aggregate dealing limits	disagree				3.67	0.54
		Neutral	29	36.25	36.25		
		Agree	48	60	96.25		
		St. agree	3	3.75	100		
		Total	80	100			

Source: STATA data analysis output

4.7.3 Internal control system

Banks should implement a system of internal controls to ensure that their arrangements for managing foreign exchange risk are working effectively. The system should ensure that the banks foreign exchange activities are undertaken within the prescribed risk tolerance limits, and that all established procedures, and practices are being followed. (NBE, 2010)

As shown in Table4.7.3, 61.25% of the respondents agree on the bank internal control system ensures the arrangements for managing foreign exchange risk are working effectively and 35% are neutral. 62.5% of the respondents agree on The bank internal control system ensures that the banks' foreign exchange activities are undertaken within the prescribed risk tolerance limits and 32.5 % are neutral.

52.5% of respondents strongly agree on the bank Internal control system ensures that all established procedures and practices are being followed properly and 40% agree the rest are answered neutral. 52.5% of respondents agree on internal control system used to review and assess the foreign exchange risk management process and 45% are answered strongly agree on the issue. 60% of respondent are answered neutral on the statement of The bank internal control system is essential for management to establish and implement procedures governing the conduct and practices of foreign exchange traders/dealers and 40% answered agree.

For the statement that internal control system continuously check documented approvals and authorizations to ensure accountability to an appropriate level of management 55% of respondents are answered strongly agree and 40% are answered agree. 61.25% of respondents agree on Level of control by your bank is appropriate for the foreign exchange risk that it faces and 35% of respondents answered neutral.

The result shows that most of the respondents are agree and strongly agree on the statements of internal control system issues regarding foreign exchange this indicates that main purposes or objectives of internal control system are implemented in private commercial banks. This implies the commercial banks in Ethiopia have given much attention on internal control system and they understand that it helps them to have better financial performance achievements by insuring the operational activities are properly done in accordance with the rules, regulations and procedures of the banks

Table 4.7.3 summary of survey findings for internal control system issues

	Statements	Rank	freq	Perc.	Cum	mean	SD
Q41	The bank Internal control system ensures the arrangements for managing foreign exchange risk are working effectively	Disagree				3.68	0.54
		Neutral	28	35	35		
		Agree	49	61.25	96.25		
		St. agree	3	3.75	100		
		Total	80	100			
Q42	The bank Internal control system ensures that the banks' foreign exchange activities are undertaken within the prescribed risk tolerance limits	Disagree				3.72	0.55
		Neutral	26	32.5	32.5		
		Agree	50	62.5	95		
		St. agree	4	5.	100		
		Total	80	100			
Q43	The bank Internal control system ensures that all established procedures and practices are being followed properly.	Disagree				4.45	0.63
		Neutral	65	7.5	7.5		
		Agree	32	40	47.5		
		St. agree	42	52.5	100		
		Total	80	100			
Q44	Internal control system used to review and assess the foreign exchange risk management process	disagree				4.42	0.54
		Neutral	2	2.5	2.5		
		Agree	42	52.5	55		
		St. agree	36	45	100		
		Total	80	100			
Q45	The bank Internal control system is essential for management to establish and implement procedures governing the conduct and practices of foreign exchange traders/dealers	disagree				3.4	0.49
		Neutral	48	60	60		
		Agree	32	40	100		
		St. agree	-	-			
		Total	80	100			
Q46	Internal control system continuously check documented approvals and authorizations to ensure accountability to an appropriate level of management	Disagree				4.5	0.59
		Neutral	4	5	5		
		Agree	32	40	45		
		St. agree	44	55	100		
		Total	80	100			
Q47	Level of control by your bank is appropriate for the foreign exchange risk that it faces	Disagree				3.68	0.54
		Neutral	28	35	35		
		Agree	49	61.25	96.25		
		St. agree	3	3.75	100		
		Total	80	100			

Source: STATA data analysis output

4.7.4 The role of senior management

According to NBE Bank risk management guideline Senior management is responsible for the day-to-day management of the bank's exposure to foreign exchange risk.

As shown in Table 4.7.4, 60% of respondents agree on the statement that Top management plays a great role by developing procedures and practices that facilitate the implementation of the broad foreign exchange risk management strategy and policies and 32.5% are answered neutral. 62.5% of respondents agree on that Top management have key role in developing measures that shall facilitate the measurement, monitoring and control of foreign exchange risk and 37.5% are answered neutral.

52.5% of respondents are strongly agree on the statement that Top management implement a system of internal controls that shall serve as an effective check over the measures used to manage foreign exchange risk and 42.5% are agree on the statement. 48.75% of respondents agree on Top management have key role by ensure compliance with any relevant national bank of Ethiopia (NBE) directives on the management of foreign exchange risk and 45% are answered strongly agree. 57.5% of respondents answered neutral on the statement that Top management plays a great role in developing an effective system of reporting to the board on issues related to the management of foreign exchange risk and 41.25% answered on agree.

52.5% of respondents strongly agree on Top management have great role in developing lines of communication to ensure that timely dissemination of foreign exchange risk management policies and other foreign exchange risk management information to all individuals involved in the process and 41.25% are answered on agree. 57.5% of respondents agree on the statement that the banks management regularly reviews the organizations performance in managing its FX risk and 31.25% are answered on neutral.

The result shows that most of the respondents are answered agree on the statements of the roles of top/senior management issues regarding foreign exchange risk management. this indicates that top managements plays great role in the management of foreign exchange risk by involving and performing different tasks such as developing procedures and practices, developing measures that shall facilitate measurement, monitoring and control of foreign exchange, developing lines of communication to all concerned parties, and also by continuous and regular reviews on the performance in managing foreign exchange risk. This helps the banks to have better achievements on their financial performances.

Table 4.7.4 summary of survey findings for the role of top management issues

	Statements	rank	freq	Perc.	Cum	mean	SD
Q48	Top management plays a great role by developing procedures and practices that facilitate the implementation of the broad foreign exchange risk management strategy and policies	Disagree				3.75	0.58
		Neutral	26	32.5	32.5		
		Agree	48	60	92.5		
		St. agree	6	7.5	100		
		Total	80	100			
Q49	Top management have key role in developing measures that shall facilitate the measurement, monitoring and control of foreign exchange risk	Disagree				3.62	0.48
		Neutral	30	37.5	37.5		
		Agree	50	62.5	100		
		St. agree	-	-			
		Total	80	100			
Q50	Top management implement a system of internal controls that shall serve as an effective check over the measures used to manage foreign exchange risk	Disagree				4.47	0.59
		Neutral	4	5	5		
		Agree	34	42.5	47.5		
		St. agree	42	52.5	100		
		Total	80	100			
Q51	Top management have key role by ensure compliance with any relevant national bank of Ethiopia (NBE) directives on the management of foreign exchange risk	Disagree				4.38	0.60
		Neutral	5	6.25	6.25		
		Agree	39	48.75	55		
		St. agree	36	45	100		
		Total	80	100			
Q52	Top management plays a great role in developing an effective system of reporting to the board on issues related to the management of foreign exchange risk	Neutral	46	57.5	57.5	3.43	0.52
		Agree	33	41.25	98.5		
		St. agree	1	1.25	100		
		Total	80	100			
Q53	Top management have great role in developing lines of communication to ensure that timely dissemination of foreign exchange risk management policies and other foreign exchange risk management information to all individuals involved in the process	Disagree				4.46	0.61
		Neutral	5	6.25	6.25		
		Agree	33	41.25	47.5		
		St. agree	42	52.5	100		
		Total	80	100			
Q54	The banks management regularly reviews the organizations performance in managing its FX risk	Disagree				3.8	0.62
		Neutral	25	31.25	31.25		
		Agree	46	57.5	88.75		
		St. agree	9	11.25	100		
		Total	80	100			

Source: STATA data analysis output

4.8. Validity and reliability test

To make sure the validity of the questionnaire, the items of the questionnaire were developed based on through review of both theoretical and empirical literatures. With regard to internal consistency, cronbach alpha (α) was computed for multi item scales.

As of kehoe (1995) reliable scales can have minimum cronbach alpha (α) of 0.5: an alpha value of at least 0.5 should be achieved for accepting the items "as is" within a dimension, as long as they are within a short instrument (10-15) items.

On the other hand, a rule of thumb that has been advocated in the literature (Nunnally, 1998) is require cronbach alpha (α) to equal 0.70 or exceed it before the items are considered internally consistent.

Table 4.8 reliability test (cronbach alpha)

Variables	Items	Alpha (α) coefficient
X1- FX policies and procedures	7	0.7523
X2- Management information system	7	0.8072
X3- Internal control system	7	0.7823
X4- The role of top management	7	0.7598

Source: STATA data analysis output

The reliability statistics was measured to check the validity of variables for the data collection. The rule of thumb in reliability test Cronbach alpha greater than 0.7 is acceptable.

As shown in table 4.8 for the reliability test of Cronbach's alpha coefficient of all independent variables are greater than 0.7. Based on the research scales and constructs, it can be conclude that each variable represents a reliable and valid construct.

4.9. Test results for the classical linear regression model assumptions (Diagnosis Tests)

The following sections discuss results of the diagnostic tests (i.e. multicollinearity, heteroskedasticity, correlation, linearity and normality test) that ensure whether the data fits the basic assumptions of classical linear regression model or not.

Multi-co linearity

According to Brooks (2008), multi-co linearity will occur if some or all of the independent variables are highly correlated with one another. It shows the regression model has difficulty in explaining which independent variables are affecting the dependent variable. If multi-co linearity problem is too serious in a model, either additional important variable should be added or unimportant independent variable should be dropped. This study uses variance inflation factor (VIF) method to detect the existence of multi-co linearity. As a rule of thumb, a variable whose VIF values are greater than 10 may merit further investigation. Tolerance defined as (1/VIF) is used by many researchers to check on the degree of co linearity, a tolerance value lower than 0.1 is comparable to a VIF of 10. It means that the variable could be considered as a linear combination of other other independent variables.

Table 4.9.1 variance inflation factor (VIF)

Variables	VIF	1/VIF
X1- policies & procedures	1.26	0.791738
X2- Management information system	1.21	0.826455
X3- Internal control	1.14	0.874333
X4-Role of top management	1.13	0.887688
Mean VIF	1.19	

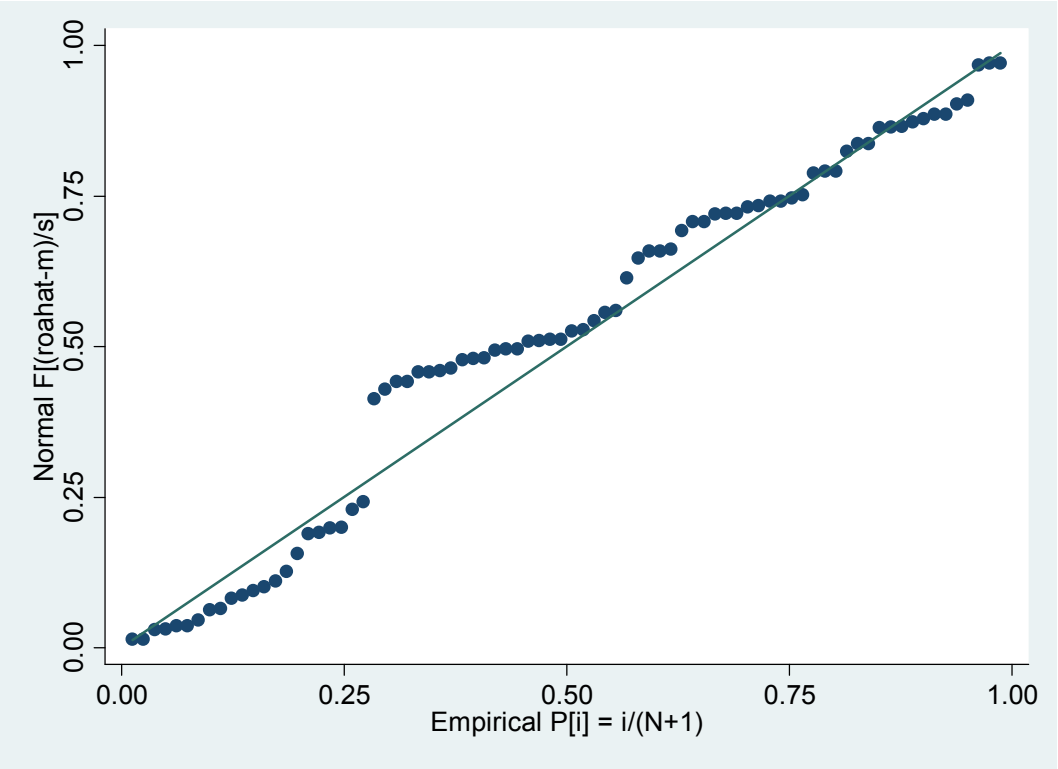
Source: STATA data analysis output

As we can see on the above table 4.91, Variance inflation factor (VIF) of independent variables is less than 10 and the tolerance value that measures the degree of co linearity is less than one this indicates that there is no multi-co linearity problem in the model.

Linearity Test

Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variables. To determine whether the relationship between the dependent variable ROA and the independent variables X1 (FX policies and procedures), X2 (management information system), X3 (internal control system), and X4 (the role of top management) is linear; plots of the regression residuals through STATA software had been used.

Fig 4.9.1 normal point plot of standardize residual



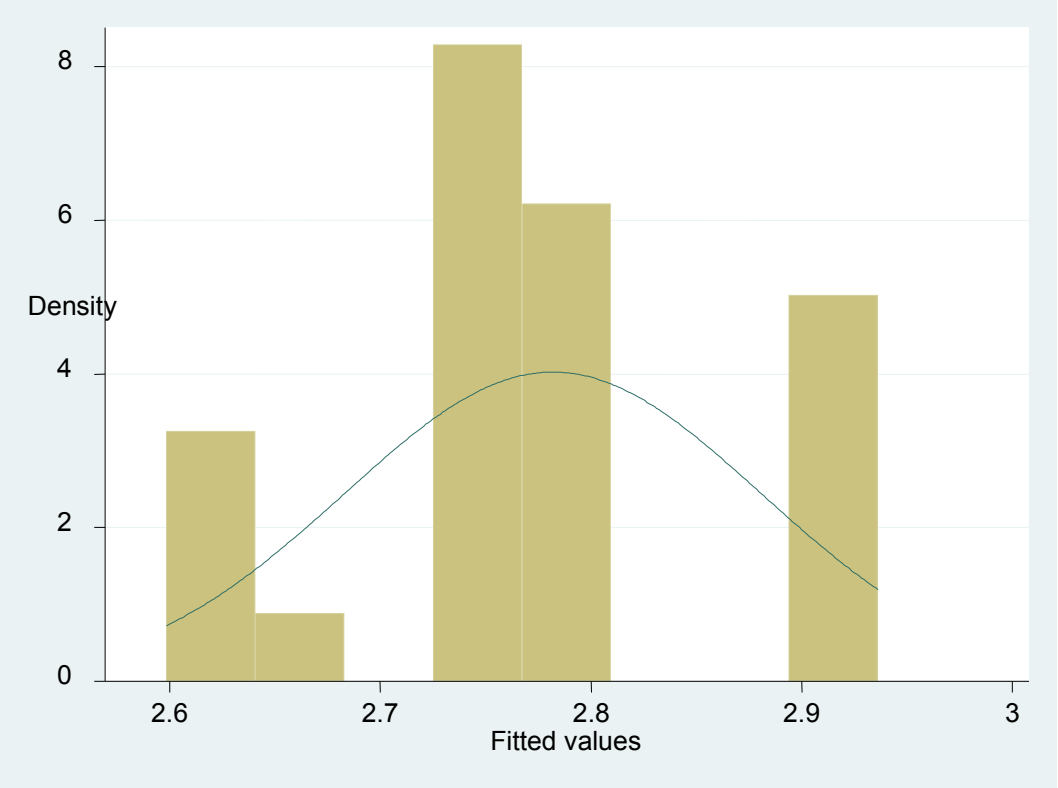
Source: STATA data analysis output

The scatter plot of residual show to no large difference in the spread of residual as you looks from left to right on figure 4.9.1. This result suggests the relationship we are trying to predict is linear.

Normality test

As per the classical linear regression models assumption, the error term should be normally distributed or expected value of error terms should be zero.

Fig 4.9.2 frequency distribution of standard residual (histogram)



Source: STATA data analysis output

Figure 4.9.2 shows the frequency distribution of standardize residuals compared to normal distribution. As you can see, although there are some residuals that are relatively far away from the curve, many of the residuals are fairly close. Moreover the histogram is bell shaped which leads to infer that the residual (disturbance or errors) are normally distributed. Thus, no violations of the assumption normally distributed error term.

Heteroskedasticity test

It has been assumed that the error terms are homoscedastic. That means the error terms are assumed to have a constant variance; otherwise they are said to be heteroskedastic. Heteroskedasticity occurs when the variance of error term is not constant. The presence of heteroskedasticity makes the standard errors wrong and hence any inferences made could be misleading. This requires validation of the null hypothesis that the error terms are homoscedastic. Therefore a white test is made to ensure that this assumption is no longer

violated. Brooks (2008) recommended that the null hypothesis of homoscedasticity would not be rejected if the p-value of the F-and x^2(LM) versions of the test statistic and the p- value of the scaled explained SS is higher than 0.05.

Table 4.9.2 Heteroskedasticity test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
White's test for Ho: homoskedasticity	
against Ha: unrestricted heteroskedasticity	
f-statistic	Obs*R-squared
F(1, 78) = 0.04	Chi2(1) = 0.04
Prob > F =0.8431	Prob > chi2 =0.8406

Source: STATA data analysis output

As it can be seen from the table, the F-statistic and chi-square version of the test statistic gave the same conclusion that there is no evidence for the presence of heteroskedasticity, as evidenced by the p-values in excess of 0.05.

Correlation matrix

According to Joseph and Rosemary, 2003, if the correlation coefficient is higher than 0.8, it is considered as the model consists of serious multi-co linearity problem.

Table 4.9.3 correlation matrix

	ROA	X1	X2	X3	X4
ROA	1.0000				
X1	0.1424	1.0000			
X2	0.1212	-0.1626	1.0000		
X3	0.1123	-0.0509	-0.3020	1.0000	
X4	0.1413	-0.2425	0.0962	-0.3222	1.0000

Source: STATA data analysis output

ROA= return on asset, X1=policies & procedures, X2= management information system, x3=internal control, x4=role of top management

Table 4.9.3 showed that there is no strong pair-wise correlation between the explanatory variables. As a rule of thumb, inter-correlation among the independent variables above 0.80 signals a possible multi-co linearity problem. In this study the maximum value of the correlation coefficient is 0.0962. Thus, it can be concluded that all the variables in the study have low correlation power as a result there is no multi-co linearity problem in the explanatory variables.

Thus, from an examination of information presented in the tests I conclude that there are no significant data problems that would lead to say the assumptions of multiple regressions have been seriously violated.

4.10 Hypotheses testing using multiple regressions

Since correlation analysis do not provide enough information to make a proper decision regarding the relationships between the variables, multiple regression has been used to test the hypothesis for the independent and dependant variables. This section discusses in detail the analysis of the results for each independent variable and their significance in influencing mobile banking usage. Furthermore, the discussion analyzes the statistical findings of the study in relation to the previous empirical evidences. The result for each set of factors is discussed as follows.

Table 4.10.1 summary of model estimation (regression result)

	(1)	
	Roa	
X1	0.164**	(0.0722)
X2	0.132*	(0.0682)
X3	0.174**	(0.0751)
X4	0.173**	(0.0748)
_cons	0.366	(0.712)
N	80	
R^2	0.1338	
adj. R^2	0.0876	
F	2.895**	

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

(ROA= return on asset, X1=policies & procedures, X2= management information system, X3=internal control, X4=role of top management)

The regression analysis of the model was run with financial performance which is measured by return on asset (ROA) as the dependent variable and the rest of four variables as independent variables. The regression analysis presents how much of the variance in financial performance is explained by the underlying factors. As shown in Table 4.10.1, the model or the predictor variables have accounted for 13.38% of the variability. This means 13.38% of variations in financial performance which is measured by ROA of private commercial banks in Ethiopia were explained by independent variables included in the model.

The overall significance or acceptability of the model from a statistical perspective can be measured using the significance value of F statistic the result shows (p-value of F test = 0.0276), which is less than p<0.05, the model is statistically significantly better than the null. This indicates that the variation explained by the model is not due to probability and is valid.

Table 4.10.2 regression coefficients analysis of the model

	(1) Roa	
X1	0.164**	(0.026)
X2	0.132*	(0.058)
X3	0.174**	(0.023)
X4	0.173**	(0.024)
_cons	0.366	(0.609)
N	80	

p-values in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

(ROA= return on asset, X1=policies & procedures, X2= management information system, X3=internal control, X4=role of top management)

4.10.1 FX policies and procedures

The results in Table 4.10.2 show that FX policies and procedures (X1) have a coefficient of 0.164 and p-value of 0.026. Holding other explanatory variables constant FX policies and

procedures (X1) was found to have a statistically significant positive association with return on asset (ROA). Therefore, the researcher reject the null hypothesis that stated FX policies and procedures has no significant effect on commercial banks financial performance (ROA).

4.10.2 Management information system

As shown in Table 4.10.2, the coefficient of management information system (X2) is 0.132 with its p-value 0.058. it can be seen that maintaining other explanatory variables constant FX management information system was found to have a positive but statistically insignificant effect on financial performance (ROA) of private commercial banks as its p value of significance is greater than 0.05. Therefore the researcher failed to reject the null hypothesis that stated FX management information system has no significant effect on financial performance of private commercial banks.

4.10.3 Internal control system

As shown in Table 4.10.2, the coefficient of internal control system (X3) is 0.174 and P-value is 0.023. Holding other explanatory variables constant, internal control system (X3) was found to have a positive and statistically significant effect on the financial performance (ROA) of private commercial banks. Therefore, the researcher rejects the null hypothesis that stated internal control system has no significant effect on the financial performance of private commercial banks.

4.10.4 The role of top management

As shown in Table 4.10.2, the coefficient of the role of top management (X4) is 0.1728389 and P-value is 0.024. Holding other explanatory variables constant, the role of top management (X4) was found to have a positive and statistically significant effect on the financial performance (ROA) of private commercial banks. Therefore, the researcher rejects the null hypothesis that stated the role of top management has no significant effect on the financial performance of private commercial banks.

CHAPTER - FIVE
SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1. Summary of Findings

- The respondents has high level of educational qualification and work experience which enables them to have sufficient knowledge about the importance of foreign exchange risk management in order to have effective financial performance.
- The finding shows that the banks most frequently face translation exposure and frequently faces transaction exposure and economic exposure.
- Foreign exchange risk management practices has many importance for the effective achievement of financial performance in private commercial banks such as to minimize foreign exchange losses, to reduce the volatility of cash flows, to protect earning fluctuations, to increase profitability, for adequacy of foreign currency reserves so we can conclude that as it have many importance for banks they should give more attention on the proper and sustainable implementation of foreign exchange risk management practices.
- The result shows that in most of the banks there is clear FX policy & procedure, well developed and standardized management information system, strong internal control system and effective involvement of top/senior management regarding the management of FX risk.
- The regression analysis presents how much of the variance in financial performance is explained by the underlying factors. The result shows that the model or the predictor variables have accounted for 13.38% of the variability. This means 13.38% of variations in financial performance which is measured by ROA of private commercial banks in Ethiopia were explained by independent variables included in the model.
- The overall significance or acceptability of the model from a statistical perspective can be measured using the significance value of F statistic the result shows (p-value of F test = 0.0276), which is less than $p<0.05$, the model is statistically significantly better than the null.
- The regression analysis shows that: Fx policies and procedures, internal control system and the role of top management has positive and significant effect on the financial performances of private commercial banks, on the other hand Fx management information system has positive but statistically insignificant effect on the financial performance of private commercial banks.

5.2. Conclusion

The successful and remarkable achievements of private commercial banks in Ethiopia with the absence of any major complaints or adverse finding against banks in Ethiopia gives the impression that the banking industry are generally stable. The implications of this belief are that the banks have relatively good risk management profiles as well as sound frameworks for managing risks inherent in their business activities. The extent to which this can be verified relies on thorough assessments of the nature and quantum of risks confronting the various banks in the country and an evaluation of their risk management structures and systems. It also provides an empirical indication of the types and levels of risks the banks are exposed to and their capacity and required policies to effectively manage them.

This research discusses and analyzes the foreign exchange risk management practice of Ethiopian private Commercial banks tested to answer the research question: How do Ethiopian commercial banks manage foreign exchange risk? What are the methods and practice used by commercial banks to manage foreign exchange risk? And what is the relationship between foreign exchange management procedures and financial performance of commercial banks in Ethiopia?

concerning the research questions a hypothesis is developed which is tested with regression analysis to test if: policies and procedures of foreign exchange risk management has significant effect on financial performance of commercial banks, management information system regarding foreign exchange risk management has significant effect on financial performance of commercial banks, internal control system regarding foreign exchange risk management has significant effect on financial performance of commercial banks, and the role of senior management on foreign exchange risk management has significant effect on financial performance of commercial banks.

Based on the hypothesis testing the result of the regression analysis shows that: Fx policies and procedures, internal control system and the role of top management has positive and significant effect on the financial performances of private commercial banks, on the other hand Fx management information system has positive but statistically insignificant effect on the financial performance of private commercial banks.

Generally the researcher conclude that there is effective foreign exchange risk management practice in private commercial banks in terms of solid governance structure with clear policies and procedures, effective internal control system, well designed and standardize management information system and also there is effective involvement of top management.

5.3. Recommendations

Despite a fairly good risk management framework in place to adequately manage the various types of risk commercial banks of Ethiopia faces, the researcher would like to make some recommendations which are believed to help strengthen risk management practices and make the banks more competitive. These are:

- In order to have effective financial performance banks should have to make continuous reviews, updates and evaluation on the way how foreign exchange risk management practice or framework is implemented.
- The depreciating trend of the home currency may affect the economic performance of different sectors and as a result, the performance of commercial banks might also be directly or indirectly affected thus the banks should have to give more attention for foreign exchange risk.
- The banks should give continuous training for their staffs in order to develop the knowledge and skills of the staffs. This helps to increase the capability of the staffs to use different techniques in order to mitigate the risk arises from foreign exchange, usage of qualitative method of rating risks to easily identifying and prioritizing the risks and also effectively assess the likelihood of different risk occurring based on stated policies and procedures.
- Banks should develop the awareness about foreign exchange risk for the stakeholders at every hierarchy of the organization in order to make sure that everyone is aware of the risk associated with his/her activity, as awareness creation is at the heart of risk management. The awareness creation mechanisms would be in terms of providing training regularly and by disseminating information through internal magazine, brochures or leaflets to update the staffs on the new development with regard to the risk.
- With the growing demand of customers for quality products and services and investors looking out for high growth in earnings, a further research should be carried out so as to

extensively examine different risks and how banks in Ethiopia are continuously assessing and quantifying each risk in order to manage it effectively.

- Due to the depreciating trend of home currency and the volatility of exchange rate in international market the banks may face foreign exchange risk. So,in order to mitigate the risk arises from this situation and also in order get more benefit from risk management regarding foreign exchange banks should develop and apply additional techniques and practices into their risk management practices such as hedging techniques and forecasting of foreign exchange rate.

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Appendix-I: Questionnaire

Addis Ababa University
College of business and economics
Masters of Business Administration (MBA)-finance

Questionnaire

This questionnaire is designed specifically with the aim of gathering information to carry out a research on the topic of "The effect of foreign exchange risk management practice on financial performance of commercial banks in Ethiopia" as a partial fulfillment of the requirements for the degree of Master of Business Administration in Finance (MBA-finance) at Addis Ababa University. The researchers would like to thank you in advance for your kind response by allotting your precious time in filling the questionnaire. As your responses have a great impact on the study findings, you are kindly requested to provide your genuine responses freely without mentioning your name. The information provided is to be used only for the sake of this study and will be kept strictly confidential.

If you have any question with regard to the questionnaire please contact me using the following address.

I thank you in advance,
Sirak Tadesse – (sirakata@yahoo.com)
Mob - 0965-588967

Part - 1

A: general information

1. Which foreign exchange risk exposure does your bank face?

Statements	Most frequently (3)	frequently (2)	Less frequently (1)
Translation exposure (arises from the need to translate accounts in foreign currencies to the local currency of the reporting entity)			
Transaction exposure (arise where the value of existing obligations are affected by adverse movements in foreign exchange rates)			
Economic exposure (relates to adverse impact on equity/income on domestic and foreign operations due to sharp, unexpected change in exchange rates)			

2. Foreign exchange directives related issues? Kindly rank the extent to which your banks can manage its foreign exchange risk exposure

Statements	Very large extent (5)	Large extent (4)	Some extent (3)	Small extent (2)	Not at all (1)
Restrictions of foreign currency customer's deposit accounts to USD, EUR, GBP and JPY types of currency					
Interest on non-resident fixed foreign currency account					
Computation of overall open foreign currency position					
Overall open foreign currency position limits					
Squaring of foreign exchange positions					
Daily report on foreign currency positions					
Other (please specify)					

B: foreign exchange risk management issues

3. The importance of Foreign exchange risk management for the bank.
   Please indicate your level of agreement or disagreement with the following statement.
   Please (√) your appropriate answer based on the following rating.
   1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = Strongly Agree

	Statements to evaluate	Rating point				
		1	2	3	4	5
1	The effective management of foreign exchange risk is critical to your banks performance					
2	Foreign exchange risk management is essential to Minimize foreign exchange loses					
3	Foreign exchange risk management is essential to Reduce the volatility of cash flows					
4	Foreign exchange risk management is essential to Protect earnings fluctuations					
5	Foreign exchange risk management is essential to Increase profitability					
6	Foreign exchange risk management is essential for Adequacy of the foreign currency reserves					
7	Foreign exchange risk management is essential to maintain liquidity					
8	Application of FX risk management techniques reduces costs or expected losses to banks					
9	Effective FX risk management is one of the main objectives of your bank					
10	There is significant board and senior management involvement in the FX risk management in your bank					
11	It is important to continuously review and update risk management practices.					
12	There is a common understanding of foreign exchange risk management across the bank					
13	Banks makes periodic and systematic assessment of transaction, translation, and economic exposure					
14	Banks forecast appreciation and depreciation of relevant currencies during their planning horizon					
15	A bank financial decisions are influenced by its foreign exchange decisions					
16	The banks staff's expertise levels towards foreign exchange risk management is adequate					

4. foreign exchange risk management policies and procedures issues: -
   Please indicate your level of agreement or disagreement with the following statement of foreign exchange risk management policies and procedure issues in order to have effective financial performance. Please (√) your appropriate answer based on the following rating.
   1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = Strongly Agree

	Statements to evaluate	Rating point				
		1	2	3	4	5
1	The bank Fx risk management policies and procedures clearly reflect the tolerance limits for foreign exchange risk					
2	The bank Fx risk management policies and procedures adequately measures, monitor and control foreign exchange risk					
3	The bank Fx risk management policies and procedures determine the types of foreign exchange products and services that the bank shall provide and the intended scope of dealing activity					
4	The bank Fx risk management policies and procedures establish limits to govern various aspects of management of foreign exchange operations (net open position limits by currency, limits on counterparty exposure and settlement limits)					
5	The bank Fx risk management policies and procedures establish rules for accounting standards that should be used in revaluating foreign currency positions and the frequency with which such revaluations should be undertaken for management and accounting purposes.					
6	The bank Fx risk management policies and procedures are helpful for governing activities in foreign currencies					
7	The bank continuously reviews and updates foreign exchange risk management policies and procedures.					

5. Management information system issues: -
   Please indicate your level of agreement or disagreement with the following statements of management information system issues regarding foreign exchange risk management in order to have successful financial performance.
   Please (√) your appropriate answer based on the following rating.
   1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = Strongly Agree

	Statements to evaluate	Rating point				
		1	2	3	4	5
1	Accurate and timely information systems are available to the management of foreign currency positions, and for insuring compliance					

	with relevant risk limits					
2	Designed standardized reports is used to communicate the information regarding open foreign exchange positions, liquidity positions and counterparty exposures					
3	The designed report gives sufficient information about net overall and intra-day positions by currency					
4	The designed report produces enough information about maturity distribution by currency of foreign currency assets, liabilities and off-balance sheet contracts.					
5	The designed report gives sufficient information about total value of outstanding contracts by settlement date and currency					
6	Management information system gives timely information about profit and loss, totals and comparison to previous day's					
7	Management information system helps to know aggregate dealing limits					

6. Internal control: -

Please indicate your level of agreement or disagreement with the following statements of internal control issues regarding foreign exchange risk management in order to have better financial performance.

Please (√) your appropriate answer based on the following rating.

1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = Strongly Agree

	Statements to evaluate	Rating point				
		1	2	3	4	5
1	The bank Internal control system ensures the arrangements for managing foreign exchange risk are working effectively					
2	The bank Internal control system ensures that the banks' foreign exchange activities are undertaken within the prescribed risk tolerance limits					
3	The bank Internal control system ensures that all established procedures and practices are being followed properly.					
4	Internal control system used to review and assess the foreign exchange risk management process					
5	The bank Internal control system is essential for management to establish and implement procedures governing the conduct and practices of foreign exchange traders/dealers					
6	Internal control system continuously check documented approvals and authorizations to ensure accountability to an appropriate level of management					
7	Level of control by your bank is appropriate for the foreign exchange risk that it faces					

7. Senior management issue: -

Please indicate your level of agreement or disagreement with the following statements that indicates the role of top management regarding foreign exchange risk management in order to have better financial performance.

Please (√) your appropriate answer based on the following rating.

1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = Strongly Agree

	Statements to evaluate	Rating point				
		1	2	3	4	5
1	Top management plays a great role by developing procedures and practices that facilitate the implementation of the broad foreign exchange risk management strategy and policies					
2	Top management have key role in developing measures that shall facilitate the measurement, monitoring and control of foreign exchange risk					
3	Top management implement a system of internal controls that shall serve as an effective check over the measures used to manage foreign exchange risk					
4	Top management have key role by ensure compliance with any relevant national bank of Ethiopia (NBE) directives on the management of foreign exchange risk					
5	Top management plays a great role in developing an effective system of reporting to the board on issues related to the management of foreign exchange risk					
6	Top management have great role in developing lines of communication to ensure that timely dissemination of foreign exchange risk management policies and other foreign exchange risk management information to all individuals involved in the process					
7	The banks management regularly reviews the organizations performance in managing its FX risk					

Part - 2
Personal Information

Instructions: Please use this √ mark for each question to indicate your response.

1. Gender: - Male ☐ Female ☐

2. Years of service (experience):

1-5 years ☐ 6-10 years ☐ above 10 years ☐

3. Level of education:- Diploma ☐ Degree (BA, BSc) ☐

Masters ☐ PHD ☐

4. Department: _____

5. Name of the Bank: _____

Thank you!!

Appendix-II: List of private commercial banks

No.	Name of private banks	Year of establishment
1	Awash international bank s.c	1994
2	Dashen bank s.c	1995
3	Bank of Abyssinia s.c	1996
4	Wegagen bank s.c	1997
5	United Bank	1998
6	Nib International Bank s.c	1999
7	Cooperative Bank of Oromia s.c	2004
8	Lion international Bank s.c	2006
9	Zemen Bank s.c	2008
10	Oromia international Bank s.c	2008
11	Bunna International Bank s.c	2009
12	Berhan International Bank s.c	2009
13	Abay Bank s.c	2010
14	Addis International Bank s.c	2011
15	Debub Global Bank s.c	2012
16	Enat Bank s.c	2012

Source: NBE, 2018

Appendix-III: Average Return on Asset of private commercial banks

No.	Name of private banks	ROA 2016/17	ROA 2017/18	Average
1	Awash international bank s.c	2.69	3.13	2.91
2	Dashen bank s.c	2.47	2.28	2.38
3	Bank of Abyssinia s.c	3.34	2.68	3.01
4	Wegagen bank s.c	2.8	3.29	3.04
5	United Bank	2.14	2.48	2.31
6	Nib International Bank s.c	2.94	2.16	2.55
7	Cooperative Bank of Oromia s.c	2.39	2.19	2.29
8	Lion international Bank s.c	2.43	3.09	2.76
9	Zemen Bank s.c	3.09	2.44	2.77
10	Oromia international Bank s.c	2.17	3.64	2.9
11	Bunna International Bank s.c	2.84	2.76	2.8
12	Berhan International Bank s.c	3.95	2.53	3.24
13	Abay Bank s.c	2.55	3.02	2.78
14	Addis International Bank s.c	3.24	2.95	3.1
15	Debub Global Bank s.c	1.78	4.02	2.9
16	Enat Bank s.c	2.68	2.82	2.75

Source: own computation from their annual report