



ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**ASSESSMENT OF FOREIGN EXCHANGE RISK MANAGEMENT
PRACTICE OF COMMERCIAL BANKS IN ETHIOPIA**

BY
YONAS LIDETU

JANUARY 2017

ADDIS ABABA, ETHIOPIA

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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF
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REQUIREMENTS FOR MBA-IN ACCOUNTING AND FINANCE**

ADVISOR: ZENEGNAW ABIY (PhD)

JANUARY 2017

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STATEMENT OF DECLARATION

I, Yonas Lidetu, have carried out independently a research work on assessment of foreign exchange risk management practice of Commercial Banks in Ethiopia in partial fulfillment of the requirement of the MBA program in Accounting and Finance with the guidance and support of the research advisor. I, also declare that this thesis is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the thesis have been duly acknowledged.

Yonas Lidetu

Sig: _____

January 2017

ENDORSEMENT

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

Advisor

Signature and Date

Abstract

The aim of this paper is to assess the foreign exchange risk management practice of commercial banks operating in Ethiopia. Information was obtained from all 17 commercial banks by adopting a census research design. Open and closed-ended questionnaires were administered to all commercial banks. The questionnaires covered key aspects of foreign exchange risk management, its objectives, strategies and techniques, its domestic regulations and including the importance of risk management practices.

Many of the standard tools used to hedge currency risk, such as futures, swaps and options contracts, are either not available in emerging markets or, where available, are traded in illiquid and inefficient markets, making the range of products available extremely limited. Therefore, the purpose of this study was to find out what foreign exchange risk exposures are there, what strategies and techniques are used by commercial banks in Ethiopia to manage foreign exchange risk.

The analysis sought to generate descriptive statistics, percentages and frequencies. Finally the presentation of the results was done by use of frequency tables, and charts presentation. The results of the study showed that translational exposure was the most identified exposures. Matching/ Natural hedging was the most utilized strategy. Engaging in spot transactions was also widely used. Diversification whereby banks financed in different currencies and or in different markets was employed by a few banks. Some banks engaged in risk sharing strategy. Avoidance was also employed to some extent. Netting was the least used strategy.

In light of the above findings, it's imperative that banks in Ethiopia pick out best practices from each other and abroad in order to put foreign exchange exposure under control to mitigate the effects of losses due to this risk.

Key words: *Commercial Banks, Foreign Exchange Risk Management Practices, and Risk Management*

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CHAPTER ONE

INTRODUCTION

1.1. Background of the study

By 2025, risk functions in banks will likely need to be fundamentally different than they are today. As hard as it may be to believe, the next ten years in risk management may be subject to more transformation than the last decades. And unless banks start to act now and prepare for these longer-term changes, they may be overwhelmed by the new requirements and demands they will face (Harle and Havas, 2015). Therefore, to succeed, such transformation could also require a shift in the organizational risk culture.

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. In order to compete effectively, large-scale banking organizations should develop internal risk management models.

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 (Dima and Orzea, 2015). 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.

There are several types of business risk factors, and in researcher's opinion, one of the most interesting and important ones is the currency risk. Currency fluctuations are a global phenomenon, and therefore it affects all companies around the world involved in international

business. The risks of currency can be either long-term or short-term and can affect the company's cash flow, financial result and firm valuation directly.

Therefore, it is not only of the company's best interest, but almost an imperative factor, that the company has structured methods for dealing with currency risks. However, currency risk itself might be divided into several sub-categories and therefore the methods and strategies that companies use to deal with them might vary.

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 of a commercial bank comes from its very trade and non-trade services (Sabri, 2011), foreign exchange trading activities include:

1. The purchase and sale of foreign currencies to allow customers to partake in and complete international commercial trade transactions.
2. The purchase and sale of foreign currencies to allow customers (or the financial institution itself) to take positions in foreign real and financial investments.
3. The Purchase and sale of foreign currencies for hedging purposes to offset customer (or financial institution itself) exposure in any given currency.
4. To purchase and sale of foreign currencies for speculative purposes based on forecasting or expecting future movements in Foreign Exchange rates.

The above mentioned trade activities do not expose a commercial bank to foreign exchange risk as a result of all of the above.

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. Foreign Exchange risk does not lie where the future exchange rate is predefined by using different instruments and tools by the bank.

These necessity calls for comprehensive assessment on foreign exchange risk management practices and here lays the justification of this study.

1.2. Statement of the problem

It is difficult to imagine another sector of the economy where as many risks are managed jointly as in banking. By its very nature, banking is an attempt to manage multiple and seemingly opposing needs. In recent years, risk management at banks has come under increasing study.

Risk-taking is an inherent element of banking and, indeed, profits are in part the reward for successful risk taking (NBE, 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.

Till date banking sectors have been working in regulated environment and were not much exposed to the risks but due to the increase of severe competition banks have been exposed to various types of risks such as financial risks and non-financial risks.

NBE in its bank's risk management guideline(2010) dictates, the banking system in Ethiopia significantly expand over the past few years and following to that having a minimum risk management (risk identification, measurement, monitoring and control) standards for all banks operating in the country is vital. Currently all commercial banks in Ethiopia are expected to increase their paid up capital in to a minimum of two Billion Ethiopian birr and to expand their service availability by opening new branch by 20% every year to the end of the second Ethiopian Growth and Transformation Plan /GTP/period.

All banks in Ethiopia are involved in international trade. And thus, the importance of foreign exchange risk management cannot be neglected for banking organizations. 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 trading volume and the complexity of risk management, banks engaged in trading must have market risk measurement and management systems that are conceptually sound and that are implemented with high integrity. The fast growth of the import and export business volume of the country in which commercial banks play an intermediary role may also increase the exchange rate risk exposure of the Ethiopian commercial banks. This is partly due to the fact that banks may hold large foreign currency reserve to meet the demand of importers.

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)

There are lots of literatures have been carried out addressing different types of risks particularly in the banking industry. Despite a concerted effort, the researcher has found few empirical studies conducted on the assessment of foreign exchange risk management practices particularly on commercial banks. The previous 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); however, these studies focus on the foreign exchange rate impacts, effects, and determining factors for the profitability, performance and the like, where as what practices are deployed in order to manage foreign exchange risks by commercial banks study is very limited particularly in Ethiopian commercial banks.

It is therefore, the researcher found the foreign exchange risk management as an interesting topic and essential to assess the underlying foreign exchange risk management practice of Ethiopian commercial banks, as NBE directive says the establishment of the risk department is a recent phenomenon; this study assesses the foreign exchange risk management practice of commercial banks in Ethiopian in particular.

1.3. Research Questions

- What are the types of foreign exchange risk exposure faced by Ethiopian commercial banks?
- What principal activity contributes to foreign exchange risk exposures of banks
- How do Ethiopian commercial banks manage foreign exchange risk? What are the different tools & instruments used by the commercial banks in Ethiopia to manage foreign currency risk faced by them?
 - Are there any tools used by the commercial banks in Ethiopia?
 - If yes, what are the tools used by them?
 - Do all commercial banks use same tools?

1.4. Objectives of the study

1.4.1. General Objective

The general objective of the study is assessment of foreign exchange risk management practice of commercial banks in Ethiopia.

1.4.2. Specific Objectives

Specifically, the study has the following objectives:

- to identify the type of foreign exchange risk exposures faced by commercial banks in Ethiopia
- to identify the techniques adopted by the commercial banks for foreign exchange risk management
- to assess whether there is a similarity between commercial banks in Ethiopia in exercising foreign exchange risk management;
- to identify what principal activity contributes to foreign exchange risk exposures of banks

1.5. Scope of the study

The study has conducted in all seventeen commercial banks operating in Ethiopia. Considering the high level of confidentiality and sensitivity attached to foreign exchange risk management, it would be impossible to acquire secondary data in form of foreign exchange policies, management reports; and the study rely on the structured questionnaire as it can offers greater anonymity to obtain accurate information, since the focus is on management, it can be enough.

1.6. Significance of the study

The findings and recommendations of the study could serve as an ingredient and be informative to the banks as well as to the regulatory body in the country. And, the study has the following significances:

- It provides valuable information for the regulatory body on the status of the bank's risk management and findings could be used in policy formulation. And also as, foreign exchange risk management structure and related strategies must be embedded in a bank's culture with an effective policy and program led by the management, the

- study will be highly important to policy makers because it draws their attention to some of the points that need corrective measures to be taken on their side.
- It will help commercial banks in evaluating their operations in identifying and taking corrective actions about possible foreign exchange risk exposures.
 - It will also give a general insight to the academic & professional society regarding foreign exchange risk management aspects of Ethiopian Commercial Banks.
 - It serves as a reference material for anyone who will undertake a further study on the same or related topic.

1.7. 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

REVIEW OF RELATED LITERATURE

2.1. Theoretical review of Foreign Exchange Risk Management Practices

2.1.1. Introduction

This chapter reviews the literature on foreign exchange risk management in banking. It discusses issues on risk management from different perspectives and with the view of giving a theoretical foundation to the study. It starts with an exposition on foreign exchange risk management, followed by reviews of literature on the rationales and types of foreign exchange risk management activities as well as the kinds of risk exposures faced by banks, and as well as some empirical studies. The chapter then provides an enumeration and evaluation of some of the strategies and techniques employed in foreign exchange risk management. These considerations therefore become a basis for this research study.

2.1.2. Defining Foreign exchange risk

[Foreign exchange](#) risk also called FX risk, [currency risk](#), or exchange rate risk is the [financial risk](#) of an investment's value changing due to the changes in [currency exchange](#) rates. This also refers to the risk a company faces when it needs to close out a long or [short position](#) in a foreign currency at a loss, due to an adverse movement in exchange rates.

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.

According to Fatemi and Glaum (2000), firms are exposed to foreign exchange risk if the results of their projects depend on future exchange rates and if exchange rate changes cannot be fully anticipated.

Foreign exchange risk is the risk that a business's financial performance or position will be affected by fluctuations in the exchange rates between currencies (CPA Australia Ltd, 2009) The risk is most sharp for businesses that deal in more than one currencies.

Bessis (2010) defines foreign exchange risk as incurring losses due to changes in exchange rates Thus; exchange risk is viewed as the possibility that currency fluctuations can alter expected amounts or variability of the firms' future cash flows.

Kenyon (1984) referred to foreign exchange risk as economic currency risk which he defined as the risk that a sustained real use of a currency against the currencies of competitors will adversely affect a company's competitive costs and therefore its sales, profit margins and market share, which in turn will reduce the return on the capital and revenue investment previously sunk in its present commercial activity and the present value of the investment.

Foreign exchange risk is the risk that a bank may suffer loss as a result of adverse exchange rate movement during a period in which it has an open position, either spot or forward or both in same foreign currency (kanchu & Kumar, 2013). Even in case where spot or forward positions in individual currencies are balanced the maturity pattern of forward transactions may produce mismatches. There is also a settlement risk arising out of default of the counter party and out of time lag in settlement of one currency in one center and the settlement of another currency in another time zone. Banks are also exposed to interest rate risk, which arises from the maturity mismatch of foreign currency position as Saunders and Cornett (2006).

From the foregoing, despite the difference in expressions and language used, it can be established the foreign exchanged risk reference to the un-certainly surrounding variations in the value of other currencies as compared to a local currency and the effect of such risks on both the value of the banks and its cash flow.

2.1.3. Exchange rate Volatility

The Exchange rate volatility measures the degree to which the exchange rate fluctuates or varies over a period of time. Exchange rate is said to be more volatile if there are more frequent ups and

downs or less volatile if there are lesser changes in it over a period of time. There is a real time fluctuation in floating exchange rate (Sabri, 2011).

Exchange rate volatility is by itself a necessary, but not sufficient, condition for foreign exchange risk: Indeed, some firms may not be affected by foreign exchange rate changes at all. Thus, what is required is to assess foreign exchange exposure that quantifies the sensitivity of the value of assets, liabilities, and operating income with respect to exchange rate variations. The concept of exposure describes the effect that exchange rate changes have on these values: It is the value at risk. Therefore, it is ultimately foreign exchange exposure that is relevant for each individual corporation (Choi, 2003)

Currencies movements are caused by some or all of the following factors which influence the demand and supply of each currency in the market (Grath, 2008).

- Relative price levels and inflation rate
- Relative economic growths
- Relative change in the money supply in the currency areas (countries) concerned
- Intervention by central banks
- Interest rate arbitrage.

Any of the above factors can independently or in conjunction with other factors affect the value of a particular currency. It is also important to stress the various causes take different time spans to operate.

In relation to the exchange rate regime, in the context of globalization and currency crisis, recent years, particularly, have seen a renewed interest on the issues relating to exchange rate regime, which is evident in the large and growing body of theoretical and empirical literature on the subject. Nevertheless, both in theory as well as in practice, the state of the debate is unsettled. A worldwide conscious is still evolving in search of an appropriate and credible exchange rate regime (Bhalla, 2004).

2.1.4. 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. (Bhalla, 2004). The risk element is that the currency movements may 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.

2.1.4.1. 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 three. There are three distinct types of foreign exchange exposures that global firms may face as a result of their international activities.

a. 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 (Borad, 2016)

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 (Harvey, 2012)

b. 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 Bhalla (2004), 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 (Bhalla, 2004)

- **Current/Non current Method.** All current assets and current liabilities are translated at current exchange rates
- **Monetary/Non-Monetary Method:** All monetary assets and liabilities are translated at current exchange rates.
- **Temporal Method:** Same as monetary/non-monetary method but inventory may be translated at current exchange rate if it is shown at market value.

- **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(2012) explain 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

c. 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 (Bhall, 2004).

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 (Bhall, 2004).

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.

2.1.5. Interbank foreign exchange market

The interbank market is the top-level [foreign exchange market](#) where banks exchange different currencies (Cheng, 2007). The banks can either deal with one another directly, or through electronic brokering platforms. The [Electronic Broking Services](#) (EBS) and [Thomson Reuters](#) The currencies of most developed countries have floating exchange rates. These currencies do not have fixed values but, rather, values that fluctuate relative to other currencies.

The interbank market is an important segment of the foreign exchange market. It is a wholesale market through which most currency transactions are channeled. It is mainly used for trading among bankers. The three main constituents of the interbank market are:

- the [spot market](#)
- the [forward market](#)
- [SWIFT](#) (Society for World-Wide Interbank Financial Telecommunications)

Cheng (2007) has argued that the forex markets have the promise of fast action and huge profits, but the risks are also great. It is estimated that over 90% of forex traders end up losing their trading capital. The good news is that most of these losses can be prevented by taking the time to learn how to trade the forex markets and by implementing careful money management.

Commercial banks in Ethiopia have also involved in interbank foreign exchange markets for the sake of managing their currency positions and to fulfill their commitments towards the foreign currency requirement.

The concepts of Nostro, Vostro and Loro Accounts which are the major parts of the currency position for commercial banks; are also the very concept in interbank transactions. In interbank transactions, foreign exchange is transferred from one account to another account and from one centre to another centre. Therefore, the banks maintain three types of current accounts in order to facilitate quick transfer of funds in different currencies. (Resnick, 2007) These accounts are Nostro, Vostro and Loro accounts meaning “our”, “your” and “their”. A bank’s foreign currency account maintained by the bank in a foreign country and in the home currency of that country is known as Nostro Account or “our account with you”. Vostro account is the local currency account maintained by a foreign bank/branch. It is also called “your account with us”. The Loro account is an account wherein a bank remits funds in foreign currency to another bank for credit to an account of a third bank.

2.1.6. Foreign Exchange risk for commercial Banks

The Federal Bank of San Francisco in its Economic research publications (1996) classifies the sources of foreign exchange risk as direct and indirect sources. As 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.

The indirect sources of risk are more subtle but just as important. A bank without foreign assets or liabilities can be exposed to currency risk because the exchange rate can affect the profitability of its domestic banking operations (Popper, 1996). For example, consider the value of a bank’s loan to a U.S. exporter. An appreciation of the dollar might make it more difficult for the U.S. exporter to compete against foreign firms. If the appreciation thereby diminishes the exporter’s profitability, it also diminishes the probability of timely loan repayment and, correspondingly, the profitability of the bank. In this case, the bank is exposed to foreign exchange risk: a stronger dollar decreases its profitability. In essence, the bank is “short” dollars against foreign currency.

Any time the value of 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. (Popper, 1996)

Sabri (2011) argues that 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 of a commercial bank comes from its very trade and non-trade services. Foreign Exchange Trading Activities include:

1. The purchase and sale of foreign currencies to allow customers to partake in and complete international commercial trade transactions.
2. The purchase and sale of foreign currencies to allow customers (or the financial institution itself) to take positions in foreign real and financial investments.
3. The Purchase and sale of foreign currencies for hedging purposes to offset customer exposure in any given currency.
4. To purchase and sale of foreign currencies for speculative purposes based on forecasting or expecting future movements in Foreign Exchange rates.

The above mentioned Trade Activities do not expose a commercial bank to foreign exchange risk as a result of all of the above. The commercial bank is exposed to foreign exchange risk only up to the extent to which it has not hedged or covered its position (Sabri, 2011). 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. Foreign Exchange risk does not lie where the future exchange rate is predefined by using different instruments and tools by the bank.

2.1.7. Foreign exchange exposure of a Commercial Bank

As noted by Sabri (2011), any un-hedged position in a particular currency gives rise to foreign exchange risk and such a position is said to be Open Position in that particular currency. If a bank has sold more foreign currency than it has purchased, it is said to be Net Short in that currency, alternatively if it has purchased more foreign currency than it has purchased than it is

in Net Long position. Both of these positions are exposed to risk as the foreign currency may fall in value as compared to local or home currency and becomes a reason for substantial loss for the bank if it is in Net Long position or the foreign currency may rise in value and cause losses if the bank is Net Short in that currency.

Long Position is also known as overbought or Net Asset Position and Short Position is also known as Net Liability or Oversold Position. Sum of all the Net Asset positions & Net Liability positions is known as Net Open Position or Net Foreign Currency Exposure.

Net foreign currency exposure gives the information about the foreign exchange risk that has been assumed by the bank at that point of time. This figure represents the unhedged position of bank in all the foreign currencies. A negative figure shows net short position whereas positive figure shows net open position.

Grath (2008) identifies that currency risk results from changes in exchange rates and originates in mismatches between the values of assets and liabilities denominated in different currencies. This mismatch may cause a bank to experience losses as a result of adverse exchange rate movements when the bank has an open on and off-balance-sheet position, either spot or forward, in an individual foreign currency. In recent years, a market environment with freely floating exchange rates has practically become the global norm. This has opened the doors for speculative trading opportunities and increased currency risk. For example, in the case of a net long position in foreign currency, domestic currency depreciation will result in a net gain for a bank and appreciation will produce a loss. Under a net short position, exchange rate movements will have the opposite effect.

Dima and Orzea (2015) the fluctuations in the value of domestic currency creating currency risk are normally motivated by macroeconomic factors manifested over long periods of time. Among the factors affecting these fluctuations are the volume and directions of a country's trade and capital flows. But the fluctuations are also influenced by expected or unexpected political events, changed expectations on the part of market participants, or speculation based currency trading

may also give rise to currency changes. All these factors affect the supply and demand for the currency and therefore the movement of the exchange rate in the currency market (Grath, 2008).

2.1.8. Commercial Banks Foreign Exchange Risk Management

Exchange rate risk management is an integral part of every firm's decision about foreign currency exposure (Weston 2001). Currency risk hedging strategy entail eliminating or reducing this risk, and requires understanding of both the ways that the exchange rate could affect the operations of economic agents and techniques to deal with the consequent risk implication (Barton and walker, 2002). Selecting the appropriate hedging strategy is often a daunting task due to the complexities involved in measuring accurately current risk exposure and deciding on the appropriate degree of risk exposure that ought to be covered.

The issue of currency risk management for banking firms is dependent from there is business and is usually dealt with by their corporate treasuries.

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.

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 unhedged 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;

- a. The individuals who take or manage risks clearly understand it.
- b. The organization's risk exposure is within the limits established by Board of Directors.
- c. Risk taking decisions are in line with the business strategy and objectives set by Board of Directors.
- d. The expected payoffs compensate for the risks taken
- e. Risk taking decisions are explicit and clear.
- f. Sufficient capital as a buffer is available to take risk

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. (Papaioannou, 2006) 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.

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 (Papaioannou, 2006)

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. According to Sabri (2011), Papaioannou (2006), (Resnic & Eun, 2016) and Leyla (2015) the hedging techniques using derivatives are forwards, options and swaps

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. (Resnic & Eun, 2016), 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.

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.

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. (Dima and Orzea, 2015)

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 (Jorion, 2001).

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.

2.1.9. Foreign Exchange Risk Management Strategies and Techniques:

2.1.9.1. Hedging Strategies

Hedging as the taking of a position, acquiring either a 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.

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) found out that some firms do not hedge their foreign exchange rate risk at all as they are not (significantly) exposed to foreign exchange risk, others hedge all open positions immediately and others follow a fixed rule according to which they always hedge a certain portion of their exposure with forward and/or option contracts, while leaving the remainder exposed. For example, some firms always hedge half of their exposure; others always hedge a third of their position with forward contracts, another third with currency options and leave the remaining third un-hedged. More than a third of the firms indicated that their management has complete discretion to decide whether or not to hedge all exposure on the basis of exchange rate forecasts. Firms that follow selective hedging strategy hedge only those positions for which they expect a currency loss while leaving open positions for which they expect a currency gain basing on the managers' ability to forecast appreciations and depreciations of the relevant currencies over the planning horizon.

2.1.9.2. Strategies and Techniques

2.1.9.2.1. 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.

2.1.9.2.2. 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.

2.1.9.2.3. 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.

2.1.9.2.4. 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.

2.1.9.2.5. 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).

2.1.9.2.6. 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. Hill (2001) 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-subsidary accounts, reinvesting funds or repatriating them, adjusting transfer prices and dividend payments.

2.1.9.2.7. 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.

2.1.9.2.8. 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.

2.1.9.2.9. 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.

2.1.9.2.10. 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.

2.1.9.2.11. 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.

2.2. Review of Empirical studies

Luostarinen (2011) examine the foreign exchange exposure management practices of non-financial companies involved in international business and ultimately to evaluate their practices. The results of the survey study showed that company size, quantity of foreign exchange exposure and the number of foreign currencies used by a company in its operations has positive relationships with the sophistication of prevailing foreign exchange exposure management practices. The study found that there are significant variations in managing practices of companies with similar foreign exchange exposure profiles.

Sabri (2011), studies the foreign exchange risk management in commercial banks of Pakistan, and identifies some bank have zero exposure, majority have net foreign currency exposure equivalent to or around Net Assets. And bank use different tools to manage foreign exchange risk which include foreign currency portfolio diversification, foreign currency assets and liabilities matches and use of currency derivatives.

Kim (2011), studies on-balance-sheet and off-balance-sheet foreign currency risk management of corporate firms and commercial banks. It is comprised of two essays investigates what determines firms' foreign currency spot net asset positions and derivatives hedging. The second essay examines what determines banks' exposure to foreign currency risks, their management of these risks, and the relationship to the probability of bank failures. Using a unique data set of Korean banks with detailed information on their foreign currency risk exposures and hedging positions, the study found that banks' foreign currency position mismatches, maturity mismatches, and debt rollover risks are significantly attributed to their currency carry lending strategy. It also finds that banks' foreign currency exposures significantly increase their financial distress likelihood through currency carry lending activities. Finally the study shows that, overall, banks that better match their foreign currency positions and maturities are rewarded with lower probabilities of financial distress.

Tadesse (2015), seek to examine the composite impact of exchange rate on the profitability (ROE) of commercial banks in Ethiopia using a balanced panel data set of banks over the period of 2000-2014. And also tried to determine how exchange rate affects the growth of bank loan with the intension to identify whether one of the indirect effects of exchange rate on bank profitability is through its effects on loan growth. The result of the study reveals that exchange rate has statistically significant negative impact on the profitability of commercial banks in Ethiopia and the impact of exchange rate on loan growth of commercial banks in Ethiopia showed that exchange rate has statistically significant positive impact on the loan growth of banks in Ethiopia.

Eneyew (2013) the study titled with "Financial Risks and Profitability of Commercial Banks in Ethiopia" show that Credit risk and liquidity risk have a negative and statistically significant relationship with banks' profitability. However, the relationship for interest rate risk and foreign exchange rate risk is found to be statistically insignificant. And the study suggests that focusing in credit risk management and keeping optimal level of liquidity which enables banks to meet their contractual commitments could maximize return on assets of Ethiopian commercial banks.

Worku (2016) the study was “Assessment and Evaluation of best risk management practices” of commercial banks in Ethiopia. The principal concern of the study was to assess to what extent commercial banks of Ethiopia can manage their risk, to what extent the staff and management of the commercial banks understand and implement risk management and to what extent their way of working can be affected by proper risk management practices and follows NBE risk guidelines. The study also reveals that credit risk, market risk and operational risk are the major risks to the bankers.

2.3. Summary and Knowledge gap

Empirical studies on foreign exchange risk management practice of commercial banks conducted abroad have been conceptual in nature, often drawing the theoretical link between good risk management practices and improved bank performance. There are few studies providing empirical evidence to the reviewing of foreign exchange risk management practices. Even if the issue of foreign exchange risk management is equally important for all country, it is less focused and only few studies are conducted to see the impact of particular risk i.e. foreign exchange risk. However, as per the researcher’s knowledge only few studies are conducted to see foreign exchange risk management practice on the banking services.

Even though much effort was made, the researcher is not find an empirical study conducted on the assessment of foreign exchange risk management practice particularly in Ethiopian commercial banks. The above mentioned studies focused on the effects and impacts of exchange rates; and financial risks on the profitability, impact on the performance of commercial banks of Ethiopia in general, besides to what extent that these commercial banks are exposed to foreign exchange risk, what techniques and strategies are used is not addressed empirically.

There is the general belief that the banking sector in Ethiopia is relatively stable with individual banks having good risk profiles and sound risk management frameworks. The banking industry

has not experienced major losses in the face of the global financial crises. The supervisory and regulatory bodies did not find any of the banks in Ethiopia in the wrong of breaking prudential arrangements aimed at protecting the interests of clients and shareholders as was experienced in different countries (financial crisis 2007-2008). There is therefore a vacuum between the general belief on the foreign exchange risk position of the Ethiopian banking industry and the evidence to back this belief. To do this, it requires thorough assessment of the foreign exchange risk profiles of banks in Ethiopia as well as evaluates the adequacy of the foreign exchange risk management practices employed by the banks to handle the various risks they are exposed. Hence, this study aims to fill the gap in the literature by focusing on the foreign exchange risk management practices of the commercial banks of Ethiopia

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This chapter presents the research methodology used for this study, it discusses the research design, provides information on the population of the study. It also provides information on the data collection method and data collection instrument used in the survey. The chapter also looks at how the questionnaire is administered and finally presents the data analysis method.

3.2. Research Design

A census survey study was carried out on commercial banks in Ethiopia. A census survey was chosen since foreign exchange risk management being fairly new in the developing markets, different banks would adopt different strategies and techniques to manage foreign exchange risk, and hence a census study was more comprehensive. The study was attempted to assess the foreign exchange risk management practices of commercial banks in Ethiopia and descriptive study is chosen as it enable the researcher to describe the current foreign exchange risk management practice of commercial banks in Ethiopia considered in this study. Descriptive study attempts to describe a situation, problem, phenomenon, or provides information about, or describes attitudes towards an issue systematically (Kumar, 2011)

3.3. Target Population

The target population consisted of all seventeen (17) commercial banks currently operated in Ethiopia. The study will use census approach to pick all the 17 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. Data type sources and collection

In order to realize the objective; the key respondents are selected from departments which are highly related to the researcher's assessment topics and the study relied on Treasury/Finance, international banking, and risk and compliance departments of commercial banks. According to the researcher's investigation the following job positions are commonly used by all commercial banks in Ethiopia; Treasury Heads/Director, dealers, finance Director/Manager, International banking managers, and the respective area expert/officers fund management officers, risk experts, risk officers and compliance officers, these are the professionals who are directly involved in a bank's foreign exchange risk management practices.

Primary data gathered through questionnaire from Head Quarter of the banks in Addis Ababa to the target respondents. The structured questionnaires designed separately for managerial and non managerial staffs of the target respondents. For all banks three managerial and three non managerial types of questionnaires are distributed. Units of analysis were all seventeen commercial banks, and the numbers of collected questionnaires from each bank were aggregated into one to present the respective banks.

3.5. Methods of Data Analysis

The data gathered through questionnaire analyzed quantitatively through tables, charts, frequency, percentages, and mean, to give a condensed picture of the data. The data collected through questionnaires were processed using SPSS.

3.6. Reliability and Validity of the Study

Reliability is concerned with the question of whether or not a result is stable (Bryman and Bell, 2007). The idea of reliability is important for measuring. The research method carefully explained throughout this research. Departments are selected because of their positions of responsibility in this area. The respondents are free to answer the questionnaire without stress,

which would have negative effects upon the reliability of this study. This study is possible to reproduce with consistent results.

Validity is concerned with “the integrity of the conclusions that are generated from a piece of research” (Bryman and Bell, 2007, p.41). In order to enhance the validity of the study and to have condensed results with the use of data collection instruments (questionnaire), two separate well structured questionnaires for the administrative and non administrative staffs are distributed. Through identifying the relevant departments which have a direct relation with the study topics, three questionnaires for administrative and three questionnaires for non administrative staffs were distributed. Furthermore, so as to alleviate unbiased response from each bank respondents average result of all respondents are taken as the bank’s response and analyzed after. Therefore, this research can be safely said to be highly valid.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1. Introduction

All 17 commercial banks operating in Ethiopia were selected for study and all banks are responded actively. Six number of questionnaires were distributed for each of the commercial banks operating in Ethiopia; three for administrative and three for non administrative staffs of the target respondent to represent their banks. Respondent's questionnaire of each bank analyzed and summed up to get average result to represent their banks so as to minimize the foregone conclusion of respondent's reply. Such a response is high for this kind of study considering the confidentiality attached to banking practices especially on foreign exchange risk management. This research endeavored to ascertain the foreign risk management strategies and techniques employed by commercial banks in Ethiopia to mitigate foreign exchange risk.

4.2. Respondents Profile

For all seventeen commercial banks in Ethiopia to have condensed results with the use of data collection instruments (questionnaire), two separate well structured questionnaires for the administrative and non administrative staffs were distributed. Through identifying the relevant departments (Finance/Treasury, International Banking, and Risk & Compliance) which have a direct relation with the study topics, three questionnaires for administrative and three questionnaires for non administrative staffs to the captioned departments were distributed. The number of maximum respondents for each commercial bank was six (6); two from each of three departments (Finance/Treasury, International Banking, and Risk & Compliance).

As depicted under below table the total respondent percentage rate is 89% however, we can say that there is no un-represented commercial banks for the study despite the average number of respondent for each bank varies.

Table 1: Respondents profile

	Administrative staffs	Non Administrative staffs	Total
No of distributed Questionnaires	51	51	102
No of collected questionnaires	42	49	91
	82%	96%	89%

Source: Survey data 2016

From the total 89% of the respondents who can represent their banks 46% and 54% were administrative and non administrative staff's respectively. As one can see from the table, the respondent's composition to present their bank in relation to the study topic from administrative and none administrate staff were balanced.

4.3. Transactions and principal activities that expose banks to foreign exchange risk

Table 2: Transactions and principal activities that expose banks to foreign exchange risk

Transactions and principal activities	Frequency(f)	Percentage %
Investing in foreign markets	1	2.32
Foreign currency trading	16	37.21
Foreign financial asset portfolios	14	32.56
Foreign financial liability portfolios	7	16.28
Borrowing credit in foreign markets	5	11.63
Providing credit in foreign markets	-	
Total	43	100

Source: Survey data 2016

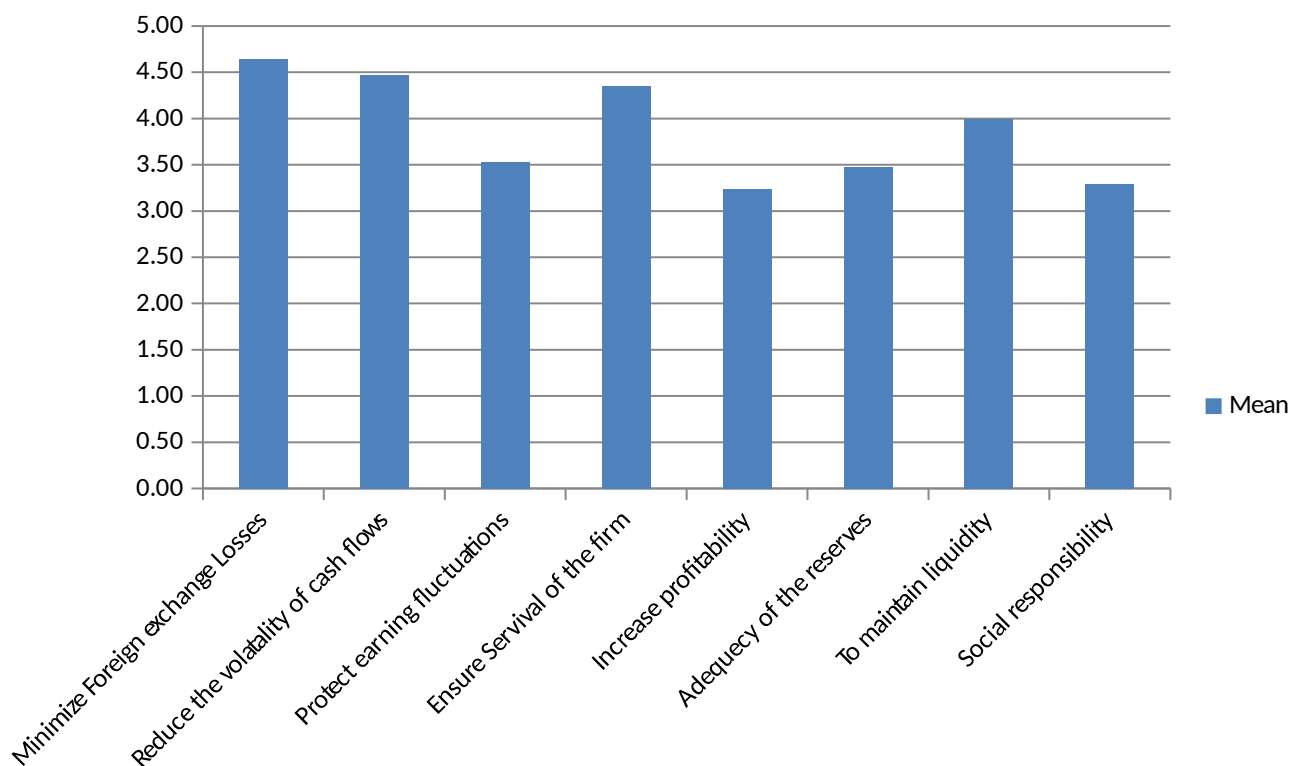
The banks were asked to indicate transactions and principal activities that exposed them to foreign exchange risk. Foreign currency trading at 37.21% exposes banks the most to foreign exchange risk. Foreign financial asset portfolio (32.56%) is the second major causes of exposure to foreign exchange risk, foreign financial liability portfolios (16.28%), borrowing credit in

foreign markets(11.63%), investing in foreign markets contribute at 2.32% and the other transactions i.e., providing credit in foreign markets the banks did not indicate that it has a contribute to foreign exchange risk.

Sabri (2011) indicates that principal activities that exposed commercial banks come from their very trade and non-trade services. And in addition to that commercial banks actively deal in foreign currencies holding assets and liabilities in foreign denominated portfolios are continuously exposed to foreign exchange risk. As indicated on the above table responses, foreign currency trading is the principal activities that the Ethiopian commercial banks are highly exposed.

4.4. Banks foreign exchange risk management objectives

Figure 1: Banks foreign exchange risk management objectives



Source: Survey Data 2016

The banks indicated that the most important objectives of risk management is to minimize foreign exchange losses (mean of 4.65), reduce the volatility of cash flows (mean of 4.47), to ensure survival of the firm (mean of 4.35), to maintain liquidity (mean of 4.00), to protect earning fluctuations (mean of 3.53), and adequacy of reserves (mean of 3.47), The objectives of social responsibility with a mean of 3.29 and increase profitability (mean of 3.24), were also considered as fairly important by the banks.

NSP Treasury Risk Management Services Ltd (2016) indicates that the first task in determining the most suitable system for managing foreign exchange exposures is to clarify corporate

objectives in this area. And Profit can never really be the prime motive for foreign exchange risk management in a corporate. As we can see from the banks response all banks have their own specific objectives and 93% of banks emerged to minimize foreign exchange losses, and “increase profitability” was least important objective in this regard.

4.5. Particular currency that has greatest contributions to bank’s foreign exchange risks

Table 3: Currency that has greatest contributions to bank’s foreign exchange risk

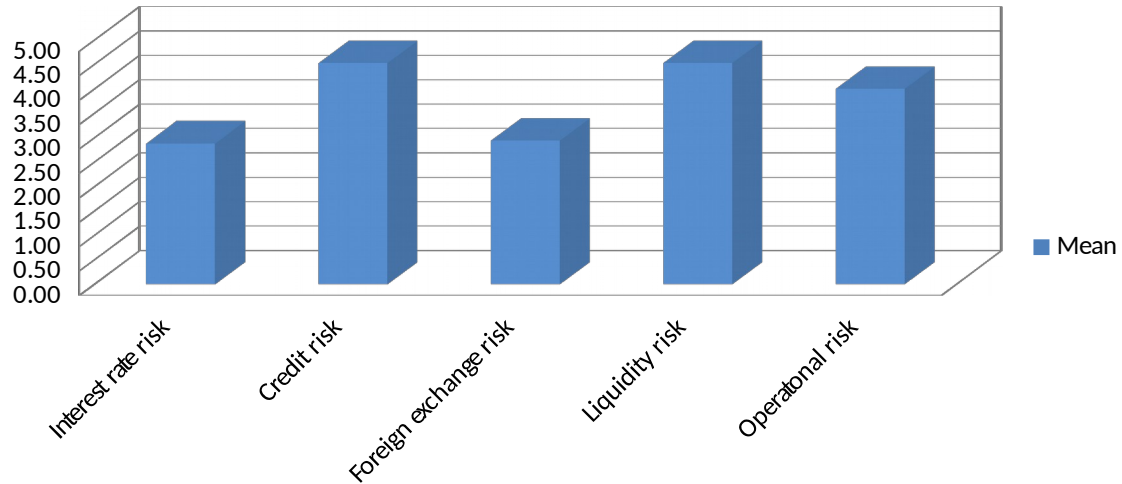
Currency	Frequency	Percentage
USD	3	17.65%
EUR	9	54.90%
GBP	5	27.45%
Total	17	100%

Source: Survey Data 2016

The banks were also requested to indicate which particular currency had the greatest contribution to their foreign exchange risk. 54.90 % indicated that EUR currency impacted the most to their foreign exchange risk exposure. Since its volatility is higher than others currency in relative terms, most banks were bound to indicate that the EUR was the most critical. The Great Britain Pound, 27.45% next to the EUR and then 17.65% of US Dollar

4.6. Risk exposures

Figure 2: Banks Risk Exposure



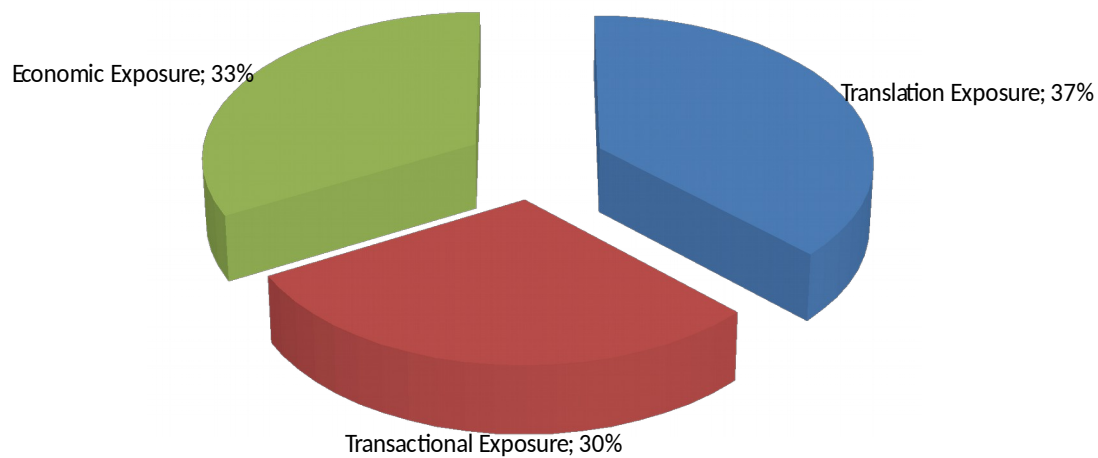
Source: Survey Data 2016

Banks were also requested to rank risk exposures in order of importance to them. Both Credit and Liquidity risks are emerged as the most important risk with a mean of 4.53 each out of 5.0. Operational risk was the second most important risk (mean of 4.00) while Foreign exchange risk was ranked third important risk at a mean of 2.94. Interest rate risk was the fourth important risk at a mean of 2.88.

Empirical results also shown that credit risk, liquidity risk and operational risk are the major risk exposures to Ethiopian commercial banks (Worku, 2016).

4.7. Foreign Exchange Risk Exposure

Figure 3: Banks foreign exchange risk exposure



Source: Survey Data 2016

The purchase and sell of foreign currencies do not expose a commercial bank to foreign exchange risk, the commercial bank is exposed to foreign exchange risk only up to the extent to which it has not hedged or covered its position (Sabri, 2011). Transaction exposure arises from fixed price contracting in a world where exchange rates are changing randomly.

The banks were asked to indicate and rank which exposures are facing translation, transaction and economic exposures. It emerged that translation exposure (37%) was the highest exposure to the banks. Economic exposure (33%) was second important while transactional exposure (30%) though the least exposure.

Transaction exposure arises from fixed price contracting in a world where exchange rates are changing randomly, and since most fixed price contact is made between the buyers and sellers, in case of banks as an intermediary role to facilitate this transaction, banks always transfer the risk to the transaction buyers and sellers whatever the prevailing exchange rates are changing .

When we see in the banking industry, banks translate or revalue their foreign currency positions (Long or short position) on the daily basis to translate accounts in foreign currencies to the local reporting currency. Revaluation or translation risk arises when a bank's foreign currency positions are revalued in domestic currency. The accounting implications of foreign currency transactions translation and a consecutive transaction exposure to foreign exchange risk are predominantly important to further be considered.

Exposure to foreign exchange 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.

Yeager & Seitz (1989) observe that 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.

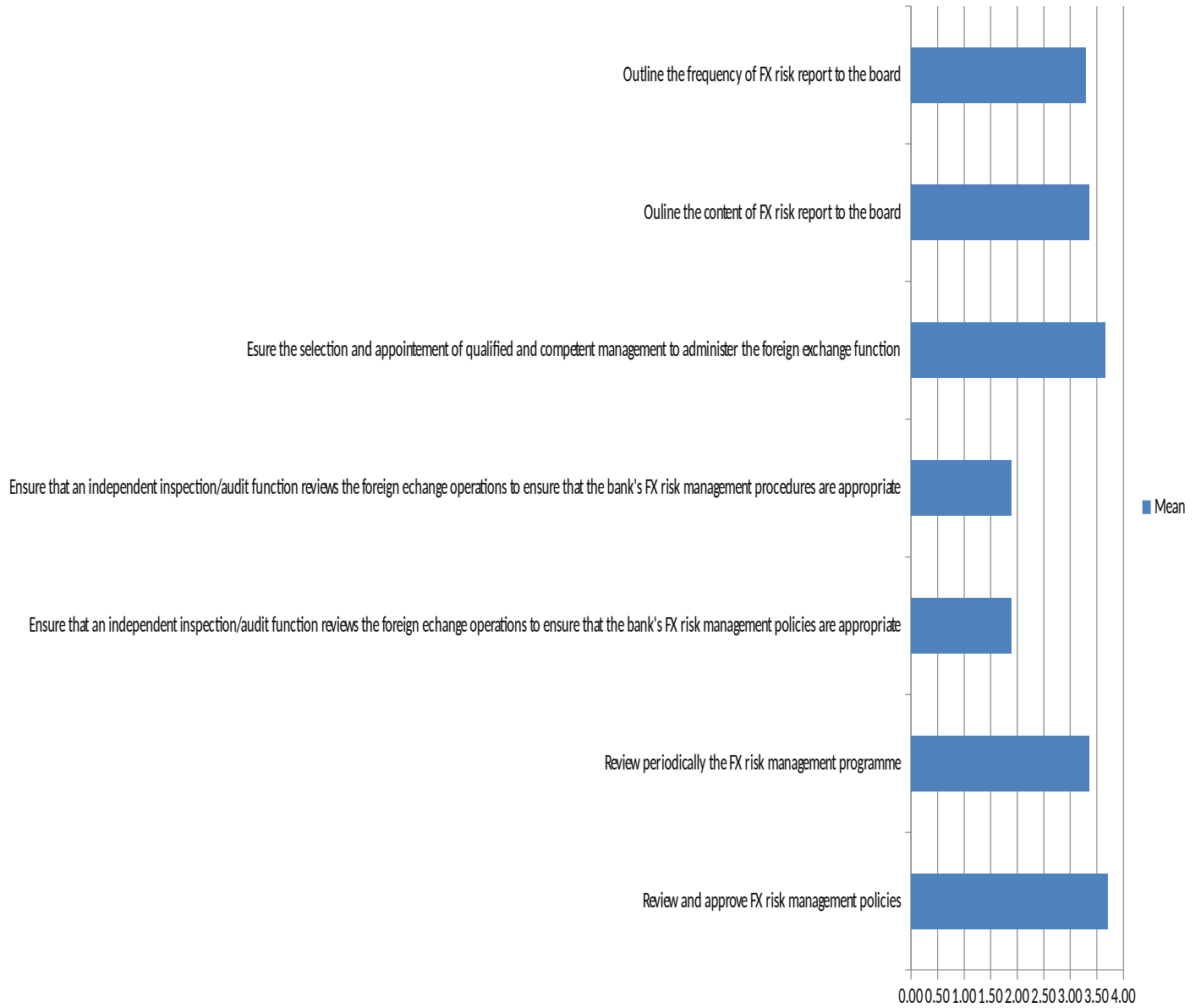
(Jayne and Des, 2001) debate whether translation exposures are relevant from a risk management perspective. Those who consider it doesn't matter would argue the effect is simply on book values and not on cash flow. On the other hand those who consider it does matter highlight the effect it can have on debt and reserves. This article focuses not on hedging foreign exchange exposures on transactions but on the more difficult topic of translation exposure management

arising from accounting conventions - both on the balance sheet and in the profit and loss account.

It is not only the cases that because of accounting conventions, if a company's base currency strengthens against other currencies in which it has assets or trading profits, then the base currency equivalent of those assets or profits is diminished. This is for the reason that a firm must have either assets or liabilities in a foreign currency for it to be affected by translation exposures.

4.8. Role of Directors in Foreign Exchange Risk Management

Figure 4: Role of Directors for foreign exchange risk management



Source: Survey Data 2016

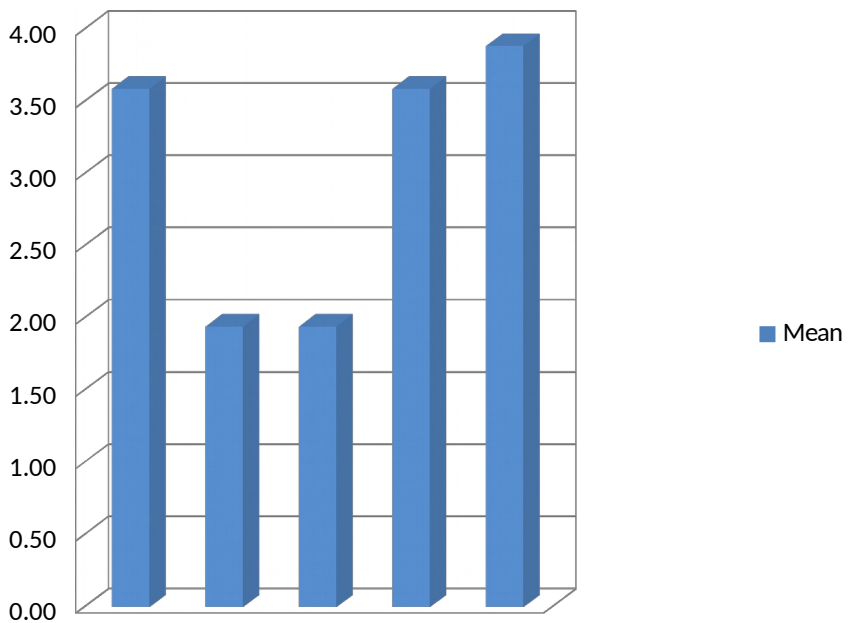
It was necessary to ask the banks to indicate what role the Board of Directors play in foreign exchange risk management. This is because of the fact that for foreign exchange risk management to be a very important aspect of an organization, the Board of Directors will play a major role. It was clear that the most important role of the directors in foreign exchange risk management was to review and approve foreign exchange risk management policies. Reviewing periodically the foreign exchange risk management programme was an important role of the directors. Ensuring that an independent inspection/audit function reviews the foreign exchange operations to ensure that the institution's foreign exchange risk management policies and procedures are appropriate and are being adhered was not an important role of the Board of Directors.

Lukic (2015) argues that 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. And the role of board of directors in this regard would be very crucial.

The Board of Directors is ultimately responsible for the bank's exposure to foreign exchange risk and the level of risk assumed (NBE, 2010). To construct 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; ensure that senior management has a full understanding of the foreign exchange rate risk incurred by the bank. This shows that the role of board of directive is very critical and as the finding emerged the weakness in this area is an independent inspection/audit function about the implementation of the strategies and policies.

4.9. Role of Management in Foreign Exchange Risk Management

Figure 5: Role of Management for foreign exchange risk management



Developing and recommending Fx risk management policies for approval by the Board of Directors

Source: Survey Data 2016

The banks were asked to indicate the roles played by management in foreign exchange risk management. It emerged that the most important role of the management on average, was reporting comprehensively on foreign exchange risk activities to the Board of Directors. Developing and recommending FX risk management policies for approval by the Board of Directors and establish and implement procedures governing the conduct and practices of foreign exchange traders are equally important. The least important roles emerged was to establish procedures for accurately measuring realized and unrealized foreign exchange trading gains and losses.

Lukic (2015) argues that 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 the role of management would be very crucial and it should not be dependent on just one or two people.

Senior management is responsible for the day-to-day management of the bank's exposure to foreign exchange risk, however as the finding indicates the role of senior managements was more rely on the reporting perspectives besides to have procedures for accurately measure the exposures that the banks are facing.

4.10. Hedging approach

Table 4: Hedging Individual open currency with individual hedge transaction

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not at all	7	41.2	41.2	41.2
Some Extent	7	41.2	41.2	82.4
Large Extent	3	17.6	17.6	100.0
Total	17	100.0	100.0	

Source: SPSS Survey Data 2016

Banks were also asked to indicate their hedging approach to hedge individual open currency positions with individual hedging transactions. 41.2% hedge their individual currency position not at all, 41.2% hedge their individual currency position to some extent, and 17.6% hedge their individual currency position large extent.

To hedge individual open currency positions with individual hedging transactions it requires systematic and regular management information system as the volume of transaction is very high in a banking industry.

Table 5: Hedging Considering the net exposure

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Some Extent	2	11.8	11.8	11.8
Large Extent	10	58.8	58.8	70.6
Very Large Extent	5	29.4	29.4	100.0
Total	17	100.0	100.0	

Source: SPSS Survey Data 2016

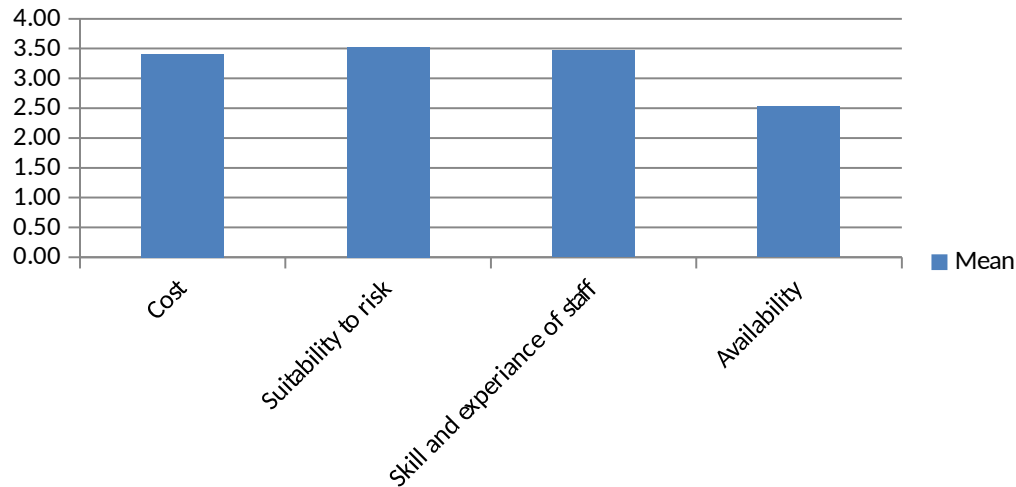
Banks emerged 58.8% hedging considering the net exposure for total currencies involved to large extent, 29.4% use the net exposure for the total currencies involved to the very large extent, and 11.8% of banks use some extent hedging with the net exposure for the total currencies involved.

Fatemi and Glaum (2000) indicates 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. And the banks respond that they use to hedging their currency position with net exposure to the large extent, there are also banks use to individual open currency with individual hedging transactions.

4.11. Factors Considered when selecting the Hedging Technique to be used

Figure 6: Factors considered when selecting the hedging techniques



Source: SPSS Survey Data 2016

It was very necessary to ask the banks to indicate the factors that they considered when selecting the hedging technique to be used. This is because in order to establish the strategies and techniques banks employ, it would be of value to understand what makes them use some techniques and not others. The findings indicate that the most critical factor considered by banks is the techniques suitability to risk, with a mean of 3.53 out of 4.

Skill and experience of staff was the second (mean of 3.47) most important factor to be considered. The cost of employing the technique was the third most important factor to be considered. This makes sense because of the cost-benefit analysis, if the cost exceeds the benefit of the technique to be employed, and then there is no need of using the particular technique. Availability of the technique is the least considered factor.

4.12. Hedging against Exposure

Table 6: Hedging against exposure

	N	Minimum	Maximum	Mean	Std. Deviation
Translation Exposure	17	2.00	4.00	3.2941	.68599
Transaction Exposure	17	2.00	4.00	2.7647	.66421
Economic Exposure	17	2.00	4.00	3.1765	.80896

Valid N (list wise)	17				
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Source: SPSS Survey Data 2016

The banks were asked whether they hedged against translation, transaction or economic exposures. It is emerged that banks most critically hedged their translation exposure (mean of 3.29), the second critical exposure that the banks hedge was economic exposure (mean of 3.18), and translation exposure is considered least exposure that the banks try to hedge.

As it can seen on point 4.7 the exposures that the banks are facing was translational exposure, and here also the finding emerged that most banks hedge translational exposure. The three hedging approach that existed hedging through use of Derivatives is more appropriate for transactional exposure, hedging through diversification of foreign currency asset liability portfolio and hedging through foreign currency asset and liabilities match also appropriate for translational exposure/balance sheet exposure.

Translation and transaction risk overlap. For example, the value of the borrowing amount in a foreign currency may change with exchange rates, but there is no immediate cash-flow effect. This is translation risk. However, any interest payments that have to be made and any repayment of the loan will be actual cash flows and become transaction risk.

Translation exposure, as it name implies, is the risk of changes in the value of an asset or liability when it is translated into the reporting currency. The risk arises because it may not have the same value than when last reported and the value may vary up and down over time. So, translation risk does not affect actual cash flows. It is only recorded in the book of accounts when the foreign currency asset or liability is revalued in the reporting currency using the current exchange rate. This revaluation is workable to all commercial banks in Ethiopia in a daily basis, and the amount of recognized gain or losses realized and recoded into the respective book of account.

A transactional hedge involves the banks entering into an agreement that fixes the exchange rate on a given amount of money. The idea is to use the resulting gain or loss to offset the translation risk that has been identified. Therefore, the finding shows that commercial banks in Ethiopia hedge their translation exposure through natural/matching foreign currency denominated assets and liabilities; to keep their open position limit and gain or losses arises from their net open positions

Transactional hedging requires more to use derivatives and the standard tools used to hedge currency risk, such as futures, swaps and options contracts, are either not available in emerging markets or, where available, are traded in illiquid and inefficient markets, making the range of products available extremely limited in Ethiopia.

Alternative hedging strategies

Table 7: Descriptive statistics of alternative Hedging Strategies

	N	Mean	Percentage
Hedging all open position immediately	17	1.7647	18.3
Use a fixed rule for partial hedging	17	2.0000	20.7
Hedge selectively	17	2.3529	24.4
Create additional exposure to profit from exchange rate changes	17	1.6471	17.1
Do not hedge foreign exchange rate risk at all	17	1.8824	19.5

Source: SPSS Survey Data 2016

The findings of this study indicates that 24.4% hedge selectively i.e. they hedge only those positions for which they expect a currency loss while leaving open positions for which they expect a currency gain. 18.3 % banks hedge all positions immediately, 20.7% of banks use a fixed rule for partial hedging, whereby they hedge a certain portion of their exposure while leaving the remainder exposed. 19.5% do not hedge foreign exchange rate risk at all. 17.1% of the banks create additional exposure, beyond that arising from its business activities) to profit from exchange rate changes.

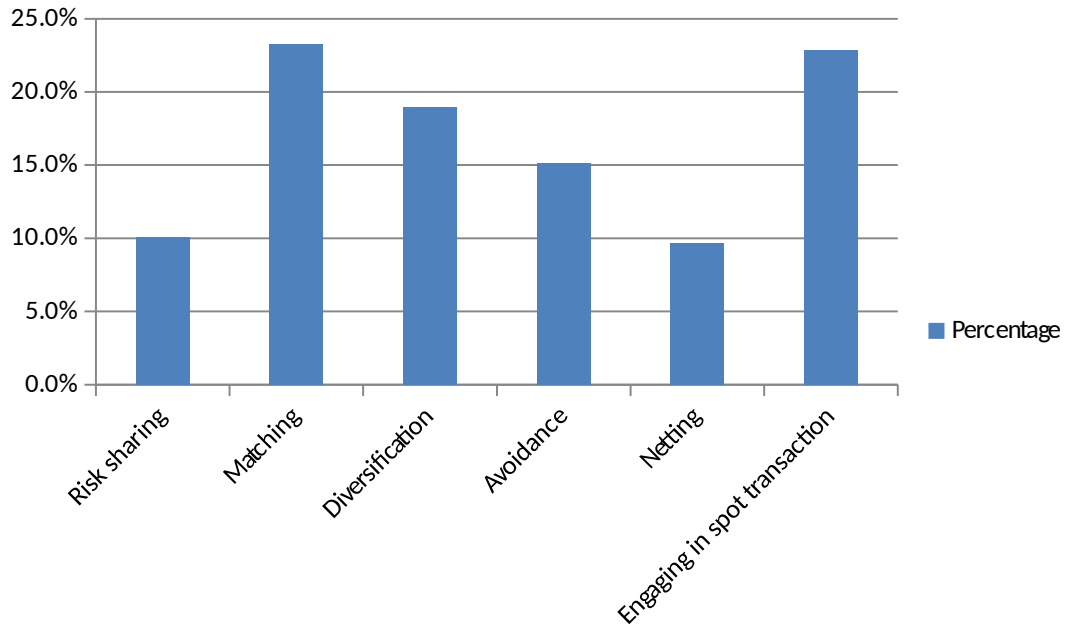
Hedge only those positions for which they expect a currency loss while leaving open positions for which they expect a currency gain is dominant as the finding emerged. This means that, those banks having short positions more often and as the exchange rate increases will cause a losses, and managing the foreign currency denominated liabilities for selective type of hedging would be a wise decisions.

Fatemi and Glaum (2000), found that most banks did not believe in the validity of the currency market efficiency hypothesis. He recommends that firms that aim to reduce or eliminate exchange risk can hedge individual foreign currency positions. Fatemi and Glaum (2000), found out that 54% of the firms used selective hedging strategy which is based on the manager's ability to forecast rates over the planning horizon.

As one can see from the above findings all banks use the listed alternative strategies accordingly. And in order to determine the optimal hedging alternative strategies it requires to see further with their own secondary data (financial records) so as to predict and understand the effects afterwards.

4.13. Hedging strategies

Figure 7: Hedging Strategies



Source: SPSS Survey Data 2016

The most important part of a firm's exchange risk management practices is its hedging strategy. The banks were requested to indicate which strategies they extensively used in mitigating risk. Matching/ Natural hedging was the most utilized strategy at 23.3%, followed by engaging in spot transactions at 22.9%. Diversification whereby banks financed in different currencies and or in different markets was employed by 19.0 %. Avoidance strategy was employed by 15.1% of the banks. Risk sharing and netting were minimally employed by the banks.

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. And banks have a little risk sharing practice with their correspondent banks as they being intermediary between the buyers and sellers. The risk sharing is not for the

sake of changes on exchange rate instead on the performance of the buyers and sellers to pay the agreed amount and deliver the goods and services.

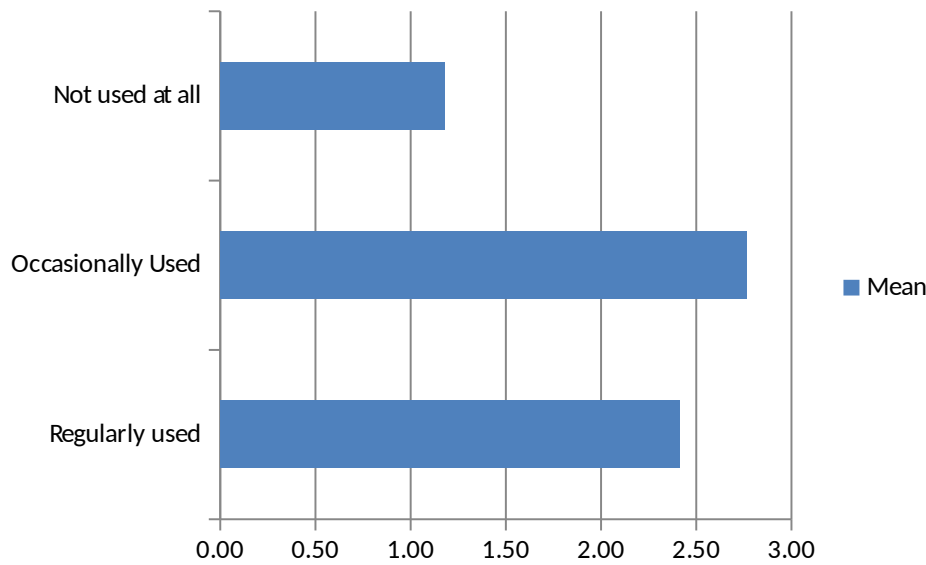
Unlike other industries, commercial banks have not a competitive advantage through sharing the foreign exchange risk in determining their product prices instead of their service availability intermediary role.

Foreign currency assets and liabilities matching is a very common practice by the commercial banks in Ethiopia to hedge against foreign exchange risk. However, such matches are strictly done within the limits. These limits are set internally by the banks themselves, mostly by the Asset Liability Committee, as advised by the National Bank of Ethiopia. These limits control foreign currency exposure through dealer limits, open foreign currency position limits & counterparty exposure limits.

Engaging in a spot rate transaction is frequently used by commercial banks in Ethiopia, a currency transaction where settlement for both parties is made two working days after conclusion of the contract particularly to the interbank dealings. Spot rate transaction is the rate value today, value tomorrow and value spot. This transaction is most often conducted to deal foreign currency with correspondent banks and when there is a letter of credit, foreign guarantees are processed. The primary advantage to spot foreign exchange than forward foreign exchange is it helps manage risk, allowing the banks to protect costs particularly for those volatile currencies. Risk sharing and netting were minimally employed by the banks explaining that these two methods were mostly used by manufacturing companies (Kanchu and Kumar, 2013).

4.14. Forecasting in exchange rate movement in connection with hedging techniques

Figure 8: Forecasting in exchange rate movement in connection with hedging techniques



Source: SPSS Survey Data 2016

The findings of this study emerged 44% of banks occasionally use exchange rate forecasts in their hedging decisions. 38% of banks regularly use forecasts while only 19% don't use exchange rate forecasts in their hedging decisions.

Fatemi and Glaum (2000) support this notion by indicating that forecasts are based on the managers' personal views and forecasts based on technical analysis of the markets. They found out that most firms used exchange rate forecasts to decide on hedging.

4.15. Importance of FX risk management practice

Table 8: Descriptive statistics of importance of risk management

		Frequency	Percent
The effective management of FX risk is central to your bank's performance	Disagree	4	23.5
	Neutral	4	23.5

	Agree	7	41.2
	Strongly agree	2	11.8
	Total	17	100.0
Application of FX risk management techniques reduces costs or expected losses to banks	Agree	12	70.6
	Strongly agree	5	29.4
	Total	17	100.0
The banks management regularly reviews the organizations performance in managing its FX risk	Neutral	1	5.9
	Agree	7	41.2
	Strongly agree	9	52.9
	Total	17	100.0
It is important to continuously review and update risk management techniques	Neutral	1	5.9
	Agree	5	29.4
	Strongly agree	11	64.7
	Total	17	100.0
Level of control by your bank is appropriate for the foreign exchange risk that it faces	Disagree	7	41.2
	Neutral	7	41.2
	Agree	3	17.6
	Total	17	100.0
Banks makes periodic and systematic assessment of transaction, translation and economic exposure	Disagree	6	35.3
	Neutral	6	35.3
	Agree	5	29.4
	Total	17	100.0
The banks staff's expertise levels towards foreign exchange risk management is adequate	Disagree	5	29.4
	Neutral	6	35.3
	Agree	5	29.4
	Strongly agree	1	5.9
	Total	17	100.0

Source: SPSS data analysis output, 2016

41.2% of the banks agree that the effective management of FX risk is central to the bank's performance, whereas 23.5% disagree. The effective management of foreign exchange risk is a critical component of comprehensive risk management essential for the success of a banking institution.

70.6% of the banks agree for the application of FX risk management techniques reduces costs or expected losses to banks, 29.4% of the banks are strongly agree.

52.9% of banks strongly agree that the management is regularly reviews the organizations performance in managing its FX risk, 5.9% of the banks are neutral.

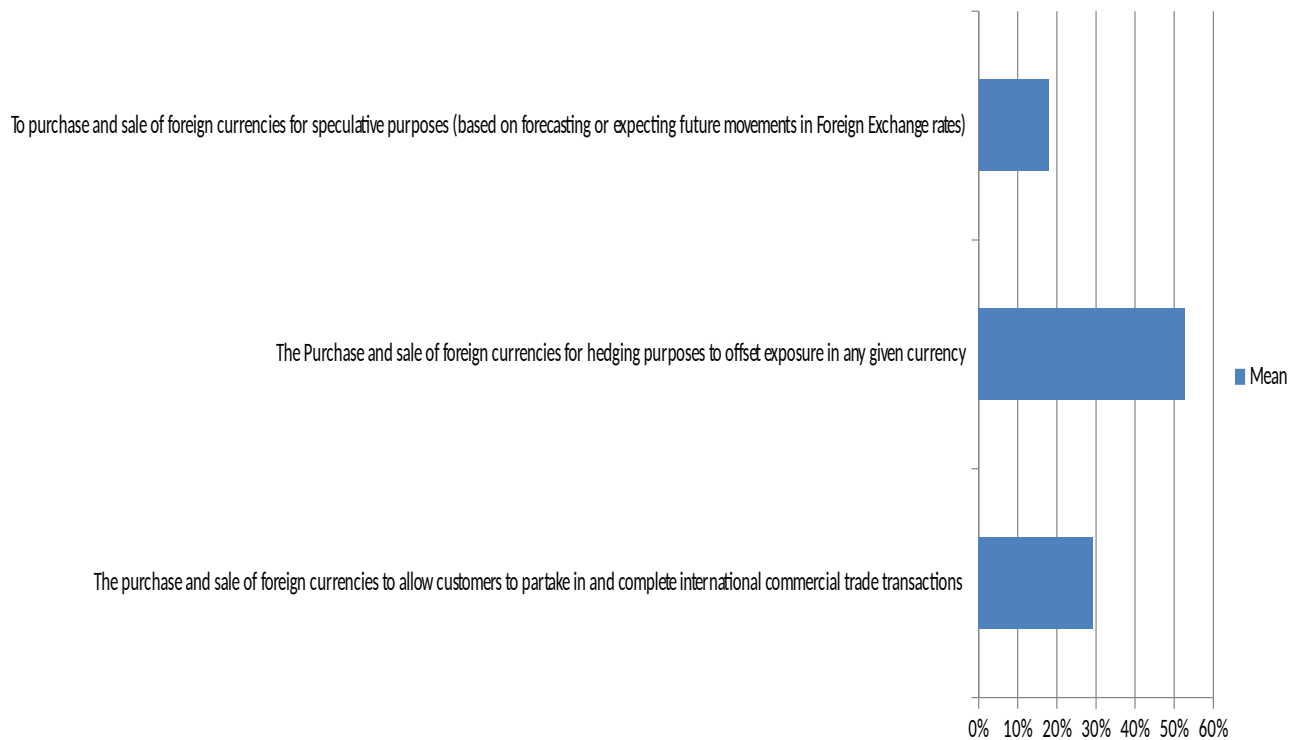
64.7 of the banks strongly agree that importance of continuously review and update of risk management techniques, and 5.9% of the banks are neutral.

41.2% of banks disagree that the level of control is appropriate for the foreign exchange risk that it faces, and 17.6% of the banks are agree for the existence of appropriate level of foreign exchange risk control
35.2% of the banks disagree that bank makes periodic and systematic assessment of transaction, translation and economic exposure, and 29.4 of the banks are neutral for the existence of periodic and systematic assessment of foreign exchange risk exposures.

35.% of banks are neutral for that the banks staff's expertise levels towards foreign exchange risk management is adequate, besides that 5.9% of the banks strongly agree that for the adequacy of the staffs expertise.

4.16. Purchase and sell of foreign currencies

Figure 9: Purchase and sell of foreign currencies



Source: SPSS data analysis output, 2016

The banks were asked to indicate how the foreign currency position is managed through purchase and sell of foreign currencies with different perspectives. It is emerged that 52.8% purchase and sale of foreign currencies for hedging purpose to offset exposure in a given currency. 29.2% of banks purchase and sale foreign currencies to allow customers to partake in international commercial trade, while 18% emerged that it is for speculative purpose based on expecting future movement in foreign exchange rate.

Particularly the interbank market is the top-level [foreign exchange market](#) where banks exchange different currencies (Cheng, 2007). The banks can either deal with one another directly, or through electronic brokering platforms. The [Electronic Broking Services](#) (EBS) and [Thomson](#)

[Reuters](#). These currencies do not have fixed values but, rather, values that fluctuate relative to other currencies. The interbank market is an important segment of the foreign exchange market. It is a wholesale market through which most currency transactions are channeled. It is mainly used for trading among bankers.

The purchase and sell of foreign currencies for speculative purposes on the basis of forecasting or expecting future movements in foreign exchange rates emerged about 18% of the banks. Speculation in the FX market can be hard to differentiate from hedging, which is when a company or financial institution buys or sells a currency to protect itself from market movements. However, as the open position limits determines, the banks may use for speculative purposes as the finding presents.

4.17. Asset Liability currency position revaluation

Table 9: Descriptive statistics of banks assets and liabilities revaluation

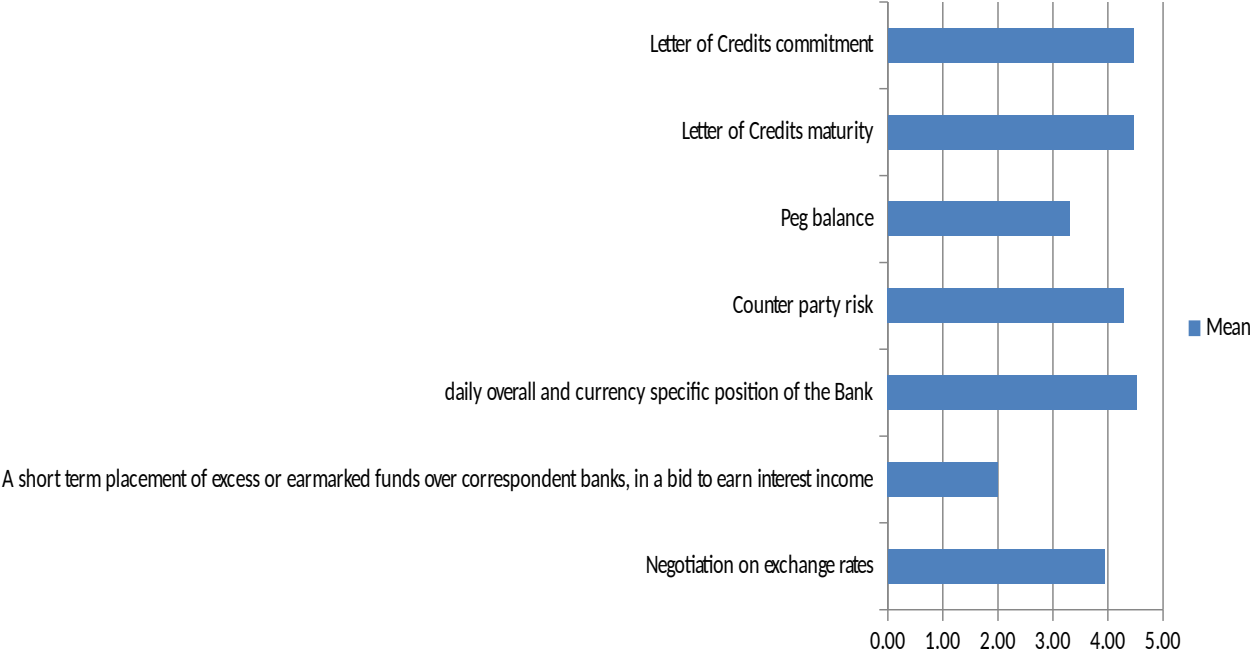
		Frequency	Percent
On Balance sheet items	Most frequently used	11	64.7
	Moderately used	6	35.3
	Total	17	100.0
Off balance sheet items	Not used at all	14	82.4
	Occasionally Used	3	17.6
	Total	17	100.0
Both on and off-balance sheet items	Not used at all	13	76.5
	Occasionally Used	3	17.6
	Moderately used	1	5.9
	Total	17	100.0

Source: SPSS data analysis output, 2016

Exposure to foreign exchange 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.

4.18. Factors considered in FX deal with foreign banks

Figure 10: Factors considered in FX deal with foreign banks



Source: SPSS data analysis output, 2016

The banks were asked what factors are considered in FX deal with foreign banks to rank on the basis of its important. The finding emerged that daily overall and specific currency position, letter of credit commitment and maturity are most importantly considered (mean of 4.47), counter party risk (mean of 4.29) considered the second important factor, negotiation on exchange rate was also importantly considered with a mean of 3.94, peg balance also considered with a mean of 3.29. And a short term placement of excess balances to earn interest income was the least considered by banks during FX deal with foreign banks.

Most factors considered in FX deal are to the customer's perspective in order to fulfill the requirement to partake in international markets for both importers and exporters.

4.19. Foreign exchange translation(the need to translate accounts in foreign currencies to the local currency) affect the bank profitability

Table 10: Foreign exchange translation effects on banks profitability

	Frequency	Percent	Valid Percent	Cumulative Percent
Most significantly	2	11.8	11.8	11.8
Valid Somehow significantly	5	29.4	29.4	41.2
Moderately	7	41.2	41.2	82.4
Insignificantly	3	17.6	17.6	100.0
Total	17	100.0	100.0	

Source: SPSS data analysis output, 2016

It was necessary to ask banks to what extent the foreign exchange translation affects their profitability. It was emerged that 41.2% affects moderately, 29.4% of the banks somehow significantly, 17.6% emerged the foreign exchange translation does not affect their profitability, however in this study 11.8% of the banks come into view that their profitability is most significantly affected by the foreign exchange translation.

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.

Kim (2011), studies on-balance-sheet and off-balance-sheet foreign currency risk management of Korean banks, the study found that banks' foreign currency position mismatches banks' foreign currency exposures significantly increase their financial distress likelihood and banks that better match their foreign currency positions are rewarded with lower probabilities of financial distress.

4.20. Foreign exchange NBE directive related issues

Table 11: Descriptive statistics of foreign exchange directives (NBE) related issues

		Frequency	Percent
Restrictions of Foreign currency customer's deposit accounts to USD, EUR, GBP and JPY types of currency	Small extent	5	29.4
	Some extent	9	52.9
	Large extent	3	17.6
	Total	17	100.0
Interest on non-resident fixed foreign currency account	Not at all	3	17.6
	Small extent	11	64.7
	Some extent	1	5.9
	Large extent	2	11.8
	Total	17	100.0
Computation of overall open foreign currency position	Some extent	10	58.8
	Large extent	7	41.2
	Total	17	100.0
Overall open foreign currency Position limits	Some extent	9	52.9
	Large extent	6	35.3
	Very Large extent	2	11.8
	Total	17	100.0
Squaring of foreign exchange positions	Some extent	5	29.4
	Large extent	8	47.1

	Very Large extent	4	23.5
	Total	17	100.0
Daily report on foreign currency positions	Small extent	1	5.9
	Some extent	2	11.8
	Large extent	10	58.8
	Very Large extent	4	23.5
	Total	17	100.0

Source: SPSS data analysis output, 2016

It was very necessary to ask the banks to indicate the extent that the banks can manage their foreign exchange risk through foreign exchange related directives set by National Bank of Ethiopia.

Restrictions on Foreign currency customer's deposit accounts to USD, EUR, GBP and JPY types of currency emerged that 52.9% of the banks rank it to the level of some extent. This restriction does not allow to banks to open customers deposit account other than captioned currencies.

64.7% of banks in this study rank the extent that Interest on non-resident fixed foreign currency account can help to manage the foreign exchange risk were to small extent. The directives states that the interest rate to apply on the fixed deposit is 50% of LIBOR rate.

Computation of overall open foreign currency position 58.8% of banks emerged to some extent the rest of 42.2% rank to the large extent level. And overall open foreign currency position limits emerged by banks to some extent with percentages of 52.9% and 35.3% considered the directive to the large extent level. Squaring of foreign exchange positions and daily report on foreign currency positions emerged that 47.1% and 58.8% of large extent level

The directives in relation to squaring of foreign exchange positions (the buying and selling of foreign currencies, in a bid to net-off positions and eliminate the related foreign exchange risks), 47.1% of banks use it to the large extent and 29.4% of the banks to some extent.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary and Conclusion

5.1.1. Summary of major findings

In this section, the findings from the respondents will be presented in a summarized and informative manner.

- The study revealed that foreign currency trading was the principal activity that contributed the most to foreign exchange exposures of banks.
- The banks indicated that the most important objectives of risk management were to minimize foreign exchange losses, to ensure survival of the firm, to protect earning fluctuations, to maintain liquidity and to increase profitability. It also emerged that most banks practiced foreign exchange risk management in order to achieve business objectives.
- Credit and liquidity risk emerged as the most important risk, operational risk was the second and foreign exchange risk ranked third while interest rate risk was the fourth most important risk.
- The study also revealed that translation exposure was the most important to the banks. Similarly, the results of the current study revealed that most banks considered economic exposure to be the most critical. The study revealed that even if transaction exposure was considered the least it still was critical to banks in Ethiopia.
- The findings indicated that the most critical factor considered by banks was the techniques' suitability to risk. Other critical factors included the cost of employing the technique, availability of the technique, while the skill and experience of staff was also critical.
- Matching/ Natural hedging was the most utilized strategy. Engaging in spot transactions was also widely used. Diversification whereby banks financed in different currencies and or in different markets was employed by a few banks. Some banks engaged in risk sharing strategy. Avoidance was also employed to some extent. Netting was the least used strategy.

- The study revealed that majority of the banks hedged their position selectively i.e. they hedged only those positions for which they expected a currency loss while leaving open positions for which they expected a currency gain, while the other hedge all positions immediately, some of the banks used a fixed rule for partial hedging,. Minority of banks used created additional exposure beyond that arising from its business activities, to profit from exchange rate changes while leaving the remainder exposed. Some banks did not hedge against foreign exchange rate risk at all.
- Restrictions on foreign currency customer's deposit accounts to USD, EUR, GBP and JPY types of currency majority of the banks ranks that the directive allow them to some extent to manage their foreign exchange risk.
- And the interest rate applied to the fixed time deposit by the central bank directive was to the small extent that the banks used to manage their FX risk.
- The directives for the overall open foreign currency position limits set by central banks, majority of the banks considered that it help them to some extent to manage their FX risk. The finding emerged that limits on foreign currency trading were imposed especially to limit overall exposure.

5.1.2. Conclusions

The conclusions of the study were based on the research objectives: to identify the type of foreign exchange risk exposures faced by commercial banks in Ethiopia; to identify the techniques adopted by the commercial banks for foreign exchange risk management and to assess whether there is a similarity between Commercial banks in Ethiopia in exercising foreign exchange risk management; and to ascertain the strategies and techniques used by banks in Ethiopia to manage foreign exchange risk.

It can be concluded from this study that majority of the commercial banks are exposed to translational exposure, it can be also concluded that the strategies and techniques used by commercial banks in Ethiopia to manage foreign exchange risk are matching/ natural hedging, engaging in spot transactions, diversification, risk sharing, and avoidance.

From this study, it can be concluded that majority of the banks hedged their position selectively i.e. they hedged only those positions for which they expected a currency loss while leaving open positions for which they expected a currency gain, while the other hedge all positions immediately, some of the banks used a fixed rule for partial hedging,. Minority of banks used created additional exposure beyond that arising from its business activities, to profit from exchange rate changes while leaving the remainder exposed. Some banks did not hedge against foreign exchange rate risk at all.

Minority of banks use a fixed rule for partial hedging, whereby they hedge a certain portion of their exposure, while leaving the remainder exposed. It can also be concluded that some banks do not hedge foreign exchange rate risk at all.

It can conclude that the directives set by National Bank of Ethiopia regarding restrictions on foreign currency customer's deposit accounts, interest rate applied to the foreign currency customer's fixed time deposit and the overall open foreign currency position limits set could not allow banks to give them a room to manage their foreign exchange risk to the expected level as this study emerged.

From the study objectives point of view it can be concluded that all commercial banks have foreign exchange risk management practices, however they use to different strategies and different techniques to manage foreign exchange risk.

5.2. Recommendation

It cannot be developed a one-size-fit-all risk management process for all the organizations. In the case of a bank, functions of risk management should actually be bank specific dictated by the size and quality of balance sheet, complexity of functions, technical/ professional manpower and

the status of Management Information System in place in that bank. Balancing risk and return is not an easy task as risk is subjective and not quantifiable, whereas return is objective and measurable.

Despite a fairly good foreign exchange risk management framework in place to adequately manage the risk commercial banks in Ethiopia faces, the researcher would like to make some recommendations to the commercial banks in Ethiopia and to the regulatory bodies. These are:

- Commercial banks in Ethiopia must have periodic assessments of foreign exchange risk events in association with the type of foreign exchange risk exposures, and align the respective strategy accordingly.
- All commercial banks should give adequate weight for foreign exchange risk management parallel to the liquidity and credit risk.
- It is recommended that to 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.
- One of the critical factors considered by banks was the techniques' suitability to risk, and all banks should evaluate each technique with their own identified foreign exchange risk exposure, which requires the skill and experience of staff to be trained.
- As a census survey, the findings of the study will provide useful comparisons of the various strategies and techniques. Commercial banks in Ethiopia can get such insights on exchange risk management best practice by other banks by assessing the findings of this study hence they will be able to appraise the strategies and techniques that they employ.
- There should be an assessed and determined level of foreign exchange risk exposure particularly in the banking industry during the managed floating exchange regime. The behavior and the effects as well as the techniques and strategy should be reviewed and documented by the regulatory bodies.
- It emerged that most banks based their foreign exchange hedging decisions on speculations and forecasts of currency market fundamentals. This implies that most banks do not consider the Ethiopian currency market to be information efficient. The

regulatory body (Central Bank of Ethiopia) should intervene and manipulate market fundamentals to eliminate such inefficiencies.

- National Bank of Ethiopia should review its restrictions on foreign currency customer's deposit accounts; interest rate applied to the foreign currency customer's fixed time deposit and the overall open foreign currency position limits.
- Academicians should critique the findings and compare them to other empirical studies in order to gauge the foreign exchange risk exposure, the level of the use of strategies and techniques of foreign exchange risk management by Ethiopian commercial banks. They will be able to give further recommendations on other techniques and strategies that were not adequately analyzed by this study

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Annex 1: List of commercial banks in Ethiopia

No	List of Commercial Banks
1	Abay Bank S.C
2	Addis International Bank S.C
3	Awash International Bank S.C
4	Bank of Abyssinia
5	Berhan International Bank
6	Buna International Bank
7	Commercial Bank of Ethiopia
8	Cooperative Bank of Oromia S.C
9	Dashen Bank S.C
10	Debab Global Bank S.C
11	Enat Bank S.C
12	Lion International Bank S.C
13	Nib International Bank S.C
14	Oromia International Bank S.C
15	United Bank S.C
16	Wegagen Bank S.C
17	Zemen Bank S.C

Annex 2: Questionnaires

St. Mary's University
School of Graduate Studies
Department of Accounting and Finance
MBA program

This questionnaire is designed to collect information about the *foreign exchange risk management practice of Ethiopian Commercial Banks*. The data or information collected in such a way shall be used as primary data in researcher's thesis, which is conducting as a partial fulfillment for the requirement of study in **MBA in Accounting and Finance at St. Mary's University**. The researcher would like to thank you in advance for your kind response in giving your precious time in filling the questionnaire.

No need to mention your name and the information provided is to be used only for this study and any information given will be kept confidential.

Thank you for your Co-operation!!

This questionnaire is designed to be filled by the Managerial Post respondents

SECTION A: GENERAL INFORMATION

1. Which transactions and principal activities expose your bank to foreign exchange risk? (tick as appropriate and you may select more than one)

Investing in Foreign Markets	
Foreign Currency Trading	
Foreign Financial Asset portfolio	
Foreign Financial Liability portfolio	
Borrowing credit in foreign markets	
Providing credit in foreign markets	
Other(Kindly Specify)	

2. What are your bank’s objectives of foreign exchange risk management? Kindly rank the importance on a scale of 5-1.

Statements	Very Important (5)	Important (4)	So-So (3)	Less Important (2)	Not Important (1)
Minimize foreign exchange losses					
Reduce the volatility of cash flows					
Protect earnings fluctuations					
Ensure survival of the firm					
Increase profitability					
Adequacy of the reserves					
To maintain liquidity					
Social responsibility					
Other (please specify)					

3. Rank the following risk exposures in order of importance to your bank on a scale of 5-1.

Statements	Very Important (5)	Important (4)	So-So (3)	Less Important (2)	Not Important (1)
Interest Rate Risk					
Credit Risk					
Foreign Exchange risk					
Liquidity Risk					
Operational Risk					
Other(Kindly Specify)					

4. Which foreign exchange risk exposures does your bank face? Kindly rank the importance on a scale of 5-1.

	Most			Less	Not
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Statements	Critical (5)	Critical (4)	So-So (3)	Critical (2)	Critical (1)
Translation Exposure (arises from the need to translate accounts in foreign currencies to the local currency of the reporting entity)					
Transaction Exposure (arises 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)					

5. Kindly rank the role of Board of Directors in foreign exchange risk management on a scale of 5-1.

Statements	Very Important (5)	Important (4)	So-So (3)	Less Important (2)	Not Important (1)
Review and approve foreign exchange risk management policies					
Review periodically the foreign exchange risk management programme					
Ensure that an independent inspection/audit function reviews the foreign exchange operations to ensure that the bank's foreign exchange risk management policies are appropriate and are being adhered to					
Ensure that an independent inspection/audit function reviews the foreign exchange operations to ensure that the bank's foreign exchange risk management procedures are appropriate and are being adhered to					
Ensure the selection and appointment of qualified and competent management to administer the foreign exchange function					
Outline the content of foreign exchange risk reports to the board					
Outline the frequency of foreign exchange risk reports to the board					
Other(Please specify)					

6. Kindly rank the role of Management in foreign exchange risk management on a scale of 5-1.

Statements	Very Important (5)	Important (4)	So-So (3)	Less Important (2)	Not Important (1)
Developing and recommending FX risk management policies for approval by the Board of Directors					
Establishing procedures for accurately measuring realized FX trading gains and losses					

Establishing procedures for accurately measuring unrealized FX trading gains and losses					
Establishing and implementing procedures governing the conduct and practices of FX traders					
Reporting comprehensively on FX risk activities to the Board of Directors					
Other(Please specify)					

SECTION B: RISK MANAGEMENT STRATEGIES AND TECHNIQUES

7. Kindly rank the hedging approach that your bank employs on a scale of 4-1.

Statements	Very Large Extent (4)	Large Extent (3)	Some Extent (2)	Not At All (1)
Hedging individual open currency positions with individual hedge transactions				
Considering the net exposure i.e. cash outflow less cash inflows, for total currencies involved, of the same time horizon.(net position)				

8. What factors does your bank consider when selecting the hedging technique to be used? Kindly rank the extent to which they affect your bank on a scale of 4-1.

Factors	Most Critical (4)	Critical (3)	Less Critical (2)	Not Critical (1)
Cost				
Suitability to Risk				
Skill and Experience of Staff				
Availability				
Others(Please specify)				

9. Please indicate whether your bank hedges against the following exposures. Kindly rank the extent to which they affect your bank on a scale of 4-1.

Statements	Most Critical (4)	Critical (3)	Less Critical (2)	Not Critical (1)
Translation Exposure (arises from the need to translate accounts in foreign currencies to the local currency of the reporting entity)				
Transaction Exposure (arises 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				

10. Foreign exchange risk is mitigated by using different hedging techniques. Kindly indicate the extent by which a bank eliminates or minimizes its risk exposure on a scale of 5-1.

Hedging using Derivatives				
Hedging through Diversification of Foreign Asset-Liability Portfolio				

11. The following are alternative hedging strategies. Kindly indicate the extent to which each of them best describes the rules and procedures of your bank's foreign exchange risk management.

Statements	Very Large Extent (5)	Large Extent (4)	Some Extent (3)	Small Extent (2)	Not at All (1)
Hedge all open position immediately					
Use a fixed rule for partial hedging (hedge a certain portion of exposure with forward and/or option contracts, while leaving the remainder exposed)					
Hedge selectively (hedge only those positions for which they expect a currency loss while leaving open positions for which they expect a currency gain)					
Create additional exposure(beyond that arising from its business activities) to profit from exchange rate changes					
Do not hedge foreign exchange rate risk at all					

12. Which hedging strategy does your bank employ? Please rank the extent to which you use them on the scale of 4-1.

Statements	Most Frequently used (4)	Moderately Used (3)	Occasionally Used (2)	Not Used at All (1)
Risk Sharing(agreement between two parties to share currency risk)				
Matching/ Natural Hedging (covering cash outflows with cash inflows in the same currency at the same time)				
Diversification (financing in different currencies and/or in different markets)				
Avoidance				
Netting (by offsetting exposure in one currency with exposure in the same or another currency)				
Engaging in spot transactions				
Others(Please specify)				

13. Forecasting in exchange rate movements is a strategy of risk management. Kindly indicate to what extent your bank uses exchange rate forecasts in connection with hedging techniques. Kindly rank on a scale of 5-1.

Statements	Very Large Extent (5)	Large Extent (4)	Some Extent (3)	Small Extent (2)	Not at All (1)

Regularly used					
Occasionally used					
Not used at all					

14. The Importance of FX Risk Management Practice(tick as appropriate)

1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree

No	Questions	1	2	3	4	5
1	The effective management of foreign exchange risk is central to your Bank's performance					
2	Application of FX risk management techniques reduces costs or expected losses to banks					
3	Effective FX risk management is one of the main objectives of your bank					
4	There is significant board and senior management involvement in the FX risk management in your bank					
5	The banks management regularly reviews the organizations performance in managing its FX risk					
6	It is important to continuously review and update risk management techniques					
7	There is a common understanding of foreign exchange risk management across the bank					
8	Level of control by your bank is appropriate for the foreign exchange risk that it faces					
9	Banks makes periodic and systematic assessment of transaction, translation and economic exposure					
10	Banks hedge with an aim of profiting from foreign exchange rate movements					
11	Banks forecast appreciation and depreciation of relevant currencies during their planning horizon					
12	A banks financial decisions are influenced by its foreign exchange decisions					
13	The banks staff's expertise levels towards foreign exchange risk management is adequate					

15. Foreign Exchange Directives related issues? Kindly rank the extent by which your banks can manage its foreign exchange risk exposure

No	Questions	Very Large Extent (5)	Large Extent (4)	Some Extent (3)	Small Extent (2)	Not at All (1)
1	Restrictions of Foreign currency customer's deposit accounts to USD, EUR, GBP and JPY types of currency					
2	Interest on non-resident fixed foreign currency account					
3	Computation of overall open foreign currency position					
4	Overall open foreign currency Position limits					
5	Squaring of foreign exchange positions					
6	Daily report on foreign currency positions					
7	Other (Please Specify).....					

Thank You!!!