

CHAPTER- I

INTRODUCTION

1.1 Background of the study

Nepal is one of the under developed landlocked country due to the lack of political stability, illiteracy, political and non political insurgency. Our country is economically backward to the world. In Nepal growth is not possible without development of agricultural technology, industrialization, banking sector etc. The onward movement of the country solely depends upon its economic condition. The farsighted infrastructure and well developed financial system of the country plays a key role to meet the expected goal for the betterment of the country as a whole. Financial institution gathers scattered financial resources form the mass and distributed fund from commercial and economic activities to develop trade, industry and facilitate a process of economic development.

Sound banking system is the crucial means to accelerate the development of a country by strengthening the economic condition in this globalize economy of the twenty –first century. This requires the well-developed corporate culture, proper management of risk and return and healthy competitive environment that facilitate mobilization of small saving in the commercial and industrial sectors that will enhance the economic and social welfare of a country.

Bank is a financial institution, which deals with money by accepting various types of deposits, disbursing loan and rendering various types of financial services. It is the intermediary between the deficit and surplus of the financial resources. Banking when properly organized, aids and facilitates growth on trade and considered not as dealers in money but as the leader of development.

Bank are not just the storehouse of the country's wealth but are the reservoirs of resources necessary for economic development, (Radhaswami and Vasudevan, 1991).

In Nepal, banking sector started in 1937 A.D. with the establishment of Nepal Bank Ltd., Nepal Rastra Bank, and the central bank of Nepal, established in 1957 A.D. followed by Rastriya Banijya Bank in 1966 A.D. As Nepalese government took liberal economic policy, joint venture banks started to operate since 1984 A.D. with the establishment of Nepal Arab Bank Ltd. till the March 2011; thirty one commercial banks have been operating in the country.

With the growth rate of banking industry from the 1984 A.D., the risk on banking also made a mark simultaneously. Most of the Nepalese banks have suffered form credit risk, which is associated with the non-payment of loan by the borrowers. Nepal Bank Limited, Rastriya Banijya Bank are the greatest victims of such risk, leading the banks to have negative net worth.

Present challenges to the banking sector are: to manage the excess liquidity outstanding to invest the money in productive as well as new sector, to manage the accumulated non-performing loan. Commercial banks collect deposits from individuals and invest them as loan and advance to the borrowers and receive interest as the output of business. Commercial banks' profit and operating cost are borne by these interest collected from the borrowers. When interests as well as the principal are not collected in due time, the existence of the bank and the deposits of individuals will be in threat. So, necessary action must be taken by the banks and government to overcome this situation.

In addition to the credit bank faces other risks. According to the Nepal Rastra Bank Unified Directives 2005, the major source of risk is credit risk, liquidity

risk, market risk and operation risk. But other risk except mention by NRB affect the banking sector .They are interest rate risk, inflation risk ,default risk, exchange rate risk, business risk etc.

Risk management has become a non delegable part top management's function and thus a non delegable responsibility and liability. Driven by law, the financial sector has developed overview the past years strategies, culture and considerable technical and management known-how relating to risk management, which represents a competitive advantage against the manufacturing and insurance sectors. Risk management is an integrated part of upper management's responsibilities or an independent control and oversight function. Risk management is not a new function or gadget in the financial industry. However, based on recent events, regulators and the media have increasingly scrutinize risk management, is not a new function grade get in the financial industry. However, based on a recent events, regulators and the media have increasingly scrutinized risk management practices and techniques, A closer look at some of the accidents makes it apparent that managers, regulators and investor have partially lost control of risk management, overestimated their own capabilities, and brought companies and entire markets to the edge of the abyss. Therefore, risk management is the good topic for the researcher. Commercial banks have to assume different kind of risk: market risk, operational risk, credit risk and other of them credit risk cover the significant risk to the total risk. Though the banking sector has been facing different types of risk, major banking problem have been either explicitly or indirectly caused by the weaknesses in credit risk management, in this study, the researcher has focused mainly on the credit risk management of the commercial banks in Nepal. However, the brief introduction of other risks like liquidity risk, interest risk, operation risk and foreign exchange risk is also included. In addition to the credit risk the bank faces other risks. According to

the Nepal Rastra Bank unified directives 2010, the major source of risk is credit risk, liquidity risk, foreign exchange risk, and interest rate risk etc.

1.1.1 Meaning of Risk and Risk Management

Risk is a term used to define a factor or factors that may have a negative impact on the profitability or success of a company. A risk could stem from external factors that a business may have little control over, or issues within the company itself. External factors of business risk are often out of the control of the company. Continuously declining the condition of economy, decreased demand for a product or service and changes to regulations affecting an industry are examples of external business risks. Risk Management is the process of assessing risk and developing strategies to manage it. Strategies include transferring the risk, avoiding the risk, reducing the negative effect of the risk, and accepting the consequences of a particular risk, (<http://risk-management.bestmanagementarticles.com>)

1.2 Brief Introduction of Banks under Study

Two commercial banks, Nepal Credit & Commerce Bank Ltd. (NCC Bank) and Machhapuchchhre Bank Limited (MBL) have been selected for the study. This study shows the comparison of risk management between the joint venture based bank (NCC Bank) and national based bank (MBL).

1.2.1 Nepal Credit & Commerce Bank Limited.

Nepal Credit & Commerce Bank Ltd. (NCC Bank) formally registered as Nepal - Bank of Ceylon Ltd. (NBOC), commenced its operation on 14th October, 1996 as a Joint Venture with Bank of Ceylon, Sri Lanka. It was the first private sector Bank with the largest authorized capital of Nrs. 1,000 million. Now it's paid up capital is Rs. 1.4 billion. The Head Office of the Bank is located at Siddhartha Nagar, Rupandehi, the birthplace of LORD

BUDDHA, while its Corporate Office is placed at Bagbazar, Kathmandu.

The name of the Bank was changed to Nepal Credit & Commerce Bank Ltd., (NCC Bank) on 10th September 2002, due to transfer of shares and management of the bank from Bank of Ceylon, an undertaking of Government of Sri Lanka to Nepalese Promoters.

At present, NCC Bank provides banking facilities and services to rural and urban areas of the Kingdom through its 17 branches. The Bank has developed corresponding agency relationship with more than 150 International Banks having worldwide network.

Nepal Credit & Commerce Bank Ltd. (NCC Bank) has the paid up capital of Rs. 699.1 million in 2007. The Bank is using Pumori Plus, the most commonly used software by Nepalese Banks. The Bank offers Any Branch Banking Service (ABBS) in branches operating in Kathmandu and Banepa. Telex and SWIFT are other modes of communication for efficient and effective transmission of information. In order to facilitate the customers with state of art technology, Bank is providing Debit Card facilities under the SCT (Smart Choice Technology) Network jointly in consortium with 12 other member Banks. This facility enables the customers to withdraw cash from any of the 26 ATM Terminals located at different parts of the country and to purchase goods from more than 250 shopping complexes and departmental stores under POS arrangement.

NCC Bank has strategic alliance with ICICI Bank, which facilitates its customers to remit their money to more than 670 locations of India through ICICI Bank branches and their correspondent Banks in India.

Its customers can affect their money transfer to India either through Speed Transfer Arrangement or through Demand Draft Arrangement. Under Speed Transfer Arrangement, money can be credited on-line to the beneficiary's account at more than 400 branches of ICICI Bank, India. Under Demand Draft Arrangement, the Bank can issue draft payable at more than 670 locations in India.

NCC Bank is globally connected through various prominent Banks in Asia, Europe and North America like American Express Bank, Standard Chartered Bank, UBAF etc. Its services across the globe include remittance, draft arrangement, import and export business, guarantee etc.

NCC Bank has considered risk as the primary threatening factor and due to this risk management is given high priority by the top management. For the proper management of risk, well defined policies and procedures are developed and followed by every level of management. In addition, Credit Committee, Management committee, Asset Liability Management Committee, Credit Collection Committee is the key departments of NCC Bank that play vital role in lessening the risk

1.2.2 Machhapuchchhre Bank Limited

Machhapuchchhre Bank Limited (MBL) was registered in 1998 as the first regional commercial bank to start banking business from the western region of Nepal with its head office in Pokhara. Today, with a paid up capital of above 1,430 million rupees, it is one of the full fledged commercial bank operating in Nepal; and it ranks in the topmost among the private commercial banks.

Machhapuchchhre Bank Limited is striving to facilitate its customer needs by delivering the best of services in combination with the state of the art

technologies and best international practices.

This bank is the pioneer in introducing the latest technology in the banking industry in the country. It is the first bank to introduce centralized banking software named GLOBUS BANKING SYSTEM developed by Temenos NV, Switzerland. Currently it is using the latest version of GLOBUS, referred as T-24 Banking System. The bank provides modern banking facilities such as Any Branch Banking, ATM, Internet Banking and Mobile Banking to its valued customers.

The bank in the last few years have really opened up with branches spread all around the country. At this stage, it has its own Corporate Office at Lazimpat, Kathmandu and branch offices in major cities of Nepal such as Kathmandu, Damauli, Bhairahawa, Birgunj, Banepa ,Naryanghat, Nepaljung and different parts of Pokhara in addition to the Head Office in Naya Bazar, Pokhara. A full-fledged banking branch is in operation in Jomsom located high up in the mountains too. The bank aims to serve the people of both the urban and rural areas. The bank intends to open many more branches in the coming years, MBL (2010/11).

In Machhapuchchhre Bank Ltd. also, risk is considered as the main threatening factor by which here as well risk management is regarded as the key function of the bank in all levels of management. The Credit Committee, Internal Audit & Compliance Department is the key departments that are concerned with the management, compliance and evaluation of the risk management procedure.

1.2 Statement of the Problem

In general perception, the commercial banking is a very profitable industry with profit Rs. 2981.1 million in periods from mid July 2009 to mid January 2010. In

this profit MBL's and NCC banks contribution is 102.4 and 294.5 million respectively. But unlike the common view, this industry is beleaguered with many challenges to sustain and outwit among those within the industry. Furthermore, there is growing competition with the establishment of new banks in the weak economic situation of the country. One of the major challenges is The government's policy of total liberalization of the banking industry from fiscal year 2009/10 A.D. making possible for the foreign banks to operate their branch in Nepal without joint venture of Nepalese investors could bring the mushrooming of the commercial banks and could result in the increased pressure for Nepalese commercial banks to face the competition of foreign banks. Similarly, Nepal Rastra Bank (NRB) declared to commercial bank to increase paid up capital to Rs.2 billion by the end of fiscal year 2013/14 has challenged most of the commercial bank of Nepal. (www.nepalsharemarket.com.)

Poor lending practices, which are indicated by poor financial analysis of borrowers, inadequate or substandard collateral and improper portfolio analysis, poor tracking of credit and intention of borrowers to default result in the high amount of Non Performing Loan. Similarly the concentration of loan and the recovery of loan combining with improper asset liabilities management decrease the profit, (NRB 2010). These could be another problem to be addressed in the research.

The interest rate on the both deposits and loan has been increasing each year. Like this, the inflation rate of the country has been increasing dramatically. Appreciation and depreciation of foreign exchange highly affect the bank. The increased foreign exchange transaction invites the increased risk due to the depreciation of the foreign exchange rate. The change in market rate probably affects the commercial banks profitability.

Moreover, the usage of computerization in banking such as computerized banking system, Internet Banking, Mobile Banking, ATM, Credit Card services has brought the electronic theft of the amount and increased the vulnerability of the bank and its customers. This may also be another problem to be addressed in the research.

In addition, the issuance of new 16 unified directives by the NRB in 2005 has also provided the commercial banks different measures related to credit risk, interest rate risk, foreign exchange risk, liquidity risk and operation risk coupled with maintaining adequate capital to safeguard the interest of investors, depositors and shareholders. In the same way, the implementation of Basel II from 2007, this is mainly concerned with the management of various types of risks and the capital framework for providing enough cushions to absorb the risks faced by commercial banks.

Within this competitive market scenario, the strength credit risk management, sound portfolio analysis, and proper management of asset and liabilities, compliance of NRB prudential and Basel II are crucial for these banks to sustain and grow in the industry. Nepal Credit & Commerce Bank Ltd. and Machhapuchchhre Bank Ltd. established as commercial banks could not be isolated with above mentioned challenges and problems faced by the entire banking industry. From the review of the annual reports and interview with these banks officials, it is found that both banks have been giving high priority to these problems for the prompt solution to show their continuous competency in the market.

Henceforth, the research problem defined above leads to the following research questions:

1. How the different risks of commercial banks can be analyzed?

2. How do different risks affect the performance of the commercial banks?
3. How important is the management of different risk to the commercial banks?
4. What actions can minimize these risks in order to maximize the profit?
5. Are the commercial banks implementing the NRB Directives and Based II?
6. What are the main reason banking sectors has been facing liquidity problem?

1.3 Objectives of the Study

This research aims to study and analyze how the selected commercial banks have managed different types of risk in this competitive Nepalese banking industry. The specific objectives of this study are:

1. To analyze different types of risks of the commercials banks.
2. To analyze financial position of the commercials banks.
3. To examine the reason of liquidity problem in banking sectors.
4. To assess the implementation of the NRB Direction by Commercial bank.
5. To provide valuable suggestion to the top management about risk of respective bank and whole banking industry.

1.4 Focus of the Study

Banking sector is vital sector for economic growth in a country. For the growth and development of this sector proper management of risk by considering the return is required. In today's competitive scenario, several macro economic factors such as political, economical, social and technological factors have increased the challenges to the banking sector. Banking sector also involves several risks, which need to be handled promptly for the survival and growth.

As this study is made mainly to analyze the various risks and their management in reference to NRB directives and measures, it will provide valuable insight to

different stakeholders about the major problems of commercial banks and their action for its management.

The key stakeholders who will be largely facilitated by this study include:

- Commercial banks under the study will be highly benefited. It identifies major risks of the banks, their current risk management styles, NRB guidelines on risk management and organization of basic compliance of such guidelines etc. Further, the banks will have knowledge of their strengths and weaknesses.
- This study is useful to those individuals, who have interest on risk management.
- Investors, depositors, borrowers or the banks will also be benefited as it provides an insight into the organizational risk management patterns within the standards set by NRB.
- Students will also be benefited from this study as reference to carry out their study in the same subject.

1.6 Limitations of the study

This study has been performed on various constrains and certain limitations Which are listed below?

- The study is based on the primary and secondary data provided by the NCC Bank and MBL. Therefore, the accuracy of results and conclusions highly depends on the reliability of the data.
- The evaluation is made through the analysis of financial statement published and presented by the banks. Therefore generalization of the whole banking industry cannot be made.
- Resource, time, money constraints and inaccessibility of sufficient information also limit the conclusion drawn from study.

- The study has covered only four types of risk out of eight therefore its depends on credit risk, market risk, liquidity risk and operational risk.
- This study may not be precise as it is prepared to fulfill the partial requirement of the MBS program
- The study has covered only the five years data from fiscal year 2006/07 to 2010/11.

1.7 Organization of the Study

The study has presented the systematic presentation of the research design, analysis, presentation and findings of the study. It has divided into five chapters

Chapter -I: Introduction

The first chapter of the study is introduction, which highlighted the basic information of the research area, various problems, objectives, importance, limitations and organization of the study.

Chapter - II: Review of Literature:

The second chapter of the study assures readers that they are familiar with important research that has been carried out in similar areas by earlier scholars in related areas. It also establishes that the study as link in a chain of research that is developing and emerging knowledge about concerned field.

Chapter - III: Research Methodology

The third chapter refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. It describes the various research methods (i.e. research design, source of data, data collection techniques, data collection methods).

Chapter - IV: Data Presentation and Analysis

The developed information has finished in required form in fourth chapter. Information is presented and analyzed (i.e. both primaries as well as secondary source) by using various financial and statistical tools in specified form to meet the stated objective of study.

Chapter - V: Summary, Conclusion and Recommendations

On the basis of the results from data analysis, the researcher concluded about the research work. Besides, it also gives important suggestions to the concerned organization for better improvement.

Bibliography, appendix and other supporting documents have also been incorporated at the end of the study.

CHAPTER II

REVIEW OF LITERATURE

This chapter is basically concerned with review of literature relevant to the topic risk management. The purpose of reviewing of literature is to develop some expertise in one's area, to see what new contribution has made and to receive some ideas for developing a research design. Thus, previous studies cannot be ignored as they provide the foundation of the present study. This chapter highlights the literature that is available in concerned subject as to my knowledge, research work, and relevant study on this topic, review of journals and articles and review of thesis work performed previously.

2.1 Conceptual Framework

Other definitions include the restriction that risk is based on real world events, including a combination of circumstances in the external environment Risk management is the process of measuring and assessing risk strategies. In ideal risk management, a prioritization process is followed whereby the risks with the greatest loss and the greatest probability of occurring are handled first, and risks with lower probability of occurrence and lower loss are handled later. In practice, the process can be very difficult and balancing risks with a high probability of occurrence but lower loss vs. a risk with high loss but lower probability of occurrence can after be mishandled. Risk refers to certainty on the investment faced by the investors. It is the possibility that actual outcomes may be different from those expected. Risk can be defined as the possibility of deviation of the actual return from the expected return (1950: p 134. Money market)

Risk is defined as “a condition in which there exists an exposure to adversity.” (1999: p 234. Financial Institution and Marketing) .In addition, there is an expectation of what the outcome should look like. Many definitions of risk include the term adverse deviation to express the negative dimension of the expected or hoped-for outcome. Therefore, risk is defined here as: risk is a condition in which there exists a possibility of deviation from a desired outcome that is expected or hoped for. Different investors define risk in different ways. In general, risk can be defined as the likelihood that actual return from an investment will be less than the forecast return. Stated differently, it is the variability of return from an investment. (2002: p: 200 Kothari)

Risk management is the process of measuring, or assessing risk and then developing strategies to manage the risk. In ideal risk management, a prioritization process is followed whereby the risks with the greatest loss and the greatest probability of occurring are handled first, and risks with lower probability of occurrence and lower loss are handled later. In practice the process can be very difficult, and balancing between risks with a high probability of occurrence but lower loss vs. a risk with high loss but lower probability of occurrence can often be mishandled.

Risk management also faces a difficulty in allocating resources properly. This is the idea of opportunity cost. Resources spent on risk management could be instead spent on more profitable activities. Again, ideal risk management spends the least amount of resources in the process while reducing the effects of risks as much as possible.

2.1.1 Meaning of Risk and Risk Management

Risk Management is a hot topic in the financial sector especially in the light of

the recent losses of some multinational corporations e.g. collapses of Britain's Barings Bank, WorldCom and also due to the incident of 9/11. Rapid changes in business condition, restructuring of organizations to cope with ever increasing competition, development of new products, emerging markets and increase in cross border transactions along with complexity of transactions has exposed Financial Institutions to new risks dimensions. Thus the concept of risk has captured a growing importance in modern financial society.

By facilitating transactions and making credit and other financial products available, the financial sector is a crucial building block for private as well as public sector development. In its broadest definition, it includes everything from banks, stock exchanges, and insurers, to credit unions, microfinance institutions and moneylenders. As an efficient service provider, the financial sector simultaneously fulfils an important function in the overall economy. Various types of Financial Institutions actively working in Financial Sectors include Banks, DFIs, Micro Finance Banks, Leasing Companies, Assets Management Company, Mutual Funds, etc. Thus today's operating environment demands systematic and more integrated risk management approach.

2.1.1.1 Risk:

Banks are always faced with different types of risks that may have a potentially negative effect on their business. Risk-taking is an inherent element of banking and, indeed, profits are in part the reward for successful risk taking in business. On the other hand, excessive and poorly managed risk can lead to losses and thus endanger the safety of a bank's depositors. Risks are considered warranted when they are understandable, measurable, controllable and within a bank's capacity to readily withstand adverse results. Sound risk management systems enable managers of banks to take risks knowingly, reduce risks where

appropriate and strive to prepare for a future, which by its nature cannot be predicted.

Nepal Rastra Bank laid significant emphasis on the adequacy of a bank's management of risk. Nepal Rastra Bank puts forward this document for the purpose of providing guidelines to all commercial banks on risk management systems that are expected to be in place. This document sets out minimum standards that shall be expected of a risk management framework. Overall risk management is of utmost importance to Banks, and as such, policies and procedures should be endorsed and strictly enforced by the senior management and the board of the Bank, (www.nrb.org.np)

Risk by default has two components; uncertainty and exposure. If both are not present, there is no risk. Definition of Risk as per Guidelines on Risk Management issued by State Bank of Pakistan is, "Financial risk in a banking organization is possibility that the outcome of an action or event could bring up adverse impacts. Such outcomes could either result in a direct loss of earnings / capital or may result in imposition of constraints on bank's ability to meet its business objectives. Such constraints pose a risk as these could hinder a bank's ability to conduct its ongoing business or to take benefit of opportunities to enhance its business."

2.1.1 Types of Risk Faced by Commercial Banks

Risk and uncertainties are the integral part of banking business. In banking sector, risk refers to the possibility that the bank will turn into liquidation there are several inherent risks in banking which can be classified into three broad categories i.e. Credit Risk, Market Risk and Operational Risk. Primarily, risk in the banking context is credit risk through lending, which occupies about 60% of total risk portfolio. Therefore, this study is mainly

focused on the credit risk. However, the brief introduction of Market Risk and operational Risk has also been included. The major sources of risk in banking business are briefly discussed as below.

1. Credit Risk

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Anthony Saunders defines the credit risk as “the risk that the promised cash flows from loans and securities held by FIs (Financial Institutions) may not be paid in full”. Credit risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, Settlement and other financial transactions

The non-performance may arise from counterparty’s refusal to perform due to an adverse price movement caused by systematic factors, or from some other political or legal constraint that was not anticipated by the principals. Diversification is the major tool for controlling nonsystematic counterparty risk. Counterparty risk is like credit risk, but it is generally viewed as a more transient financial risk associated with trading than standard creditor default risk. In addition, counterparty’s failure to settle a trade can arise from other factors beyond a credit problem. So, 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. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Bank should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization. (*Bhandari, 2003:44*).

2. Market Risk

Market risk is 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. The four standard market risk factors are stock prices, interest rates, foreign exchange rates, and commodity prices. The associated market risks are as with other forms of risk, the potential loss amount due to market risk may be measured in a number of ways or conventions. Traditionally, one convention is to use [Value at Risk](#). The conventions of using Value at risk are well established and accepted in the short-term risk management practice.

However, it contains a number of limiting assumptions that constrain its accuracy. The first assumption is that the composition of the portfolio measured remains unchanged over the specified period. Over short time horizons, this limiting assumption is often regarded as reasonable. However, over longer time horizons, many of the positions in the portfolio may have been changed. The Value at Risk of the unchanged portfolio is no longer relevant.

In addition, care has to be taken regarding the intervening cash flow, embedded options, changes in floating rate interest rates of the financial positions in the portfolio. They cannot be ignored if their impact can be large. Market risk is the risk incurred in the trading of assets and liabilities due to changes in interest rates, exchange rates, and other asset prices. So, Market risk is exposure to the uncertain market value of the firm's asset. Major factors affecting Market risk are:

- a. Liquidity Risk
- b. Interest Rate Risk
- c. Foreign Exchange Risk

3. Liquidity Risk

Anthony Saunders says, “Liquidity risk arises whenever financial institutions’ liability holders, such as depositors or insurance policyholders, demand immediate cash for their financial claims”. When liability holders demand cash immediately – that is, put their financial claims back to the FI – the FI must either borrow additional funds or sell off assets to meet the demand for the withdrawal of funds. An institution is said to have liquidity if it can easily meet its liability holders’ demand for cash either because it has cash on hand or can otherwise raise or borrow cash. In banking sector, Liquidity risk is created when banks hold different sizes of assets and liabilities and mismatch occurs in maturity of the assets and liabilities. Extreme illiquid asset in bank may result in bankruptcy where as excess liquid asset may carry interest rate risk over the period of time. As it is fatal risk, prudent liquidity management is the primary function of banking sector. Liquidity management is also to make sure that expected shortfall amounts are funded at a reasonable cost, ensure excess fund are invested properly with reasonable returns and without carrying any interest rate risk to the bank

4. Interest Rate Risk (IRR)

Interest rate risk is the risk incurred by a financial institution when the maturities of its assets and liabilities are mismatched. Interest Rate Risk is the probability of decline in earnings, due to the adverse movements of the interest rates in various markets. The applicable interest earned on assets and liabilities and hence net interest margin is the function of market variables and it may get changed overnight or over a period of time according to the market situation. Changes in the interest rate can significantly alter net interest income depending on the mismatch of assets and liabilities held by the bank. Changes in interest rates also affect the market value of bank’s equity.

5. Foreign Exchange Risk

Foreign exchange risk is the risk that exchange rate changes can affect the value of a bank's assets and liabilities denominated in foreign currencies. The bank is also exposed to foreign exchange risk, which arises from the maturity mismatching of foreign currency positions. In the foreign exchange business, banks also face the risk of default of the counterparties or settlement risk. While such type of risk crystallization will not cause principal loss, banks may have to undertake fresh transactions in the cash/spot market to replace the failed transactions. Thus, the bank may incur replacement cost, which depends upon the currency rate movements.

6. Operational Risk

Operational risk *is* associated with the problems of accurately processing, settling, and taking or making delivery on trades in exchange for cash. It also arises in record keeping, processing system failures and compliance with various regulations. The Basel Committee on Banking Supervision (2000), defines operational risk as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.” Operational risk arises from inadequate control systems, operational problems and breaches in internal controls, fraud and unforeseen catastrophes leading to unexpected losses for a bank. Many of the operational-risk-related functions such as regulatory compliance, finance management, frauds, IT, legal, and insurance are carried out by the staff and thus human resources itself becomes a cause for operational risk.

2.2 Review of NRB Directives Related to Risk Management of Commercial Banks

2.2.1 Overview

Banks are always faced with different types of risks that may have a

potentially negative effect on their business. Risk-taking is an inherent element of banking and, indeed, profits are in part the reward for successful risk taking in business. On the other hand, excessive and poorly managed risk can lead to losses and thus endanger the safety of a bank's depositors. Risks are considered warranted when they are understandable, measurable, controllable and within a bank's capacity to readily withstand adverse results. Sound risk management systems enable managers of banks to take risks knowingly, reduce risks where appropriate and strive to prepare for a future, which by its nature cannot be predicted.

Nepal Rastra Bank laid significant emphasis on the adequacy of a bank's management of risk. Nepal Rastra Bank puts forward this document for the purpose of providing guidelines to all commercial banks on risk management systems that are expected to be in place. This document sets out minimum standards that shall be expected of a risk management framework. Overall risk management is of utmost importance to Banks, and as such, policies and procedures should be endorsed and strictly enforced by the senior management and the board of the Bank.

2.2.2 Risk Management Guideline (RMG)

The guideline at hand does not replace, rather supplements the existing regulations and guidelines. The guideline will become a focal point of reference for all requirements of the Nepal Rastra Bank for overall risk policy formulation and management. The guideline applies to the commercial banks in Nepal. It is not intended to be so comprehensive that it covers each and every aspect of risk management activity. This guideline provides minimum standard for the risk management practice to be exercised in the banks. A bank may establish a more comprehensive and sophisticated framework than that outlined in the guideline. This is entirely acceptable as long as all

essential elements of the guideline are fully taken into account.

The guideline is in line with internationally accepted risk management principles and the best practices. It is also aligned with the revised version of Core Principles for Effective Banking Supervision, which the Basel Committee published in October 2006. Core Principle 7 on 'Risk Management Processes' mentions that "*banks and banking groups must have comprehensive risk management processes (including Board and senior management oversight) to identify, evaluate, monitor and control or mitigate all material risks and to assess their overall capital adequacy in relation to their risk profile. These processes should be commensurate with the size and complexity of the bank*". Other relevant Core Principles (CP) includes credit risk (CP8), market risk (CP13) liquidity risk (CP14), operational risk (CP15) and interest rate risk (CP16). Moreover, principles set for the specific risk categories (Credit, Market, Operational, and Liquidity) are presented in the box.

The types and degree of risks an organization may be exposed to depend upon a number of factors such as its size, complexity, business activities, volume etc. This guideline covers the most common risks of Nepalese commercial banks; mainly Credit Risk, Market Risk, Operational Risk and Liquidity Risk. Depending on the nature and size of business, banks can introduce several stringent measures for the efficient risk management.

There are several risks like; strategic risk, reputation risk, legal risk etc. which can be measured in terms of qualitative criteria. Banks risk management process should incorporate all the risks associated with its business activities. This guideline presents the broader principles and concepts for the risk management in banking business. It provides minimum

standard as well as general guidelines to encourage banks for directing their efforts towards stringent measures for risk management. Only objective of the RMG is to contribute towards maintaining and improving financial safety and soundness through better risk management practices in the banks. (Source: www.nrb.org.np)

2.2.3 Managing Credit Risk

2.2.3.1 Overview

Credit risk is the likelihood that a debtor or financial instrument issuer is unwilling or unable to pay interest or repay the principal according to the terms specified in a credit agreement resulting in economic loss to the bank. Credit risk also refers the risk of negative effects on the financial result and capital of the bank caused by borrower's default on its obligations to the bank.

Credit risk is the major risk that banks are exposed during the normal course of lending and credit underwriting. Credit risk arises from non-performance by a borrower. For most banks, loans are the largest and most obvious source of credit risk; however, credit risk could stem from activities both on and off balance sheet. It may arise from either an inability or an unwillingness to perform in the pre-committed contracted manner. In a bank's portfolio, losses arise from outright default due to inability or unwillingness of a customer or counter party to meet commitments in relation to lending, trading, settlement and other financial transactions. Alternatively losses may result from reduction in portfolio value due to actual or perceived deterioration in credit quality.

This section presents fundamental credit risk management policies and practices that are recommended for adoption by the banks. The guideline

outlines general principles that are designed to govern the implementation of more detailed lending procedures and practices within the banks.

A typical Credit risk management framework in a bank may be broadly categorized into following main components;

- Board and senior Management's Oversight
- Organizational structure
- Systems and procedures for identification, acceptance, measurement
- Monitoring and control risks

Board and Senior Management's Oversight

Board Oversight

The Board of directors has a vital role in granting credit as well as managing the credit risk of the bank. It is the overall responsibility of a bank's Board to approve credit risk strategy and significant policies relating to credit risk and its management which should be based on the overall business strategy. Overall strategy as well as significant policies has to be reviewed by the board regularly.

Each bank, depending upon its size, should constitute a Credit Risk Management Committee (CRMC), ideally comprising of head of credit department and treasury. This committee should be empowered to oversee credit risk taking activities and overall credit risk management function.

The CRMC should be mainly responsible for;

- The implementation of the credit risk policy/strategy approved by the Board.
- Monitor credit risk and ensure compliance with limits approved by the Board.
- Recommend to the Board, for its approval, clear policies on standards for presentation of credit proposals, financial covenants, rating

standards and benchmarks.

- Recommend delegation of credit approving powers, prudential limits on large credit exposures, standards for loan collateral, portfolio management, loan review mechanism, risk concentrations, risk monitoring and evaluation, pricing of loans, provisioning, regulatory/legal compliance.

The responsibilities of the board with regard to credit risk management shall include to:

- Ensure that appropriate policies, plans and procedures for credit risk management are in place. Ensure the bank implements sound fundamental policies;
- Define the bank's overall risk tolerance in relation to credit risk;
- Ensure that top management as well as staffs responsible for credit risk management possess sound expertise and knowledge to accomplish the risk management function;
- Ensure that bank's significant credit risk exposure is maintained at prudent levels and consistent with the available capital. Review trends in portfolio quality and the adequacy of bank's provision for credit losses;
- Ensure that internal audit reviews the credit operations to assess whether or not the bank's policies and procedures are adequate and implemented;
- Review exposures to insiders and their related parties, including policies related thereto;
- Ratify exposures exceeding the level of the management authority delegated to management and be aware of exposures; and
- Outline the content and frequency of management report to the board on credit risk management.
- Developing credit policies and credit administration procedures for

Board approval;

- Implementing credit risk management policies to ensure effective credit risk management process;
- Ensuring the development and implementation of appropriate reporting system;
- Monitoring and controlling the nature and composition of the bank's credit portfolio;
- Monitoring the quality of credit portfolio and ensuring that the portfolio is soundly and conservatively valued and probable losses are adequately provided for;
- Establishing internal controls and setting clear lines of accountability and authority; and
- Building lines of communication for the timely dissemination of credit risk management policies, procedures and other credit risk management information to all the credit staffs.

2.2.3.2 Credit Strategy, Policies, Procedures and Limits

Credit Strategy

The primary purpose of bank's credit strategy is to determine the risk appetite. Risk appetite, at the organizational level, is the amount of risk exposure, or potential adverse impact from an event, that the bank is willing to accept. Once it is determined, the bank shall develop a plan to optimize return while keeping credit risk within predetermined limits. The credit risk strategy thus should cover:

- The bank's plan to grant credit based on various client segments and products, economic sectors, geographical location, currency and maturity;
- Target market within each lending segment and level of

- diversification/concentration;
- Pricing strategy.

Credit risk strategy should be developed on the basis of bank's target market and its internal strength. The strategy should provide continuity in approach and take into account cyclic aspect of country's economy and the resulting shifts in composition and quality of overall credit portfolio. The credit procedures should aim to obtain a deep understanding of the bank's clients, their credentials and their businesses in order to fully know their customers. These strategies should be reviewed periodically and amended, as deemed necessary; it should be viable in the long run.

Credit Policies

Every bank has to develop Credit Policies Guidelines (CPG) that clearly outline the bank's view of business development priorities and the terms and conditions that should be adhered to for loans to be approved. The CPG should be updated at a regular interval to reflect changes in the economic outlook and the evolution of the bank's loan portfolio. To make it effective, policies should be communicated timely and should be implemented by all levels of the bank through appropriate procedures. It should be distributed to all lending authorities and credit officers. Credit policies establish framework for making investment and lending decisions and reflect bank's tolerance for credit risk. Any significant deviation to these policies must be communicated to the Senior Management/Board and corrective measures should be taken. At a minimum, credit policies should include:

- Areas of credit in which the bank plans to lend and does not lend (acceptable and unacceptable lines of credit). These areas can be on the basis of credit facilities, type of collateral security, types of borrowers, or geographic sectors on which the bank may focus;
- Bank's formal credit approval process; detailed and formalized credit

evaluation/ appraisal process, administration and documentation;

- Credit approval authority at various levels;
- Clear guidelines for each of the various types of credits, such as loans, overdrafts, mortgages, leases, etc.
- Concentration limits on single counter party and group of connected counter parties, particular industries or economic sectors, geographic regions and specific products. Banks can set their own stringent internal exposure limits comply with any prudential limits or restrictions set by the Nepal Rastra Bank;
- Authority for approval of allowance for probable losses and write-offs;
- Credit Pricing;
- Roles and responsibilities of units/staff involved in credit;
- Guidelines on regular monitoring and reporting system.
- Guidelines on management of problem loans; and
- Internal rating (Risk grading) systems including definition of each risk grade and clear demarcation for each risk grade.

The credit policy should spell out the process to ensure appropriate reporting and approval of credit extension beyond prescribed limits. The policy should also spell out approvals of disbursements of excess over limits, and other exceptions to credit policy. In order to be effective, credit policies must be communicated throughout the bank, implemented through appropriate procedures, and periodically revised to take into account changing internal and external circumstances.

Credit Procedures

The credit procedures should aim to obtain a deep understanding of the

bank's clients and their businesses in order to fully know their customers. Banks should develop procedures that adequately capture salient issues regarding the borrower's industry; macro economic factors; the purpose of credit; source of repayment; track record and repayment history of the borrower; repayment capacity of the borrower; the proposed terms and conditions and covenants; adequacy and enforceability of collaterals; and appropriate authorization for the loan.

Credit Limits

An important element of credit risk management is to establish exposure limits covering on-balance sheet and off-balance sheet credit exposures for single counter party and group of connected counter parties. The objective of setting credit limit is to prevent banks from relying excessively on a large borrower or group of borrowers. Banks are expected to develop their own stringent limit structure while remaining within the exposure limits set by the Nepal Rastra Bank. The size of the limits should be based on the credit strength of the counterparty, purpose of credit, economic conditions and the bank's risk appetite. Limits should also be set for respective products, activities, specific industry, economic sectors and/or geographic regions to avoid concentration risk. Credit limits should be reviewed regularly at least annually or more frequently if counter party's credit quality deteriorates. All requests of increase in credit limits should be substantiated.

2.2.3.4 Credit Administration

Credit administration is a critical function in maintaining the safety and soundness of a bank. The credit administration function is basically a back office activity that supports and controls extension and maintenance of credit. A typical credit administration unit should perform the functions of credit documentation, disbursement and monitoring; loan repayment; and

maintenance of credit files, collateral and security documents. Once a credit is granted, it is the responsibility of Credit Administration to ensure that the credit is properly maintained. It is the responsibility of credit administration to ensure completeness of documentation (loan agreements, guarantees, transfer of title of collaterals etc) in accordance with approved terms and conditions. This includes keeping the credit file up to date, obtaining current financial information, sending out renewal notices and preparing various documents such as loan agreements. While developing credit administration areas, banks should ensure:

- the efficiency and effectiveness of credit administration operations, including monitoring documentation, contractual requirements, legal covenants, collateral, etc.;
- the accuracy and timeliness of information provided to management information systems;
- the adequacy of control over all “back office” procedures; and
- Compliance with prescribed management policies and procedures as well as applicable laws and regulations.

For the various components of credit administration to function appropriately, senior management must understand and demonstrate that it recognizes the importance of this element of monitoring and controlling credit risk

Banks need to enunciate a system that enables them to monitor quality of the credit portfolio on day-to-day basis and take remedial measures as and when any deterioration occurs. Such a system would enable a bank to ascertain whether loans are being serviced as per facility terms, the adequacy of provisions, the overall risk profile is within limits established by management and compliance of regulatory limits. Monitoring procedures

and systems should be in place so as to provide an early indication of the deteriorating financial health of a borrower.

Banks should ensure that all security documents are kept in a fireproof safe. Registers for documents should be maintained to keep track of their movement. Procedures should also be established to track and review relevant insurance coverage for certain facilities/collateral. Physical checks on security documents should be conducted on a regular basis.

The credit files should include all of the information necessary to ascertain the current financial condition of the borrower or counter party as well as sufficient information to track the decisions made and the history of the credit. Bank should devise procedural guidelines and standards for maintenance of credit files. The credit files not only include all correspondence with the borrower but also contain sufficient information necessary to assess financial health of the borrower and its repayment performance. It should be filed in organized way so that external/internal auditors or NRB inspector could review it easily.

2.2.3.5 Internal Credit Risk Rating System

Banks should develop an internal credit risk rating system for its loans and advances. The risk rating should categorize all credits into various classes on the basis of underlying credit quality. Risk rating is a key measurement of a bank's asset quality, and as such, it is essential that rating is a robust process. All facilities should be assigned a risk grade. In case of deterioration in risk is noted, the Risk Grade assigned to a borrower and its facilities should be immediately changed. NRB does not advocate any particular credit risk rating system; it should be bank's own choice. But the rating system should be consistent with the nature, size and complexity of a

bank's activities and should have at least the following parameters:

- covers a broad range of the bank's credit exposure, including off-balance sheet exposures;
- covers both performing and non-performing assets;
- has several grades covering exposures, with the lowest rating accorded to those where losses are expected;
- has risk ratings for "performing" credits with several grades (including the grades like "watch list" or "special mention");
- has regulatory classifications (performing, substandard, doubtful & bad) should be incorporated within the risk rating systems; and
- has the credit risk rating system detailed in the credit policy and procedures developed for the determination and periodic review of the credit grades.

The rating system, which has been endorsed by the board, has to be submitted to Nepal Rastra Bank. For banks, which have yet to implement the rating system, a plan, endorsed by the board, must be submitted to Nepal Rastra Bank specifying the timeframe, persons responsible and steps taken for the implementation of a credit grading system. Such plans must be submitted to Nepal Rastra Bank not later than **end of December 2010**.

Banks should regularly monitor and evaluate the actual default or loss experience of credits in each risk grade as one means to assess the consistency and reliability of the ratings being used.

2.2.3.6 Credit Risk Monitoring and Control

Credit risk monitoring refers to the continuous monitoring of individual

credits inclusive of off-balance sheet exposures to obligors as well as overall credit portfolio of the bank. Banks need to develop and implement comprehensive procedures and information systems to monitor the condition of individual credits and single borrowers across the bank's various portfolios. Banks need to enunciate a system that enables them to monitor quality of the credit portfolio on day-to-day basis and take remedial measures as and when any deterioration occurs. These procedures need to define criteria for identifying and reporting potential problem credits and other transactions to ensure that they are subject to more frequent monitoring as well as possible corrective action, classification and/or provisioning. Establishing an efficient and effective credit monitoring system would help senior management to monitor the overall quality of the total credit portfolio and its trends. As a result the management could reassess its credit strategy /policy accordingly before encountering any major setback. The banks credit policy should explicitly provide procedural guideline relating to credit risk monitoring. At the minimum it should lay down procedure relating to:

- The roles and responsibilities of individuals responsible for credit risk monitoring
- The assessment procedures and analysis techniques (for individual loans & overall portfolio)
- The frequency of monitoring
- The periodic examination of collaterals and loan covenants
- The frequency of site visits
- The identification of deterioration in any loan

Such a system would enable a bank to ascertain whether loans are being serviced as per facility terms, the adequacy of provisions, the overall risk profile is within limits established by management and compliance of

regulatory limits.

An effective credit monitoring system includes, measures to:

- ensure that the bank understands the current financial condition of the borrower or counter party;
- ensure that all credits are in compliance with existing covenants;
- follow the use customers make of approved credit lines;
- ensure that projected cash flows on major credits meet debt servicing requirements;
- ensure that, where applicable, collateral provides adequate coverage relative to the obligor's current condition; and
- Identify and classify potential problem credits on a timely basis.

Given below are some key indicators that depict the credit quality of a loan:

a. Financial Position and Business Conditions

The most important aspect about an obligor is its financial health, as it would determine its repayment capacity. Business/industry risk, borrower's position within the industry and external factors such as economic condition, government policies, and regulations should be taken into consideration. The Key financial performance indicators on profitability, equity, leverage and liquidity should be analyzed on a regular basis.

b. Conduct of Accounts

In case of existing obligor the operation in the account would give a fair idea about the quality of credit facility. Banks should monitor the obligor's account activity, repayment history and instances of excesses over credit limits. For trade financing, banks should monitor cases of repeat in extensions of due dates for trust receipts and bills.

c. Loan Covenants

Bank should regularly review the credit in terms of the obligor's ability to adhere to financial covenants stated in the loan agreement, and any breach detected should be addressed promptly.

d. Collateral valuation

Banks need to reassess value of collaterals on periodic basis. The frequency of such valuation depends upon nature of collaterals. Appropriate inspection should be conducted to verify the existence and valuation of the collateral.

2.2.3.7 Credit Risk Review & Stress Testing

The bank must establish a mechanism of independent, ongoing assessment of credit risk management process. All facilities except those managed on a portfolio basis should be subjected to individual risk review at least once in a year. The results of such review should be properly documented and reported directly to the board. The purpose of such reviews is to assess the credit administration process, the accuracy of credit rating and overall quality of loan portfolio independent of relationship with the obligor. Banks should conduct credit review with updated information on the counter party's financial and business conditions, as well as conduct of account.

An important element of sound credit risk management is analyzing what could potentially go wrong with individual credits and the overall credit portfolio if conditions/environment, in which borrowers operate, change significantly. The results of this analysis should then be factored into the assessment of the adequacy of provisioning and capital of the bank. Such stress analysis can reveal previously undetected areas of potential credit risk exposure that could arise in times of crisis.

Possible scenarios that banks should consider in carrying out stress testing include:

- i. Significant economic or industry sector downturns;
- ii. Adverse market-risk events; and
- iii. Unfavorable liquidity conditions.

Banks should have industry profiles in respect of all industries where they have significant exposures. Such profiles must be reviewed /updated on a regular basis. Each stress test should be followed by a contingency plan as regards recommended corrective actions. Senior management must regularly review the results of stress tests and contingency plans. The results must serve as an important input into a review of credit risk management framework and setting limits and provisioning levels.

2.2.4 Managing Market Risk

2.2.4.1 Overview

Market risk refers to the risk to a bank resulting from movements in market prices, in particular, changes in interest rates, foreign exchange rates, and equity and commodity prices. Market risk is defined as the risk of losses in on and off-balance sheet positions arising from movements in market prices. The risks subject to this requirement are:

- i. the risks pertaining to *interest rate related instruments* and *equities* in the trading book;
- ii. *foreign exchange risk* and *commodities risk* throughout the bank.

Market risk exposure may be explicit in portfolios of securities/equities and instruments that are actively traded. On the other hand, it may be implicit such as interest rate risk due to mismatch of loans and deposits. Besides, market risk may also arise from activities categorized as off- balance sheet item. Therefore

market risk is potential for loss resulting from adverse movement in market risk factors such as interest rates, foreign exchange rates, and equity and commodity prices. The risk arising from these factors have been discussed below.

Foreign Exchange Risk

Foreign exchange risk is the risk of negative effects in the financial result and capital of the bank caused by changes in exchange rates. It is the current or prospective risk to earnings and capital arising from adverse movements in currency exchange rates. It refers to the impact of adverse movement in currency exchange rates on the value of open foreign currency position. As a result, banks may suffer losses due to changes in discounts of the currencies concerned.

The foreign exchange positions arise from the following activities:

- Trading in foreign currencies through spot, forward and option transactions as a market maker or position taker, including the unheeded positions arising from customer-driven foreign exchange transactions;
- Holding foreign currency positions in the banking book (e.g. in the form of loans, bonds, deposits or cross-border investments); or
- Engaging in derivative transactions that are denominated in foreign currency for trading or hedging purposes.

In the foreign exchange business, banks also face the risk of default of the counter parties or settlement risk. Thus, banks may incur replacement cost, which depends upon the currency rate movements. Banks also face another risk called time-zone risk, which arises out of time lags in settlement of one currency in one center and the settlement of another currency in another time zone. The foreign exchange transactions with counter parties situated outside

Nepal also involve sovereign or country risk.

Interest Rate Risk

Interest rate risk is the risk of negative effects on the financial result and capital of the bank caused by changes in interest rates. Changes in interest rates affect a bank's earnings by changing its net interest income and the level of other interest-sensitive income and operating expenses. Changes in interest rates also affect the underlying value of the bank's assets, liabilities and off-balance sheet instruments because the present value of future cash flows change when interest rates change. The immediate impact of variation in interest rate is on bank's net interest income, while a long term impact is on bank's net worth since the economic value of bank's assets, liabilities and off -balance sheet exposures are affected. An effective risk management process that maintains interest rate risk within prudent levels is essential for the safety and soundness of banks.

Interest rate risk arises when there is a mismatch between positions, which are subject to interest rate adjustment within a specified period. Interest rate risk is usually assessed from two common perspectives. Earnings perspective, which focuses on the impact of variation in interest rate on accruals or reported earnings, and economic value perspective, which reflects the impact of fluctuation in the interest rates on economic value of a financial institution.

Commodity Risk

A bank that is active in commodities trading should also account for variations in the "convenience yield" between derivatives positions, such as forwards and swaps, and cash positions in the commodity. All significant levels of commodity exposures should be properly managed.

Equity Price Risk

It is risk to earnings or capital that results from adverse changes in the value of equity related portfolios of a bank. Price risk associated with equities could be systematic or unsystematic. The former refers to sensitivity of portfolio's value to changes in overall level of equity prices, while the later is associated with price volatility that is determined by firm specific characteristics.

2.2.4.2 Market Risk Management

Each bank should put in place a set of systems and procedures appropriate to its size and complexity of its operations for identifying, measuring monitoring and controlling market risk. The risk appetite in relation to market risk should be assessed keeping in view the capital of the bank as well as exposure to other risks. Once the market risk appetite is determined, the bank should develop a strategy for market risk-taking in order to maximize returns while keeping exposure to market risk at or below the pre-determined level.

Board and Senior Management Oversight

Management of market risk should start from the board and top management level. Effective board and senior management oversight of the bank's overall market risk exposure is a foundation of risk management process. For its part, the board of directors has following responsibilities;

- Define banks overall risk tolerance in relation to market risk.
- Ensure that bank's overall market risk exposure is maintained at prudent levels and consistent with the available capital.
- Ensure that top management as well as individuals responsible for market risk management possesses sound expertise and knowledge to accomplish the risk management function.
- Ensure that the bank implements sound fundamental principles that facilitate the identification, measurement, monitoring and control of

market risk.

The board of directors should periodically review the financial results of the bank and, based on these results, determine if changes need to be made to the strategy. While the board gives a strategic direction and goals, it is the responsibility of top management to transform those directions into procedural guidelines and policy document and ensure proper implementation of those policies.

Accordingly, senior management is responsible to:

- Develop and implement procedures that translate business policy and strategic direction set by BOD into operating standards that are well understood by bank's personnel.
- Ensure adherence to the lines of authority and responsibility that board has established for measuring, managing, and reporting market risk.
- Oversee the implementation and maintenance of Management Information System that identify, measure, monitor, and control bank's market risk.
- Establish effective internal controls to monitor and control market risk.

The banks should formulate market risk management policies which are approved by board. The policy should clearly define the lines of authority and the responsibilities of the Board of Directors, senior management and other personnel responsible for managing market risk; set out the risk management structure and scope of activities; and identify risk management issues, such as market risk control limits, delegation of approving authority.

The boards of directors and senior management have ultimate responsibility for understanding the nature and level of market risk taken by the bank. Board oversight may be delegated to an appropriate subcommittee such as the Asset

and Liability Committee (ALCO) or Risk Management Committee.

Structure

The organizational structure used to manage market risk varies depending upon the nature size and scope of business activities of the bank. Since the structure varies at a minimum it should take into account following aspect.

- The structure should be in line with the overall strategy and risk policy set by the BOD.
- Those who take risk (front office) must know the organization's risk profile, products that they are offering, and the limits assigned to them.
- The risk management function should be independent, reporting directly to senior management or BOD.

Establishment of strong MIS for controlling, monitoring and reporting market risk.

Besides the role of Board as discussed earlier a typical organization set up for Market Risk Management should include: -

- The Risk Management Committee
- The Asset-Liability Management Committee (ALCO)
- The Middle Office.

Risk Management Committee

It is generally a board level subcommittee constituted to supervise overall risk management functions of the bank. The structure of the committee may vary in banks depending upon the size and volume of the business. Generally it includes head of Credit, Market and operational risk Management divisions. It will decide the policy and strategy for integrated risk management containing various risk exposures of the bank including the market risk. The

responsibilities of Risk Management Committee with regard to market risk management aspects include

- i. Formulate policies and guidelines for identification, measurement, monitoring and control for all major risk categories.
- ii. Ensuring the bank has clear, comprehensive and well-documented policies and procedural guidelines relating to risk management and the relevant staff fully understands those policies.
- iii. Ensuring that resources allocated for risk management are adequate given the size nature and volume of the business and the personnel involved in measuring, monitoring and controlling risk possess sufficient knowledge and expertise.
- iv. Reviewing and approving market risk limits, including triggers or stop losses for traded and accrual portfolios.
- v. Ensuring robustness of financial models and the effectiveness of all systems used to calculate market risk.
- vi. Ensuring that the bank has a strong management information system relating to risk reporting.

Asset-Liability Committee

ALCO is a senior management level committee responsible for supervision/management of Market Risk (mainly interest rate and liquidity risks). The committee generally comprises of senior managers from treasury, Chief Financial Officer, business heads generating and using the funds of the bank, credit, and individuals from the departments having direct link with interest rate and liquidity risks. The CEO or any senior person nominated by CEO is the head of the committee. The size as well as composition of ALCO depends on the size of each bank, business mix and organizational complexity. To be effective ALCO should have members from each area of the bank that significantly influences liquidity risk. Major

responsibilities of the committee include:

- Monitoring the structure /composition of bank's assets and liabilities
Identifying balance sheet management issues like balance sheet gaps, interest rate gap/profiles etc. that are leading to under-performance.
- Developing maturity profile and mix of incremental assets and liabilities.
- Determining interest rates the bank and deciding on the future business strategy.
- Reviewing and documenting bank's funding policy.
- Deciding the transfer pricing policy of the bank.
- Evaluating market risk involved in launching of new products.
- Reviewing deposit-pricing strategy for the local market.
- Receiving and reviewing reports on liquidity risk, market risk and capital management
- Reviewing liquidity contingency plan for the bank.

ALCO should ensure that risk management is not limited to collection of data only. Rather, it will ensure that detailed analysis of assets and liabilities is carried out so as to assess the overall balance sheet structure and risk profile of the bank. The ALCO should cover the entire balance sheet/business of the bank while carrying out the periodic analysis.

Middle Office

The risk management functions relating to treasury operations are mainly performed by middle office. Besides the existence of front office and back office, the concept of middle office has recently been introduced so as to monitor measure and analyze risks inherent in treasury operations of banks independently. The unit also prepares reports for the information of senior

management as well as bank's ALCO. Basically the middle office performs risk review function of day-to-day activities. Being a highly specialized function, it should be staffed by people who have relevant expertise and knowledge. The methodology of analysis and reporting may vary from bank to bank depending on their degree of sophistication and exposure to market risks. These same criteria will govern the reporting requirements demanded for the Middle Office, which may vary from simple gap analysis to computerized VAR modeling.

Middle Office staff may prepare forecasts (simulations) showing the effects of various possible changes in market conditions related to risk exposures. Banks using VAR or modeling methodologies should ensure that its ALCO is aware of and understand the nature of the output, how it is derived, assumptions and variables used in generating the outcome and any shortcomings of the methodology employed.

Segregation of duties should be evident in the middle office, which must report to ALCO independently of the treasury function. In respect of banks without a formal Middle Office, it should be ensured that risk control and analysis should rest with a department with clear reporting independence from Treasury or risk taking units, until normal Middle Office framework is established.

Risk Measurement

Accurate and timely measurement of market risk is necessary for proper risk management and control. Each bank should evolve measurement process, which is capable of identifying, and quantifying market risk factors that affect the value of traded and non-traded portfolios, income stream and other business activities using all available data. There is a wide range of risk measurement techniques ranging from static measurement techniques (Gap analysis) to

highly sophisticated dynamic modeling (Monte Carlo Simulation), the banks may employ any technique depending upon the nature size and complexity of the business.

Banks may adopt multiple risk measurement methodologies to capture market risk in various business activities; however management should have an integrated view of overall market risk across products and business lines. The measurement system ideally should:

- Assess all material risk factors associated with a bank's assets, liabilities, and Off Balance sheet positions.
- Utilize generally accepted financial concepts and risk measurement techniques.
- Have well documented assumptions and parameters. It is important that the assumptions underlying the system are clearly understood by risk managers and top management.

Regardless of the measurement system, the usefulness of each technique depends on the validity of the underlying assumptions and accuracy of the basic methodologies used to model risk exposure. The integrity and timeliness of data relating to current positions are key elements of risk measurement system.

Risk Monitoring

Risk monitoring processes should be established to evaluate the performance of bank's risk strategies/policies and procedures. A separate unit performs the function of risk monitoring or it can be a part of banks internal audit depending on the size and complexity of business. It is important that the monitoring function should be independent of units taking risk, which reports directly to the risk management committee.

Banks should have an information system that is accurate, informative and timely to ensure dissemination of information to management to support compliance with board policy. Reporting of risk measures should be regular and should clearly compare current exposures to policy limits. Further past forecast or risk estimates should be compared with actual results to identify any shortcomings in risk measurement techniques. The board on regular basis should review these reports. While the types of reports for board and senior management could vary depending upon overall market risk profile of the bank, at a minimum following reports should be prepared.

- Summaries of bank's aggregate market risk exposure
- Reports demonstrating bank's compliance with policies and limits
- Summaries of finding of risk reviews of market risk policies, procedures and the adequacy of risk measurement system including any findings of internal/external auditors or consultants

Risk Control

Banks should have adequate internal controls to ensure the integrity of their market risk management process. These internal controls should be an integral part of the institution's overall system of internal control. Bank's internal control structure ensures the effectiveness of process relating to market risk management. Staff responsible for risk monitoring and control procedures should be independent of the functions they review. Key elements of internal control process include internal audit and review and an effective risk limit structure.

An effective system of internal control for market risk should ensure that:

- there is a strong control environment;
- there is in place an adequate process for identifying and evaluating risk;
- there are adequate control activities such as policies, procedures and

- methodologies; and
- there is an effective management information system.

Management should ensure that sufficient safeguards exist to minimize the potential that individuals initiating risk-taking positions may inappropriately influence key control functions of the risk management process such as the development and enforcement of policies and procedures, the reporting of risks to senior management, and the conduct of back-office functions.

Limits

Banks need to set limits, including operational limits, for the different trading desks and/or traders which may trade various products, instruments in different markets. Limits need to be clearly understood, and any changes clearly communicated to all relevant/related parties. Risk Taking Units must have procedures that monitor activity to ensure that they remain within approved limits at all times. Limit breaches or exceptions should be made known to appropriate senior management without delay. There should be explicit policy as to how such breaches are to be reported to top management and the actions to be taken.

Audit

Market risk measurement process should be reviewed and validated on a regular basis. This review function can be performed by a number of units in the organization including internal audit department. The audit or review should take into account.

- The appropriateness of bank's risk measurement system given the nature, scope and complexity of bank's activities
- The accuracy or integrity of data being used in risk models.

- The reasonableness of scenarios and assumptions
- The validity of risk measurement calculations.

Stress testing

Bank's risk measurement system should support a meaningful evaluation of the effect of stressful market conditions on the bank. Stress testing should be designed to provide information on the kinds of conditions under which strategies or positions would be most vulnerable, and thus may be tailored to the risk characteristics of the bank. Possible stress scenarios might include:

- abrupt changes in the general level of market rates;
- changes in the relationships among key market rates (i.e. basis risk);
- changes in the slope and the shape of the yield curve (i.e. yield curve risk);
- changes in the liquidity of key financial markets or changes in the volatility of market rates; or
- conditions under which key business assumptions and parameters break down.

In conducting stress tests, special consideration should be given to instruments or markets where concentrations exist as such positions may be more difficult to liquidate or offset in stressful situations. Banks should consider "worst case" scenarios in addition to more probable events. Management and the board of directors should periodically review both the design and the results of such stress tests, and ensure that appropriate contingency plans are in place.

2.2.5 Managing Liquidity Risk

Liquidity risk is the potential for loss to a bank arising from either its inability to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable cost or losses.

2.2.5.1 Overview

Liquidity is the ability of an institution to transform its assets into cash or its equivalent in a timely manner at a reasonable price to meet its commitments as they fall due. Liquidity risk is considered a major risk for banks. It arises when the cushion provided by the liquid assets are not sufficient enough to meet its obligation. In such a situation banks often meet their liquidity requirements from market. Funding through market depends upon liquidity in the market and borrowing bank's liquidity.

Liquidity risk can best be described as the risk of a funding crisis. Plan for growth and unexpected expansion of credit can be the main sources of such funding crisis. Banks with large off-balance sheet exposures or the banks, which rely heavily on large corporate deposit, have relatively high level of liquidity risk. Further the banks experiencing a rapid growth in assets should have major concern for liquidity.

Liquidity risk should not be seen in isolation, because financial risks are not mutually exclusive and liquidity risk often triggered by consequence of these other financial risks such as credit risk, market risk etc. For instance, a bank increasing its credit risk through asset concentration etc may be increasing its liquidity risk as well. Similarly a large loan default or changes in interest rate can adversely impact a bank's liquidity position. Further if management misjudges the impact on liquidity of entering into a new business or product line, the bank's strategic risk would increase.

Liquidity Risk Indicators

Given below are some early warning indicators that have potential to ignite liquidity problem for a bank. Bank management needs to monitor carefully such indicators and exercise careful scrutiny wherever it deems appropriate. Examples of such internal indicators are:

- A negative trend or significantly increased risk in any area or product line.
- Concentrations in either assets or liabilities.
- Deterioration in quality of credit portfolio.
- A decline in earnings performance or projections.
- Rapid asset growth funded by volatile large deposit.
 - A large size of off-balance sheet exposure.
 - Deteriorating third party evaluation (negative rating) about the bank and negative publicity.
 - Unwarranted competitive pricing that potentially stresses the banks.

2.2.5.2 Liquidity Risk Management

The formality and sophistication of risk management processes established to manage liquidity risk should reflect the nature, size and complexity of a bank's activities. Sound liquidity risk management employed in measuring, monitoring and controlling liquidity risk is critical to the viability of any bank. Banks should have a thorough understanding of the factors that could give rise to liquidity risk and put in place mitigating controls.

A liquidity risk management involves not only analyzing banks on and off-balance sheet positions to forecast future cash flows but also how the funding requirement would be met. The later involves identifying the funding market the bank has access, understanding the nature of those markets, evaluating banks current and future use of the market and monitor

signs of confidence erosion. Bank's Liquidity Risk Management Procedures should be comprehensive and holistic. At the minimum, they should cover formulation of overall liquidity strategy, risk identification, measurement, and monitoring and control process.

Board and Senior Management Oversight

The board has to ensure that the bank has necessary liquidity risk management framework and bank is capable of confronting uneven liquidity scenarios. The prerequisites of an effective liquidity risk management include an informed board, capable management, and staff having relevant expertise and efficient systems and procedures. It is primarily the duty of board of directors to understand the liquidity risk profile of the bank and the tools used to manage liquidity risk. Generally, in this respect the responsibilities of the Board include:

- Providing guidance on the level of tolerance for liquidity risk;
- Establishing an appropriate structure for the management of liquidity risk and identifying lines of authority and responsibility for managing liquidity risk exposure;
- Appointing senior managers who have the ability to manage liquidity risk and delegate to them the required authority to accomplish the job;
- Continuously monitoring the bank's performance and overall liquidity risk profile through reviewing various reports;
- Ensuring that senior management takes necessary steps to identify, measure, monitor and control liquidity risk; and
- Reviewing adequacy of the contingency plans of the banks.
- Senior management is responsible for the implementation of sound policies and procedures keeping in view the strategic direction and risk appetite specified by board. To effectively oversee the daily and

long-term management of liquidity risk senior managers should:

- Develop and implement procedures and practices that translate the board's goals, objectives, and risk tolerances into operating standards that are well understood by bank personnel and consistent with the board's intent.
- Adhere to the lines of authority and responsibility that the board has established for managing liquidity risk.
- Oversee the implementation and maintenance of management information and other systems that identify, measure, monitor, and control the bank's liquidity risk.
- Establish effective internal controls over the liquidity risk management process.

2.2.5.3 Liquidity Risk Strategy and Policies

Banks should formulate and implement appropriate liquidity risk management policies approved by the Board of Directors. The liquidity strategy must be documented in a liquidity policy, and communicated throughout the bank. The strategy should be evaluated periodically to ensure that it remains valid. Specific details of the policy may vary from bank to bank according to the nature, size and complexity of their business. At minimum it should cover general liquidity strategy (short-and long-term), specific goals and objectives in relation to liquidity risk management, process for strategy formulation and the level within which it is approved. The strategy should provide continuity in approach and should be reviewed and amended periodically as deemed necessary; it should be viable in the long term and through various economic cycles. The liquidity risk strategy defined by board should enunciate specific policies on particular aspects of liquidity risk management, such as:

Composition of Assets and Liabilities.

The strategy should outline the mix of assets and liabilities to maintain liquidity. Liquidity risk management and asset/liability management should be integrated to

avoid steep costs associated with having to rapidly reconfigure the asset liability profile from maximum profitability to increased liquidity.

Diversification and Stability of Liabilities.

The strategy should ensure that the bank have a diversified sources of funding day-to-day liquidity requirements. A bank would be more resilient to tight market liquidity conditions if its liabilities were derived from more stable sources. To comprehensively analyze the stability of liabilities/funding sources the bank need to identify:

- Liabilities that would stay with the bank under any circumstances;
- Liabilities that run-off gradually if problems arise; and
- That run-off immediately at the first sign of problems.

Access to Inter-bank Market.

The inter-bank market is one of the sources of liquidity. However, the strategies should take into account the fact that in crisis situations access to interbank market could be difficult as well as costly.

Contingency Funding Plan

Designing contingency funding plan to enable banks meet their funding needs under stress scenarios. Such a plan, commonly known as Contingency Funding Plan (CFP), is a set of policies and procedures that serve as a blue print for a bank to meet its funding needs in managing liquidity risk in a timely manner and at a reasonable cost. The CFP should project the future cash flows and funding sources of a bank under market scenarios including aggressive asset growth or rapid liability erosion.

2.2.5.4 Liquidity Policy

The banks should formulate liquidity policies, which are recommended by senior management/ALCO and approved by the Board of Directors. While specific

details vary across banks according to the nature of their business, the key elements of any liquidity policy include:

- General liquidity strategy (short- and long-term), specific goals and objectives in relation to liquidity risk management, process for strategy formulation and the level within the bank it is approved;
- Roles and responsibilities of individuals performing liquidity risk management functions, including structural balance sheet management, pricing, marketing, contingency planning, management reporting, lines of authority and responsibility for liquidity decisions;
- Liquidity risk management structure for monitoring, reporting and reviewing liquidity;
- Liquidity risk management tools for identifying, measuring, monitoring and controlling liquidity risk (including the types of liquidity limits and ratios in place and rationale for establishing limits and ratios);
- Contingency plan for handling liquidity crises.

The liquidity policy should be communicated down the line throughout in the organization. There should be periodic review in a regular basis and when there are any material changes in the bank's current and prospective liquidity risk profile. Such changes could arise from internal circumstances (e.g. changes in business focus) or external circumstances (e.g. changes in economic conditions). Reviews provide the opportunity to update and amend the bank's liquidity policies in light of the bank's liquidity management experience and development of its business. Banks should establish appropriate procedures and processes to implement their liquidity policies. The procedural manual should explicitly outline necessary operational steps and processes to execute the relevant liquidity risk controls. The manual should be periodically reviewed and updated to take into account new activities, changes in risk management approaches and systems.

Asset Liability Committee

Bank should develop appropriate structure for managing overall liquidity of the bank. Generally the function of liquidity risk management is performed by an ALCO. Ideally ALCO comprises of senior management from each key area of the bank that assumes and manages liquidity risk. It is important that these members have clear authority over the units responsible for executing liquidity-related transactions so that ALCO directives reach these line units unimpeded. The ALCO should meet on a regular basis. Generally responsibilities of ALCO include developing and maintaining appropriate risk management policies and procedures, MIS reporting, limits, and oversight programs. ALCO usually delegates day-to-day operating responsibilities to the bank's treasury department. However, ALCO should establish specific procedures and limits governing treasury operations before making such delegation. To ensure that ALCO can control the liquidity risk arising from new products and future business activities, the committee members should interact regularly with the bank's risk managers and strategic planners.

2.2.6 Managing Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and system or from external events.

2.2.6.1 Overview

Rapid development in the pace of financial innovation is making the activities of bank and their risk profiles (i.e. the level of risk across an institution's activities and/or risk categories) more complex. A clear understanding of operational risk is critical to the effective management and control of this risk category.

Operational risk is the risk of negative effects on the financial result and capital of the bank caused by omissions in the work of employees, inadequate internal procedures and processes, inadequate management of

information and other systems, and unforeseeable external events.

Operational risk event types having the potential to result in substantial losses include:

- Internal fraud; for example, intentional misreporting of positions, employee theft, and insider trading on an employee's own account.
- External fraud; for example, robbery, forgery, cheque kiting, and damage from computer hacking.
- Employment practices and workplace safety; for example, workers compensation claims, violation of employee health and safety rules, organized labor activities, discrimination claims, and general liability.
- Clients, products and business practices; for example, fiduciary breaches, misuse of confidential customer information, improper trading activities on the bank's account, money laundering, and sale of unauthorized products.
- Damage to physical assets; for example, terrorism, vandalism, earthquakes, fires and floods.
- Business disruption and system failures; for example, hardware and software failures, telecommunication problems, and utility outages.
- Execution, delivery and process management; for example; data entry errors, collateral management failures, incomplete legal documentation, unapproved access given to client accounts, non-client counter party undue performance, and vendor disputes.

Operational risk is associated with the problems of accurately processing, settling, and taking or making delivery on trades in exchange for cash. It also arises in record keeping, processing system failures and compliance with various regulations. It is associated with human error, system failures and inadequate procedures and controls. It is the risk of loss arising from

the potential that inadequate information system; technology failures, breaches in internal controls, fraud, unforeseen catastrophes, or other operational problems may result in unexpected losses or reputation problems. Operational risk exists in all products and business activities.

The board should provide senior management with clear guidance and direction regarding the principles underlying the framework and approve the corresponding policies developed by senior management.

Board and senior management's oversight

The ultimate responsibility of operational risk management rests with the board of directors. The Board of Directors should be aware of the major aspects of the bank's operational risks. The board should approve and review periodically the bank's operational risk management framework. Bank should establish an organizational culture that places a high priority on effective operational risk management and adherence to sound operating controls. The board should establish tolerance level and set strategic direction in relation to operational risk. Such a strategy should be based on the requirements and obligation to the stakeholders of the bank.

Senior management should transform the strategic direction given by the board through operational risk management policy. Board delegates the management of this process and execution of such process must be ensured.

The policy should include:

- The strategy formulated by the board.
- The systems and procedures to institute effective operational risk management framework.
- The structure of operational risk management function and the roles and responsibilities of individuals involved.

Board of the bank should approve the policy. The policy establishes a process to ensure that any new or changed activity will be evaluated for operational risk prior to come into effect. The management should ensure that it is communicated and understood throughout the bank. The management also needs to place proper monitoring and control processes in order to have effective implementation of the policy. The policy should be regularly reviewed and updated, to ensure it continue to reflect the environment within which the bank operates.

Operational Risk Function

A separate independent function should be established for effective management of operational risks in the bank. The structure (unit) performs the jobs related to identify, measure, monitor and report operational risks as a whole and ensure that the management of operational risk in the bank is carried out as per strategy and policy. The function helps to establish policies and standards and coordinate various risk management activities. Besides, it should also provide guidance relating to various risk management tools, monitors and handle incidents and prepare reports for management and BOD.

2.2.6.2 Operational Risk Management

Management should evaluate the adequacy of tools and techniques both in terms of its efficiency and effectiveness. Steps should be taken to design and implement cost- effective solutions to reduce the operational risk to an acceptable level. The extent and nature of the controls adopted by the banks can be different, very often such measures encompass areas such as Code of Conduct, Delegation of authority, Segregation of duties, audit coverage, compliance, succession planning, mandatory leave, staff compensation, recruitment and training, dealing with customers, complaint handling, record

keeping, MIS, physical controls, etc

Risk Assessment and Quantification

A number of techniques are evolving but still operational risk remains the most difficult risk category to quantify. Banks should identify and assess the operational risk inherent in all material products, activities, processes and systems and its vulnerability to these risks. Banks should also ensure that before new products, activities, processes and systems are introduced or undertaken, the operational risk inherent in them is subject to adequate assessment procedures. It would not be feasible at the moment to expect banks to develop such measures. However the banks could systematically track and record frequency, severity and other information on individual loss events. Such a data could provide a meaningful information for assessing the bank's exposure to operational risk and developing a policy to mitigate / control that risk.

Risk Monitoring and Reporting

Banks should develop a regular reporting of the information to senior management and the board of directors that supports the proactive management of operational risk. Senior Management should establish a program to:

- Monitor assessment of the exposure to all types of operational risk faced by the bank;
- Assess the quality and appropriateness of mitigating actions, including the extent to which identifiable risks can be transferred outside the bank; and
- Ensure that adequate controls and systems are in place to identify and address problems before they become major concerns.

Regular monitoring activities can offer the advantage of timely detecting and correcting deficiencies in the policies, processes and procedures for managing operational risk. Promptly detecting and addressing these deficiencies can substantially reduce the severity of a loss. This mechanism should be appropriate to the scale of risk and activity undertaken. Management should ensure that information is received by the appropriate channel, on a timely basis, in a form and format that helps in the monitoring and control of the business.

Control Mechanism.

Banks should assess the feasibility of alternative risk limitation and control strategies. Banks should adjust their operational risk profile using appropriate strategies, in light of their overall risk appetite and profile. To be effective, control activities should be an integral part of the regular activities of a bank. A framework of formal, written policies and procedures is necessary; it needs to be reinforced through a strong control culture that promotes sound risk management practices.

Contingency Planning

Banks should have disaster recovery and business continuity plans to ensure its ability to operate as a going concern and minimize losses in the event of severe business disruption. The business disruption and contingency plans should take into account different types of scenarios to which the bank may be vulnerable and should be commensurate with the size and complexity of its operations. Management should identify critical business processes, including those where there is dependence on external vendors or other third parties, for which rapid resumption of service would be most essential.

2.3Review of Journals and Articles

Tiwari (2004) in his article "*Problem and challenges of governments control bank*" published in The Himalyan times states that Nepal's financial institution have failed in delivering beneficial services to needy people by developing credit-giving centers in rural areas without which sustained economic growth is impossible. On the other hand banks and financial institutions have enough liquidity but they are finding it difficult to find suitable places for investment. Problems such as insecurity, lack of market research from banks, low investment opportunities, weak operational policies for carrying out financial transaction, among others have contributed to the problems of this sector. Despite these central banks directives regulating banks and financial institution, private and government banks are functioning haphazardly. Nepal Bank Limited (NBL) Agriculture Devolvment Bank and Rastriya Banijya Bank (RBB), the three largest banks, occupy about 50% of the country's banking assets. Effective reform of these three banks is keys to improved performance of the whole sector. The process currently underway to reform these three institutions, despite paying huge amounts to foreign experts, has not given expected results. Besides NBL, ADB and RBB, the Non-Performing Assets (NPA) of some private banks is also very high. If the government and central bank allow the financial sector reforms to focus only on RBB ADB and NBL, it might become a futile effort. The current management of RBB, ADB and NBL has not been able to reduce their NPL even after two years, which has crossed over 60%.

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Sharma (2008) in their article "*priority sector*" has presented the commercial bank should take care of board national interest and they showed not confine their lending activities only to commercial area providing quick interest if some proportion could be directed to the area conclusive to build economic infrastructures of the country it would create atmosphere conducive to their investment in future. In our society where ignorance and literacy is in wide scale, it is necessary that the bank search entrepreneurs instead of entrepreneurs searching banks. so they have opined that the priority sector program is a timely and appropriate will designed to create additions productive employment opportunities there by increasing production and the general living standard of rural

poor. But the success of the program largely depends upon the integrated operation with other programs designs for rural development. Further they argue that various programmers VIZ. Rural development land reform SAJHA, Back to the village national Champaign. Adult literacy etc. Could not materials their objective despite their some theoretically philosophy and good objectives

Shrestha (2009) in her article “*Lending Operation of Commercial Banks of Nepal and its Impact on GDP*” has made an analysis of contribution of commercial banks, lending to the Gross Domestic Product (GDP) of Nepal. She has set hypothesis that there has been positive impact of lending of commercial banks to the GDP, in research methodology; she has considered GDP as the dependent variable and various sector of lending like agriculture, industrial, commercial service and general social sectors as independent variables. A multiple regression techniques have been applied to analyze the contribution.

The analysis shows that the entire variable except service sector lending has positive impact on GDP. Thus, in the conclusion she had accepted the hypothesis i.e. there has been positive impact on GDP and also she has accepted the hypothesis i.e. there has been positive impact by the lending of Commercial Banks in various investment.

2.4 Review of Thesis

Shrestha (2007) has conducted a study on “*A Study of Nonperforming Loan & loan loss Provision of Commercial Bank, A case study of NABIL, SCB and NBL*” has made study about a part of credit risk associated with those banks.

The main objectives of the study are as follows:

- To find out the proportion of non-performing loan in the selected commercial banks.
- To find out the factors leading to accumulation of nonperforming loan in commercial banks.
- To find out the relationship between loan and loan loss provision in the selected commercial bank.
- To study and the impact of loan loss provision on the profitability of the commercial banks.

The major findings of the study are as follows:

- The major finding in her study was that the NBL has the highest portion of the loan in total asset followed by NABIL and SCBNL. She concludes that the SCBL shows the risk-averse attitude. Likewise the non-performing loan to total loan is found highest in NBL, NABIL and SCBNL. Likewise the Loan Loss Provision is also highest in NBL where as the SCBL has the least Loan Loss Provision.
- Likewise, the NBL has the highest portion of Loss loan followed by NABIL and SCBL. This study is more concentrated on non-performing loans; however, there exist lots of areas in credit risk management where further research is called for. In context of credit risk, collateral risk, concentration risk, organization risk management system can be studied.

Subba (2008) has carried out the study on “*Risk Analysis of Machchhapuchhre Bank Ltd. and Lumbini Bank Ltd*”. To analyze how the selected commercial banks (i.e. Machchhapuchhre Bank Ltd. and Lumbini

Bank Ltd.) have managed different types of risk in this competitive Nepalese banking Industry.

The main objectives of the study are as follows:

- To analyze the following types of risk of selected commercial banks in Nepal
- Credit Risk
- Market Risk
- Operation Risk.

The major findings of the study are as follows:

- The major finding of his study was that in commercial banks, minimizing the risk is the major challenge. For minimizing the risk, both the banks have taken several measures. One of the major measures is capital adequacy ratio. The capital adequacy ratio depicts that both EBL and MBL has higher CAR than statutory requirement.
- He concludes that: For credit risk management, both banks have Credit Policies Guidelines (CPG). Similarly, NPL is regularly monitored by both the banks on regular basis and provisioning is done on quarterly basis by categorizing the loan as per NRB guidelines. Similarly, sector wise and security wise lending is being analyzed by these banks on monthly basis. Gap analysis of both types of asset and liabilities (i.e. Rate Sensitive and Fixed Rate) is required for the interest rate risk management. Besides, analysis of cost of fund, yield on loan & spread is made continuously in these banks to ensure that banks have competitive interest rate, which is profitable for the banks.

- In regard to operational risk, the major steps banks are taking to reduce it are preparing and implementing the different operational guidelines and policies & frequently monitoring their compliance. Most of these policies are prepared as per NRB guidelines. Similarly, employees' training is also the major tools for minimizing the operation risk in these banks. For minimizing the loss arising due to occurrence of the above risks, capital and reserve have been maintained by these banks within the standard prescribed by NRB.
- However, the trend of Capital Adequacy ratio of these banks suggests that both the banks need to increase their capital fund, which is possible mainly by issuing shares, debentures or preference share. The major gap in this study is the focus on the credit risk. This research has been made on the study on different types of risk including market risk and operational risk.

Pandey (2009) has conducted a study on “*Risk and Return Analysis of Common Stock Investment*” by taking six insurance companies as sample. She has used analytical tools like rate of return, standard deviation, coefficient of variance, beta coefficient and t-test has used.

The main objectives of his study are to calculate the risk and return of the common stocks and portfolio and also to understand and identify the problem faced by the individual investor and insurance companies.

The major findings of the study are generally public have least understanding about the risk of the investments which may be due to poor education, lack of adequate information, etc., that may obstruct the development of stock market.

There is no significant different between the performance of common stock of insurance companies and overall market portfolio. The study has covered five years period As a recommendation given by Chand, ADB/N should play a significant role in such direction as to fulfill the credit demands of rural areas. For effective credit recovery from the borrowers or clients, credit should be channeled through the borrower groups.

Karki Manoj (2010) has conducted a study on “*Risk Management of Himalayan Bank Ltd. (A Case Study of Himalayan Bank Ltd.)*”

The main objectives of the study are as follows:

- To analyze the level of different types of risk faced by Himalayan Bank Ltd.
- To assess the financial performance of HBL through the help of financial ratios and standards.

The Major findings of the study are as follows:

- Proper policies, procedures, guidelines and tools have been developed with appropriate triggers. That forms the guiding pillars for its operations.
- The banks believe in corporate culture that emanates from the "Think Customers" philosophy at all levels of the banks. Teamwork, camaraderie, sincerity, dedication, trust, respect, equality, dignity and valuing each contribution are key pillars on which the corporate culture of the banks thrives on.
- The banks have a competitive salary package in place that is revised on a regular basis to reward strong performance. The employees are also provided with early bonus other facilities on a requirement basis.

Chand Chodaraj (2011) has conducted a study on "*Credit Disbursement and Repayment of Agriculture Development Bank Nepal*".

The main objectives of the study are as follows:

- To see the repayment situation.
- To find out the growth rate of investment.
- To explain possible causes of none and delay repayment.

The Major findings of the study are as follows:

- There is systematic relationship between credit disbursement and repayment .The coefficient of correlation value as calculated is 0.94 which shows significance relationship.
- Repayment situation is satisfactory on production and agro-based industry, warehouses and farm mechanization, irrigation, tea horticulture, livestock, poultry and fisheries is less satisfactory.
- As a recommendation given by Chand, ADB/N should play a significant role in such direction as to fulfill the credit demands of rural areas. For effective credit recovery from the borrowers or clients, credit should be channeled through the borrow

Shrestha Yamuna (2012) has submitted her thesis on "*Credit Risk Management of Commercial Bank in Nepal* "by taking two sample banks in order to achieve the following basic objectives

The main objectives of the study are as follows:

- To evaluate the status of the loan portfolio of the banks.
- To evaluate problems and weakness in credit risk management.
- To review the prevailing laws rules and regulation enforced by Nepal Rastra Bank and assess its impact on profitability and liquidity of bank.

The Major findings of the study are as follows:

- NABIL and NIB have increasing trend in collecting deposit the rate of increment of total deposit for NIB seems to be higher than that of NABIL Here NIB has better position in collecting deposit than NABIL.
- The total investment trend line of NABIL and NIB is upward slopping where as NABIL has little high upward slopping of total investment trend line than NIB. It refers that NABIL has better increasing trend of total investment than NIB.
- The trend line of Net profit for NABIL and NIB is upward slopping, But NIB has little high than NABIL. NABIL has smoothly increasing trend. The position of NIB is better in order to generate profit than NABIL.

2.5 Research Gap

From the review of literatures, it has been found that some research has been made in the risk management of banking sectors. Few theses have been prepared on the credit risk. These researches are related only with loan loss provision and non-performing loan and not detail of risk management of banking sector. So, further research on concentration risk, collateral risk can be conducted etc. Though the different thesis has been written in the NRB Directives and their implementation, all these researches are about the loan provisioning and capital adequacy. Likewise, no research has been made regarding foreign exchange and interest rate risk of a bank. Similarly, the legal risk, which has the significant portion in total risk, has not been studied till now. Hence the research has been conducted. So this study will be fruitful to those interested person, Scholar, civil society, stakeholder, businessman and government for academically as well as policy perspective.

CHAPTER- III

RESEARCH METHODOLOGY

A systematic study needs to follow a proper methodology to achieve pre determine objective. Research methodology may be defined as “a systematic process that is adopted by the researcher in studying problem with certain objective and view”. In other word, research methodology describes the methods and process applied in the entire aspect of the study focus of data, data gathering instrument and procedure, data tabulating and processing and methods of analysis. It is really a method of critical thinking by defined and redefining the problems, formulating hypothesis or suggested solution and collecting and organizing and evaluating data, making deduction and making conclusions.

Research methodology is a path from which we can solve research dilemma systematically to accomplish the basic objective of the study. It consists of a brief explanation of research design, nature and sources of data, method of data collection and methods of tools used for analyzing data.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aim to combine relevance to the research purpose with economy in procedure. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to objective of this study. To achieve the objective of this study, descriptive and analytical research design has been used.

It is the process which gives us an appropriate way to reach research goal. It includes definite procedures and techniques which guide in sufficient way for analyzing and evaluating the study. This study is carried out by using both

quantitative and qualitative analysis methods. Secondary data has been used for analysis, but the discussion and personal interview with the concerned employees of the selected bank is also used for qualitative analysis. Hence, research design of this study is based on analytical method.

3.3 Population and Samples

Population is the aggregative or totality of statistically data forming a subject of investigation. Wolf and Pant (2002) defines the term “population” for research as the universe of research study in which the research is based. Since the research topic is about risk management of commercial banks, all the commercial banks of Nepal form population of the study. The population for the study comprises 32 commercial banks. Among the total population only two commercial banks are take as sample for the comparative study using judgmental sampling. The sample is chosen with an objective to find out the risk management of two commercial banks, which have completed 5 years. NCC Bank and MBL are taken for the study.

3.4 Sources of Data and Collection Procedure

For this study secondary data are used. Secondary data are collect mainly form published sources like annual report, prospectus., balance sheet, newspaper, journal, internet and other sources. Secondary data published in the annual reports of concerned organizations are collected through personal visit in respective organization as well as from their web sites.

3.5 Data Processing and Presentation

The data obtained from the different sources are in raw form. The raw data is processed and converted into required form. For this study, required data are taken from the secondary source (bank’s publication) and presented in this study. For presentation, different tables are used.

3.6 Data Analysis Tools

In order to get the concrete results from this research, data are analyzed by using different types of tools. As per topic requirements, emphasis is given on statistical tools rather than financial tools. So for this study following statistical tools are used. Analyzing data is an important and vital task in a study report for achieving the objectives of the study by using some tools. The analysis of data is done according to the data available. Various calculated results can be obtained through financial, accounting and statistical tools. In this study Statistical and Financial tools are used to measure the strength of the concerning banks.

3.6.1 Statistical Tools

Statistical tools are used to analyze the relationship between two or more variables and to find how these variables are related. In this study, following statistical tools are used.

a. Arithmetic Mean or Average:-

The mean or average value is a single value within the range of the data that is used to represent all the values in the series. Since an average is somewhere within the range of the data, it is also called a measure of central value. It is calculated by;

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N}$$

Where,

\bar{X} = Arithmetic Mean

$\sum X$ = Sum of values of all items, and,

N = Number of items

b. Standard Deviation:-

The standard deviation is the measure that is most often used to describe variability in data distributions. It can be thought of as a rough measure of the average amount by which observations deviate on either side of the mean. Denoted by Greek letter's (read as sigma), standard deviation is extremely useful for judging the representatives of the mean. Standard deviation is calculated as;

$$\text{Standard deviation}(\sigma) = \sqrt{\frac{\sum(\mathbf{X}-\bar{\mathbf{x}})^2}{\mathbf{N}}}$$

Where,

σ	=	Standard deviation
$\sum(\mathbf{X} - \bar{\mathbf{x}})^2$	=	Sum of squares of the deviations measured from arithmetic average.
\mathbf{N}	=	Number of items

c. Coefficient of Correlation: -

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between two sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always lie between +1 and - 1. The formula for the calculation of coefficient of correlation between X and Y is given below.

$$r = \frac{\sum x_1x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

Where,

r	=	Correlation coefficient
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$$\sum x_1 = X_1 - \bar{X}_1$$

$$\sum x_2 = X_2 - \bar{X}_2$$

The interpretation of calculated value of correlation coefficient by following way.

- If $r = 0$, then there is no correlation between variables.
- If $r > 0$, then there is positive correlation between variables.
- If $r < 0$, then there is negative relation between variables.
- If $r = +1$, then there is perfect positive correlation.
- If $r = -1$, then there is perfect negative correlation.

d. **Least Square Linear Trend Analysis:-** Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly. The future trend is forecasted by using the following formula.

$$Y = a + bx$$

where,

Y = the dependent variable

a = the origin i. e. arithmetic mean

b = the slope coefficient i. e. rate of change

X = the independent variable

3.6.2 Financial Tools

Credit Risk Ratio

The probability that some of bank's assets, especially Its loans, will decline in value and perhaps become worthless is known as credit risk. The following two ratios of the most widely used indicators of bank credit risk.

The ratio of non performing asstes to total loans and advance =

$$\frac{\text{non performing asstes}}{\text{Total loans and advance}}$$

Nonperforming assets are income generating assets, including loans that are past due for 90 days or more. As the ratio rise, the institution's credit risk grows, and institution may be failure.

Annual provision for loan losses to total loans =

$$\frac{\text{Annual provision for loan losses}}{\text{Total loans or total equity capital}}$$

If the loans losses come to exceed equity capital, the institutions credit risk will overwhelm the owners' stake in the firm and it will collapse.

Operating Efficiency Ratio

One possible management response is to improve the efficiency of the organization in managing its resource .This may mean installing new labor saving machinery (such as computer and automated tellers) to increase the productivity of employees in processing transactions .it may also mean a conscious decision to expand the overall size of the organization tom take advantage of any remaining economies of scale.

Increased efficiency is indicated by how well expenses are controlled relative to revenues and how productive each employee is in terms of revenues and income

generated, assets managed, and accounts handled. The most popular indicators of how efficient a bank or financial institutions are as follows.

$$\text{Operating expense ratio} = \frac{\text{Total operating expenses}}{\text{Total operating revenues}}$$

$$\text{Income productivity ratio} = \frac{\text{Net income}}{\text{No of employee}}$$

Increasing operating expense ratio shows the management is unable to control the operating expenses and vice versa. Income productivity ratio tends to be higher among the top earners. Banks with the best profits seem to generate and manage more assets and income per employee and often pay their more productivity employees higher salaries

Liquidity Ratios

It is the applicable to measure the ability of the firms to meet short term obligations. As name denotes the liquidity refers to the ratio between liquid assets and liability. The ability of firm to meet its obligation in the short term is known as liquidity. It reflects the short term financial strength of the business. In order to ensure short term solvency, the company must maintain adequate liquidity. But liquidity ratio must be optimum. If the company maintain unnecessary high liquidity ratio then it may adversely effect in the profitability of the company, which can lose the opportunity to earn high profit, means everybody knows that investing all assets in safe liquid assets doesn't have a good return. As well as, high liquidity may unnecessary tie up in the current assets. On the other hand if a company doesn't maintain adequate liquidity then it will result in bad credit ratings, less creditors confidence eventually may lead to bankruptcy. Thus the

company should endeavor to maintain proper balance between inadequate liquidity and unnecessary liquidity for the survival and for avoiding risk.

$$\text{Liquidity risk ratio} = \frac{\text{Cash and government securities}}{\text{Total assets}}$$

High ratio indicates the liquidity position is good .Low ratio indicates the liquidity risk is high i.e. there is liquidity problem .To overcome the liquidity problem, the financial institution can increase a bank's cash and readily marketable assets ,such as government securities ,or using long term liabilities to fund the bank's operations.

Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the selected banks are utilizing their total collections or deposits on loan and advances for the purpose of earning profit and total liquidity position of the bank. Greater ratio shows the better utilization of total deposits and high liquidity risk. This ratio can be obtained dividing loan and advances by total deposits, which can be shown as,

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Total loan and Advances}}{\text{Total Deposit}}$$

Market risk

Market risk refers to the risk to a bank resulting from movements in market prices, in particular, changes in interest rates, foreign exchange rates, and equity and commodity prices. Market risk is defined as the risk of losses in on and off-

balance sheet positions arising from movements in market prices.

The impact of changing interest rates on a bank's margin of profit is usually called interest rate risk. Interest rate risk: the bank's interest rate risk is related to the changes in asset and liability returns and values caused by movements in interest rates. The most widely used measure of bank interest rate risk is:

$$\text{Interest rate risk ratio} = \frac{\text{Interest sensitive assets (ISA)}}{\text{Interest sensitive liabilities (ISL)}}$$

Interest rate risk ratio measure the danger of loss due to changing in the market interest rates. Particularly in periods of wide interest rate movements, this ratio reflects the risk the bank is willing to take that it can predict the future direction of interest rates. If a bank has a ratio above 1.0, the bank's returns will be lower if interest rates decline and higher if they increase.

Risk and Return Ratio

Risk and Return analysis is also called Net Profit to Loan and Advance Ratio. This Ratio indicates how efficiently the bank has employed its resources in the form of Loan and Advances. This ratio is calculated dividing Net profit of the bank by Total loan and Advances. Net profit refers to that profit which is after deduction provision of tax and employee bonus. Hence this ratio measures bank's profitability with respect to loan and advance. Higher the ratio better is the performance of bank.

$$\text{Risk and Return Ratio} = \frac{\text{Net Profit}}{\text{Loan and Advances}}$$

CHAPTER IV

DATA ANALYSIS AND PRESENTATION

The analysis is fully based on secondary data. In presentation section, data are presented in terms of table and charts. The presented data are then analyzed using different statistical tools mentioned in chapter three. At last the results of analysis are interpreted. Though there is no distinct line of demarcation for each section (like presentation section, analysis section & interpretation section). The main purpose of analyzing data is to change it from an unprocessed form to an understandable presentation which consists of organizing, tabulating and performing the statistical data. The presentation of data is the basic organization and classification of the data for analysis. This is the section where, the filtered data are presented and analyzed. This is one of the major chapters of this study because it includes detail analysis and interpretation of data from which concrete result can be obtained. This chapter consists of various calculation made for the analysis of credit risks of the sample bank. To make our study effective, precise and easily understandable, this chapter is categorized in three parts; presentation, analysis and interpretation. In this thesis primary data, which is collected through questionnaires and personal interview with the various staffs, are also used equally.

4.1 Risk Management Function

For each separate risk area (Credit, Market and Operational risk), bank must describe their risk management objectives and policies, including:

- Strategies and processes
- The structure and organization of the relevant risk management function;
- The scope and nature of risk reporting and/or Write off of Loans and Interest Suspense: measurement systems; and

- Policies for hedging and/or mitigating risk and strategies, and processes for monitoring the continuing effectiveness of hedges/mitigants.

4.1.1 Credit Risk

Strategies

Main focus is given on medium sized entity. Maximum percentage of sectorial exposure in terms of capital funds for a particular financial year is fixed at the beginning of a financial year and approved by the Board. Loaning power to concerned official at branch level has been fixed comparatively at lower level with a view to have strong appraisal system at corporate level. Manuals relating to credit is in place. Every aspect relating to credit such as procedure, documentation etc. are clearly defined. Credit Policy of the Bank has also been put in place.

Process

- **Pre sanction:** Each credit limit is approved after due scrutiny by two layer of authority in branch level of their limit. Loans are approved after due scrutiny of background of the promoter, nature of business, turnover in the account, cash flows, debt/equity ratio, income or profit, value of primary and collateral security. Loans above branch power are recommended to Head Office for consideration on merit.
- **Post sanction monitor/follow up:-** Concerned branch obtains regular returns from the borrower as stipulated in the sanctioned letter on regular interval. Drawing power in case of revolving type of loan is calculated to keep the exposure within its drawing power. Business place of the borrower is visited, physical stock level is being interval checked on a time bound basis. In case there is symptom of any slippage in a particular account, steps are taken for regularizing or repayment or exit. Loans more than Rs. 1 Lac which are either irregular or likely irregular are reported to Board on regular basis and discussed about the course of action. Credit related returns

such as Credit Officer's Report, Review Sheet etc. Are submitted to H.O. in a specified time interval on regular basis.

4.1.2 Credit Risk Management

Financial analysis is the process of identifying the financial strength and weakness of a firm by properly establishing relationship between the items of the financial statements. Analysis and the interpretation of the various ratios should give experienced, skilled analyst and a better understanding of the financial condition and performance of the firm than they would obtain from the analysis of the financial data alone.

Credit Deposit Ratio is calculated as total loans & advances to total deposit ratio. Banks receive fund as deposits from the public so that to mobilize it in terms of loans & advances to generate the interest as income. It is the ratio that measures the banks efficiency in mobilizing deposit collected from public. In another word, CD ratio is the fundamental parameter to ascertain fund deployment efficiency of commercial banks. Greater the CD ratio implies better the mobilization of deposits and vice-versa. Hence, higher the ratio is preferred as per the directives issued by the NRB; commercial banks should classify their loan in terms of pass loan, substandard loan, doubtful loan and loss loan. Hence, the loans falling in the category of substandard, doubtful and the loss loan are considered as non-performing loan. Increase in the NPL results higher volume of loan loss provision and of course deduction in the banks profit. That's why, NPL could not only affect the banking operation but also it has serious implication in the economic performance of the country. This ratio NPL to total loan & advances implies the proportion of the NPL in the bank's loan portfolio. Meaning that, higher the ratio represents higher portion of NPL and vice-versa. Hence, lower the ratio preferred the best.

4.1.2.1 Non performing asstes to total loans and Advances ratio

Nonperforming assets are income generating assets, including loans that are past due for 90 days or more. Here, non performing assets are cash and bank balance, Money at call and short notice, investments, Loan and advances etc. As the ratio rise, the institution's credit risk grows, and institution may be failure.

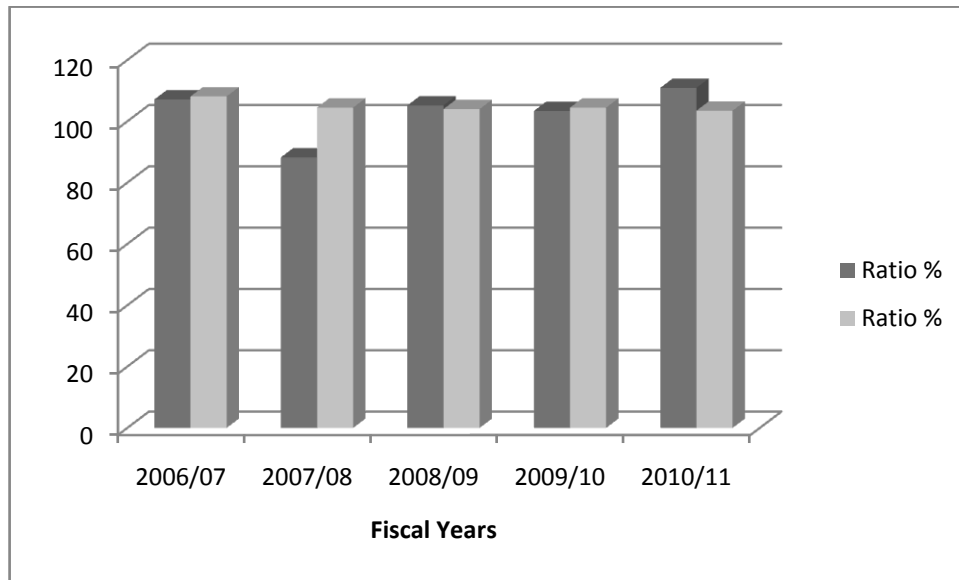
Table 4.1
Non Performing Assets to Total Loans and Advances Ratio

Fiscal Year	Rs In Thousand					
	NCC Bank			MBL		
	NPA	Total Loans	Ratio %	NPA	Total Loans	Ratio %
2006/07	6039962	5636737	107.15	8778531	8117904	108.14
2007/08	5778092	6547012	88.26	10353450	9908856	104.5
2008/09	7950855	7556551	105.21	11778242	11316288	104.01
2009/10	9814703	9491927	103.40	16484180	15777827	104.48
2010/11	12238631	11031467	110.95	20190607	19509126	103.49
		Total	514.97		Total	524.62
		Mean	102.99		Mean	104.92
		S.D	7.78		S.D	1.65
		C.V. %	7.56		C.V. %	1.57

Source: Annex -11

Figure 4.1

Non Performing Assets to Total Loans and Advances Ratio



The table 4.1 and figure 4.1 shows that the Non Performing Assets to Total Loans and Advances Ratio of two commercial banks for five consecutive years. The ratio of NCC Bank was decreased at 2007/08 and increase at next year then it is decreasing slowly. But fiscal year 2010/11 the ratio increased. However the ratio of MBL was decreased till 2008/09 and increasing slowly. But it is decreased in fiscal year 2010/11. In average, It shows the credit risk of NCC Bank is lower than MBL. The average ratio of NCC Bank is 103 % where as ratio in MBL is 105%.

Likewise, the standard deviation of NCC Bank and MBL are 7.78 % and 1.65 % respectively. From standard deviation we can conclude that MBL has less credit risk than NCC Bank. Higher standard deviation shows higher risk and vice versa. Similarly, Coefficient of variation of MBL is lower than NCC Bank. CV measures the risk per unit. Lower CV shows lower risk and vice versa. NCC Bank has highest CV than that of MBL which shows more variable ratio of NCC Bank than MBL.

4.1.2.2 Annual provision for loan losses to total loans

If the loans losses come to exceed equity capital, the institutions credit risk will overwhelm the owners' stake in the firm and it will collapse. The ratio annual provision for loan losses to total loans shows the risk of bank's loan. Higher ratio shows the more risk on credit.

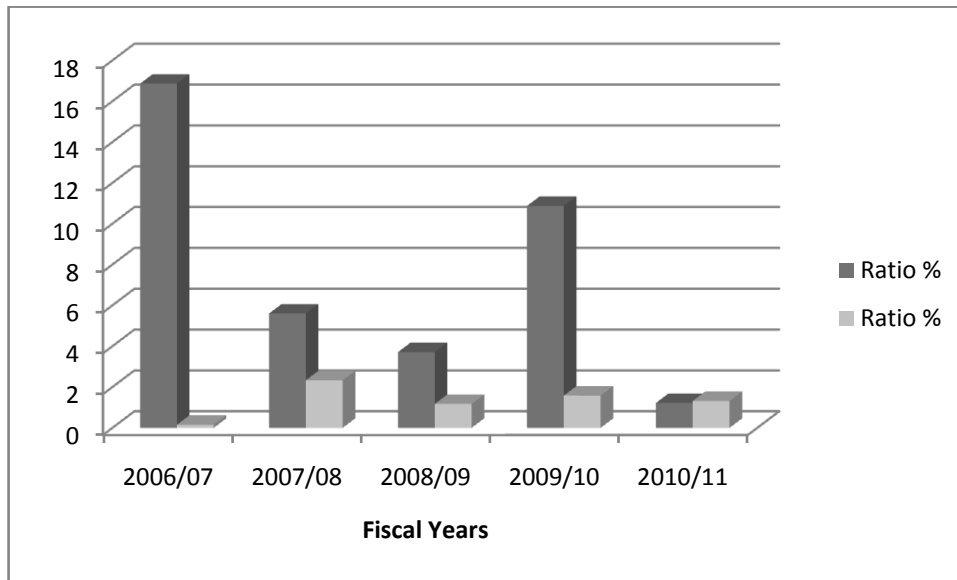
Table 4.2
Annual provision for loan losses to total loans

	Rs In Thousand						
	NCC Bank			MBL			
Fiscal Year	Loan Loss Provision	Total Loans	Ratio %	Loan Loss Provision	Total Loans	Ratio %	
2006/07	782710	4643262	16.86	8867.90	6068913	0.15	
2007/08	206868	3707642	5.6	165494	7096898	2.33	
2008/09	163875	4417856	3.71	101064	8674976	1.17	
2009/10	745573	6858194	10.87	197024	12467188	1.58	
2010/11	121088	9942332	1.22	197486	14972534	1.32	
		Total	38.26			Total	6.55
		Mean	7.65			Mean	1.31
		S.D	5.59			S.D	0.54
		C.V. %	73.06			C.V. %	41.53

Source: Annex-1

Figure 4.2

Annual provisions for loan losses to total loans



The table 4.2 and figure 4.2 shows that the Annual provisions for loan losses to total loans loan. The NCC bank is more risky then the loan of MBL. The ratio annual provision for loan losses to total loans shows the risk of bank's loan. Higher ratio shows the more risk on credit. At 2006/07 ratio of NCC Bank was 16.86% which shows high risk on bank credit but till next two year it has decreased continuously but fiscal year 2009/10 the ratio increased dramatically. Where, the ratio of MBL is comparatively lower than NCC Bank. From this we can conclude that the risk on credit of MBL is lower than NCC Bank. At 2006/07 the ratio was 0.146 % and it was increased at 2006/7 then after decreased, again it was increased and decreased. It shows that the ratio of MBL is slightly fluctuated than NCC Bank.

Likewise, the standard deviation of NCC Bank and MBL are 5.59% and 0.54 % respectively. Higher standard deviation has higher risk and vice versa. It shows that NCC Bank has high risk on credit than MBL. Similarly CV of NCC Bank

and MBL are 73.06 % and 41.53 % respectively. It shows that risk per unit on credit of NCC Bank is higher than MBL.

4.2 Operating Efficiency Ratio

One possible management response is to improve the efficiency of the organization in managing its resource. This may mean installing new labor saving machinery (such as computer and automated tellers) to increase the productivity of employees in processing transactions. It may also mean a conscious decision to expand the overall size of the organization to take advantage of any remaining economies of scale.

4.2.1 Operating expense ratio

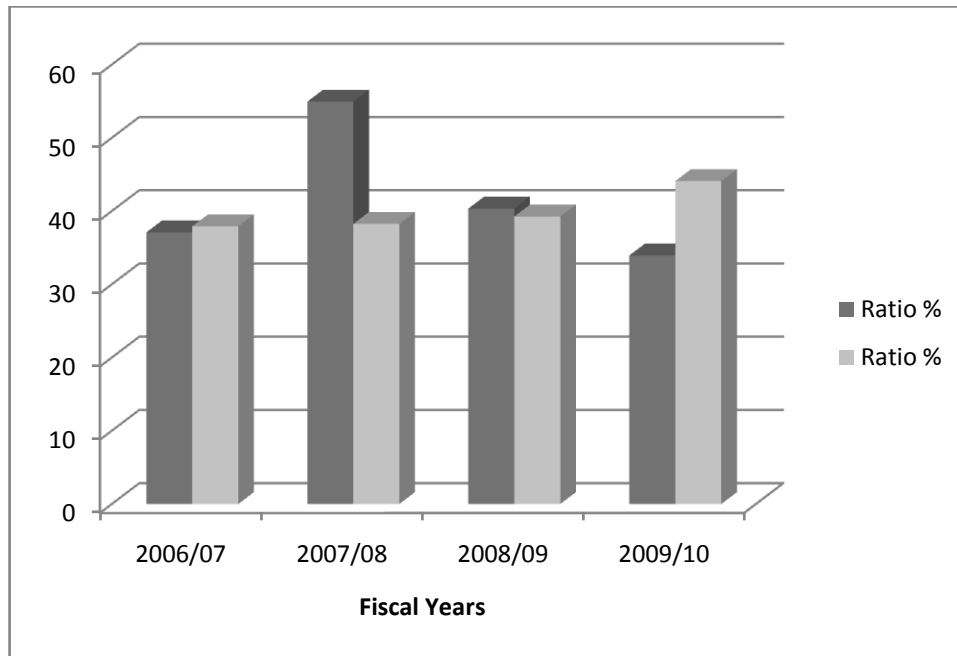
Increased efficiency is indicated by how well expenses are controlled relative to revenues and how productive each employee is in terms of revenues and income generated, assets managed, and accounts handled. Increasing operating expense ratio shows the management is unable to control the operating expenses and vice versa.

Table 4.3
Operating Expense Ratio

Fiscal Year	Rs In Thousand					
	NCC Bank			MBL		
	Operating expenses	Operating Revenues	Ratio %	Operating expenses	Operating Revenues	Ratio %
2006/07	118007	318129	37.09	129521	341597	37.92
2007/08	145779	265372	54.94	158308	413889	38.25
2008/09	172002	426351	40.34	198005	504345	39.26
2009/10	189479	558243	33.94	271019	614591	44.10
2010/11	216466	592532	36.53	371187	699676	53.05
		Total	202.84		Total	212.58
		Mean	40.57		Mean	42.52
		S.D	7.47		S.D	5.72
		C.V. %	18.41		C.V. %	13.44

Source: Annex-2

Figure 4.3
Operating Expense Ratios



The table 4.3 and figure 4.3 show that the Operating Expense Ratio of NCC and MBL. The comparative analysis of operating expenses and operating revenue of

NCC Bank and MBL. The operating expense ratio of MBL is increasing from 2006/07 to till now .It shows that management is unable to control the operating expenses and to increase the revenue as compared with expenses. So, the operating risk of MBL is increasing. From this trend, in future the banks profit will be declined and finally it will affect the net profit and dividend of MBL. The ratio of NCC Bank was 37.09% at 2006/07 and it is decreased at 2007/08 due to decrease in operating revenues and increase in operating expenses. In fiscal year 2008/09 and 2009/10 the ratio was decreased due to heavily increased in operating income. We can conclude that MBL has more operating risk than NCC Bank.

4.2.2 Income productivity ratio

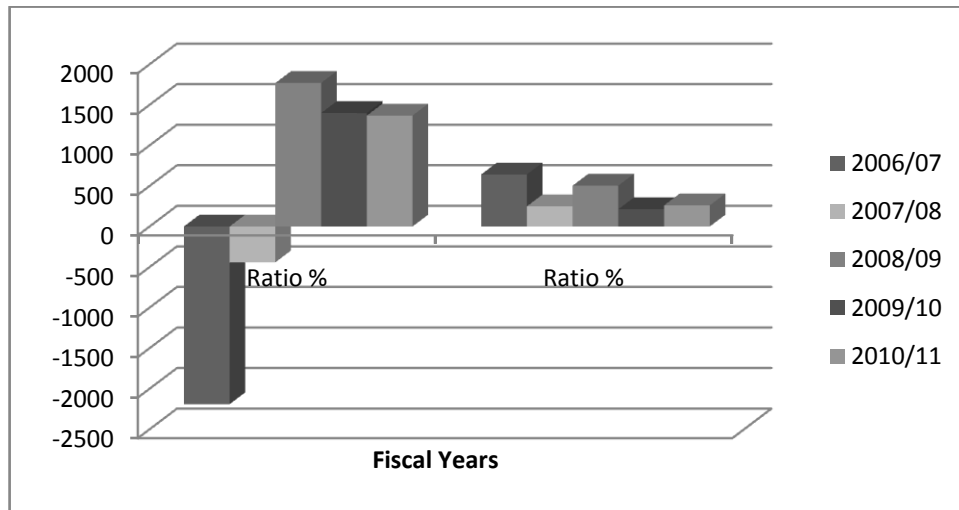
Income productivity ratio tends to be higher among the top earners .Banks with the best profits seem to generate and manage more assets and income per employee and often pay their more productivity employees higher salary.

Table 4.4
Income Productivity Ratios

	Rs In Thousand						
	NCC Bank			MBL			
Fiscal Year	Net Income	No of Employee	Ratio %	Net Income	No of Employee	Ratio %	
2006/07	-569744	260	-2191	125628	196	641	
2007/08	-115828	262	-442	57933	234	248	
2008/09	498755	282	1769	127824	254	503	
2009/10	415461	297	1398	92935	439	212	
2010/11	423773	310	1367	128046	492	260	
		Total	1901			Total	1864
		Mean	380.2			Mean	372.8
		S.D	1498.37			S.D	169.14
		C.V. %	394.10			C.V. %	45.37

Source: Annex-

Figure 4.4
Income Productivity Ratios



The table 4.4 and figure 4.4 show that the Income Productivity Ratios of NCC and MBL. The comparative analysis of income productivity ratio of NCC Bank and MBL. At fiscal year 2006/07 and 2006/7 the NCC Bank has negative income productivity ratio due to the net loss. Whereas MBL has positive ratio at the same time. After fiscal year 2008/09 both bank has positive ratio but NCC Bank has higher ratio then MBL due to more profit then MBL. From fiscal year 2008/09 NCC Bank with the best profits seem to generate and manage more assets and income per employee and often pay their more productivity employees higher salaries then MBL. IN fiscal year 2010/11 per employee income of NCC Bank and MBL is 1367 and 260 in thousand respectively. It shows that NCC Bank has higher profits to generate and manage more assets and income per employee.

4.3 Liquidity Ratios

It is the applicable to measure the ability of the firms to meet short term obligations. As name denotes the liquidity refers to the ratio between liquid assets and liability. The ability of firm to meet its obligation in the short term is known as liquidity. It reflects the short term financial strength of the business. In order to ensure short term solvency, the company must maintain adequate liquidity. But

liquidity ratio must be optimum. If the company maintain unnecessary high liquidity ratio then it may adversely effect in the profitability of the company, which can lose the opportunity to earn high profit, means everybody knows that investing all assets in safe liquid assets doesn't have a good return. As well as, high liquidity may unnecessary tie up in the current assets.

4.3.1 Liquidity Risk Ratios

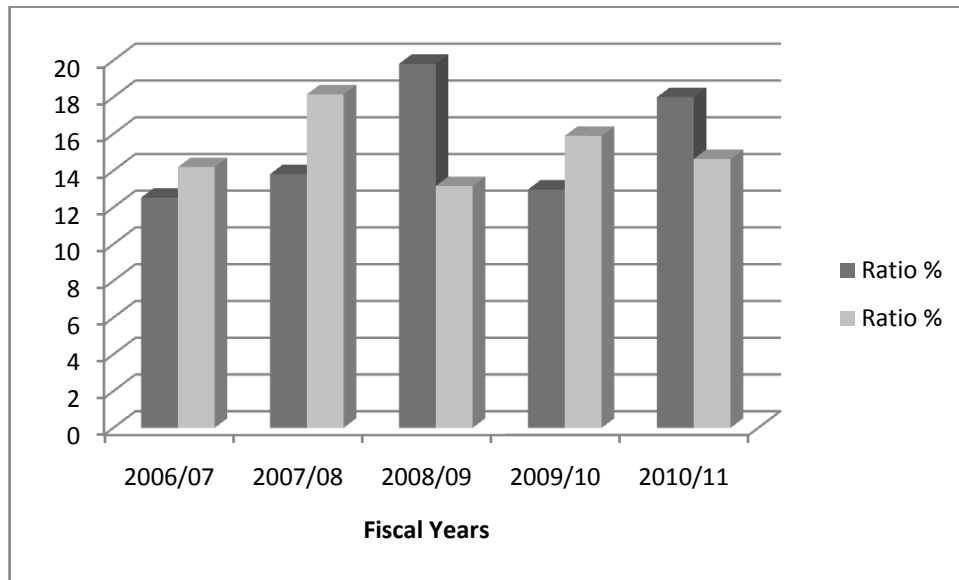
High ratio indicates the liquidity position is good .Low ratio indicates the liquidity risk is high i.e. there is liquidity problem .To overcome the liquidity problem, the financial institution can increase a bank's cash and readily marketable assets ,such as government securities ,or using long term liabilities to fund the bank's operations. This ratio is low if funds are kept idle as cash and bank balance but this reduces profitability. When the bank makes loan, its profitability as well as risk will be increase. Thus, higher liquidity ratio indicates less profitable return and vice-versa.

Table 4.5
Liquidity Risk Ratios

	Rs In Thousand					
	NCC Bank			MBL		
Fiscal Year	Cash and Government Securities	Total Assets	Ratio %	Cash and Government Securities	Total Assets	Ratio %
2006/07	805056	6427700	12.53	1283217	9046271	14.19
2007/08	833828	6036676	13.81	1978083	10897281	18.15
2008/09	1632240	8241334	19.81	1659715	12608246	13.16
2009/10	1373388	10590847	12.97	2770833	17447570	15.89
2010/11	2296299	12761075	18.00	3121281	21337370	14.63
		Total	77.12		Total	76.02
		Mean	15.42		Mean	15.20
		S.D	2.93		S.D	1.71
		C.V. %	18.99		C.V. %	11.27

Source: Annex-4

Figure 4.5
Liquidity Risk Ratios



The table 4.4 and figure 4.5 show that the liquidity ratio of NCC and MBL. The liquidity position of NCC Bank and MBL from fiscal year 2006/07 to 2010/11. Higher liquidity ratio shows good position of liquidity. The average liquidity position of MBL is 15.20% where NCC Bank has 15.42%. In average MBL bank has low liquidity risk then NCC Bank. MBL facing more liquidity problem then NCC Bank.

Likewise, the standard deviation of NCC Bank and MBL are 2.93% and 1.71% respectively. Lower standard deviation shows lower risk and vice versa. It seems that MBL has low liquidity risk then NCC Bank. Similarly Coefficient of variation of MBL is lower than NCC Bank. Higher CV shows higher risk. At last we can conclude that MBL has good liquidity position than NCC Bank.

4.3.2 Loan and Advances to Total Deposit Ratio

The core banking function is to mobilize the funds obtained from the depositors to borrowers and earn profit and loan and advances to total deposit ratio, often called

Credit Deposit Ratio (CD ratio), is the fundamental parameter to ascertain fund deployment efficiency of commercial bank. In other words, this ratio is calculated to find out how successfully the banks are utilizing their total deposits on credit or loans and advances for profit generating purposes as loans and advances yield high rate of return. Greater CD ratio implies the better utilization of total deposits and better earning, however, liquidity requirements also needs due consideration. Hence 70-80% ratio is considered as appropriate. This ratio is calculated by dividing total credit by total deposits.

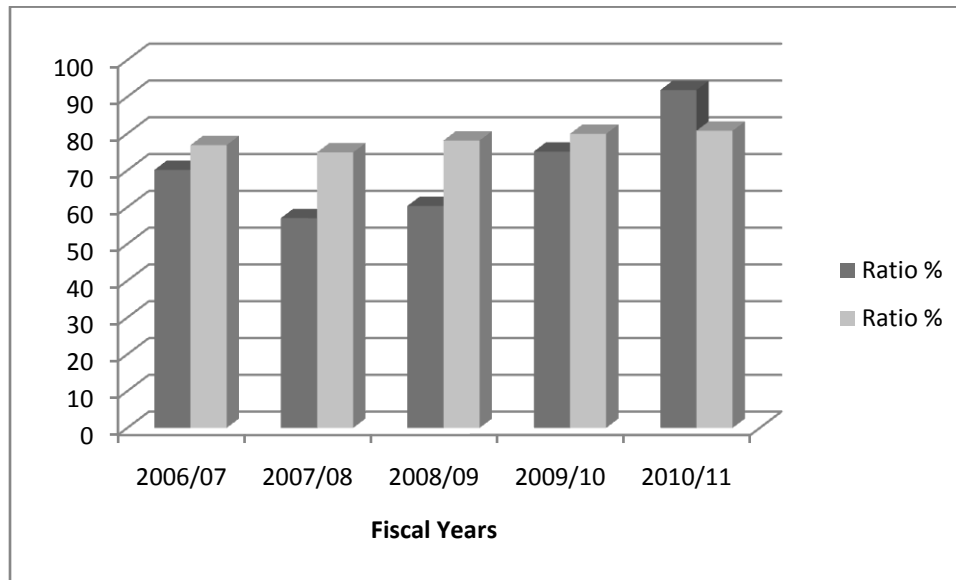
Table 4.6
Loan and Advances to Total Deposit Ratio

	Rs In Thousand						
	NCC Bank			MBL			
Fiscal Year	Loan and Advances	Total Deposits	Ratio %	Loan and Advances	Total Deposits	Ratio %	
2006/07	4643262	6619581	70.14	6068913	7893298	76.88	
2007/08	3707642	6500343	57.04	7096898	9474968	74.90	
2008/09	4417856	7320236	60.35	8674976	11101180	78.14	
2009/10	6858194	9127749	75.14	12467188	15596249	79.94	
2010/11	9942332	10824693	91.85	14972534	18536211	80.78	
		Total	354.52			Total	390.64
		Mean	70.90			Mean	78.13
		S.D	12.34			S.D	2.11
		C.V. %	17.40			C.V. %	2.70

Source: Annex-5

Figure 4.6

Loan and Advances to Total Deposit Ratio



The table 4.6 and figure 4.6 show that the loan and advances to total deposit ratio of NCC and MBL. The loan and advance to total deposit ratio of NCC Bank and MBL. 70-80% ratio is considered as appropriate. From fiscal year 2006/07 to 2010/11 MBL has good ratio because ratio in this time lies between 70 % to 80%.But NCC bank has fluctuating ratio. Only fiscal year 2006/07 and 2009/10 the ratio was appropriate. At 2010/11 the ratio was 91.85%, which shows that bank gave 91.85% loan of total deposit .From this bank has facing liquidity problem.

Likewise, Standard Deviation of MBL was 2.11% which is lower than NCC Bank i.e. 12.34%.It shows MBL has less risk then NCC Bank.CV gives same result as standard deviation.

4.4 Market risk

Market risk refers to the risk to a bank resulting from movements in market prices, in particular, changes in interest rates, foreign exchange rates, and equity and

commodity prices. Market risk is defined as the risk of losses in on and off-balance sheet positions arising from movements in market prices.

4.4.1 Interest Rate Risk Ratio

Interest rate risk ratio measure the danger of loss due to changing in the market interest rates. Particularly in periods of wide interest rate movements, this ratio reflects the risk the bank is willing to take that it can predict the future direction of interest rates. If a bank has a ratio above 1.0, the bank's returns will be lower if interest rates decline and higher if they increase.

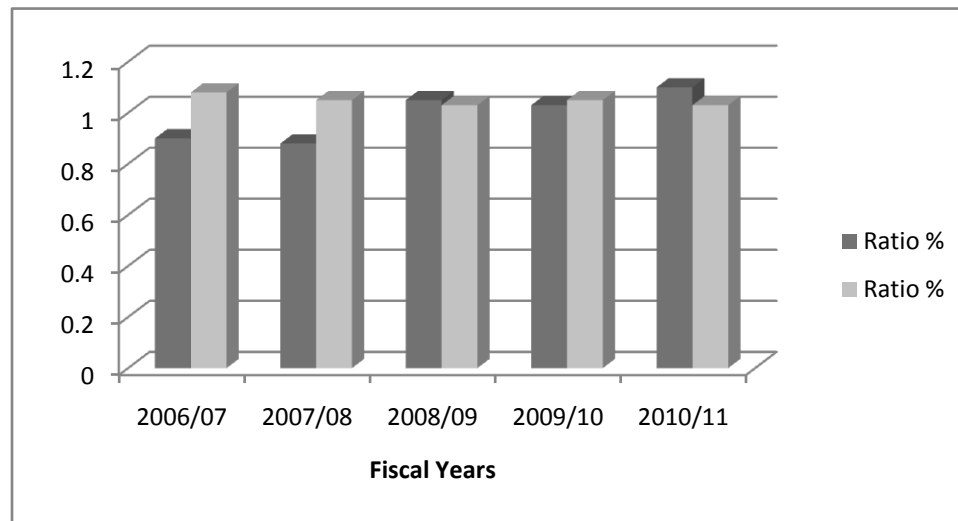
Table 4.7
Interest Rate Risk Ratio

	Rs In Thousand					
	NCC Bank			MBL		
Fiscal Year	ISA	ISL	Ratio %	ISA	ISL	Ratio %
2006/07	6039962	6736737	0.9	8778531	8117904	1.08
2007/08	5778091	65470120	0.88	10353450	9908855	1.05
2008/09	7950855	7556251	1.05	11778242	11395976	1.03
2009/10	9814703	9491927	1.03	16484180	15777827	1.05
2010/11	12238631	11031467	1.1	20190607	19509127	1.03
		Total	4.96		Total	5.24
		Mean	0.99		Mean	1.05
		S.D	0.087		S.D	0.0184
		C.V. %	8.79		C.V. %	1.76

Source: Annex-8

Figure 4.7

Interest Rate Risk Ratios



The table 4.8 and figure 4.8 show that the interest rate risk ratio of NCC and MBL. Above table and graph illustrates the interest rate risk ratio of NCC Bank and MBL. If a bank has a ratio above 1.0, the bank's returns will be lower if interest rates decline and higher if it increases. If a bank has a ratio below 1.0, the bank's return will be higher if interest rates decline and lower if it increases. At average the ratio of MBL is above 1 which shows that, if increases in interest rate the banks profit will increase and vice versa. At fiscal year 2006/07 and 2007/08 the NCC Bank has ratio below 1.0 and thereafter till fiscal year 2010/11 ratio it is above 1.

Likewise the standard Deviation and Coefficient of variation of MBL Bank is lower than NCC Bank. This shows that MBL has lower Interest rate risk than NCC Bank. If a bank has ratio below 1, at that time interest rate and banks returns has negative relation.

4.4.2 Risk and Return Ratio

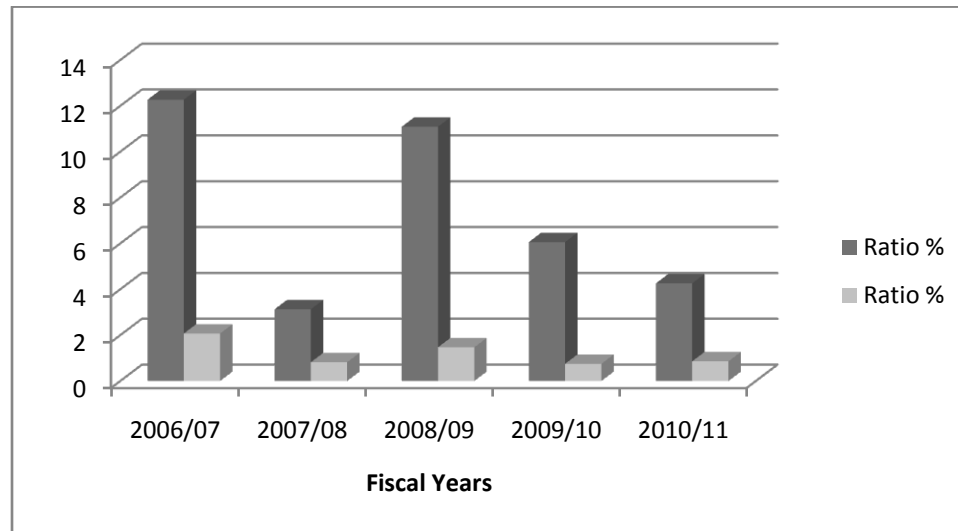
Risk and Return analysis is also called Net Profit to Loan and Advance Ratio. Return on loan and advances ratio indicates how efficiently the bank has utilized its resources in the form of loan and advances to generate good return. It measures the earning capacity of a commercial bank. This ratio is calculated by dividing net profit by loan and advances. Mathematically,

Table 4.8
Net Profit to Loan and Advance Ratios

	Rs In Thousand					
	NCC Bank			MBL		
Fiscal Year	Net Profit	Loan and Advances	Ratio %	Net Profit	Loan and Advances	Ratio %
2006/07	-569745	4643262	-12.27	125628	6068913	2.07
2007/08	-115929	3707642	-3.13	57933	7096898	0.82
2008/09	489755	4417857	11.09	127824	8674976	1.47
2009/10	415461	6858194	6.06	92935	12467188	0.75
2010/11	423773	9942332	4.26	128046	14972534	0.86
		Total	6.01		Total	5.96
		Mean	1.20		Mean	1.19
		S.D	8.06		S.D	0.49
		C.V. %	671.67		C.V. %	1.76

Source: Annex-9

Figure 4.8
Net Profits to Loan and Advance Ratios



The table 4.8 and figure 4.8 show that the net profit to advances ratio of both banks. Fiscal year 2006/07 NCC Bank has huge loss and it was decreased at fiscal year 2007/08. Then after NCC Bank able to earn net profit. It was happened from payment of bad debt. At fiscal year 2008/09 the ratio was 11.09% after that the ratio was decreased due to increase in loan and advances but decreased in profit. It was happened due to decreased at gap of interest rate. Ratio of MBL also decreased due to tough competition in the banking sector. At average the ratio of MBL is lower than NCC bank. It seems NCC Bank utilizing its total deposit effectively rather than MBL. Likewise, Standard deviation and coefficient of variation of NCC Bank is higher than MBL. It shows that NCC Banks has higher risk to earn profit then MBL.

4.4 Correlations Analysis

Table 4.9

Correlation Analysis between Net Profit and Loan & Advance

Name of Bank	Correlation between Net Profit & Loan and Advance	Relation
NCC	0.5015	Positive
MBL	0.2395	Positive

Source: Annex-10

The table 4.9 shows the correlations coefficient between Net Profit and Loan & Advance of NCC Bank and MBL are positive. NCC bank has moderate correlation between Net profit and Loan where MBL has low degree of positive correlation. For example if we increase loan and Advance by 100% then return of NCC Bank will increase by 50.15%. But due to low degree of correlation if we increase 100% loan and Advance then return of MBL will increase only by 23.95%. If we compare the correlation between Net profit and loan & Advance of both Banks. We can conclude that NCC Bank has higher earnings at their loan then MBL.

4.5 Trend Analysis

Trend Analysis shows the relationship between two variables on a single period. It helps in future forecasting and planning with the help of past and present data and the factors affecting them will make possible to forecast the future magnitude. Trend Analysis is an analysis of bank's financial figure over a period of time in order to determine the improvement, deterioration or stability of its financial situation.

Under this topic, trend analyses of Loan and advances total deposit of NCC and MBL are studied during the period of time. The objective of this topic is to forecast the total loan and advances and total deposit for the next five years.

The projections are based on the following assumptions:

- The bank will run in the present style.
- Nepal Rastra Bank and the Government of Nepal will not make any amendments in the guidelines for the operation of commercial banks.
- Other all the things also remain constant.

Simple linear trend line of the form ‘ $y = a + bx$ ’ is used where ‘ x ’ and ‘ y ’ are considering variables. Here, ‘ x ’ denotes time, ‘ b ’ measures the increase and decrease in the value of ‘ y ’ due to unit change in ‘ x ’ and ‘ y ’ denotes the loan and advance and total deposit. Here, the method of least square has been used for the analysis of total RWA and total NPL of EBL.

4.5.1 Trend analysis of loan & Advances and Total Deposit of NCC Bank

Table 4.10

Trend analysis of loan & Advances and Total Deposit of NCC Bank

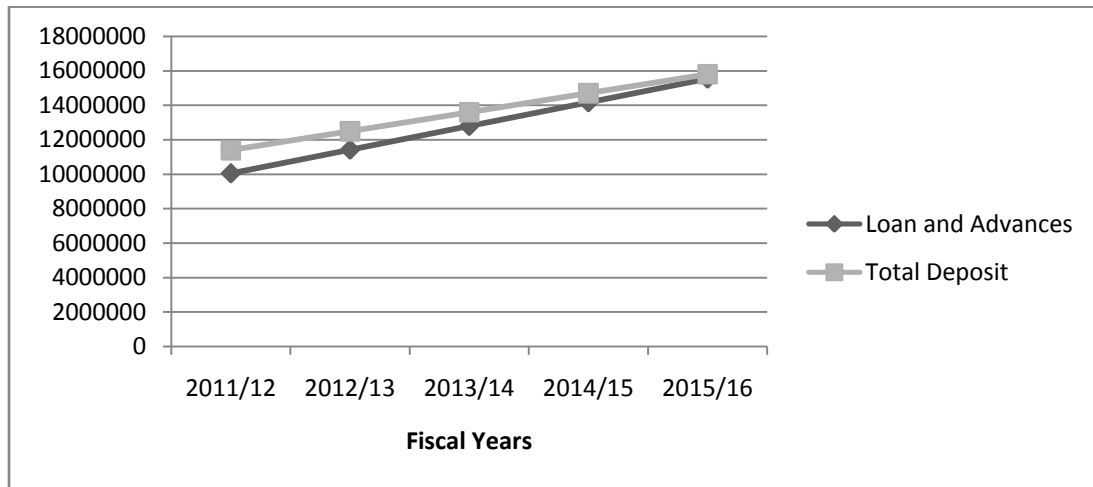
Rs in Thousand

Year	Loan and Advances	Total Deposit
2011/12	10038465.0	11389809
2012/13	11413334.2	12493572
2013/14	12788203.4	13597335
2014/15	14163072.6	14701098
2015/16	15537941.8	15804861

Source: Annex-6 &7

Figure 4.8

Trend analyses of loan &Advances and Total Deposit of NCC Bank



The table 4.10 and Figure 4.8 show that the trend analysis of Loan & Advances and Total deposit of NCC Bank for fiscal year 2011/12 to 2015/16. Mainly this ratio shows the liquidity position of the bank. Till fiscal year NCC Bank faced liquidity problem due to higher loan and advance to total deposit ratio. From this we can forecasts that in future NCC Bank may face the big challenges from liquidity problem. For this bank should maintain this ratio between 70% to 80%.

4.5.2 Trend analysis of loan &Advances and Total Deposit of MBL

Table 4.11

Trend analysis of loan &Advances and Total Deposit of MBL

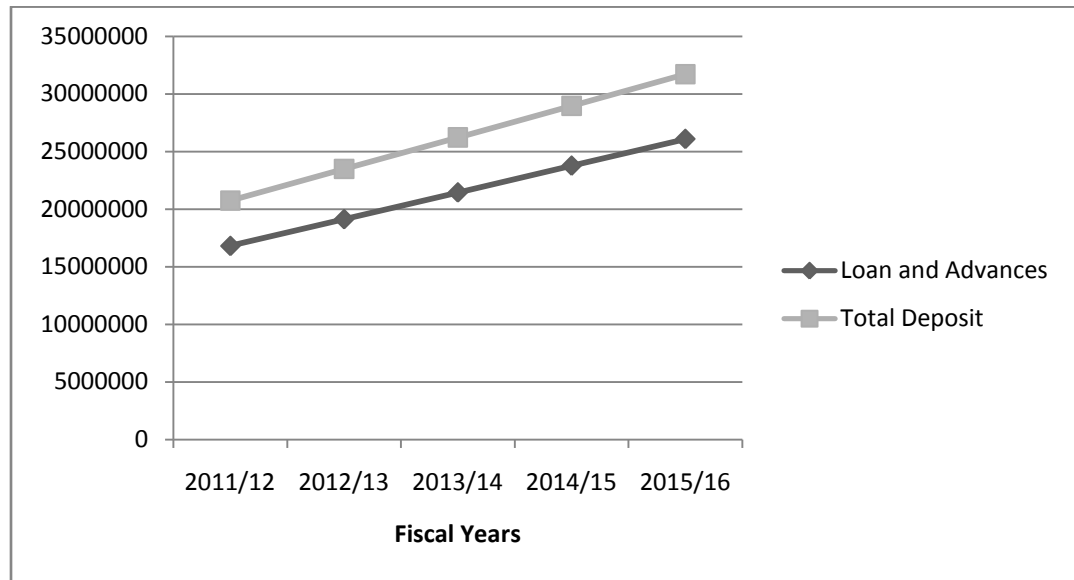
Rs In Thousand

Year	Loan and Advances	Total Deposit
2011/12	16809361.4	20742513.3
2012/13	19127114.6	23483224
2013/14	21444867.8	26223934.7
2014/15	23762621	28964645.4
2015/16	26080374.2	31705356.1

Source: Annex-6 &7

Figure 4.10

Trend analyses of loan &Advances and Total Deposit of MBL



The table 4.11 and Figure 4.10 show that the trend analysis of Loan & Advances and Total deposit of MBL for fiscal year 2011/12 to 2015/16. Mainly this ratio shows the liquidity position of the bank. Till fiscal year NCC Bank has not liquidity problem due to proper manage of loan and advance to total deposit ratio. From this we can forecasts that in future MBL may have not challenges from liquidity problem. Bank management is giving priority for liquidity management.

4.6 Major Findings of the study

Having completed the basic analysis required for this study, the final and the most important task of the researcher is to enlist the findings. This will give meaning to the desired result. A comprehensive summary of the major findings of this study is presented below. The major findings of the study derived from the analysis of financial data of NCC Bank and MBL are given below.

- From annual provision for loan losses to total loan ratios of NCC Bank and MBL. We can conclude that NCC bank has higher credit risk then MBL because NCC Bank has higher average ratio than MBL.

- Operating expenses ratio shows how effectively bank expenses are controlled related to revenues. MBL has higher operating ratio than NCC Bank.
- Income productivity ratio shows employee productivity of bank. Here NCC Bank has higher ratio. It shows that NCC Bank generating best profit by effective utilizing its employee than MBL.
- Liquidity ratio of NCC Bank and MBL are not more significant difference. But little bit the ratio of NCC Bank is higher than MBL. It shows NCC Bank has more liquidity risk than MBL.
- Loan & advances to Total Deposit ratio shows how successfully the banks are utilizing their total deposits on credit or loans and advances for generate profit. Here the ratio of MBL is higher than NCC Bank. It shows MBL are more effectively utilized its deposits than NCC Bank.
- Trend analysis of Loan and Advances to Total deposit from 2010/11 to 2014/15 shows in future NCC Bank may face more liquidity problem than MBL but NCC Bank has more profit due to better utilizing its total deposits.
- If interest risk ratio has below 1, at that time interest rates & banks return has negative relation. Here the ratio of NCC bank is below 1 and the ration of MBL is above 1. Now interest rates is in increasing trend from this MBL has more opportunity to earn higher profit than NCC Bank.
- At average, net profit to loan and advance ratio is lower than NCC Bank. It seems NCC Bank utilizing its total deposit with effectively to earn profit rather than MBL. But the standard deviation of NCC Bank has e than MBL. It shows NCC Bank has higher risk to earn profit than MBL.
- Correlation analysis between net profit and loan & advance shows NCC Bank has moderate positive correlation while MBL has low degree of positive correlation. It shows if the NCC Bank increase its loan and

advance by same percentage of MBL. At that time NCC Bank will earn higher profit than MBL.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter includes summary conclusion & recommendation of the study. The final and most important task of the researchers is to enlist fact findings of the study and give suggestion for further improvement. The analysis is performed with the help of financial tools and statistical tools. The analysis is associated with comparison and interpretation. Under financial analysis, various financial ratios related to the risk management are used and under statistical analysis some relevant statistical tools are used.

5.1 Summary

Economic development is not possible without the proper development of banking sector in a country, as banks are the real facilitator for mobilizing the resources. Banks are the institutions, which collect the scattered small savings from the public and invest them into productive sector that ultimately contributes to economic development of a country. Besides providing the services for economic development, they are established to earn profit. In the context of current competitive scenario, banks need to face challenges from all around. One of the major challenges for Nepalese commercial banks is to properly manage the risk. Considering the importance of risk management in commercial banks, this research aimed at studying the risk management system of selected commercial banks. For this purpose, descriptive cum analytical research design was adopted. Out of total population of 31 commercial banks, 2 banks were taken as sample using judgmental sampling method .MBL and NCC Bank have been taken for comparative study. The data collections from various sources are recorded systematically and presented. Appropriate statistical and financial tools have been applied to analyze the data. The data of five consecutive years of the two banks

have been analyzed to meet the objective of the study. The major risk in MBL and NCC Bank is associated with credit decision as the proportion of credit risk on total risk is high.

Non-performing assets to total loans and leases ratio shows credit risk of Bank. Here, the ratio of NCC is lower than MBL. So NCC bank has lower credit risk than MBL. Similarly, annual provision for loan losses to total loan also shows the credit risk. Higher ratio shows more credit risk. Here ratio, S.D. and C.V. of NCC bank is higher than MBL. It shows MBL has lower credit risk than NCC Bank. The credit risk of these banks mainly arises due to non-payment of loan by borrowers, poor appraisal of borrowers of financial condition and collateral. Poor tracking of borrowers and improper diversification of lending across industries also result in higher credit risk in commercial banks. From before few years ago both banks are victims from non-payment of loan but they are rapidly decreasing their bad debt.

The analysis of operating risk shows that both banks have the same sort of operation risk, which includes mainly transactional risk (such as cash shortage, settlement risk and document risk) money laundering and system risk. Cash shortage, which arises due to overpayment by the teller than the requested amount is taken as regular phenomenon. In both banks there exists a provision of teller risk fund to safeguard the loss against the cash shortage. The daily transaction list are checked and verified by the compliance department to ensure proper transaction has been made. Likewise, document risk arises due to transaction against the counterfeit documents. Both banks have well defined know your customer policy for preventing the money laundering. This policy clearly outlines the procedure for checking and verifying the suspicious transaction. Similarly, this policy has made provision to the required documents and information before opening an account of customers. Compliance and Internal audit departments are

concerned with tracking all the suspicious and huge level of transaction on daily basis. Increasing operating ratios shows management is unable to control the operating expenses and vice versa. Here MBL has more operating risk than NCC Bank. Similarly, Income productivity ratio shows how the banks are using its employees with higher efficiency. Here NCC Bank has higher productivity ratio than MBL. It shows NCC Bank has higher profits per employee from generating and managing more assets and income per employee.

The liquidity risk of banks is mainly studied by analyzing such as Liquidity ratio, Loan and advance to total deposit ratio. Higher liquidity ratio indicates liquidation position is good but higher liquidity ratio indicates less profitable return and vice versa. Here NCC Bank's ratio is slightly higher than ratio of MBL which shows in future MBL may face the liquidity problem. Loan and advance to total deposit ratio is calculated to find out how successfully the banks are utilizing their total deposits on credit. Greater ratio shows better utilization of total deposit and better earning. 70% to 80% is appropriate. Both banks are not too much liquidity risk.

Interest rate risk measures the market risk of the bank. Mainly it measures the danger of loss due to changing in the market interest rates. Here NCC Bank has higher S.D, and CV than MBL which shows NCC Bank has more market risk than MBL. MBL has positive impact at net profit with change in interest rate because its interest risk rate ratio has greater than one. And NCC Bank has negative impact caused its ratio is below one.

Trend analysis of Loan and Advances to Total deposit from 2010/11 to 2014/15 shows in future NCC Bank may face more liquidity problem than MBL but NCC Bank has more profit due to better utilizing its total deposits. Correlation analysis between net profit and loan & advance shows NCC Bank has moderate positive correlation while MBL has low degree of positive correlation. It shows if the NCC

Bank increase its loan and advance by same percentage of MBL. At that time NCC Bank will earn higher profit than MBL.

5.2 Conclusion

As per the objectives and analyzing of the study following conclusions have been drawn. In commercial banks, minimizing the risk is the major challenges. Nepalese government has started to liberalize the financial sector since 1980s to streamline the financial sector of the country. After the adoption of financial sector liberalization policy, the financial sector widened with more banks and financial institutions. Commercial banking sectors have made a significant mark with establishment of 31 commercial banks. Though banking sector developed rapidly in quantity not in quality. Commercial banks are established with an objective to maximize the value of shareholder by performing the function of mobilizing the idle funds collected from society to productive sector, which will support to achieve economic development of country. Most of the Nepalese banks victims from credit risk due to lack of secured investment sector and nonpayment of loan. Banks needs proper handling of several problem and challenges.

In current scenario, the major challenge of commercial banks is competition among 32 banks. From this banks have low profitability. Proper risk management is required to remain competitive in the market and achieve goals. Most of the banks being victims from banking risks such as credit risk, liquidity risk, operational risk and market risk. Among these risks, credit risk has the major impact on banking industry which is more than 60% of total risk. Because the credit risk Non Performing Loan (NPL) of bank will increase .With the increase in NPL, the loan loss provisioning will also increase simultaneously leading to decrease profit. The decrease in profit results in low dividend to shareholder and bonus to employees. In credit risk, single sector concentration is main problem in both banks. Similarly, poor management of asset and liabilities bank may face the

liquidity risk, Interest risk and Operational risk. Similarly, tactfully dealing with market interest movement by adjusting the interest sensitive asset and liabilities banks can minimize the Market Risk. If banks have superior management team, long-term strategy & plan then banks may face the different risk arises from market and within the bank. For proper management of such risk both banks have own set of policies and practices, which is consistence with NRB guidelines. For credit risk management, both banks have credit policies guidelines. Similarly, NPL is regularly monitored by both banks on regular and provisioning is done on quarterly basis by categorizing the loan as per NRB guidelines. In regard to operational risk, the major steps are taking to reduce it. For this both banks have preparing and implementing the differential operational guidelines and policies. Most of these policies are prepared as per NRB guidelines.

5.3 Recommendations

From the above analysis the various risk management procedure of both NCC Bank and MBL. Following recommendation is made to these banks, NRB and Government of Nepal in respect of different risk management. Following general recommendation can be made to these banks regarding all types of risk management.

- Both banks seem conservative in terms of dealing risk. Credit risk has been giving high priority in both banks, to remain competent in the market both banks need to identify new risk and make proper strategy to solve the upcoming risk. Which will may arises from external environment.
- Both banks are recommended to initiate training and development program for the employees to make them efficient and professional in terms of managing various risks. Training for credit appraisal, monitoring and

management of different risk can play vital role to minimize overall risk of banks.

- Both banks should give focus the system of check and balance, which helps to minimize operational risk.
- It is often said “prevention is better than cure”. Hence it is recommended for both banks to take preventive measures before the risk occur in bank. Both banks are recommended to develop management information system to gather all the information and activities that provides necessary information to take timely precaution.
- Following the directives of NRB and acting upon it also reduces bank’s risk. Therefore both the banks are recommended to adhere to the directives and come up with a stronger internal audit that the directives are properly followed up.
- Integrated and speedy development of the country is possible only when competitive banking services reaches nook and corners of the country. NCC Bank has shown no interest to open branches in rural areas. Now, MBL has giving higher priority to open its branches to rural area. Mainly NCC bank than MBL are recommended to expand their branches and banking services and facilities in rural areas and communities to accelerate their economic development. NRB should made and implement policies to encourage bank to open their branch in underdeveloped region, which provide extensive services to the community.
- Both banks must give training regularly to their employees for minimizing the Operational Risk. The training most focus to identifying fake notes and check & balance system in cash department and documentation fraud in credit department.

- Both banks have credit recovery unit but this unit becoming unable to control credit risk. For this banks must implement strict polices and follow legal action.
- NCC Bank and MBL need to follow principles prescribed by NRB for the proper risk management.
- The best situation for the bank is the fewer gaps between the assets and liability, as higher on either side is risky to the bank. Though from liquidity point of view the higher the assets and liabilities gap is better, however, the excess net assets liabilities position also leads the higher idle fund of the banks that ultimately results of higher opportunity cost.
- Both banks must maintain standard of liquidity ratio given by NRB. For this both banks must have sufficient fund. For the minimizing liquidity risk banks can investment at Treasury bill and other government sector from this bank can quickly convert such investment into cash.
- Analysis through correlation coefficient we can conclude that at current scenario MBL has low return compare than NCC Bank. So MBL has most provide loan to productive sector and must recover its bad debt through legal action.
- Based on trend analysis at future NCC Bank may face challenges of Liquidity. So NCC Bank must be aware to increase the deposit.
- Government of Nepal should take inflexible legal actions against the defaulters.