**Addis Ababa University**
**College of Business and Economics**
**Department of Accounting and Finance**
**(Graduate Program)**

# Risk Management Practice of Ethiopian Commercial Banks

By

Tsion Fekadeselassie

A Thesis Submitted to the Department of Accounting and Finance of Addis Ababa University for the Partial Fulfillment of the requirements for the Degree of Master of Science in Accounting & Finance

June 2015

Addis Ababa, Ethiopia

# Addis Ababa University
# College of Business and Economics
# Department of Accounting and Finance
# (Graduate Program)

Risk Management Practice of Ethiopian Commercial Banks

By

Tsion Fekadeselassie

**Approved by the Board of Examiners:**

| | |
|---|---|
| _____ | _____ |
| **Advisor** | **Signature** |
| _____ | _____ |
| **Examiner** | **Signature** |
| _____ | _____ |
| **Examiner** | **Signature** |

**Statement of Declaration**

I, Tsion Fekadeselassie, have carried out independently a research work on Risk management practice of Ethiopian Commercial Banks in partial fulfillment of the requirement of the M.SC 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.

Tsion Fekadeselassie

Sig: _____

June 2015

## Statement of Certification

This is to certify that Tsion Fekadeselassie has carried out her research work on the topic entitled "Risk management practice of Ethiopian Commercial Banks". The work is original in nature and is suitable for submission for the reward of the M.Sc. Degree in Accounting and Finance.

Advisor: Laxmikantham (PhD)

Signature: _____

## *Abstract*

*The aim of this paper is to analyze the effectiveness of risk management practice of commercial banks operating in Ethiopia. Information was obtained from 15 purposely-sampled commercial banks by adopting concurrent mixed research design. Open and closed-ended questionnaires were administered to 86 respondents from selected commercial banks. The questionnaires covered key aspects of risk management including the importance of risk management practices, risk identification, risk monitoring and nature of risk management practices. The main conclusions of the paper are: risk managers perceive risk management as critical to their banks performance; the types of risks causing the greatest exposures are credit risk, operational risk, liquidity risk, interest rate risk and foreign exchange risk; there was a reasonable level of success with current risk management practices and, banks are utilizing some of the approaches/techniques traditionally used to manage risks. Overall, the findings suggest that banks operating in Ethiopia are indeed risk-focused. Some recommendations were made and prominent amongst them were that banks should give emphasis on staff training in the area of risk management and they must make risk visible, measurable and manageable and ensure a meaningful risk culture throughout all processes and activities.*



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

## Acknowledgements

Above all, I praise my God in the name of Lord Jesus Christ for enabling me to complete my work. Without the support of God, it was difficult to come to an end.

I would like to thank my supervisor Dr. P. Laxmikantham for his suggestions, recommendation and guideline during working on this thesis. And also I would like to thank all of respondents for taking a value time and giving useful information enabling this study.

Moreover, I am extremely thankful to my lovely family for their support and cheer me up. Last but not least, my thanks go to my friends for the time that we had and their assistance to complete this research thesis.

## Table of Contents

*List of Figures*

# List of Tables

# Chapter 1: Introduction

In this introductory chapter, background of the study, problem statement, research questions, methodology, significance, scope, limitation and organization of the study are discussed.

## 1.1 Background of the Study

Today, the banking environment has experienced many global contemporary changes, the most significant of which are the liberalization of service trade, major progress in the technological aspect, and a rise in competition whether it is within the bank of between banks and other institutions.

In the light of these changes, evolution within banking itself has to come along too in order to keep pace with such contemporary developments, making it a must to pay attention on revealing and clarifying the various risks that banks may encounter, in addition to providing a method for assessing such risks and managing them, while also suggesting means through which risks and their impacts can be curbed (Khalid & Amjad, 2012).

Risk is unavoidable like the common death and taxes. It is one of the few things in life that is inevitable. All businesses, whatever their size and shape, in whatever markets they operate and no matter what products and services they provide, are constantly faced with a multitude of risks, large and small. Indeed, businesses can only prosper by successful risk taking as argued by Osborne, 2012.

Besides, risk arises due to uncertainties, which in turn arises due to changes that could take place in the economic, social and political environments and as well as due to lack of information

availability concerning such changes. Risk is also an exposure to a transaction with loss, which occurs with some probability where such loss can be expected, measured and minimized.

In financial institutions, risk results from variations and fluctuations in assets or liabilities or fluctuation both in incomes from assets or payments on liabilities or variation in outflows and inflows of cash. In today‟s world, banks are facing various types of risks in the course of their service delivery and hence, a bank manager should ensure that he/she has a clear understanding of these risks to take sound measures effectively manage them. Therefore, bank managers have to be "risk intelligent"". Risk intelligence defined as the ability to make informed decisions based on past, current and future data (Whipple, 2010).

In banks and financial institutions, risk considered the most important factor of earnings. Therefore, they have to balance the relationship between risk and return. In reality, we can say that management of financial institution is nothing but management of risk. Managing financial risk systematically and professionally becomes an even more important task. Rising global competition, increasing deregulation, introducing of innovative products and delivery channels has pushed risk management to the forefront of today's financial landscape. Ability to measure the risks and take appropriate position will be the key to success. It can be said that risk takers will survive, effective risk managers will prosper and risk averse are likely to perish.

Osborne (2012) has stated that, in businesses we need to strike the correct balance between risk and potential reward; to maximize our upside risk and minimize our downside risk. To succeed we need to manage risk appropriately, not to try eliminating or avoiding it, as, in any case, that simply is not possible. That is, therefore, essential that we understand the major risks of our business operations so that we manage them to our advantage.

According to Osborne (2012), risk management has an essential role in one‟s decision-making, whether it‟s with regard to business start-up, strategy, exploiting opportunities, managing one‟s various projects or in one‟s day-to-day business operations. Risk management can help to justify- to the management team, employees, business partners, investors, creditors and customers.

In recent years, the Ethiopian financial industry has registered an encouraging growth. Currently the financial sector includes 18 commercial banks, 16 insurance companies and 19 micro finance institutions. The banking industry in the country is making great advancement in terms of quality, quantity, expansion and diversification and is keeping up with the updated technology, ability, stability and thrust of a financial system. Where the commercial banks play a very important role, emphasize the very special need of a strong and effective control system with extra concern for the risk involved in the business (Fasika Firew, 2012).

National bank of Ethiopia (NBE) as a one and only regulator and supervisor of all financial institution activities in the country has a mandate to issue and provide guidance to all financial institutions as to the risk management system. To this end, it has revised the 2003 bank‟s risk management guidelines in 2010 to incorporate latest developments in the area. The guideline presents the risk management system of the banking risks.

This revised document, consistent with international standards and best practices, expected to provide minimum risk management (risk identification, measurement, monitoring and control) standards for all banks operating in the country. It covers the most common and interrelated risks that banks could face in the country, namely, credit, liquidity, market and operational risks. The guidelines are those expected to assist risk-based supervision and contribute towards safety and soundness of the banking system.

Therefore, the risk management practice of Ethiopian commercial banks is at its infancy stage, as NBE directives say the establishment of the risk department is a recent phenomenon, this study analyzes effectiveness of the risk management practice of selected Ethiopian commercial banks. These necessity calls for an in-depth investigation on risk management practices and here lays the justification of this study.

## 1.2 Statement of the Problem

Banks today operate in an environment marked by rising customer expectations, increasing regulatory requirements, technological innovation and mounting competition. In Ethiopia, the competition within the banking industry has generated a greater concern to manage the entire activities of banks in order to avert any possible risks that may occur.

According to NBE risk management guideline (2010), although underdeveloped, the banking system in Ethiopia has observed a significant expansion over the past few years based on increase in terms of in number of banks, financial products they are offering to the clients & etc. The regulatory body believes that such growth should be matched with strong risk management practices.

However, the previous literature on risk management practices of banks in Ethiopia is very limited. The exception to this argument is that the available few studies gave focused to assess particular types of risks. For instance, Fasika Firew (2012) has investigated selected Ethiopian commercial banks operational risk management and Tibebu Tefera (2011) has studied on the impact level of credit risk management towards the profitability of commercial banks in Ethiopia.

Therefore, the motivation of this study is to extend the literature by examining the various types of risks faced by selected commercial banks operating in Ethiopia.

## 1.3 Objectives of the Study

Depending on the problem that is discussed in the above, the study has both general and specific objectives.

### 1.3.1 General Objective

The general objective of this study is to analyze the risk management practice of selected Ethiopian Commercial banks.

### 1.3.2 Specific Objectives

Specifically, the study has the following objectives:

a) To identify the type of risk exposures faced by commercial banks in Ethiopia.

b) To ascertain the nature of risk management practice

c) To identify the techniques adopted by the banking industry for risk management.

## 1.4 Research Questions

To address purpose and objectives of the study, the following research questions are exploited.

i. To what kind of risks the Ethiopian commercial banks are exposed?
ii. Are the staffs in Ethiopian commercial banks familiar with the concepts of risk and its associated management?
iii. What is the risk management techniques used by Ethiopian commercial banks?

## 1.5. Research Methodology

In order to achieve the research objectives, both quantitative and qualitative (i.e. mixed approach) is adopted. The reason for the use of such a mixed method approach is to gather data that could not be obtained by adopting a single approach.

In the cases of sampling technique, the study adopted purposive sampling technique. The study used survey of risk experts in the case of commercial banks in Ethiopia. The survey includes both open and closed end questionnaires. The reason for the use of questioner for this study is due to the fact that the main purpose of the study is to analyze the risk management practice of Ethiopian commercial banks because of that; the researcher chose a questionnaire method of data collection techniques. The survey consisted 86 risk experts from fifteen commercial banks and the questionnaire was distributed them.

## 1.6 Significance of the Study

The findings and recommendations of the current study could serve as an ingredient and be informative to the banks under examination as well as to the regulatory body in the country. It was also give a general insight to the academic & professional society regarding risk management aspects. Additionally, the study has the following significances:

1. 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.
2. It used by other banks in evaluating their operations in identifying and taking corrective actions about possible risk exposures.

3. It serve as a reference material for anyone who will undertake a further study on the same or related topic

## 1.7 Scope of the Study

This study analyzes the risk management practice of Ethiopian commercial banks having the establishment year before 2011. Those banks that are established three or four years back from now are not included in this study because they are not well organized to develop risk management departments and they may not have necessary expertise and skill in managing various types of risks in a scientific manner. In addition, the study investigates the most common and interrelated risks namely, credit, liquidity, market and operational risks faced by commercial banks operating in Ethiopia.

## 1.8 Limitations of the Study

The limitation of this paper related with the participating bank personnel were more directly involved in the area of credit risk management and, hence, lacked detailed knowledge of the management of other risks. It proved quite challenging to enlist the participation of a more varied cast of risk managers within the banks.

## 1.9 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, limitation 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, data type, sampling design, research instrument, method of data analysis and so forth. 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 2: Review of Related Literature

## 2.1 Review of Theoretical Literature

In this chapter different theoretical aspects of risk like its definition, types, management and others as well as empirical issues and works as to the risk management practice in the banking industry discussed.

### 2.1.1 Defining Risk

A risk can be defined as an unplanned event with financial consequences resulting in loss or reduced earnings (Vasavada, Kumar, Rao & Pai, 2005). An activity, which may give profits or result in loss, may be called a risky proposition due to uncertainty or unpredictability of the activity of trade in future. In other words, it can be defined as the uncertainty of the outcome.

Risk refers to „a condition where there is a possibility of undesirable occurrence of a particular result, which is known or best quantifiable and therefore insurable," (Periasamy, 2008). Risk may mean that there is a possibility of loss or damage, which, may or may not happen.

Risks may be defined as uncertainties resulting in adverse outcome, adverse in relation to planned objective or expectations (Kumar, Chatterjee, and Chandrasekhar & Patwardhan 2005). In the simplest words, risk may be defined as possibility of loss. It may be financial loss or loss to the reputation/ image (Sharma, 2003).

Although the terms risk and uncertainty are often used synonymously, there is difference between the two (Sharma, 2003). Uncertainty is the case when the decision-maker knows all the possible outcomes of a particular act, but does not have an idea of the probabilities of the

outcomes. On the contrary, risk is related to a situation in which the decision-maker knows the probabilities of the various outcomes. In short, risk is a quantifiable uncertainty.

In general risk is all about uncertainty. That is inability to precisely determine what will occur in the future, as future is full of uncertain. With regard to what is a risk Osborne (2012) has claimed that, what we all are talking about is a future problem- or, indeed, opportunity or the potential future effect of a decision or an action that we take now. And every decision we make or action we take contains some element of risk. Furthermore, Osborne (2012) has indicated that,

> *"Risks can arise as a result of our business's activities or as a result of external factors such as legislation, market forces, and interest or exchange rate fluctuations, the activities of others or even the weather. They can be a product of business environment, the natural environment, and the political or economic climate or of human inadequacies, failing or errors. The bottom line is that risk may impact on our ability to meet our business objectives or even threaten the business itself."*

The types and the degree of effect of risk defers among business organizations, even within industry level as they might differ in their size, complexity of task, types of service or product being offered or organizational structure.

Thus, risks that business organizations face are inherent to their operations or endeavors. As to the classification of risk Jorion and Khoury (1996) argument has cited by Khan and Ahmed (2001) discusses that, there are different ways in which risks are classified. One way is to distinguish between business risk and financial risks. Business risk arises from the nature of a

firm‟s business. It relates to factors affecting the product market. Financial risk arises from possible losses in financial markets due to movements in financial variables (Jorion and Khoury 1996). It is usually associated with leverage with the risk that obligations and liabilities cannot be met with current assets (Gleason 2000).

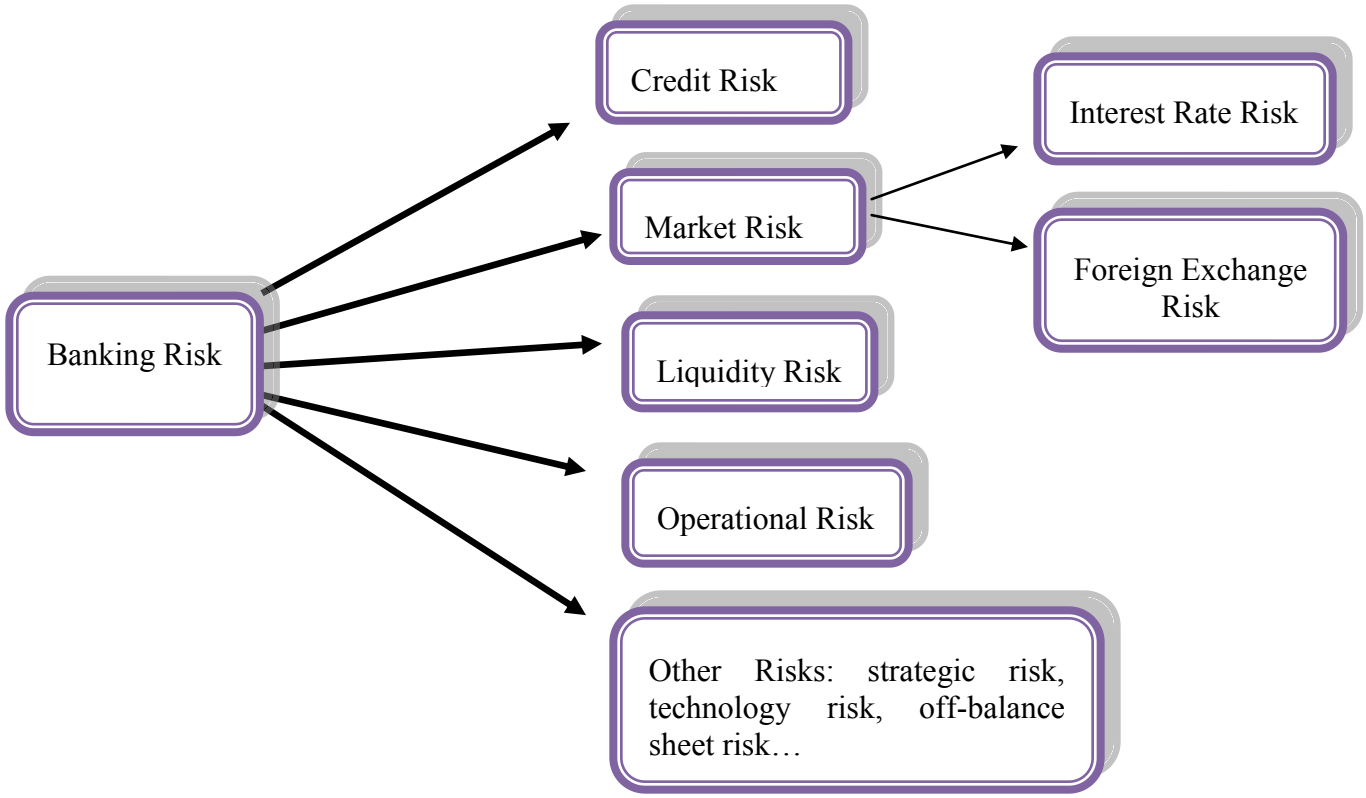
Another way of decomposing risk is between systematic and unsystematic components. While systematic risk is associated with the overall market or the economy, unsystematic risk is linked to a specific asset or firm. While the asset-specific unsystematic risk can be mitigated in a large diversified portfolio, the systematic risk is non-diversifiable. Parts of systematic risk, however, can be reduced through the risk mitigation and transferring techniques.

### 2.1.2. Types of Risk in Banking Sector

Banking is the intermediation between financial savers on one hand and the funds seeking business entrepreneurs on the other hand. As such, in the process of providing financial services, banks assume various kinds of risk both financial and non-financial. Moreover this risk inherent in the provision of their services differs from one product or service to the other (Adarkwa, 2011). Various writers have grouped these risks in different ways to develop the frameworks for their analyses.

According to Bessis (2002), the three main types of risk are credit risk, interest rate risk and market risk. However, banks are also exposed to liquidity risk, operational risk, foreign exchange risk, country/sovereign risk, technology risk; off-balance sheet risk and insolvency risk.

*Figure 1: Types of risk in banking sector*




### 2.1.2.1 Credit Risk

Hempel and Simonson (1999) have defined credit risk as the possibility of losses associated with decrease in the credit quality of the borrower or the counter parties. In the bank's portfolio, losses stem from outside default due to inability or unwillingness of the customer or the counter party to meet the commitments, losses may also result from reduction in the portfolio value arising from actual or perceived deterioration in credit quality.

Greuning and Bratanovic (2009) define credit risk as the chance that a debtor or issuer of a financial instrument whether an individual, a company, or a country will not repay principal and other investment-related cash flows according to the terms specified in a credit agreement.

Inherent to banking, credit risk means that payments may be delayed or not made at all, which can cause cash flow problems and affect a bank„s liquidity.

Credit risk can be “firm-specific” or “systematic”. The former is the risk of default of the borrowing firm associated with the specific type of projects entered into by the bank. On the other hand systematic credit risk relates to default associated with general economic or macroeconomic factors affecting all borrowers [Saunders and Cornett (2006)]. Credit risk is a major challenge for banks during recessionary times when customers are unable to adequately service their loans.

The objective of credit risk management is to maximize a bank„s risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. According to many literatures more than half percent of a bank„s balance sheet generally relates to credit risk and hence considered as the principal cause of potential losses and bank failures. Time and again, lack of diversification of credit risk has been the primary cause for bank failures. The dilemma is that banks have a comparative advantage in making loans to entities with which they have an ongoing relationship, thereby creating excessive concentrations in geographic and industrial sectors. There are two main types of credit risk that a portfolio or position is exposed to, credit default risk and credit spread risk.

While default cause a total or partial loss of any amount lent to the counterparty, a deterioration of the credit standing leads to the increase of the possibility of default. In the market universe, a deterioration of credit standing of a borrower does materialize into a loss because it generates an upward move of the required market yield to compensate the higher risk and triggers a value decline (Bessis, 2010). Normally the financial conditions of the borrower as well as the current

value of any underlying collateral are of considerable interest to banks when evaluating the credit risks of obligors or counterparties (Santomero, 1997). According to Greuning and Bratanovic (2009), formal policies lay down by the board of directors of a bank and implemented by management plays a vital part in credit risk management. As a matter of fact, a bank uses a credit or lending policy to outline the scope and allocation of a bank„s credit facilities and the manner in which a credit portfolio is managed that is, how investment and financing assets are originated, appraised, supervised, and collected.

There are also minimum standards set by regulators for managing credit risk. These cover:

a) The identification of existing and potential risks,
b) The definition of policies that express the bank„s risk management philosophy, and
c) The setting of parameters within which credit risk will be controlled.

There are typically three kinds of policies related to credit risk management. The first set aims to limit or reduce credit risk, which include policies on concentration and large exposures, diversification, lending to connected parties, and overexposure. The second set aims at classifying assets by mandating periodic evaluation of the collectability of the portfolio of credit instruments. The third set of policies aims to make provision for loss or make allowances at a level adequate to absorb anticipated loss.

#### 2.1.2.2 Liquidity Risk

Gup and Kolari (2005) define liquidity risk as the risk to earnings or capital related to a bank‟s ability to meet its obligations to depositors and the needs of borrowers by turning assets into cash quickly with minimal loss, being able to borrow funds when needed, and having funds available

to execute profitable securities trading activities. Liquidity risk is a major risk for the bank portfolio, in that, in extreme cases it could result in bankruptcy. The Basel Committee on Bank Supervision, in its June 2008 consultative paper, defined liquidity as the ability of a bank to fund increases in assets and meet obligations as they become due, without incurring unacceptable losses.

Bessis (2010) however considers liquidity risk from three distinct situations. The first angle is where the bank has difficulties in raising funds at a reasonable cost due to conditions relating to transaction volumes, level of interest rates and their fluctuations and the difficulties in funding counterparty. The second angle looks at liquidity as a safety cushion, which helps to gain time under difficult situations. In this case, liquidity risk is defined as a situation where short-term asset values are not sufficient to match short-term liabilities or unexpected outflows. The final angle from where liquidity risk is considered as the extreme situation. Such a situation can arise from instances of large losses, which creates liquidity issues and doubts on the future of the bank. Such doubts can result in massive withdrawal of funds or closing of credit lines by other institutions that try to protect themselves against a possible default. Both can generate a brutal liquidity crisis, which possibly ends in bankruptcy.

There are many factors that affect banks own liquidity and in turn affect the amount of liquidity they can create. These factors have a varying degree of influence on the balance between liquidity risk and liquidity creation, or a bank‟s liquidity management. A bank‟s assets and liabilities play a central role in their balancing of liquidity risk and creation. A bank‟s liabilities include all the banks sources of funds. Banks have three main sources of funds: deposit accounts, borrowed funds, and long-term funds. The amounts and sources of funds clearly affect how

much liquidity risk a bank has and how much liquidity it can create. The easier a bank can access funds the less risk it has and the higher amount of funds it holds the more liquidity it can create. Liquidity is necessary for banks to compensate for expected and unexpected balance sheet fluctuations and to provide funds for growth (Greuning and Bratanovic, 2009).

Santomero (1995) however, suggests that while some would include the need to plan for growth and unexpected expansion of credit, the risk here should be seen more correctly as the potential for funding crisis. Such a situation would inevitably be associated with an unexpected event, such as a large charge off, loss of confidence, or a crisis of national proportion such as a currency crisis. Effective liquidity risk management therefore helps ensure a bank's ability to meet cash flow obligations, which are uncertain as they are affected by external events and other agents' behavior.

#### 2.1.2.3 Market Risk

Saunders and Cornett (2006) define market risk as the possibility of loss to bank caused by the changes in the market variables. It is the risk that movements in equity and interest rate markets, currency exchange rates and commodity prices will adversely affect the value of on-/off-balance sheet positions. Market risk is the risk to the banks‟ earnings and capital due to changes in the market level of interest rates or prices of securities, foreign exchange and equities, as well as the volatilities, of those prices. Market risk management provides a comprehensive framework for measuring, monitoring and managing interest rate, foreign exchange and equity as well as commodity price risk of a bank that needs to be closely integrated with the bank‟s business strategy. The following are types of market risks; interest rate risk and foreign exchange risk.

### I) Interest Rate Risk

Interest rate risk is the potential negative impact on the net interest income and it refers to the vulnerability of an institutions financial condition to the movement in interest rates. Changes in interest rate affect earnings, value of assets, liability off-balance sheet items and cash flow. Earnings perspective involves analyzing the impact of changes in interest rates on accrual or reported earnings in the near term. This is measured by measuring the changes in the Net Interest Income (NII) equivalent to the difference between total interest income and total interest expense as Gleason (2000).

Though interest rate risk is obvious for borrowers and lenders with variable rates, those engaged in fixed rate transactions are not exempt from interest rate risks because of the opportunity cost that arises from market movements (Bessis, 2010). According to Greuning and Bratanovic (2009), the combination of a volatile interest rate environment, deregulation, and a growing array of on and off-balance-sheet products have made the management of interest rate risk a growing challenge. At the same time, informed use of interest rate derivatives such as financial futures and interest rate swaps can help banks manage and reduce the interest rate exposure that is inherent in their business. Bank regulators and supervisors therefore place great emphasis on the evaluation of bank interest rate risk management, particularly since the Basel Committee recommends the implementation of market risk based capital charges.

Greuning and Bratanovic (2009) imagine that banks encounter interest rate risk from four main sources namely repricing risk, yield curve risk, basis risk, and optionality. The primary and most often discussed source of interest rate risk stems from timing differences in the maturity of fixed rates and the repricing of the floating rates of bank assets, liabilities, and off-balance sheet

positions. The basic tool used for measuring repricing risk is duration, which assumes a parallel shift in the yield curve. Also, repricing mismatches expose a bank to risk deriving from changes in the slope and shape of the yield curve (nonparallel shifts). Yield curve risk materializes when yield curve shifts adversely affect a bank,,s income or underlying economic value. Another important source of interest rate risk is basis risk, which arises from imperfect correlation in the adjustment of the rates earned and paid on different instruments with otherwise similar repricing characteristics. When interest rates change, these differences can give rise to unexpected changes in the cash flows and earnings spread among assets, liabilities, and off-balance-sheet instruments of similar maturities or repricing frequencies (Wright and Houpt, 1996).

According to Adarkwa (2011) interest rate risk management comprises various policies, actions and techniques that a bank uses to reduce the risk of diminution of its net equity as a result of adverse changes in interest rates from any of the sources mentioned above.

Risk factors related to interest rate risk are estimated in each currency in which a bank has interest-rate-sensitive on and off-balance sheet positions. Since interest rate risk can have adverse effects on both a bank,,s earning and its economic value, an approach which focuses on the impact of interest rate changes on a bank,,s net interest income is combined with another which takes a more comprehensive view of the potential long-term effects of such interest rates changes on its economic value is used to assess the interest risk exposure (Adarkwa, 2011).

**II) Foreign Exchange Risk:**

Raghavan (2003) defines foreign exchange risk as the risk that a bank may suffer loss because 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. 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).

In principle, the fluctuations in the value of domestic currency that create currency risk result from long-term macroeconomic factors such as changes in foreign and domestic interest rates and the volume and direction of a country„s trade and capital flows. Short-term factors, such as expected or unexpected political events, changed expectations on the part of market participants, or speculation based currency trading may also give rise to foreign exchange changes. All these factors can affect the supply and demand for a currency and therefore the day-to-day movements of the exchange rate in currency markets (Greuning and Bratanovic, 2009). Foreign exchange risk is generally considered to comprise of transaction risk, economic risk and revaluation risk. Transaction risk is the price-based impact of exchange rate changes on foreign receivables and foreign payables, that is, the difference in price at which they are collected or paid and the price at which they are recognized in local currency in the financial statements of a bank or corporate entity.

Alternatively known as business risk, economic risk relates to the impact of exchange rate changes on a country„s long-term or a company„s competitive position. With increasing globalization, capital moves quickly to take advantage of changes in exchange rates and therefore devaluations of foreign currencies can lead to increased competition in both overseas

and domestic markets. This phenomenon makes this component of foreign exchange risk very critical for its management.

The third component, revaluation or translation risk arises when a bank„s foreign currency positions are revalued in domestic currency, and when a parent institution conducts financial reporting or periodic consolidation of financial statements. Banks conducting foreign exchange operations are also exposed to foreign exchange risk in forms of credit risks such as the default of the counterparty to a foreign exchange contract and time-zone-related settlement risk.

#### 2.1.2.4 Operational Risk

The New Basel Accord defines operational risk as "the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events." It is the potential financial loss as a result of breakdown in day-to-day operational processes. It can arise from failure to comply with policies, laws and regulations, from fraud or forgery (Njogo, 2012). These include direct and indirect laws resulting from inadequate of fail internal processes, people and systems or from external event. In order to mitigate this, internal control and internal audit systems are used as the primary means.

Malfunction of the information systems, reporting systems, internal monitoring rules and internal procedures designed to take timely corrective actions, or the compliance with the internal risk policy rules result in operational risks (Bessis, 2010). Operational risks, therefore, appear at different levels, such as human errors, processes, and technical and information technology. Because operational risk is an event risk, in the absence of an efficient tracking and reporting of risks, some important risks will be ignored, there will be no trigger for corrective action and this can result in disastrous consequences. Developments in modern banking environment, such as

increased reliance on sophisticated technology, expanding retail operations, growing e-commerce, outsourcing of functions and activities, and greater use of structured finance (derivative) techniques that claim to reduce credit and market risk have contributed to higher levels of operational risk in banks **(**Greuning and Bratanovic, 2009)**.**

The recognition of the above-mentioned contributory factor in operational risk has led to increased attention on the development of sound operational risk management systems by banks with the initiative being taken by the Basel Committee on Banking Supervision. The Committee addressed operational risk in its Core Principles for Effective Banking Supervision (1997) by requiring supervisors to ensure that banks have risk management policies and processes to identify, assess, monitor, and control or mitigate operational risk. In its 2003 document, Sound Practices for the Management and Supervision of Operational Risk, the Committee further provided guidance to banks for managing operational risk, in anticipation of the implementation of the Basel II Accord, which requires a capital allocation for operational risks. Despite all these efforts by the regulators at addressing operational risk, practical challenges exist when it comes to its management. In the first place, it is difficult to establish universally applicable causes or risk factors that can be used to develop standard tools and systems of its management since the events are largely internal to individual banks.

Moreover, the magnitude of potential losses from specific risk factors is often not easy to project. Lastly, it is difficult designing an effective mechanism for systematic reporting of trends in a bank,,s operational risks because very large operational losses are rare or isolated. Because of the data and methodological challenges raised by operational risk, the first stage of developing an effective framework to manage it is to set up a common classification of loss events that should

serve as a receptacle for data gathering process on event frequency and costs. The data gathered is then analyzed (risk mapping) with various statistical techniques such as graphical representation of the probability and severity of risks. This helps to find the links between various operational risks. The process then ends with some estimates of worst-case losses due to events risks. Modeling of loss distributions due to operational risks will enable the right capital charges to be made for operational risk as required by current regulations (Bessis, 2010).

In order for the objectives of setting up an operational risk management framework to be accomplished, it may require a change in the behavior and culture of the firm. Management must also not only ensure compliance with the operational risk policies established by the board, but also report regularly to senior executives. A certain amount of self-assessment of the controls in place to manage and mitigate operational risk will be helpful.

### 2.1.3 Risk Management in Banking

In the process of doing business, it is certain that organization faced with unexpected and very often unpleasant surprises that threaten to weaken or, even worse, to destroy the business. That is the essence of risk and how a company or an individual respond to it will determine whether it will survive and succeed or not.

According to many authors risk management progressed from a strictly banking activity, related to the quality of loans, to a very complex set of procedures and instruments in the modern financial environment. It underscores the fact that the survival of an organization depends heavily on its capabilities to anticipate and prepare for the change rather than just waiting for the change and react to it. Risk is associated with uncertainty and reflected by way of charge on the fundamental /basic in other words in the case of business it is the capital, which is the cushion

that protects the liability holders of an institution. These risks are interdependent and events affecting one area can have ramification and penetrations for a range of other categories of risk. Therefore, the need to understand the risks run by banks and to ensure that the risks are properly confronted effectively controlled and rightly managed. Each transaction that a bank undertakes however changes the risk profile of the bank thereby making it a near impossibility to provide real time risk update and profile of the institution (Adarkwa, 2011).

Risk Management is described as the performance of activities designed to minimize the negative impact (cost) of uncertainty (risk) regarding possible losses (Schmidt and Roth, 1990). Redja (1998) also defines risk management as a systematic process for identify, evaluation of pure loss exposure faced by an organization or an individual, and for the selection and implementation of the most appropriate techniques for treating such exposures. The process involves: identification, measurement, and management of the risks. Risk management can be regarded as an active, strategic, and integrated process that encompasses both the measurement and the mitigation of risk, with the ultimate goal of maximizing the value of a bank, while minimizing the risk of bankruptcy (Schroeck, 2002).

Bessis (2010) also adds that in addition to it being a process, risk management also involves a set of tools and models for measuring and controlling risk. The objectives of risk management include the minimization of foreign exchange losses, reduction of the volatility of cash flows, protection of earnings fluctuations, and increment in profitability and assurance of survival of the firm (Fatemi and Glaum, 2000).

Another group of researchers stated that risk management is about ensuring that risks are taken consciously with full knowledge, clear purpose and understanding so that it can be measured and

mitigated to prevent a firm from suffering unacceptable loss causing it to fail or materially damage its competitive position. To ensure that banks operate in a sound risk management environment with reduced impact of uncertainty and potential losses, managers need reliable risk measures to direct capital to activities with the best risk/reward ratios. Management needs estimates of the size of potential losses to stay within limits set through careful internal considerations and by regulators. They also need mechanisms to monitor positions and create incentives for prudent risk taking by divisions and individuals. According to Pyle (1997), risk management is the process, by which managers satisfy these needs by identifying key risks, obtaining consistent, understandable, operational risk measures, choosing which risks reducing, which to increase and by what means, and establishing procedures monitor resulting risk positions.

Bessis (2010) indicates that the goal of risk management is to measure risks in order to monitor and control them, and also enable it to serve other important functions in a bank in addition to its direct financial function. These include assisting in the implementation of the bank,,s ultimate strategy by providing it with a better view of the future and therefore defining appropriate business policy and assisting in developing competitive advantages through the calculation of appropriate pricing and the formulation of other differentiation strategies based on customers,, risk profiles.

According to Santomero (1995), the management of the banking firm relies on a sequence of steps to implement a risk management system. These normally contain four parts, which are standards and reports, position limits or rules, investment guidelines or strategies and incentive contracts and compensation. These tools are generally established to measure exposure, define

procedures to manage these exposures, limit individual positions to acceptable levels, and encourage decision makers to manage risk in a manner that is consistent with the firm's goals and objectives.

### 2.1.4 Categories of Risk Management

As noted by Merton (1989), a key feature of the financial institutions (including banks) is the bundling and unbundling of risks. However, not all risks inherent in their business should be borne directly by them; some can be traded or transferred whiles others can be eliminated altogether. It is therefore useful to defragment the risks inherent in their activities and assets into three distinctive subgroups in accordance with their nature so that the appropriate strategies can be adapted to mitigate them.

Oldfield and Santomero (1995) argue therefore that risk facing financial institutions can be segmented into three distinguishable categories from a management outlook. These are risks that can be eliminated or avoided by simple business practices, risks that can be transferred to other participants and risk that must be actively managed at the firm level. Avoiding risk altogether by business practices has the goal of ridding the bank of risks that are not essential to the services provided or absorbing on the optimal quantity of a particular kind of risk. This is done by engaging in actions such as underwriting standards, diversification, hedging, reinsurance and due diligence investigation to reduce the chances of particular losses by eliminating risks that are unnecessary to the bank,,s business purpose.

After this is done, what will be left is some portion of systematic and operational risks, which should be minimized to the greatest extent possible, and their level and costs communicated to stakeholders. This is because an attempt to aggressively avoid these risks will constrain risks all

right but will also reduce the profitability of the business activity. The bank can also transfer some risks, when there is no value-added or competitive advantage associated with absorbing and/or managing them, to other parties who are in better positions to manage and benefit from them.

There is yet another class of risks which should be adsorbed and aggressively managed at the originating bank level because good reasons exist for using further resources to manage them. Some activities whose inherent risks have to be managed by the bank include those where the nature of the embedded risk may be complex and difficult to reveal to non-firm interests. For instance, banks holding complex illiquid and proprietary assets may find communicating the nature of such assets more difficult or expensive than hedging the underlying risk. Moreover, revealing information about customers or clients may give competitors an undue advantage. Internal management of some risks may also be necessary because it is central to the bank„s business purpose because they are the basis of the firm. This includes propriety positions that are accepted because of their risks and expected return. In all these circumstances when risk is absorbed, risk management activity requires the monitoring of business activity risk and returns and it is considered as part of doing business. In effect, banks should accept only those the risks that are uniquely a part of the bank„s array of unique value-added services (Allen & Santomero, 1996, Oldfield & Santomero, 1995).

### 2.1.5 Rationales for Risk Management in Banking

As noted by Adarkwa (2011), the main aim of management of banks is to maximize expected profits taking into account its variability/volatility (risk). This calls for an active management of the risk in order to get the desired results. Risk management is therefore an attempt to reduce the

volatility of profit, which has the potential of lowering the value of shareholders‟ wealth. Various authors including Stulz (1984), Smith et al (1990) and Froot et al (1993) have offered reasons why managers should concern themselves with the active management of risks in their organizations.

According to Oldfield and Santomero (1995), recent review of the literature presents four main rationales for risk management. These include managers‟ self-interest of protecting their positions and wealth in the firm. It is argued that due to their limited ability to diversify their investments in their own firms, they are risk averse and prefer stability of the firm„s earnings to volatility. This is because, all things being equal, such stability improves their own utility. Beyond managerial motives, the desire to ensure the shouldering of lower tax burden is another rationale for mangers to seek for reduces volatility of profits through risk management. With progressive tax schedule, the expected tax burden are reduce when income smoothens therefore activities which reduce the volatility of reported taxable income are pursued as they help enhance shareholders‟ value.

Perhaps the most compelling rationale for managers to engage in risk management with the aim of reducing the variability of profits is the cost of possible financial distress. Significant loss of earnings can lead to stakeholders losing confidence in the firm„s operations, loss of strategic position in the industry, withdrawal of license or charter and even bankruptcy. The costs associated with these will cause managers to avoid them by embarking on activities that will help avoid low realizations. Finally, risk management is pursued because firms want to avoid low profits, which force them to seek external investment opportunities. When this happens, it results

in suboptimal investments and hence lowers shareholders‟ value since the cost of such external finance is higher than the internal funds due to capital market imperfections.

According to Adarkwa (2011), this undesirable outcome encourages managers to actively embark upon volatility reducing strategies, which have the effect of reducing the variability of earnings. It is believed that any of the above mentioned rationales is sufficient to motivate management to concern itself with risk and embark upon a careful assessment of both the level of risk associated with any financial product and potential risk mitigation techniques.

### 2.1.6 Risk Management Process and System

To overcome the risk and to make banking function well, there is a need to manage all kinds of risks associated with the banking. Risk management becomes one of the main functions of any banking services and consists of identifying the risk and controlling them, means keeping the risk at acceptable level. These levels differ from institution to institution and country to country. The basic objective of risk management is to stakeholders; value by maximizing the profit and optimizing the capital funds for ensuring long term solvency of the banking organization. The risk management system outlined here can be a standard for banks to follow.

There is no single management system that would fit for all banks. Therefore, NBE requires each bank to develop its own comprehensive risk management system fitted to its need and circumstances. Moreover, the state bank of Pakistan (2003) in its risk management guideline for commercial banks has claimed that, the risk management activities takes place at different hierarchical levels. Hence, it has indicated the following hierarchical levels of risk management activities in every financial institution.

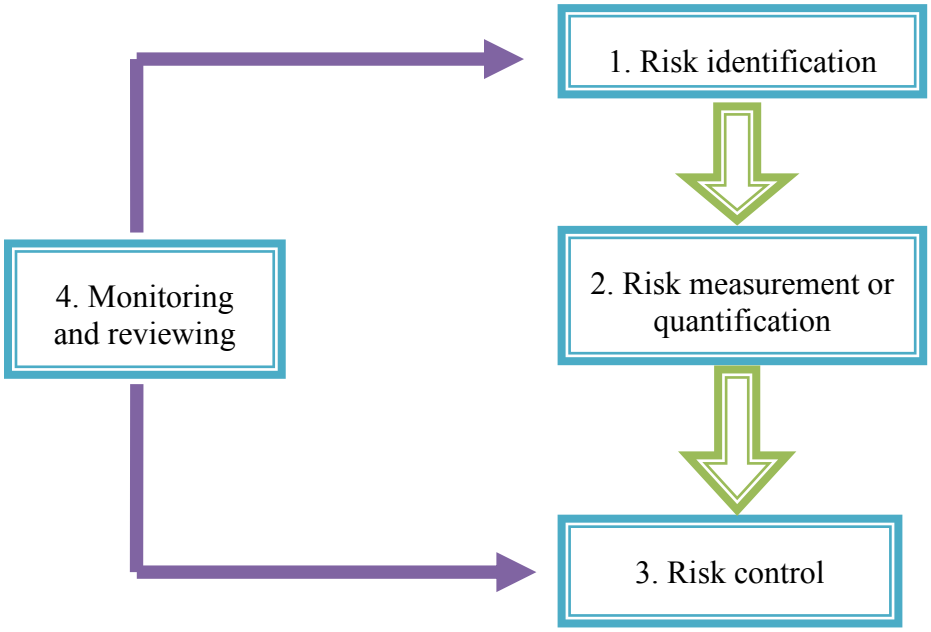
I) **Strategic level:** It encompasses risk management functions performed by senior management and BOD. For instance definition of risks, ascertaining institutions risk appetite, formulating strategy and policies for managing risks and establish adequate systems and controls to ensure that overall risk remain within acceptable level and the reward compensate for the risk taken.

II) **Macro Level**: It encompasses risk management within a business area or across business lines. Generally the risk management activities performed by middle management or units devoted to risk reviews fall into this category.

III) **Micro Level**: It involves "On-the-line" risk management where risks are actually created. This is the risk management activities performed by individuals who take risk on organization"s behalf such as front office and loan origination functions. The risk management in those areas is confined to following operational procedures and guidelines set by management.

The following diagram shows the risk management process adopted from NBE guideline (2010).

*Figure 2: Risk management process*




#### 2.1.6.1 Risk Identification

Before taking any meaningful action to address our risk, risks must first be identified. Almost every product and service offered by banks has a unique risk profile composed of multiple risks. For example, at least credit risk, interest rate risk, liquidity risk and operational risk are usually present in most loans. So risk identification process should be understood at both the transaction and portfolio levels. In short, risk identification involves:

1. Understanding the nature of various kinds of risks.

2. Circumstances which lead a situation to become a risk situation and

3. Due to which the risk can arise.

#### 2.1.6.2 Risk Measurement or Quantification

Risk quantification is an assessment of the degree of the risk, which a particular transaction or an activity is exposed to. Though the exact measurement of risk is not possible but the level of risk

can be determined with the help of risk rating models. According to NBE guideline (2010) each risk should be viewed in terms of its three dimensions: size, duration, and probability of adverse occurrences. Accurate and timely measurement of risk is essential to effective risk management system.

#### 2.1.6.3 Risk Control

After risk identification and measurement banks should control or minimizing risks. As of many scholars there are three ways to control risks or at least minimize their adverse consequences:

I. Avoiding or placing limits on certain activities/risks
II. Mitigating risks and
III. Offsetting risks

In order to do the above activities the bank or institutions take steps to control the risk with the help of various tools such as diversification of the business, insurance and hedging, fixation of exposure ceiling, transfer the risk to another party at right time and securitization and reconstruction.

#### 2.1.6.4 Risk Monitoring & Reviewing

Keeping close track of risk identification measurement activities in the light of the risk, principles and policies is a core function in a risk management system. For the success of the system, it is essential that the operating wings perform their activities within the broad contours of the organization‟s risk perception as Ashan & Poonam (2013). In risk monitoring the bankers have to fix up the parameters on which the transaction is to be tested to be sure that there is no risk to viable existence of the financial unit or investment of the banks.

Though main elements of risk management include identifying, measuring, monitoring, and managing various risk exposures these cannot be effectively implemented unless there is a broader process and system in place. The overall risk management process should be comprehensive embodying all departments/sections of the institution so as to create a risk management culture. It should be pointed out that the specific risk management process of individual financial institutions depends on the nature of activities and the size and sophistication of an institution. The risk management system outlined here can be a standard for banks to follow. A comprehensive risk management system should encompass the following four components (Jorion 2001).

1) Active board and Senior management oversight;
2) Establishing appropriate risk management environment and sound policies and procedures;
3) Maintaining an appropriate risk measurement, mitigating, and monitoring process; and
4) Adequate internal controls

### 2.1.7 Techniques of Risk Management

**a) GAP Analysis** it is an interest rate risk management tool based on the balance sheet, which focuses on the potential variability of net-interest income over specific time intervals. The information on GAP gives the management an idea about the effects on net-income due to changes in the interest rate. Positive GAP indicates that an increase in future interest rate would increase the net interest income as the change in interest income is greater than the change in interest expenses and vice versa (Cumming and Beverly, 2001).

**b**) **Duration-GAP Analysis:** It is another measure of interest rate risk and managing net interest income derived by taking into consideration all individual cash inflows and outflows. Duration is value and time weighted measure of maturity of all cash flows and represents the average time needed to recover the invested funds. Duration gap (DGAP) reflects the differences in the timing of asset and liability cash flows and given by, DGAP = DA - u DL. Where DA is the average duration of the assets, DL is the average duration of liabilities, and u is the liabilities/assets ratio. When interest rate increases by comparable amounts, the market value of assets decrease more than that of liabilities resulting in the decrease in the market value of equities and expected net-interest income and vice versa (Cumming and Beverly, 2001).

**c) Value at Risk (VaR):** it is one of the newer risk management tools. 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).

**d) Risk Adjusted Rate of Return on Capital (RAROC):** it gives an economic basis to measure all the relevant risks consistently and gives managers tools to make the efficient decisions regarding risk/return tradeoff in different assets. As economic capital protects financial institutions against unexpected losses, it is vital to allocate capital for various risks that these institutions face. Risk Adjusted Rate of Return on Capital (RAROC) analysis shows how much economic capital different products and businesses need and determines the total return on capital of a firm. Though Risk Adjusted Rate of Return can be used to estimate the capital

requirements for market, credit and operational risks, it is used as an integrated risk management tool (Crouhy and Robert, 2001).

**e) Securitization:** it is a procedure studied under the systems of structured finance or credit-linked notes. Securitization of a bank‟s assets and loans is a device for raising new funds and reducing bank‟s risk exposures. The bank pools a group of income-earning assets (like mortgages) and sells securities against these in the open market, thereby transforming illiquid assets into tradable asset backed securities. As the returns from these securities depend on the cash flows of the underlying assets, the burden of repayment is transferred from the originator to these pooled assets (Crouhy and Robert, 2001).

**f) Sensitivity Analysis:** it is very useful when attempting to determine the impact, the actual outcome of a particular variable will have if it differs from what was previously assumed. By creating a given set of scenarios, the analyst can determine how changes in one variable(s) will impact the target variable (Cumming and Beverly, 2001).

**g) Internal Rating System** An internal rating system helps financial institutions manage and control credit risks they face through lending and other operations by grouping and managing the credit-worthiness of borrowers and the quality of credit transactions (Cumming and Beverly, 2001).

## 2.2 Review of Empirical Literature

This section provides a summary of some of the published work on the management of risks by banks in developed and developing economies.

Khalid and Amjad (2012) conducted a research on the risk management in Islamic banking in Pakistan. The authors use the same model suggested by Al-Tamimi and Al-Mazrooei (2007) of risk management practices. The results indicate that Islamic banks are somewhat reasonably efficient in managing risk where understanding risk and risk management risk monitoring and credit risk analysis, are the most influencing variables in risk management practices.

Shafiq and Nasr (2009) examine the risk management practices followed by commercial banks in Pakistan. The results reveal the following: (i) the greatest exposures banks face are credit risk, liquidity risk, interest rate risk, foreign exchange risk and operating risk; (ii) significant differences exist in the application of risk management practices among public sector and local private commercial banks; and (iii) commercial banks‟ staff basically understand risk management but additional training is required to enhance their expertise in the area.

Hassan, (2010) the researcher conducts this research with the title of a comparative study of Handelsbanken and Swanbank; how risk has been managed during the last decade**.** In this thesis the authors strive to investigate the risk management phenomena in the banking sector by conducting a longitudinal comparative study in two different banks. In a broader perspective to understand the phenomena the authors depart from theoretical framework that recognizes the social and cultural elements of risk. However, to be more specific the thesis narrows down its analysis to three main variables that come under the realm of this discussion which are; how banks organizing for risk, how they measure it and the role of IT and human judgment. This study contributes to the banking sector by providing a road map of how successful banks manage risk. It highlights that the risk question should be addressed strategically and deemed to be a continuous phenomenon.

Hassan (2009) seeks to identify the risks posing the greatest exposure for Islamic banks in Brunei Darussalam and to examine the effectiveness of risk management techniques utilized in these banks. The results of the study reveal that the three major risks affecting the banks are foreign-exchange risk, credit risk and operational risk. Also, Islamic banks are reasonably efficient in managing risk; and risk identification, and risk assessment and analysis are the most influencing variables in risk management practices.

Rekha A. (2004) Risk management in commercial banks (A case study of public and private sector banks) Banks is in the business of managing risk, not avoiding it. To the researcher, Risk is the fundamental element that drives financial behavior. Without risk, the financial system would be vastly simplified. However, risk is omnipresent in the real world. Financial Institutions, therefore, should manage the risk efficiently to survive in this highly uncertain world. The future of banking will undoubtedly rest on risk management dynamics.

Only those banks that have efficient risk management system will survive in the market in the long run. The effective management of credit risk is a critical component of comprehensive risk management essential for long-term success of a banking institution. The researcher understood that Credit risk is the oldest and biggest risk that bank, by virtue of its very nature of business, inherits. This has however, acquired a greater significance in the recent past for various reasons. Foremost among them is the wind of economic liberalization that is blowing across the globe. India is no exception to this swing towards market driven economy.

Better credit portfolio diversification enhances the prospects of the reduced concentration credit risk as empirically evidenced by direct relationship between concentration credit risk profile and

NPAs of public sector banks. They conclude their paper by proverb that is, a bank„s success lies in its ability to assume and aggregate risk within tolerable and manageable limits.

Wood (1994) reviews the lending behavior and examines credit risk management practices of banks in Barbados. The results of the study are as follows: (i) banks utilized published and internally-generated information in the process of screening applicants; banks do not use interest rates alone to allocate credit but resort to other means like varying the maturity structure of loans, requesting collateral, and utilizing debt covenants and compensating balances in order to offset credit risk; the role of monitoring by banks is essential given the absence of credit rating agencies and lack of an active acquisitions market; monitoring activities of banks are characterized by regular (formal and informal ) visiting (and telephone contact) between banks and clients and by periodic reviews of clients‟ accounts; credit rationing in Barbados can be usefully explained by the Stieglitz-Weiss "equilibrium-rationing model which emphasizes the influence of imperfect or asymmetric information on bank behavior.

Christie-Veitch (2005) examines the status of operational risk management in Trinidad, Barbados and Jamaica; assesses its importance relative to the other risks and reviews the practices for managing operational risk by the financial institutions. The findings are analyzed based on the assessment of compliance with regard to Basel Core Principles for the management of operational risk. The study reveals a number of findings: (i) the framework necessary to identify, assess, monitor and control operational risk is still not evident, (ii) the management of operational risk is basically limited to implementing and testing internal controls, (iii) operational profile is not currently reviewed and adjusted based on specific strategies, (iv) the plans to handle business disruption are somewhat in place but are not subject to testing or

scenario analysis, (v) best practices with regard to operational risk are not finalized or circulated, and (vi) operational risk management methodologies are not being disclosed by banks.

Fasika Firew (2012) analyzes the operational risk management practices of selected Ethiopian Commercial banks by taking in to account the operational risk factors (Loss events) and their effect on entire banks performance. The results of the study reveals that the management should pay attention to those contributory operational risks so as to manage the operational risk effectively and efficiently, particularly, to operational risk management tools as the extracted factors has shown. Also the importance of awareness creation and accurate on time capturing of internal loss data are in consistent with factor analysis findings of management supervision and follow-up and capturing of internal loss data as both are among the extracted factors.

In summary, from the reviewed studies the following points emerge

a. The major risks affecting banks are credit risk, interest rate risk, operational risk and foreign exchange risk.
b. Banks are basically efficient in managing risk; however, additional training is still necessary.
c. Operational risk is a major risk but is also quite complex in its measurement
d. The sophistication of the risk management technique used varies according to the size of the bank.
e. Banks, which usually venture into non-interest income activities experience higher risk than banks, which are basically in the loans market.
f. Non-national firms have significant foreign exchange risk exposure; however, through the use of hedging techniques they are able to significantly reduce its impact.

# Chapter 3: Data Sources and Research Methodology

This chapter deals with the methodology of the study whereby the choice of study, research design, sampling and sampling techniques, data collection instruments, data collection procedures and the method of data analysis.

## 3.1 Choice of Study

This study conducted based on previous knowledge and experience from working in financial institutions. Moreover, risk management practice of Ethiopian commercial banks is a current phenomenon, found risk management to be an interesting subject and many surveys and studies showed that effective risk management is required (Al-Tamimi, and Al-Mazrooei, 2007). At the present day, risk management has become an important part of business.

Specifically, risk management is more important in the financial sector than in other business areas because the financial industry is facing a large number of risks in a volatile environment (Carey, 2001). Therefore, the researcher decided to study risk management practice in the financial industry because the study could be beneficial for a wide range of businesses.

## 3.2 Research Design

Bhattacherjee (2012) defined a research design, a comprehensive plan for data collection in an empirical research project. It has also indicated the two categories of data collection techniques used in scientific research, quantitative and qualitative design. Despite the apparent separation of these techniques, it should be noted that quantitative design does not necessarily exclude

collection of qualitative data, or vice versa. And, hence "mixed-mode designs" that combine features of quantitative and qualitative designs and collect both types of data may be desirable.

In order to achieve the research objectives a mixed method that is qualitative and quantitative design is adopted. The purpose of using such a mixed methods design is to gather data not be obtained by adopting a single method and for triangulation so that the findings with a single approach could be substantiated with others wherever possible.

## 3.3 Research Method

This study has employed the survey research method. As defined by Bhattacherjee (2012) this method involves the use of standardized questionnaires or interviews to collect data about people and their preferences, thoughts, and behaviors in a systematic manner.

Survey method can be used for descriptive, exploratory, or explanatory research. It has also shown that though the method best suited that have an individual people as the unit of analysis, other unit of analysis such as groups, organizations or dyads (pairs of organizations, such as buyers and sellers), are also studied using surveys, such studies often use a specific person from each unit as "key informant" or a "proxy" for that unit[1].

Hence, in this study based on sources of data primary method of data collection was performed. The primary data collected by distributing a semi-structured questionnaire to respondents (the bank‟s risk management department employees)**.** As the study is at institutional level, the risk

[1] Ibid.

management department employees were asked their view on a series of questionnaires distributed to them.

## 3.4 Data Collection Instruments

Data was collected from 86 staff of the fifteen selected commercial banks. Data was gathered through semi-structured questionnaire that is both closed and open-ended questions for primary data. The purpose of using primary source data is to understand the overall risk management practices of commercial banks in Ethiopia. And secondary data was gathered from NBE guidelines, quarterly reports of banks, web pages, and banks documentation on each risk as well as other existing relevant literature.

According to Dawson (2002), semi structured questionnaires are used both in qualitative and quantitative research design. It contains both closed ended questions and open-ended questions. Louis (2000) also noted that stated that open-ended questions in semi-structured might be used to find out what participants think about the issues to be studied. But closed questions in semi-structured questionnaire are used to enable the respondents to choose among the alternative or to tick the boxes.

Both open-ended questions and closed ended questions in semi structured questionnaires used to collect data from the staff in the risk management directorate of the fifteen commercial banks those who are in connection with risk management issues. So as to give flexibility to the respondent, the semi-structured questionnaire sets the agenda but does not presuppose the nature of the response.

A questionnaire is a list of carefully structured questions with a view to exploring a reliable response from a chosen sample (Hussey and Hussey 1997). The questionnaire and an information sheet explaining the purpose of the study were distributed to management and staff of the fifteen commercial banks selected to represent the banking industry in Ethiopia. In order to maximize the chances of obtaining adequate responses, the length of the questionnaire was taken into consideration and the terms used in the questionnaire was not technical, therefore, no explanations were needed. The questionnaire was tested by contacting with some banks for clarity, ease of use, and value of the information that could be gathered.

As indicated in the above, all risk experts of the purposely-sampled 15 commercial banks were included in the survey. The respondents were asked to indicate their level of agreement on a five point Likert scale with the following ratings. Strongly agree (SA; or 5), agree (A; or 4), neutral (N; or 3), disagree (DA; or 2), and strongly disagree (SD; or 1). The numbers were indicated in the questionnaires to provide a feel of ordinal scale measurement and to generate data suitable for quantitative analysis. The central issue to argue that Likert scales produce ordinal data is because of no way at all of knowing whether the differences between the different points on the scale are truly equivalent, and the points on an ordinal scale are not necessary equally spaced as they must be in order for it to be regarded as an interval scale (Hole, 2011).

Moreover, Johns (2010) noted that in statistical terms the level of measurement of the Likert response scale is “ordinal” rather than “interval”: that is, we can make assumptions about the order but not the spacing of the response options. Thus, the permissible descriptive statistics that can perform on ordinal data is median (or average response) and mode (or more frequent responses) (Hole, 2011). To elicit additional information, the respondents were requested to

provide open-ended responses if they have opinions which they feel the researcher would find useful. Since it is difficult to use one scale for all types of questions because of difference in their nature, there was another scale, which is Yes or No.

Information was obtained from the banks via the use of a structured questionnaire containing twenty-five questions divided into four sections[2]. The questionnaire is an adaptation of the one utilized by Hassan (2009). The first section of the questionnaire contains six closed-ended questions focusing on "The importance of risk management to banks". The second section, which contains two open-ended and four closed-ended questions, deals with "risk identification"; this involves the ranking of risk according to the bank"s experience of risk exposure. The third section comprises four closed-ended questions focusing on "risk monitoring". The final section contains nine closed-ended questions dealing with "risk management practices". For the open-ended questions banks were asked to explain the current measures in place to manage risk and also indicate the level of success or failure with the risk management practices utilized.

A pilot survey was conducted in order to ascertain if the questionnaire adequately addressed the critical aspects of the research topic. Immediately following the first discussion, it resulted in an expansion of one question and another question was sub-divided so as to facilitate a more detailed response. The final survey form was then giving to the other banks.

[2] List of questions; Annex 2

## 3.5 Sampling Technique

Survey sampling is the process of choosing, from a much large population, a group about which wish to make generalized statements so that the selected part represent the total group (Leedy, 1989, p. 158).

Commercial banks have been operated were taken as population, and purposely draw a sample from the total to get rich evidence. According to National Bank of Ethiopia (2015), the total number of Commercial Banks which had been operated in the year 2015 is 16 private banks and 2 state-owned banks. However, to undertake this research paper, the researcher was purposely sampled 15 banks to get rich documentary sources.

Thus, this research paper was used purposive sampling method to draw the sample from the population. These selected commercial banks have 86 employees in their risk management directorate and all employees were included in this study[3].

## 3.6 Data Analysis

Since this study is the descriptive type of research, the collected data was analyzed by using frequency and percentage of the respondents. To show and rank the respondent"s responses table, charts and graph are used. As, Greener (2008) stated that in most types of research studies, the process of data analysis involves the following three steps: first preparing the data for analysis, then analyzing the data and finally, interpreting the data. Based on these steps, Content analysis of data involved presenting data or respondent"s responses in table form or graph forms then data were analyzed using frequency percentage and the information from secondary data supports the

[3] For the list of banks & no of staff selected, please refer to Annex 1

analyses. Then the data from open-ended questions were analyzed. Finally, the analyzed data were interpreted into results.

As this study constitutes numeric data (ordinal data) that was collected via a questionnaire, a descriptive data analysis method were used in order to describe and analyze the collected data. Further, as the collected data has an ordinal scale of measurement (measured on 1 up to 5 point basis) and contain a close-ended type questions (coded as 1 for "yes" and 0 for "no"), it was captured onto a statistical package of SPSS version 20 just to support the data presentation. As a part of descriptive method, tables, graphs and charts were employed to represent and interpret the results and findings of the study clearly.

Furthermore, Wolcott (1994) as cited in Creswell (2003), suggested that qualitative research is fundamentally interpretative i.e. the researcher was interpreted the qualitative data. Thus, data collected from reviews of documents were interpreted qualitatively. To sum, the analysis of quantitative data and interpretation of qualitative data combines to seek conjunction among the results (Creswell, 2003).

## 3.7 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. The sample selection based upon non-probability. The people 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). The process of survey, the questionnaire sent to the pilot to ensure the questionnaire is understandable and acceptable. In addition, the empirical data analyzed with SPSS for windows, which is possibly the most widely used computer software for the analysis of quantitative data. Therefore, this research can be safely said to be highly valid.

In summary, the chapter shows the overall methodologies used in this study. Begin with the choice of study that gave the reason why the author is interested in this subject. Followed by the data collection method presented the process to collect data and the data analysis. Finally, how the reliability and validity results in this study. The next chapter presents the empirical data from the data collection methods.

# Chapter 4: Data Analysis and Result Discussion

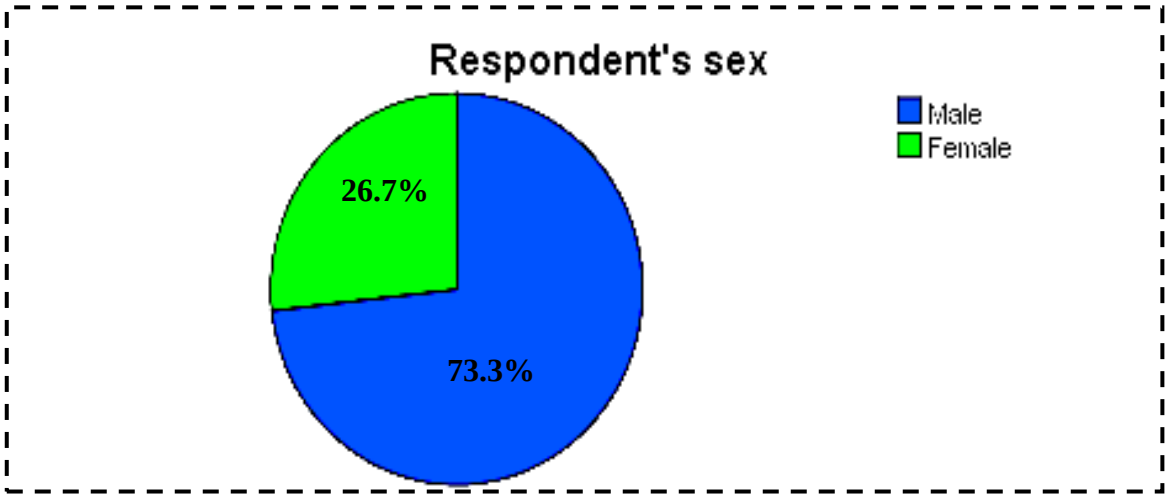
This chapter deals with data presentation, analysis and interpretation. These data are presented and analyzed based on data collected through structured and open-ended questions in semi-structured questionnaires, and secondary data or documents from fifteen commercial banks. For this purpose, questionnaires have been distributed to 86 staff members of risk management directorate of the fifteen commercial banks, which are, Commercial Bank of Ethiopia, Construction and Business Bank, Awash International Bank, Nib International Bank, Wegagen Bank, Oromia International Bank, Lion International Bank, Cooperative Bank of Oromia, Bank of Abyssinia, United Bank, Abbay Bank, Dashen Bank, Brehan International Bank, Bunna International Bank and Zemen Bank. All the questionnaires that were fielded are returned. These questionnaires are related to risk management practice in Ethiopian commercial banks. In addition to the questionnaires, secondary data or documents that are related to risk management were used in the presentation and analysis.

## 4.1. The General Background of the Respondents

In the following table, the demographic information of respondents is presented. These include the educational back ground, work experience, and educational qualification of respondents. To get information on these issues the respondents were asked a semi-structured question and their responses are presented and analyzed as follows. The results of this survey processed using the SPSS software.

There were a total of 86 respondents, of these, 63 (73.3%) were male and 23 (26.7%) were female. In general, the following figure shows the distribution of the respondent"s gender.

*Figure 3: Distribution of gender*

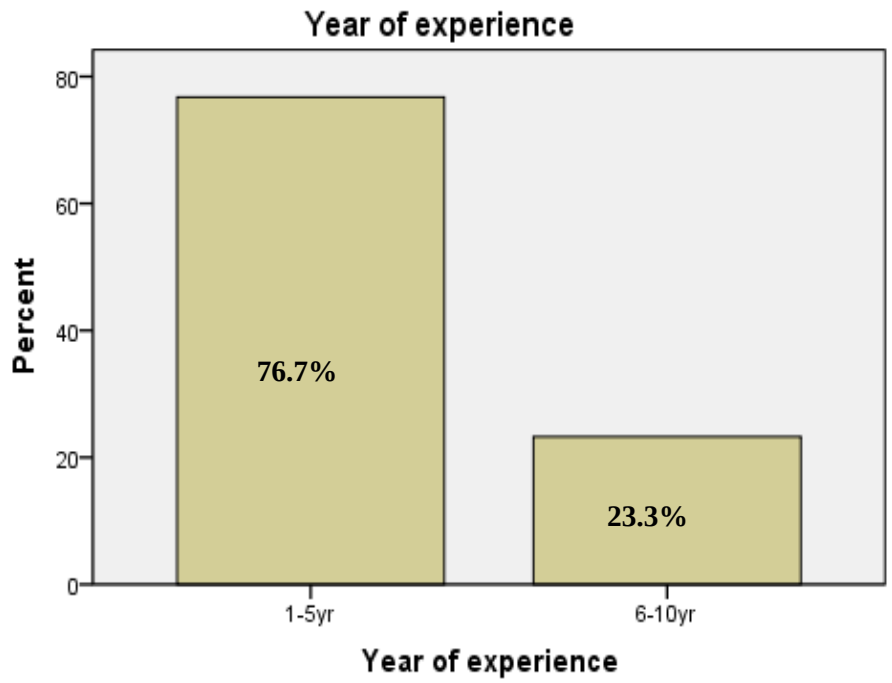



*Source: Own survey*

As one can see in the figure above, there is a clear overweight with male respondents. It indicates that the number of male and female respondents are not proportional instead male covers the majority of the respondents.

The other background information of the respondents is years of working in risk management department. As shown in the figure below, the percentage of the years of experience of the respondents those were working with risk management. Out of 86 respondents, 66 respondents (76.7% of total respondents) represent a group that covers 1 to 5 years of experience. The rest 20 respondents, which represent 23.3%, were under the ranges of 6-10 years of experience.

*Figure 4: Years of working in risk management department*




*Source: Own survey*

As it is indicated above, one can understand that almost half of the experts have less than 6 years of experience working in the risk management department. It implies that most of the staffs‟ didn‟t acquired enough experience to perform risk management activities, though there is no minimum requirement set by the standard.

Table 1 & 2 indicates level of education and qualification of the respondents. Accordingly, out of 86 respondents, 76 (88.4%) have BA or BSc degree and 10 (11.6%) of the respondents have Master‟s degree in different educational qualifications. These results indicated that almost all banks possessed first degree. From the table 2, majority of the respondents are specialized in field of Management, which accounts for 41.9% of the total respondent and followed by 34.9%

of the Accounting. The remaining 23.3% of the respondents are specialized in other field of education.

*Table 1: Respondents level of education*

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Bachelor Degree | 76 | 88.4 | 88.4 | 88.4 |
| | Master's Degree | 10 | 11.6 | 11.6 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

*Table 2: Respondents qualification*

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Accounting | 30 | 34.9 | 34.9 | 34.9 |
| | Management | 36 | 41.9 | 41.9 | 76.7 |
| | Other | 20 | 23.3 | 23.3 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

As it is discussed on the above paragraphs, with regard to educational qualification and field of study, majority of the respondents have a good level of educational qualification that is BA or BSc degree and Master‟s Degree which enables the respondents to have a clue idea of the importance risk management. Moreover, majority of the respondents studied the field related to business, which enables them to understand the importance of effective risk management in banks. This shows us majority of the respondents have an idea about the process of risk

management which more important for the implementation of effective risk management in banks.

## 4.2 Risk Presenting the Greatest Exposure

Table 3 summaries the result of the various types of risks as ranked by risk management employees within the Ethiopian banking industry. The results indicate that for the fifteen banks participating in the survey, the order of importance for risk exposure is as follows: credit risk, operational risk, liquidity risk and market risk including interest rate risk and foreign exchange risk.

*Table 3: Risks presenting the greatest exposure*

| Types of risks | Respondents | Percentage | Rank |
|---|---|---|---|
| Credit Risk | 32 | 37.21 | 1 |
| Liquidity Risk | 15 | 17.44 | 3 |
| Operational Risk | 20 | 23.25 | 2 |
| Interest Rate Risk | 10 | 11.63 | 4 |
| Foreign Exchange Risk | 9 | 10.46 | 5 |
| **Total** | **86** | **100** | |

*Source: survey result, 2015*

Out of the total population 37.21% of the respondents ranked credit risk as the most relevant in the banking industry. Operational risk was second with 23.25% of the respondent ranking it as the most relevant in the industry. Liquidity risk was ranked by 17.44% of the respondents as the third most relevant. Interest rate risk and Foreign exchange risk was ranked fourth and fifth by 11.63% and 10.46% of the respondents respectively.

## 4.3 Risk Identification

The collected data is used to assess the extent to which the banks focused on risk identification. Risk identification is very critical in the risk management process. Table 6 shows the respondents response in related to risk identification process of banks.

*Table 4: Descriptive statistics of risk identification*

| | | Freq. | Percent |
|---|---|---|---|
| The bank finds it difficult to prioritize its main risk. | Strongly | 48 | 55.8 |
| | Disagree | 38 | 44.2 |
| | Total | 86 | 100.0 |
| It is important for your bank to emphasize continuous review and evaluation of the techniques used in risk management. | Neutral | 11 | 12.8 |
| | Agree | 30 | 34.9 |
| | Strongly Agree | 45 | 52.3 |
| | Total | 86 | 100.0 |
| The bank is aware of the strengths and weaknesses of the risk management systems of the other banks | Disagree | 59 | 68.6 |
| | Agree | 27 | 31.4 |
| | Total | 86 | 100.0 |
| The bank currently has procedures in place to recognize risk and adjust policies accordingly. | Agree | 62 | 72.1 |
| | Strongly Agree | 24 | 27.9 |
| | Total | 86 | 100.0 |

*Source: SPSS data analysis output, 2015*

According to the respondents‟ response, it is confident to say banks generally do not experience difficulty in identifying and prioritizing their main risk. This important aspect of the risk management process is facilitated to a considerable extent through continuous review and

evaluation of the techniques used in managing risk. Yet, aware of the strengths and weaknesses of the risk management systems of the other banks is at slack in this particular risk identification process.

## 4.4 Importance of Risk Management Practices

Data obtained from the close ended questions revealed that 86% of the respondents strongly agree and followed by 14% of the respondents agree on effective risk management is the center to banks performance (Table 5). The table shows that out of 86 respondents, 95.4% of the respondents indicated that the application of different risk management techniques reduces costs or expected losses of bank and the remaining 4.7% respondents did know whether application of different risk management techniques reduces costs or expected losses of bank or not.

The table also revealed that, although the 81.4% of the respondents agreed that effective risk management is one of the main objectives of the bank, 76.7% of them disagreed that the main business of the bank is to manage risk. Moreover the respondents asked to give their opinion about significance involvement of board and senior management in the risk management activities. The entire number of respondents agreed on there is significance involvement of board and senior management in the risk management activities.

*Table 5: Descriptive statistics of importance of risk management*

| Questions | | Freq | Per |
|---|---|---|---|
| The effective management of risk is center to your bank's performance. | Agree | 12 | 14.0 |
| | Strongly Agree | 74 | 86.0 |
| **Total** | | **86** | **100.0** |
| The main business of your bank is to manage risk. | Disagree | 66 | 76.7 |
| | Agree | 20 | 23.3 |
| **Total** | | **86** | **100.0** |
| Application of risk management techniques reduces costs or expected losses to bank. | Neutral | 4 | 4.7 |
| | Agree | 28 | 32.6 |
| | Strongly Agree | 54 | 62.8 |
| **Total** | | **86** | **100.0** |
| Managing risk is important to the bank's performance and success of your bank. | Disagree | 2 | 2.3 |
| | Neutral | 2 | 2.3 |
| | Agree | 16 | 18.6 |
| | Strongly Agree | 66 | 76.7 |
| **Total** | | **86** | **100.0** |
| Effective risk management is one of the main objectives of your bank | Agree | 38 | 44.2 |
| | Strongly Agree | 48 | 55.8 |
| **Total** | | **86** | **100.0** |
| There is significant board and senior management involvement in the risk management of your bank. | Agree | 47 | 54.7 |
| | Strongly Agree | 39 | 45.3 |
| Total | | 86 | 100.0 |

*Source: SPSS data analysis output, 2015*

## 4.5 Current measures in place to manage and control risk

In this case, according to Tafri, Abdul-Rahman and Omar (2011), it is indicated that many tools can be used to measure different types of risks. In their study, they provided examples of those

tools, which are in line with the respondents, as it showed that many tools could be used to measure different types of risk, with those tools being either internal or external, as required by central banks. This can be seen in the following respondents‟ statements regarding how to measure different types of risks:

**Credit Risk**: banks measured credit risk both at transitional and portfolio level. There are established credit processes and policies characterized by credit grading and scoring, and a monitoring system; the credit management process is supported by an independent system of credit review by credit conformance teams; judgment, discretion and level of expertise (use of experienced lenders) are very critical; there is constant monitoring of policies, portfolios and trends to maintain credit quality; there is an annual review of client‟s financial statements and constant contact is maintained with the client; finally, credit provisions are independently calculated in accordance with regulatory and internal limits to meet regulatory requirements.

**Liquidity Risk:** Liquidity management within banks is governed by a policy approved by the Board. The implementation of the policy is the responsibility of the Asset and Liabilities Committee (ALCO). The treasury team handles the day-to-day management of liquidity; matching principles are utilized; and maturity ladder technique, liquidity risk matrix, stress tests and scenario analysis are undertaken in order to forecast the cash flow in the coming periods and to evaluate the impact of stresses on the bank‟s liquidity position comparing with regulatory and internal limits. These results being reported to the Board on a quarterly basis and independently reviewed by risk monitoring team.

**Interest Rate Risk:** Before interest rate risk could be managed, they should be identified and quantified. Unless the quantum of IRR inherent in the balance sheet is identified, it is impossible to measure the degree of risks to which banks are exposed. It is also equally impossible to develop effective risk management strategies techniques without being able to understand the correct risk position of banks. The interest rate risk measurement system should address all material sources of interest rate risk including gap or mismatch, basis, yield curve, price, reinvestment and net interest position risks exposures. It also take into account the specific characteristics of each individual interest rate sensitive position and capture in detail the full range of potential movements in interest rates.

There are different techniques for measurement of interest rate risk, ranging from the traditional Maturity Gap Analysis (to measure the interest rate sensitivity of earnings), Duration (to measure interest rate sensitivity of capital), and simulation and reprising. While these methods highlight different facets of interest rate risk, many banks use them in combination, or use hybrid methods that combine features of all the techniques. The matching principles are applied; loan portfolios are reviewed to assess the capacity to repay; the policy of "locking" interest rates into a particular country"s interest is utilized.

**Foreign Exchange Risk:** There is strict adherence to the policies, guidelines and procedures manual, which outlines the risks and controls that are available to mitigate the various risks. These policies are updated continuously to take into account new risks and ways of mitigating them.

In case of Foreign exchange risk measurement

i. Set appropriate limits – open positions and gaps.

ii. Clear-cut and well-defined division of responsibility between front, middle and back offices.

**Operational Risk:** There is currently no single measure to capture all aspects of operational risk. A risk register is prepared to record any events that have potential risk for the overall operation of the bank. Moreover sensitivity measures and stress testing are utilized. Also, there is a centralized, dedicated risk management team charged with the responsibility of ensuring that the risk measurement methodologies used are appropriate for the risk being taken and that appropriate measurement, monitoring and control procedures are in place.

## 4.6 Level of success or failures

The banks surveyed and banks report reveals that there is reasonable level of success with the current measures utilized to manage the above-identified risks. This success was based on the overall performance of banks, positive accounting ratios and solid reputation of the banks.

## 4.7 Risk Monitoring

From closed ended questions, table 6 shows that in general all respondents agree monitoring the effectiveness of risk management are an integral part of routine management reporting and evaluation of the effectiveness of the existing controls. Moreover, the table indicates that the bank‟s response to risk also includes action plans in implementing decisions about identifying risk.

*Table 6: Descriptive statistics of risk monitoring*

| | | Freq | Per |
|---|---|---|---|
| Monitoring the effectiveness of RM is an integral part of routine management reporting. | Agree | 63 | 73.3 |
| | Strongly Agree | 23 | 26.7 |
| | Total | 86 | 100.0 |
| The bank‟s response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses. | Neutral | 2 | 2.3 |
| | Agree | 65 | 75.6 |
| | Strongly Agree | 19 | 22.1 |
| | Total | 86 | 100.0 |
| The bank‟s response to risk includes action plans in implementing decisions about identified risk. | Agree | 69 | 80.2 |
| | Strongly Agree | 17 | 19.8 |
| | Total | 86 | 100.0 |

*Source: SPSS data analysis output, 2015*

The table below shows that out of the total population 55 (64%) of the respondents agree that there is appropriate level of control for the identified risk that banks exposed. Even if the remaining respondents being stand on neutral and disagree on the above statement, it is confident to say banks have satisfactory level of control over the identified risks.

*Table 7: Descriptive statistics of the level of control*

| | | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| Valid | Disagree | 10 | 11.6 | 11.6 | 11.6 |
| | Neutral | 21 | 24.4 | 24.4 | 36.0 |
| | Agree | 55 | 64.0 | 64.0 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

*Table 8: Descriptive statistics of research development*

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 63 | 73.3 | 73.3 | 73.3 |
| | No | 23 | 26.7 | 26.7 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

The above table shows that out of the total population 63(73.3%) agree that the bank actively engaged in research to develop risk management instruments and techniques. So, engage in research and development activities banks could reduce costs of applying appropriate risk management instruments and techniques.

*Table 9: Descriptive statistics of separation of duties*

| | | Freq | Per | Valid Per | Cum Per |
|---|---|---|---|---|---|
| Is there a separation of duties between those who identify risks and those who manage and control risks? | Yes | 56 | 65.1 | 65.1 | 65.1 |
| | No | 30 | 34.9 | 34.9 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

As we can see the above table (table 9), out of the total population 65.1% of the respondent says that there is a separation of duties between those who generate risks and those who manage and control risks and the remaining 34.9% respondents disagree with the above statement. Based on

the response it is confident to say that banks have acceptable level of segregation of duties between those who identified/generate risks and those who manage and control.

## 4.8 Risk Management Practice

*Table 10: Descriptive statistics of risk management practice*

| | | Freq | Per | Valid Per | Cum Per |
|---|---|---|---|---|---|
| The bank"s management regularly reviews the organization"s performance in managing its business risk | Agree | 63 | 73.3 | 73.3 | 73.3 |
| | Strongly Agree | 23 | 26.7 | 26.7 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |
| The bank"s risk management procedures and processes are documented and provide guidance to staff about managing risk | Agree | 67 | 77.9 | 77.9 | 77.9 |
| | Strongly Agree | 19 | 22.1 | 22.1 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

The above table shows that the entire respondent indicates that their bank has documented risk management procedures and most of the respondents understand the guideline of risk management. The guidelines also help the institutions to supports the goals and objectives of risk management. Because the financial world is always in fluctuation, all respondent suggests that organizational performance/structure has reviewed regularly and adjusted to adapt to changing financial environment.

*Table 11: Descriptive statistics of risk management training program*

| | | Freq | Per | Valid Per | Cum. Per |
|---|---|---|---|---|---|
| Valid | Disagree | 53 | 61.6 | 61.6 | 61.6 |
| | Agree | 33 | 38.4 | 38.4 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

*Table 12: Descriptive statistics of recruitment*

| | | Freq | Per | Valid Per | Cum. Per |
|---|---|---|---|---|---|
| Valid | Disagree | 17 | 19.8 | 19.8 | 19.8 |
| | Neutral | 24 | 27.9 | 27.9 | 47.7 |
| | Agree | 45 | 52.3 | 52.3 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

The above two tables indicated training and recruitment related questions. Out of 86 respondents 53 respondents witnessed the weakness of the bank in arranging training. However 52.3% respondents agree that banks give emphasis to recruit qualified people from the market. So it is confident to say it is not enough to recruit qualified people rather banks must give attention to arrange short term or/and long term training to update the employees understanding about risk management.

*Table 13: Descriptive statistics of role of NBE*

| | | Freq | Per | Valid Per | Cum Per |
|---|---|---|---|---|---|
| Your bank views the supervisory role of the National Bank of Ethiopia (NBE) as critical in risk management. | Neutral | 11 | 12.8 | 12.8 | 12.8 |
| | Agree | 54 | 62.8 | 62.8 | 75.6 |
| | Strongly Agree | 21 | 24.4 | 24.4 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |
| Your bank has internally developed risk management procedures or guidelines. | Agree | 53 | 61.6 | 61.6 | 61.6 |
| | Strongly Agree | 33 | 38.4 | 38.4 | 100.0 |
| | Total | 86 | 100.0 | 100.0 | |

*Source: SPSS data analysis output, 2015*

The table shows that out of the total population 87.2% respondents have positive response regarding to the supervisory role of NBE in risk management area by doing so setting policy, and guidelines which force banks to think over their risk management policy, and other related things. The table also reveals that the entire respondent agrees the statement that their banks internally developed risk management procedures or guidelines in line with the NBE guideline of risk management.

## 4.9 Summary of Findings

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

- The respondents have good level of education qualification which enables the respondents to have clue idea of the importance of risk management but most of staffs of the department did not acquire enough experience to perform risk management activities. Respondents witnessed the weakness of the bank in arranging training
- Banks don‟t experience difficulty in identifying and ranking their main risk. This important aspect of the risk management process is facilitated to a considerable extent through continuous review & evaluation of the techniques used in managing risk. And banks have reasonable level of success with the current measures utilized to manage the identified risks.
- According to respondents response monitoring the effectiveness of risk management is an integral part of routine management reporting and evaluation of the effectiveness of the existing controls.
- Finally the respondents agree on the statements that bank has documented risk management guidelines and most of the respondents understand the guideline of risk management.

# Chapter 5: Conclusion and Recommendation

This chapter provides summary of findings & conclusions of the whole research in order to answer the research question. Finally, further research is suggested in the last part of this chapter.

## 5.2 Conclusion

According to the uncertainty of conditions, the financial industries are facing a large number of risks. For this reason, the financial industries emphasize risk management. This paper therefore examined this important issue in the context of banks operating in Ethiopia. This research discusses and analyzes the risk management practice of selected Ethiopian Commercial banks tested to answer the research question: to what kind of risks the Ethiopian commercial banks are exposed? Are the staffs in Ethiopian commercial banks familiar with the concepts of risk and its associated management? And what is the risk management techniques used by Ethiopian commercial banks?

Then the researcher needed to collect data to answer the stipulated research question. A mixed research approach, namely a semi-structured questionnaire, was used to collect data. The questionnaires were sent to 86 employees of risk management department. The respondents gave the data that was analyzed and discussed. The discussion part shows the importance of risk management practice.

Based on findings the researcher concludes the following. First, bank managers perceive risk management as very important and critical to their banks‟ overall performance. Second, the main types of risk exposures are Credit risk, Operational risk, Liquidity risk, and Market risks including Interest rate risk and Foreign Exchange risk. Third, there is a reasonable success with

the current risk management practices. Finally, Ethiopian banks are utilizing some of the approaches/techniques traditionally used to manage risks today. Overall, the findings suggest that banks operating in Ethiopia are risk-focused.

## 5.2 Recommendation

The following recommendations are being made with the aim of helping to improve the risk management practice and system in banks and thus making them more competitive.

I. Training is considered an overhead activity, which does not justify much attention or resources. There are few or no training professionals on staff. So the researcher recommended that banks should give emphasis on staff training in the area of risk management.

II. Although risk management is the responsibility of all staff at all levels, there must be an explicit allocation of risk management responsibility to ensure management accountability for risk control. Banks must make risk visible, measurable and manageable and ensure a meaningful risk culture throughout all processes and activities.

III. To stay ahead of the competition at all times, banks must ensure there is a continuous monitoring process to ensure the integrity of risk management controls and systems.

IV. With the growing demand of customers for quality products and services and investors looking out for high growth in earnings, a further research should be carried so as to extensively examine different risks and how banks in Ethiopia are continuously assessing and quantifying each risk in order to manage it effectively.

# Reference


Adarkwa, (2011), "Risk Management and Bank Performance, A case study of First Atlantic Merchant Bank Ghana Limited", Master"s Thesis.

Afsheen Shafiq and Mohamed Nasr, (2010), "Risk Management Practices Followed by the Commercial Banks in Pakistan" *Journal of International Review of Business Research Papers,* Vol. 6, No. 2, pp. 308 – 325.

Allen, L and A, Saunders (2002), "Incorporating Systemic Influences into Risk Measurements: A Survey of the Literature".

Al-Tamimi, H. (2002), "Risk management practices: an empirical analysis of the UAE Commercial Banks", Finance India, Vol. 16, No. 3, pp. 1045-1057.

Al-Tamimi, H. and Al-Mazrooei, F.M. (2007), "Banks" risk management: a comparison study of UAE National and Foreign Banks", *The Journal of Risk Finance*, Vol. 8, No.4, pp. 394-409.

Ashan Singh & Poonam Gupta (2013), "Measure for identifying & controlling risk in Indian Commercial Banks", *The International Journal of Management*, Vol. 2, Issue 2.

BCBS (2001), The New Capital Accord, (Basel: Basel Committee on Banking Supervision).

BCBS (2003), Sound Practices for the Management and Supervision of Operational Risk. Basel: Bank for International Settlements (February).

Bessis, J. (2002), Risk Management in Banking, John Wiley & Son66s, Ltd.

Bessis, J. (2010), Risk Management in Banking, Wiley, Third edition

Bhattacherjee, A. (2012), Social Science Research: Principles, Methods and Practices, 2nd ed., USA: University of South Florida.

Carey, A. (2001), "Effective risk management in financial institutions: the Turnbull approach", *Balance Sheet*, Vol. 9, No.3, pp. 24-27

Chapelle, A., Crama, Y., Hubner, G. and Peters, J. (2008), "Practical Methods for Measuring and Managing Operational Risk in the Financial Sector*:* A Clinical Study", *Journal of Banking and Finance* Vol. 32, pp. 1049 - 1061.

Christie-Veitch, C. (2005), "Operational Risk Management Practices and the Role of Capital: A Preliminary Assessment of Three Caribbean Countries", 26th Annual Review Seminar, Research Department, Central Bank of Barbados, July.

Creswell, J. W. (2003), Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 2nd ed., California: Sage Publications.

Creswell, J. W. (2009), Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 3rd ed, Sage Publications, California, USA.

Creswell, J. W. (2010), Research Design: Qualitative, Quantitative and Mixed methods Approaches, 2nd ed., California: sage publications.

Croupy, M, Galai, D and Mark, R., (2001), Risk Management, McGraw-Hill, New York pp. 543-548.

Crouhy, M., Galai, D & Mark, R. (2006), "The Essentials of Risk Management*"*. New York: McGraw-Hill.

Crouhy, M., Galai, D. and Robert, M (2004), “Insuring versus Self-insuring Operational Risk: Viewpoints of Depositors and Shareholders”. *Journal of Derivatives* (winter), pp. 51-55.

Cumming, Christine and Beverly J. Hirtle (2001), “The Challenges of Risk Management in Diversified Financial Companies”, *Economic Policy Review*, Federal Reserve Bank of New York, 7, 1-17

Dawson (2002), „Practical Research Methods: A user-friendly guide to mastering research“, How to books Ltd., Newtec Place, http://www.amazon.co.uk/Practical-Research-methods-User-friendly-Techniques/dp/1857038290.

Dr. Krishna A. Goyal, Prof. Sunita Agarwal, (2010), “Risk Management in Indian Banks: Some Emerging Issues*”, International Journal of Economics and Research*, Vol. 1, No.1, pp.102-109.

Ebnother, S. and Vanini, P. (2007), “Credit Portfolios: What Defines Risk Horizons and Risk Management.

Emblemsvåg, J. & Kjølstad, L. E. (2002), "Strategic risk analysis a field version & Management Decision”, *Journal of Banking and Finance*, Vol. 31, pp. 3663-3679.

Fabozzi, F., Modigliani, F. and Jones, F. (2010), Foundations of Financial Markets and Institutions, Prentice Hall.

Fasika Firew (2012*),”*Commercial Bank operational risks management: Exploratory study on selected Ethiopian Commercial Banks*”,* Master“s Thesis.

Fatemi, A and Glaum, M (2000), “Risk management practices of German Firms”, *Journal of Managerial Finance*, Vol. 26, No. 3, pp. 1-17.

Flynn, S.I. (2008), Risk Management, EBSCO Research Starters Business Page 1-7.

Froot Kenneth A. and Jeremy C. Stein (1998), "Risk Management, Capital Budgeting, and Capital Structure Policy for Financial Institutions: An Integrated Approach", *Journal of Financial Economics*, Vol. 47, pp.55-82

Gleason, J. T. (2000), Risk: "The New Management Imperative in Finance" *Bloomberg Press, Princeton,* New Jersey, pp. 21.

Greener (2008), "Business Research Method", Ventus publishing APS, viewed July 2010, http:bookboon.com/count/35359.

Greuning, H, & Brajovic Bratanovic, S (2003), Analyzing and managing banking risk a framework for assessing corporate governance and risk management, 2nd edition, Washington, D. C.: The World Bank

Greuning, H. and Iqbal, Z. (2007), "Banking and Risk Environment" in Archer, S. and Karim, R. A. A. (2007), "Islamic Finance: The Regulatory Challenge", John Wiley & Son (Asia) Pte Ltd.

Greuning, H., & Iqbal, Z. (2008), Risk Analysis for Islamic Banks. Washington, DC: The World Bank.

Greuning, H., Brajovic Bratanovic, S (2009), "Analyzing banking risk a framework for assessing corporate governance and risk management", 3rd edition, Washington, D. C.: The World Bank

Gup, B. and Kolari, J. (2005), Commercial Banking the Management of Risk, John Wiley & Sons, Inc.

Hassan, A. (2009), "Risk Management Practices of Islamic Banks of Brunei Darussalam", *Journal of Risk Finance*, Vol.10, No.1, pp. 23-37.

Hempel, G. and Simonson, D. (1999), Bank Management-Text and Cases, John Wiley & Sons Inc.

Huff, S. A. (2009), Designing Research for Publication, California: Sage Publications Inc.

Hussey, J. and Hussey, R. (1997), Business research: a practical guide for undergraduate and postgraduate students. Basingstoke: Macmillan.

Iqbal, Zamir (2000), "Risk and Risk Management in Islamic Finance", paper presented to the Conference on Islamic Financial Services Industry in the 21st Century, Alexandria University.

Jorion, Phillippe and Sarkis J. Khoury, (1996*),* Financial Risk Management Domestic and International Dimensions, Blackwell Publishers, Cambridge, Massachusetts.

Jorion, Phillipe (2001), Value at Risk, the New Benchmark for Managing Financial Risk, McGraw Hill, New York.

Khan, T. and Ahmed, H. (2003), "An analysis of issues in Islamic financial industry."

Knight, F.H., (1921), Risk, Uncertainty and Profit, New York Hart, Schaffner and Marx.

Kupper, E. (1999), "Risk Management in Banking", New Economics Papers, pp.2.

Kwasi, M., A (2010), "A risk-based assessment of Eco Bank Ghana limited (EGH)", Master"s Thesis.

Lekatis, G. (2012), "Understanding risk management and compliance", International Association of Risk and Compliance Professionals, newsletter.

Leedy, P.D. (1989), Practical Research: Planning and Design, 4th ed., Macmillan, New York.

Louis, C. (2000), „Research Methods in Education, 5th ed., Publishing Taylor and Francis group", The Taylor and Francis e-library, http:/www.amozon.co.uk/Resarch-Methods-Education-Professor Louis/dp/041595411.

Marczyk, G., DeMatteo, D., Festinger, D. (2005), Essentials of Research Design and Methodology, New Jersey: John Wiley & Sons, Inc.

Merton, Robert C. (1995) "Financial Innovation and the Management and Regulation of Financial Institutions*", Journal of Banking & Finance.*

M.K. Rastogi & M. Chaturvedi, (2012), "Risk Management and its Process in Commercial Banks", *International Journal of Business and Management Tomorrow*, Vol.2, No.11, pp.1-5.

Miller, K. D. (1992), "A Framework for Integrated Risk Management in International Business", *Journal of International Business*, pp. 311-331.

National Bank of Ethiopia (2010), *"Commercial banks risk management guidelines*".

Oldfield, G.S. and Santomero, A.M. (1997), "Risk Management in Financial Institutions", *Sloan Management Review*, Vol. 39, No. 1, pp. 33-46.

Oldfield, G. & Santomero A. M. (1995), "The Place of Risk Management in Financial Institutions", *Wharton Financial Institutions Center, University of Pennsylvania, Working Paper 95-05.*

Osborne, A. (2012*),* Risk management Made Easy. Andy Osborne and Ventus Publishing Aps. ISBN 978-87-7681-984-2.

Pyle, D (1977), “Informational Asymmetric, Financial Structure and Financial Intermediation”, *Journal of Finance*, Vol. 37, No. 2, pp. 371-387.

Pyle, H. David (1997), Bank Risk Management Theory, Working paper RPF-272, Haas School of Business, University of California, Berkeley, pp. 2.

Raghavan, R. (2003), “Risk Management in Banks”, *Chartered Accountant*, pp. 1.

Rosenberg, J. V. & Schuermann, T. (2006), "A general approach to integrated risk management with skewed, fat-tailed risks", *Journal of Financial Economics, Elsevier*, Vol. 79, No.3, pp, 569-614.

Santomero, A.M. (1995), Financial Risk Management: The Whys and How‟s, Financial Markets, Institutions and Instruments 4(5):1-14.

Santomero, A. (1997), “Commercial Bank Risk Management: An Analysis of the Process”, *Journal of Financial Services Research*, Vol. 12.2/3, pp. 83-115.

Saunders, A. and Cornett, M. (2006), Financial Institutions Management: A Risk Management Approach, McGraw-Hill, and Irwin.

Schmit, J. T. & Roth K. (1990), "Cost Effectiveness of Risk Management Practices," *Journal of Risk and Insurance,* Vol. 57, No.3 pp. 455-470

Schroeck, G (2002), Risk management and value creation in financial institutions, John Wiley and Son, Inc., New Jersey.

Sharma, B.R. (2003). Bank Frauds- Prevention & Detection, Universal law Publishing Co. Pvt. Ltd.

Slywotzky, A. J. & Drzik, J. (2005), Countering the Biggest Risk of All, Harvard Business Review, 82, pp. 78-88.

Tarullo, DK (2008), Banking on Basel: The future of international financial regulation, Peterson Institute.

Tibebu Tefera (2011), "Impact level of credit risk management towards the profitability of Commercial Banks in Ethiopia", Master"s Thesis.

Wagner, W (2010), "Loan Market Competition and Bank Risk-Taking", *Journal of Financial Services Research,* Vol. 37, pp. 71–81.

Whipple, A. (2010), "Adopting Risk Intelligence in Today"s Volatile Market", *Journal of Risk Management in Financial Institutions*, Vol.4, No.1, pp.12-17.

Wright, D. M. & Houpt, J. V. (1996), "An analysis of commercial bank exposure to interest rate risk", *Federal Reserve Bulletin,* February Issue, 115–128.

http://en.wikipedia.org/wiki/Risk_management

http://en.wikipedia.org/wiki/Bank_Risk and capital

National Bank of Ethiopia website: http://www.nbe.gov.et/aboutus/index.html.

Official site of Bank of International Settlement, www.bis.org.

## Annex 1: List of banks & number of staff selected for this study

| Name of banks | Private | Public | Year Establishment | No. of staff |
|---|---|---|---|---|
| Commercial Bank of Ethiopia | | √ | 1963 | 12 |
| Construction and business bank S.C. | | √ | 1983 | 6 |
| Awash International Bank S. C. | √ | | 1994 | 6 |
| Nib International Bank S. C. | √ | | 1999 | 7 |
| Wegagen Bank S.C. | √ | | 1997 | 6 |
| Oromia International Bank S. C. | √ | | 2008 | 5 |
| Lion International Bank S. C. | √ | | 2006 | 6 |
| Cooperative Bank of Oromia S.C. | √ | | 2005 | 4 |
| Bank of Abyssinia | √ | | 1996 | 7 |
| United Bank S. C. | √ | | 1998 | 5 |
| Abay Bank S. C. | √ | | 2010 | 6 |
| Dashen Bank S. C. | √ | | 2003 | 5 |
| Brehan International Bank | √ | | 2010 | 4 |
| Bunna International Bank | √ | | 2009 | 2 |
| Zemen Bank | √ | | 2009 | 5 |

*Source: National Bank of Ethiopia, 2015.*

## Annex 2: Questionnaires

***Addis Ababa University***

***College of Business and Economics***

***Department of Accounting and Finance***

***MSc program***

This questionnaire is designed to collect information about the risk management practice in Ethiopian commercial banks. The data or information collected in such a way shall be used as primary data in my thesis, which I am conducting as a partial fulfillment for the requirement of my study in **MSc in Accounting and Finance at Addis Ababa 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**!!

**Background Information**

**Instructions:**

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

1. Gender: Female ☐ Male ☐

2. Years of service (Experience): 1- 5 years ☐ 6-10 years ☐

Above 10 years ☐

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

Master"s degree ☐ PhD ☐

4. What is your qualification? Accounting ☐ Management ☐ Marketing ☐

Other ☐

## 1. The Importance of Risk Management Practice

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

| No. | Questions | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. | The effective management of risk is central to your bank"s performance. | | | | | |
| 2. | The main business of your bank is to manage risk. | | | | | |
| 3. | Application of risk management techniques reduces costs or expected losses to banks. | | | | | |
| 4. | Managing risk is important to the bank"s performance and success of your bank. | | | | | |
| 5. | Effective risk management is one of the main objectives of your bank. | | | | | |
| 6. | There is significant board and senior management involvement in the risk management in your bank. | | | | | |

## 2. Risk Identification

7. Rank in order of importance your bank"s risk exposure. State the first five. If the type of risk is not stated amongst the list given, feel free to add your own. The abbreviated term would be acceptable.

1. Interest rate Risk (IRR)
2. Market Risk (MR)
3. Credit Risk (CR)
4. Off-Balance Sheet Risk (OBR)
5. Operational Risk (OR)
6. Foreign Exchange Risk (FXR)
7. Liquidity Risk (LR)
8. Other Risks please specify

**1. _____ 2. _____ 3._____ 4. _____ 5. _____**

8. In response to question (7) above briefly explain the current measures in place to manage particular risk and state the level of success or failure for the method currently in use.

**Risk (1)**

Current measures in place to manage particular risk

_____

_____

_____

Level of success or failure

**Risk (2)**

Current measures in place to manage particular risk

Level of success or failure

**Risk (3)**

Current measures in place to manage particular risk

Level of success or failure

**Risk (4)**

Current measures in place to manage particular risk

_____

_____

_____

Level of success or failure

_____

_____

_____

**Risk (5)**

Current measures in place to manage particular risk

_____

_____

_____

Level of success or failure

_____

_____

_____

| No. | Questions | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 9. | The bank finds it difficult to prioritize its main risk | | | | | |
| 10. | It is important for your bank to emphasize continuous review and evaluation of the techniques used in risk management. | | | | | |
| 11. | The bank is aware of the strengths and weaknesses of the risk management systems of the other banks | | | | | |
| 12. | The bank currently has procedures in place to recognize risk and adjust policies accordingly | | | | | |

### 3. Risk Monitoring

| No. | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 13. | Monitoring the effectiveness of risk management is an integral part of routine management reporting. | | | | | |
| 14. | The bank‟s response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses | | | | | |
| 15. | The bank‟s response to risk includes action plans in implementing decisions about identified risk | | | | | |
| 16. | The level of control is appropriate for the risk it faces. | | | | | |

## 4. Risk Management Practices

| No. | Questions | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 17. | The bank‟s management regularly reviews the organization‟s performance in managing its business risk | | | | | |
| 18. | The bank‟s risk management procedures and processes are documented and provide guidance to staff about managing risk | | | | | |
| 19. | The bank‟s policy encourages training programs in the area of risk management | | | | | |
| 20. | The bank emphasizes the recruitment of highly qualified people having knowledge in risk management | | | | | |
| 21. | Your bank views the supervisory role of the National Bank of Ethiopia (NBE) as critical in risk management | | | | | |
| 22. | Your bank has internally developed risk management procedures or guidelines. | | | | | |

1: Yes, 0: No

| No. | Questions | 1 | 0 |
|---|---|---|---|
| 23. | Changed in risk are recognized and identified with the bank‟s rules and responsibilities. | | |
| 24. | Is your bank actively engaged in research to develop risk management instruments and techniques? | | |
| 25 | Is there a separation of duties between those who identify risks and those who manage and control risks? | | |

Finally, if you would like to comment or suggest any thing you feel about your bank‟s risk management system, please mention it.

_____

_____

_____

_____

_____

_____