CHAPTER I
INTRODUCTION

1.1 General Background

Nepalese Economy is predominantly a subsistent agricultural economy, which contributes about 40 percent of GDP and provides employment to more than 80 percent of the economically active population. Financial institutions, like Banks, accumulate the savings of the people from all the economic sectors and mobilize them to productive and effective sector in a systematic manner. So, sound-banking system is the crucial means to accelerate the development of a country by strengthening the economic condition in today's globalized 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, 1991:88).

In Nepal, banking sector started in 1937 A.D. with the establishment of Nepal Bank Ltd., Nepal Rastra Bank, 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 mid-July 2007, twenty 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 baking sector are: to mange 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 the 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.

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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, foreign exchange risk, and interest rate risk and operation risk etc.

In this world of globalization, the activities of banks and financial institutions have become more complex and challenging due to the privatization, free market and economic liberalization etc. More over the development in science and information technologies has turned the world a small place because of which banks and financial institutions are needed to be much more conscious in their work

1.2 Brief Introduction of Banks under Study

Two commercial banks, Nepal Credit & Commerce Bank Ltd. (NCC Bank) and Machhapuchhre 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. 2 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.1399 million in 2008. 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 42 other member commercial bank and development Banks. This facility enables the customers to withdraw cash from any of the 19 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’s main goal is to provide a wide range of banking services and products in the emerging socio-economic environment within and outside the country maintaining high standards of integrity and efficiency with excellence, (NCC Bank 2009/10).

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 Machhapuchhre Bank Limited

Machhapuchhre 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 1314 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.

Machhapuchhre 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 GLOBAL 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, 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 Corporate Office in Kathmandu and branch offices in other parts of Kathmandu, Damauli, Bhairahawa, Birgunj, Banepa, 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.

In Machhapuchhre 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.

1.3 Statement of the Problem

In general perception, the banking is a very profitable industry with an annual profit of Rs. 8946.9 million in the fiscal year 2009/10. 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. 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. Besides this, Nepal Rastra Bank (NRB) directives to commercial banks to increase the paid up capital Rs.2 billion by 2010 may perhaps challenge most of the commercial banks in Nepal.

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. These could be another problem to be addressed in the research.

The interest rate on the both deposits and loan has been declining each year. On the contrary, 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 17 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. The Basel II has categorized Nepal as the high-risk country with ECA (Export Credit Rating Agencies) rating 7. This means that the Nepalese commercial banks assets are rated risky up to 150%, (Basel, 2005: 88). Complying these prudential of national and international measures could be another problem faced by the Nepalese commercial bank.

Within this competitive market scenario, the stringent credit risk management, sound portfolio analysis, and proper management of asset and liabilities, compliance of NR's prudential and Basel II are crucial for these banks to sustain and grow in the industry. Nepal Credit & Commerce Bank Ltd. and Machhapuchhre 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 bank's 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:

- How important is the management of different risk to the commercial banks?

- How do different risks affect the profitability of the commercial banks?
- How the different risks of commercial banks can be analyzed?
- What actions can minimize these risks in order to maximize the profit?
- Are the commercial banks implementing the NRB Directives ?
- What are the different systems opted by the commercial banks?

1.4 Objectives of the Study

In solving the research problem and answering the research questions mentioned previously, this study has the following objectives:

- To analyze different types of risks of the bank.
- To analyze Nepal Rastra Bank's directives and measures on the risk management of commercial banks.
- To analyze the risk management system of NCC Bank and MBL in reference to NRB Guidelines.
- To provide appropriate suggest.

1.5 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 theirs action for its management.

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

- 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 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.
- 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 2005/06 to 2009/10.

1.7 Organization of the Study

The study will be organized in to five chapters as follows:

Chapter I: Introduction of the study

Chapter one deals with General Background, Brief Introduction of Banks under Study, Statement of the Problem, Objectives of the Study, Focus of the Study, Limitations of the Study and Organization of the Study.

Chapter II: Conceptual Framework and Review of Literature

Chapter two consists of review of literature. This chapter is subdivided into various sections such as Theoretical Review, Review of NRB Directives related to Risk Management of Commercial Banks, Review of Literatures and review of past Thesis.

Chapter III: Research Methodology

Chapter three present methodologies adopted for the research. It comprises Introduction, Research Design, Population and Sample, Sources of Data and Collection Procedure, Data Processing and Presentation and Data Analysis Tools.

Chapter IV: Presentation and Analysis

Chapter four deals with the techniques used in analyzing the collected data and their presentations in the descriptive and analytical manner.

Chapter V: Summary, Conclusions and Recommendations

The last chapter i.e. summary of the study, which is followed by the conclusions of the study based in the fourth chapter. On the basis of these conclusions, recommendation has also been presented for consideration.

CHAPTER II
CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

2.1 Conceptual Framework

Problems of risk management are very much on the agenda in banking and finance. There is a clear sense that risk exposure of the financial system has been increased by the changes that have taken place over the past two decades. The changes may be due to the incapability of accumulating the credit, interest rate positions taken or derivative exposures that may or may not have been assumed to hedge balance sheet risk. For the minimization of this risk, commercial banks have felt the need of upgrading their risk management and control system.

2.1.1 Meaning of Risk and Risk Management

Risk, in most methodologies, tends to be viewed in a very negative sense. It is generally defined in terms of something that might occur to adversely affect the achieving goals. But the broad definition of risk says it may not always have an adverse impact or risk is not necessarily something going wrong - it is simply something turning out differently to what is expected or planned for. Again, risk can be defined as the possibility of deviation of the actual return from the expected return (Kupper, 2003: 103).

To be a bit more specific risk is: 'A future event (or series of events) with a probability of occurrence and the potential for a.) Loss or b.) Impact on objectives that can be either positive or negative.'. In all types of undertaking, there is the potential for events and consequences that constitute opportunities for benefit (upside) or threats to success (downside). This view allows the possibility that risks can be turned into opportunities if managed effectively. Risk Management is increasingly recognized as being concerned with both positive and negative aspects of risk. Therefore this standard considers risk from both perspectives. In the safety field, it is generally recognized that consequences is only negative and therefore the management of safety risk is focused on prevention and mitigation of harm (Chance and Brooks, 2008: 53).

Risk management is a central part of any organization's strategic management. It is the process whereby organizations methodically address the risks attaching to their activities with the goal of achieving sustained benefit within each activity and across the portfolio of all activities. In other words, risk management is the process of measuring, or assessing risk and then developing strategies to manage the risk. In general, the strategies employed include transferring the risk to another party, avoiding the risk, reducing the negative affect of the risk, and accepting some or all of the consequences of a particular risk (Chance and Brooks, 2008: 106).

For the good risk management, it must focuses in the identification and treatment of the risks. The objective must be to add maximum sustainable value to all the activities of the organization. It has to marshal the understanding of the potential upside and downside of all those factors, which can affect the organization. It increases the probability of success, and reduces both the probability of failure and the uncertainty of achieving the organization's overall objectives. Risk management should be a continuous and developing process, which runs throughout the organization's strategy and the implementation of that strategy. It should address methodically all the risks surrounding the organization's activities past, present and in particular, future. It must be integrated into the culture of the organization with an effective policy and a program led by the most senior management. It must translate the strategy into tactical and operational objectives, assigning responsibility throughout the organization with each manager and employee responsible for the management of risk as part of their job description. It supports accountability, performance measurement and reward, thus promoting operational efficiency at all levels (Chance and Brooks, 2008: 82).

2.1.2 Types of Risk Faced by Commercial Banks

In the course of their operations, banks are invariably faced with different types of risks that may have a potentially negative effect on their business. Risk management in bank operations includes risk identification, measurement and assessment, and its objective is to minimize negative effects risks can have on the financial result and capital of a bank. Banks are therefore required to form a special organizational unit in charge of risk management. Also, they are required to

prescribe procedures for risk identification, measurement and assessment, as well as procedures for risk management.

The risks to which a bank is particularly exposed in its operations are: credit risk, market risk (liquidity risk, interest risk, foreign exchange risk) and operation risk which are clarified as under:

2.1.2.1 Credit Risks

Credit risk arises from potential that a borrower or counter-party to a transaction will fail to perform on an obligation. In other words, credit risk involves inability or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. Views credit risk is generally made up of transaction risk or default risk and portfolio risk. The portfolio risk in turn comprises intrinsic and concentration risk. The portfolio risk depends on both external and internal factors. The external factors are the state of the economy, wide swings in commodity/equity prices, foreign exchange rates and interest rates, trade restrictions, economic sanctions, government policies, etc. The internal factors are deficiencies in loan policies/administration, absence of prudential credit concentration limits, inadequately defined lending limits for Loan Officers/Credit Committees, deficiencies in appraisal of borrowers‟ financial position, excessive dependence on collaterals and inadequate risk pricing, absence of loan review mechanism and post sanction surveillance.

Another variant of credit risk is counterparty risk. Counterparty risk comes from non-performance of a trading partner. 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 (Santomero, 1997: 66)

2.1.2.2 Market Risk

Market risk is the change in net asset value due to changes in underlying economic such as interest rates, exchange rates, and equity and commodity prices. Or in other words, market risk is exposure to the uncertain market value of the firm's assets. Major components of market risk are:

- Liquidity risk
- Interest rate risk
- Foreign exchange risk (Chance and Brooks, 2008: 82).

2.1.2.2.1 Liquidity Risk

The term liquidity is used in various ways, all-relating to availability of, access to, or convertibility into cash. An institution is said to have liquidity if it can easily meet its needs for cash either because it has cash on hand or can otherwise raise or borrow cash. A market is said to be liquid if the instruments it trades can easily be bought or sold in quantity with little impact on market prices. Similarly, an asset is said to be liquid if the market for that asset is liquid. The common theme in all three contexts is cash. A corporation is said to be liquid if it has ready access to cash. A market is liquid if participants can easily convert positions into cash. An asset is liquid if it can easily be converted to cash.

The liquidity of an institution depends on:

- The institution's short-term need for cash;
- Cash on hand;
- Available lines of credit;
- The liquidity of the institution's assets;

The institution's reputation in the marketplace-how willing will counterparties be to transact trades with or lend to the institution.

Liquidity risk is the risk of negative effects on the financial result and capital of the bank caused by the bank's inability to meet all its due obligations or in simple word; it is a financial risk due to uncertain liquidity. An institution might lose liquidity if its credit rating falls, it experiences sudden unexpected cash outflows, or some other event causes counter parties to avoid trading with or lending to the institution. A firm is also exposed to liquidity risk if markets on which it depends

are subject to loss of liquidity. Liquidity risk tends to compound other risks. If a trading organization has a position of an asset, its limited ability to liquidate that position at short notice will compound its market risk. Suppose a firm has offsetting cash flows with two different counter parties on a given day. If the counter party that owes it a payment defaults, the firm will have to raise cash from other sources to make its payment. Should it be unable to do so, it too will default. Here, liquidity risk is compounding credit risk. 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. The world over, liquidity is the primary concern of every bank ass it affects the bank to sustain itself in the market. Extreme liquid 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 (Chance and Brooks, 2008: 82).

2.1.2.2.2 Interest Rate Risk (IRR)

Interest Rate Risk is the risk of negative effects on the financial result and capital of the bank caused by changes in interest rates. In simple word, interest raterisk is the probability of decline in earnings, due to the adverse movements of the interest rate risk in various markets. The applicable interest earned on asses 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.

2.1.2.2.3 Foreign Exchange Risk:

Foreign exchange risk is the risk that a bank may suffer losses as a result of adverse exchange rate movements during a period. The bank is also exposed to interest rate risk, which arises from the maturity mismatching of foreign currency position. Even in cases where spot and forward positions in individual currencies

are balanced, the maturity pattern of forward transactions may produce mismatches. In Consequence, banks may suffer losses as a result of changes in premium/discounts of the currencies concerned.

In 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.

Banks also face another risk called time-zone risk, which arises out of time lags in settlement of one currency in one centre and the settlement of another currency in another time zone. The foreign exchange transactions with counterparties from another country also trigger sovereign or country risk.

2.1.2.3 Operational Risk

Operational risk arises from the potential that inadequate information system, operational problems, breaches in internal controls, fraud, or unforeseen catastrophes will result in unexpected losses. It is also associated with the problems of accurately processing, settling, and taking or making delivery on trades in exchange for cash. Individual operating problems are small probability events for well-run organizations but they expose a firm to outcomes that may be quite costly. The Basel Committee on Banking Supervision (2000) defines operational risk as "the risk of loss resulting form inadequate or failed internal processes, people and systems or from external events." Example of operation risks are:

- Risk associated with settlement or payment risk and business interpretation and legal risk
- Risk of fraud by employees and outsiders; unauthorized transaction by employees and errors relating to computer and telecommunication systems.

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 (Leippoldy 2003:222)

The quantification of operational risk is difficult, as it is difficult to build a clear mathematical or statistical link between individual risk factors and the likelihood of loss. Data limitations and lack of analytical tools are contributing factors.

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

The main focus of this study is analysis of the directives of Nepal Rastra Bank issued to commercial banks. The directives issued fro time to time are one of the tools used by the central bank to control and monitor the commercial banks. The first directives were basically concerned with the acceptance of deposits and disbursement of loans. In present context, the directives are issued by NRB quite regularly. In 2005, NRB has issued unified directives to regulate all three categories of financial sectors in Nepal to ensure that the banking industry functions as per the international standard.

NRB (2005) prescribes following prudential in different aspects of risk.

2.2.1 Credit Risk and Directive No. 2 and

With an objective to minimize the possible risks associated with credits extended by finance companies in the form of overdraft loans and advance, bills purchased and discounted, the new unified directive relating to loan classification and provisioning has been issued in 2005.

According to new unified directive No. 2, banks should classify outstanding loan and advances on the basis of aging of principal amount into the following 4 categories.

- **Pass**

  Loan and advances, which principal and interest payment has not exceed the due date a period of 3 months shall be included under this category. These are classified and defined as Performing Loan.

- **Substandard Loan**

All the loans and advances, which principal and interest that have exceeded the due date for a period of 3 months to 6 months shall be included in this category.

- **Doubtful Loan**

All the loans and advances, which are past due for a period of 6 months to 1 year, shall be included in this category.

- **Bad Loan**

All the loans and advances which principal and interest has crossed the due for a period of more than 1 year as well as advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future shall be included in this category. Loan and Advances falling in the category of Sub-standard, Doubtful, and Bad Loan are classified and defined as Non-Performing Loan.

- **Additional Arrangement in Respect of Pass Loan**

Loans and advances fully secured by gold, silver, fixed deposit receipts and HMG securities shall be included under "Good Loan"/Pass Loan category. However, where collateral of fixed deposit receipt or HMG securities or NRB Bonds is placed as security against loan for other purposes, such loan has to be classified on the basis of ageing. Loans against Fixed Deposit Receipts of other banks shall also qualify for inclusion under Pass Loan.

Additional Arrangement in Respect of "Bad Loan"

Even if the loan is not past due, loans having any or all of the following discrepancies shall be classified as "Bad Loan"

- No security at all or security that is not in accordance with the borrower's agreement with the bank
- The borrower has been declared bankrupt.
- The borrower is absconding or cannot be found
- Purchased or discounted bills are not realized within 90 days from the due date
- The credit has not been used for the purpose originally intended

- Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation
- Loans provided to the borrowers included the black list and where the credit information Bureau blacklists the borrower.

Note: Bills purchased/Discounted are to be classified into Bad Loan if they are not realized within 90 days from the due date. Accordingly, bills would have only two classifications (i.e. Pass and Bad)

Additional Arrangement in Respect of Term Loan

In respect of term loans, the classification shall be made against the entire outstanding loan on the basis of the past due period overdue installment.

Loan Loss Provisioning

The loan loss provisioning on the basis of the outstanding loans and advances and bills purchases are classified as per the new unified directives 2005, shall be provided as follows:

Classification of Loan	**Loan Loss Provision**
Good	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Bad	100 Percent

Loan loss provision set aside for performing loan is defined as “General Loan Loss Provision” and Loan Loss Provision set aside for non-performing loan is defined as “Specific Loan Loss Provision.”Where the banks provide for loan loss provisioning in excess of the proportion as required under directives of NRB, the whole amount of such additional provisioning may be included in General Loan Loss Provision under the supplementary Capital.

Additional Provisioning in the case of Personal Guarantee Loans

Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other shall be obtained. Such loans shall be classified as per above and where the loans fall under category of Pass, Substandard and Doubtful, in addition to normal loan loss provision applicable for the category, an additional provision 20% point shall be provided. Classification of such loans and advances shall be prepared separately. Hence the loan loss provision required against the personal guarantee loan will be 21%, 45% and 70% for Pass, Substandard and Doubtful category respectively.

Rescheduling and Restructuring of Loan

In respect of loans and advances falling under the category of Substandard, doubtful or loss, banks may reschedule or restructure such loans only upon receipt of a written plan of action from the borrower citing the following reason:

- The internal and external causes contributing to deterioration of the quality of loan.
- The reduced degree of risk inherent to the borrower/enterprise determined by analyzing its balance sheet and profit and loss account in order to estimate recent cash flows and to project future one in addition to assessing market conditions.
- Evidence of existing of adequate loan documentation
- An evaluation of the borrower/enterprise/s management with particular emphasis on efficiency, commitment and high standards of business ethics.

Loan Loss Provisioning in Respect of Reschedule, Restructured or Swapped Loan

- Except for priority sector, in respect of all types of rescheduled or restructured or swapped loan, if such credit falls under pass category according to NRB directives, loan loss provisioning shall be provided at minimum 12.5%

- In case of rescheduling or restructuring or swapping of insured or guaranteed priority sector credit, the loan loss provisioning shall be provided at one fourth of the percentage mentioned in clause (i).
- In respect of swapped loans, the bank accepting the loans in swapping has to provide loan loss provision classifying the loan under the same classification as existed. The bank accepting the loan in swapping shall obtain certification from the concerned bank of financial institution as to the existing classification.

Directive No. 3 (Single Person or Group Limit/Single Obligor Limit)

Single obligor limit refers to the limit of loan disbursement to a person or a firm or a group of borrowers. NRB has provisioned single obligor limit while providing credit facilities by the bank. According to unified directive No. 3, the single obligor limit for the fund-based loan is 25% of core capital where as for nonfund based loan is 50% of core capital.

The main reason for this provision is to protect bank from suffering losses due to investing in single client. In another word, this directive is intended to diversify the concentration risk.

Loan Loss Provisioning for Minimizing Concentration Risk

According to NRB Directives, if any firm, person or group of borrowers is provided the credit more than the limit of single obligor; the bank should have to make 100% provision for the loan exceeding the limit.

Sector wise lending

NRB has issued a directive for the commercial banks to send sector wise lending report on a monthly basis. The main objective of this report is to identify the different sectors in which the bank has extended its credit.

Loan Concentration on Single Sector

According to NRB directive No. 3, if the commercial bank has extended the credit facilities more than 100% of core capital in single sector, such loan should have to approve by the board of directors.

2.2.2 Operation Risk and NRB Directive No. 5

According to NRB unified directive No. 5, the bank has classified the operation risk into following categories.

2.2.2.1 Liquidity

According to NRB directive, the commercial banks have to classify their liabilities and asset according to the maturity period to identify the gap between asset and liabilities. It has been mentioned that the maturity period has to be classified into following period.

- Maturity period upto 90 days
- Maturity period between 90 days to 180 days
- Maturity period between 180 days to 270 days
- Maturity period between 270 days to 1 year
- Maturity period above 1 year

For those liabilities, which do not have certain maturity period (such as current and saving deposit), the commercial banks have to classify that part of liabilities in above 1 year, which remains as a primary deposit and should have to maintain itself as a minimum deposit

2.2.2.2 Interest Rate Risk

The NRB has issued a directive for measuring interest rate risk of commercial bank through the gap analysis method. According to directive, the assets and liabilities of a bank should have to match according to their maturity period. If there exists a gap between asset and liabilities, it is said that there exist an interest rate risk. But while calculating such gap, cash balance and non-interest bearing account should not be included. Likewise the directive has also made provision for the assets and liabilities, which do not have fixed maturity period.

Asset Having no Fixed Maturity Period

For floating rate loan with interest adjusted periodically, the loan should be categorized into that period, when the interest rate is adjusted. Again for the loan with the interest rate adjustment is subject to special changes (such as treasury bills interest rate), such loan should be categorized into the least maturity period.

Liabilities with no Fixed Maturity Period

For those liabilities, which do not have certain maturity period (such as current and saving deposit), the commercial banks have to classify that part of liabilities in above 1 year, which remains as a primary deposit and should have to maintain itself as a minimum deposit.

Procedure for Gap Analysis

- The gap is determined by deducting total liabilities from the total liabilities of various period and such gap can be positive or negative
- For minimizing the interest rate risk, the cumulative gap should have to be calculated at each maturity period.
- The changes in interest rate should have to be estimated (generally 1 percentage can be assumed)
- The estimated interest rate should have to be adjusted according to the time interval. For such provision interest rate change is calculated by following
- formulas:

$$\text{Interest Rate Change (IRC)} = \frac{\text{Maturity Period} \mid \mid \text{Changes in the Interest Rates}}{\text{Days in the Year}}$$

To identify the effect of changes in interest rate on profit and loss on bank, the IRC should have to multiply with the cumulative GAP.

2.2.2.3 Foreign Exchange Risk

NRB has issued a directive to study the effect on financial position of the banks with the fluctuation in foreign exchange rate. The commercial banks have to segregate the foreign assets and liabilities in short and long term interval to identify the net position of each interval. According to directive the daily net position of bank should be at most 30% of core capital.

The commercial banks have to send such foreign asset position report on weekly basis.

2.2.3 Directive No. 1 – Capital Adequacy Ration

Capital Adequacy Ratio (CAR) is the proportion of Capital Fund or Shareholders equity on the total risk weighted asset of a bank. In other words, it is the capital portion, which is used to finance the asset. The total risk weighted asset, on the other hand, includes both on & off balance sheet items, which has been rated with certain percentage of risk. The risk weight of asset ranges from zero for cash, balance a NRB and investment in government bonds to 100% for loans and advances. The higher the risk weighted asset means lower will be the capital adequacy ratio as CAR is the ratio between capital fund and risk weighted asset. According to unified directive 2005, the capital fund includes two types of capital:

2.2.3.1 Primary Capital

Primary capital refers to core capital of a bank, which includes the share capital employed by the shareholders and all the reserve maintained by a bank.

Primary capital includes:

1. Paid Up Capital
2. Share Premium
3. Non-Redeemable Preference Share
4. General Reserve Fund
5. Retained Earnings
6. Capital Redemption Reserve
7. Net Profit after Provision, Tax & Bonus (Current Year)
8. Capital Adjustment Fund
9. Other Free Reserve

2.2.3.2 Supplementary Capital

Supplementary Capital refers to all the reserves band has made for specific purpose, such as loan loss, foreign exchange loss etc. The supplementary capital includes:

1. General Loan Loss Provision (Good Loans)
2. Asset Revaluation Reserve
3. Hybrid Capital Instrument
4. Unsecured Subordinated Term Debt
5. Exchange Equalization Reserve
6. Additional Loan Loss Provision
7. Investment Adjustment Reserve

2.2.3.3 Capital Fund

Capital Fund includes both the primary and supplementary capital. It can be stated in equation as below:

$$Capital\ Fund = Primary\ Capital + Supplementary\ Capital$$

Risk Weighted Asset, on the other hand, refers to the all the on and off balance sheet assets, which has provided certain percent of risk weight that ranges from zero for cash, balance with NRB, investment in government securities to 100 percentage for loans and advances, fixed asset etc.

On balance sheet asset includes three types of risk-weighted asset (i.e. 0%, 20% and 100%). Zero percentage risk weighted assets include cash and bank balance, gold (tradable), investment in NRB and Government Bonds, loan against own bank's fixed deposit receipts and government bonds, Interest receivable on National Saving Bonds. 20% risk weighted asset includes balance with local and foreign banks, loan against other bank's fixed deposit receipts, money at call, loan against internationally rated bank's guarantee and other investment on internationally rated banks. 100%risk weighted asset includes investment on shares and debentures, loans and advances, fixed assets, other investment, all other assets (excluding tax paid and accrued interest receivable). Off balance sheet assets includes four types of risk-weighted asset (i.e.0%, 20%, 50% and 100%). Bills collection has 0% risk. Letter of credit with maturity period less than 6 months and guarantee against counter guarantee of international rated foreign banks have 20% risk, 50% risk weighted asset includes letter of credit with maturity period more than 6 months, bid bond, underwriting and performance bond. 100% risk weighted items include advance payment guarantee, financial guarantee, other guarantee, irrevocable loan commitment, contingent liability on income tax and acceptance and other contingent liability.

The Capital Adequacy ratio of a bank is calculated as below:

i. Capital Adequacy Ratio for Core Capital

$$Capital\ Adequacy\ Ratio = \frac{\text{Core Capital}}{\text{Total Risk Weighted Assets}}$$

ii. Capital Adequacy Ratio (CAR) for Total Capital Fund

$$\text{Capital Adequacy Ratio} = \frac{\text{Core Fund}}{\text{Total Risk Weighted Assets}}$$

According to NRB directive 2005, the statutory Capital Adequacy Ratio (CAR) for core capital is 6% where as CAR for total capital fund is 12%.

2.3 Review of Previous Study

2.3.1 Review of Articles and Journals

Santomero (1997) has conducted a research topic on *Various Risk Faced by Commercial Banks* has analyzed the various risk faced by commercial banks. According to him, the major risk of commercial bank includes credit, market risk, interest risk, counterparty risk and liquidity risk. He has categorized this risk into following categories:

- Risk that can be eliminated by simple business practices.
- Risk that must be actively managed at the firm level.
- Risk that can be transferred to other participants.

According to him, the main reason for the risk management is:

- Managerial self interest
- Non linearity of tax structure
- Cost of financial distress
- Existence of capital market imperfection.

The main method prescribed in his research for various risk management includes:

For Credit Risk

- Sound evaluation of credit rating and making rating system compatible
- Credit losses, currently regularly related to credit rating, need to be closely monitored.
- Sound analysis of the evaluation of the diversified portfolio

For Interest Rate Risk, Gap Analysis of both interest sensitive and fixed rate asset and liabilities. Similarly for liquidity risk management, crises model coupled with

operational details is prescribed. However usefulness of such model is limited by the realism of the environment considered. In case of Foreign Exchange Risk, VAR (Value at Risk) model is the main tool.

Basel Committee of Bank Supervision (2000) has conducted a research topic on *Main Reason of Serious Problems in Banking Sector* has mentioned that the main reason of serious problems in banking sector is related to lack of credit standards for borrowers and counterparties, poor portfolio risk management or lack of attention to changes in economic or other circumstances that can led to a deterioration in the credit standing of a bank's counterparties. This phenomenon is common both G 10 and non G 10 countries. In this publication, the credit risk has been defined as the potential that a bank borrower or counter party will fail to meet its obligation in accordance with the agreed terms. Five principal has been laid down for the credit risk management. They are:

- Establishing appropriate credit risk environment
- Operation under sound credit granting process
- Maintaining appropriate credit administration, measurement and monitoring process
- Ensuring adequate controls over credit risk
- Effective role of supervisor

Guiding principals in risk management for U.S. commercial banks (1999) has conducted a research topic on *Developed After a Meeting of Committee of Financial Services* was developed after a meeting of committee of financial services which are**:**

- **Board of Directors and Senior Management responsibility**. Overall risk management policies and tolerances should be set on a comprehensive, organization-wide basis by Senior Management, and reviewed with—and where appropriate, approved by—the Board of Directors. Policies and tolerances addressing risk identification, measurement, monitoring and control should be clearly communicated to those areas affected throughout the organization.

- **Framework for managing risk**. The bank should have a framework for managing risk that is effective, comprehensive and consistent. Management should allocate sufficient funds to staff and support its chosen framework.
- **Integration of risk management**. To ensure that interactions among risks are identified, understood and managed as appropriate, risks should not be evaluated in isolation. The analysis required to aggregate and highlight risks across the entire organization must be done at a level high enough to encompass the whole firm.
- **Business line accountability**. Business lines should be accountable for managing the risks associated with their activities within established tolerances, as well as for the results, both positive and negative, of taking those risks. This accountability should exist notwithstanding the presence of one or more support functions dedicated to risk management activities.
- **Risk evaluation/measurement**. All risks should be qualitatively evaluated on a recurring basis and, wherever practical, the evaluation should include quantitative analysis. Risk assessments should consider the effects of both likely and unlikely events.
- **Independent review**. Risk assessments should be validated by independent review functions with resources, authority and expertise sufficient to assess the risks, test the effectiveness of risk management activities, and make recommendations for remedial action.
- **Contingency planning**. Risk management policies and processes to address potential crises and unusual circumstances should be in place and tested as appropriate.

Rana (2002)) has conducted a research topic on *Major Changes Made in the New Directive and Suggests Measures to be Taken by NRB to Commercial Banks and Finance Companies are Similar in Some Aspects* alerts commercial banks of the new directives issued by Nepal Rastra Bank on 2002. The article gives bird's eye view of major changes made in the new directive and suggests measures to be taken by NRB to commercial banks and finance companies are similar in some aspects, this article is also relevant to finance companies. Mr. Rana has highlighted the following points in his article:

- Capital adequacy ratio for commercial bank prescribed by Nepal Rastra Bank is even higher than the requirement in India.
- Classification of loans and advances into four categories instead of six categories prescribed earlier.
- The newly prescribed change in income recognition system will require most of the banks to either upgrade or change their banking software
- Banks will find it very difficult to maintain records of all persons, who are included in the definition of family/relative.

In order to comply with the new NRB directives, he has suggested following measures:

- Upgrade/change the banking software, which facilitates generating numerous reports required by Nepal Rastra Bank.
- Foresee capital adequacy position for a number of years ahead and initiate measures for increasing the capital if required.
- Review and revise overall credit policies to address new directives governing loan classification and loan loss provisioning.
- Strengthen banks "monitoring and follow up department". Time has come to inculcate financial discipline to the customers. A number of interaction programs should be organized with credit customers so that NRB's new directives could be explained to them.
- Update their record with Credit Information Bureau (CIB). Also banks should timely submit required return to CIB for its effective functioning.

The policy of NRB seems to be vague. The existing policies might be ambiguous as a result of which people try to manipulate as per their personal requirement. However, it can be said that NRB has initiated directives, which have control on the promoters and other senior officials of commercial banks, but it is still to be found whether such directives are consistently followed. The article failed to give a clear picture on what exactly happened after the instruction of NRB. This article highlights the importance of compliance with the directives issued by NRB.

Pandey (2002) has conducted a research topic on *Impact of Changes in NRB Directives on the Performance of the Commercial Banks* has carried out study with

the objectives to find out the impact of changes in NRB directives on the performance of the commercial banks and to find out whether the directives were implemented or not. According to his findings the directives if not properly addressed have potential to wreck the financial system of the country. The directives in themselves are not that important unless properly implemented. The implementation part depends upon the commercial banks. In case commercial banks are making such huge profit with full compliance of NRB directives, then the commercial banks would deserve votes of praise because they would then be instrumental in the economic development of the country. All the changes in NRB directives made impacts on the banks and the result are the followings:

- Increase in operational procedures of the banks, which increase the operational cost of the banks.
- A short term decreases in probability, which result to fewer dividends to shareholders and less bonus to the employees.
- Reduction in the loan exposure of the banks, which decreases the interest income but increase the protection of the depositor's money.
- Increase protection to the money of the depositors through increased capital adequacy ratios and more stringent loan related documents.
- Increase demand from shareholder's contribution in the banks by foregoing dividends for loan loss provisions and various other reserves to increase core capital.

All the aforesaid result lead to one direction the commercial banks will be financially healthy and stronger in the future. All the commercial banks will be able to withstand tougher economic situation in the future with adequate capital and provision of losses. The tough time through which the banks are undergoing at present will prevail only for a couple of years but in the long run, it will be strong enough to attract more deposits and expose itself to more risk with capital cushion behind it. The quality of the asset of the commercial banks will become better as banks will be careful before creation credit. Ultimately, the changes in the directives will bring prosperity not only to the shareholders but also to the depositors and the employees add the economy of the country as a whole. Pandey has made his research on the impact on changes in new directives. In his study, he

has studied only the provision related to loan provisioning and capital adequacy. The provision of directives related to interest rate risk, foreign exchange risk, operation risk and liquidity risk are the key areas where further research can be made.

Shrestha (2005) has conducted a research topic on *Credit Risk Associated with Nabil Bank, SCBL and NBL* has made study about the credit risk associated with Nabil Bank, SCBL and NBL. The main objectives of her study was

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

The major finding in her study was that the NBL has the highest portion of the loan in total asset followed by Nabil Bank and SCBL. She concludes that the SCBL shows the risk-adverse attitude. Like wise the non-performing loan to total loan is found highest in NBL, Nabil and SCBL. Moreover, Loan Loss Provision is also found highest in NBL where as the SCBL has the least Loan Loss Provision. This study is more concentrated on the credit risk of the bank and even much focused on non-performing loan only. So there exist lots of areas where further research is called for. In context of credit risk, collateral risk, concentration risk and organization risk, management system can be studied. In addition to credit risk, other risks such as market risk, operational risk, foreign exchange risk can also be studied.

Subba (2009) has conducted a research topic on *Risk Management Policies of Farmers' Commercial Ba*in his study has made an attempt to find out the risk management of commercial banks. He has concluded that:

- Proper risk management is required to remain competitive in the market and achieve the goals. The major banking risks include credit risk, market risk (i.e. liquidity risk, foreign exchange risk, interest risk) and operation risk. Among these credit risk has the major impact on banking
- Poor management of asset and liabilities having different maturity period is the main problem that brings market risk.
- Commercial Banks (MBL and Kumari Bank taken as sample) have their own set of policies and practices, which is in consistence with NRB guidelines.
- Operational risk can be reduced if banks take major step in preparing and implementing the different operational guidelines and policies.

His study is made on credit risk, market risk (interest risk, foreign exchange risk, liquidity risk) and operation risk and their management is the key areas where further research can be made.

Mikes (2009) in his article on *Managing Risk in the New World* in the October issue of the Harvard Business Review concludes that**:**

- The global financial crisis was the result of the sub prime business which exposed tremendous credit risk to Commercial Banks in USA.
- The innovations in the financial engineering that were developed over the past decade created an opportunity to take on more risk through new products.
- Risk became the rule rather than the exception, which explains the scale of the crisis.
- Hedging of risks is essential for all the banks.
- Outsourcing is the best tool for managing risks and leverage is more problematic at some times in the economic cycle than at others and tension exists between caution and investors demand for returns.
- Effective regulation is the major tool to reduce risks.
- Switch is required from risk management to creating risk managers.

2.3.2 Review of Previous Research Works

Pandey (2002) has conducted a thesis topic on *Impact of Changes in NRB Directives on the Performance of the Commercial Banks.*

Main Objectives:

- To assess capital adequacy position of selected commercial banks and compare their performance with the concerned directives of NRB.
- To study the loan loss provision of selected commercial banks and compares their provision with the concerned directive of NRB.
- To make necessary recommendations to the commercial banks and Nepal Rastra Bank for improvement in the findings of the early two objectives of this study.

Major Findings:

- Increase in operational procedures of the bank, which increase the operational cost of the bank.
- A short term decrease in profitability, which result to fewer dividends to shareholders and less bonus to the employees.
- Reduction in the loan exposure of the bank, which decreases the interest income but increase the protection of the depositor's money.
- Increase protection to the money of the depositors through increased capital adequacy ratios and more stringent loan related documents.
- Increase demand from shareholder's contribution in the bank foregoing dividends for loan loss provisions and various other reserves to increase core capital.

Khadka (2002) has carried out research on *A Comparative Study on Investment Policy of Commercial Banks*

Main Objectives:

- To study the Comparative Study on Investment Policy of Commercial Banks.
- Find out the relationship between deposits, investment, loans and advances and net profit.

Major Findings:

- NBL is comparatively less successful in on balance sheet as well as off balance sheet operations than that o f other commercials banks.
- It predicts that in the coming days if it count not mobilize and utilize its resources as efficiently as others CBs to maximize the returns; it would lag behind in the competitive market of banking.
- Profitability position of NBL is comparatively worse than tat of other CBs. It predicts that NBL may not maintain the confidence of shareholders, depositors and its customers if it cannot increase its volume even in the future.
- There exist several areas where further research can be made such as study of commercial banks investment policy in context of NRB provisions, investment portfolio analysis from the point of risk return, investment and capital adequacy measures etc.

Shrestha (2006) has conducted a thesis topic on *Impact of NRB Directives on Commercial Banks*.

Main Objectives:

- To see how far the banks are following norms on capital adequacy, loan classification and single borrower limit as prescribed by NRB.
- To find out whether the selected banks actually implement the directives issued by NRB.
- To analyze how NRB monitors the issued directives.
- To provide necessary suggestions and recommendations on the basis of the findings.

Major Findings:

- The bank has to expand its banking products in order to utilize the increased liquidity created due to the decrement in loan disbursement.
- The bank needs to have a strong Internal Audit Department in order to ensure that guidelines set by NRB are properly followed by the concerned departments.

- Credit disbursement of the banks need to be very seriously dealt with mainly because of the classification of loans and corresponding provisions to be made. It is to be kept in mind that more the provision to be kept less the profit to be obtained.
- Non performing loan of the bank should be reduced to less than 5% which ensures that provisions are kept in certain check.
- Core capital of the bank should be increased in order to have a firm cushion against credit risk. Also, increased core capital increase Single Obligor Limit (SOL).
- NRB should enhance the monitoring and supervision aspect of the directives and should timely publicize the reports.

Dhungana (2009) has made a research on the impact of *Impact of NRB Directives to the Fiancé Companies*.

Main Objectives:

- To study the norms and standards laid down by NRB relating to finance companies in Nepal in respect of capital Adequacy, Collection of Funds, Statutory Deposits & Liquidity Requirements, Loan Classification and Loan Loss Provisioning, Investment in Shares and Securities, Non Banking Assets, and interest income.
- To study the impact of NRB directives in the smooth functioning and profitability of finance companies.
- To provide necessary recommendations to the NRB and finance companies on the basis of findings.

Major Findings:

- Protection of the depositors' money through increased capital adequacy ratio and pressure on finance companies to increase their capital base for collecting more funds fro public.
- Stringent loan loss provisioning and thereby reduction on operation profit and consequently less bonus to employees and less dividends to shareholders.

- Reducing interest spread making business competitive thereby forcing finance companies to be customer oriented.
- Increase in operational procedures of the finance companies, which increase the operational costs. Forcing those finance companies that were relying on software for report generation to modify software.
- A short term decline in profitability resulting in fewer bonuses to employees and less dividends to the shareholders.
- Increased demand for shareholders contribution in the capital base by foregoing dividends for loan loss provisioning and various other reserves to increase the capital base.
- Although new directives are welcomed by finance companies, the same has not been complied with properly.

Shrestha (2009) has conducted a thesis topic on *Credit Risk Associated with Banks*.

Main Objectives:

- To find out the proportion of non performing loan in the selected commercial banks.
- To find out the factors leading to accumulation of non performing loan in commercial banks.
- To study and analyze the guidelines and provisions pertaining to loan classifications and loan loss provisioning.
- To find out the relationship between loan and loan loss provision in the selected commercial banks.
- To study the impact of loan loss provisions on the profitability of commercial banks.

Major Findings:

- NBL has the highest portion of the loan in total assets followed by NABIL and SCBNL.

- SCBNL shows the risk averse attitude. Likewise the nonperforming loan to total loan is found highest in NBL, NABIL and SCBNL. Likewise the loan loss provisions is also highest in NBL whereas least in SCBNL.

2.4 Research Gap

There has been a few research carried similar to this research. The previous research has focused basically on the risk associated with credit and market. The research aims to analyze the risk of operation and the system of risk management based on the directives of NRB. The previous research has been based on commercial banks with similar strategies of risk management. However this research aims to compare the strategies involved with low performing bank Machhapurche with relative stable NCC bank.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a systematic way to solve the research problem. In other words, research methodology describes the methods and process applied in the entire aspect of the study. (Kothari, 1994:38) defines Research methodology as the various sequential steps (along with a rational of each steps) to be adopted by a researcher in studying a problem the certain objectives in view. Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing techniques and tools.

3.2 Research Design

This study is the combination of descriptive and analytical type of research. Historical data are used to analyze different risks of a bank and each risk is analyzed separately. Historical data are used to identify and analyze past status of the bank's performance based on which future recommendation has been made. Similarly, management system, organizational structure and policies for mitigating the risk and risk management procedures have been presented in descriptive form so as to identify the current status from which pitfalls can be identified. From collection of past data and information from key informants, the risk management system has been analyzed and recommendations have been made for improving the risk management of banks. Since only two banks (NCC bank and MBL) have been selected for the study, this study is a comparative study between these two banks in different risks and their management system.

Both primary and secondary data are used for analysis of various risks. In credit, interest and liquidity risk, secondary data published in annual reports of banks under study and NRB publications are mainly used. However, some primary data, collected through personal interview and questionnaires, are also used in analysis of credit risk and hypothesis test of such data are also made whenever felt

necessary. The operation risk is all about the descriptive research as the quantification of operation risk variable is not feasible.

3.3 Population and Samples

Wolf and Pant (2008) 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. The sample is chosen with an objective to find out the risk management system of new 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.

3.6 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:

Arithmetic Mean

Arithmetic Mean has widely used in this study. It has been used as to calculate the average for 5 years data in some cases for 4 years due to unavailability of complete data. This tool has been used to calculate the single figure that can represent the whole data for the period. The Arithmetic Mean of loan, deposits, net profit,

nonperforming loan, loan loss provision etc, has been calculated in this study. It is computed by sing following formula:

$$\textbf{Mean } (\bar{X}) = \frac{\phi\, x}{n}$$

Where,

$\bar{X}$ = Mean

ΣX = Sum of all the variable X

n = Variables involved

Standard Deviation

Standard Deviation has been used wherever the mean is calculated to study the deviation of the data from the mean. Here, standard deviation is used as a measure of dispersion. It has also been used as a measure to identify the risk. Higher the deviation greater will be the risk and vice versa. Mathematically, it is defined as the positive square root of their arithmetic mean of squares of the deviation of the given observations from their arithmetic mean of a set of value. Here, it is denoted by the letter sigma (σ).

It can be computed by using following formula.

$$\textbf{Standard Deviation } (\sigma) = \sqrt{\frac{1}{n}(\phi\, x\ Z\ \bar{x})^2}$$

Greater the magnitude of standard deviation, higher will be the fluctuation and vice versa (Gupta, 2002:57).

Coefficient of Correlation

For making inference about the relationship between loan and loan loss provisioning, non-performing loan and loan loss provisioning correlation coefficient has been computed. Coefficient of Correlation has been used as a tool to measure the degree of relationship between two variables. In other words, this tool is used to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be linked with the change in the other variables. Pant and

Chaudhary, 2009: 231). defines correlation analysis as the closeness of the relationship between the variables.

- Correlation may be positive or negative and ranges form -1 to +1. When r = +1, there is perfect positive correlation; where r = -1, there is prefect negative correlation; where r = 0, there is no correlation and when r < 0.5 then there is low degree of correlation.
- When „r" lies between 0.7 and 0.999 (or -0.7 and -.0999), there is high degree of positive (or negative) correlation.
- When „r" lies between 0.5 and 0.666, there is a moderate degree of correlation.

The simple correlation coefficient, r, is calculated by using following formula:

Correlation Coefficient (r) = $$\frac{n\phi x_1 x_2 \; Z \phi x_1 \phi x_2}{\sqrt{n\phi x_1^2 \; Z (\phi x_1)^2}\sqrt{n\phi x_2^2 \; Z (\phi x_2)^2}}$$

Alternately,

$$\mathbf{r} = \frac{\text{Cov } X_1 X_2}{\text{Var } X_1 \mid \text{Var } X_2}$$

Where,

Covariance X1 X2 = $$\frac{1}{n} \sum f X_1 \; Z \overline{X_1} \; f X_2 \; Z \overline{X_2}$$

n = Total number of observations.

X1 and X2 = two variables, correlation between them are calculated.

Probable Error

In this study, Probable Error has been used for testing the reliability of values of correlation coefficient of non-performing loan and loan loss provisioning, loan and loan loss provisioning. Though it is an old measure of ascertaining the reliability of the value of coefficient of correlation, the technique has been used because of its simplicity. The test of provable error ash been made by following ways: If r is the

calculated correlation coefficient in a sample of n pairs of observations then its standard error, usually denoted by S.E (r) is given by,

$$\textbf{Standard Error S.E (r)} = \frac{1 - r^2}{\sqrt{n}}$$

Where,

r = correlation coefficient

n = Number of observation

Probable Error (P.E.) of the coefficient of correlation can be calculated from Standard Error of the coefficient of correlation by the following formula,

If r<P.E. (r), the value of r is not all significant

$$\textbf{Probable Error (P. E) = 0.6745 x S.E(r)}$$

P.E. (r) may be used to test if calculated value of sample correlation coefficient is significant. A few rules for the interpretation of the signification coefficient are as follows,

If r>P.E. (r), the value of r is definitely significant.

In other situations, nothing can be calculated with certainty.

P.E. (r) may lead to fallacious conclusions particularly when the number of pairs of observation is small. Also the probable error of correlation coefficient may be used to determine the limits within which the population correlation coefficient may be expected to lie. Limits for population correlation coefficient are r = +- P.E. (r), (Sharma and Chaudhary, 2009: 63).

Ratio Analysis

In this study, various rations have been used as per requirement. The major ratios used in this study include:

- Loans and advances to Total Asset Ratio
- Loans and Advances to Total Deposit Ration
- Non-performing Loan to Total Loans and advances Ration
- Loan Loss Provision to Total Loans and Advances

- Return on Loan and Advances
- Current Ration of NCC BANK and MBL
- Cash and Bank Balance to Total Asset Ratio
- Cash and Bank Balance to Total Asset Ratio
- Interest Income to Total Income
- Interest Expenses to Total Expenses
- Core Capital to Total Risk Weighted Asset (RWA)
- Supplementary Capital to Total Risk Weighted Assets
- Capital Fund to Total Risk Weighted Asset (RWA)
- On Balance Sheet RWA to Total RWA
- Off balance Sheet RWA to Total RWA

Gap Analysis

Gap Analysis is the process of analyzing the mismatch between asset and liabilities within various maturity periods. Under this measure, asset and liabilities are categorized into various groups as prescribed by the NRB Directive No 5. The main objective of this gap analysis is to identify the mismatch between asset and liabilities, the greater the liquidity risk and vice versa. The following gap analyses have done in this study for analysis of liquidity and interest rate risk.

Gap Analysis for Liquidity Risk

Under this, the gaps of total asset and liabilities of different maturity periods, prescribed by NRB, have been calculated to identify the liquidity crises in different time interval. The higher the gap between asset and liabilities, the greater the liquidity risk and vice versa.

Gap Analysis for Interest Rate Risk

Gap analysis is used to identify mismatch between interest rate sensitive and fixed interest rate asset and the liabilities. Assets and liabilities have been classified into interest rate sensitive and fixed interest rate.

Interest rate sensitive asset and liabilities refers to such an asset/liabilities, interest rate of which keeps on changing in the market. Such types of assets includes the

inter bank loan/placement financial derivatives etc., the interest rate on which changes over night. Interest rate sensitive liabilities includes inter bank borrowing etc.

Gap refers to difference between IRSA and IRSL and gap analysis refers to the analysis of the gap between IRSA and IRSL. The higher the gap between assets and liabilities of a bank, the higher the risk does a bank have and vice versa.

Conversely, fixed interest rate refers to such asset of a bank, interest rate of which remains fixed for a certain period of time. The rate of interest on this type of asset normally remains constant for a long time. For example, the interest on term loan of a bank is constant for a long period of time. Likewise fixed interest rate liabilities (FIRSL) refers to such liabilities of a bank, interest on which remains constant for certain period of time, though the market interest rises.

CHAPTER IV
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter gives the presentation, detail analysis and interpretation of the accumulated data from which concrete result can be obtained. Here only secondary data are used for the analysis of different risks of the sample banks (NCC Bank and MBL). To make the study more effective, precise and easily understandable, this chapter is categorized in three parts; presentation, analysis and interpretation. In presentation section, data are tabulated. These tabulated data are then analyzed using different statistical tools mentioned in chapter three.

4.2 Comparative Analysis of Credit Risk

Credit risk is simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. 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. Banks 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, (Basel 2000:66).

They key performance indicators of credit performance of NCC Bank and MBL are as follows:

4.2.1 Ratio Analysis

4.2.1.1 Loans and Advances to Total Asset Ratio

The ratio of loans and advances to total assets measures the volume of loans and advances in the structure of total assets. The high degree of ratio indicates the good performance of the banks in mobilizing its fund by way of lending functions. However, in its reverse side, the high degree is representative of low liquidity ratio.

Granting loans and advances always carry a certain degree of risk. Thus, this asset of banking business is regarded as risky assets. Hence this ratio measures the management attitude towards risky assets. The lower ratio is indicative of lower proportion of income generating asset and high degree of safety in liquidity and vice versa.

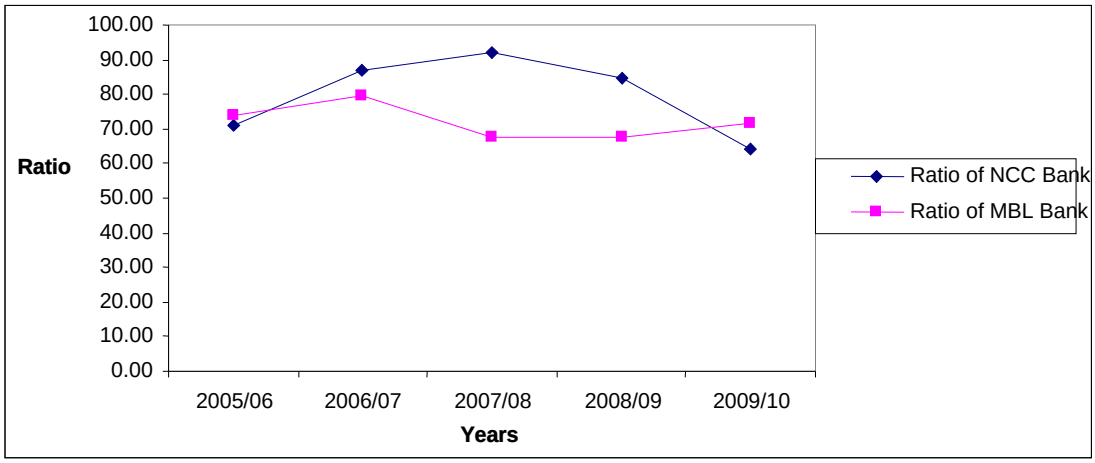
Table: 4.1
Loans and Advances to Total Asset Ratio (%)

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Loans & Advances	Total Assets	Ratio	Loans & Advances	Total Assets	Ratio
2005/06	4717	6661	70.82	2541	3449	73.67
2006/07	6012	6918	86.90	5130	6445	79.60
2007/08	5900	6428	91.79	6146	9070	67.76
2008/09	5122	6037	84.84	7320	10807	67.73
2009/10	5281	8241	64.08	8964	12498	71.72
Total	-	-	**398.43**	-	-	**360.49**
Mean	-	-	**79.69**	-	-	**72.10**
S.D	-	-	**11.70**	-	-	**4.92**
C.V %	-	-	**14.678844**	-	-	**6.819599**

Source: Annual Reports

Figure 4-1
Loans and Advances to Total Asset Ratio (%)



The above table and graph exhibit the loans and advances to total assets of two commercial banks for five consecutive years. This ratio shows the increasing trend in NCC Bank where as MBL shows the fluctuating trend. The mean ratio of NCC Bank is 79.69% where as ratio in MBL is 72.10%. From this, it is clear that out of total asset in balance items the proportion of loans and advances is higher in NCC Bank as compared to MBL. This relates that the credit risk is higher in NCC Bank

as compared to MBL. It also refers that the MBL has invested in the risk-free asset such as Treasury Bills, Debentures, National Saving Bonds etc. Like wise, the standard deviation of NCC Bank and MBL are 11.70 and 4.92 percentage. This indicates that the ratio deviate more from the average in case of NCC Bank than MBL. The coefficient of variation (C.V) is 14.67% and 6.81 % in NCC Bank and MBL respectively, which means that per unit variation of the ratio of NCC Bank is more than that of MBL. These indicate that the loan and advances to total asset ratio of NCC Bank has more variation than that of MBL, which means higher risk in case of NCC Bank than MBL.

4.2.1.2 Loans 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: 4.2

Loan and Advances to Total Deposit Ratio (%)

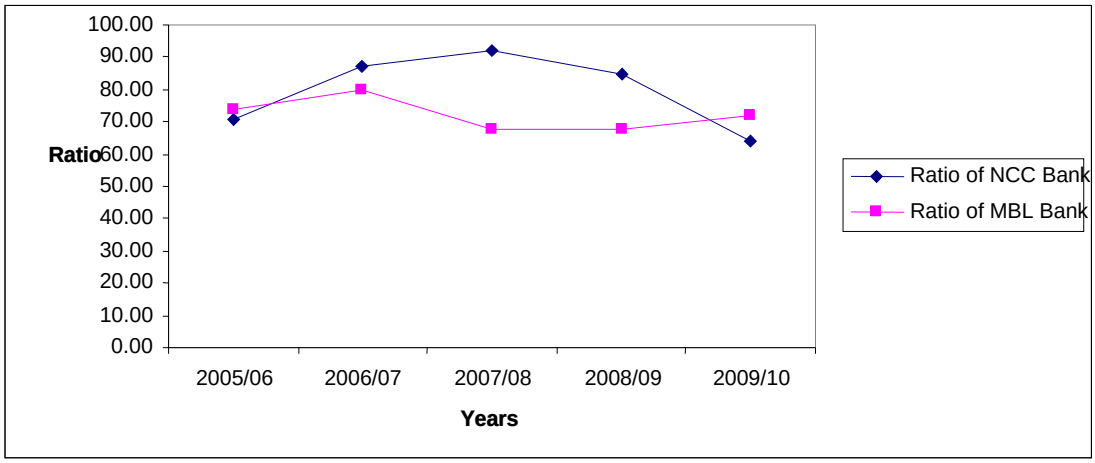
(Rs. in million)

	NCC Bank			**MBL**		
Fiscal Year	**Loans & Advances**	**Total Deposit**	**Ratio**	**Loans & Advances**	**Total Deposit**	**Ratio**
2005/06	4717	5988	78.77	2541	2755	92.23
2006/07	6012	6631	90.67	5130	5581	91.92
2007/08	5900	6619	89.14	6146	7893	77.87
2008/09	5122	6500	78.80	7320	9475	77.26
2009/10	5281	7320	72.14	8964	11102	80.74
Total	**-**	**-**	**409.52**	**-**	**-**	**420.02**
Mean	**-**	**-**	**81.90**	**-**	**-**	**84.00**
S.D	**-**	**-**	**7.81**	**-**	**-**	**7.49**
C.V %	**-**	**-**	**9.53**	**-**	**-**	**8.91**

Source: Annual Reports

Figure: 4.2

Loan and Advances to Total Deposit Ratio (%)



Above chart and table show that the loans and advances to total deposit ratio of two commercial banks for 5 consecutives years. The loans and advances to total deposit ratio of both banks are fluctuating. The MBL has the highest CD ratio of 92.23% in the fiscal year 2005/06 where as the NCC Bank has the highest CD ratio of 90.67% in the fiscal year 2006/07. The average CD ratio of NCC Bank and MBL for 5 years is 83.28% and 84.66% respectively. The average CD ratio of MBL is higher than that of NCC Bank which means that the MBL has utilized its deposit higher than NCC Bank. This again means that MBL has higher risk than NCC Bank.

4.2.1.3 Non- Performing Loan to Total Loans and Advances Ratio

This ratio determines the proportion of non-performing loans (NPL) in the total loan portfolio. As per Nepal Rastra Bank directives the loans falling under category of substandard, doubtful and bad loan are regarded as non-performing loan. Higher the ratio implies the bad quality of assets of banks in the form of loans and advances. Hence the lower NPL to total credit ratio is preferred.

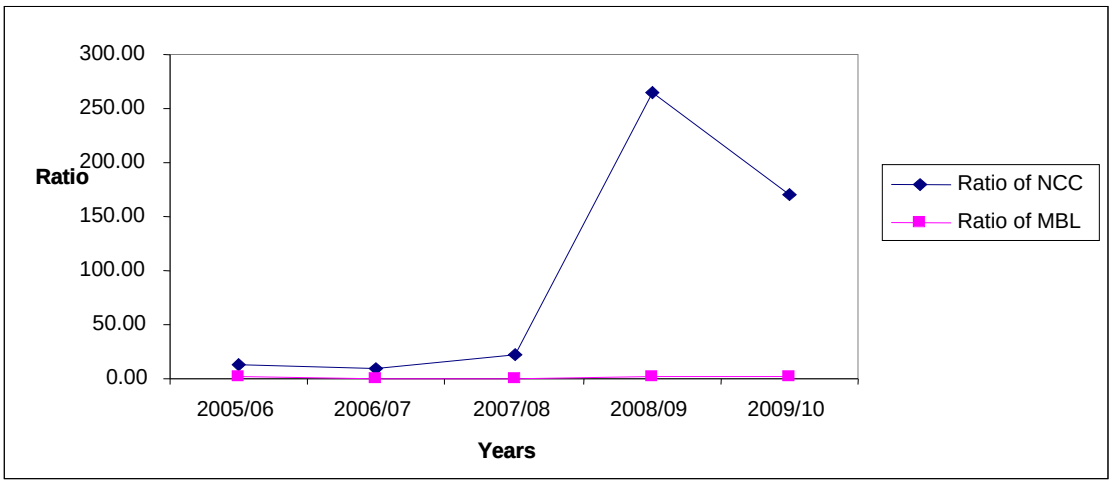
Table: 4.3
Non-Performing Loan to Total Loans and Advances

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	NPL	Loans & Advances	Ratio	NPL	Loans & Advances	Ratio
2005/06	600	4717	12.72	24	2541	0.94
2006/07	519	6012	8.63	20	5130	0.39
2007/08	1290	5900	21.86	17	6146	0.28
2008/09	1606	5122	31.35	85	7320	1.16
2009/10	8673	5281	164.23	92	8964	1.03
Total	-	-	**238.80**	-	-	**3.80**
Mean	-	-	**47.76**	-	-	**0.76**
S.D	-	-	**65.70**	-	-	**0.40**
C.V %	-	-	**137.55**	-	-	**52.51**

Source: Annual Reports

Figure: 4.3
Non-Performing Loans to Total Loan and Advances



Above table and graph show that the ratio of non-performing loans (NPL) total loans and advances of NCC Bank and MBL for five consecutive years. Here, it is found that the NPL of NCC Bank is highly fluctuating as well as its total loan and advances. Where as the NPL of MBL is less fluctuating though its total loan and advances is in increasing trend. The average NPL ratio of NCC Bank and MBL are47.76% and 0.76% respectively. It can be related as NCC Bank is in much higher risk than MBL. The standard deviation of NCC Bank and MBL are 65.70% and 0.40%respectively. This indicates that the NCC Bank has higher risk as its NPL ratio deviate more from average.

4.2.1.4 Loan Loss Provision (LLP) to Non-Performing Loan Ratio

This ratio determines the proportion of provision held to non-performing loan of bank. This ratio measures up to what extent of risk innate in NPL is covered by total loan loss provision. The higher the ratio, the better cushion that the bank provides for recovering from loss caused by NPL. Hence higher ratio signifies the better financial position of bank.

Table: 4.4

Loan Loss Provision to Non Performing Loan

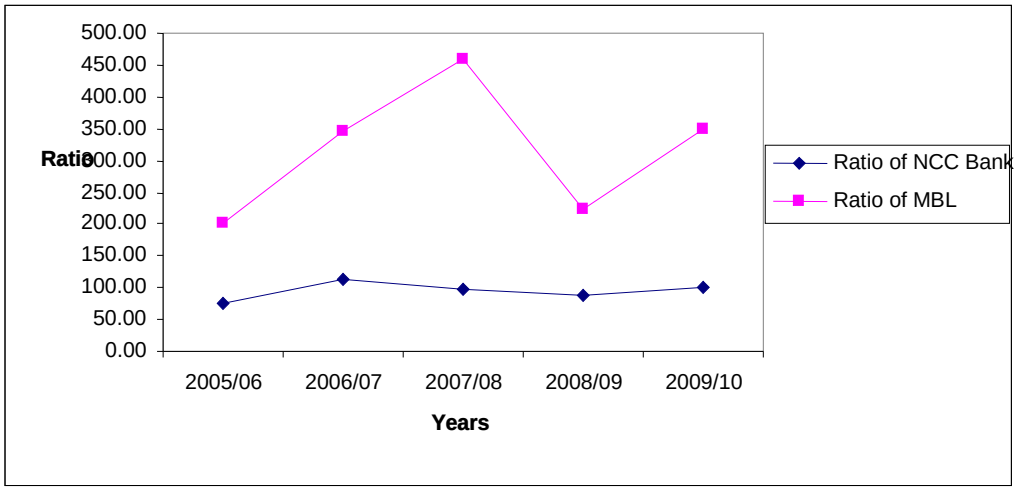
(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	LLP	NPL	Ratio	LLP	NPL	Ratio
2005/06	446	600	74.33	48	24	200.00
2006/07	592	519	114.07	69	20	345.00
2007/08	1256	1290	97.36	78	17	458.82
2008/09	1414	1606	88.04	190	85	223.53
2009/10	8631	8673	99.52	321	92	348.91
Total	-	-	**473.32**	-	-	**1576.27**
Mean	-	-	**94.66**	-	-	**315.25**
S.D	-	-	**14.70**	-	-	**105.27**
C.V %	-	-	**15.52**	-	-	**33.39**

Source: Annual Reports

Figure: 4.4

Loan Loss Provision to Non Performing Loan



The above table and Graph illustrate the ratio of loan loss provision held to non-performing loan of NCC Bank and MBL for five consecutive years. The graph and the values in the table represents that the MBL has increasing trend of the ratio and has the highest ratio of 458.82% in the fiscal year 2007/08 and then decreased in

the fiscal year 2008/09. Whereas NCC Bank has the highest ratio of 114.07% in the fiscal year 2006/07 and then its trend is also decreasing thereafter. The average NPL ratio of NCC Bank and MBL is 94.66% and 315.25% respectively. This shows that MBL has provided higher protection of provisioning to non performing loan compared to NCC Bank.

The standard deviation of NCC and MBL are 14.70% and 105.27% respectively. This means that there exists the higher deviation in this ration in context of MBL than NCC Bank. The coefficient of variation of NCC Bank and MBL is 15.52% and 39.39% respectively.

4.2.1.5 Loan Loss Provision (LLP) to Total Loans and Advances Ratio

This ratio indicates the amount of Loan Loss Provision, a cushion for the possibility of default, to total loans and advances of a bank. Higher provision for non performing loan reflects increasing non-performing loan in volume of total loans and advances. The low ratio signifies the good quality of assets in the volume of loans and advances and makes efforts to cope with provable loan loss. Higher ratio implies that the bank has the higher proposition of NPL in bank loan portfolio. of NCC Bank and MBL respectively. The higher ratio of NCC Bank than MBL reflects that NCC Bank has higher non-performing loan compared to MBL

Table: 4.5

Loan Loss Provision to Total Loan & Advances Ratio

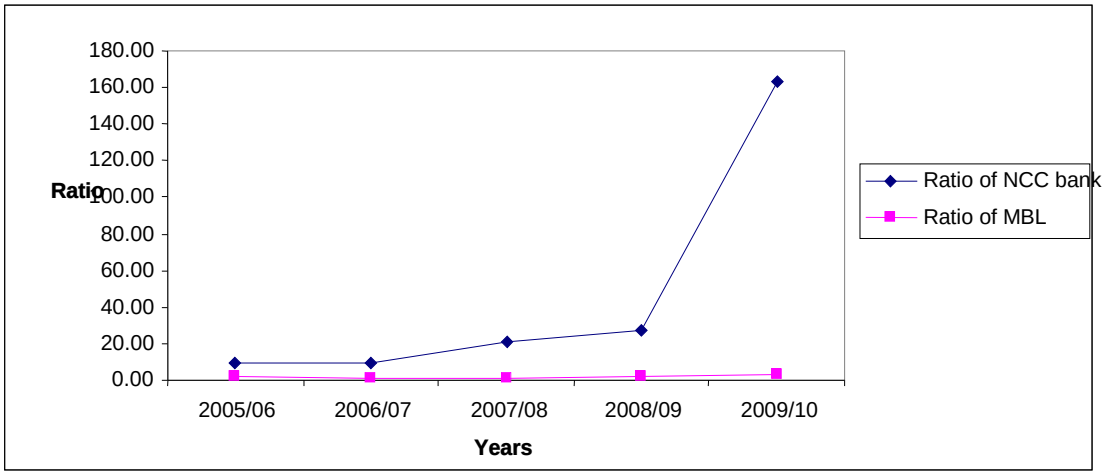
(Rs. in million)

	NCC Bank			**MBL**		
Fiscal Year	**LLP**	**Loans & Advances**	**Ratio**	**LLP**	**Loans & Advances**	**Ratio**
2005/06	446	4717	9.46	48	2541	1.89
2006/07	592	6012	9.85	69	5130	1.35
2007/08	1256	5900	21.29	78	6146	1.27
2008/09	1414	5122	27.61	190	7320	2.60
2009/10	8631	5281	163.43	321	8964	3.58
Total	-	-	**231.63**	-	-	**10.68**
Mean	-	-	**46.33**	-	-	**2.14**
S.D	-	-	**65.92**	-	-	**0.97**
C.V %	-	-	**142.30**	-	-	**45.25**

Source: Annual Reports

Figure: 4.5

Loan Loss Provision to Total Loan & Advances Ratio



The above table and graph illustrate that MBL has the least portion of loan loss provision. The average LLP to total loan and advances ratio is 46.33% and2.14% of NCC Bank and MBL respectively. The higher ratio of NCC Bank than MBL reflects that NCC Bank has higher non-performing loan compared to MBL.

Likewise the standard deviation and coefficient of variation of NCC Bank is 65.92% and 142.30% respectively, which is much higher than that of MBL (i.e. 0.97% standard deviation and 45.25% coefficient of variation). This indicates that NCC Bank is in higher risk than MBL.

4.2.1.6 Return on Loan & Advances

This ratio indicates how efficiently the bank as employed its resources in the form of loans and advances. This ratio is calculated by dividing net profit of the bank by total loan and advances. Net profit refers to that profit which is obtained after all types of deduction like employee bonus, tax, provision etc. Hence this ratio measures bank's profitability with respect to loans and advances. Higher the ratio better is the performance of the bank.

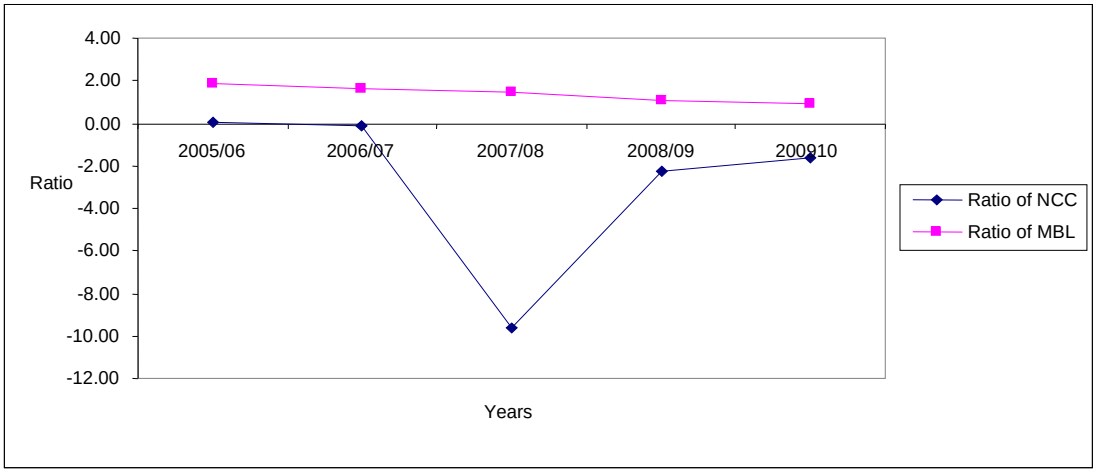
Table: 4.6
Return on Loans and Advances

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Net Profit	Loans & Advances	Ratio	Net Profit	Loans & Advances	Ratio
2005/06	3	4717	0.06	46.69	2541	1.84
2006/07	-5	6012	-0.08	84.87	5130	1.65
2007/08	-570	5900	-9.66	90.12	6146	1.47
2008/09	-116	5122	-2.26	76.79	7320	1.05
2009/10	-87	5281	-1.65	85.01	8964	0.95
Total	-	-	**-13.59**	-	-	**6.96**
Mean	-	-	**-2.72**	-	-	**1.39**
S.D	-	-	**4.01**	-	-	**0.38**
C.V %	-	-	**-147.41**	-	-	**27.54**

Source: Annual Reports

Figure 4-6
Return on Loans and Advances



It is illustrated from above table and graph that the ratio of return on loans and advances of MBL is greatly high than that of NCC Bank. The graph and the table shows that ratio of NCC Bank is just above, in and below the 0. The average ratio for 5 years of NCC Bank and MBL is -2.72% and 1.39 % respectively. This shows that MBL has better return than NCC Bank. NCC Bank has huge loss and is still increasing.

The standard deviation of NCC Bank and MBL for the study period is 4.01% and 0.38% respectively. Similarly the coefficient of variation of NCC Bank and MBL is -147.41% and 27.54% respectively. These two figures indicate that both the deviation and variation of return percentage of NCC Bank is more volatile than

MBL, which also signifies the higher risk. Thus MBL is in better position than NCC Bank.

4.2.1.7 Security-wise/Sector-wise Lending of NCC Bank and MBL

Security wise lending refers to the lending of banks to the client against the various collaterals. As the collateral is also key aspect while lending, the analysis of security helps to identify the credit risk position of the bank. The collateral can be anything ranging from the more liquid and secure collateral such as government bonds, bills, fixed deposit receipt to non-liquid fixed asset and immovable property. Banks even can lend without collateral for the trustworthy customers. Sector-wise lending refers to the lending of banks to client of different sectors. It helps to analyze the credit concentration of the bank.

4.2.1.7.1 Security-Wise Lending of NCC Bank

This analysis is done to identify the various types of securities on the basis of which loans have been provided by NCC Bank. This also assists to analyze bank risk on collateral. As the more liquid the collateral, chances of risk is to the bank. Here, security wise lending of NCC Bank includes 12 types of securities, including without collateral lending.

Table: 4.7
Security-wise Lending of NCC Bank

(Rs. in million)

S. No	Security against lending	Average lending against each collateral	Rank
1	Movable/Non-movable Assets	5281	1
2	Guarantee of local licensed institution	418	5
3	Government Guarantee	56	8
4	Internationally Rated Bank Guarantee	25	10
5	Export Documents	16	11
6	Fixed Deposit Receipts	640	2
7	Own FDR	575	4
8	FDR of Other Licensed Institutions	65	7
9	Government Bonds	27	9
10	Counter Guarantee	5	12
11	Personal Guarantee	304	6
12	Other Securities	597	3

Source: Annual Reports

The above table demonstrates the lending of NCC Bank against different securities over the five years. NCC Bank has extended the credit mostly against the movable/non movable property over the five years. The average lending against movable/non movable property is 5281 million, which is highest among the lending against all securities. The bank has granted 597 million of loan without collateral, which is the good part of lending practice. The banks have lending of 25 million against the guarantee against internationally rated bank. The bank has extended comparatively less credit against the government guarantee, which is ranked 8th position on the basis of average amount of lending. From the average lending, personal guarantee is ranked in 6th position. This means the bank has been granting loan largely on personal guarantee which can be very risky. On the contrary, the bank has been granting less loan against the more liquid and secured collateral like government guarantee, government bonds and FDR of other licensed institution, which are ranked at 8, 9and 7 respectively. This means that the bank has been lending in very risky securities.

4.2.1.7.2 Security-wise Lending of MBL

Table: 4.8
Security-wise Lending of MBL

(Rs. in million)

S. No	Security against lending	Average lending against each collateral	Rank
1	Movable/Non-movable Assets	8964	1
2	Guarantee of local licensed institution	788	3
3	Government Guarantee	57	8
4	Internationally Rated Bank Guarantee	2424	2
5	Export Documents	0	-
6	Fixed Deposit Receipts	4	9
7	Own FDR	237	5
8	FDR of Other Licensed Institutions	0	-
9	Government Bonds	0	-
10	Counter Guarantee	98	7
11	Personal Guarantee	686	4
12	Lending Without Collateral	230	6

Source: Annual Reports

It is demonstrated from the above table that MBL has extended credit against the 9 securities only over the period of five years. The MBL has also granted the highest amount of loan against the movable/non movable property, the average lending against which over five years is Rs.8964 million. Likewise, the average loan against the other securities over five year is Rs. 230 million which is ranked at 6th. The bank has granted least loan against fixed deposits receipts which is ranked at 9th. The bank has extended credit of Rs 57 million against government guarantee. No credit has been extended to export documents, FDR of licensed institutions and government bonds .While it has granted loan against personal guarantee ranked at 4, which is not a good part of lending. Moreover, the bank has extended loan without collateral which is very risky.

Since MBL has granted loan without collateral, the bank has higher risk because of two reasons:

- The bank has to make 100% provision for this loan, which decreases the bank's profit.
- In case of default, the bank will suffer losses of the total amount of loan, as there is no collateral to cover it.

4.2.1.7.3 Risk Weighted Lending Analysis

Risk Weighted lending refers to weighed provided to the bank loan according to level of risk while risk level of the loan is categorized on the basis of the collateral The lending against own bank Fixed deposit receipt and government securities are considered as risk free lending. Similarly, the loan against other banks Fixed Deposit Receipt, Counter guarantee of internationally rated banks are considered as moderate level risk lending and loan against all other securities or without collateral are taken as high level risk lending. The risk weighted for moderate level and high-level risk lending in 20% and 100% respectively. The higher the risk free and moderate level lending, the lower is the credit risk of the bank and vice versa. The loan has been categorized on the basis of NRB Risk weighted Asset basis. The proportion of different category of risk weighed lending of both banks is presented below:

Table: 4.9

Proportion of Different Category of Risk Weighted Lending of NCC Bank

Security	Risk Weighted %	2005/06	2006/07	2007/08	2008/09	2009/10	Average
Risk Free Lending to Total Loan	0	0.17	0.62	8.19	1.22	0.19	2.07
Moderate Risk Lending to Total Loan	20	0.62	0.02	0.14	0.10	0.12	0.20
High Risk Lending to Total Loan	100	99.22	99.63	99.05	98.68	99.69	99.25

Source: Annual Reports

Above table exhibits percentage of different categories of risk lending of NCC Bank for 5 years. The table further reveals that NCC Bank has the highest lending on 100% risk lending. The bank has extended 0.17, 0.62, 8.19, 1.22 and 0.19% of total lending against the risk free collateral in the year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively. Likewise, the bank has extended 0.62, 0.02, 0.14, 0.10,and 0.12% of total loan against the moderate level risk collateral in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively.. The average lending in 5 years on risk free, moderate level and high risk level lending is 2.07, 0.20 and 99.25% respectively.

Table: 4.10

Proportion of Different Category of Risk Weighted Lending of MBL

Security	Risk Weighted %	2005/06	2006/07	2007/08	2008/09	2009/10	Average
Risk Free Lending to Total Loan	0	0.02	0.31	0.68	0.26	0.81	0.41
Moderate Risk Lending to Total Loan	20	-	0.12	1.35	2.88	0.08	0.88
High Risk Lending to Total Loan	100	99.88	99.57	97.97	96.86	99.11	98.67

Source: Annual Reports

The above table illustrates the percentage of lending of different categories of risk of MBL for 5 years. The table further reveals that MBL has also the highest lending on 100% high risk level category. The bank has extended 0.02, 0.31, 0.68, 0.26 and 0.81% of total lending against the risk free collateral in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively Likewise the bank

has not made moderate level risk lending for two fiscal years 2003/004. It has extended 0.12, 1.35 2.88 and 0.08% of its total lending against the moderate level risk lending in the fiscal year 2006/07, 2007/08, 2008/09 and 2009/10 respectively. The average lending in 5 years on risk free, moderate level and high level risk lending is 0.41, 0.88 and 98.67% respectively.

Now, from above it is clear that both banks have extended least amount of loan against lower level risk collateral and more amount of loan against in high level risk collateral. However the average lending in high level risk collateral of MBL is slightly less than NCC Bank. So, NCC Bank is slightly in risk than MBL.

4.2.1.7.4 Credit Concentration on Sector

This analysis helps to find out the credit concentration of banks in different sectors. The higher the concentration of bank's credit in one sector, the higher will be the risk for a bank and vice versa. It is because when there is a problem or crises in that particular sector, it will result in a significant loss to the bank. The proportion of sector wise lending to total loan has been presented in the table below.

Table: 4.11
Credit Concentration on Different Sector on Fiscal Year 2009/10

(Rs. in million)

S. No	Sector	NCC Bank %	MBL %
1	Agriculture	4.42	0.93
2	Mine	0.46	0.27
3	Manufacturing	27.91	16.37
4	Construction	12.26	7.22
5	Metal and Electric Products	1.07	9.85
6	Transport equipment	0.27	0.89
7	Transport, communication and public utilities	12.10	10.10
8	Whole Seller & Retailer	14.22	19.85
9	Finance Insurance &Real Estate	5.36	7.08
10	Service Industries	9.19	6.63
11	Consumer Loan	1.22	0.07
12	Local Government	0.00	0
13	Others	11.52	20.73
14	**Total**	**100**	**100**

Source: NRB, Banking & Financial Statistics 2010

From the above table it is found that NCC Bank and MBL have extended more than 10% of their total loan in 4 sectors. Similarly, NCC Bank has invested highest27.91% of its total loan in manufacturing while MBL has invested highest of 19.85% of its total loan in wholesaler and retailer sector. Both banks have not invested any loan in local government sector while both bank have least percentage of loan extended in consumer loan and mine sector. However, NCC Bank has the high credit concentration on single sector than MBL which indicates that NCC Bank has higher risk than MBL.

4.2.1.7.5 Sector-wise Loan to Core Capital

This is the ratio between loan extended by bank in a sector and core capital. Core capital includes share capital, retained earning, general reserve, capital adjustment fund, non-redeemable preferred stock etc. The higher ratio does a bank have, the higher will be the risk to the bank and vice versa. According to NCC directive no 3 of Unified Directive 2005, the loan exposure on single sector more than 50% of core capital needs to verify at least quarterly as there exists the concentration risk. Similarly, single sector loan concentration more 100% of core capital needs to be approved by the board of directors. The core capital of NCC Bank and MBL is Rs97 and Rs.1302 million respectively in fiscal year 2009/10.

Table: 4.12
Sector-wise Loan to Core Capital in fiscal Year 2009/10

(Rs. in million)

S. No	Sector	NCC	MBL
1	Agriculture	233.5	83.2
2	Mine	24.3	24.2
3	Manufacturing	1473.8	1468.3
4	Construction	647.4	647.7
5	Metal and Electric Products	56.3	883.5
6	Transport equipment	14.4	79.9
7	Transport, communication and public utilities	638.7	906
8	Whole Seller & Retailer	750.8	1780.2
9	Finance Insurance &Real Estate	282.9	635.4
10	Service Industries	485.4	595.1
11	Consumer Loan	64.3	6.4
12	Local Government		
13	Others	608.2	1859.8
14	**Total**	**5280**	**8969.7**

Source: NRB, Banking &Financial Statistics, Mid July 2010

Above table illustrates that the percentage of loan on single sector to core capital of NCC Bank and MBL in fiscal year 200/08. Above table depicts that the ratio of NCC Bank and MBL has crossed 50% in 6 sectors. Out of which, the ratio of NCC Bank and MBL has crossed 100% in 3 and 2 sectors respectively. The above table indicates that NCC Bank has higher concentration risk than MBL though the core capital of NCC Bank is in negative figure. NCC Bank has higher ratio in manufacturing sector where as MBL has in wholesaler and retailer sector which is 1519% and 123% respectively.

4.2.1.8 Correlation Analysis

4.2.1.8.1 Correlation between Loan Loss Provision (LLP) and Loans and Advances (L&A)

The correlation between LLP and Loans and advances shows the degree of relationship between these two items. How a unit increment in loans and advances affect the loan loss provision is measured by this correlation. Here loans and advances and independent variable and LLP are dependent variable.

Table: 4.13

Correlation Coefficients between LLP and Loans and Advances

Banks	Correlation Coefficient (r)	Probable Error (P.E)	6*P.E
NCC Bank	0.5	0.226	1.356
MBL	0.83	0.094	0.564

Above table explains the relationship between loans and advances and LLP. Correlation coefficient of NCC Bank is 0.50, which means that the LLP moderately correlated with loans and advances. The correlation coefficient of MBL is 0.83 which also shows that there exists positive correlation between the LLP and loan and advances.

The probable error when multiplied by 6, is used to test the significance of calculated correlation coefficient, which is 1.356 and 0.564 of NCC Bank and MBL. Here, the probable error (multiplied by 6) of NCC Bank is more than the correlation coefficient that means the correlation coefficient value is not significant. Where as the probable error (multiplied by 6) of MBL is less than the

correlation coefficient. Therefore, the correlation coefficient value of MBL is significant.

4.2.1.8.2 Correlation between Loan Loss Provision and Non-performing Loan

This correlation indicates the relationship between LLP and NPL. How a unit increases in NPL effect the LLP is exhibited b this correlation. NPL has been treated as an independent variable, whereas the LLP a dependent variable.

Table: 4.14

Correlation Coefficient between LLP and NPL

Banks	Correlation Coefficient (r)	Probable Error (P.E)	6*P.E
NCC Bank	0.95	0.029	0.174
MBL	0.89	0.063	0.378

Above table exhibits correlation between LLP and NPL of two commercial banks. The correlation between LLP and NPL of NCC Bank and MBL are positive. This indicates that the LLP of both banks changes with the change in NPL. The probable error multiplied by 6 which is used to test the significance of correlation coefficient, of both bank is also less than the correlation coefficient. Hence, both correlation coefficient values are significant.

4.2.2 Organizational Structure for Credit Risk Management

As the credit risk has the highest proportion of risk in banking sector, the bank should have a well-defined management committee to analyze and manage the credit risk. For handling the credit function of bank, both banks have credit department headed by the credit manager. The credit manger will take credit decision to a certain extent after that the decision is made by the CEO or sometimes by the Board of Director if the bank has to extend credit to single borrowers above 25 % of fund based and 50 % of non fund based loan. For the effective credit risk management NCC Bank and MBL have separate Committees, which monitors the risk associated with the lending practice and the develop strategies and plans to minimize the risk.

4.2.2.1 Nepal Credit & Commerce Bank Limited (NCC Bank)

NCC Bank has a Credit Department that handles the all credit functions. Credit Control Department formulates the credit policies and monitoring credit. It has Recovery Department which monitors all the credit documentation and performance of the credit client. It also acts as legal department, which handles all the legal issues before extending credit to the clients.

In NCC Bank all the credit decision is governed by Credit Policies Guidelines. Under the management level, the credit decision is taken by Chief Credit Officer but beyond his authority CEO takes the decision.

4.2.2.2 Machhapuchhre Bank Ltd.

A special Credit Committee exists for formulating credit policies in the bank. Besides, this committee also takes a credit decision beyond the limit of Chief Executive officer. The committee includes Chief Executive Officer, 3 Board of Directors, Assistant General Manager and Credit Manager. The main responsibility of this committee is to take decision beyond the jurisdiction of the management of MBL, to provide support to the board of directors etc.

In MBL, all the credit decision is governed by the Credit Policies Guidelines. Under the management level, all the credit decision is taken by the credit manager but for the credit decision beyond his jurisdiction: the assistant general manager and CEO take the decision. For the legal issue while granting credit, the legal department is responsible for all the documentation part. There is also a credit administration department, which handles all the administrative aspect of credit such as monitoring credit, recovery etc.

4.2.3 Common Sources of Major Credit Problems

Major banking problems have been either clearly or indirectly caused by weaknesses in credit risk management. According to the experience of key respondents of NCC Bank, MBL, certain key problems tend to recur in the banking industry that results in the high credit losses. Sever credit losses in a banking system usually reflect simultaneous problems in several areas, such as concentrations, failures of due diligence and inadequate monitoring. According to

the key respondents of NCC Bank and MBL some of the most common problems related to the broad areas of concentrations, credit processing, and market- and liquidity-sensitive credit exposures.

4.2.3.1 Concentration

Concentrations are the single most important cause of major credit problems. Credit concentrations are viewed as any exposure where the potential losses are large relative to the bank's capital, total assets, and overall risk level. Relatively large losses may reflect not only large exposures, but also the potential for unusually high percentage losses. Credit concentrations can further be grouped roughly into two categories:

- Conventional credit concentrations include concentrations of credits to single borrowers or counterparties, a group of connected counterparties, and sectors or industries, such as commercial real estate, oil and gas.
- Concentrations based on common or correlated risk factors reflect subtler or more situation-specific factors, and often cannot be covered through analysis. Disturbances in economic sector because of strikes, curfew, and blockade have also slowed down the business of the banks as well as the borrowers. Similarly, a highly leveraged borrower will produce larger credit losses for a given severe price or economic shock than a less leveraged borrower whose capital can absorb a significant portion of any loss.

4.2.3.2 Credit Process Issues

Many credit problems reveal basic weaknesses in the credit granting and monitoring processes. While shortcomings in underwriting and management of market-related credit exposures represent important sources of losses at banks, many credit problems would have been avoided or mitigated by a strong internal credit process.

According to the key respondents, carrying out a thorough credit assessment (or basic due diligence) is a substantial challenge for all banks. For traditional bank

lending, competitive pressures and the growth of loan syndication techniques create time constraints that interfere with basic due diligence.

The absence of testing and validation of new lending techniques is another important problem. Adoption of untested lending techniques in new or innovative areas of the market, especially techniques that dispense with sound principles of due diligence or traditional benchmarks for leverage, have led to serious problems at banks. Sound practice calls for the application of basic principles to new types of credit activity. Any new technique involves uncertainty about its effectiveness. That uncertainty should be reflected in somewhat greater conservatism and corroborating indicators of credit quality.

Some credit problems arise from subjective decision-making by senior management of the bank. This includes extending credits to companies they own or with which they are affiliated, to personal friends, to persons with a reputation for financial acumen or to meet a personal agenda, such as cultivating special relationships with celebrities.

Lack of effective credit review process is also one of the major sources of credit risk in the commercial banks. Credit review at banks usually is a department made up of analysts, independent of the lending officers, who make an independent assessment of the quality of a credit or a credit relationship based on documentation such as financial statements, credit analysis provided by the account officer and collateral appraisals. The purpose of credit review is to provide appropriate checks and balances to ensure that credits are made in accordance with bank policy and to provide an independent judgment of asset quality, uninfluenced by relationships with the borrower. So, the lack of the effective credit review is also the key factors for higher credit risk.

A common and major source of the credit risk is the failure to monitor borrowers or collateral values. The negligence by the banks to obtain periodic financial information from borrowers or real estate appraisals in order to evaluate the quality of loans on their· books and the adequacy of collateral has resulted banks failure to recognize early signs that asset quality was deteriorating and missed opportunities

to work with borrowers to stem their financial deterioration and to protect the bank's position. This lack of monitoring led to a costly process by senior management to determine the dimension and severity of the problem loans and resulted in large losses.

In some cases, the failure to perform adequate due diligence and financial analysis and to monitor the borrower can result in a breakdown of controls to detect credit-related fraud. For example, banks experiencing fraud-related losses have neglected to inspect collateral, such as goods in a warehouse or on a showroom floor, have not authenticated or valued financial assets presented as collateral, or have not required audited financial statements and carefully analyzed them.

A related problem is that many banks do not take sufficient account of business cycle effects in lending. As income prospects and asset values rise in the ascending portion of the business cycle, credit analysis may incorporate overly optimistic assumptions. Industries such as retailing, commercial real estate and real estate investment trusts, utilities, and consumer lending, often experience strong cyclical effects. Sometimes the cycle is less related to general business conditions than the product cycle in a relatively new, rapidly growing sector, such as health care and telecommunications. Effective stress testing which takes account of business or product cycle effects is one approach to incorporating into credit decisions a fuller understanding of a borrower's credit risk. More generally, many credit problems reflect the absence of a thoughtful consideration of downside scenarios. In addition to the business cycle, borrowers may be vulnerable to changes in risk factors such as specific commodity prices, shifts in the competitive landscape and the uncertainty of success in business strategy or management direction. Many lenders fail to "stress test" or analyze the credit using sufficiently adverse assumptions and thus fail to detect vulnerabilities.

4.2.3.3 Market and Liquidity-Sensitive Credit Exposures

Market and liquidity-sensitive exposures pose special challenges to the credit processes at banks. Market-sensitive exposures include foreign exchange and financial derivative contracts. Liquidity-sensitive exposures include margin and collateral agreements with periodic margin calls, liquidity back-up lines,

commitments and some letters of credit, and some unwind provisions of securitizations. The contingent, nature of the exposure in these instruments requires the bank to have the ability to assess the probability distribution of the size of actual exposure in the future and its impact on both the borrower's and the bank's leverage and liquidity.

4.2.3.4 Gap Analysis (for Liquidity Risk)

Gap Analysis is the process of analyzing the mismatch between asset and liabilities within various maturity periods. Under this measure, asset and liabilities are categorized into various groups as prescribed by the NRB Directive No. 5. The main objective of this gap analysis is to identify the mismatch between asset and liabilities in different maturity periods. The higher the gap between asset and liabilities, the greater the liquidity risk and vice versa.

Table: 4.15
Gap Analysis of Asset & Liabilities of NCC Bank and MBL

Fiscal Year	1-90 Days		91-181 Days		181-270 Days		271-365 Days		More than 1 Year	
	NCC	MBL	NCC	MBL	NCC	MBL	NCC	MBL	NCC	MBL
2005/06	-1242	313	-2	389	61	240	1380	-17	-197	51
2006/07	275	203	23	-512	2	-16	1820	43	-2121	-94
2007/08	505	160	167	200	72	336	2111	-160	-2856	396
2008/09	871	259	104	477	45	340	1892	955	-2912	-1949
2009/10	1176	372	382	123	38	687	2217	286	-2386	-2352
Mean	**1585**	**1307**	**674**	**677**	**218**	**1587**	**9420**	**1107**	**-10472**	**-3948**
S.D	**985.1**	**434**	**259.5**	**412**	**75.1**	**565.3**	**3090.2**	**534.8**	**3561.5**	**1714.3**

Source: Annual Reports

The above table illustrates the net asset/liabilities for different time interval of NCC Bank and MBL. The positive figure indicates that the asset is more than that of liabilities on the contrary the negative figure indicates that the liabilities are more than that of asset for each interval. From above, it is clear that the NCC Bank and MBL both have positive net position in almost short term intervals in five years period.

NCC Bank has negative net position in long interval (i.e. in more than 1 year) in all fiscal year while MBL has negative in long interval in year 2006/07, 2008/09 and in 200/08. This means that both banks have short-term assets adequate than short-

term liabilities and do not have any liquidity problem. But both banks have negative net position in time interval of more than 1 year which indicates that both banks have long-term liabilities such as deposits and other liabilities higher than long term asset such as loan and advances, fixed assets etc.

The mean net position of NCC Bank is Rs.11585 million, Rs. 674 million, Rs. 218million, Rs. 19420 million, - Rs. -10472 million in time interval 1-90 days, 91 – 181 days, 182 – 270 days, 271 – 365 days and more than 1 year respectively. Likewise the mean net position of MBL is Rs.1307 million, Rs. 677 million, Rs. 1587million, Rs. 1107 million, - Rs.-3948 million in time interval 1-90 days, 91 – 181 days, 182 – 270 days, 271 – 365 days and more than 1 year respectively. This means, that NCC Bank has less mean net position in almost all short time interval except in time interval 271-365 days which is a sign that NCC Bank is in more risky positions than MBL in terms of meeting short term liquidity. In long term, MBL has matched its asset liabilities much satisfactorily than NCC Bank.

4.2.3.5 Current Ratio of NCC Bank and MBL

Current ratio is the ratio of current assets to current liabilities. Current assets and liabilities change frequently, unlike long term assets such as land and building or long term liabilities like equity capital or long term loans. The word `current' denotes that the particular asset or liability is expected to be converted into cash or paid for with cash within twelve months or over the operating cycle, whichever is longer. In other word, the current ratio indicates how much proportion of current assets has been financed by the current liabilities. If the current liabilities are lower than the current asset it means that the bank current asset has been financed by the long-term liabilities and capital. On the contrary, if the current ratio is very low it means the current liabilities are more than the current asset.

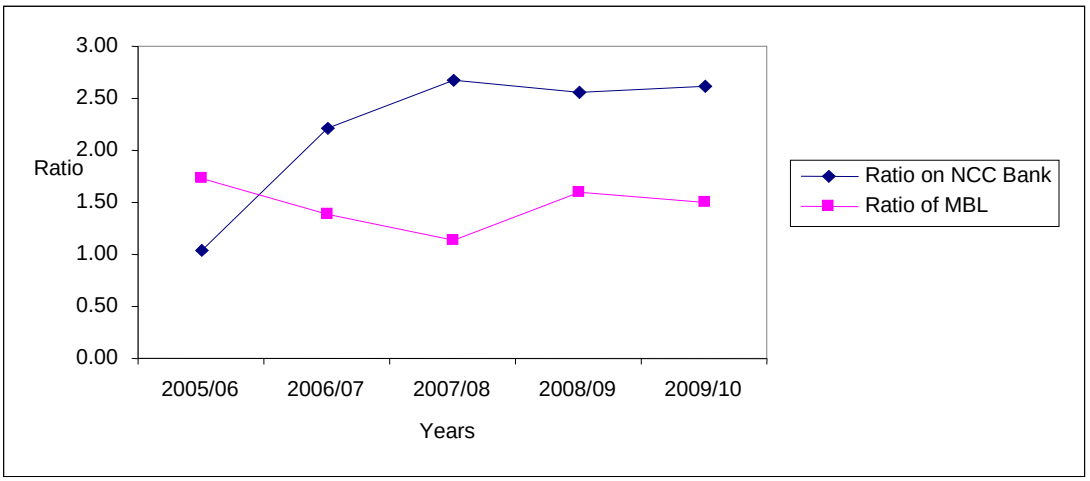
Table: 4.16
Current Ratio of NCC Bank and MBL

(Rs. in million)

Fiscal Year	NCC			MBL		
	CA	CL	CR	CA	CL	CR
2005/06	4311	4134	1.04	2611	1507	1.73
2006/07	3864	1743	2.22	5502	3961	1.39
2007/08	4554	1699	2.68	4521	3953	1.14
2008/09	4778	1867	2.56	8138	5107	1.59
2009/10	5081	1937	2.62	9235	6120	1.51
Average	-	-	**2.22**		-	**1.47**

Source: Annual Reports

Figure: 4.7
Current Ratio of NCC Bank and MBL



Above table and figure exhibit the current ratio of NCC Bank and MBL over 5 years. It is clear that the average current ratio of NCC Bank and MBL is 2.22 and 1.47 respectively. This means that the MBL has used most of current liabilities to finance the current assets. NCC Bank has met the standard ratio 2:1 while MBL has low current ratio which indicates that it has low ability to meet the short-term obligations as they come due.

4.2.3.6 Cash and Bank Balance to Total Asset Ratio

Cash and Bank Balance to Total Asset Ratio measure the proportion of total cash and bank balance on the total asset of the bank. This helps to measure how much liquid fund does the bank has out of the total asset. The higher the ratio, the better the bank's liquidity position and vice versa. In other sense, the higher the cash and bank balance, the higher will be bank's idle cash, which reduces the banks profit. However, the bank should have to be enough liquid position to fulfill its liabilities. The cash and bank balance to total asset ratio of two banks is calculated below:

Table: 4.17
Cash and Bank Balance to Total Asset Ratio

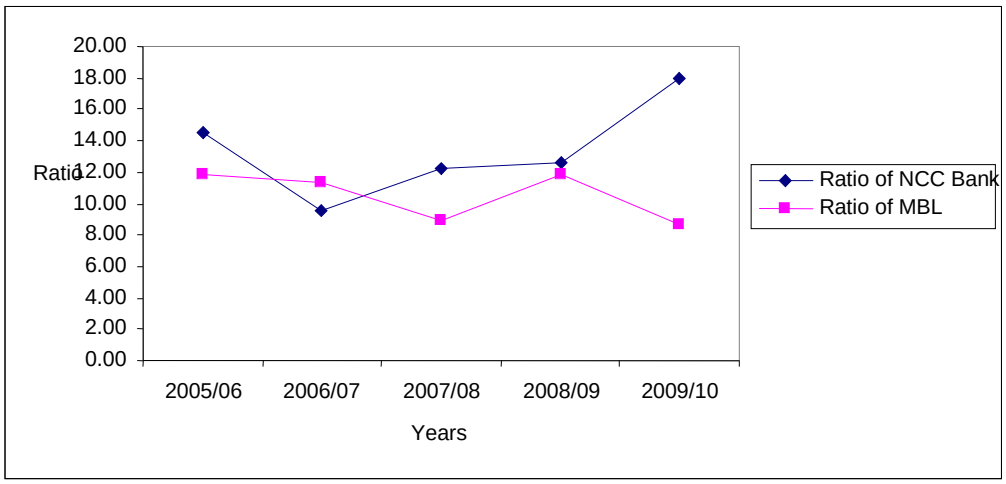
(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Cash & Cash Balance	Total Assets	Ratio	Cash & Cash Balance	Total Assets	Ratio
2005/06	971	6661	14.58	410	3449	11.89
2006/07	662	6918	9.57	731	6445	11.34
2007/08	783	6428	12.18	813	9070	8.96
2008/09	759	6037	12.57	1284	10807	11.88
2009/10	1477	8241	17.92	1084	12498	8.67
Total	-	-	**66.82**	-	-	**52.75**
Mean	-	-	**13.36**	-	-	**10.55**
S.D	-	-	**3.11**	-	-	**1.60**
C.V %	-	-	**23.27**	-	-	**15.16**

Source: Annual Reports

Figure: 4.8

Cash and Bank Balance to Total Asset Ratio



The above table and graph show that the cash and bank balance to total asset ratio of NCC Bank and MBL for 5 years. The ratio of NCC Bank is the highest of 17.92% in fiscal year 2009/10 and the lowest of 9.57% in the fiscal year 2006/07. On the other hand, the ratio of MBL is the highest of 11.89% in the fiscal year 2005/06 and lowest of 8.67% in the fiscal year 2009/10. The ratio of both the banks is fluctuating. The average ratio of NCC Bank and MBL is10.36 % and 10.55% respectively. This shows that the MBL has less amount of liquid fund such as cash and bank balance than the NCC Bank. This means the NCC Bank is in more liquid position than MBL, which also indicates the lower level of liquidity risk. The standard deviation of ratio of NCC Bank and MBL is 3.11 and 1.60

respectively. This means that the fluctuation rate of cash and bank balance is lower in MBL than NCC Bank. This indicates that the MBL has less variation in cash and bank balance out of total asset.

4.2.3.7 Cash Reserve Ratio (CRR)

Cash Reserve Ratio refers to the portion of total deposit the commercial banks maintain in NRB. It is a statutory reserve that the bank should have to maintain in NRB. Higher CRR ratio means higher amount of bank fund is tied up in NRB, which means lower investment etc.

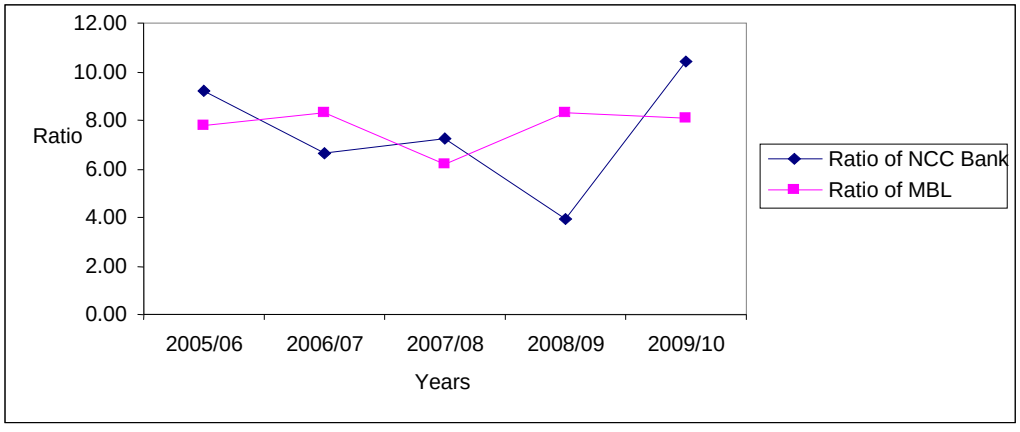
Table: 4.18
Cash Reserve Ratio of NCC Bank and MBL

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Bal. With NRB	Total Deposit	Ratio	Bal. With NRB	Total Deposit	Ratio
2005/06	551	5988	9.20	137	1755	7.81
2006/07	441	6631	6.65	463	5587	8.29
2007/08	478	6620	7.22	489	7893	6.20
2008/09	256	6500	3.94	786	9475	8.30
2009/10	762	7320	10.41	893	11102	8.04
Total	-	-	**37.42**	-	-	**38.63**
Mean	-	-	**7.48**	-	-	**7.73**
S.D	-	-	**2.49**	-	-	**0.88**
C.V %	-	-	**33.30**	-	-	**11.38**

Source: Annual Reports

Figure: 4.9
Cash Reserve Ratio of NCC Bank and MBL



The above table and graph illustrate the cash reserve ratio of NCC Bank and MBL from fiscal year 2005/06 to 2009/10. The Cash Reserve Ratio (CRR) indicates the total amount of deposit of commercial banks in NRB. NRB prescribe CRR for the

commercial banks each year. Today, CRR is 5.5% which means that the bank has to maintain 5.5% of total deposit in NRB.

From above table and graph, it is clear that NCC Bank has maintained the statutory measure (i.e. 5.5%) till the fiscal year 2007/08 but in the fiscal year 2008/09, CRR of NCC Bank is 3.94% which is below the statutory measure and also the CRR is in decreasing trend. The higher the CRR, the more funds in NRB and the stronger will be in liquidity position. The mean CRR of NCC Bank 7.48 with standard deviation 2.49 where as the mean of MBL is 7.73 with standard deviation of at 0.08. From this, it is clear that the average CRR of MBL is higher than NCC Bank but the deviation is higher in case of NCC Bank than MBL.

From above, it can be summarized that the MBL is in more liquid position than NCC Bank. The more liquid position does the bank maintain, the more likely that the bank can easily met its liabilities that come. However, higher liquidity is also associated with opportunity loss due to the idle cash balance.

4.2.4 Interest Rate Risk (IRR)

Interest rate risk refers to the risk of a bank, which arises due to changes in interest rate in the market. It is one of the important indicators of market risk. The changes in interest rate on both lending and deposit are equally risky and profitable for a bank. Increase in interest rate on deposit leads to increase cost of deposit and less profit for a bank and the increase in interest on loan leads to increase in profitability of a bank. The comparative study of interest rate risk is presented as below by using different ratios.

4.2.4.1 Interest Income to Total Income

This ratio indicates the proportion of interest income on total income of a bank. The higher the ratio does a bank maintain, the more the dependency of bank on interest income unveil, which indicates higher level of risk to the bank. On the contrary, lower ratio indicates that the bank has diversification on sources of income.

Higher level of ratio also indicates the higher level of interest rate risk because the changes in interest rate on market will make significant impact on bank total

income and net profit. The interest income to total income of both banks is presented below:

Table: 4.19
Interest Income to Total Income of NCC Bank and MBL

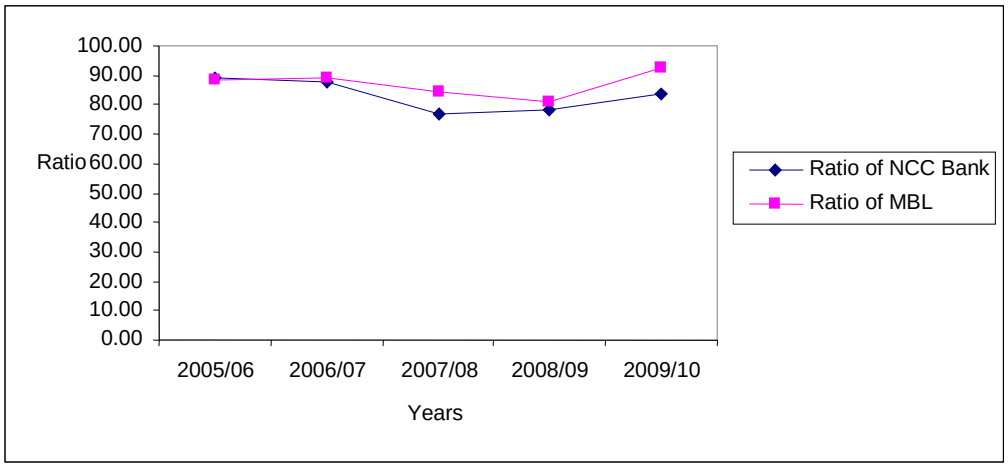
(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Interest Income	Total Income	Ratio	Interest Income	Total Income	Ratio
2005/06	487	547	89.03	215	244	88.11
2006/07	542	618	87.70	382	428	89.25
2007/08	563	735	76.60	563	665	84.66
2008/09	474	604	78.48	694	855	81.17
2009/10	576	686	83.97	796	861	92.45
Total	-	-	**415.77**	-	-	**435.65**
Mean	-	-	**83.15**	-	-	**87.13**
S.D	-	-	**5.49**	-	-	**4.34**
C.V %	-	-	**6.61**	-	-	**4.98**

Source: Annual Reports

Figure: 4.10

Interest Income to Total Income Ratio of NCC Bank and MBL



The above table and graph illustrate the interest income to total income of NCC Bank and MBL. The interest income to total income of both banks is in decreasing trend but NCC Bank has slight increment in the fiscal year 2008/09 which is 78.48%. The mean of ratio of NCC Bank and MBL is 83.15% and 87.13% respectively. This ratio indicates that both banks are highly dependent on interest based income, which shows the sign of high risk for banks. Both banks need to have diversification on investment. The standard deviation of ratio of NCC Bank and MBL is 5.49% and 4.34% with coefficient of variation of 6.61% and 4.98% respectively. This shows that NCC Bank has higher deviation of ratios than MBL.

4.2.4.2 Interest Expenses to Total Expenses

This ratio indicates the proportion of interest expenses on total expenses of a bank. Higher ratio indicates that the bank has to pay high amount of interest expenses out of its total expenses, which means higher level of risk. On the contrary, lower ratio indicates that the bank has the diversification on its expenses. Higher level of ratio also indicates the higher level of interest rate risk because the changes in interest rate on market will make significant impact on bank's interest expenses, which will ultimately affect on total income and net profit. The interest expenses to total expenses of both banks are presented below.

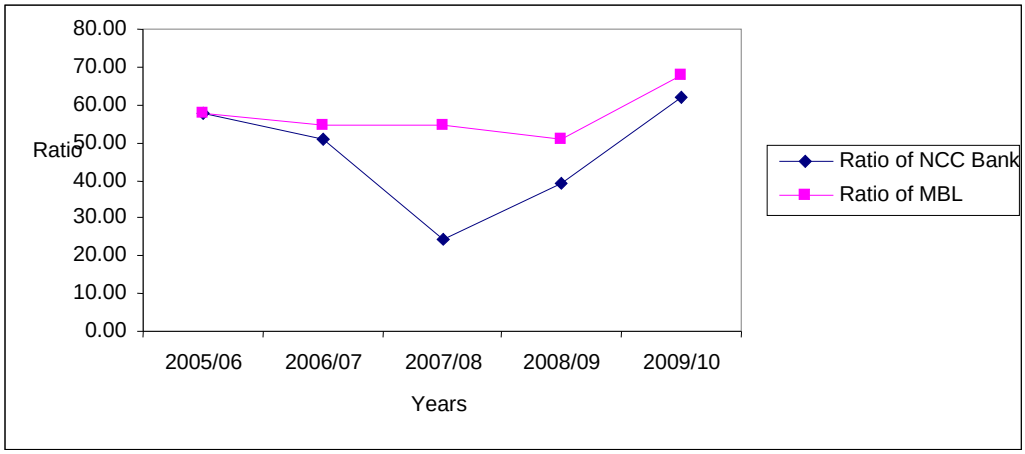
Table: 4.20
Interest Expenses to Total Expenses of NCC Bank and MBL

(Rs. in million)

	NCC Bank			MBL		
Fiscal Year	**Interest Expenses**	**Total Expenses**	**Ratio**	**Interest Expenses**	**Total Expenses**	**Ratio**
2005/06	314	544	57.72	114	197	57.87
2006/07	316	622	50.80	187	343	54.52
2007/08	316	1304	24.23	289	532	54.32
2008/09	283	720	39.31	398	781	50.96
2009/10	278	450	61.78	407	602	67.61
Total	-	-	**233.84**	-	-	**285.28**
Mean	-	-	**46.77**	-	-	**57.06**
S.D	-	-	**15.21**	-	-	**6.38**
C.V %	-	-	**32.52**	-	-	**11.19**

Source: Annual Reports

Figure: 4.11
Interest Expenses to Total Expenses Ratio of NCC Bank and MBL



The graph and table above show the interest expenses to total expenses of two commercial banks, NCC Bank and MBL. The ratio of interest expenses to total

expenses of both banks is in decreasing trend except that NCC Bank has a rise at the fiscal year 2008/09. The mean ratio of NCC Bank and MBL is 46.77% and 57.06% respectively. This ratio indicates that the interest expense has higher proportion in MBL than in NCC Bank. The change in interest rate on deposit and borrowing will have higher impact on NCC Bank and MBL which produces the higher interest rate risk to the both banks. The standard deviation of ratio of NCC Bank and MBL is 15.21% and 6.38% with the coefficient of variation of 32.52% and 11.19% respectively.

These ratios indicate that the proportion of interest expenses on total expenses fluctuates more in NCC Bank than that of MBL.

4.2.4.5 Gap Analysis (Interest Rate)

Gap Analysis refers to the process of analyzing mismatch between rate sensitive of fixed rate asset and the liabilities. In other words, it is the process of identifying the net position between asset and liabilities of a bank. The higher the gap between assets and liabilities of a bank, the higher the risk does a bank have and vice versa. The gap analysis has been categorized as below:

4.2.4.5.1 Gap Analysis of Interest Rate Sensitive Asset and Interest Rate Sensitive Liabilities (IRSA and IRSL)

Interest rate sensitive asset and liabilities refers to such assets/liabilities, interest rates of which keep on changing in the market. Such types of assets includes the inter bank loan/placement financial derivatives etc. the interest rate on which changes over night. Rate sensitive liabilities includes inter bank borrowing etc. Gap refers to difference between IRSA and IRSL and gap analysis refers to the analysis of the gap between IRSA and IRSL. The bank has to bear higher losses if the gap is high (either positive or negative). The bank will not bear interest rate risk if the gap between IRSA and IRSL is zero. The gap analysis of IRSA and IRSL of NCC BANK and MBL is presented below:

Table: 4.21
Gap Analysis of IRSA and IRSL of NCC Bank and MBL

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	IRSA	IRSL	Gap Ratio	IRSA	IRSL	Gap Ratio
2005/06	0	0	0	0	0	0
2006/07	0	0	0	353.09	102	251.1
2007/08	10	0	10	356.4	154	202.4
2008/09	0	0	0	812	132	680
2009/10	0	0	0	1021	129	892
Mean	-	-	**2**	-	-	**405.1**

Source: Annual Reports

The above table exhibits the IRSA and IRSL of two commercial banks for 5 years. The table shows that MBL has higher level of gap in every year than NCC Bank except in the fiscal year 2006/07. NCC Bank has zero Rate Sensitive Liabilities in almost all year except in the fiscal year 2007/08 it has 10 million rupees Rate Sensitive Assets but none Rate Sensitive Liabilities. The average gap of NCC Bank is Rs 2.0 million and MBL is Rs.405.1 million respectively. This average gap shows that NCC Bank has nicely matched the IRSA and IRSL than MBL which indicates the lower interest rate risk.

4.2.4.5.2 Gap Analysis of Fixed Interest Rate Asset/Liabilities

Gap Analysis now refers to the difference between fixed interest rate asset and fixed interest rate liabilities. The fixed interest rate asset refers to such asset of a bank, interest rate of which remains fixed for a certain period of time. The rate of interest on this type of asset normally remains constant for a long period. For example, the interest on term loan of a bank is constant for long period of time. Likewise fixed interest rate liabilities (FIRSL) refers to such liabilities of a bank, interest on which remains constant for certain period of time, though the market interest rises. For example, the fixed deposit of a bank, on which the interest remains constant till the maturity period. The gap ratio refers to the ratio between FIRSA and FIRSL. Higher gap ratio indicates that the bank has more FIRSA than FIRSL, which means that in future if the interest rate is to be increased, the bank will earn profit and vice versa.

Conversely, the negative gap or gap ratio of less than 1 indicates the bank has lower amount of fixed rate asset than fixed rate liabilities. In such a situation, the bank has to bear higher amount of losses if the interest rate is decreased. The bank will not suffer any losses if the ratio is 1 and gap is zero.

Table: 4.22
Gap Analysis of FIRSA and FIRSL of NCC Bank and MBL

(Rs. in million)

Fiscal Year	NCC Bank				MBL			
	FIRSA	FIRSL	Gap	Gap Ratio	FIRA	FIRL	Gap	Gap Ratio
2005/06	5637	6648	-1011	0.85	2612	2683	-71	0.97
2006/07	6775	7485	-710	0.91	5257	5587	-330	0.94
2007/08	7313	8104	-791	0.90	7051	7772	-721	0.91
2008/09	7150	7384	-234	0.97	8271	9206	-935	0.90
2009/10	7532	7780	-248	0.97	9210	1089	8121	8.46
Mean	-	-	**-598.8**	**0.92**	-	-	**1213**	**2.44**

Source: Annual Reports

The table above illustrates the FIRSA and FIRSL of NCC Bank and MBL. The table shows that both banks have high level of negative gap in all fiscal year. NCC Bank has the highest negative gap of -1011 million in fiscal year 2005/06 and MBL has the highest negative gap of -935 in fiscal year 2008/09. The higher gap indicates the high level of interest rate risk of both banks. The mean gap ratio of NCC Bank and MBL is 0.91 and 0.93 respectively. This shows that NCC Bank has matched FIRSA and FIRSL better than MBL, which indicates lower risk.

4.2.4.5.3 Net Interest Margin

Net interest margin refers to the difference between interest received from bank's earning asset and the interest paid to bank's liabilities. The net interest margin (NIM) measures how much profit or loss bank will suffer if the interest rate on both interest sensitive asset and liabilities increases. The table below shows the NIM of both NCC Bank and MBL, assuming that the market interest rate will change by 1 percent**.**

Table: 4.23

Net Interest Margin of NCC Bank and MBL

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	RSA	**RSL**	**NIM**	**RSA**	**RSL**	**NIM**
2005/06	0	0	0	0	0	2.51
2006/07	0	0	0	353	102	2.02
2007/08	10	0	0.1	356	154	6.8
2008/09	0	0	0	812	132	4.81
2009/10	0	0	0	1021	129	5.3
Mean	**-**	**-**	**0.02**	**-**	**-**	**4.29**

Where,

Δ NIM = (ΣRSAs x Δ rA) - (ΣRSLs x Δ rL)

RSA = Rate Sensitive Assets

Δ rA = Changes in interest rate received on Rate Sensitive Asset

RSL = Rate Sensitive Liabilities

Δ rL = Changes in interest rate received on Rate Sensitive Liabilities

The table above illustrates the net interest margin of NCC Bank and MBL for 4 fiscal years. When the interest rate changes is assumed to be 1% in both RSA and RSL, MBL shows the higher average net interest margin than NCC Bank which is 4.29% and 0.02% respectively. This means that MBL has higher net interest margin than that of NCC Bank.

4.2.4.6 Interest Risk Analysis According to NRB Directive No. 5

According to NRB directive no. 5, the interest rate risk is measured by calculating net asset/liabilities of the bank within the different time interval. While calculating the net position, cash and bank balance and non-interest bearing liabilities

is excluded. The cumulative gap is calculated of each interval and the certain percent changes in interest rate (normally 1) has to multiply the cumulative gap to identify the net profit/loss position of bank due to interest rate changes. The interest rate risk of both banks for fiscal year 2009/10has been calculated as below:

Table: 4.24
Interest Rate Risk Analysis of NCC Bank for Fiscal Year 2009/10

(Rs. in million)

	1-90 Days	91-180 Days	181-270 Days	270-365 Days	Above 1 year	Total
Assets						
Investment in Foreign Bank	76					76
Government of Nepal Securities	1155				5	1160
NRB Debt Paper						0
Inter Bank Loan						0
Loan & Advances	294	101	41	1892	2794	5122
Other Asstes	11	3	4	443	406	867
Total Assets	1536	104	45	2335	3200	7225
Liabilities						
Borrowings						0
Saving Deposit						0
Fixes Deposit					3317	3317
Debt Papers	900				1737	2637
Total Liabilities	900	0	0	0	5054	5954
Net Assets/ Liabilities	606	104	45	2335	-1849	
Cumulative Gap	636	740	785	3120	1271	1271
Net Profit/Loss (Cumulative Gap * IRC)	1.59	1.9	1.96	7.8	3.18	3.18

Source: Annual Reports

The table above illustrates the net profit/loss position of asset and liabilities of each time interval of bank for the changes in interest rate. It is shown in the above table that the NCC Bank has negative gap in the above 1 year time interval. This shows that the bank has higher liabilities than asset in the long term period and higher assets in short term period. The cumulative gap for total time interval is Rs.1271 million and the overall profit of the bank is Rs.3.18 million if the interest rate changes by 1% in year i.e. divided into five periods (i.e. .25% in each period).

Table: 4.25
Interest Rate Risk Analysis of MBL Bank for Fiscal Year 2009/10

(Rs. in million)

	1-90 Days	91-180 Days	181-270 Days	270-365 Days	Above 1 year	Total
Assets						
Investment in Foreign Bank	218	85	13	2		318
Government of Nepal Securities	716	88	147			95
NRB Debt Paper						0
Inter Bank Loan					9	9
Loan & Advances	1633	631	297	2555	2205	7319
Total Assets	3261	804	457	2555	2214	9291
Liabilities						
Borrowings	289					289
Saving Deposit	1566					3857
Fixes Deposit	375	328				2734
Debt Papers						
Total Liabilities	2230	328	118	600	3604	6880
Net Assets/ Liabilities	1031	476	339	1955	-1390	2411
Cumulative Gap	1031	1507	1846	3801	2411	2411
Net Profit/Loss (Cumulative Gap * IRC)	2.58	3.8	4.62	9.5	6.03	6.03

Source: Annual Reports

Where, IRC = Interest rate change (i.e. 1% P.A and 0.25% for each interval)

Above table shows the net profit/loss position for each interval asset and liabilities of bank from changes in interest rate. The above table shows that MBL has negative gap in above 1 year time interval. This shows that the bank has higher liabilities than asset in long term period. The cumulative gap for total period is Rs. 2411 million and the bank would earn overall profit of Rs. 6.03 million if the interest rate changes by 1% in year, which consists of five periods. (i.e 0.25% in each period

4.2.4.7 Interest Rate Spread

The interest rate spread refers to the difference between weighted average interest on loan and advances and the weighted average interest on deposit. This interest rate spread also measures the profitability position of a bank. The higher spread does a bank have, the higher will be the profitability position of the bank because

the bank has to pay less interest on deposits and will receive higher interest on loan and advances. The interest rate spread of two banks is presented as below:

Table: 4.26
Interest Rate Spread of NCC Bank and MBL for 4 years

(Rs. in million)

	NCC Bank			MBL		
Fiscal Year	**Average Interest on Loan (%)**	**Average Interest on Deposit (%)**	**Interest Spread (%)**	**Average Interest on Loan (%)**	**Average Interest on Deposit (%)**	**Interest Spread (%)**
2005/06	10.28	5.92	4.36	7.87	4.09	3.78
2006/07	9.62	4.97	4.65	6.9	3.26	3.64
2007/08	8.54	3.74	4.8	6.99	3.60	3.39
2008/09	7.27	2.86	4.41	7.27	4.10	3.17
2009/10	8.64	4.19	4.45	7.6	3.64	3.96
Mean Spread	-	-	**4.53**	-	-	**3.59**

Source: Annual Reports

Above table illustrates the interest rate spread of two commercial banks. The interest rate on loans and advances and deposit of MBL is fluctuating while the interest rate on loans and advances and deposits of NCC Bank is in decreasing trend.

NCC Bank has highest interest rate of 10.28% on loans and advances and 5.92% on deposit in the fiscal year 2005/06. MBL has highest interest rate of 7.87% on loan and advances in the fiscal year 2005/06 and highest interest rate of 4.1% on deposit in fiscal year 2008/09. Both interest rate of NCC Bank are higher than MBL. The mean spread of NCC Bank is also higher than MBL. This interest rate spread indicates that NCC Bank has higher net interest income than MBL, which means higher profit. However, both banks have interest rate spread less than 5%.

4.3 Operation Risk

Operational risk arises from the potential inadequate information systems, operational problems, breaches in internal controls, fraud, or unforeseen catastrophes that result in unexpected losses. There are operational risks associated with virtually any banking activity but the greater dependence on technology and centralized operations is one of the reasons for banks in becoming increasingly exposed to operation risk. Though operation risk cannot be quantified, it has a

significant impact on the banking operations. The operation risk of the banks is analyzed as below:

4.3.1 Transaction Risk

Transaction risk refers to such types of risk, which arises from the mistake of the bank staff, while making transaction. This is one of the biggest problems in banking operation. This risk is mainly associated with human error, while making transactions.

4.3.1.1 Cash Shortage & Coverage

The cash short & over is the main transaction risk in banking sector. Cash shortage and over is associated with the employees of cash department. Cash short of a staff refers to a situation in which any amount below the actual amount required to balance the cash flow of a staff in a particular date. It also includes the loss of cash in premises of bank, customers and other banks during the course of banking transaction and any amount found short due to wrong transaction of account. Cash over of a staff, on the other hand, refers to a situation in which any amount above the actual amount required to-balance the cash flow of a staff in a particular date. It also includes the excess of cash in premises of bank, customers and other banks during the course of banking transaction and any amount found excess due to wrong transaction of account.

This cash short or over occurs mainly due to human error of the banks staff. Both cash short and over position is not good for a bank. Cash Short is associated with the loss of banks where as over means the reputation risk (i.e. the customer, who pays more might come later on to claim).

Ms. B. Pathak of NCC Bank states the cash short and over is a regular phenomenon in banking sector, which can be minimized but cannot be completely eliminated due to the human error. The average cash short in a year is around Rs.50 thousands to 100 thousands. Mr. P. Dangol of MBL states the average cash short is around Rs.100 thousands in a year. In both banks, to cover the cash shortage from the bank teller, there is a provision of teller risk fund. The short

amount is covered from this teller risk fund. If the short amount is higher than the teller risk fund, the concerned staffs have to pay to the bank.

4.3.1.2 Document Risk

Document risk refers to the risk, which arises from the acceptance of false/mistake document by the bank. In document-based business such as Letter of Credit (L.C.), if the bank opens a L.C. or provides loan against the false document, the bank has to suffer a loss. Similarly, while purchasing the cheques and bills, if the document is not genuine, this leads the bank to suffer a huge loss. This document risk is associated with human error of banks' staff as well as the intention of the client.

When interviewed to key employees of both banks, it is found that banks have taken a high precaution for the document risk. There is no such a case that banks have suffered a huge loss due to fraud document. To minimize the risk, both the banks have provided hierarchy wise authority to take both LC and Credit Decision.

4.3.1.3 Settlement Risk

Settlement risk refers to potential of loss; bank might suffer due to unsettlement of transaction within branches of a bank or between inter bank transaction. The unsettlement of transaction is the main problem of non-computerized bank. However unsettlement of a transaction also remains a problem in computerized banks as well. This problem mainly occurs in case of inter bank transaction.

Mr. S. Pandey of NCC Banks opines that major settlement problem of the bank is associated with the draft payment, payment of foreign trade & visa card etc. This problem is mainly because of the unsettlement of transaction by the Nostro Banks. Nostro Bank refers to the bank in which a commercial bank keeps its money as deposit. So, when Nepalese banks have to do transaction in foreign countries in foreign trade, they will perform through such Nostro Banks. While making transaction by the banks, the debited entry made by local banks need to be credited by Nostro Banks and vice versa. But the main problem is, lots of these entries remains un-reconciled for a long time. The bank can neither record the entries as income nor expenses, which result in the risk.

Likewise, the bank also has to make inter branch transactions. Inter branch transaction refers to the transaction made between branches. While making inter branch transactions, the transaction should be settled down timely. The outstanding entries from either branch for a long time are risky for a bank. According to Head of Reconciliation Department of MBL there is least problem in inter branch transaction because of the computerized system (i.e. Any Branch Banking Services). The bank has given high priority on the settlement of risk.

Both the banks have a reconciliation department, concerned with the reconciliation of inter branch and Nostro transaction. It is found that both the banks are doing inter branch reconciliation on a weekly basis, where as Nostro Reconciliation is being carried out on a fortnightly and monthly basis. From the interview of the head of reconciliation department of both the banks, it has been found that in common these banks have least outstanding entries for more than 3 months.

Generally, the inter branch transactions will be settled within maximum 2-3 days, where as the foreign banks transaction may remains outstanding for 2-3 months. But, both the banks are making timely follow up with agency banks for its timely settlement of the transactions.

4.3.2 Money Laundering

Money laundering is the practice of engaging in finance/financial transactions in order to conceal the identity, source, and/or destination of illegally gained money, and is a main operation of the underground economy, (Wikipedia, 2008). In another word, Money Laundering is defined as disguising the source or ownership of illegally gained funds to make them appear legitimate or hiding money to avoid paying taxes or using legally gained money in pursuit of unlawful activities.

In the past, the term "money laundering" was applied only to financial transactions related to organized crime. Today its definition is often expanded by government regulators such as the United States Office of the Comptroller of the Currency to encompass any financial transaction which generates an asset or a value as the result of an illegal act, which may involve actions such as tax evasion or false accounting. As a result, the illegal activity of money laundering is now recognized

as potentially practiced by individuals, small and large businesses, corrupt officials, members of criminal organization organized crime such as drug dealers or the Mafia, and even corrupt states, through a complex business network of shell companies and trusts based in Offshore Financial Centre offshore tax havens. Smurfing crime Smurfing and kiting are examples of money laundering technique, (Wikipedia, 2008: 257). Money Laundering takes place in three phases;

- When bulk cash is deposited into the banking system using currency or funds from illegal activities.
- Layering where multiple transaction are used to separate the proceeds from their illegal source.
- Integration of the illegal funds with apparently legitimate business earning. Money Laundering was a global issue after the September 11, 2001. In both banks, combating against the money laundering has been given a high priority.

According to the managers operation, both the banks have a comprehensive anti-money laundering policy, known as "Know You: Customer (KYC) policy". The policy is in line with international practices. Banks look following minimum standards while conducting banking business:

- Customer identity is ascertained before opening an account and/or making an account operational.
- New accounts are generally subjected to a detailed interview to ascertain
- Purpose of opening an account and sources of funds etc.
- All suspicious transactions are reviewed by senior management.
- Records are kept for all data obtained for the purpose of identification. Employees are trained on a regular basis on anti-money laundering measures

In both the banks, compliance department is responsible for monitoring the compliance of Know your customer (KYC) policy. Key person of NCC Bank states that the Credit Control Department is responsible for tracing out all the doubtful transaction on daily basis. The bank continuously identifies and verifies the following transactions:

- Due Diligence are collected, recorded and monitored information on customers.
- Operating staff is required to record and report all individual cash deposits and withdrawals and all incoming / outgoing electronic fund transfers, exceeding a sum prescribed by Compliance Officer.
- Unusual or Suspicious transactions/ activities identified should be reported to the Compliance Officer and after verification of the correctness should report to Senior Management in the appropriate format.

For this purpose a bank looks into following transactions:

- Customer background, which does not justify the deposited amount
- Customer who have frequent large transaction without any source
- Multiple bank accounts of a same customer in same bank
- Business unit reluctant to provide information about nature and purpose of business, its key employees etc.

It has also been found from the interview of key employees of both banks that NRB frequently sends letters to commercial banks in order to block the account of terrorist, corrupted people etc.

From above, it has been found that both banks have enough measures to combat money laundering. However, to attract the deposit, banks have been opening accounts with minimum formalities.

4.3.3 System Risk

System risk is associated with the possible losses bank might suffer due to system failure. In today's scenario, banking sector is computerized. Therefore, when the system fails, it will have huge problem to the bank.

The main software of NCC Bank is 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. The main software of MBL is Globus. All the branches have been interconnected with radioactive links so that the customer can get Any Branch Banking Services (ABBS).

The bank itself configures most of the problems related to system; however for the complex problem the bank has been using the help of Indian companies every day the bank records the transaction in a disk after.

For the proper back up and diversification of system risk, the data are replicated in more than one server located in various places. Proper back up of data and information is maintained by the bank, which helps to restore the data easily in case of major breakthrough. For the proper security of data, both the bank has adopted the latest device.

Internet banking services, which are new banking product in Nepalese commercial banks, have also been lunched by both banks. For the security of customer transaction from Internet banking, both banks have adopted the latest technology. Similarly, frequent inspection of the equipment and preventive maintenance is carried out by both banks, which lower the major break through of the technology. Further, both banks are providing training to their staffs for handling new technology frequently.

Under the system risk, the risk associated with card business is also one of the great problems in bank. Card refers to all debit and credit card issued by the bank in order to facilitate the transaction of its customers. In today's scenario, debit and credit card are being highly used, which almost substitute the money. In Nepalese context, card business has just been emerging. With the use of debit and credit card by commercial banks to facilitate the customer for making transaction, the operation risk has also increased significantly.

NCC Bank is providing Debit Card facilities under the SCT (Smart Choice Technology) Network jointly in consortium with 12 other member Banks. NCC Bank has 26 ATM Terminals located at different parts of the country and it has POS arrangement as well.

Similarly, MBL is providing ATM card in collaboration of Smart Choice Technology (SCT) Network, which can be used only in the ATM counter of SCT and POS. SCT Network owns and handles all the administrative function of ATM. MBL is using its service on fee basis.

The major risk in card business is associated with fraud over payment of cash, unsettlement of credit card transaction and system failure etc. As the government is yet to come with rules and regulation regarding card business, the operation of card business looks troublesome in Nepal.

Key Person of Card department NCC Bank states that there is least risk in debit card, as customers only are allowed to withdraw cash from their deposited amount. However, in credit card and foreign bank's card transaction, settlement risk is associated as the settlement of transaction involves various agents (for e.g. visa, correspondence banks etc).

A technical problem with ATM is also one of the significant problems. Due to the technical problem, the ATM services remain out of service. Besides, over payment of cash than customer's request is also the problem associated with ATM services. Reviewing the responses of the key respondents, it has been found that on an average, ATM of both banks remains out of service for maximum of 5 times in a month.

Similarly, fraud is also one of the problems in card business. However, in both banks there is no incidence that bank suffered loss due to the use of fraud card and pin number.

4.4 Banking Risk and Capital Adequacy Measures

Capital Adequacy Ratio (CAR) is one of the major tools of minimizing the overall risk of a bank. In other words, it is the cushion to cover the loss suffered by the bank. The higher the CAR of a bank, the safer the bank will be. It is because in case of losses, the capital will be used to cover those losses. So it is the great safeguard measures for the bank, depositors and investors. For the management of

default risk of bank, NRB has prescribed capital adequacy ratio for primary capital and total capital fund. All the commercial banks need to maintain the required ratio. If the bank fails to maintain the required ratio, bank is not allowed to increase its asset, disburse loans, collect deposits and distribute dividend.

4.4.1 Core Capital to Total Risk Weighted Asset (RWA)

Core Capital to Total Risk Weighted Asset (RWA) ratio measures the proportion of funding of Total Risk Weighted Asset from the core capital. Risk weighted asset refers to all the on balance sheet and off balance sheet assets which has been weighted by some portion of risk. The assets have been weighted on the basis of their risk level (e.g. 0 % for cash & investment on government bills to 100% on loans and advances). Core Capital, on the other hand, refers to the shareholders equity, which includes Share Capital, Retained Earning, General Reserve, Net profit & Non redeemable Preference Share). The higher ratio does a bank maintain, the better position a bank has and vice versa. Higher ratio also means more use of equity while financing the asset, which means lower use of debt (i.e. borrowings and deposit). As we know the lower the use of the debt, the less risk a bank has and vice versa; the higher ratio is always preferred.

Table: 4.27
Core Capital to Total Risk Weighted Asset Ratio

(Rs. in million)

Fiscal Year	Statutory Ratio (%)	NCC Bank				MBL			
		Core Capital	Total RWA	Core Capital/ RWA(%)	Excess/ Surplus	Core Capital	Total RWA	Core Capital RWA(%)	Excess/Surplus
2005/06	5.5	185	5598	3.30	-2.20	552	3251	16.98	11.48
2006/07	5.5	256	7494	3.42	-2.08	638	6063	10.52	5.02
2007/08	6	-374	7392	-5.06	-11.06	912	7593	12.01	6.01
2008/09	6	-575	6297	-9.13	-15.13	982	9200	10.67	4.67
2009/10	6	634	6009	10.55	4.55	1142	10417	10.96	4.96
Mean	-	-	-	**0.62**	**-5.18**	-	-	**12.23**	**6.43**
S.D	-	-	-	**6.94**	**7.03**	-	-	**2.43**	**2.56**
C.V	-	-	-	**1119.35**	**-135.71**	-	-	**19.71**	**39.81**

Source: Annual Reports

The above table illustrates the ratio of core capital to total risk-weighted asset of NCC Bank and MBL for 5 years. MBL has maintained secure level of ratio but NCC Bank has shortfall of the ratio in all the fiscal year. The average core capital

to RWA ratio is 0.62% and of MBL is 12.23%. This indicates that MBL has employed higher capital than NCC Bank to finance the risk-weighted asset. The negative ratios of NCC Bank reflect that there can be a problem if losses will arise as it does not have enough amount to cope the problem. Again the average excess ratio than the statutory requirement of NCC Bank and MBL is –5.18% and 6.43% respectively, which shows that MBL can increase its risk-weighted asset more than NCC Bank. The higher capital ratio does a bank maintain, the higher amount of asset can be increased by the bank and vice versa, which also means higher income and profit. This above figures indicates that NCC Bank is in riskier position than MBL.

The standard deviation of both core capital to RWA and Excess/Shortfall ratio of NCC Bank is 6.94% and 7.03% respectively, whereas these ratios of MBL is 2.43% and 2.56% respectively. Similarly, the Coefficient of Variation (C.V) of NCC Bank on core capital to RWA and Excess/Shortfall ratio is 1119.35% and –135.71% respectively, whereas C.V or these ratios of MBL is 19.71% and 39.81% respectively.

These figures indicate that ratios of NCC Bank are more fluctuating from average than MBL, which shows inconsistency.

4.4.2 Supplementary Capital to Total Risk Weighted Asset

This ratio measures how much supplementary Capital does a bank has to finance the total RWA. Supplementary Capital refers to the reserve maintained by the bank for specific purpose such as loan loss, foreign exchange loss etc. It includes

General Loan Loss Provision, Asset Revaluation Reserve, and Foreign Exchange Reserve etc. The higher ratio does a bank maintain, the higher will be the capital cushion for a bank to cover the risk and vice versa.

Table: 4.28
Supplementary Capital to Total Risk Weighted Asset Ratio

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Supplementary Capital	RWA	Supplementary Capital/RWA	Supplementary Capital	RWA	Supplementary Capital/RWA
2005/06	37	5598	0.66095	127	3251	3.90649
2006/07	53	7494	0.70723	51	6063	0.841168
2007/08	118	7392	1.59632	65	7593	0.856052
2008/09	0	6297	0	119	9200	1.293478
2009/10	497	6009	8.27093	136	10417	1.305558
Mean	-	**-**	**2.25**	-	**-**	**1.64**
S.D	-	**-**	**3.05**	-	**-**	**1.15**
C.V	-	**-**	**135.55**	-	**-**	**70.12**

Source: Annual Reports

The above table shows the Supplementary Capital to Total Risk Weighted Asset ratio of NCC Bank and MBL for 5 years. Both banks have very low percentage of supplementary capital to finance the total RWA. The average ratio of NCC Bank and MBL for 5 years is 2.25% and 1.64% respectively. This indicates that MBL has higher amount of Supplementary capital than NCC Bank. The higher amount of supplementary indicates that MBL has maintained higher amount of reserve to combat the specific risk such as loan loss, asset revaluation loss and foreign exchange loss etc.

The Standard deviation of the ratio of NCC Bank and MBL is 3.05% and 1.15% respectively. Likewise, the coefficient of variation of NCC Bank and MBL is 135.55% and 70.12 % respectively. The S.D and C.V indicate that the ratios of NCC Bank fluctuate more than that of MBL, which depicts the less consistency in part of NCC Bank.

4.4.3 Capital Fund to Total Risk Weighted Asset (RWA)

Capital fund to total RWA ratio measures how much RWA is financed from the Capital Fund. Capital Fund includes Core Capital plus Supplementary Capital. The higher the ratio does a bank have, the better is the bank's financial position and the bank will be in less risky position and can increase its asset, which ultimately will increase bank's overall profit.

Table: 4.29
Total Capital Fund to Risk Weighted Asset Ratio

(Rs. in million)

Fiscal Year	Statutory Ratio (%)	NCC Bank				MBL			
		Total Capital Fund	Total RWA	Capital Fund/ RWA(%)	Excess/ Surplus	Total Capital Fund	Total RWA	Capital Fund RWA(%)	Excess/ Surplus
2005/06	11	223	5598	3.98	-7.02	579	3251	17.81	6.81
2006/07	11	309	7494	4.12	-6.88	689	6063	11.36	0.36
2007/08	12	-256	7392	-3.46	-15.46	976	7593	12.85	0.85
2008/09	12	-575	6297	-9.13	-21.13	1102	9200	11.98	-0.02
2009/10	10	732	6009	12.18	2.18	1279	10417	12.28	2.28
Mean	-	**-**	-	**1.54**	**-9.66**	-	**-**	**13.26**	**2.06**
S.D	-	**-**	-	**7.28**	**8.00**	-	**-**	**2.33**	**2.50**
C.V	-	**-**	-	**1126.74**	**-135.53**	-	**-**	**19.88**	**39.89**

Source: Annual Reports

Above table demonstrates the total capital fund to risk weighted asset (RWA) of NCC Bank and MBL for 5 years. MBL has maintained the capital adequacy ratio higher than the statutory requirement except in fiscal year 2008/09 while NCC Bank is failed to maintain the capital adequacy ratio even equal to the statutory level. The average ratio of NCC Bank and MBL is -9.66% and 13.26% respectively. This shows that MBL is in better position tan NCC Bank. The ratios of both banks are in decreasing trend. The average excess ratio than statutory requirement of NCC Bank and MBL is –9.66% and 2.06% respectively. This figure indicates that MBL has higher excess ratio than NCC Bank.

The standard deviation of both total capital fund to risk weighted asset and Excess/Shortfall ratio of NCC Bank is 7.28% and 8.00% respectively, whereas these ratios of MBL is 2.33% and 2.50% respectively. Similarly, the Coefficient of Variation (C.V) of NCC Bank total capital fund to RWA and Excess/Shortfall ratio is 1126.74% and 39.89% respectively, whereas C.V or these ratios of MBL is 19.88% and 82.24% respectively. These figures indicate that ratios of NCC Bank are more fluctuating from average than MBL, which shows inconsistency.

4.4.4 On Balance Sheet RWA to Total RWA

This ratio measures the proportion of on balance sheet RWA on total RWA of a bank. On balance sheet RWA refers to the risk weighted of all the balance sheet items such as loans and advances, fixed asset, investment etc. Since the risk weight of cash and bank balance, investment in governments is nil, such assets do not have impact on total RWA. The higher ratio refers that the bank has high amount of loans& advances, fixed asset, investment and other assets and vice versa.

Table: 4.30
On Balance Sheet RWA to Total RWA Ratio

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	On Balance Sheet Assets	RWA	On Bal Sheet Assets/RWA	On Balance Sheet Assets	RWA	On Bal Sheet Assets/RWA
2005/06	5120	5598	91.4612	2900	3251	89.20332
2006/07	6625	7494	88.4041	5452	6063	89.92248
2007/08	6456	7392	87.3377	6480	7593	85.34176
2008/09	5623	6297	89.2965	7776	9200	84.52174
2009/10	5846	6009	97.2874	9722	10417	93.32821
Mean	-	-	**90.76**	-	-	**88.46**
S.D	-	-	**3.54**	-	-	**3.21**
C.V	-	-	**3.90**	-	-	**3.63**

Source: Annual Reports

The above table demonstrates the ratios of on balance sheet RWA to total RWA of NCC Bank and MBL for 5 years. Both banks have higher amount of on balance sheet asset in total RWA. However, the ratio of both banks has been fluctuating over the years. The average ratio of NCC Bank and MBL is 90.76% and 88.46% respectively. This indicates that NCC Bank has more amount of on balance sheet RWA than MBL, which means that NCC Bank has diversified its asset more than MBL and also MBL will duffer less loss than NCC Bank.

The standard deviation of ratio of NCC Bank and MBL is 3.54% and 3.21% respectively. Likewise, the coefficient of variation of the ratio of NCC Bank and MBL is 3.90% and 3.63% respectively. This indicates that the ratio of MBL deviate more from the average than that of NCC Bank, which shows higher inconsistency and risk.

4.4.5 Off Balance Sheet RWA to Total RWA

This ratio measures the proportion of off-balance sheet RWA on total RWA of a bank. Off-balance sheet RWA refers to the risk weighted of all the contingent asset/liabilities such as Letter of Credit (L.C.), Guarantee, and Bills Collection etc. Contingent liabilities, on the other, hand refers to such types of undertaking of a bank, the liability of the bank on it will be created only happening of certain contingency.

The higher ratio refers the bank has high amount of contingent liabilities such as L.C. Guarantee etc.

Table: 4.31
Off Balance Sheet RWA to Total RWA Ratio

(Rs. in million)

Fiscal Year	NCC Bank			MBL		
	Off Balance Sheet Assets	RWA	Off Bal Sheet Assets/RWA	Off Balance Sheet Assets	RWA	Off Bal Sheet Assets/RWA
2005/06	478	5598	8.53876	350	3251	10.76592
2006/07	869	7494	11.5959	611	6063	10.07752
2007/08	936	7392	12.6623	1113	7593	14.65824
2008/09	674	6297	10.7035	1424	9200	15.47826
2009/10	762	6009	12.681	6941	10417	66.63147
Mean	-	**-**	**11.24**	-	**-**	**23.52**
S.D	-	**-**	**1.54**	-	**-**	**21.66**
C.V	-	**-**	**13.68**	-	**-**	**92.07**

Source: Annual Reports

The above table demonstrates the ratios of ff balance sheet RWA to total RWA of NCC Bank and MBL for 5 years. Both banks have lower amount of on balance sheet asset in total RWA. And the ratio of both banks has been fluctuating over the years. The average ratio of NCC Bank and MBL is 11.24% and 23.52% respectively. This indicates that MBL has more amount of off balance sheet RWA than NCC Bank, which means that MBL has higher amount of Letter of Credit, Guarantee etc. This means than MBL has diversified more on income generating business than NCC Bank.

The standard deviation of ratio of NCC Bank and MBL is 1.54% and 21.66% respectively. Likewise, the coefficient of variation of the ratio of NCC Bank and MBL is 13.68% and 92.07% respectively. This indicates that the ratio of MBL deviate more from the average than that of NCC Bank, which shows higher inconsistency and risk.

4.5 Major Findings of the Study

From the above analyses of different risks, following major findings have been obtained and categorized under different risks heading.

- NCC Bank and MBL have been frequently adjusting the proportion of loan. Lower average loan and advances to total asset of MBL than that of NCC Bank (i.e 72.10 %< 79.69 %)
- Analyzing the organization structure for the credit risk management, it has been found that MBL Bank has more rigorous organization structure for credit risk management than NCC Bank. In NCC Bank, Credit Control Department is mainly concerned with all types of risks management. In MBL, Credit Committee, which includes the member of both board of directors and management, is the main body for managing credit risk.
- The interest income to total income of NCC Bank and MBL stood very high. The average ratio for NCC Bank and MBL is 83.15 % & 87.13 % respectively.
- In the fiscal year 2005/06 the ratio of NCC Bank and MBL is 89.03% & 88.11 %. This indicates that both the banks are highly vulnerable to interest risk.
- The gap analysis of interest rate sensitive asset and liabilities of both the banks depicts that MBL has higher gap than that of NCC Bank. The mean gap of NCC Bank and MBL is Rs. 2.0 million and Rs.4.5.1 million respectively.
- The gap analysis of Fixed Interest Rate Sensitive Asset (FIRSA) Fixed Interest Rate Sensitive Liabilities (FIRSL) of both banks depicts that both the banks' structure of asset and liabilities has been changing over years. The average gap ratio for 5 years of NCC Bank and MBL is 0.92 and 2.44 respectively.
- Average interest rate spread of NCC and MBL is 4.53 % and 3.59 % respectively. The higher amount of spread of NCC Bank indicates that the net interest income (i.e interest income less interest expenses) of NCC Bank is more than MBL. This means NCC Banks earns more profit than MBL.

- Transaction risk has been identified as one of the major source of operation risk. Transaction risk, which arises mainly due to human error, includes cash shortage and over, document risk & settlement risk.
- In both the banks, the risk management techniques involve two different sets of conceptual techniques (i.e. setting standard and financial reporting). Both the banks apply consistent evaluation and rating scheme to all its investment opportunities.
- In case of interest rate risk, both banks have been setting their own standard for setting interest rate on both deposit and lending. Similarly, the interest rate spread is the major factor, which the bank monitors, in periodic basic to make adjustment according to market trend.
- In regard to liquidity risk, both banks have their own standard for maintaining the liquidity position of the bank set by top-level management. In banks, treasury department & finance department is concerned with managing the cash and bank balance of a bank.
- The internal audit committee of both NCC Bank and MBL is concerned with auditing the overall function of banks, which includes credit, operation and administration etc.
- To ensure the proper functioning of bank, the monitoring and controlling body of the bank frequently monitors all the jobs performed. The main body for monitoring & controlling the various department and branches is Internal Audit and Compliance Department. In both banks, internal audit department reports to the audit committee, which includes both the top level management and board of directors.

CHAPTER V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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 32 commercial banks, 2 banks were taken as sample using judgmental sampling method.

The credit risk of these banks mainly arises due to non-payment of loan by borrower's poor appraisal of borrower's financial condition and substandard collateral. Poor tracking of borrowers and improper diversification of lending across industries also result in higher credit risk in commercial banks. The major problems in credit risk can be categorized into three areas of concentrations; credit processing, and market and liquidity-sensitive credit exposures. The main indicators of loan default (i.e. non performing loan (NPL) indicate that average NPL of NCC Bank is more than that of MBL (i.e. 47.76%> 0.76%). In contrary to this, MBL has provisioned more reserve than NCC Bank against the NPL.

The gap analysis of both Rate Sensitive Asset and Liabilities of both the banks depicts that MBL has higher gap than that of NCC Bank. The higher gap of MBL means that the bank has higher amount of mismatch between RSA and RSL. The higher amount of mismatch represents that the bank neither has nor hedged the

asset and liabilities properly to minimize the risk. This also indicates that MBL has higher vulnerability of interest rate changes than NCC Bank.

The gap analysis of Fixed Interest Rate Sensitive Asset (FIRSA) and Fixed Interest Rate Sensitive Liabilities (FIRSL) of both banks depicts that both the banks' asset structure and liabilities have been changing over years. Both banks have negative gap throughout the study period. The average gap ratio of NCC Bank is higher than that of MBL. The higher gap ratio of NCC Bank shows mismatch between FIRSA and FIRSL, which is more than that of MBL.

Similarly the net interest margin of MBL is greater than that of NCC Bank, which indicates that the impact of changes in interest rate on MBL is higher than that of NCC Bank. This means that when there is a change in interest rate on Rate Sensitive Asset and Liabilities, MBL will have greater impact on profit than NCC Bank.

From the above gap analysis, it is found that NCC Bank has managed Interest Rate Sensitive Asset and Interest Rate Sensitive Liabilities better than MBL while MBL has managed Fixed Rate Sensitive Asset and Fixed Rate Sensitive Liabilities better than NCC Bank. The interest rate risk analysis according to NRB directive no. 5 shows that MBL has higher amount of cumulative net profit than that of NCC Bank, which indicates that MBL has positive impact with changes in interest rate.
The analysis of operation risk shows that both the banks have the same sort of operation risk, which includes mainly transaction risk (such as cash shortage and over, 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 the 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.

The risk management procedure in these banks includes four basic procedures. The major outlines for risk management include setting standard for all the transaction such as lending, borrowing etc, and preparing financial reports. A substantial

degree of standardization of process and documentation has been set in both the banks to make decision in a consistent manner and for the resultant aggregate reporting of risk exposure to be meaningful. Similarly, the position for managing the risk as well as jurisdiction limit is also set. Investment policy is prepared in consistent with the NRB guidelines and this is the major guideline for making investment decisions. This policy outlines the amount to be invested in various sectors such as loan and advances, government bonds, shares and debentures of corporation, placements etc. Likewise, to ensure the proper functioning of bank, the monitoring and controlling body of the bank frequently monitors all the jobs performed. The main body for monitoring & controlling the various department and branches is Internal Audit and Compliance Department. These departments continuously audit the functioning of various departments to ensure that organization is functioning professionally and in consistent with bank's internal policy as well as NRB policy. In both the banks, Internal Audit Department reports to the Audit Committee, which include both the top level management and board of directors.

5.2 Conclusions

Nepalese government has started to liberalize the financial sector since 1980s to streamline the financial sector of the country. Prior to liberalization, there were 2 commercial banks, 1 central bank, and 2 development banks. 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 the establishment of 32 commercial banks. Though banking sector developed rapidly in quantity, it has remained far behind in terms of quality compared to international banks. Commercial banks are established with an objective to maximize the shareholders value by performing the function of mobilizing the idle funds collected from the society to productive sector, which will help to achieve the economic development of a country. Bank needs proper handling of several problem and challenges. In current scenario, the major challenge of commercial banks is competition among 32 commercial banks.

Proper risk management is required to remain competitive in the market & achieve the goals. The major banking risks include credit risk, market risk (i.e. liquidity risk, interest risk, operation risk etc). Among these risks, credit risk has the major impact on banking (i.e. more than 60 %). Because of the credit risk, the Non Performing Loan (NPL) of bank will increase. With the increase in NPL, the loan loss provisioning will also increase simultaneously leading to decrease in profit. The decrease in profit results in low dividend to shareholder and bonus to employees.

Similarly, poor management of asset and liabilities having different maturity period is the main problem that results in other market risk such as liquidity risk, interest rate risk etc. The other component of market risk includes the interest rate risk.

For proper management of these risks, both banks have their own set of policies and practices, which is in consistence with NRB guidelines. 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. Organization structure of these banks is frequently restructured for proper risk management.

Gap analysis is the major tool for managing the liquidity risk. The top management analyzes the gap between asset and liabilities and makes decision to make adjustment for it. Further, the top management decides how much liquid asset is needed to be kept in the bank. Treasury and finance depm1ment of these banks continuously manage the CRR in NRB to ensure that statutory requirement is met.
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 polices are prepared as per NRB guidelines. Similarly, employees' training is also the major tools for minimizing the operation risk in these banks.

5.3 Recommendations

From the above analysis of the various risk management procedure of both NCC Bank and MBL, following recommendations are made to these banks, NRB and Nepal government in respect to different risk management:

- In the current context, both banks have been applying old techniques for managing the risk. These techniques should be changed with changes in the environmental forces. For management of risk associated with asset and liabilities management, banks need to adopt new methods such as Simulation Method and Value at Risk (VAR) Method etc.
- Both the banks seem conservative in terms of dealing risks. Credit risk has been given high priority in both the banks. To remain competent in the market both the banks need to identify and deal with new risks that arise with changes in environmental forces.
- Both the banks need to upgrade the system with the changes in both level and pace of technological changes in 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 be operational. Similarly, handling of new system and procedures also assist banks to decrease it operation risk.
- Both banks should give focus in the system of check and balance, which helps to reduce the risk.
- 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 and compliance to ensure that the directives are properly followed up.

- It is often said, “Prevention is better than cure". Hence it is recommended for both the banks to take preventive measures before the risk occur and will suffer loss. Both the banks are recommended to develop an information system to gather all the possible information and activities to take timely precaution.
- This sort of practice seems risky and non-profitable, as there is least chance of covering default loan when there is no collateral and 100 % provision of loan amount need to be maintained. So MBL needs to stop lending without any collateral.
- NCC Bank and MBL have higher amount of loan and advances in total asset. So to minimize the credit risk, the diversification in investment is needed in both the banks. These banks need to diversify investment in government bonds and placements etc.
- The board of directors should have responsibility for approving and periodically (at least annually) reviewing the credit risk strategy and significant credit risk policies. The strategy should reflect the bank’s risk tolerance and the level of profitability the bank expects to achieve for incurring various credit risks.
- Senior management should have responsibility for implementing the credit risk strategy approved by the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk. Such policies and procedures should address credit risk in all the bank's activities and at both the individuals credit and portfolio levels.
- Both banks should identify and manage credit risk inherent in all products and activities. These banks should ensure that the risks of products and activities new to them are subject to adequate risk management procedures and controls before being processed it forwards for the approval to the members of the board of directors or its appropriate committee.
- Both the banks should maintain a tight grip on business practice. This includes proper implementation of internal and NRB policies, keeping eyes on new risks that could arise due to changing market condition, new regulatory requirements and intensifying competitive pressures.

- Both the banks should constantly evaluate its internal principles and policies related to day-to-day operation. Those policies need to be evaluated periodically to ensure policies are time relevant.
- Even if banks have the appropriate control; mitigation and managerial backstops of place, their culture does not allow them to follow the appropriate control mechanism. Both the banks need to stop a tendency to say one thing but do another.
- Both the banks need to prepare and strictly adhere to their anti money laundering policies. Since both the banks have only Know Your Customer policy for preventing the money laundering, both the banks should prepare and implement AML policies.
- Nepal Government should draft and implement Anti Money Laundering Policy to ensure country has given high priority to combat money laundering.
- From 2009/10, Nepal Government has allowed to establish banks in Nepal by foreigners without joint venture of Nepalese investors. This will certainly provide threat to Nepalese banks which are already established. So Nepal Government should provide some incentives to the local banks and banks that are already established to face the intense competition of foreign banks.
- Nepal Government should provide adequate measures for taking action against the willful defaulters.NRB, in addition to imposing directives, needs to provide training for commercial banks to apply new methods and system. NRB should make a clear cut policies related to banking supervision. Confusing policies need to be removed.
- Regarding to the Asset and Liabilities gap analysis, NRB should specify the maximum amount of gap a bank can maintain on asset and liabilities of different maturity period.
- NRB has been mainly focusing on credit risk of the banks. Therefore, NRB needs. NRB needs to establish a separate credit rating organization, which will help to minimize bank's credit and operation risk.