ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE
(GRADUATE PROGRAM)

Assessing determining factors of Best Risk Management Practice of Ethiopian Commercial Banks

By
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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

Summited to: G/Medhin G/Hiwot

January-2016

Addis Ababa University
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Approved by the Board of Examiners:

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Advisor	Signature
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Examiner	Signature
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Statement of Declaration

I, Worku Nigussie, have carried out independently a research work on Assessment and Evaluation of best 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.

Worku Nigussie

Sig: _____

January 2016

Statement of Certification

This is to certify that Worku Nigussie has carried out her research work on the topic entitled "Determining factors of best 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: Ato Gebremedhin Gebrehiwot

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Table of Content

ABSTRACT

The paper is about "Assessment and Evaluation of best risk management practices" of commercial banks in Ethiopia based on fifteen commercial banks operating in Ethiopia. The number of respondents was eighty. While collecting the requisite data, five points Likert Scale has been used. The objective of the study was to critically examine determining factors of best risk management practices of Ethiopian commercial banks i.e., types of risk facing a bank, The extent in which the management and staff members of commercial banks understand and implement risk management and if or not the staff members of the selected commercial banks aware of the risks associated with their actions and goals. The study also examines how far the banks follow the guidelines of National Bank of Ethiopia regarding risk management. For this study there are six independent variables: understanding risk and risk management (URM), risk assessment and analysis (RAA), risk identification (RI), risk monitoring (RM), Risk Evaluation (RE), required policy in place (RP) and one dependent variable, RMP. Initially, data reliability was found by applying Cronbach's alpha. So regression model was applied to analyze the impact of independent variables on dependent variables. From the analysis it was concluded that there were five variables which have positive significance impact on the dependent variable RMP. The study also reveals that credit risk, market risk and operational risk are the major risks to the bankers.

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

Acknowledgements

It is a great pleasure to thank everyone who assisted me in writing my dissertation successfully. I owe sincere and earnest thankfulness to my advisor Ato Gebremedhin Gebrehiwot who guided me through several parts of my dissertation. I am also grateful to my colleagues at work who provided me with great information resources and the respective sample banks staffs members of risk and compliance department. This dissertation would not have been possible without the valuable support, patience & understanding of my wife W/o Alemtsehay Kebede and moral boost provided by my family.

I am highly indebted to W/o Sofanit Kebede and W/t Ainalem Tsegaye who extended their cooperation in typing of this paper.

LIST OF ACRONYMS

ADRs: America depository receipt

BIS: Bank for International Settlements

BCBS: Basel Committee on Banking Supervision

COSO: Committee of the Sponsoring Organizations of the Tread way Commission

ERM: Enterprise risk management

ESFS: European System of Financial Supervision

FPC: Financial Policy Committee

FSOC: Financial Stability Oversight Council

GDP: Gross Domestic Product

IRM: Institution of Risk Management

IMF: International Monetary Fund

IFRS: International Financial Reporting Standard

ISO: International Organization for Standardization

IBs: Islamic Banks

OBS: Off-balance-sheet

OECD: Organization for Economic Co-operation and Development

PLS: Profit and Loss Sharing

ROA: Return on Asset

ROE: Return on Equity

RAA: Risk Assessment and Analysis

RE: Risk Evaluation

RI: Risk Identification

RM: Risk Management

RM: Risk Monitoring

RP: Required Policy

SIFIs: Systemically Important Financial Institutions

UAE: United Arab Emirates

URM: Understanding Risk Management

UBS: Universal Bank Model and Service

LIST OF FIGURES

List of Tables

Chapter One-Introduction

1.1 - Background:

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 the identification and 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 exposure. The process involves: identification, measurement, and management of the risk. Bessis (2010) also adds that in addition to it being a process, risk management also involves a set of tool and models for measuring and controlling risk.

The objectives of risk management include to: minimize foreign exchange losses, reduce the volatility of cash flows, protect earnings fluctuations, increase profitability, and ensure survival of the firm (Fatemi and Glaum, 2000). To ensure that banks operate in a sound risk management environment, where there is reduced impact of uncertainty and potential losses, managers need reliable risk measures to direct capital to activities with the best risk/reward ratios. They need 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 to reduce, which to increase and by what means, and establishing procedures to 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, 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.

Risk management in banking sector is in limelight especially after the recent turbulence that has impacted the very existence of banking sector as a viable industry. The journey of risk management started way back in early 1800's, where the banks had recognized the significance of the role of risk management and had adapted the same by creating a risk function in their organizations. Not only the bank's, even the various government bodies have recognized the repercussions / impact of not managing the risks effectively in banks and accordingly enacted several regulations to control risks that arise in the banking business and operations. From there onwards, the risk function in the banks has evolved over a period of time and reached to a stage where the need felt to have a common criteria to measure & quantify the risks so that a comparative analysis of the banks can be performed and made available to the stakeholders. This development has led to introduction of BASEL Norms by BIS Committee. The committee has guided all the central banks of the participating countries and the banks governed by them to adapt and align their risk management practices to the norms over a period in time. Zaher (2006).

The Basel norms are focused on the risks in Operational, Credit and Market areas which in turn helped the banks to quantify the risks and standardize their risk management practices in the said areas. However, most of the banks have seen Basel norms as another mundane exercise of regulatory compliance instead of a tool for effective risk management which has resulted in reality as a pure eye-wash act to satisfy the regulatory authorities. The situation resulted was mainly on account of banks being under constant scrutiny of the regulatory authorities and cornered with multiple number of regulations to be complied with. In other words, banks in their efforts to comply with these multi-regulations realized that complying with all the mandatory regulations is too cumbersome because many times the data and approach required to meet different requirements are quite similar resulting in duplicated efforts and increased costs. AL-Tamimi (2002)

One way, these multi-regulations have jeopardized the very essence of the regulations and risk management itself. Moreover, given the depth, breadth and geographical spread of the banking business and operations, banks realized that Basel norms are not comprehensive enough to establish a comprehensive risk management system which could help them to identify, mitigate risks across enterprise in all the areas and at the same time rationalize and mature their risk management practices across the enterprise. The above said factors lead to a scenario where the banks started looking beyond Regulatory compliance and Basel norms for an Enterprise-wide approach to cater to all risk requirements in more cost effective and efficient manner.

A complex system of techniques and management tools are used from banks to measure, monitor and control risks that are mainly categorized in credit risk, market risk, interest rate risk, liquidity

risk, operational risk and legal risk. In fact, risk is referred to any uncertainty that might bring losses and good management of this enhances the return profile of the bank portfolio. Main progress and goal in this area is the creation of new quantified risk measures for all above categories, providing also new categories of risks and the creation of more realistic indicators. The fact that today's risks may become tomorrow's losses and that maybe is not something immediate visible makes risk measurement imperative need for the banks and the department that deals with it essential for the survival of the organism. The basic reasons that made the risk-based practices to develop quickly are: banks have major incentives to move rapidly in that direction, regulations developed guidelines for risk measurement and for defining risk-based capital (equity) and the risk management toolbox of models enriched considerably, for all types of risks, providing tools making risk measures instrumental and their integration into bank processes feasible.

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.

The financial institutions operate in a very uncertain environment where conditions can change due to inflation, interest rate fluctuation, financial crises, competition, government influence and etc. The operational problem and poor financial position in financial institutions can be life threatening to businesses (Carey, 2001) and national income, since the banking crises affect the country's economy. It's known that risks may hinder the activities of financial institutions in performing their operation.

Emira(2013) have conducted research on Comparative Analysis of Risk Management in Conventional and Islamic Banks(The Case of Bosnia and Herzegovina). This research paper tried to determine the reliance of banks' financial performance on the risk management. The results of this research reveal that still practices of risk management are developing worldwide. Currently all the banks understand the value of risk management but still they do not have sufficient ways for risk management. Exposure of Islamic banks as compared to conventional banks to risk is much more but its dynamic risk management system allowed it to constantly compete with conventional banks and get good returns. Lastly, banks which have effective risk management system have better financial performance.

Ali Said (2013) has researched on Risks and Efficiency in the Islamic Banking Systems (the Case of Selected Islamic Banks in MENA Region). The objective of this study was to investigate how in Islamic banks, risks and efficiency are correlated with each other. This research concluded that

credit risk has negative relationship with efficiency, while operational risk has found to be negatively correlated to efficiency too. The liquidity risk showed insignificant correlation to efficiency in Islamic banks in MENA area.

Naveed (2013) conducted research on Risk management practices and attitude of Pakistani Islamic banking system employees. This study was intended to explore the Risk Management Practices in Islamic Banks and to study the impact of independent variables on dependent variables. The independent variable of the study were understanding risk and risk management, risk assessment and analysis, risk identification, risk monitoring, credit risk analysis and the dependent variable was risk management practices. The result showed that four out of five independent variables have positive and significant impact on dependent variable.

Selma (2013) conducted research empirically on Risk Management Tools Practiced in Tunisian Commercial Banks. The purpose of the researchers was to investigate risk management practices and procedures followed by banks. The results revealed that banks in Tunisia know the importance of efficient risk management in enhancing bank performance and cost reduction. Moreover banks have active risk management structures in Tunisia. Further researchers concluded that risk management must be an ongoing process which systematically addresses all risks faced by organization in past, present and future.

Omar (2011) conducted research on Risk management and the implementation of the Basel Accord in emerging countries (An application to Pakistan). The aim of this research was to examine attitudes of Pakistani banks towards Basel Accord implementation plans and thus to determine which factors create hindrances in the Basel Accord implementation in these banks. Results of this research showed that managers' view regarding Basel Accord is positive though operational risk appears as a major obstacle for Basel Accord implementation in Pakistan. Private banks than public banks are technically more capable and favorably inclined towards Basel Accord implementation.

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.

The principal concern of this paper is to assess to what extent commercial banks of Ethiopia can manage their risk, to what extent the staff and management of the commercial banks understand and implement risk management and to what extent their way of working can be affected by proper risk management practices and follows NBE risk guidelines.

1.3. Objectives of the study

1.3.1 General Objective

To asses and evaluate the different types of risk that Ethiopian Commercial banks are facing in the current climate, and to examine the diverse risk management practices that banks are using to deal with said risks.

1.3.2 Specific Objective

In line with the general objectives the research paper address the following specific objectives:-

- To assess the relationship between the theories, concepts and Models of risk management and what goes on practically in the banking industries of commercial banks of Ethiopia.
- To what extent are the management teams of the selected banks understand and implement risk management
- To see the efficiency and effectiveness of selected public and private banks in internal risk management practices
- Has the National bank of Ethiopia assisted or hindered risk management amongst the selected commercial banks
- To asses weather all commercial banks in Ethiopia are following the same risk management practice in line with National bank requirement or not
- To recommend alternative solution for the actual problem that will be identified by this research

1.4 Research Questions

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

1. To what extent do the management teams and staff member of Commercial banks of Ethiopia understand and implement risk management?
2. Are the staffs in Ethiopian commercial banks familiar with the concepts of risk and type of risks which the bank faces?
3. To identify the type of risk exposures faced by commercial banks in Ethiopia.

1.5. Research Hypotheses

Since exposure to risk continue to be the leading source of problems in banks worldwide, banks their supervisors should be able to draw useful lesson from past experience. Banks should now have a keen awareness of the need to identify measure, monitor and control risk as well as to determine that they should hold adequate capital against these risks and that they are adequately compensated for risks incurred (Basel Committee, 2004). Based on the research questions and problem of study, hypotheses is developed and tested to show the degree of relationships between risk management practices and each of the five aspects of risk management process. The Hypothesis to be tested were:

Hypothesis 1: Understanding of risk management Practice have a positive and significant effect on risk management practices.

Hypothesis 2: Risk assessment and Analysis have a positive and significant effect on risk management practices.

Hypothesis 3: Risk Monitoring have a positive and significant effect on Risk management practices.

Hypothesis 4: Risk identification have a positive and significant effect on risk management Practices.

Hypothesis 5: Evaluation of risk have a positive and significant effect on Risk management practices.

Hypothesis 6: Required policies in place have a positive and significant effect on risk management practices.

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 serves as a reference material for anyone who will undertake a further study on the same or related topic

1.7. Methodology

Research methodology is a philosophical framework for any research (White 2003, 20). It contains the data used and the research data collection techniques. For this thesis, both primary and secondary data are used. Secondary data are collected from the literature (books, journals, previous research papers, electronic sites, etc.), National bank of Ethiopia database, the subject bank's annual reports and published internal policies as well as the transaction office's annual business results. Primary data are gathered by the researcher through both qualitative and quantitative methods. A questionnaire will also be designed and handed to all selected commercial banks managers and staffs related with risk management practices.

1.8. Structure of the Study

This part will guide the readers on the systematic organization of this research study. Every parts and sub-parts of this thesis circles around and supports one single central theme. The central theme of the thesis lies in assessment and evaluation of best risk management practices in banks. This central theme is primarily supported by the theoretical framework and the empirical study. But before the theories appear, this whole first chapter is dedicated to background information on the research problem, the motivations behind it, the study objectives and research methodology. Chapter 2 follows with an emphasis on the theories supporting this thesis, including risks and banking risks, risk management in bank and certainly two key points of the central theme. Once the theories have been identified, it is important that the research methodology is selected. The 3rd chapter will deal with the data and the research methods employed in the study. Chapter Four takes up to more than half of the thesis and gives the audience answers to the research questions mentioned at a practical level of the selected commercial banks of Ethiopia and its transaction office. It contains the research findings of the selected commercial banks of Ethiopia risk management practices and a very important analysis of the findings. Finally, the implications for the bank and recommendations for further studies (reflect from the theoretical and empirical part) will conclude the thesis in the fifth chapter.

1.9. Scope of the study

The study will focus on methods of assessing and evaluation of best risks management practices in Commercial Bank of Ethiopia (CBE), Construction and business Bank(CBB), Nib International Bank(NIB), Dashen Bank (DB),Abay Bank (AB), Berhane International Bank (BIB) United Bank (UB),Oromia International Bank (OIB), Awash International Bank (AIB), Cooperative bank of Oromia (CBO), Buna International bank (BIB), Debub Global Bank (DGB), Enat Bank (EB),Wegagen Bank (WB) and Bank of Abyssinia(BoA) .The main areas covered by this study includes overview of risk management practice in Ethiopian banks, the extent of banking risks and its management measures, and the relationship between risk amount and handling practice

Chapter Two: Review of related literature

2. THEORETICAL FRAMEWORK

2.1 INTRODUCTION

This chapter reviews the literature on risk management in banking. It discusses issues on risk management from different perspectives and with the view of giving a theoretical foundation to the study. It starts with an exposition on risk management, followed by reviews of literature on the rationales and categories of risk management activities as well as the kinds of risk faced by banks.

2.2 Risk Management in the Bank industry

The banking industry is a highly regulated industry with detailed and focused regulators. While banks struggle to keep up with the changes in the regulatory environment, regulators struggle to manage their workload and effectively regulate their banks. The impact of these changes is that banks are receiving less hands-on assessment by the regulators, less time spent with each institution, and the potential for more problems slipping through the cracks, potentially resulting in an overall increase in bank failures. Jaiye (2009) mention in his paper that the business of Banking is to manage risks associated with accepting deposits, granting loans and trading portfolios. The changing economic environment has a significant impact on banks and thrifts as they struggle to effectively manage their interest rate spread in the face of low rates on loans, competition for deposits and the general market changes, industry trends and economic fluctuations. Andrea (2010) in his study mentioned that Management failure can be easily recognized in losses resulting from over-aggressive lending practices and risk tolerances that were too high. However, as one digs deeper, more subtle failures can be recognized in operational inefficiencies, weak internal control environments, and lack of management attention to detail. A rising interest rate environment may seem to help financial institutions, but the effect of the changes on consumers and businesses is not predictable and the challenge remains for banks to grow and effectively manage the spread to generate a return to their shareholders.

2.3. Risk Management Practices and Processes in the Banking Industry

The banking industry is no doubt a regulated sector as a result of the riskiness of its operation. Consequently, risk management in banks is fast becoming a discipline that every participants and players in the industry need to align with. As earlier noted, it is a process which involves:

(i) Risk identification: In order to properly manage risks, an institution must recognize and understand risks that may arise from both existing and new business initiatives; for example, risks inherent in lending activity include credit, liquidity, interest rate and operational risks. Risk identification should be a continuing process, and should be understood at both the transaction and portfolio levels.

(ii) Risk Measurement: Once risks have been identified, they should be measured in order to determine their impact on the banking institution's profitability and capital. This can be done using various techniques ranging from simple to sophisticated models. Accurate and timely measurement of risk is essential to effective risk management systems. An institution that does not have a risk measurement system has limited ability to control or monitor risk levels. Banking institutions should periodically test their risk measurement tools to make sure they are accurate. Good risk measurement systems assess the risks of both individual transactions and portfolios.

(iii) Risk Monitoring: Institutions should put in place an effective management information system (MIS) to monitor risk levels and facilitate timely review of risk positions and exceptions. Monitoring reports should be frequent, timely, accurate, and informative and should be distributed to appropriate individuals to ensure action, when needed.

(iv) Risk Control: After measuring risk, an institution should establish and communicate risk limits through policies, standards, and procedures that define responsibility and authority. These limits should serve as a means to control exposure to various risks associated with the banking institution's activities. Institutions may also apply various mitigating tools in minimizing exposure to various risks. Institutions should have a process to authorize and document exceptions or changes to risk limits when warranted.

2.4 Conceptual Model of risk management

There are many conceptual studies that show the important aspects of risk management process that firms need to have in order to practice risk management (e.g. Tchankova 2002; Kromschroder and Luck, 1998; Luck 1998; Fuser et al, 1999; Barton et al 2002; Pausenberger and Nassauer, 2005). Some empirical findings (e.g. Al-Tamimi and Al- Mazrooei, 2007) show positive relationships between risk management practices and the various aspects of risk management process, and some findings (e.g. Boston Consulting Group, 2001; Al-Tamimi, 2002; KPMG, 2003; Parrenas, 2005; Al-Tamimi and Al-Mazrooei, 2007) show the important aspect of risk

management practices by various financial institutions. In the context of Islamic banking, studies made on theoretical side of risk and risk management in Islamic banking (e.g. Iqbal and Mirarkor, 2007; Akkizidis and Khandelwal, 2007; Grais and Kulathunga, 2007; Haron and Hin Hock, 2007; Greuning and Iqbal, 2007; Sundararajan, 2007; Archer and Haron, 2007) explain the framework and the aspect of risk management process, and some empirical evidence (e.g Khan and Ahmed, 2001; Noraini, 2005) examine the perception and level of risk management practices by IBs.
There is a relationship between risk management practices and the four aspects of risk management process i.e. 1- understanding risk and risk management; 2-risk identification; 3-risk analysis and assessment; and 4- risk monitoring as in the following figure. By making reference to the model adopted by Al-Tamimi and Al-Mazrooei (2007), the function of risk management practices is as follows:

RMP= f(URM, RI, RAA, RM)

Where:

RMP= Risk Management Practices

URM= Understanding Risk and Risk Management

RI= Risk Identification

RAA= Risk Analysis and Assessment

RM= Risk Monitoring

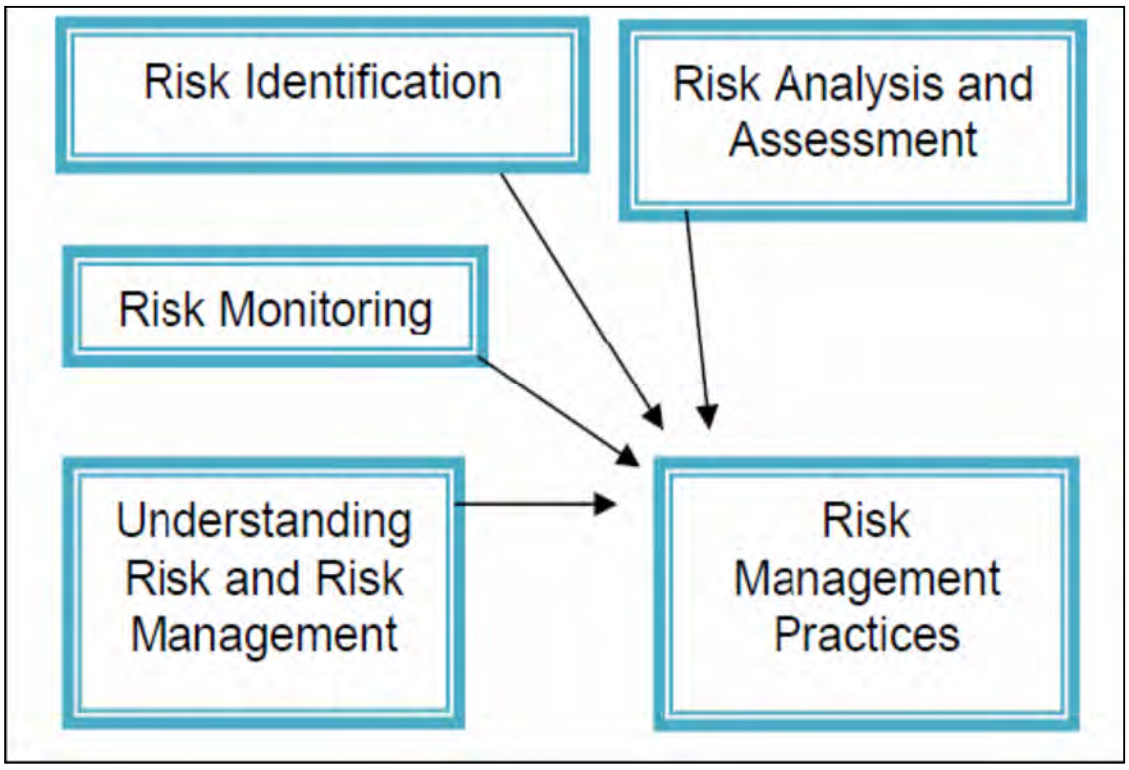

Figure 1. Conceptual model of risk management practices

2.5 RATIONALES FOR RISK MANAGEMENT IN BANKING

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 volatility (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 manager's self-interest of protecting their position 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 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 managers to seek for reduced volatility of profits through risk management With progressive tax schedules, the expected tax burden are reduced 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 lower expected shareholders' value since the cost of such external finance is higher than the internal funds due to capital market imperfections. 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.

2.6 CATEGORIES OF RISK MANAGEMENT

As Merton (1989) noted, a key feature of the franchise of 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 separable categories from a management perspective. 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, and reinsurance and due diligence investigation to reduce the chances of idiosyncratic losses by eliminating risks that are superfluous 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 alright but will also reduce the profitability of the business activity.

Some risks can also be transferred by the bank, 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 raison determinant 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 risks that are uniquely a part of the bank's array of unique value-added services (Allen & Santomero, 1996, Oldfield & Santomero, 1995).

2.7 Case Studies of Risk Management in banks

Within the last few years, a number of studies have provided the discipline into the practice of risk management within the corporate and banking sector. An insight of related studies is as follows: Amran, *et al*. (2009), explored the availability of risk disclosures in the annual reports of Malaysian companies. The study was aimed to empirically test the characteristics of the sampled companies. The level of risk faced by these companies with the disclosure made was also assessed and compared. The findings of the research revealed that the strategic risk came on the top, followed by the operations and empowerment risks being disclosed by the selected companies. The regression analysis proved significantly that size of the companies did matter.

The stakeholder theory explains well this finding by stating that "As company grows bigger, it will have a large pool of stakeholders, who would be interested in knowing the affairs of the company." The extent of risk disclosure was also found to be influenced by the nature of industry. As explored within this study, infrastructure and technology industries influenced the companies to have more risk information disclosed.

Hassan, A. (2009), made a study "Risk Management Practices of Islamic Banks of Brunei Darussalam" to assess the degree to which the Islamic banks in Brunei Darussalam implemented risk management practices and carried them out thoroughly by using different techniques to deal with various kinds of risks. The results of the study showed that, like the conventional banking system, Islamic banking was also subjected to a variety of risks due to the unique range of offered products in addition to conventional products.

The results showed that there was a remarkable understanding of risk and risk management by the staff working in the Islamic Banks of Brunei Darussalam, which showed their ability to pave their way towards successful risk management. The major risks that were faced by these banks were Foreign exchange risk, credit risk and operating risk. A regression model was used to elaborate the results which showed that Risk Identification, and Risk Assessment and Analysis were the most influencing variables and the Islamic banks in Brunei needed to give more attention to those variables to make their Risk Management Practices more effective by understanding the true application of Basel-II Accord to improve the efficiency of Islamic Bank's risk management systems.

Al-Tamimi (2008) studied the relationship among the readiness of implementing Basel II Accord and resources needed for its implementation in UAE banks. Results of the research revealed that the banks in UAE were aware of the benefits, impact and challenges associated in the implementation of Basel II Accord. However, the research did not confirm any positive relationship between UAE banks readiness for the implementation of Basel II and impact of the implementation. The relationship between readiness and anticipated cost of implementation was also not confirmed. No significant difference was found in the level of Basel II Accord's

preparation between the UAE national and foreign banks. It was concluded that there was a significant difference in the level of the UAE banks Basel II based on employees education level. The results supported the importance of education level needed for the implementation of Basel II Accord.

Al-Tamimi and Al- Mazrooei (2007) provided a comparative study of Bank's Risk Management of UAE National and Foreign Banks. This research helped them to find that the three most important types of risks facing the UAE commercial banks were foreign exchange risk, followed by credit risk and then operating risk. They found that the UAE banks were somewhat efficient in managing risk; however the variables such as risk identification, assessment and analysis proved to be more influencing in risk management process. Finally, the results indicated that there was a significant difference between the UAE National and Foreign banks in practicing risk assessment and analysis, and in risk monitoring and controlling.

Koziol and Lawrenz (2008) provided a study in which they assessed the risk of bank failures. They said that assessing the risk related to bank failures is the paramount concern of bank regulations. They argued that in order to assess the default risk of a bank, it is important considering its financing decisions as an endogenous dynamic process. The research study provided a continuous-time model, where banks chose the deposit volume in order to trade off the benefits of earning deposit premiums against the costs that would occur at future capital structure adjustments. Major findings suggested that the dynamic endogenous financing decision introduced an important self-regulation mechanism.

Hussain and Al-Ajmi (2012) organized a study on the comparison of RMP pursued by Commercial banks and Islamic banks operating Bahrain. Advanced artificial variable bank is exercised to compose the flawless comparativeness. The conclusion of the research was the better risk management and better understanding of risk, risk assessment and analysis, risk identification, risk monitoring and credit risk they have positive and significant relationship with risk management procedures in the conventional and Islamic banks working in Bahrain. Comparison of the research argues that there are significantly higher levels of risks encountered by Islamic banking system as compare to Commercial banking system. Furthermore, liquidity, and operational, country, settlement, and residual risks have been found that it is higher in Islamic banks than those in Commercial banks. All these outcomes are available to differences in the products of both types of banks that lead to unique risks to Islamic banks.

Nazir (2012) examined the present RMP followed by Islamic and Commercial banks operating in Pakistan. Data for the study was gathered through questionnaire to establish the outcome of relative analysis. The regression results reflects that banks in Pakistan are efficient in the analysis of credit risk, monitoring risk and understanding risk are the most important variables in the risk management and there result shows that they have a significant difference. Moreover the findings

of the research revealed that there is significant difference in risk management practices of the Islamic and conventional banks of Pakistan.

According to Hassan (2009) who conducted research on the RMP of Islamic banks in Brunei, to analyze the level of Islamic banks in Brunei to which they implemented the practices of risk management and investigate them by applying different techniques on the different kinds of risks. According to the results, like the conventional banks, Islamic banks are also exposed to the variety of risk in the market because of different products they are offering to the public in addition to the products of conventional banks. The results reveals that the Brunei Islamic Banks have better understanding of risk and how to manage risk means that the staff working there are properly aware to these kinds of risks. The main risk that affects their performance is foreign exchange risk, operational risk and credit risk. As per the regression results, risk assessment, risk analysis and risk identification are the most significant variables that affects the performance of Islamic banks in Brunei.

Al- Tamimi (2007) examined the scale of risk management techniques used by banks in the UAE to manage different types of risk. This study focused on four different types of risk identifications: inspection by the bank risk manager; audits or physical inspection; financial statement analysis; and risk surveys. The study was based on both primary and secondary data, with a questionnaire used as a source of primary data. The questionnaire covered six aspects of risk: understanding risk and risk management; risk identification; risk assessment and analysis; risk management practices; risk monitoring and credit risk analysis. This study revealed that UAE banks were efficient in credit risk management but there were significant differences between UAE banks and foreign banks regarding risk management.

Another useful case study comes from Hassan (2009) who examined the degree to which some Islamic banks in Brunei Darussalam were able to use formal risk management practices to address different types of risk. This study covered a similar six aspects of risk management to those examined by Al-Tamimi (2007), as well as the specific methods of risk identification and the types of risk facing the sample banks. This study indicated that the main types of risk facing the banks in Brunei Darussalam were foreign-exchange risk, credit risk, and operating risk. Whilst these results will not directly translate to the UAE, the methodology is sound and has significant relevance. In addition, the results of Hassan's (2009) study were useful for considering the Islamic banking system in the UAE as well as the conventional banking system

Another line of research has been focused on the comparison between the practice of risk management in Islamic banks and conventional banks. Hassan (2011) provided a comparative study of Bank's Risk Management of Islamic and conventional banks in the Middle East region. The study aims to identify the most important types of risk facing the Islamic banks and conventional banks in the Middle East. The multi regression model and ANOVA test prove that

there is a positive relationship between risk management practices and understanding risk, risk management, risk identification, risk assessment and analysis, risk monitoring, risk, and credit risk analysis in Islamic banks and Conventional banks.

Hussain and Al-Ajmi (2012) conducted a comparative analysis on risk management practices between the Islamic and conventional banking system in Bahrain. The new modified dummy variable bank type has been used to make the optimum comparison. The deduction of the study was understanding of risk and risk management, risk identification, risk assessment analysis, risk monitoring, credit risk analysis have a positive and significant effect on risk management practices in Islamic and conventional banking of Bahrain. The comparative study indicates that the levels of risks faced by Islamic banks are found to be significantly higher than those faced by conventional banks. Similarly, country, liquidity, and operational, residual, and settlement risks are found to be higher in Islamic banks than in conventional banks. These findings are attributable to differences in the products of both types of banks that lead to unique risks to Islamic banks.

2.8 RISK MANAGEMENT ADOPTION DRIVERS

A. Corporate Governance

N.A. Manab, I. Kassim, and M.R. Hussin, 2010 found that corporate governance and shareholder value to be the most important driver in RM adoption and implementation among the public listed companies. This argument is aligned with who claimed that RM components could not be attained without corporate governance compliance. Furthermore, there was a significant positive relationship between corporate governance practice and RM. Moreover, revealed that the current developments of corporate governance work as a catalyst for RM adoption. The varying degree of RM implementation across countries could also be attributed to different timing and standards of corporate governance introduced.

B. Compliance to Rules and Regulations

Among the reasons for adopting enterprise RM in Canada was the compliance with the Toronto Stock Exchange (A.E. Keleffiner, F.B, Lee, and B. McGannon, 2003). Whereas the introduction of the Revamped Listing Requirements of Bursa Malaysia in 2001 was established as an effort to amend the former code into a mandatory practice which must be complied by public listed companies . On the other hands, the New South Wales government imposed a mandatory statement so that any new project and major capital assets activities which cost more than 5 million dollars comply with RM standard. In German, large firms and SMEs implement RM practices due to KonTraG law and Basel II regulations respectively. These examples show that some companies have to implement the RM practices on compliance basis.

C. Pressure from External Auditor

Companies audited by the Big Four auditors namely PricewaterhouseCoopers, Deloitte Touche Tohmatsu, Ernst & Young and KPMG had higher likelihood to deploy RM practice compared to companies not audited by them. This is because the Big Four auditors pressured the companies to comply with RM regulations in order to maintain their good reputations (N.A. Manab, I. Kassim, and M.R. Hussin, 2010). In contrast, the audit firms regardless whether they are the Big Four auditors or not are equally effective in encouraging the RM practice to their clients. Reference further strengthen this argument by indicating that higher chance of enterprise RM adoption exists when a company is engaged with one of the Big Four auditors.

D. Firm and Industry Characteristics

The average RM users are large companies. This finding is further supported by who discovered that larger financial companies had higher inclination to build state-of-art risk management systems. Moreover, as described by, the adoption of RM practice was more dispersed among companies with high turnover. This is because it has been repeatedly proven that the high cost of RM hinders the implementation of RM practices (E.E. Carter, 2007 & 2011). Thus, it is rational to believe that larger firms, in terms of larger assets, are more capable in launching the costly RM practices. On the other hands, financial firms (banking and insurance companies) were more likely to implement RM practices.

E. Internal Factors

The presence of Chief Risk Officer had influenced the implementation of RM practices. In addition, the appointment of Chief Risk Officers who had advanced degree qualifications and possessed strong technical knowledge in RM results in more advanced RM implementation (W.N. Daud and A.S. Yazid,2011) . The support from the Board of Directors also played a crucial role in implementing RM since the large amount of company resources required for the expensive RM practices need to be approved by the Board (A.S. Yazid, M.R. Hussin, and W.N. Daud, 2011) . Similarly, reference accentuated that sufficient motivation from the functional heads is required for the implementation of enterprise-wide RM. Furthermore, leadership of the chief executives, initiative of board of directors and recommendations from internal auditors were found to be significant determinants to enterprise RM adoption. The poor implementation of RM practices has been attributed to managers' and administrators' strong skepticism about RM, indicating the strong influence of managers on the implementation of RM.

F. Acknowledgement of RM Potential Benefits

Although the RM practices are not compulsory for some companies, the recognition of RM benefits could encourage them to adopt RM practices. A survey of companies in manufacturing and services sectors revealed that majority of respondents were convinced about RM benefits (P.K. Gupta, 2011). It has also been discovered that firm adopts RM because of the economic benefits as opposed to pressure from regulatory compliance (D.Pagach and R. Warr, 2011). Unlike banking

and insurance sectors which receive strong pressure in achieving Turnbull, Basel regulations and Rating Agency's evaluation, gas and oil companies adopt enterprise RM for value-creating opportunity and good business practice (K. Muralidhar,2010) . Furthermore, a literature review by exposed that firms implemented enterprise RM to reduce potential financial loss, increase business performance, as good business practice and enhance their competitive advantage, which are the potential benefits of RM. This implies that firms adopt RM basically based on their recognition of RM benefits.

G. Emergence of New Business Trends

The new business trends include outsourcing, reduction of suppliers, globalization and product variants (J.H. Thun and D. Hoening, 2013). Similarly (A. Norman and U. Jansson,2004), listed nine current business trends comprise of outsourcing the manufacturing and R&D functions to suppliers, reduction of supplier base, globalization of supply chains, and reduction of inventory and lead time. (S.M. Wager and C. Bode,2006) consistently described the new business trends as outsourcing and off shoring many of manufacturing and R&D activities, low cost countries outsourcing, inventory reduction, and better collaboration between supply chain members. Paradoxically, the adoptions of these strategies have resulted in emerging new supply risks and higher supply chain vulnerabilities (A. Norman and U. Jansson, 2004) Therefore, it is strongly believed that the increased level of risk will as well spread the implementation of RM. Pertaining to lean manufacturing, firmly stated that "the implementation of lean concepts within supply chains must be accompanied by supply chain RM concepts."

H. Occurrence of Risk Events

Several studies have associated risk management practice with risk events such as 9/11 terrorism attack, Hurricane Katrina (S.M. Wager and C. Bode,2006) , outbreak of SARS , Enron and WorldCom scandals, and the United Stated sub-prime mortgage crisis , which receive world-wide media coverage. The media indeed influences individual beliefs on the seriousness of a hazard (N.D. Weinstein, 1988) and risk perceptions. Consequently, risk perceptions increase behavior motivation or the behavior to take protective action which in this context, the implementation of RM practices.

2.9 Theoretical framework

Recent literature suggests various antecedents or factors influencing risk management implementation in organizations (Daud, & Yazid, 2009). Framework defines important risk management mechanisms, risk management philosophies and concepts, and proposes a common risk management language, and provides clear course and direction for risk management process. The main objective of this study is to examine the level of risk management implementation in the Nigerian banking sector and investigate the antecedents of risk management implementation moderated by top management support. Based on the review of literature and research problem, a theoretical framework has been developed and presented in Fig. 2 as shown below.

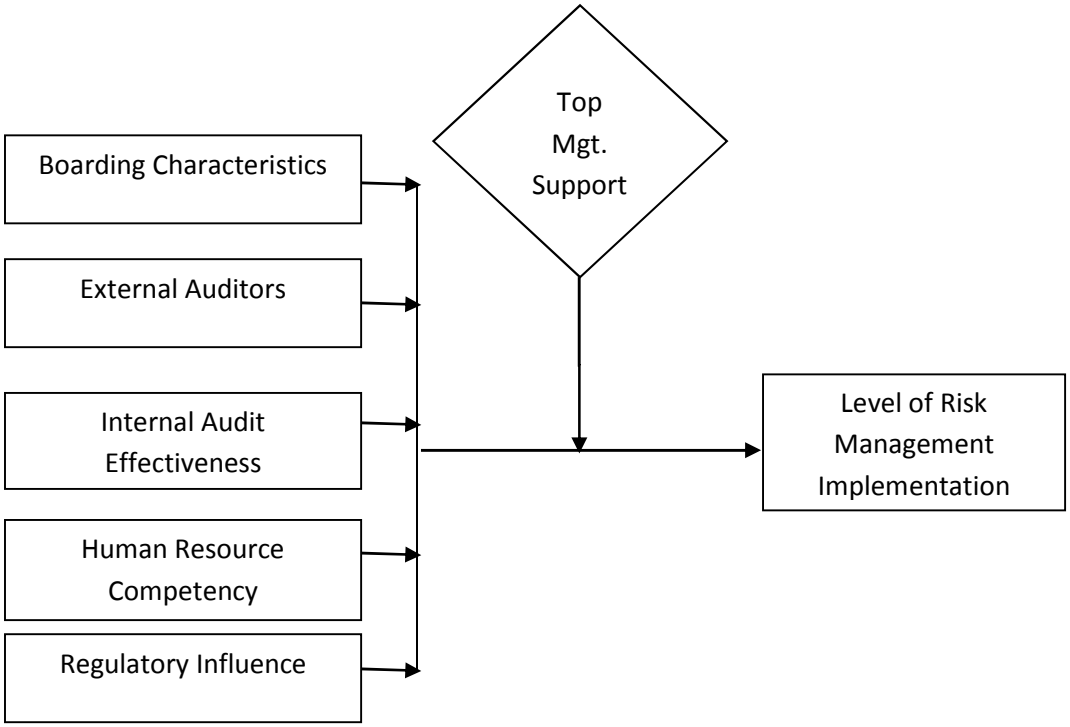

Figure 2. Theoretical Framework

2.10 KEY BANK RISKS

The risks associated with the provision of banking services differ by the type of service rendered. Different authors have grouped these risks in various ways to develop the frameworks for their analyses but the common ones which are considered in this study are credit risk, market risks (which includes liquidity risk, interest rate risk and foreign exchange risk), operational risks which sometimes include legal risk, and more recently, strategic risk.

This categorization is based on types of services offered by banks. (The Wharton Financial Institutions Center 1997, 11) But the risks seem to be insufficient and some overlapping can be found. Counterparty risk and credit risk are quite alike or the list lacks country risks, for example.

2.10.1 Credit Risk

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. The goal of credit risk management is to maximize a bank‘s risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. More than 70 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 culprit for bank failures. The dilemma is that banks have a comparative advantage in making loans to entities with whom they have an ongoing relationship, thereby creating excessive concentrations in geographic and industrial sectors. Credit risk includes both the risk that a obligor or counterparty fails to comply with their obligation to service debt (default risk) and the risk of a decline in the credit standing of the obligor or counterparty.

While default triggers a total or partial loss of any amount lent to the obligor or 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 triggers an upward move of the required market yield to compensate the higher risk and triggers a value decline (Bessis, 2010). Normally the financial condition 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 laid 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 the identification of existing and potential risks, the definition of policies that express the bank‘s risk management philosophy, and 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.

2.10.2 Market Risks

Market risk is generally considered as the risk that the value of a portfolio, either an investment portfolio or a trading portfolio, will decrease due to the change in value of the market risk factors. Pyle (1997) defines market risk as the change in net asset value due to changes in underlying economic factors such as interest rates, exchange rates, and equity and commodity prices. There are three common market risk factors to banks and these are liquidity, interest rates and foreign exchange rates.

2.10.2.1 Liquidity Risk

Greuning and Bratanovic (2009), indicate that a bank faces liquidity risk when it does not have the ability to efficiently accommodate the redemption of deposits and other liabilities and to cover funding increases in the loan and investment portfolio. These authors go further to posit that a bank has adequate liquidity potential when it can obtain needed funds (by increasing liabilities, securitizing, or selling assets) promptly and at a reasonable cost. 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 finding 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 which try to protect themselves against a possible default. Both can generate a brutal liquidity crisis which possibly ends in bankruptcy.

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, posits 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.

The Basel Committee on Bank Supervision consultative paper (June 2008) asserts that the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans makes banks inherently vulnerable to liquidity risk, both of an institution-specific nature and that which affects markets as a whole. A liquidity shortfall at a single bank can have system-wide repercussions and hence liquidity risk management is of paramount importance to both the regulators and the industry players.

The price of liquidity is however a function of market conditions and the market‘s perception of the inherent riskiness of the borrowing institution (Greuning and Bratanovic, 2009). So if there is a national crisis such as acute currency shortage or decline, or perception of the bank‘s credit standings deteriorates, or fundraising by the bank becomes suddenly important and recurrent or has unexpected fluctuation, funding becomes more costly. Financial market developments in the past decade have increased the complexity of liquidity risk and its management.

2.10.2.2 Interest Rate Risk

In general, interest rate risk is the potential for changes in interest rates to reduce a bank‘s earnings or value. Most of the loans and receivables of the balance sheet of banks and term or saving deposits, generate revenues and costs that are driven by interest rates and since interest rates are unstable, so are such earnings. 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) posits 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 reprising 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 reprising frequencies (Wright and Houpt, 1996).

2.10.2.3 Foreign Exchange Risk

Bessis (2010) defines foreign exchange risk as incurring losses due to changes in exchange rates. Such loss of earnings may occur due to a mismatch between the value of assets and that of capital and liabilities denominated in foreign currencies or a mismatch between foreign receivables and foreign payables that are expressed in domestic currency. According to Greuning and Bratanovic (2009), foreign exchange risk is speculative and can therefore result in a gain or a loss, depending on the direction of exchange rate shifts and whether a bank is net long or net short (surplus or deficit)in the foreign currency. 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. 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.

2.10.3 Operational Risk

The Basel Accord (2007) 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. Malfunctions 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 an 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 which 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.

2.10.4 Strategic Risk

While financial risk and credit risk in banking have been rigorously explored, the risk management implications of many corporate strategies and the external market and industry uncertainties have received relatively little attention (Miller, 1992). Slywotzky and Drzik (2005), define strategic risk as the array of external events and trends that can devastate a company‘s growth trajectory and shareholder value. Whiles these two authors consider strategic risk as a sole consequence of external occurrences; other authors look at strategic risk as the current and prospective impact on earnings and/or capital arising from internal business activities such as adverse business decisions, improper implementation of decisions, or lack of responsiveness to industry changes. They therefore consider strategic risk as a function of the compatibility of an organization’s strategic goals, the business strategies developed to achieve those goals, the resources deployed against these goals, and the quality of implementation.

Emblemsvag and Kjolstad (2002), also define strategic risk as risk which arises as a firm pursues its business objectives either by exploiting opportunities and/or reducing threats. Whichever way this is considered, strategic risk encompasses a variety of uncertainties which are not financial in nature, but rather credit or operational related caused by macro-economic factors, industry trends or lapses in a firm‘s strategic choices which affects the firm‘s earnings and shareholders‘ value adversely. Strategic risks often constitute some of a firm‘s biggest exposures and therefore can be a more serious cause of value destruction.

Unfortunately, as strategic risks are often highly unpredictable and of different forms, managers have also not yet been able to systematically develop tools and techniques to address them (Slywotzky and Drzik, 2005). This is because the more formalized risk management approaches often remain focused on identifiable exposures and thus less suitable to deal with many of the unexpected economic and strategic events that characterize contemporary business environment in which strategic risks are embedded.

Slywotzky and Drzik (2005) attempted to identify significant events which contribute to strategic risk and categorized them into seven main classes. These include industry margin squeeze, threat of technology shift which has the possibility of driving some products and services out of the market, brand erosion, emergence of one-of-a-kind competitor to seize the lion share of value in the market, customer priority shift, and new project failure and market stagnation. The idea was to

provide a framework for assessing a company‘s strategic risks and develop counter measures to address them. The authors intimate that the key to surviving strategic risks is; knowing how to assess and respond to them and therefore devoting resources to it. They also advice management to adjust their capital allocation decisions by applying a higher cost of capital to riskier projects and to build greater flexibility into their capital structure when faced with riskier competitive environments.

How these risks can be managed is determined by the organizational characteristics – the strengths and weaknesses. They include communication channels, operating systems, delivery networks, and managerial capacities and capabilities. The organization’s internal characteristics must be evaluated against the impact of economic, technological, competitive, regulatory, and other environmental changes. An effective strategic risk management approach should embrace both the upside and downside of risk. It should seek to counter all losses, both from accidents and from unfortunate business judgments, and seize opportunities for gains through organizational innovation and growth. Seizing upside risk involves searching for opportunities and developing plans to act on these opportunities when the future presents them. Countering downside risk on the other hand is done by reducing the possibility of occurring (probability) and scope (magnitude) of losses; and financing recovery from these losses (Herman and Head, 2002).

2.11 THE PLACE OF CORPORATE GOVERNANCE IN THE MANAGEMENT OF BANK RISKS

According to Greuning and Bratanovic (2009), corporate governance relates to the manner in which the business of the bank is governed. It is defined by a set of relationships between the bank‘s management, board, shareholders, and other stakeholders. This includes setting corporate objectives and a bank‘s risk profile, aligning corporate activities and behaviors with the expectation that management will operate the bank in a safe and sound manner, running day-to-day operations within an established risk profile and in compliance with applicable laws and regulations, while protecting the interests of depositors and other stakeholders. An effective governance practice in the banking system helps maintain public trust and confidence in the banking system. It is also said to create an enabling environment that rewards banking efficiency, mitigates financial risks, and increases systemic stability. Cost of capital tends to be lower when corporate governance is perceived to be good as it conveys a sense of lower risk that translates into shareholders’ readiness to accept lower returns. Good corporate governance has been proven to improve operational performance and reduce the risks of contagion from financial distress. Besides mitigating the internal risk of distress by positively affecting investors‘ perception of risk and their readiness to extend funding, good governance increases the firms‘ robustness and resilience to external shocks.

Greuning and Bratanovic (2009) also posit that the key elements of a sound corporate governance framework in a bank include a well-articulated corporate strategy against which the overall success and the contribution of individuals can be measured. It also includes setting and enforcing clear assignment of responsibilities, decision making authority, and accountabilities appropriate for the bank‘s selected risk profile and a strong financial risk management function (independent of business lines), adequate internal control systems (including internal and external audit functions), and functional process design with the necessary checks and balances.

It also consists of adequate corporate values, codes of conduct, and other standards of appropriate behavior and effective systems used to ensure compliance. This includes special monitoring of the bank‘s risk exposures where conflicts of interest are expected to appear such as relationships with affiliated parties. Financial and managerial incentives to act in an appropriate manner offered to the board, management, and employees, including compensation, promotion, and penalties are also important elements to a sound corporate governance as well as transparency and appropriate information flows internally and to the public.

Due to the critical importance of corporate governance to the banking industry, the Basel Committee on Banking Supervision has in place a set of governance principles for banking institutions. The guidelines contain four important forms of oversight that should be included in the organizational structure of any bank to ensure appropriate checks and balances. These are oversight by the board of directors or supervisory board, oversight by individuals not involved in the day-to-day running of the various business areas, direct line supervision of different business areas and independent risk management, compliance, and audit functions. In addition, it is important that key personnel are fit and proper for their jobs.

In the publication by Greuning and Bratanovic (2009), the key players involved in bank corporate governance and risk management are the regulatory and supervisory authorities who create a regulatory and legal environment in which the quality and effectiveness of bank risk management can be optimized to contribute to a sound and reliable banking system. Next are the shareholders who determine the direction of a bank by electing the supervisory board and approving the board of directors, the audit committee, and external auditors. The board sets the strategic direction, appoints management, establishes operational policies, and, most importantly, takes responsibility for ensuring the soundness of a bank. Another key player in the corporate governance structure of a bank is management who are responsible for bank operations and for implementing risk management policies. An audit committee which can be regarded as an extension of the board‘s risk management function helps management with the identification and handling of risk. A key external player in bank governance is the external auditors. They provide shareholders, the market and other stakeholders with information and capacity to hold directors and management accountable for the sound operation of a bank. They play a key role in improving the market‘s ability to determine which banks to do business with. 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.

2.12 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.

2.13 Case studies related to the variables

2.13.1 Understanding risk and risk management

It is important for staff of banking institutions to understand the aspect of risk in the banking operations and the risks that are inherent and exposed in their business operations. Better understanding of risk management is also necessary especially in the financial intermediation activities where managing risk is one its important activities.

A study conducted by Boston Consulting Group (2001) found that the sole determining success factors is not the technical development but the ability to understand risks trategically and also the ability to handle and control risk organizationally. Secondly, in order to realize a risk based

management philosophy, the attitude and mindset of the employees need to be changed whereby they must be brought to understand that managing risk is crucial for success. This implies that there must be intensive training, clearly defined structures and responsibilities, as well as commitment to change. In addition, it was identified that banks in North America and Australia concentrate on risk management primarily to enhance their competitive positions. Meanwhile in Europe, Asia and particularly in South America, risk management is considered primary from the perspective of regulatory requirements.

Then, Al-Tamimi and Al-Mazrooei (2007) found that the UAE banks staff have good understanding of risk and risk management, which might give an indication about the ability of these banks to manage risks efficiently in the future. Moreover, understanding risk and risk management had positive effect on risk management practice although it is insignificant.
From the literature, it shows that understanding risk and risk management is an important factor of risk management practices.

Ahmed and Khan (2007) analyzed the issue of risk management systems in Islamic banks in ten countries; their findings indicated that IBs are able to establish better risk management policies and procedures compared to measuring, mitigating, and monitoring risk. They further suggested the IBs to upgrade their measuring, mitigating, and monitoring processes. In the case of Malaysia and Indonesia, Abdul Rahman et al. (2012) stated that the Islamic banks in Malaysia should strengthen their risk management practices with the aim of being relevant in the industry and being able to survive in the challenging environment; Islamic banks in Indonesia, on the other hand, should improve their approach to managing risk.

2.13.2 Risk identification

There are few conceptual studies on risk identification of financial institutions (e.g. Kromschroder and Luck, 1998; Luck 1998; Tchankova, 2002; Barton et al. 2002) andfew empirical studies that include risk identification of banks (e.g. Al-Tamimi, 2002; Al-Tamimi and Al-Mazrooei, 2007).
Risk identification is the first stage of risk management (Tchankova, 2002) and a very important step in risk management (Al-Tamimi and Al-Mazrooei, 2007). The first step in organizing the implementation of the risk management function is to establish the crucial observation areas inside and outside the corporation (Kromschroder and Luck, 1998). Then, the departments and the employees must be assigned with responsibilities to identify specific risks. For instance, interest rate risks or foreign exchange risks are the main domain of the financial department. It is important to ensure that the risk management function is established throughout the whole corporation; i.e. apart from parent company, the subsidiaries too have to identify risks, analyze risks and so on.
There are many other approaches for risk identification, for instance, scenario analysis or risk mapping. An organization can identify the frequency and severity of the risks through risk mapping which could assist the organization to stay away from high frequency and low severity risks and

instead focus more on the low frequency and high severity risk. Risk identification process includes risk-ranking components where these ranking are usually based on impact, severity or dollar effects (Barton et al. 2002).

Accordingly, the analysis helps to sort risk according to their importance and assists the management to develop risk management strategy to allocate resources efficiently. In relation to commercial banks' practice of risk management, Al-Tamimi (2002) found that the UAE commercial banks were mainly facing credit risk. The study also found that inspection by branch managers and financial statement analysis are the main methods used in risk identification. The main techniques used in risk management are establishing standards, credit score, credit worthiness analysis, risk rating and collateral. The recent study by Al-Tamimi and Al-Mazrooei (2007) was conducted on banks' risk management of UAE national and foreign banks.

Their findings reveal that the three (3) most important types of risks encountered by UAE commercial banks are foreign exchange risk, followed by credit risk, then operating risk. Not only that, there is no significant different on risk identification between UAE national and foreign bank, hence, the UAE banks clearly identified the potential risks relating to each of their declared aims and objectives. Moreover, risk identification is positively significant to influence risk management practices.

In the case of Islamic banks, studies made especially on risk identification and risk mitigation includes the work of Haron and Hin Hock (2007) on market and credit risk, and Archer and Haron (2007) specifically on operational risk. Haron and Hin Hock(2007) explain the inherent risk i.e. credit and market risk exposures in IBs. Also, they illustrate the notion of displaced commercial risk that is important in IBs. They conclude that certain risks may be considered as being inherent in the operations of both Islamic and conventional banks. Although the risk exposures of IBs differ and may be complex than conventional financial institution, the principles of credit and market risk management are applicable to both. In addition, the IFSB's standards on capital adequacy and risk management guiding principles mark the first steps in an ongoing process of developing prudential standards and filling regulatory gaps in the field of Islamic finance.

Apart from those two risks, Archer and Haron (2007) show that IBs are exposed to a number of operational risks that are different from those face by conventional banks. They argue that the complexities of a number of their products, as well as their relative novelty in the contemporary financial services market, combined with the fiduciary obligations of Islamic bank when it acts as a Mudarib, imply that for IBs operational risk is very important consideration. Because of that, the IFSB has taken the position while Investment Account Holders (IAHs) may be considered in the absence of misconduct and negligence by the Islamic bank to bear credit and market risks of assets in their funds have been invested by the bank, the latter must be considered as being exposed to the operational risk arising from its management of those funds.

Empirical studies made by Khan and Ahmad (2001) found that IBs face some risks arising from profit-sharing investment deposits. Here, the bankers considered these unique risks more serious than conventional risks faced by financial institutions. Also, the surveys show that the Islamic bankers judge profit sharing mode of financing (i.e. diminishing Musharakah and Mudarabah), and product-deferred sale (i.e. Salam and Istisa') are riskier than Murabaha and Ijarah. The results of survey of risk perception in different modes of financing shows that risk level is considered elevated. The high perception of risks may be an indication of the low degree of active risk management due to the absent of risk control through internal processes and control, especially in the case of operational risk (Iqbal and Mirarkhor, 2007). Also, Noraini (2005) indicates that credit risk in Islamic banks perceived to be the most important risk. Finally, from the literature, it is suggested that risk identification is one of the important step of risk management practices.

2.13.3 Risk analysis and assessment

There are many conceptual studies made on risk analysis and assessment by reference to measurement and mitigation of risk. In practice, it is useful to classify the different risks according to the amount of damage they possibly cause (Fuser et al, 1999). This classification enables the management to divide risks that are enabling to threat the existence of the corporation from those which can only causing slight damages.

Frequently, there is an inverse relationship between the expected amount of loss and its corresponding likelihood, i.e. risks that will cause a high damage to corporation, like earthquakes or fire, occur seldom, while risks that occur daily, like interest rate risks or foreign exchange risks, often cause only relatively minor losses, although these risk scan sometimes harm the corporations seriously. The empirical findings by Al-Tamimiand Al-Mazrooei (2007) highlighted that UAE banks are somewhat efficient in analyzing and assessing risk and there is a significant different between UAE national and foreign banks in the practice of risk analysis and assessment. Additionally, the findings show that risk analysis and assessment are influencing risk management practices.

It is also mentioned by Drzik (1995) that the BAI Risk Management Survey showed that large bank in the US had made a substantial progress in their development and implementation of risk measures. The measures use not only for risk control purposes, but also for performance measurements and pricing.

In the context of Islamic banking, few conceptual studies (e.g. Sundararajan, 2007; Jackson-Moore, 2007) discuss the risk measurement aspects particularly on the unique risk. A comprehensive risk measurement and mitigation methods for various risk arising from Islamic financing activities and from the nature of profit and loss sharing (PLS) in the source of funds especially investment account holders (IAHs) are explained by Sundararajan (2007). He concludes

that the application of modern approaches to risk measurement, particularly for credit and overall banking risks is important for IBs. Also, he suggests that the need to adopt new measurement approaches is particularly critical for IBs because of the role IAHs play, the unique mix of risks in Islamic finance contracts. However, Noraini (2005) indicates that IBs are perceived not to use the latest risk measurement techniques and Shari'ah compliant risk mitigation techniques due to different Shari'ah interpretation of these techniques. Also, appropriate measurement of credit and equity risks in various Islamic finance facilities can benefit from systematic data collection efforts, including by establishing credit and equity registry.

Jackson-Moore (2007) suggests that bank need to start collecting data, and there can be significant advantages in pooling information and using common definitions, standards, and methodologies for operational risk which is argued can lead to significant losses in all financial institutions. Finally, it is found that risk analysis and assessment particularly on measuring risk in banking institutions is important for risk management practices.

2.13.4 Risk monitoring

Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place (IRM, AIRMIC and ALARM; 2002). Risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps bank management to discover mistake at early stage (Al-Tamimi and Al-Mazrooei, 2007).

Monitoring is the last step in the corporate risk management process (Pausenberger and Nassauer, 2002). According to them, control has to be established at different levels. The control by the management board will not be enough to ensure the effective functioning of the risk monitoring system, because the management board members do not have time on their hands to exercise extensive control. Hence, the management board will install an independent unit to complete the task of internal supervision. This task is the responsibility of the internal audit. Also, the supervisory board is obliged to control the risk management process. The supervisory board is supported by the auditor. If the auditor discovers a defect, he will have to inform the supervisory board and the management board. Finally, the shareholders of the corporation can use their rights to demand information in order to judge the efficiency of the risk management system. The director's report enables the shareholders to assess the status of the corporation knowledgeably and thoroughly.

Khan and Ahmad (2001) conducted a survey of risk management practices and found that on average the lowest percentage is on the measuring, mitigating and monitoring risk i.e. 69% score as compared to risk management policies and procedures i.e.82.4%, and internal control of Islamic banks i.e. 76%. Al-Tamimi and Al-Mazrooei(2007) found that there is significant difference between UAE national and foreign banks in risk monitoring and controlling. Also, the UAE

commercial banks have an efficient risk monitoring and controlling system and it has positive influence on risk management practices. Finally, risk monitoring is important process to ensure that risk management effectively been practiced by banks

2.13.5 Required Policies and Procedures

A risk management system has to be based on a set of written risk policies and procedures that are endorsed by the board and implemented by the senior management of the firm.
Formal policies and procedures provide consistency and discipline within the organization and can also be effective in keeping the focus on its objectives. According to Morgan and Andersen (1997:71), effective risk management policies should be concise, yet provide adequate detail on the following:

- ✓ Exposure Definition
- ✓ Exposure measurement methodologies
- ✓ Authorized risk management strategies and related limits: and
- ✓ Performance measures by which the risk programme will be evaluated

  Morgan and Anderson (1997:75) also state that procedure documents should support the policies and provide additional details which establishes the following:

- ✓ Responsibilities within various functions
- ✓ Authorized transactors
- ✓ Reporting requirements, including frequency
- ✓ Confirmation, Processing and Settlement procedures
- ✓ Valuation
- ✓ Credit risk measurement activities
- ✓ Accounting and financial reporting requirements

To ensure the positive contribution of policies and procedures to an organization, it is important they are updated and in line with the organization strategy, business and internal operation.

2.14. Related empirical studies in Ethiopia

Few studies were conducted by different researchers in Ethiopia on the impact of credit risk and liquidity risk. The following section will presents the related study of Worku (2006), Girma Mekasha (2011) and Tseganesh Tesfaye(2012).Worku (2006), conducted the study on the impact of liquidity risk on the performance of commercial banks of Ethiopia. He argued that liquidity has an impact on the performance of commercial banks in Ethiopia and there was an inverse relation between deposit/net loan and ROE. And the coefficient of liquid asset to total asset was positive and directly related with ROE. In addition, the study also found that the capital adequacy of all banks in Ethiopia were above threshold, means there was sufficient capital that can cover the risk-weighted assets. Depositors who deposit their money in all banks were safe because all the studied banks fulfilled NBE requirement (Worku, 2006). Likewise, Tseganesh Tesfaye(2012), conducted the study on the determinants of banks liquidity and their impact on financial performance with

the aim of identify determinants of commercial banks liquidity in Ethiopia and then to see the impact of banks liquidity up on financial performance through the significant variables explaining liquidity. The study used balanced fixed effect panel regression model with eight commercial banks in the sample covered the period from 2000 to 2011. The result of the study revealed that, among the statistically significant factors affecting banks liquidity capital adequacy and bank size had positive impact on financial performance whereas, non-performing loans and short term interest rate had negative impact on financial performance. Interest rate margin and inflation had negative but statistically insignificant impact on financial performance. Finally the study concludes that, the impact of bank liquidity on financial performance was non-linear/positive and negative.

In relation to credit risk and banks performance the study conducted by Girma Mekasha (2011), on "Credit Risk management and its impact on performance in Ethiopian Commercial Banks." With the aim of better understanding of credit risk management and its impact on performance (return on asset). The result of the study revealed that the most common way of communicating effectively to reduce risk is developing understanding between management team and employee. The study also reveals banks with higher profit potentials can better absorb credit losses whenever they crop up and therefore record better performances. Furthermore, the study shows that there is a direct but inverse relationship between return on asset (ROA) and the ratio of non-performing loans to total loan (NPL\TL) and loan provision to total loan. Finally the study concludes that, banks with good credit risk management policies have a lower loan default rate and relatively higher return on asset.

2.15. Summary and Knowledge gap

Most Studies on risk management practice of commercial banks mostly have been conceptual in nature, often drawing the theoretical link between good risk management practices and improved bank performance. There are limited studies providing empirical evidence to the risk management practices of commercial banks in Ethiopia.. However, as per the researcher's knowledge no study is conducted to see risk management practice of commercial banks in association with some variables like: Risk identification, Risk monitoring, Risk Evaluation, Required policies in place, Risk Assessment and analysis and Understanding risk management practices. Hence, this study aims to fill the gap in the literature by focusing on the risk management practices of the commercial banks of Ethiopia.

Chapter 3: Materials and Methodology

This chapter deals with the methodology of the study including 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 is conducted based on previous knowledge and experience from working in financial institutions. Moreover, risk management practice of Ethiopian commercial banks is a current phenomenon, and risk management is found 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. Risk management is more important in the financial sector than in other business areas because the financial sector 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 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.

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

3.4 Data Collection Instruments

Data was collected from 100 staff of the fifteen selected commercial banks. Data was gathered through questionnaire that is both closed and open-ended 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 will be 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 Forty two questions divided into four sections. 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.

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 which have been operated in Ethiopia 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 3state-owned banks. However, to undertake this research paper, the researcher was purposely sampled 15 banks to get rich information sources.

Thus, this research paper used purposive sampling method to draw the sample from the population. These selected fifteen commercial banks have 100 employees in their risk management directorate and all employees were included in this study.

3.6 Presentation of Data

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 using table form or graph forms then data were analyzed using frequency percentage and the information from secondary data supports the 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 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 Variables

This study is mainly related to the risk management practices being followed by the commercial Banks in Ethiopia. The questionnaire is used as a main tool to collect primary data and check the extent to which the risk management practices are being carried upon by the commercial banks in Ethiopia. The six important aspects of risk management process are categorized as one dependent and five explanatory variables.
Dependent Variable: The dependent variable of this study is *risk management*. It is measured with the help of risk management practices and specifically their degree of usage within the commercial banks of Ethiopia.

Independent or Explanatory Variables: The explanatory variables include the five main aspects of risk management. These variables are as follows:

- ✓ Understanding Risk and Risk Management.
- ✓ Risk Assessment and Analysis
- ✓ Risk Monitoring
- ✓ Risk Identification
- ✓ Risk Evaluation
- ✓ Required Policy

A regression model is applied to estimate the relationship between one dependent variable and the five explanatory variables. The model is as follows:

RMP = ƒ (URM, RAA, RM, RI, RE, RP)

Where:

RMP = Risk Management Practices;

URM = Understanding Risk and Risk Management;

RAA = Risk Assessment and Analysis;

RM = Risk Monitoring;

RI = Risk Identification;

RE = Risk Evaluation; and

RP= Required Policy

3.8 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 is based upon non-probability sampling. 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 was first administered in pilot testing to ensure the questions are understandable and acceptable. In addition, the empirical data are analyzed with SPSS for windows, which is possibly the most widely used computer software for the analysis of quantitative data.

Chapter Four: Data Analysis and Result Discussion

This chapter deals with data presentation, analysis and interpretation. A survey has been carried out using the attached questionnaire (Annex1) with the goal of assessing determining factors of best risk management practices in Ethiopian commercial banks. Questionnaires were sent to Hundred Risk and compliance department staffs at different position to the selected public and commercial banks listed in (Annex 2). Among them, eighty percent (80 %) have responded. 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.

The first part covers the analysis of the respondent's profile. The second part discusses results of questions 5-41 of the questionnaire which were used to answer the 3 research questions. Questions were based on a five point Likert scale ratings of individual factors. The respondents were asked to rank on a scale of 1-5 (where 1 indicates "Strongly Disagree" and 5 indicates "Strongly Agree") the extent to which they agree with statements given, indicating the degree of their understanding & implementation of risk management, the extent to which they are aware of the risks that are associated with their actions and goals & if National bank of Ethiopia Guideline regarding Risk assisted or hindered risk management amongst banks in the Ethiopian commercial banks.
The fourth section covers results of the open ended qualitative questions in the questionnaire designed to obtain more details from the employees around their specific attitudes towards, and understanding of, risks and risk management, as well as clarify their answers to the quantitative questions. It assisted in providing some subjective data on the employees' attitude to risks and risk management.

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 using a semi-structured question on the questionnaire and their responses are presented and analyzed as follows. The results of this survey processed using the SPSS (**Statistical Package for the Social Sciences)** software.
There were a total of 80 respondents, of these, 60 (75%) were male and 20 (25%) were female. In general, the following figure shows the distribution of the respondent's gender.

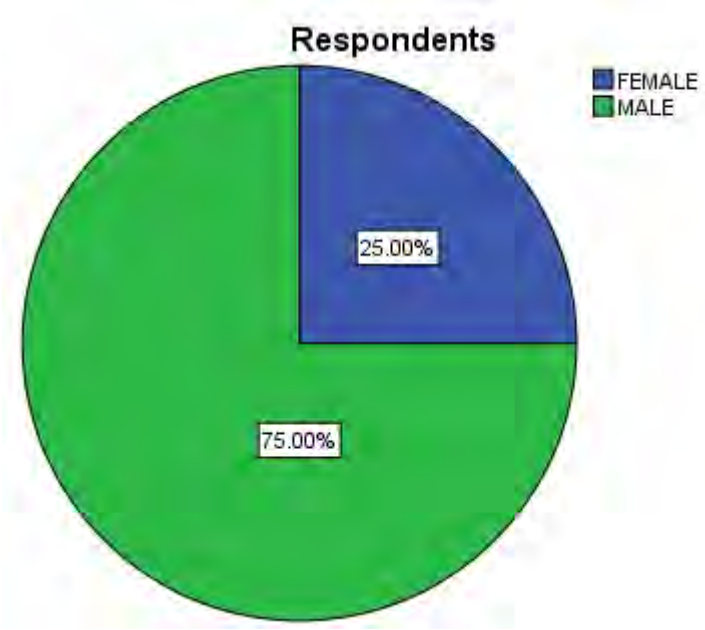

Figure 3. Respondent's classification by Sex

Table 1. Respondents sex distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FEMALE	20	25.0	25.0	25.0
	MALE	60	75.0	75.0	100.0
	Total	80	100.0	100.0	

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 those respondents working with risk management. Out of 80 respondents, 28 respondents (35% of total respondents) represent a group that covers 1 to 5 years of experience. The rest 32respondents, which represent 40 %, covers 6-10 years of experience. Employees with experience of above ten years of service represent 25 % of the total respondents.

Table. 2 Respondents work Experience summary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 YR	28	35.0	35.0	35.0
	6-10YR	32	40.0	40.0	75.0
	MORE THAN 10 YR	20	25.0	25.0	100.0
	Total	80	100.0	100.0	

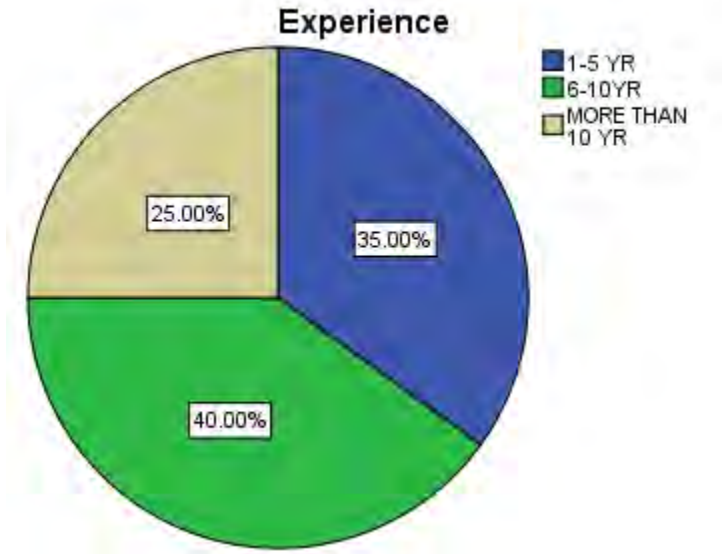

Figure 4. Respondent's years of service

As it is indicated above, one can understand that most of the experts have years of experience between 6-10 working in the risk management department. It implies that most of the staffs' had acquired enough experience to perform risk management activities, though there is no minimum requirement set by the standard.

Table 3&4 indicates level of education and qualification of the respondents. Accordingly, out of 80 respondents, 59 (73.8%) have BA or BSc degree and 20 (25%) of the respondents have Master's degree in different educational qualifications; the rest 1.3 % holds Diploma. These results indicated that almost all banks possessed professionals with first degree. From table 2, it can be seen that some of the respondents are specialized in the field of Management, which accounts for 36.3% of the total respondent and followed by 32.5 % in the Accounting. The remaining 31.3% of the respondents are specialized in Marketing and other field of education.

Table 3: Respondents level of Education

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DIPLOMA	1	1.3	1.3	1.3
	DEGRE	59	73.8	73.8	75.0
	MASTER'S	20	25.0	25.0	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

Table 4: Respondents Qualifications

Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ACCOUNTING	26	32.5	32.5	32.5
	MANAGEMENT	29	36.3	36.3	68.8
	MARKETING	7	8.8	8.8	77.5
	OTHER	18	22.5	22.5	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

As it is discussed in 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 some idea about 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 that majority of the respondents have an idea about the process of risk management which is very important for the implementation of effective risk management in banks.

4.2 Respondent's response on Understanding Risk & Risk management

Even though the staff of commercial banks that are practicing in managing risk may have good knowledge regarding different methods of risk analysis and assessments, risk identification etc., it does not clarify that risk management practices are followed by Ethiopian commercial banking system or not. So in order to address this question we must concentrate on the risk management practices that are adopted by the Ethiopian commercial banking system. In order to get the respondents' view and to know whether they have some knowledge about risk and risk management, there were certain questions added to the questionnaire. Table 5, 6,7 & 8 shows that the percentage and mean of the responses on the thirteen (13) questions regarding URM and the analysis of each question will be presented under each table.

Table.5 Respondent's Result on goals of risk management process

Q.1. Please rate each of the following goals of your risk management process in terms of their importance. Use a scale of 1-6, where 6 is the most important	No of responses	%	Mean	Std. Deviation
A. To reduce legal liability	80	17.5	3.8250	1.39416
B. To maximize profit	80	18.8	4.0000	1.44957
C. To avoid making any losses	80	31.3	4.4500	1.52531
D. To free up as much capital as possible	80	1.3	2.7125	1.51944
E. To minimize your exposure to market downturns	80	5	2.8250	1.66707
F. To reduce the credit risk	80	46.3	4.3000	1.91199
Valid N (listwise)	80			

Source: SPSS data analysis output

Analysis of Respondent's Responses

The results of this question imply that there is a potential misunderstanding amongst banks in the sample commercial banks of Ethiopia as to the true purpose of risk management. As argued in the Economist (2009), the main aim of a risk management process should be to maximize the profits of the firm, as should be any actions taken by the firm. However, in the responses above maximizing profit, response b, was rated third lowest in terms of importance. With 18.8 per cent of respondents rating it as the top or third top priority. This implies that some banks are aware of this, but as one of the risk managers noted in their response to question 42, "in the commercial banks of Ethiopia, risk management as a tool to manage the profitability and operations is relatively new".

This implies that many of the banks in the sample still need to develop a greater understanding of the usefulness of risk management and its role in strategic business management. Indeed, the two factors with the strongest rankings were "C: to avoid making any losses" and "f: to reduce the credit risk of your loan portfolio". This could indicate that risk managers in the commercial banks of Ethiopia are overly concerned with the most visible aspects of the process: the figures for losses and credit risk, and not the factors which actually add value to the business.

Table.6 -Respondent's Results on ranking of the stated factors in terms of their importance

Q.2. Please rank these factors in terms of their importance in the current strategic goals and objectives of your bank. Please rank them in terms of importance, where 1 is the most important. If any are not important to your bank's current strategic goals, please exclude them from the	N	%	Mean	Std. Deviation
A. Increase profits	80	46.3	2.4500	1.72032
B. Increase market share	80	17.5	2.7125	1.10458
C. Reduce costs	79	12.5	3.4557	1.41238
D. Expand in to new markets	79	8.8	3.6709	1.61501
E. Improve efficiency	80	30	3.0250	1.86218
Valid N (listwise)	79			

Source: SPSS data analysis output

Analysis of Respondent's Responses

This question indicated as strong focus on the need to increase profits, which received a mean response of 2.45. Second to this was the need to increase market share, indicating that some banks may be prioritizing managerial goals over financial goals. Whilst the desire to reduce cost also received a relatively high ranking, which can be strongly linked to improved financial performance. Only 8.8 % of respondent rated expanding into new markets as an important strategic goal, implying that commercial banks of Ethiopia remain focused on adding shareholder value.

Table.7 Respondent's Results on National banks role in managing risk

Q. 3. To what extent has the National bank of Ethiopia helped in managing risk?	Frequency	Percent	Valid Percent	Cumulative Percent
A. HELPED SIGNIFICANTLY	35	43.8	43.8	43.8
B. HELPED A LITTLE	27	33.8	33.8	77.5
C. NIETHER HELPED NOR HINDERED	4	5.0	5.0	82.5
D. HINDERED A LITTLE	11	13.8	13.8	96.3
E. HINDERED SIGNIFICANTLY	3	3.8	3.8	100.0
Total	80	100.0	100.0	

Source: SPSS data analysis output

Summary of Respondent's Responses

The responses to this question were somewhat influenced by the fact that, National bank of Ethiopia block the free computation between public and private banks. As such, some of the respondents were only able to provide estimates as to its role in the management of risk. In spite of this, 43.8 % of the respondents agreed that it had helped significantly their management of risk. This implies that the National bank of Ethiopia is assisting risk management, and should continue to do so in future.

Table.8 the importance of risk management practices

Q.4.There is a common understanding of risk management across the bank		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	10	12.5	12.5	12.5
	DISAGREE	16	20.0	20.0	32.5
	NUTRRAL	12	15.0	15.0	47.5
	AGREE	18	22.5	22.5	70.0
	STRONGLY AGREE	24	30.0	30.0	100.0
	Total	80	100.0	100.0	
Q.5. Responsibility of risk management is clearly set out and well understood across the bank		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	STRONGLY DISAGRREE	13	16.3	16.3	16.3
	DISAGREE	8	10.0	10.0	26.3
	NUTRRAL	12	15.0	15.0	41.3
	AGREE	30	37.5	37.5	78.8
	STRONGLY AGREE	17	21.3	21.3	100.0
	Total	80	100.0	100.0	
Q.6.Accountability of risk management is clearly set out and well understood across the bank		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	11	13.8	13.8	13.8
	DISAGREE	7	8.8	8.8	22.5
	NUTRRAL	28	35.0	35.0	57.5
	AGREE	19	23.8	23.8	81.3
	STRONGLY AGREE	15	18.8	18.8	100.0
	Total	80	100.0	100.0	
Q.7. The management of risk makes an important contribution to the success of the bank		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	2	2.5	2.5	2.5
	DISAGREE	3	3.8	3.8	6.3
	NUTRRAL	5	6.3	6.3	12.5
	AGREE	30	37.5	37.5	50.0
	STRONGLY AGREE	40	50.0	50.0	100.0
	Total	80	100.0	100.0	
Q.8. The management of risk makes an important contribution to the financial stability of the bank in the current financial climate		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	3	3.8	3.8	3.8
	DISAGREE	3	3.8	3.8	7.5
	NUTRRAL	16	20.0	20.0	27.5

	AGREE	28	35.0	35.0	62.5
	STRONGLY AGREE	30	37.5	37.5	100.0
	Total	80	100.0	100.0	

Q.9. Risk management helps to reduce costs and expected losses at the bank		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	3	3.8	3.8	3.8
	DISAGREE	7	8.8	8.8	12.5
	NUTRRAL	5	6.3	6.3	18.8
	AGREE	18	22.5	22.5	41.3
	STRONGLY AGREE	47	58.8	58.8	100.0
	Total	80	100.0	100.0	

Q.10. It is important to continuously review and update risk management techniques		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	2	2.5	2.5	2.5
	DISAGREE	2	2.5	2.5	5.0
	NUTRRAL	4	5.0	5.0	10.0
	AGREE	17	21.3	21.3	31.3
	STRONGLY AGREE	55	68.8	68.8	100.0
	Total	80	100.0	100.0	

Q.11. Your bank takes significant steps to keep up to date with current risk management trends		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	21	26.3	26.3	26.3
	DISAGREE	19	23.8	23.8	50.0
	NUTRRAL	8	10.0	10.0	60.0
	AGREE	21	26.3	26.3	86.3
	STRONGLY AGREE	11	13.8	13.8	100.0
	Total	80	100.0	100.0	

Q.13 Your bank understands the risk management systems used by other banks and their costs and benefits		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	25	31.3	31.3	31.3
	DISAGREE	16	20.0	20.0	51.3
	NUTRRAL	10	12.5	12.5	63.8
	AGREE	18	22.5	22.5	86.3
	STRONGLY AGREE	11	13.8	13.8	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

Summary of Respondent's Responses of Table 8

In the area of risk awareness, there seems to be a good understanding of risk management among the sample commercial banks of Ethiopia as the result of the respondent's response shows 30% and 22.5 % strongly agree and agree respectively. 50 % of the respondents strongly agree that the management of risk makes an important contribution to the success of the bank, and also 37.5 % of the respondents agree on its contribution to financial stability in the current financial climate, as well as understanding that risk management helps reduce costs and losses. Commercial banks in Ethiopia understand the importance of reviewing and updating their risk management techniques as 68.8 % of the respondents strongly agree, they are less able to actually implement them in reality. However, the results of the respondent's response analysis which is 63.8 % indicate that this is countered by a lack of effort to understand the systems used by their peers and the market as a whole, as well as absence of clearly set out accountability and responsibility to be well understood across their staffs in order to effectively assess the various risks the banks face.

4.3 Respondent's Responses in Risk Assessment and Analysis

To know if the staff of Ethiopian commercial banking system has knowledge about risk assessment and analysis of risk, they were given opportunity to answer certain questions. The questionnaire contains seven (7) questions regarding risk assessment analysis. It indicates that how much each bank assesses the risk that it is facing and how efficiently it analyzes risk (Table 9).

Table. 9 Risk assessment and Analysis

Q.14. Your Bank assesses the likelihood of occurring risk.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	6	7.5	7.5	7.5
	DISAGREE	15	18.8	18.8	26.3
	NUTRRAL	15	18.8	18.8	45.0
	AGREE	30	37.5	37.5	82.5
	STRONGLY AGREE	14	17.5	17.5	100.0
	Total	80	100.0	100.0	
Q.15. Your bank's reporting and communication processes support the effective management of risk		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	2	2.5	2.5	2.5
	DISAGREE	10	12.5	12.5	15.0
	NUTRRAL	21	26.3	26.3	41.3
	AGREE	23	28.8	28.8	70.0
	STRONGLY AGREE	24	30.0	30.0	100.0
	Total	80	100.0	100.0	
Q.16. Your bank develops action plans for implementing decisions and management plans for identified risks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	1	1.3	1.3	1.3
	DISAGREE	9	11.3	11.3	12.5
	NUTRRAL	19	23.8	23.8	36.3
	AGREE	20	25.0	25.0	61.3
	STRONGLY AGREE	31	38.8	38.8	100.0
	Total	80	100.0	100.0	

Q.17. Your bank's risk management processes are well documented and provide guidance to staff about the management of risk		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	15	18.8	18.8	18.8
	DISAGREE	18	22.5	22.5	41.3
	NUTRRAL	20	25.0	25.0	66.3
	AGREE	20	25.0	25.0	91.3
	STRONGLY AGREE	7	8.8	8.8	100.0
	Total	80	100.0	100.0	
Q.18. Your bank's training policies encourage formal training in risk management		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	31	38.8	38.8	38.8
	DISAGREE	13	16.3	16.3	55.0
	NUTRRAL	2	2.5	2.5	57.5
	AGREE	16	20.0	20.0	77.5
	STRONGLY AGREE	18	22.5	22.5	100.0
	Total	80	100.0	100.0	
Q.19. Your Bank's response to the analysis of risk includes assessment of the costs and benefits of addressing risk.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	28	35.0	35.0	35.0
	DISAGREE	14	17.5	17.5	52.5
	NUTRRAL	13	16.3	16.3	68.8
	AGREE	13	16.3	16.3	85.0
	STRONGLY AGREE	12	15.0	15.0	100.0
	Total	80	100.0	100.0	

Q.20. Your bank has excellent overall risk management practices and processes		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	10	12.5	12.5	12.5
	DISAGREE	15	18.8	18.8	31.3
	NUTRRAL	26	32.5	32.5	63.8
	AGREE	14	17.5	17.5	81.3
	STRONGLY AGREE	15	18.8	18.8	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

Summary of Respondent's Responses

55 % of the respondents agree that banks assess the likelihood of occurring risk, and 58 % of the respondents agree that the reporting and communication process support the management of risk. Regarding implementation and decision 38.8 % of the respondents strongly agree that their banks develop action plans for implementing decision and managing identified risks. Here there is evidence that the level of assessing the likelihood of risk occurrence, communication process to support effective risk management, developing action plans for implementing decisions for identified risks is almost similar among the fifteen sample commercial banks of Ethiopia. But as risk assessment and evaluation is important for the existence of financial institutions banks should encourage and arrange formal training in risk management since 38.8 % of the respondents strongly disagree on the existence of formal training and also include assessment of the costs and benefits of addressing risk while assessing the specific risk identified as it is supported by 35 % and 17.5 % of the respondents strongly agree and agree respectively. In addition, they need to look for document the risk management process and to provide guidance to staff about risk management in order to be competent in the future and to keep their performance.

4.4 Respondent's responses: Risk Monitoring

To know if the staff of Ethiopian commercial banking system has knowledge about risk monitoring, they were given opportunity to answer certain questions. The questionnaire contains six (6) questions regarding risk Monitoring. It indicates that how much each bank Monitor the risk that it is facing (Table 10).

Table 10 -Respondent's Responses on Risk monitoring

Q.21.Monitoring the effectiveness of risk management is an integral part of routine management reporting		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	17	21.3	21.3	21.3
	DISAGREE	13	16.3	16.3	37.5
	NUTRRAL	2	2.5	2.5	40.0
	AGREE	31	38.8	38.8	78.8
	STRONGLY AGREE	17	21.3	21.3	100.0
	Total	80	100.0	100.0	
Q.22.Level of control by your bank is appropriate for the risk that it faces		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	3	3.8	3.8	3.8
	DISAGREE	5	6.3	6.3	10.0
	NUTRRAL	10	12.5	12.5	22.5
	AGREE	30	37.5	37.5	60.0
	STRONGLY AGREE	32	40.0	40.0	100.0
	Total	80	100.0	100.0	
Q.23.In your bank, reporting and communication processes support the effective management of risks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	8	10.0	10.0	10.0
	DISAGREE	11	13.8	13.8	23.8
	NUTRRAL	15	18.8	18.8	42.5
	AGREE	25	31.3	31.3	73.8
	STRONGLY AGREE	21	26.3	26.3	100.0
	Total	80	100.0	100.0	

Q.24. Your Bank's response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	4	5.0	5.0	5.0
	DISAGREE	9	11.3	11.3	16.3
	NUTRRAL	9	11.3	11.3	27.5
	AGREE	37	46.3	46.3	73.8
	STRONGLY AGREE	21	26.3	26.3	100.0
	Total	80	100.0	100.0	
Q.25. Your Bank's response to risk includes action plans in implementing decisions about identified risk		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	9	11.3	11.3	11.3
	DISAGREE	10	12.5	12.5	23.8
	NUTRRAL	4	5.0	5.0	28.8
	AGREE	32	40.0	40.0	68.8
	STRONGLY AGREE	25	31.3	31.3	100.0
	Total	80	100.0	100.0	
Q.26. The existing control and monitoring process in your Bank always considers National bank of Ethiopia compliance issues		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	3	3.8	3.8	3.8
	DISAGREE	3	3.8	3.8	7.5
	NUTRRAL	6	7.5	7.5	15.0
	AGREE	37	46.3	46.3	61.3
	STRONGLY AGREE	31	38.8	38.8	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

Summary of Respondent's Responses

From closed ended questions, table 10 shows that in general all respondents agree monitoring the effectiveness of risk management is an integral part of routine management reporting as the respondents result shows 21.3 % strongly agree and 38.8 % of the respondents agree on the matter and the banks response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses as it is supported by 26.3 % of the respondents strongly agree and 46.3 % of the respondents also agree. Moreover, the table indicates that the bank's response to risk also includes action plans in implementing decisions about identified risk, 73.8 % of the respondents agree on the presence of effective reporting and communication in order to support management of identified risk. Regarding the appropriateness of the control over the risk the banks faces majority of the respondents agree on the matter and also 61.3 % of all the sample commercial banks witnessed that their monitoring process always consider National Bank of Ethiopia's guideline. So from the above table we can generalize that there is a good practice of risk monitoring in the sample commercial banks of Ethiopia.

4.5 Respondent's responses in relation to: Risk Identification

Diagnosis is a very important step in solving a problem; whenever one wants to solve any problem, the problem should be diagnosed accurately so that it can be easy to solve. Whenever we talk about risk management, risk identification is an important step in it. For risk identification purpose we have included six (6) questions. Table 11& 12 shows the results of the respondents' responses towards risk identification.

Table. 11 Respondents responses on Risk Identification

Q.27. Your bank finds it difficult to identify and prioritize its main risks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	34	42.5	42.5	42.5
	DISAGREE	28	35.0	35.0	77.5
	NUTRRAL	12	15.0	15.0	92.5
	AGREE	6	7.5	7.5	100.0
	Total	80	100.0	100.0	

Q.28. Your bank finds it difficult to manage its main risks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	29	36.3	36.3	36.3
	DISAGREE	27	33.8	33.8	70.0
	NUTRRAL	18	22.5	22.5	92.5
	AGREE	5	6.3	6.3	98.8
	STRONGLY AGREE	1	1.3	1.3	100.0
	Total	80	100.0	100.0	
Q.29. Your bank effectively assesses the likelihood of different risks occurring		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	10	12.5	12.5	12.5
	DISAGREE	11	13.8	13.8	26.3
	NUTRRAL	7	8.8	8.8	35.0
	AGREE	24	30.0	30.0	65.0
	STRONGLY AGREE	28	35.0	35.0	100.0
	Total	80	100.0	100.0	
Q.30. Your bank uses numerical methods to assess risks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	3	3.8	3.8	3.8
	DISAGREE	6	7.5	7.5	11.3
	NUTRRAL	5	6.3	6.3	17.5
	AGREE	35	43.8	43.8	61.3
	STRONGLY AGREE	31	38.8	38.8	100.0
	Total	80	100.0	100.0	
Q.31. Your bank uses qualitative methods such as Red Amber Green analysis to assess risks		Frequency	Percent	Valid Percent	Cumulative Percent

	STRONGLY DISAGRREE	46	57.5	59.0	59.0
	DISAGREE	16	20.0	20.5	79.5
Valid	NUTRRAL	1	1.3	1.3	80.8
	AGREE	14	17.5	17.9	98.7
	STRONGLY AGREE	1	1.3	1.3	100.0
	Total	78	97.5	100.0	
Missing	System	2	2.5		
Total		80	100.0		

Source: SPSS data analysis output

Summary of Respondent's Responses

77.5 % of the population disagree that their banks find difficulty in identifying and prioritizing their major risks. And also 70 % of the population supports that their banks have no difficulty in managing major risks. Moreover, 65 % of the respondents witnessed that their banks effectively assesses the likelihood of different risks occurring. However, 79.5 % of the respondents disagree on the use of qualitative methods such as Red, Amber and green analysis to assess risk. Here there is evidence that most of the banks under investigation have no difficulty in identifying, prioritizing and manage their main risks. Also banks effectively assess the likelihood of different risks occurring by using numerical methods. In contrast, Red, Amber and Green qualitative analysis to asses risk was seen as lesser in the process of risk identification.

Table. 12 Respondents responses on Risk Identification

Q.32.Risk presenting the greatest exposure	N	%	Mean	Std. Deviation
Interest rate risk	54	67.5	3.5000	1.37017
Market Risk	46	57.5	3.6739	1.17482
Credit Risk	79	98.75	1.5316	.95857
Off balance sheet risk	12	15	4.0833	.90034
Operational risk	77	96.25	3.0260	1.25629
Foreign Exchange risk	52	65	3.5385	.95920
Liquidity risk	76	95	3.1053	1.38158
Other Risks	1	1.25	5.0000	.
Valid N (listwise)	0			

Source: SPSS data analysis output

Summary of Respondent's Responses

Table 12 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, Interest rate risk, foreign exchange risk and market risk.
Out of the total population 98.75% of the respondents ranked credit risk as the most relevant in the banking industry. Operational risk was second with 96.25% of the respondent ranking it as the second most relevant in the industry. Liquidity risk was ranked by 95% of the respondents as the third most relevant. Interest rate risk and Foreign exchange risk was ranked fourth and fifth by 67.5% and 65% of the respondents respectively.

4.6 Respondent's results in relation to: Risk Evaluation

To know if the staff of Ethiopian commercial banking system has knowledge about risk Evaluation, they were given opportunity to answer certain questions. The questionnaire contains six (6) questions regarding risk Evaluation. It indicates that how much each bank Evaluate the risk that it is facing (Table 13).

Table. 13 Respondents response on Risk Evaluation

Q.33.Your Bank analyses and evaluates the opportunities that it has to achieve objectives.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	43	53.8	53.8	53.8
	DISAGREE	16	20.0	20.0	73.8
	NUTRRAL	9	11.3	11.3	85.0
	AGREE	8	10.0	10.0	95.0
	STRONGLY AGREE	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

Q.34. It is important for your bank to emphasize continuous review and evaluation of the techniques used in risk management		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	2	2.5	2.5	2.5
	DISAGREE	3	3.8	3.8	6.3
	NUTRRAL	12	15.0	15.0	21.3
	AGREE	29	36.3	36.3	57.5
	STRONGLY AGREE	34	42.5	42.5	100.0
	Total	80	100.0	100.0	
Q.35. The bank is aware of the strengths and weaknesses of the risk management systems of the other banks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	5	6.3	6.3	6.3
	DISAGREE	20	25.0	25.0	31.3
	NUTRRAL	11	13.8	13.8	45.0
	AGREE	27	33.8	33.8	78.8
	STRONGLY AGREE	17	21.3	21.3	100.0
	Total	80	100.0	100.0	

Q.36. The bank currently has procedures in place to recognize risk and adjust policies accordingly		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	5	6.3	6.3	6.3
	DISAGREE	12	15.0	15.0	21.3
	NUTRRAL	14	17.5	17.5	38.8
	AGREE	25	31.3	31.3	70.0
	STRONGLY AGREE	24	30.0	30.0	100.0
	Total	80	100.0	100.0	
Q.37. Your bank is able to accurately evaluate the costs and benefits of taking risks		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	23	28.8	28.8	28.8
	DISAGREE	2	2.5	2.5	31.3
	NUTRRAL	16	20.0	20.0	51.3
	AGREE	17	21.3	21.3	72.5
	STRONGLY AGREE	22	27.5	27.5	100.0
	Total	80	100.0	100.0	
Q.38. Your bank is able to accurately evaluate and prioritize different risk treatments even when there are constraints on risk treatment implementation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	STRONGLY DISAGRREE	6	7.5	7.5	7.5
	DISAGREE	12	15.0	15.0	22.5
	NUTRRAL	14	17.5	17.5	40.0
	AGREE	25	31.3	31.3	71.3

	STRONGLY AGREE	23	28.8	28.8	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

Summary of Respondent's Responses

Based on the summary presented on the above table banks have difficulty in analyzing and evaluating the opportunities to achieve their objectives as evidenced by 53.8 % of the respondents. And 42.5 % of the respondent's emphasizes the importance of a continuous review and evaluation of risk management techniques to evaluate their risks. Slightly more than 60 % (60.1 %) of the respondents agreed that their banks accurately evaluate and prioritize different risk treatments even when there are constraints on risk treatment implementation. Out of the total population,49(61.3 %) of the respondents' agree that the banks have procedures in place currently to adjust policies for recognized risks and also out of the total population 44(55.1%) of the respondents agree that the respective banks are aware of the strengths and weaknesses of the risk management system of other banks. But out of the total population 25(31.3 %) of the respondents witnessed that their banks are able to accurately evaluate the costs and benefits of taking risks. 16 (20 %) of the respondents are not aware whether or not their banks do accurately evaluate the costs and benefits of taking risks. All in all the banks under investigation have a good practice of evaluating the risks that they face.

4.7 Respondent's responses to: Required policies in place

Whenever we want to analyze any rules, we must have to monitor these implemented rules and regulations. For this we have to know the required policies in place of the risk management practices that are implemented in Ethiopian commercial banking system. So, the questionnaire contains three (3) questions regarding required policies in place in Ethiopian commercial banking system. And the response of the questions is summarized in Table 14.

Table. 14Respondents responses on required policies in place

Q.39. Changes in risk are recognized and identified with the bank's rules and responsibilities		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	49	61.3	61.3	61.3
	NO	31	38.8	38.8	100.0
	Total	80	100.0	100.0	

Q.40. Is your bank actively engaged in research to develop risk management instruments and techniques?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	24	30.0	30.0	30.0
	NO	56	70.0	70.0	100.0
	Total	80	100.0	100.0	
Q.41. Is there a separation of duties between those who identify risks and those who manage and control risks?		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	38	47.5	47.5	47.5
	NO	42	52.5	52.5	100.0
	Total	80	100.0	100.0	

Source: SPSS data analysis output

Summary of Respondent's Responses

The above table shows that out of the total population 49 (61.3%) agree that changes in risk are recognized and identified with the banks rules and responsibilities. And 56 (70 %) 0f the population indicates that the banks are not actively engaged in research to develop risk management instruments and techniques. So, by not engaging in research and development activities banks could not reduce costs of applying appropriate risk management instruments and techniques. Out of the total population 52.5% of the respondent says that there is no separation of duties between those who generate risks and those who manage and control risks and the remaining 47.5% respondents agree with the above statement. Based on the response it can be confidently concluded that banks have no acceptable level of segregation of duties between those who identified/generate risks and those who manage and control.

4.8 Validity and Reliability analysis (Hypothesis testing with Regression Analysis)

To make sure the validity of the questionnaire, the items of the questionnaire were developed based on thorough review of both theoretical and empirical literatures. Likewise, repeated discussions were held with one of the banks risk expert to have in depth insight in order to contextualize the

study variables. With regard to internal consistency, Cronbach alpha values were computed for multi item scales.

As of Kehoe (1995) reliable scales can have minimum Cronbach Alpha (**α**) of **0.5**:
An Alpha value of at least 0.5 should be achieved for accepting the items "as is" within a dimension, as long as they are within a short instrument (10-15) items.
On the other hand, a rule of thumb that has been advocated in the literature (Nunnally, 1998) is to require *Cronbach alpha (**α**)* to equal **0.70** or exceed it before the items are considered internally consistent.

Table 15: Reliability coefficient of the study variables

S. No	Variables	Alpha
1	Understanding Risk Management	0.771
2	Risk assessment and Analysis	0.651
3	Risk Identification	0.689
4	Risk Monitoring	0.809
5	Risk Evaluation	0.765
6	Required policy	0.887
	All Variables	0.762

The reliability statistics was measured to check the validity of variables for the data collection. The rule of thumb in the reliability statistics is 0.70, if the Cronbach alpha value is more than 0.70 it will be considered as valid for the data collection (Nunnally, 1978). The individual Cronbach's Alpha of URM (0.771), RAA (0,651), RI (0.689), RM (0.809), RE (0.765) and RP (0.887). The above value of all the six variables shows the overall reliability of all six variables as 0.762.

4.9. Test results for the classical linear regression model assumptions

4.9.1. Regression Model

This section presents the results of testing the five hypothesis developed. The following regression model was applied:

RMPs= function (*URM, RI, RAA, RM, RE, RP*)

Where,

RMPs is the dependent variable and

URM, RI, RAA, RM, RE and *RP* are the independent variables.

Table 16: OLS Regression Result for all Explanatory Variables

	Beta	***t***	**Sig.**
(Constant)	1.293	**1.**164	.251
URM	1.205	2.750	.025
RI	-.427	-1.212	.260
RAA	.915	2.152.	.050
RM	-.399	-1.675	.132
RE	.834	2.895	.020
RP	.874	2.854	.035

Result of regression for Understanding risk management from Table 16

The value of beta of Understanding risk management is 1.205, and the value of beta shows the contribution in the variation in the dependent variable by each independent variable. The beta of URM is 1.205 which shows a strongest contribution (in same direction) in the explanation of dependent variable by Understanding risk Management. The value of t-ratio is 2.750 which is more than the standard value. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .025 which is less than .005. URM has significant effects on risk management

Result of regression for Risk assessment and Analysis from Table 16

The value of beta of risk assessment and analysis is .915, and the value of beta shows the contribution in the variation in the dependent variable by each independent variable. The beta of risk assessment and analysis is .915 which shows the strongest contribution in the explanation of dependent variable by risk assessment and analysis. The value of t-ratio is 2.152 which is more than the standard value. The rule of thumb for t-ratio is 2, the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .050 which is less than .05. Risk assessment and analysis has significant effects on risk management.

Result of regression for Risk Monitoring from Table 16

The value of beta of risk monitoring is -.399, and the value of beta shows the contribution in the variation in the dependent variable by each independent variable. The beta of risk monitoring is -.399 which shows a strongest contribution (in opposite direction) in the explanation of dependent variable by risk monitoring. The value of t-ratio is -1.675 which less than the standard value is. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .132 which is more than .005. Risk monitoring has insignificant effects on risk management.

Result of regression for Risk Identification from Table 16

The value of beta of risk identification is -.427, and the value of beta shows the contribution in the variation in the dependent variable by each independent variable. The beta of risk identification is -.427 which shows the strongest contribution (in opposite direction) in the explanation of dependent variable by risk identification. The value of t-ratio is -1.212 which less than the standard value is. The rule of thumb for t-ratio is 2; and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .260 which is more than .005. Risk identification has insignificant effects on risk management.

.**Result of regression for Risk Evaluation from Table 16**

The value of beta of risk Evaluation is .834, and the value of beta shows the contribution in the variation in the dependent variable by each independent variable. The beta of risk Evaluation is .834 which shows a strongest contribution (in same direction) in the explanation of dependent variable by risk Evaluation. The value of t-ratio is 2.895 which is more than the standard value. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .020 which is less than .005. Risk Evaluation has significant effects on risk management.

. **Result of regression for Required Policy from Table 16**

The value of beta of required policy is .874, and the value of beta shows the contribution in the variation in the dependent variable by each independent variable. The beta of RP is .874 which shows a strongest contribution (in same direction) in the explanation of dependent variable by Required Policy. The value of t-ratio is 2.854 which is more than the standard value. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .035 which is less than .005. RP has significant effects on risk management.

Table 17: Model Summary of Linear Regression for all Independent or Explanatory Variables

Model	R	R2	Adjusted R2	F	Sig
	.781	.610	.366	2.500	0.080

**. Correlation is significant at the 0.05 level (2-tailed)*

The above table shows the results of regression model. The model was used to check the effects of independent variables on the dependent variable. The value of R is .781, and this shows the association of independent variables with dependent variable. The value shows that independent

variables are 78 percent correlated to dependent variable. The value of R2 is .610 which shows the effect of independent variables on the dependent variable. The results show that 61 percent variation shows in the risk management by five dependent variables.

4.10. Summary for the Hypotheses Testing

The following table summarizes the results of hypotheses testing:

Table (18): Summary of Hypotheses Testing Results

Alternative hypotheses	**The detected coefficient sign**	**Decision**
Understanding of risk management Practice have a positive and significant effect on risk management practices?	Positive	Understanding risk management practices have a significant effect on risk management practices
Risk assessment and Analysis have a positive and significant effect on risk management practices?	Positive	Risk assessment and Analysis have a significant effect on risk management practices
Risk Monitoring have a positive and significant effect on Risk management practices?	Negative	Risk Monitoring have an insignificant effect on risk management practices
Risk identification have a positive and significant effect on risk management Practices?	Positive in Opposite Direction	Risk Identification have an insignificant effect on risk management practices
Evaluation of risk have appositive and significant effect on Risk management practices?	Positive	Risk Evaluation have a significant effect on risk management practices
Required policies in place have a positive and significant effect on risk management practices?	Positive	Required policy have a significant effect on risk management practices

4.11 Summary of the Findings

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

- ✓ The respondents have good level of educational qualification which enables the Respondents to have some idea about 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 and there is also a potential misunderstanding amongst the selected banks as to the true purpose of risk management.

- ✓ The national bank of Ethiopia assisted risk management practices amongst the selected commercial banks and also the banks are following the guidelines and risk management practices stated by the National bank which helps them to have a strong governance structure in place.

- ✓ Banks do not 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 and 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 the respondents' responses bank's do not have difficulties in identifying and prioritizing their risks and also effectively assess the likely hood of different risk occurring based on stated policies and procedures but they lack qualitative methods to rate their level of risk as Red, Amber and Green.

- ✓ From the analysis of the respondents' responses regarding understanding of risk management, level of risk management practices, risk assessment and analysis, required policies in place, there is no significant level of difference amongst the banks.

- ✓ 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.

- ✓ According to the regression analysis performed to test the hypothesis the result showed that Risk assessment and analysis has significant effects on risk management.
- ✓ According to the regression analysis performed to test the hypothesis the result showed that Risk identification has insignificant effects on risk management.

- ✓ According to the regression analysis performed to test the hypothesis the result showed that Risk Monitoring has insignificant effects on risk management.

- ✓ According to the regression analysis performed to test the hypothesis the result showed that Risk Evaluation has significant effects on risk management.

- ✓ According to the regression analysis performed to test the hypothesis the result showed that URM has significant effects on risk management.

- ✓ According to the regression analysis performed to test the hypothesis the result showed that RP has significant effects on risk management.

- ✓ Since questionnaire was employed as a research instrument, the cronbach's alpha value of the questionnaire items were computed and became reliable and internally consistent (all items were exceeded the minimum requirement of **70%)** which justifies the reliability of the questionnaire items.

- ✓ The respondent's response is evident for the existence of risk management policies and procedures in their respective banks though it could not be taken for guaranteed for the presence of efficient and effective operational risk management process.

- ✓ Finally the respondents disagree on the statements that bank has documented risk management guidelines and specifically looks to recruit trained and qualified people in risk management.

Chapter 5. Conclusion and Recommendations

5.1 CONCLUSION

The impressive financial performance of the Ethiopian commercial banking industry coupled with the absence of any major complaints or adverse finding against banks in Ethiopia gives the impression that the banks are generally stable. The implications of this belief are that the banks have relatively good risk profiles as well as sound frameworks for managing risks inherent in their business activities. The extent to which this can be verified relies on thorough assessments of the nature and quantum of risks confronting the various banks in the country and an evaluation of their risk management structures and systems. The researcher has no knowledge of any previous work on Ethiopian banks in this area of study and therefore this study is believed to provide an initial contribution to this exercise with a focus on fifteen (15) selected sample commercial banks of Ethiopia. It also provides an empirical indication of the types and levels of risks the banks are exposed to and their capacity and required policies to effectively manage them.

This research discusses and analyzes the risk management practice of selected Ethiopian Commercial banks tested to answer the research question: To what extent are the management teams and staff member of the Commercial banks of Ethiopia understand and implement risk management? Are the staffs in Ethiopian commercial banks familiar with the concepts of risk and its associated management? Are Commercial banks in Ethiopia aware of the risks that are associated with their actions and goals? Has the National Bank of Ethiopia assisted or hindered risk management amongst banks? Based on the research questions a hypothesis is developed which is tested with regression analysis to test if: There is a significant relationship between the levels of risk management practices and Understanding risk,; There is a significant relationship between the level of risk management and risk identification,; There is a significant relationship between the levels of risk management and risk assessment and analysis,; There is a significant relationship between the level of risk management and Risk monitoring,; There is a significant relationship between the level of risk management and required policies in place,; There is a significant relationship between the level of risk management and Evaluation.

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 distributed to 100 employees of risk management department. The respondents gave their response to the questionnaires and it was analyzed and discussed. The discussion part shows that: First the management teams and staffs of commercial banks have a good level of understanding of risk management and they are also aware of the concepts of risks associated with their goals. 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. Regarding the hypothesis testing the result of the regression analysis shows that:

- ✓ The beta of risk assessment and analysis is .915 which shows a strongest contribution in the explanation of dependent variable by risk assessment and analysis. The value of t-ratio is 2.152 which is more than the standard value. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .050 which is less than .05. Risk assessment and analysis has significant effects on risk management.
- ✓ The beta of risk identification is -.427 which shows a strongest contribution (in opposite direction) in the explanation of dependent variable by risk identification. The value of t-ratio is -1.212 which less than the standard value is. The rule of thumb for t-ratio is 2; and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .260 which is more than .005. Risk identification has insignificant effects on risk management.
- ✓ The beta of risk monitoring is -.399 which shows a strongest contribution (in opposite direction) in the explanation of dependent variable by risk monitoring. The value of t-ratio is -1.675 which less than the standard value is. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .132 which is more than .005. Risk monitoring has insignificant effects on risk management.
- ✓ The beta of risk Evaluation is .834 which shows a strongest contribution (in same direction) in the explanation of dependent variable by risk Evaluation. The value of t-ratio is 2.895 which is more than the standard value. The rule of thumb for t-ratio is 2, and the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .020 which is less than .005. Risk Evaluation has significant effects on risk management.
- ✓ The beta of URM is 1.205 which shows a strongest contribution (in same direction) in the explanation of dependent variable by Understanding risk Management. The value of t-ratio is 2.750 which is more than the standard value. The rule of thumb for t-ratio is 2, the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .025 which is less than .005. URM has significant effects on risk management.
- ✓ The beta of RP is .874 which shows a strongest contribution (in same direction) in the explanation of dependent variable by Required Policy. The value of t-ratio is 2.854 which is more than the standard value. The rule of thumb for t-ratio is 2, the value of t-ratio will always be interpreted as absolute (irrespective of its positive or negative sign). The p-value is .035 which is less than .005. RP has significant effects on risk management.

The evidence from the study suggests that the risk management practices of the selected commercial banks of Ethiopia were good based on the following observations:

A. An appropriate environment has been established for managing risk. This included a, solid governance structure with clear obligations and policy documents approved by the board containing procedures, processes and techniques for handling various risks.
B. Relevant tools and management information systems have been provided to ensure adequate and consistent identification, measurement, monitoring and controlling as well as reporting on the various risks the bank is exposed to.
C. Effective controls have also been put in place to ensure compliance to the tenet of the bank's risk management framework.

These interventions made by the banks to ensure sound risk management are also in line with the national bank of Ethiopia Guidelines.

5.2 RECOMMENDATIONS

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

- In order for the banks to have staff which effectively understands risks, they should hire more educated and trained staffs and to improve the lack of employee's knowhow on risk management practice coming from employees experience and education it is better to provide more training on risk management to employees who are new to the sector as well as refreshment for the existing employees.

- To improve usage of qualitative method of rating risks in order for staffs to easily identifying and prioritizing their risks and also effectively assess the likelihood of different risk occurring based on stated policies and procedures.

- 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.

- Engaging the stakeholders at every hierarchy of the organization in order to make sure that everyone is aware of the risk associated with his/her activity, as awareness creation is at the heart of risk management. The awareness creation mechanisms would be in terms of providing training regularly and by disseminating information through internal magazine, brochures or leaflets to update the staffs on the new development with regard to the risk.

- Besides providing training for staffs and recruiting qualified personnel it is good for the banks to have documented their risk management processes so that newly joined staffs can easily trace back the way to be followed in analyzing the specific risk.

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

References

Abraham, H. (2008) *Bank runs: A risk mismanagement perspective: A Note.* South African Journal of Business Management; Vol. 39, Issue 4, p. 63-65.

Abdul Rahman, R., Ibrahim, Z., Tohirin, A., Muhammad, A. D., & Suryaputri, R.V. (2013). *Risk Management practices in islamic banking institutions: Malaysia and Indonesia in comparative perspective.*Accounting Research Institute, University Technology MARA, Malaysia.

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, F. & Santomero, A.M. (1997), ―The theory of financial intermediation‖, Journal of Banking and Finance, 21, 1461 - 1485.

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.

Andersen, K. & Terp, A. (2006), ―Risk Management‖, Chapter 2 in Perspectives on Strategic Risk Management, CBS Press, pp. 27-46.

Ahmed & Khan (2007). Risk management in Islamic banking. In M. K. Hassan & M. K. Lewis (Ed.)*Handbook of Islamic banking* (pp.144-158). USA: Edward Elgar.

Al-Hadith: An English translation and commentary of Mushkat-ul-Masabih with Arabic text. (2006). (M. F.Karim, Trans.). New Delhi: Islamic Book Service.

Al-Omar & Abdel-Haq (1996). *Islamic banking, theory, practice & challenges*. London & New Jersey:Oxford University Press, Karachi, and Zed Books.

Al Wadi, M. H., & Samhan, H. M. (2007). *Islamic banks - the theoretical basis and applications* (1st ed.).Dar Almasira, Amman, Jordan.

Berger, A. Klapper, L. and Turk-Ariss, R. (2009) *Bank Competition and Financial Stability.* Journal of Financial Services Research; Vol. 35, Issue 2, p. 99-118.

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

Beasley, M. S. & Frigo, M. (2007), ―Strategic Risk Management: Creating and Protecting Value‖, Strategic Finance, LXXXVII, 29. May 2007.

Bank Negara Malaysia: Annual Banking Statistics. (2007). Kuala Lumpur.

Carey, A. (2001) *Effective risk management in financial institutions: the Turnbull approach.* Balance Sheet; Vol. 9, Issue 3, p. 24-27.

Carroll, J. J. (1998) *Evaluations of Risk: Do Organizational or Individual Biases Prevail?* Academy of Management Executive; Vol. 12, Issue 4, p. 129-130.

Carey, A. (2001) *Effective risk management in financial institutions: the Turnbull approach.* Balance Sheet; Vol. 9, Issue 3, p. 24-27.

Current Corporate Practice‖, Journal of Applied Corporate Finance, Vol. 18, No. 4, pp. 81-90.

Chatterjee, P. (2007) *Troubles light up in the dawn of Basel II.* Banker; Vol. 157, Issue 982, p. 12.

Capital market development in Malaysia: History & perspectives. (2004). Kuala Lumpur: SecuritiesCommission of Malaysia.

Chapman, R. J. (1998). The effectiveness of working group risk identification and assessment techniques.*International Journal of Project Management, 16*(6), 333-343.

DeLoach, J. W. (2000), ―Mastering Risk to Create Value‖, Chapter 1 in Enterprise-Wide Risk Management: Strategies for Linking Risk and Opportunity, Financial Times/Prentice Hall, London, pp. 3-19.

Emblemsvag, J. & Kjolstad, L. E. (2002), "Strategic risk analysis – a field version", Management Decision, Vol. 40 Iss: 9, pp.842 – 852

Fatemi, A. & Glaum, M. (2000), ―Risk management practices in German firms‖, Managerial Finance, 26, 1–17.

Fournier, E. De Cordova, P. G. James, B. Miles, A. Crompton, S. Faith, J. Gleeson, S. Blackmore, V. Evans, R. Siskey, K. De Verneuil, V. Nishiyama, K. Seem, A. Ikeda, M. Ozawa, J. Stender, N. Zhou, L. L. Zeng, Y. Elliott, G. and Irani, V. (2008) *Regulatory Capital Is Broken.* International Financial Law Review; Vol. 27, Issue 12, p. 1.

Greuning, H. V. & Bratanovic, S. B. (2003), Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management, World Bank Publications.

Gates, S. (2006), ―Incorporating Strategic Risk into Enterprise Risk Management:

Greuning, H. V. & Bratanovic, S. B. (2003), Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management, World Bank Publications.
Herman, M. L. & Head, G. L. ( ),″Strategic Risk Management: Looking at Both Sides Now″, Nonprofit Risk Management Center.

Hahm, J. H. (2004), "Interest rate and exchange rate exposures of banking institutions in pre-crisis Korea", *Applied Economics*, 36 (13), 1409-19.

Jorion, P. (1997), Value at Risk, Richard D. Irwin Inc., Burr Rudge, IL.

Khambata, D. and Bagdi, R. R. (2003), "Off-balance-sheet credit risk of the top 20 Japanese banks", *Journal of International Banking Regulation*, 5(1) 57-71.

Khan, T., & Ahmed, H., (2001). *Risk management, an analysis of issues in Islamic financial industry*. (Occasional Paper No. 5). IRTI-IDB, Jeddah, K.S.A.

Linbo Fan, L. (2004), "Efficiency versus risk in large domestic US", *Managerial Finance*, 30(9), 1-19.

Lehar, A. (2005), "Measuring systemic risk: a risk management approach", *Journal of Banking & Finance*, 29 (10): 2577-603.

Muelbroek, L. K. (2002), ―Integrated Risk Management for the Firm: A Senior Manager's Guide, Harvard Business School, working paper.

Merton, R. C. (1989), ―The application of the continuous-time theory of finance to financial intermediation and insurance‖, Geneva Papers on Risk and Insurance Theory, 14, 225-261.

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

Mahayuddin, I. (2012). *Islamic banking and finance course notes*. Accounting Research Institute, University Technology MARA, Malaysia.

Niinimaki, J. P. (2004), "The effects of competition of banks risk taking", *Journal of Economics*, 81 (3), 199-222.

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-B.

Pyle, D. H. (1997) "Bank Risk Management: Theory," Institute of Business and Economic Research, University of California, Finance Working Paper No. RPF-272, July 1997.

Pyle, D. H. (1997) "Bank Risk Management: Theory," Institute of Business and Economic Research, University of California, Finance Working Paper No. RPF-272, July 1997

Petrou, K. S. (2010). "Basel III + Dodd-Frank=Little Leeway on Capital". *The American Banker.* 175 (127). Retrieved from Business Source Premier on EBSCOhost

Rejda, G. E. (1998), Principles of risk management and insurance, USA: Addison Wesley, Sixth Edition, New York, NY.

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(3), pages 569-614.

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

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

Stulz, R. M. (1984), ―Optimal Hedging Policies‖, The Journal of Financial and Quantitative Analysis, Vol. 19, No. 2. pp. 127-140.

Smith, C., Smithson C. & Wilford, D. (1990), Strategic Risk Management (Institutional Investor Series in Finance), Harper and Row, New York.

Santomero, A.M. (1997), ―Commercial Bank Risk Management: An Analysis of the Process,Journal of Financial Services Research.

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

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

Wang, J. and Sheng-Yung (2004), "Return and volatility intra-day transmitting of dually-traded stocks: The case of Taiwan, Korea, Hong Kong and Singapore", *Journal of Economics and Management,* 1(2), 119-141.

Appendix 1

Addis Ababa University
College of Business and Economics
Department of Accounting and Finance
MSc program

Dear Sir/Madam:

The intent of this questionnaire is to explore information regarding determining factors of best risk management practices of Ethiopian commercial banks, which is used as a 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 questionnaire will distribute to Staff of risk management departments of 15 purposely selected commercial banks head office. The information you provide in response to the items in the questionnaire will be used as part of the data needed for the study. The results of the study are anticipated to supply to the understanding of the role of risk management practices in commercial banks of Ethiopia in particular and be used to obtain insight in relation to financial institutions in general.

I would like to assure you that the information you provide will be accessible only to the investigator. Your involvement is regarded as a great input to the quality of the research results. Hence, I believe that you will enlarge your assistance by participating in the study.

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

Part one: Respondents Profile

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 ☐

Part Two: General understanding of Risk management
1. Please rate each of the following goals of your risk management process in terms of their importance. Use a scale of 1-6, where 6 is the most important.

a	To reduce legal liability	
b	To maximize profits	
c	To avoid making any losses	
d	To free up as much capital as possible	
e	To minimize your exposure to market downturns	
f	To reduce the credit risk of your loan portfolio	

2. Please rank the following factors in terms of their importance in the current strategic goals and objectives of your bank. Please rank them in terms of importance, where 1 is the most important. If any are not important to your bank's current strategic goals, please exclude them from the rankings in light of the contribution of risk management practices.

a	Increase profits	
b	Increase market share	
c	Reduce costs	
d	Expand into new markets	
e	Improve efficiency	
f	Other (please specify)	

3. On a scale of 1-5 (where 1 indicates “Strongly Disagree” and 5 indicates “Strongly Agree”) please rank the extent to which you agree with the following statements.

a	Monitoring the effectiveness of risk management is an integral part of routine management reporting.	
b	The bank’s response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses	
c	The bank’s response to risk includes action plans in implementing decisions about identified risk	
d	The level of control is appropriate for the risk it faces	

4. To what extent has the National bank of Ethiopia helped in managing risk?

a	Helped significantly	
b	Helped a little	
c	Neither helped nor hindered	
d	Hindered a little	
e	Hindered significantly	

On a scale of 1-5 (where 1 indicates “Strongly Disagree” and 5 indicates “Strongly Agree”) please rank the extent to which you agree with the following statements:

5	There is a common understanding of risk management across the bank	
6	Responsibility of risk management is clearly set out and well understood across the bank	
7	Accountability of risk management is clearly set out and well understood across the bank	
8	The management of risk makes an important contribution to the success of the bank	
9	The management of risk makes an important contribution to the financial stability of the bank in the current financial climate	
10	Risk management helps to reduce costs and expected losses at the bank	
11	It is important to continuously review and update risk management techniques	
12	Your bank takes significant steps to keep up to date with current risk management trends	
13	Your bank understands the risk management systems used by other banks and their costs and benefits	

Risk Assessment and Analysis

14	Your bank's level of risk control is appropriate for the risks that it faces	
15	Your bank's reporting and communication processes support the effective management of risk	
16	Your bank develops action plans for implementing decisions and management plans for identified risks	
17	Your bank's risk management processes are well documented and provide guidance to staff about the management of risk	
18	Your bank's training policies encourage formal training in risk management	
19	Your bank specifically looks to recruit highly trained and qualified people in risk management	
20	Your bank has excellent overall risk management practices and processes	
21	Monitoring the effectiveness of risk management is an integral part of routine management reporting	

Risk Monitoring

22	Level of control by your bank is appropriate for the risk that it faces	
23	In your bank, reporting and communication processes support the effective management of risks	
24	Your Bank's response to risk includes an evaluation of the effectiveness of the existing controls and risk management responses	
25	Your Bank's response to risk includes action plans in implementing decisions about identified risk	
26	The existing control and monitoring process in your Bank always considers National bank of Ethiopia compliance issues	

Risk Identification

27	Your bank finds it difficult to identify and prioritize its main risks	
28	Your bank finds it difficult to manage its main risks	
29	Your bank effectively assesses the likelihood of different risks occurring	
30	Your bank uses numerical methods to assess risks	
31	Your bank uses qualitative methods such as Red Amber Green analysis to assess risks	

32. 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. _____

Risk Evaluation

33	The bank finds it difficult to prioritize its main risk	
34	It is important for your bank to emphasize continuous review and evaluation of the techniques used in risk management	
35	The bank is aware of the strengths and weaknesses of the risk management systems of the other banks	
36	The bank currently has procedures in place to recognize risk and adjust policies accordingly	
37	Your bank is able to accurately evaluate the costs and benefits of taking risks	
38	Your bank is able to accurately evaluate and prioritize different risk treatments even when there are constraints on risk treatment implementation	

Required Policies in Place

Yes = 0, No = 1

39	Changes in risk are recognized and identified with the bank's rules and responsibilities.	
40	Is your bank actively engaged in research to develop risk management instruments and techniques?	
41	Is there a separation of duties between those who identify risks and those who manage and control risks?	

Part Four:

42. Please describe your concept of risk management as fully as possible. Please refer back to your previous answers if relevant.

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_____
_____
_____
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_____

Annex 2: 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	15
Construction and business bank S.C.		✓	1983	9
Awash International Bank S. C.	✓		1994	7
Nib International Bank S. C.	✓		1999	7
Wegagen Bank S.C.	✓		1997	7
Oromia International Bank S. C.	✓		2008	5
Debub Global Bank S.C	✓		2006	6
Cooperative Bank of Oromia S.C.	✓		2005	4
Bank of Abyssinia	✓		1996	9
United Bank S. C.	✓		1998	6
Abay Bank S. C.	✓		2010	6
Dashen Bank S. C.	✓		2003	5
Brehan International Bank	✓		2010	4
Bunna International Bank	✓		2009	5
Enat Bank S.C	✓		2009	5

Source: National Bank of Ethiopia, 2015.