

CHAPTER ONE

INTRODUCTION

1.1 General Background:

Nepal is an underdeveloped country. The economy of Nepal is predominantly depending on agriculture and foreign employment. Agriculture is the biggest but subsistence sector where still more than 70 percent of the total population derive their livelihood directly from agriculture. According to preliminary assessment of the Central Bureau of Statistics, Government of Nepal for fiscal year 2011/12, GDP at basic price has grown by 3.5% in comparison to 4.6% previous year. Whereas the inflation remained at 7.8%. Nepal's merchandise exports to India and overseas rapidly declined over the years resulting in a huge trade deficit. The balance of payment of foreign trade ,around 80% is covered by the remittance received from worker in 2011/12. Remittance has been the major contributor to manage BOP. The economy is being highly dependent on foreign employment.

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 of money but as the leader of development. Banks are not just the storehouse of the country wealth but are the reservoirs of resources necessary for economic development (Radhaswami and Vasudevan 1991)

According to Crowther "A banker is a dealer in debts. The bankers business is then to take the debt of other to people, to offer his own in exchange and thereby to create money."

According to World Bank "Banks are the financial institutions that accept funds in the form of deposit repayable on demand or short notice."

Commercial Banks are the largest depository institution in size. They accumulate the savings from various savers from all the economic sector and mobilize them to productive and effective sectors in a systematic manner. Therefore sound banking system is a crucial means to accelerate the development of a country by strengthening the economic condition in today's globalized economy of twenty-first century. This requires a 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 which will enhance the economic and social welfare of a country.

In the context of Nepal, the fully state owned commercial bank is Nepal Bank Limited, (NBL) established on 30th Kartik 1994 according to Nepal Bank Act 1993. Nepal Rastra Bank (NRB) the central Bank of Nepal was established as Nepal Rastra Bank Act 2012 on 14th Baishak 2013 B.S. Subsequently another fully state owned commercial Bank Rastriya Banijya Bank(RBB) was established on 10th Magh 2022 under Rastriya Bank Act 2021. It was the second commercial Bank. After adopting the economic liberalization policy by government of Nepal, joint venture commercial banks are started to open. Nepal Arab Bank in earlier, now Nabil Bank Limited is the first joint venture private sector bank of Nepal. It was established on 20th Baishak 2040 BS. After the establishment of Nabil there have been rapid growth in commercial banks and financial institutions. The number of commercial Banks are 32.

With the growth of Banking industry, the challenges and risks are also increased simultaneously. Increasing competition among commercial banks and other financial institution, country's weak economic activities, unsecure areas for loan and investment, unfriendly business environment, energy crisis, slow down in housing and real state, liquidity crisis, growth in deposit interest, has created risks and challenges for sustain and grow to the banking industry. In addition, political instability, weak economic activities, adoption of free market and economic liberalization policy, development in science and information technology etc. has made commercial bank more challenging complex and risky. So the commercial banks are needed to be more conscious in operation.

1.2 Brief Introduction of Banks under study:

The third commercial bank and first joint venture bank of Nepal Arab Bank Limited in earlier now Nabil bank limited and fifteenth commercial bank of Nepal, Kumari Bank Limited (KBL) has been selected for the research study. This study will show the comparison of risk management between both commercial banks.

1.2.1 Nabil Bank Limited:

Nabil Bank Limited was earlier known as Nepal Arab Bank Limited. It is the first joint venture bank of Nepal, with Dubai Bank Limited under a technical service

agreement. It was started operation in July 1984 (20th Baishak 2040). The bank was incorporated with the objective of extending international standard modern banking services to various sectors of the Nepalese society. It provides a large range of commercial banking service through 49 point of representation across the country and over 170 correspondent banks across the globe. It has its head office at Kamaladi Kathmandu. Nabil Bank as a pioneer in introducing many innovative products and marketing concept in the domestic banking sector represents a mile stone in the banking with customer satisfaction measured as a focal objective while doing business.

The bank's operation including day to day operation and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with the modern technology which includes ATMs, Credit Cards, State-of-Arts, World renowned software from Infosys Technologies System, Bangalore India, Internet banking system and Tele banking system. The bank is providing full-fledged commercial banking services to its clients.

From it's inception period as the first joint venture bank, the bank has been a leader in term of bringing the best international standard banking practices, products and services in Nepal. The mission of bank is to be a "Bank of the first choice" to all of its stakeholders. For customer, It want to be the first choice in meeting all of the financial requirements, for share holders it want to be the first choice to investment, for regulators if want to be an example of a model banks, It want to be an outstanding corporate citizen in all the communities it work in and finally It want to be the first choice as an employer with whom to build a career. To achieve this mission, it has a core set of values C.R.I.S.P i.e. Customer focused, Result Oriented, Innovative, Synergistic and Professional. The bank is committed to live these values to make an unique Nabil Bank Limited.

The bank is providing full range of products and services. The bank is always concerned about how it can create values for its customers, the best in the market. The bank at different intervals engineers and re-engineers products and services in sync with time technology and market. Bank has deposit accounts in local and foreign currency, visa and master card denominated in rupees and dollars. Visa electron debit cards, personal lending products for Auto, Housing properties, Apartment, education. Personal overdraft and Trade financing products i.e. SME Banking, Treasury services

and corporate financing is providing to meet financial requirements which may pride the bank being "Your Bank at Your Service".

Nabil Bank has considered risks as a threatening factor. The bank constantly in assessing its risk exposures and managing them Risk Management unit pursuing measure to address banking risks reviewing policies, products papers, systems, procedures, limits etc. on regular basis to ensure the risks are effectively managed strategic planning unit assesses the macroeconomic indicators both on national and international level and observes the market trend and the risk involved in the projects. Internal Audit Department reports directly to the board of director on the banks business practices and their compliances along the line of set norms and standards.

1.2.2 Kumari Bank Limited

Kumari Bank Limited (KBL) is a fifteenth commercial bank of Nepal. It has started commercial operations from 2nd Chaitra 2057 B.S. (3rd April 2001) Its head office is located at Durbar Marg Kathmandu. The objective of bank is providing competitive and modern banking services in Nepalese financial market. The bank was established with fully domestic capital of which 70% is contributed by promoters and remaining from public.

KBL has been providing wide-range of modern banking services through 28 points till of representatives located in various urban and semi-urban part of the country. The bank is pioneer in providing some of the latest, lucrative banking services like E-Banking and SMS Banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The adoption of modern Globus software developed by Temenos NV, Switzerland and arrangement of centralized data base system enables customer to make highly secured transactions in any branch regardless of having account with particular branch. Similarly, the bank has been providing 365 days banking facilities, extended banking hours till 7:00 PM in the evening, utility bill payment services, Inward and outward remittance services, online banking services.

Visa Electronic Debit card, which is accessible in entire visa linked ATM's including 33own ATMs and point of sales (POS) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer

value and satisfaction by banking transparent business practice, professional management, corporate governance and total quality management as the organizational mission.

The key focus of the bank is always center on serving unfulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive banking products and services in their door steps. The bank always prioritizes the priorities of the valued customers.

The Kumari Bank Limited has been regarding risks as most adversely affecting factors. A separate risk management division has been established and related committees and sub committees have been formed to regularly monitor and protect the bank from potential risks associated with different activities of the bank. Policies and regulations have also been formed and implemented to manage the numerous risks associated with banking activities as well as other potential risks.

1.3 Statement of Problem

Commercial Banks are the large group of depository institution in size. They accept various types of deposits and channelize those deposits in lending activities either directly by issuing loan or indirectly investing through capital market. Average interest rate in deposit is comparatively less than the average interest in lending and investing. The difference between average interest on interest earning assets minus average interest paid in interest paying liabilities is interest spread which is the profit of the banks.

Commercial Banks are the profit oriented financial institutions. They have permitted to raise funds in the form of deposit. They have ability to create demand deposit. Therefore, in general perception, commercial banks are very profitable institution. But unlike the general perception the banking industry has many challenges to sustain and grow within the industry.

Banking industry is totally focused on lending business. Because of the decrease in economic activities in non agriculture sector, labor problems, energy crisis, liquidity crisis, failure to implement to govern budget in time have been a decline in the economic growth. Due to the sluggishness in the real state sector, the stagnancy in share market business and the decline in progress of productive sector loan of the entire banking sector have a direct effect on banks' loan and investment.

In Nepal 32 banks are operating with similar products and services. There are approximately 90 Development banks and 79 financial company are operating. These growths in banks and finance companies have made tough competition. It result decrease in interest margin and affect the profitability of banks.

The age of computerization in banking i.e. computerized banking system, Internet banking, Mobile banking, ATM, credit card services also has brought the risk of electronic theft of amount which increase challenges to the banks and customers.

The interest rate on the deposit and loan has been changing. The inflation rate of country has been increasing dramatically. The increasing foreign exchange transactions invite the increased risk due to the depreciation of foreign exchange rate which may affect the commercial banks profitability.

The unified directives risk management guideline issued by NRB has defined risks related to credit risk, interest rate risk, foreign exchange risk, liquidity risk and operation risks. NRB has focused to maintain adequate capital to safeguard the interest of investors, depositors and shareholders. For this purpose NRB has implemented Based II, Capital framework for providing enough cushions to absorb the risks faced by commercial banks. The directions, policies and guidelines of unified directives, related to the bank operation may be another challenges for implement in these adverse economic situation. In context of challenges and risks facing by Nepalese Commercial banks. The research problem, defined above will lead the following research questions.

- What types of risks exist to the commercial banks and how it is important to manage?
- How do different risks affect the profitability of commercial bank?
- How the different risks of commercial banks can be analyzed?
- What action can minimize these risks in order to maximize the profit?
- Are the commercial banks implementing the NRB directives and Basel II?
- What are the different system adopt by the commercial banks for minimize risks?

1.4 Objectives of the study

The objective of the research study is as follows.

- To analyze different types of risks of banks by Nabil Bank Ltd. and KBL.

- To analyze Nepal Rastra bank's directives and measures on the risk management of commercial banks.
- To analyze the risk management system of Nabil Bank Ltd. and KBL.

1.5 Focus of the study

The study is mainly focused to analyze the various risks and their management in reference to NRB directives and measures. the study will be the concentrate to the risks of banks through sample banks. So the study will mainly focus on following things.

- What types of risks are existing in the banking business?
- How does NRB directives and measures trying to manage risks of banks.
- What are the conditions of the sampling banks regarding to the risks and risk management.

1.6 Limitation of study

The study has been performed on various constraints and certain limitations which are listed below.

- The study is based on secondary data provided by the Nabil Bank Ltd. and Kumari Bank Ltd. The study's results and conclusions are highly depending on reliability of data. Therefore generalization of whole banking industry cannot be made.
- The study will be limited to the view point of risks management.
- The evaluation is made from Annual Reports published by the banks.
- This study has been performed on five year data from to fiscal year 2006/07 to fiscal year 2010/11.
- The study may not be precious as it is prepared to partial fulfillment of requirement of MBS program.

1.7 Organizations of the study

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

CHAPTER ONE: 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, Limitation of the Study and Organization of the Study.

CHAPTER TWO: 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 Research Gap.

CHAPTER THREE: Research Methodology

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

CHAPTER FOUR: 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 FIVE: Summary, Conclusions and Recommendations

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

Bibliography

Annexure

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

Commercial banks, as financial institutions, perform a number of internal functions. Among them, providing credit is considered as most the important one. According to of H.D. Crosse (1963), “Commercial banks are very risky one. For this, commercial banks have to pay due consideration while formulating investment policy regarding loan investment. Investment policy is one facet of the overall spectrum of policies that guide banks investment operations.”

Risks management is the most important issue for every organizations. It is too much big agenda for the Banking industry. It is clear that the risk exposure of the financial system has been increased by the changes of economic factors related to National and International. For minimize risk of commercial banks and Banking regulatory institution has been trying to upgrading their risk management and control system.

2.2 Meaning of Risk and Risk management

In general, risk is viewed as negative sense. It is an undesirable. It might adversely affect to achieve the goals. But in broad sense risk is simply some things fluctuating out differently to what is expected or planned. Risk can be defined as the possibility of deviation of the actual return from the expected return. Kupper (2000) defines risk as the volatility of corporation's market value.

Different investors define risk in different ways. In general, risk can be defined as the likelihood that actual return from an investment will be less than the forecast return. Stated differently, it is the variability of return from an investment. (Hampton, 1998)

Risk is defined in the Webster’s dictionary “as a hazard a peril: exposure to loss of injury”. Thus, risk refers to chance that some unfavorable events may occur. If we bet on the horses, we are risking our money. If we invest in speculative stocks we are taking a kind of risks in a hope of making appreciable returns. (Brigham, Capeskin and Erhards, 2001)

A risk is a random event that may possibly occur and, if it did occur and, would have a negative impact on the goal of the organization. Thus a risk is composed of three elements. The scenario its probability of occurrence, and the size of impact if it did occur (either a fixed value or a distribution) (Davis vose ,2007)

Risk is the variability of possible returns around the expected returns of an investment. Each investor has his/her own attitudes towards risks and how much he/she can tolerate. Since, investment have risks associated with them, the investors must determine combination of alternatives matches that tradeoff the risk and compensation for percept risks. (Basnet, 2006)

In reality, risk occurs when we cannot be certain about the possible future outcomes of particular activity or events. So, we are not sure that risk will occur in the future consequently. Risk results from the fact that the action such as investment can provide the more than one outcome in future. (Western and Brigham)

According to Saunders and Cornett, 2002, “A major objective of the financial management is to increase the Financial Institutions’ return for its owners. They often come however at the cost of increased risk. The effective management of this risk is central to a financial institutions’ performance. Indeed, it can be argued that the main business of financial institution is to manage the risk for the purpose of maximization of return. So, financial institution manager must devote the significant time to understanding and managing the various risks to which their financial institutions are exposed”.

Therefore, risk is a future event with probability of loss or benefit. Two component of risks are, uncertainty and exposure. Impact of risk can be either positive or negative. The risk, may constitute opportunity for benefit or threats to success. This view allows the possibility that risks can be turned into opportunities if managed effectively.

Risk management is very much important issue for every organization. It is concerned with strategic management. Risk management is the process of measuring or assessing risks and developing strategies to manage the risks. In other words, it is a process whereby risks associated with organizational activities address methodically to achieve goal and for sustained benefit with in each activity and across the portfolio of activities. Strategically, risk can be managed, transferring the risk to another party,

avoiding the risks, reducing the negative effects of the risk and accepting some or all of the consequences of a particular risk.

2.3 Types of Risks faced by Commercial Banks

Banks are always faced with different types of risks that may have a potentially negative effect on their business. Risk taking is an inherent element of banking and indeed profit are in part the reward for successful risk taking in business (RMG 2010). Excessive risks and poorly managed risks can lead the losses and endanger to the safety of banks depositors. Sound risk management helps to assess measure the risks and reduces the negative effects. It enhances the competence for success.

The risks particularly exposed with banking operations are credit risks, Market risks and Operational risks.

2.3.1 Credit Risks

Credit risks arises due to uncertainty in a debtors and counter party's ability to meet its obligations in accordance with agreed upon terms. In other words, it involves inability or unwillingness of borrower or counter party to meet agreed commitments in relations to lending, trading, hedging, settlement and other financial transactions. Anthony Saunders defines the credit risk, The risk that promised cash flow from loans and securities held by financial institutions may not be paid in full. According to Santomero (1997) views Credit risk is generally made up of transaction risk or default risk and portfolio risk. The portfolio risk comprises with intrinsic and concentration risk. It depends on both internal and external factors. The internal factors are deficiencies in loan policies, absence of prudential credit concentration limits, inadequately defined lending limit for loan officer/committees, deficiencies in appraisal of borrower's financial position. Excessive dependence on collaterals, inadequately risk pricing, absence of loan review mechanism and post sanction surveillance etc. The external factors are the state of economy wide swings in commodity/equity price, Foreign exchange rates and interest rates. Trade restrictions, economic sanctions, Government policies etc.

Counter party risk is another variant of credit risk. It depends on non-performance of a trading partner due to an adverse price movement caused by systematic factors or from other political and legal constraints that was not anticipated

by the principals. Diversification is the major tool for controlling non systematic counter party risk.

The objective of credit risk management is to maximize a bank's risk adjusted rate of return by maintaining risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in credits or transactions. It is a critical components of a comprehensive approach of risk management. It is essential to long term success for every banking organizations.

2.3.2 Market Risk

Market risk is defined as the risk of losses in on-balance sheet and off-balance sheet positions arising from adverse movement in market price (NRB Directives 2012). Market risk arises to a bank resulting from movements in market prices. Particularly, changes in market interest rates, foreign exchange rates and equity and commodity prices causes market risk. Market risk is defined as the risk of losses in on and off balance sheet positions arising from movements in market prices. The major constituents of market risk are:

-) Interest rate risk
-) Foreign exchange risk
-) Liquidity risk

2.3.3 Interest rate risk

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

2.3.4 Foreign Exchange risk:

Foreign exchange risk is the risk of negative effects in financial result and capital of the bank caused by change in exchange rate. It results adverse movement in

current exchange rates on the value of open foreign currency position. As a result, banks may suffer losses due to change in discounts of the currencies concerned.

Foreign exchange position arises from trading in foreign currencies, holding foreign currency position in banking book (e.g. form of loan, bonds deposits, cross-boarder investment), engaging in derivative transactions that are denominated in foreign currency for trading or hedging purposes.

In foreign exchange business banks also face the risk of default of the counter parties or settlement risk. Thus bank may incur replacement cost which depends upon the currency rate movement. Bank also face another risk called time zone risk which arises out of time lags in settlement of one currency in one center and the settlement of another currency in another time zone. The foreign exchange transactions with counter parties situated outside Nepal also involve sovereign or country risk.

2.3.5 Liquidity Risk:

Liquidity risk is the ability of an institution to transform its assets into cash or its equivalent in a timely manner at a reasonable price to meet its commitments as they fall due. It is concerned a major risk for banks. It arises when the cushion provided by the liquid assets are not sufficient enough to meet its obligation. In such a situation banks often meet their liquidity requirements from market. Funding through market depends upon liquidity in the market and borrowing banks liquidity(RMG 2010).

Liquidity risk can be described as the risk of a funding crisis. Liquidity risk arises from growth an unexpected expansion of credit, large off balance sheet exposures, heavily on large corporate deposit, rapid growth in assets etc..

Liquidity risk should not be seen in isolation. It often triggered by consequence of other financial risk such as credit risk, operational risk etc.

An effective risk management system is very important for the bank. Risk management involves analyzing banks on and off-balance sheet positions to forecast cash flow for finding requirement, identifying the access to funding market, understanding the nature of risk exposure to existing as well as future risks, at both the transactions and portfolio level. Key elements of an effective risk management process include an efficient MIS system to measure, monitor and control existing as well as future liquidity risk and reporting them to senior management.

2.3.6 Operational Risk:

Operational risk is the risk of negative effects on the financial results and capital of the bank caused by omissions in the work of employees, inadequate internal procedures and processes, inadequate internal procedures and process, inadequate management of information and other systems and unforeseeable external events(RMG 2010) .

Operational risk is associated with the problems of accurately processing, settling and taking or making delivery on traders in exchange for cash. It also arises in record keeping, processing system failures and compliance with various regulations. It is associated with human error, system failures and inadequate procedures and controls. It arises from the potential that inadequate information system, technology failures, breaches in internal controls, fraud, unforeseen catastrophes or other operational problems. It may result in unexpected losses or reputation problem. Operational risk exists in all products and business activities.

Operational risks quantification is difficult. Bank should identify and assess the operational risk inherent in all material, products, activities, processes and systems, and its vulnerability to these risks. To manage operational risk management should evaluate the adequacy of tools and techniques both in term of its efficiency and effectiveness. Operational risk in the bank is carried out as strategy and policy.

2.4 Review of NRB directives

The main focus of this study is to analyze the directives of NRB related to risks management of commercial banks. The directives is issued time to time from central bank to control and monitor the commercial banks. The directives is the main tools to regulate banking activities of the commercial banks. The NRB has issued unified directives to regulate all categories (A, B and C class) of financial sectors in Nepal to ensure that the banking industry functions as per the international standard .

The unified directives 2012, has prescribed following prudential for different risks.

2.4.1 Credit Risk and Directive No. 2 and 3

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 made necessary.

According to unified directive 2012 banks should classify outstanding loan and advances on the basis of aging of principal amount into the following categories.

a. Pass

Loans and advances, which principal and interest have not overdue and which have overdue by a period up to 3 month shall be included under this categories. These are classified and defined as performing loan.

b. Substandard loan

All the loans and advances which principal and interest are overdue by a period from 3 months to a maximum period up to 6 month. Shall be included in this categories.

c. Doubtful loan

All the loans and advances which are overdue by a period of 6 month to 1 year shall be included in this categories.

d. Loss

All the loans and advances which principal and interest have overdue by a period of more than 1 year shall be included in this categories.

The loans and advances which are in past class and which have been rescheduled or restructure are called as The Performing Loan and The Substandard doubtful and loss categories are called Non Performing Loan.

Additional Provisions relating to Pass Loan

Loans and advances fully secured by gold, silver, fixed deposit receipts and HMG securities shall be included under Pass loan categories where collateral of fixed deposit receipts or HMG securities or NRB Bond is placed as securities against loan for other purposes, Such loan has to be classified on the basis of ageing.

Additional Provision in Respect of Loss Loan

The loans and advances whether or not got deadline for payment is expired in case these loans and advances having any or all of the following discrepancies has to be categorized as the loss loan.

- i. The market price of collateral cannot secured the loan..

- ii. The borrower has been declared bankrupt.
- iii. The borrower is not identifying or disappears.
- iv. Purchased or discounted bills are not realized within 90 days from the due date.
- v. The credit has been used for the purpose originally intended.
- vi. Owing to non-recovery, initiation as to auctioning of the collateral has passed six month and If the recovery process is under litigation.
- vii. Loans provided to the borrower included the black list and where the credit information Bureau blacklists the borrower.
- viii. The Project/business is not in a condition to be operated or project or business is not in operation
- ix. The credit card loan is not written off with in 90 days from date of expiry.
- x. The L/C, guarantee and other possible liabilities is converted into fund based loan and such loan is not recovered within 90 days.
- xi. The trust-receipt loan is expired.

Loan loss provision

The loan loss provisioning on the basis of the outstanding loans and advances and bills purchases are classified as per the new unified directives 2012, shall be provided as follows:

Classification of Loan	Loan loss provision
Pass	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Loss loan/The loan extended to black listed persons, firms, company or corporate body	100 Percent

Rescheduling and Restructuring 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:

- i. The external causes contributing to deterioration of the quality of loan.
- ii. 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.

- iii. Evidence showing that documents relating to loans and security are adequate.
- iv. The bank is convinced of the possibility that the rescheduled or restructured loan would be recovered.
- v. For rescheduling and restructuring loans at least 25 percent of interest due to be paid until the date of rescheduling or restricting has been paid.

Loan Loss Provisioning in Respect of Reschedule Loan

- i. Except for priority sector, in respect of all types of rescheduled or restructured loan, if such credit falls under pass category according to NRB directives, loan loss provisioning shall be provided at minimum 12.5%
- ii. In caser of rescheduling or restructuring of insured or guaranteed priority sector credit, the loan loss provisioning shall be provided at one fourth of the percentage mentioned in clause (i)
- iii. In respect of restructured loans, the bank accepting the loans restructuring has to provide loan loss provision classifying the loan under the same classification as existed. The bank accepting the loan is restructuring shall obtain certification from the concerned bank of financial institution as to the existing classification.

2.4.2 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 obligator limit for the fund-based loan is 25% of core capital where as for non-fund 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.

Provision relating to Housing, Land and Real Estate Loans

According to directives No. 3 the amount of loan disbursed against security of having land and real estate should not be more than 60 percent of the fair market value under collateral security. More than 25 percent in real estate and with residential housing more than 40 percent of the total loan is not allowed to disburse loan.

The NRB directives has made provision real-estate loans have to brought up to 10 percent of the total loan and both real estate and residential housing loan have to brought up to 25% till mid-July, 2012.

If real estate and residential housing loans are not brought under the limit fixed within provisioned 150 percent while calculating the total risk weight assets.

2.4.3 Operation Risk and NRB Directives No. 5

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

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.

- i. Maturity period up to 90 days
- ii. Maturity period between 90 days to 180 days

- iii. Maturity period between 180 days to 270 days
- iv. Maturity period between 270 days to 1 year
- v. **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.

With the objective of minimizing the liquidity risk of bank and financial institutions a limit has been fixed, proportion of the total loan and advance may not exceed 80% of total deposits.

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

The 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

- i. The gap is determined by deducting total liabilities from the total assets of various period and such gap can be positive or negative.
- ii. For minimizing the interest rate risk, the cumulative gap should have to be calculated at each maturity period.
- iii. The changes in interest rate should have to be estimated (generally 1 percentage can be assumed)
- iv. 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:

$$\text{Interest Rate Change (IRC)} \times \frac{\text{Maturity period}}{\text{Days in a year}} \mid \text{Change in interest rate}$$

- v. 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.

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 most of core capital.

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

2.4.4 Capital Adequacy Ratio (Directive No. 1)

Capital adequacy ratio is a ratio of banks capital to its risk weighted assets. The ratio determines the banks capacity to meet the time liabilities and risks. In the most, formulation of banks capital is the cushion for potential loans and protect banks depositors and investors. Banking regulators define and monitor CAR to protect depositors there by maintaining confidence in the banking system.

Capital Adequacy ratio shows the relationship between banks capital fund and total risk weighted assets. The total risk weighted assets, include both on and off balance sheet items, which has been adjusted with risk exposure of certain percentage rate. The risk weight of asset ranges from zero for cash, balance a NRB and

investment in government bonds to 150% for loans and advances. The higher the risk weighted asset means lower will be the capital adequacy ratio.

According to unified directive 2012, the capital fund includes two types of capital:

Core Capital

Core capital refers to primary capital of a bank, which comprises of equity capital and disclosed reserved. This is the key element of capital on which most market Judgment are made. It contributes to profit margin and banks ability to compete.

Core 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 and Bonus (Current Year)
8.	Capital Adjustment Fund
9.	Other Free Reserve
10.	Less; Goodwill
11.	Less; Fictitious assets
12.	Less; Investment in equity in licensed financial institution
13.	Less; Investment in equity of institutions with financial interests
14.	Less; Investment in equity of institutions in excess of limits
15.	Less; Investment arising out of under writing commitments
16.	Less; Reciprocal Cross holdings
17.	Less; Other Deductions

Table 2-1 Core Capital

Supplementary Capital

Supplementary Capital refers to all the reserves which have been passed through the profit and loss account and all other capital instruments eligible and acceptable for capital purposes. In case where the core capital of a bank is negative, the supplementary capital for regulatory purposes shall be considered as zero.

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

Table 2-2 Supplementary Capital

Capital Fund

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

$\text{Capital Fund} = \text{Primary Capital} + \text{Supplementary Capital}$

Equation 2-2 Capital Fund Equation

Risk Weighted Asset, on the other hand, refers to the all on and off balance sheet assets, which has provided certain percent of risk weight that ranges from zero to 200 percentage.

On balance sheet asset includes four types of risk-weighted asset (i.e. 0%, 20% , 100 % and 150%). 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 Inter-bank lending. 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 and Inter-banking lending. 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). 150% risk weighted assets includes Real estate/ residential having loans exceeding the limits. Off balance sheet assets includes 7 types of risk-weighted asset (i.e. 0%, 10, 20%, 50%, 100%, 150% and 200%). Bills collection has 0% risk forward exchange contract has 10% risk. Letter of credit with foreign exchange contract has 10% risk 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 and credit purchase and repurchased and take over. 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. 200% risk weight assets includes unpaid guarantee claims. Total risk weighted assets comprises with on balance sheet and off balance sheet risk weighted assets. The Capital Adequacy ratio of a bank is calculated as follows:

i. Capital Adequacy Ratio for Core Capital

$$a. \text{ Core Capital ratio} = \frac{\text{Core Capital}}{\text{Total of the risk Zweight assets}} | 100$$

Equation 2-3 Capital Adequacy Ratio for Core Capital

ii. Capital Adequacy Ratio for Total Capital Fund

$$b. \text{ Capital fund ratio} = \frac{\text{Core Capital} \Gamma \text{Supplementary Capital}}{\text{Total of the risk Zweight assets}} | 100$$

Equation 2-4 Capital Adequacy Ratio for Total Capital Fund

According to NRB directive 2012, the statutory Capital Adequacy Ratio (CCR) for core capital is 6% where as CCR for total capital fund is 100% for A class commercial banks.

2.5 Review of Empirical Works

Akhigbe and Whyte (2004) in their research paper, “The Gram-Leach-Billey Act” of 1999: Risk implications for the Financial Service Industry have focused on risk implication of banking and private sectors. The research paper has included many other studies some of the studies find that bank expansion into banking activities can affect of events that permitted only limited entry by banks into non-banking activities. The study is conducted on systematic, unsystematic and total risk, such risk are calculated by using statistical tools i.e. variance and standard deviation and T-statistic. The study has included 340 banks for the sample size than they partition two sub- samples: 46 large banks and 294 small banks. The major finding of the study is that evidence of a significant decline in systematic risk for the banks securities firm and insurance companies but a significant increase in total and unsystematic risk for the banks and insurance companies. The study has included five years period data. The study also found that bank and insurance companies are less risk than other securities business. If security wants to decline in risk, security firm can be explained by their ability to diversify

into less risky banking and insurance activities. The research paper result suggests that regulators should carefully monitor and supervise banking activities in new era of financial modernization to mitigate adverse effects from the increase in risk.

Pagano's (2001) has a study on how theories of Financial Intermediation of Corporate Risk-Management Influence Bank Risk-Taking Behavior. This paper has based on the relation for the risk taking and risk management behavior from a both corporate finance and banking perspective. That data set covers the period from 1986-94, 1986-90 and 1991-94 but overall time of the study is 9 year period. In this study, the research scholar has used statistical tools that are the mean, standard deviation, coefficient of various, and interest rate risk. The main objective of the study is to examine the relation for risk taking and risk management behavior for both corporate financial and a banking perspective. After combining the theoretical insights from the corporate finance and banking literatures related to hedging and risk taking the paper reviewed empirical tests based on these theories to determine which of these theories are best supportive by the data.

Management incentives appear to be must consistently supported rational for the describing how bank manage risk. In particular, moderate/high levels of equity ownership reduce bank risk while positive amount of stock option grants increase bank risk-taking behavior. The empirical tests of theory of corporate risk management need to consider individual subcomponents of total risk and the bank ability to trade these risks in a component financial market.

Berkowitz and Brien's (2002) in their research paper "How Accurate are Value-At-Risk Models at Commercial Banks" has focused on first direct evidence on the performance of value at risk model for trading firms. The result shows that VAR forecasts for six large commercial banks have exceed nominal coverage levels over the past two years and for the some banks, VARs we substantially removed from the lower range of trading. While such conservative estimates imply higher levels of capital coverage for trading risk, the reported VARs are less useful as a measure of actual portfolio risk.

They have used standard deviation, means, correlation coefficient and VAR correlation coefficient. To a certain extent, the study is limited by the fact that banks only forecast a single percentile of the portfolio distribution significant more could be

learned about the empirical performance of internal valuation models of density forecast were recorded. Density forecast evaluation techniques described in Disbold, Gunther and Tay (1998) and Berkowitz (2001) provide researchers with substantially more information to assess the dimension in which models need improvement and those in which models do well.

Basel Committee on Bank Supervision (2005) 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 lead 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 principals have been laid down for the credit risk management. They are:

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

Wenner, Navajas, Trivelli and Tarazona (2007), in their article, "Managing Credit Risk in Rural Financial Institutions in Latin America", have stated that credit risk management in Latin American rural financial institutions is improving and evolving, but much still needs to be done. Many of the institutions surveyed demonstrated success as measured by high overall rates of profitability, low delinquency rates in both general and agricultural portfolios, and sustained growth rates in agricultural portfolios over time. Nonetheless, the paucity of institutions active in rural areas and expressed desires for better risk management systems, the relatively small loan sizes, and restricted terms indicate that the situation is less than optimal.

Massive credit expansion in developed countries has been due in large part to the introduction and wide diffusion of risk transfer techniques (insurance, securitization, derivatives, etc.) and the wider acceptance of different types of

collateral (inventories, accounts receivables, warehouse receipts, etc.). In Latin America, the most common risk transfer instruments available are publicly financed loan guarantee funds have been plagued with problems of high costs, limited additionally, and moral hazard. Recent work has shown that the most successful guarantee funds in Latin America (in terms of additional) are those in Chile, and that much of the positive impact is due to adequate regulation. In order to introduce some of the other risk transfer instruments more commonly found in developed financial markets, investments will be needed to reform and strengthen the insurance industry, capital markets, credit bureaus, commercial codes, secured transaction frameworks, and information disclosure rules.

Ganzi and Huppman (2010), in their article, "Credit Risk Management: How the Banking Industry is Integrating Environmental and Social Issues: Is Being Green Financially Responsible?", have stated that credit risk management is undergoing an important transition. Banks are no longer treating environmental and other social issues as peripheral to their business concerns; they no longer focus simply on recycling paper or using energy-efficient light bulbs. Based on meetings with 80 officers at 38 leading financial institutions, a study financially supported by Environmental Resources Management (ERM), indicates that the majority of the world's large banks agree that integrating environmental and broader social issues into their core credit risk management process is essential to managing credit risk in the 21st century. Leading banks such as Citigroup, ABN AMRO, Westpac, and Barclays, to name a few, now view these "non-traditional" issues as real credit risk variables that may potentially affect their clients' bottom lines as well as their own.

Fatemi and Fooladi (2009), in their article, "*Credit Risk Management: A Survey of Practices*", have stated that credit risk arises from uncertainty in a given counterparty's ability to meet its obligations. The increasing variety in the types of counterparties (from individuals to sovereign governments) and the ever-expanding variety in the forms of obligation (from auto loans to complex derivatives transactions) has meant that credit risk management has jumped to the forefront of risk management activities carried out by firms in the financial services industry.

In a survey of the largest financial institutions based in the US, the study finds that identifying counterparty default risk is the single most-important purpose served by the credit risk models utilized. Close to half of the responding institutions utilize

models that are also capable of dealing with counterparty migration risk. Surprisingly, only a minority of banks currently utilize, either a proprietary or a vendor-marketed model for the management of their credit risk. Interestingly, those that utilize their own in-house models also utilize a vendor-marketed model. Not surprisingly, such models are more widely used for the management of non-traded credit loan portfolios than they are for the management of traded bonds.

2.6 Review of Thesis

Kupper (2003) has made a study risk “risk management in Banking” to identify the different three types of risk and prescribes the method to handle those risks. He has identified three types of risk in the banking business (i.e. credit risk, market risk and operation risk). According to his study, credit risk has almost 70% of shares in total banking risks. The typical credit risk share of total capital is 80% in Wholesale Banking, 50% on Personal Banking and 10% on financial Market. He has presented the role of a banks’ risk management function in the context of the need to break the vicious cycle of risk. The cycle refers to the process by which a bank assumes uneconomic risks and by definition, key large losses. As a consequence, the risk appetite of the bank is reduced, lending and trading risks are foregone and the bank loses market share. In turn, the bank adopts an aggressive marketing strategy to regain market share and the cycle starts over. His vicious cycle aptly describes the risk taking practices observed in the industry time and time again.

Pandey (2002) 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 increase in operational procedures, increase the operational cost, decrease in interest income, increase in the protection of the depositor’s money through increased capital adequacy ratio and decrease in dividends to shareholders.

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 made study about the credit risk associated with Nabil Bank, SCBL and NBL. The main objectives of her study is To find out the relationship between loan and loan loss provision 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 (2006) 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 Bank 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.

This 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.

Shrestha (2007) has made a study of Credit risk management of Nepalese commercial banks comparative study between Kumari bank ltd. And Machhapuchchhre bank ltd. The objective of study is to examine and analyze how the selected commercial Banks have managed mainly credit risk in this competitive Nepalese banking industry. The specific objectives of this study are to examine the credit risk position, To analyze the credit risk management system and practices and evaluate the organizational structure.

From the study of credit risks, Shrestha has founded that the major problems in credit risk are related to concentrations, and credit processing. From the analysis of primary data, he found that both banks have favored with the bank's single sector, which is up to 10% of total loan. However, the sector wise lending analysis portrays that KBL and MBL have extended up to 19.88% and 30.12% of loan in a single sector respectively of FY 2005/05. Similarly, the exposure on the single sector of KBL and MBL exceeds 10% of total loan in 3 and 5 sectors respectively. In regard to concentration risk, he found, KBL has more concentration in manufacturing and other sector where as MBL has very high loan concentration on manufacturing sector. Similarly, lack of systematic and through credit processing is also the major source of credit risk in these banks. The problems in credit include lack of through credit assessment, absence of testing and validation of new lending techniques, subjective decision-making by senior management, lack of effective credit review process, failure to monitor borrowers or collateral values, and failure of banks to take sufficient account of business cycle effects etc. Likewise the market-sensitive and Liquidity-sensitive exposures also increase the credit risk of these banks. Similarly, he

found that both banks have their own rating system of the credit client and the sectors. Both banks have ranked 1st to the manufacturing sector where as the Agriculture sector has been ranked the last on the basis of priority. KBL has chosen others sector and real estate business in 2nd and 3rd position respectively, where as the MBL has just opposite preference in these sectors. Likewise, KBL has ranked Character, Collateral and Capacity of borrower first, second and third criterion for granting credit where as MBL ranked Character, Capacity and Capital first, second and third priority respectively. The hypothesis test on the preference of the banks staff also proves that there is no significant difference between observed and expected frequency of ranking. From the analysis of lending against various collaterals, it has been found that both the banks have lent highest amount of loan against the movable/immovable property.

Guragain (2009), in his thesis, "Credit Practices: A study on NABIL Bank Ltd., SCB Nepal Ltd. and Himalayan Bank Ltd.", has the major objective of examining the credit management in the selected banks. The specific objectives of the study are to measure the bank's lending strength, to analyze the portfolio behavior of credit and the credit performances in quality, efficiency and its contribution in total income.

He has found in his study that the major findings are the loans and advances and investment to deposits ratio has shown that NABIL Bank Ltd. Has deployed the highest proportion of its total deposits in earning activities. This is the indicative of that in fund mobilizing activities NABIL Bank Ltd. is significantly better.

The portfolio analysis has revealed that the flow of loans advances in agriculture sector is the lowest priority sector among these commercial banks. The contribution of all the banks in industrial sector is appreciable. The contribution made by Himalayan Bank Ltd. in industrial sector is the greatest and that of SCBNL is the least. The lending is commercial purpose is highest in case of NABIL Bank Ltd. and least in SCBNL. SCBNL has highest contribution in service sector lending. It has contributed 25047% of its total credit in general use and social purpose.

Simkhada (2010), in her thesis, "Credit Policy of Commercial Banks in Nepal", has the objective to provide the credit practices in NIBL and SBI bank. The specific objectives are; to evaluate the investment policy, to study the growth of loan and advances and to analyze the investment to total deposit and net profit NIBL and SBI.

In her study she found that Both banks current assets have exceeded than the current liabilities, cash reserve ratios have fluctuated in high degree, NIBL has invested lower amount of government securities and share and debenture than that of NIBL.

2.7 Research Gap

From the review of literatures, it has been found that no such research has been made in the risk management of banking sectors. Few these have been prepared on the credit risk. These researches are related only with loan loss provision and non-performing loan. So, further research on concentration risk, collateral risk can be conducted etc.

Though the different thesis has been written in the NRB Directives and their implementation, all these researches are about the loan provisioning and capital adequacy. Likewise, no research has been made regarding liquidity and interest rate risk of a bank. Similarly, the operation risk, which has the significant portion in total risk, has not been studied till now. Hence the research has been conducted.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction:

Research methodology is a systematic way to solve the research problem. It serves as a framework for the study, guiding the collection and analysis of the data, the research instruments to be utilized and sampling plan to be followed. It is the plan, structure and strategy of investigation to obtain answers to research questions. Kothari (1994) defines Research methodology as the various sequential steps (along with a rationale of each step) to be adopted by a researcher in studying a problem with 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 information, the risk management system has been analyzed and recommendations have been made for improving the risk management of banks. Since only two banks Nabil bank Ltd and Kumari Bank Ltd 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. The operation risk is all about the descriptive research as the quantification of operation risk variable is not feasible.

3.3 Population and Samples

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 Nepalese commercial banks. Nabil Bank and KBL are taken for the study.

3.4 Sources of Data and Collection Procedure

For this study, secondary data are used. Secondary data are collected mainly form published sources like annual reports, NRB banking and financial statics, prospectus., balance sheet, newspaper, journal, internet and other sources. Secondary data published in the annual reports of concerned organization as well as from their websites. Whereas negligible primary data are collected by questionnaire as per requirement of the study.

3.5 Data Processing and Presentation

The data obtained from the different sources are in raw form. The raw data is processed and converted into required form. For this study, required data are taken from the secondary source (bank’s publication) and presented in this study. For presentation, different tables are used. The data, collected form different sources, are also presented wherever required. Raw data are attached in annexure. Computation has been done with the help of scientific calculator and computer software program.

3.6 Data Analysis Tools

In order to get the concrete results from this research, data are analyzed by using different types of tool. As per topic requirements, emphasis is given on statistical tools as well as 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. 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, non-performing loan, loan loss provision etc, has been calculated in this study. It is computed using following formula.

$$\text{Mean} = \frac{\sum fX}{n}$$

Where, \bar{X} = Mean

$\sum X$ = 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 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.

$$S.D.(\sigma) = \sqrt{\frac{\sum (X - \bar{X})^2}{n}}$$

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

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 other variables. Pant and Chaudhary (2004) defines correlation analysis as the closeness of the relationship between the variables.

- i. 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 perfect

negative correlation; where $r = 0$, there is no correlation and when $r < 0.5$ then there is low degree of correlation.

- ii. When 'r' lies between 0.7 and 0.999 9 or -0.7 and -0.999), there is high degree of positive (or negative) correlation.
- iii. 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:

$$\text{SimpleCorrelation}(r) = \frac{N \sum X_1 X_2 - \sum X_1 \sum X_2}{\sqrt{N \sum X_1^2 - (\sum X_1)^2} \sqrt{N \sum X_2^2 - (\sum X_2)^2}}$$

Alternately,

Where,

N= Total number of observations.

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

Probable Error (PE)

The Probable error is used to measure the reliability and test of significance of correlation coefficient. It is used in interpretation whether the calculated coefficient of correlation is significant or not. PE with correlation coefficient gives upper and Lower limits within which correlation coefficient of population can be expected to lie.

Probable error of Karl Pearson's coefficient of correlation is calculated by the following formula,

$$PE = 0.6745 \frac{1 - r^2}{\sqrt{n}}$$

Where,

r = the value of correlation coefficient.

n = no of pairs of observation.

PE is interpreted as follows.

1. If $r < PE$, it is insignificant, i.e. there is no evidence of correlation.
2. If $r > 6 PE$, it is significant correlation.
3. If $PE < r < 6 PE$ nothing can be concluded.

4. By adding or subtracting the value of PE from coefficient of correlation we get the upper and lower limits respectively within which correlation coefficient in the population can be expected lie. Symbolically, correlation in the population = $r \pm P.E.$

Ratio Analysis

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

- i. Loans and advances to Total Asset Ratio
- ii. Loans and advances to Total Deposit Ratio
- iii. Non-performing Loan to Total Loans and advances Ratio
- iv. Loan Loss Provision to Total Loans and Advances
- v. Return on Loan and Advances
- vi. Current Ratio of Nabil Bank and KBL
- vii. Cash and Bank Balance to Total Asset Ratio
- viii. Cash Reserve Ratio
- ix. Interest Income to Total Income
- x. Interest Expenses to Total Expenses
- xi. Core Capital to Total Risk Weighted Asset (RWA)
- xii. Capital Fund to Total Risk Weighted Asset (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. Greater the gap greater the liquidity risk and vice versa. The following gap analysis 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 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 risk does a bank have and vice versa.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

Analyzing the data is to change it from an unprocessed form to an understandable presentation. The collected data need to be aggregated in to a form that presents the summary of collected raw data. The raw data convey little information. These must, therefore be completed, analyzed and interpreted carefully before their full meanings and implications can be understood. The data are thus transformed into information. The process of transforming data is called analysis.

The main purpose of data analysis is to obtain answers to the research questions. The analysis of data consists of organizing, tabulating, performing statistical analysis and interpretation. In this chapter, mostly secondary data are used and negligible primary data are used as per requirement for the analysis of different risks of sample banks (Nabil Bank and KBL).

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

Banking business is basically lending and investing business. Therefore there is high probability of credit risks. Credit risks arise due to uncertainty in a debtor and counter parties. It may cause by inability or unwillingness of borrower or counter party to meet the obligation 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 2005).

The key performance indicators of credit performance of Nabil Bank and

KBL 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.

Rs. In Million

Fiscal Year	Nabil Bank			KBL			
	Loan & Advances	Total Asset	Ratio %	Loan & Advances	Total Asset	Ratio %	
2006/07	15546	133316	46.66	8929	13466	66.31	
2007/08	21365	45345	47.12	11335	17100	66.29	
2008/09	27590	54584	50.55	14593	21351	68.35	
2009/10	32269	64249	50.22	14766	23375	63.17	
2010/11	38034	70022	54.32	14626	23306	62.76	
		Total	248.87			Total	326.88
		Mean %	49.77			Mean %	65.38
		S.D %	6.18			S.D %	2.36
		C.V %	12.42			C.V %	3.61

Source: Annual Reports

Table 4-1 Loans and advances to total assets ratio(%)

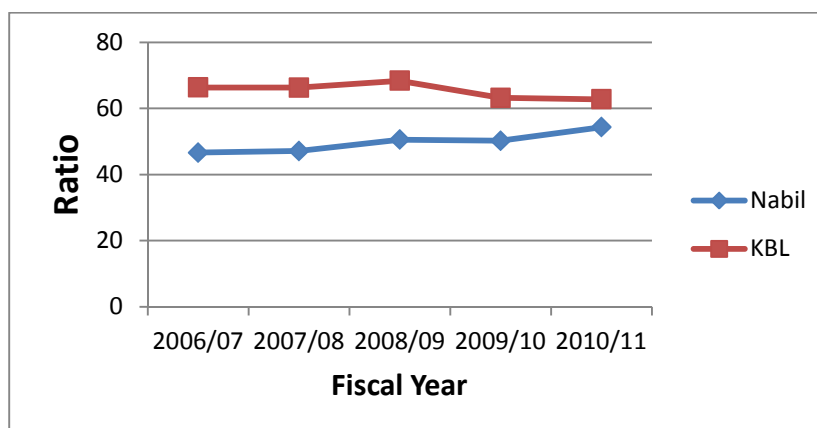


Figure 4-1 Graph of Loans and Advances to Total Asset Ratio (%)

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 Nabil Bank where as KBL shows the constant trend. The overall ratio of Nabil Bank is 49.77 % where as ratio in KBL is 65.38%. From this, it is clear that out of total asset in balance items the proportion of loans and advances is lower in Nabil Bank as compared to KBL. This indicates that the credit risk is lower in Nabil Bank as compared to KBL. It also refers that the Nabil has invested in the risk-free asset such as Treasury Bills, Debentures, National Saving Bonds etc.

Similarly, the standard deviation of Nabil Bank and KBL are 6.18 and 2.36 percentage. This indicates that the ratio deviate more from the average in case of Nabil Bank than KBL. The coefficient of variation (C.V) is 12.42% and 3.61% in Nabil Bank and KBL respectively, which means that per unit variation of the ratio of Nabil Bank is more than the KBL. These indicate that the loan and advances to total asset ratio of Nabil Bank has more variation than that of KBL, which means higher risk in case of Nabil Bank than KBL.

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. NRB has circulated that turn and advances should not be move than 80% of deposit. This ratio is calculated by dividing total credit by total deposits.

Rs. In Million

Fiscal Year	Nabil Bank			KBL			
	Loan & Advances	Total Deposit	Ratio %	Loan & Advances	Total Deposit	Ratio %	
2006/07	15546	23342	66.60	8929	10557	84.58	
2007/08	21365	31915	66.94	11335	12774	88.73	
2008/09	27590	37348	73.87	14593	15711	92.88	
2009/10	32269	46411	69.53	14766	17432	84.71	
2010/11	38034	49696	76.53	14626	16986	86.11	
		Total	353.47			Total	437.01
		Mean %	70.69			Mean %	87.40
		S.D %	4.37			S.D %	3.49
		C.V %	6.18			C.V %	3.99

Source: Annual Reports

Table 4-2 Loan and Advances to Total Deposit Ratio (%)

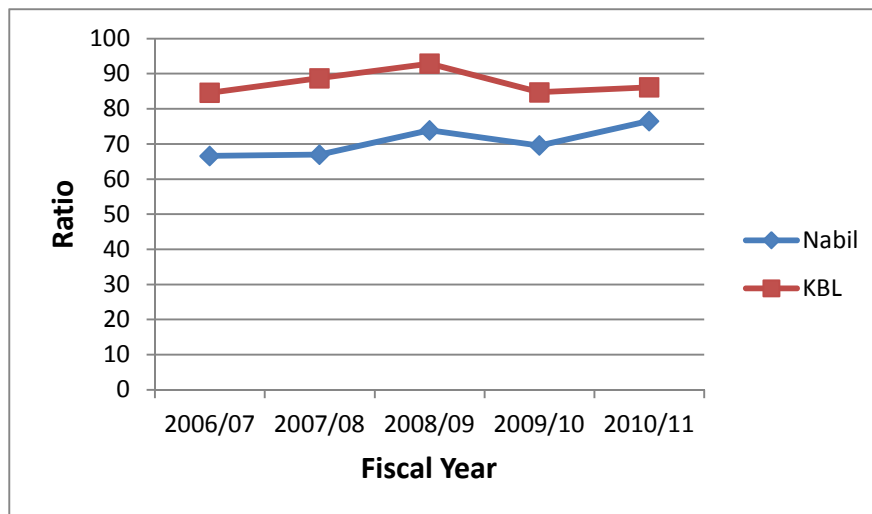


Figure 4-2 Graph of Loan and Advances to Total Deposit Ratio (%)

Above chart and table shows that the loans and advances to total deposit ratio of two commercial banks for 5 consecutive years. The loans and advances to total deposit ratio of both banks are fluctuating. The KBL has the highest CD ratio of 92.88% in the fiscal year 2008/09 where as the Nabil Bank has the highest CD ratio of 73.87% in the fiscal year 2008/09. The average CD ratio of Nabil Bank and MBL for 5 years is 70.69 and 87.40% respectively. The average CD ratio of KBL is higher than the Nabil Bank which means that the KBL has utilized its deposit higher than KBL. This again means that KBL has higher risk than Nabil 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.

Rs. In Million

Fiscal Year	Nabil Bank			KBL		
	NPL	Loan & Advances	Ratio	NPL	Loan & Advances	Ratio
2006/07	178.26	15546	1.15	66.28	8929	0.74
2007/08	544.78	21365	2.55	152.48	11335	1.35
2008/09	225.39	27590	0.82	70.35	14593	0.48
2009/10	406.28	32269	1.26	79.44	14766	0.54
2010/11	667.71	38034	1.76	168.50	14626	1.15
		Total	7.54		Total	4.26
		Mean	1.51		Mean	0.85
		S.D %	0.67		S.D %	0.38
		C.V %	44.64		C.V %	44.89

Source Annual Reports

Table 4-3 Non-Performing Loan to Total Loans and Advances

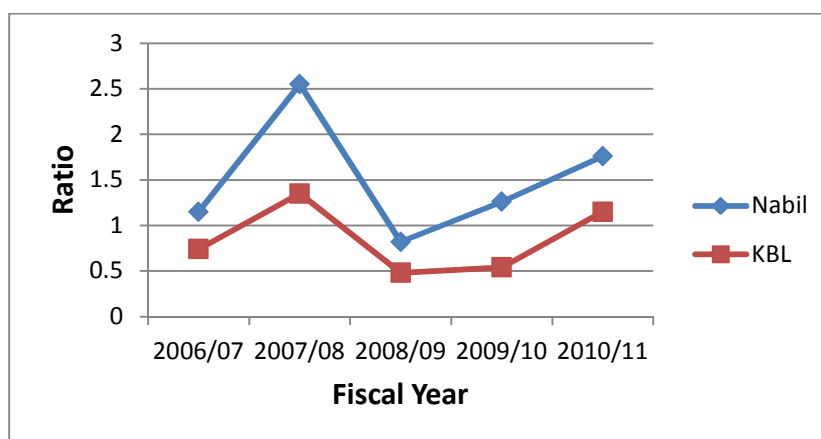


Figure 4-3 Graph of Non-Performing Loans to Total Loan and Advances

Above table and graph show that the ratio of non-performing loans (NPL) to total loans and advances of Nabil Bank and KBL for five consecutive years. Here, it is found that the NPL of Nabil Bank is fluctuating as well as its total loan and advances. Whereas the NPL of KBL is less fluctuating. The average NPL ratio of Nabil Bank and KBL are 1.51% and 0.85% respectively. It can be related as Nabil Bank is in high risk than KBL. The standard deviation of Nabil Bank and KBL are 0.67% and 0.38%

respectively. This indicates that the Nabil 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 inherent 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.

Rs. In Million

Fiscal Year	Nabil Bank			KBL		
	LLP	NPL	Ratio %	LLP	NPL	Ratio %
2006/07	357	178	200.27	133	66	200.66
2007/08	394	545	72.32	187	152	122.64
2008/09	409	225	181.46	202	71	286.40
2009/10	762	406	187.56	200	79	251.76
2010/11	871	668	130.45	300	169	178.04
		Total	772.06		Total	1039.50
		Mean %	154.41		Mean %	207.90
		S.D %	53.03		S.D %	63.83
		C.V %	34.34		C.V %	30.70

Source: Annual Reports

Table 4-4 Loan Loss Provision to Non Performing Loan

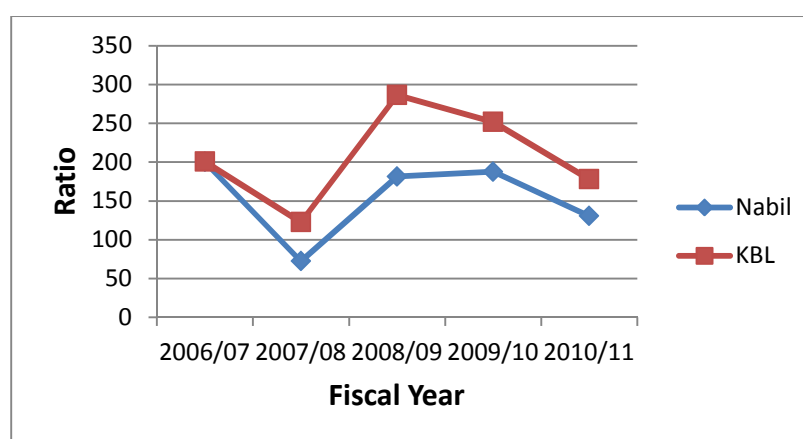


Figure 4-4 Graph of Loan Loss Provision to Non Performing Loan

The above table and Graph illustrate the ratio of loan loss provision held to non-performing loan of Nabil Bank and KBL for five consecutive years. The graph and the values in the table represents that both banks Nabil bank and KBL have highest ratio of 200.27% and 200.66% in the fiscal year 2006/07 and then decreased in the fiscal year 2007/08 to 72.32% and 122.64%, respectively. After fiscal year

2007/08 the ratio has in increasing trend up to fiscal year 2009/10. LLP to then, again decreased fiscal year 2010/11. The average NPL ratio of Nabil Bank and KBL is 154.41% and 207.9% respectively. This shows that KBL has provided higher protection by provisioning to non performing loan compared to-Nabil Bank.

The standard deviation of Nabil Bank and KBL are 53.03% and 63.83% respectively. This means that there exists the higher deviation in this ratio in context of KBL than Nabil Bank. The coefficient of variation of Nabil Bank and KBL is 34.34% and 30.70% respectively, which means that loan loss provision ratio of KBL fluctuate less from the average than the Nabil Bank.

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 provision of NPL in bank loan portfolio.

Fiscal Year	Nabil Bank			KBL			
	LLP	Loan & Advances	Ratio %	LLP	Loan & Advances	Ratio %	
2006/07	357	15546	2.29	133	8929	1.49	
2007/08	394	21365	1.84	187	11335	1.65	
2008/09	409	27590	1.48	202	14593	1.38	
2009/10	762	32269	2.35	200	14766	1.35	
2010/11	871	38034	2.29	300	14626	2.05	
		Total	10.25			Total	7.92
		Mean %	2.05			Mean %	1.58
		S.D %	0.38			S.D %	0.29
		C.V %	18.48			C.V %	18.04

Source: Annual Reports

Table 4-5 Loan Loss Provision to Total Loan & Advances Ratio

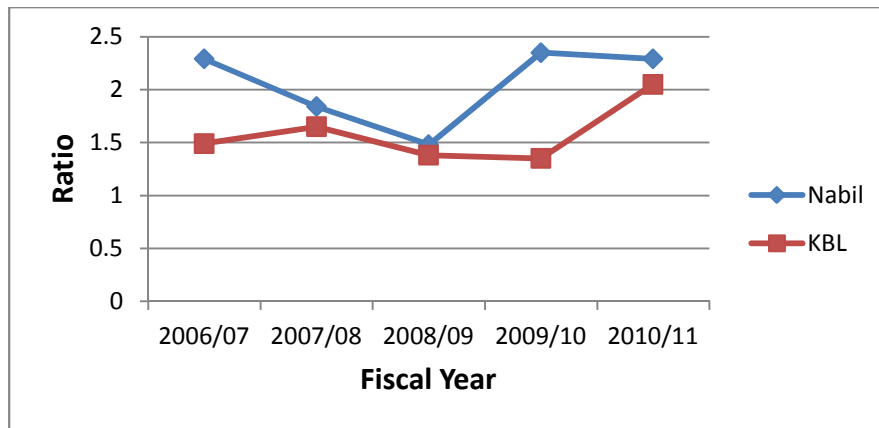


Figure 4-5 Graph of Loan Loss Provision to Total Loan & Advances Ratio

The above table and graph illustrate that KBL has the least portion of loan loss provision. The average LLP to total loan and advances ratio is 2.05% and 1.58% of Nabil Bank and KBL respectively. The higher ratio of Nabil Bank than KBL reflects that Nabil Bank has high non-performing loan compared to KBL.

Similarly the standard deviation and coefficient of variation of Nabil Bank is 18.48% and 18.04% respectively. This indicates that Nabil Bank is in higher risk than KBL.

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.

Rs. In Million

	Nabil Bank			KBL		
Fiscal Year	Net Profit	Loan & Advances	Ratio %	Net Profit	Loan & Advances	Ratio %
2006/07	674	15546	4.34	170	8929	1.90
2007/08	746	21365	3.49	175	11335	1.54
2008/09	1031	27590	3.74	258	14593	1.77
2009/10	1141	32269	3.54	316	14766	2.14
2010/10	1338	38034	3.52	251	14626	1.72
			Total		Total	9.07
			Mean %		Mean %	1.81
			S.D %		S.D %	0.22
			C.V %		C.V %	12.31

Source: Annual Reports

Table 4-6 Return on Loans and Advances

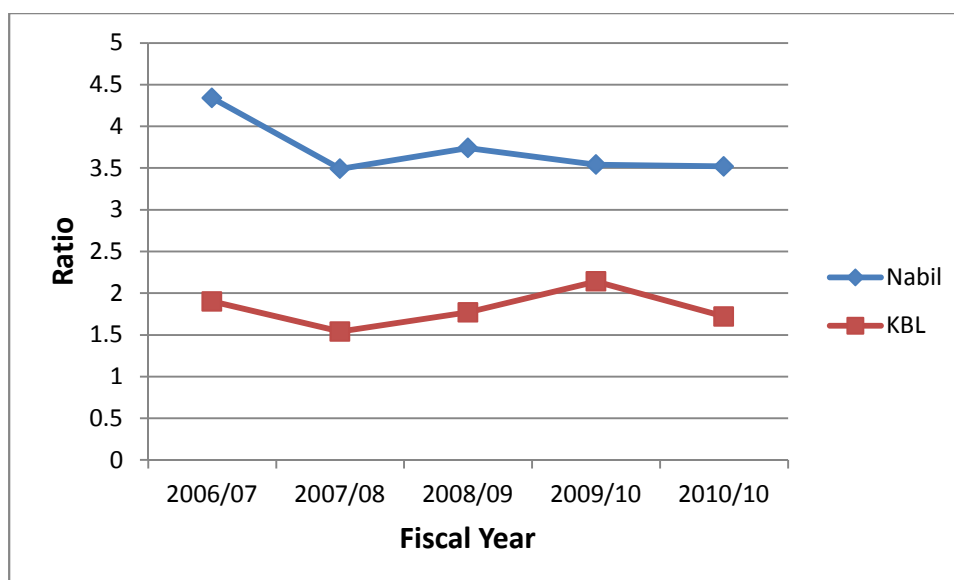


Figure 4-6 Graph of Return on Loans and Advances

It is illustrated from above table and graph that the ratio of return on loans and advances of Nabil Bank is higher than KBL. The average ratio for 5 years of Nabil Bank and KBL is 3.73% and 1.81% respectively. This shows that Nabil bank has better return than KBL.

The standard deviation of Nabil Bank and KBL for the study period is 0.36% and 0.22% respectively. Similarly, the coefficient of variation of Nabil Bank and KBL is 9.58% and 12.31% respectively. These figures indicate that the variation of return percentage of KBL is more volatile than Nabil Bank, which also signifies the higher risk. Thus Nabil is in a better position than KBL.

4.2.2 Security-wise/Sector-wise Lending of Nabil Bank and KBL

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.

4.2.2.1 Security-wise Lending of Nabil Bank

This analysis is done to identify the various types of securities on the basis of which loans have been provided by Nabil 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 Nabil Bank includes 7 types of securities.

(Rs. in Million)

S.No.	Security against lending	Average lending against each collateral	Rank
1	Movable/Non-movable Assets	25992	1
2	Guarantee of local licensed institution	-	-
3	Government Guarantee	-	-
4	Guarantee against internationally rated bank	199	3
5	Export Documents	47	6
6	Own FDR	289	2
7	FDR of other licensed institution	103	4
8	Government Bonds	85	5
9	Counter Guarantee	-	-
10	Personal Guarantee	4	7
11	Other Securities	-	2
12	Lending without collateral	-	-

Source: Annual Reports

Table 4-7 Security-wise Lending of Nabil Bank

In the above table demonstrates the lending of Nabil Bank against different securities over the five years. Nabil 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 25,992 million, which is highest among the lending

against all securities. The bank has not granted any loan without collateral, which is the good part of lending practice. The bank average have Rs. 199 Million lending against the guarantee against internationally rated bank. From the average lending, personal guarantee is ranked in 7th position. This means the bank has been granting loan 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 bonds and FDR of other licensed institution, which are ranked at 5 and 4 respectively. This means that the bank has been lending in very risky securities only.

4.2.2.2 Security-wise Lending of KBL

Rs. In Million

S.No.	Security against lending	Average lending against each collateral	Rank
1	Movable/Non-movable Assets	19934	1
2	Guarantee of local licensed institution	-	-
3	Government Guarantee	-	-
4	Guarantee against internationally rated bank	-	-
5	Export Documents	3	5
6	Own FDR	38	4
7	FDR of other licensed institution	49	3
8	Government Bonds	1	6
9	Counter Guarantee	-	-
10	Personal Guarantee	-	-
11	Other Securities	1029	2
12	Lending without collateral		-

Source: Annual Reports

Table 4-8 Security-wise Lending of' KBL

It is demonstrated from the above table that KBL has extended credit against the 6 securities only over the period of five years. The KBL has also granted the highest amount of loan against the movable/non movable property, the average lending against which over five years is Rs. 19934 million. Likewise, the average loan against the other securities over five is Rs. 1029 million which is ranked at 2. The bank has granted least loan against government bonds which is ranked at 6. The bank has not extended any credit against government guarantee, guarantee against internationally rated bank, and counter guarantee. While it has granted loan against export documents ranked at 5. Moreover, the bank has not extended loan without collateral, which is good part of lending procure since KBL has not granted loan without collateral, the bank has secured because of two reasons:

- a. The bank has not to make 100% provision for this loan, which decreases the bank's profit.
- b. In case of default, the bank will not suffer losses of the total amount of loan.

4.2.3 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, high-level risk and highest-level risk lending in 20%, 100% and 150% 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 proportions of different category of risk weighed lending of both banks are presented below:

Proportion of different category of risk weighted lending of Nabil Bank.

Security	Risk Weighted (%)	2006/07	2007/08	2008/09	2009/10	2010/11	Average
Risk Free Lending to Total Loan	0	1.47	1.33	1.73	1.42	1.20	1.43
Moderate Level Risk Lending to Total Loan	20	3.90	2.89	0.47	0.32	0.11	1.54
High Level Risk Lending to Total Loan	100	94.63	95.78	97.78	98.26	98.69	97.03
Highest Level Risk Lending to Total Loan	150	-	-	-	-	-	-

Source: Annual Reports

Table 4-9 Proportion of Different Category of Risk Weighted Lending of Nabil Bank

Above table exhibits percentage of different categories of risk lending of Nabil Bank for 5 years. The table further reveals that Nabil Bank has the highest lending on 100% risk lending. The bank has extended 1.47,1.33,1.73, 1.42, 1.20 and 1.22% of total lending against the risk free collateral in the year fiscal year 2006/07, 2007/08, 2008/09, 209/10 and 2010/11 respectively. Likewise, the bank has extended 3.90, 2.89, 0.47, 0.32 and 0.11% of total loan against the moderate level risk collateral in the fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11 respectively. The

average lending in 5 years on risk free, moderate level and high risk level lending is 1.43, 1.54, and 97.03% respectively.

Proportion of different category of risk weighted lending of KBL

Security	Risk Weighted (%)	2006/07	2007/08	2008/09	2009/10	2010/11	Average
Risk Free Lending to Total Loan	0	0.24	0.06	0.02	0.40	0.69	0.28
Moderate Level Risk Lending to Total Loan	20	.094	0.62	0.36	-	-	0.44
High Level Risk Lending to Total Loan	100	98.82	99.02	99.62	99.60	99.31	99.28
Highest Level Risk Lending to Total Loan	150	-	-	-	-	-	-

Source: Annual Reports

Table 4-10 Proportion of Different Category of Risk Weighted Lending of KBL.

The above table illustrates the percentage of lending of different categories of risk of KBL for 5 years. The table further reveals that KBL has also the highest lending on 100% high risk level category. The bank has extended 0.24, 0.06, 0.02, 0.40 and 0.69% of total lending against the risk free collateral in the fiscal year 2006/07, 2007/08, 2008/09, 2009/10 and 2010/11 respectively. Similarly the bank has made moderate level risk lending 0.94, 0.92, and 0.36% of total loan in fiscal year 2006/07, 2007/08 and 2008/09 respectively. The average lending in 5 years on risk free, moderate level and high level risk lending is 0.28, 0.44 and 99.82% respectively.

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 KBL is slightly higher than Nabil Bank. So, KBL is slightly in high risk than Nabil Bank.

4.2.4 Credit Concentration on Sector

Credit concentration are the single most important cause of major problems in banks. A risk concentration is any single exposure or group of exposures with the potential to produce losses relative to a bank's capital total assets or over all risk level to threaten a banks' health or ability to maintain its core operations.

Credit concentration risk may arise investing to single borrower or counterparties, a group of connected counter parties and sectors or industries, such as commercial real estate, oil and gas or positively correlated sectors.

The credit concentration on sector 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 proportions of sector wise lending to total loan of both banks have been presented in the table below.

S.No.	Sector	Nabil Bank %	KBL %
1.	Agriculture	0.77	2.77
2.	Mine	0.04	2.78
3.	Manufacturing	31.36	18.34
4.	Construction	12.90	12.05
5.	Metal & Electric Products	1.22	2.32
6.	Electricity Gas and water	0.31	1.06
7.	Transport, Communication and Public Utilities	10.66	10.16
8.	Wholesaler and Retailer	22.08	15.17
9.	Finance Insurance and Real Estate	7.78	2.10
10.	Service Industries Hotel and restaurant & Other Services	4.81	12.08
11.	Consumer Loan	0.53	4.64
12.	Local Government	-	-
13.	Others	7.54	16.53
	Total	100	100

Sources: NRB, Banking & Financial Statics

Table 4-11 Credit Concentration on Different Sector on Fiscal Year 2010/11

From the above table it is found Nabil Bank and KBL has extended more than 10% of their total loan in 4 Sector. Where as KBL has extended more than 10% of total loan in 6 sectors. Similarly, Nabil Bank has invested highest 31.36% of its total loan in manufacturing while KBL has also invested highest of 18.34% of its total loan in manufacturing sector. Both banks have not invested any loan in local government sector while both have least percentage to loan extended in agriculture and mine sector. However Nabil Bank has the high credit concentration on single sector that KBL which indicates that Nabil Bank has higher risk than KBL.

4.2.5 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 NRB directive no. 3 of Unified Directive 2007, the loan exposure on single sector more than 50% to 100% of core capital needs to verify at least quarterly as there exist the

concentration risk. Similarly, single sector loan concentration more 100% of core capital needs to be endorsed by the board of directors. The core capital Nabil Bank and KBL is Rs. 4319 and Rs. 2205 million respectively in fiscal year. 2010/11.

Rs. in Million

S.No.	Sector	Nabil Bank	Sector-wise loan to core Capital%	KBL	Sector-wise loan to core Capital%
1.	Agriculture	299	6.92	414	18.78
2.	Mine	16	0.37	415	18.82
3.	Manufacturing	12206	282.61	2737	124.13
4.	Construction	5052	116.97	1798	81.54
5.	Metal & Electric Products	477	11.07	347	15.74
6.	Electricity Gas and water	119	2.76	158	7.17
7.	Transport, Communication and Public Utilities	4148	96.04	1516	68.75
8.	Wholesaler and Retailer	8594	198.98	2265	102.72
9.	Finance Insurance and Real Estate	3030	72.16	314	14.24
10.	Service Industries Hotel and restaurant & Other Services	1873	43.37	1803	81.77
11.	Consumer Loan	208	4.82	692	31.38
12.	Local Government	-	-	-	-
13.	Others	2935	67.96	2467	111.88

Source: NRB, Banking & Financial Statistics,

Table 4-12 Sector-wise Loan to core Capital in fiscal Year 2010/11

Above table illustrates that percentage of loan on single sector to core capital of Nabil Bank and KBL in fiscal year 2010/11. Above table depicts that the ratio of Nabil Bank and KBL has crossed 50% in 6 sectors. Out of which, the ratio of Nabil Bank and KBL has crossed 100% in 3 sectors. The above table indicates that Nabil Bank has higher concentration risk than KBL. Nabil Bank and KBL both have higher ratio in manufacturing sector which is 282.61% and 124.13% respectively.

4.2.6 Correlation Analysis

4.2.6.1 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 terms. How a unit increment in loans and advances affect the loan loss provision is measured by this correlation. Here loans and advances are independent variable and LLP are dependent variable.

Banks	Correlation coefficient(r)	Probable Error P.E.	Test of P.E 6*P.E
Nabil Bank	0.91	0.05	0.31
KBL	0.73	0.14	0.84

Table 4-13 correlation Coefficient between LLP and Loans and Advances

Above table explains the relationship between loans and advances and LLP. correlation coefficient of Nabil Bank is 0.91, which means that the LLP positively correlated with loans and advances. The correlation of KBL is 0.73 which also shows that exists positive correlation between the LLP and loans and advances.

The probable error when multiplied by 6, is used to test the significance of calculated correlation coefficient, which is 0.31 and 0.84 of Nabil Bank and KBL respectively. Here, the probable error multiplied by 6 of Nabil Bank is less than the correlation coefficient that means the correlation value is significant. Where as the probable error multiplied by of KBL is more than the correlation coefficient. Therefore, the correlation coefficient value of KBL is not significant.

4.2.6.2 Correlation between Loan loss Provision and Non-performing Loan

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

Banks	Correlation Coefficient (r)	Probable Error. P.E.	Test of P.E. 6*P.E
Nabil Bank	0.66	0.17	1.02
KBL Bank	0.70	0.15	0.92

Table 4-14 Correlation between LLP and NPL

Above table exhibits correlation between LLP and NPL of two commercial banks. The correlation between LLP and NPL of Nabil Bank and KBL 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 more than the correlation coefficient. Hence, both correlation coefficient values are not significant.

4.2.7 Credit Process Issues

Credit risk is the major risk that banks are exposed during the normal course of lending and credit under writing. It comes from a banks dealing with individuals, corporate, bank and financial institutions or a sovereign.

Many credit problems reveal 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 thorough credit assessment 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 instead 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.

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 assessment of the quality of a credit or a credit relationship based on documentation such as financial statements, credit or a 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 credit are made in accordance with bank policy and to provide an independent judgment of asset quality, uninfluenced by relationship with the borrower. So, the lack of the effective credit review is also the key factors for higher credit risk.

A common and major sources 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 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 case, 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.

4.3 Market Risk:

Market risk refers to the risk to a bank resulting from movement in market prices in particular change in interest rates, foreign exchange rates and equity and commodity prices. Market risk is defined as the risk of losses in on and off balance sheet positions arising from movements in market prices. The major constituents factors of market risks are interest rates, foreign exchange rates and equity and commodity prices. The risk arising from these factors have been presented below.

4.3.1 Liquidity Risk

Liquidity refers to degree to which an asset or security can be bought or sold in the market without affecting the asset's price. In another word, it is the ability to convert an asset to cash quickly, also known as "marketability".

Liquidity risk can best be described as the risk of a funding crisis. While some would include the need to plan for growth and unexpected expansions of credit, the risk here is seen more correctly as the potential for a funding crisis. Such a situation would inevitably be associated with an unexpected event, such as large charge off, loss of confidence, or a crisis of national proportion such as a currency crisis.

Here the attempt has been made to analyze how the asset and liabilities of commercial banks has been managed according to their maturity period to analyze the funding gap or liquidity crises situation. Similarly, the analysis of banks liquid asset as well as cash reserve ratio.

The key tools for analyzing the liquidity risk are:

4.3.1.1 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.

Rs. In Million

Fiscal Year	1-90 days		91-181 days		181-270 days		271-365 days		More than 1 year	
	Nabil	KBL	Nabil	KBL	Nabil	KBL	Nabil	KBL	Nabil	KBL
2007/08	38.27	319.5	-125.24	107.1	42.09	20.4	217.73	123.9	-519.85	-333.1
2008/09	11.16	545.2	170.7	42	-8.8	13.86	113.4	-178.1	-286.8	-214.1
2009/10	615.30	1066.8	146.9	-933.6	-287.2	-225.1	-70	-381.7	-404.91	4560.6
2010/11	3432.94	1490.2	264.89	583.4	-3154.29	331.9	1431.47	112.76	-676.06	-2747.1
Mean	1111.28	3340.7	710.26	-201.1	-852.02	-1858.94	423.40	691.7	-471.69	1266.3

Source: Annual Reports

Table 4-15 Gap analysis of Asset & Liabilities of Nabil Bank and KBL

The above table illustrates the net asset/liabilities for different time interval of Nabil Bank and KBL. 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 Nabil Bank and KBL both have positive net position in almost short term intervals in four years period. Nabil Bank has negative net position in long interval (i.e. in more than 1 year) in all fiscal year while KBL has also negative in long interval in all fiscal year except fiscal year 2009/10. 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 assets such as loan and advances, fixed assets etc.

The mean net position of Nabil Bank is Rs 1111.28 million, Rs 710.26 million, Rs. 852.02 million, Rs 423.40 million, Rs 471.69 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 KBL is Rs 3340.70 million, Rs 201.1 million, Rs 1858.94 million, Rs 691.70 million, Rs 471.69 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 Nabil Bank has high mean net position in almost all short time interval except positions than KBL in terms of meeting short term liquidity.

4.3.1.2 Current Ratio of Nabil Bank and KBL

Current Ratio is the ratio of current assets to current liabilities. Current assets and liabilities change frequently. The word current denotes that the particular asset or liability is expected to be converted into cash or paid for with cash within one year 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.

Fiscal Year	Nabil Bank			KBL		
	CA	CL	CR	CA	CL	CR
2006/07	1963	1854	1.06	1045	336	3.11
2007/08	4623	2341	1.97	990	488	2.03
2008/09	3925	3190	1.23	1806	803	2.25
2009/10	4518	1604	2.82	2843	868	3.28
20010/11	4889	3578	1.37	1621	892	1.82
	Average		1.69	Average		2.50

Source: Annual Reports

Table 4-16 Current Ratio of Nabil Bank and KBL

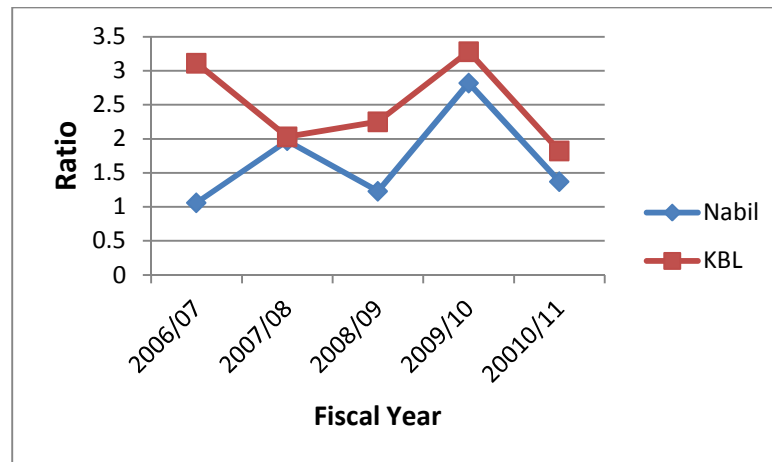


Figure 4-7 Graph Current Ratio of Nabil Bank and KBL

Above table and exhibits the current ratio of Nabil Bank and KBL over 5 year. It is clear that the average current ratio of Nabil Bank and KBL is 1.69 and 2.50 respectively. This means that the Nabil has used most of current liabilities to finance the current assets. KBL Bank has et the standard ratio 2:1 while Nabil has low current ratio which indicates that it has low ability to meet the short-term obligations as they come due.

4.3.1.3 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:

Fiscal Year	Nabil Bank			KBL		
	Cash & Bank Bal.	Total Asset	Cash & Bank to Total Asset	Cash & Bank Bal.	Total Asset	Cash & Bank to Total Asset
2006/07	1399	27253	5.13	673	11918	5.65
2007/08	2671	37132	7.19	935	15027	6.22
2008/09	3372	43867	7.69	1776	18538	9.58
2009/10	1400	52152	2.68	2723	20486	13.29
2010/11	2436	58141	4.19	1169	20492	5.70
		Total	26.88		Total	40.44
		Mean	5.38		Mean	8.09
		SD	2.08%		SD	3.33%

Source: Annual Reports

Table 4- 17 Cash and bank Balance to total Asset Ratio

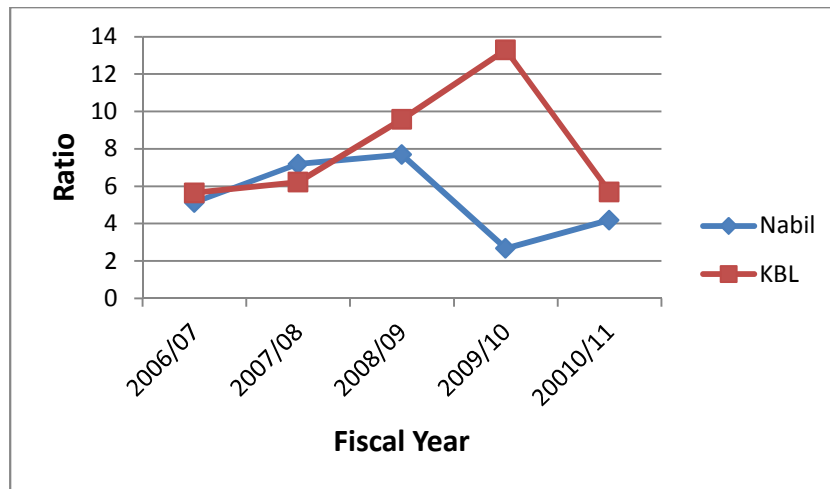


Figure 4-8 Graph Cash and bank Balance to total Asset Ratio

The table and graph above show that the cash and bank balance total asset ratio of Nabil Bank and KBL for 5 years. The ratio of Nabil Bank is the highest of 7.69% in fiscal year 2008/09 and the lowest of 2.68% in the fiscal year 2009/10. On the other hand, the ratio of KBL is the highest of 13.29% in the fiscal year 2009/10 and lowest of 5.65% in the fiscal year 2006/07. The ratio of both the banks is fluctuating. The average ratio of Nabil Bank and KBL is 5.38% and 8.09% respectively. This shows that the Nabil Bank has less amount of liquid find such as cash and bank balance than the KBL. This means the KBL is in more liquid position than Nabil Bank which also indicates the lower level of liquidity risk. the standard deviation of ratio of Nabil Bank and KBL is 2.08% and 3.33% respectively. This means that the fluctuation rate of cash and bank balance is lower in Nabil Bank than KBL Bank. This indicates that the Nabil Bank has less variation in cash and bank balance out of total asset.

4.3.1.4 Cash Reserve Ratio (CRR)

Cash Reserve Ratio refers to the protion 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.

Rs. In million

Fiscal Year	Nabil Bank			KBL		
	Balance With NRB	Total Deposit	CRR of Nabil Bank	Balance With NRB	Total Deposit	CRR of Nabil Bank
2006/07	1113	23342	4.77	385	10557	3.65
2007/08	1830	31915	5.73	245	12774	1.92
2008/09	2659	37348	7.09	1121	15710	7.14
2009/10	549	46411	1.18	1664	17432	9.55
2010/11	1474	49696	2.97	527	16986	3.10
		Total	21.74		Total	25.36
		Mean	4.35		Mean	5.07
		SD	2.32		SD	3.17

Source: Annual Reports

Table 4-18 Cash Reserve Ratio of Nabil and KBL

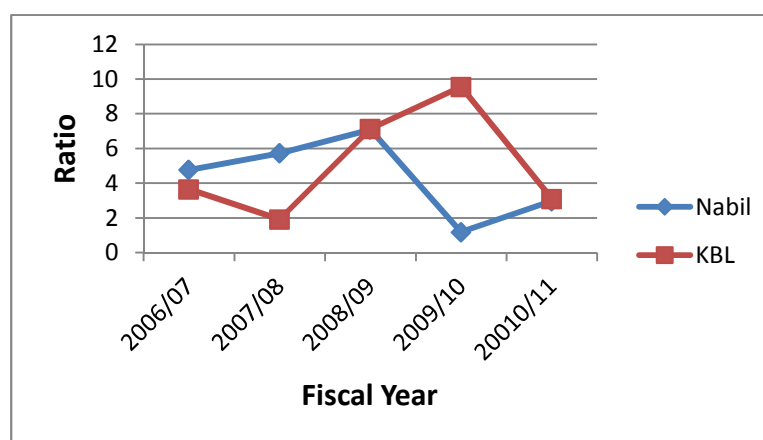


Figure 4- 9 Graph Cash Reserve Ratio of Nabil and KBL

Above table and graph illustrate the cash reserve ratio of Nabil Bank and KBL from fiscal year 2006/07 to 2010/11. 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 so fluctuates time to time. In fiscal year 2010/11, 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 Nabil Bank has maintained the statutory measure (i.e. 5.5%) till the fiscal year 2007/08 and 2008/09 but in the fiscal year 2006/07 and 2009/10 and CRR of Nabil Bank is 4.77, 1.18 and 2.97 respectively which is below the statutory measure and also the CRB is in decreasing trend. KBL has maintained the CRR above the statutory measure in 2008/09 and 2009/10 but in 2009/07 and 2010/11 CRR is the statutory ratio. The higher the CRR, the more funds in NRB and the stronger will be in liquidity position. The mean CRR of Nabil Bank is 4.35% with standard deviation 2.32% where as the mean of KBL is 5.07% with standard deviation 3.17%. From this, it is clear that the average CRR of KBL is higher than Nabil Bank and Standard deviation is also higher in KBL than Nabil bank.

From above, it can be summarized that the MBL is in more liquid position than Nabil 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.

4.3.2 Interest Rate Risk:

Interest rate risk is the risk of negative effects on the financial result and capital of the bank caused by changes in interest rates. Changes in interest rates affect a banks earnings by changing its net interest income and the level of other interest sensitive income and operating expenses. For example, The changes in inters 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 risk is presented as below by using different ratios.

4.3.2.1 Interest Income to Total Income

This ratio includes the proportion of interest income on total income of a bank. The higher the ratio reveals more the dependency of bank on interest income, 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:

Rs. In million

Fiscal Year	Nabil Bank			KBL		
	Interest Income	Total Income	Ratio %	Interest Income	Total Income	Ratio %
2006/07	1588	2093	75.87	791	873	90.61
2007/08	1978	2503	79.03	957	1084	88.28
2008/09	2798	3431	81.55	1375	1564	87.92
2009/10	4050	4806	84.27	1871	2050	91.27
20010/11	5254	6018	87.30	2251	2455	91.69
		Total	408.02		Total	449.77
		Mean	81.60		Mean	89.95
		SD	4.45		SD	1.74

Source: Annual Reports

Table 4-19 Interest Income to Total Income of Nabil Bank and KBL

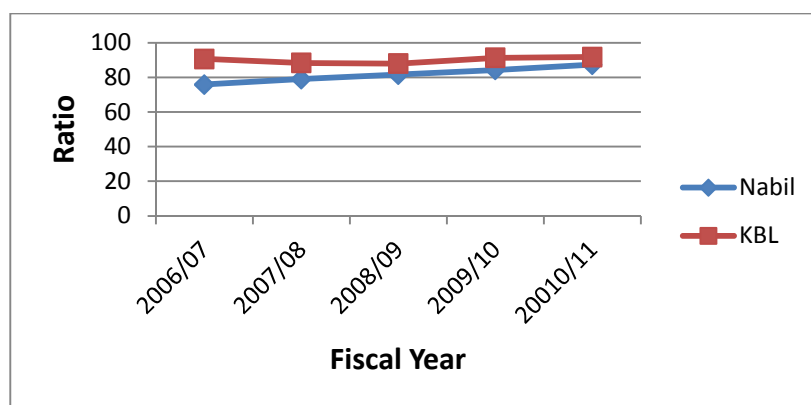


Figure 4-10 Graph Interest Income to Total Income of Nabil Bank and KBL

The above table and graph illustrate the interest income to total income of Nabil Bank and KBL. The interest income to total income of Nabil banks is in slightly increasing trend but KBL has slight decreasing to fiscal year 2008/09 slightly increment after then, The mean ratio of ratio of Nabil Bank and KBL is 81.60% and 89.95% 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 5.455 and 1.93% respectively. This shows that Nabil Bank has higher deviation of ratios than KBL.

4.3.2.2 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:

Rs. In million

Fiscal Year	Nabil Bank			KBL		
	Interest Expenses	Total Expenses	Ratio %	Interest Expenses	Total Expenses	Ratio %
2006/07	556	1491	37.29	397	703	56.47
2007/08	758	1758	43.12	499	909	54.90
2008/09	1153	2399	48.06	816	1306	62.48
2009/10	1960	3666	53.46	1189	1734	68.57
2010/11	2955	4680	63.14	1566	2204	71.05
		Total	245.07		Total	313.47
		Mean	49.01		Mean	62.69
		SD	9.90		SD	7.14

Source: Annual Reports

Table 4-20 Interest Expenses to Total Expenses of Nabil Bank and KBL

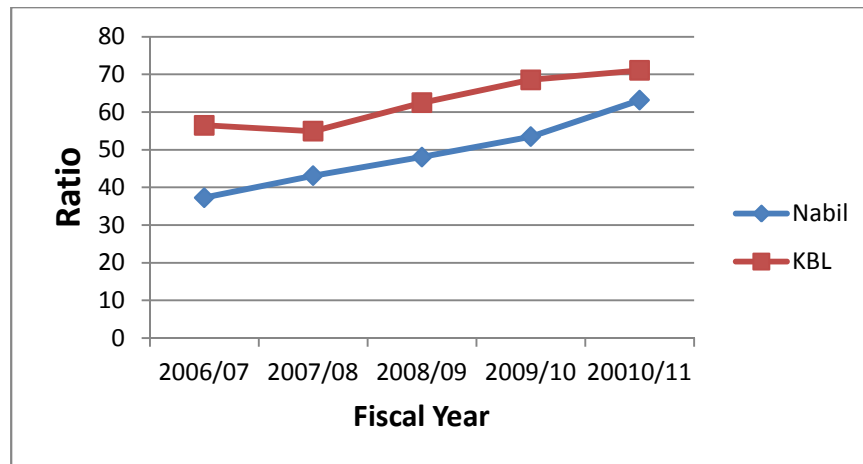


Figure 4-11 Graph Interest Expenses to Total Expenses of Nabil Bank and KBL

The above graph and table show the interest expenses to total expenses of two commercial banks, Nabil Bank and KBL. The ratio of interest expenses to total expenses of both banks is in increasing trend. The mean ratio of Nabil Bank and KBL bank is 49.01% and 62.69% respectively. This ratio indicates that the interest expense has higher proportion in KBL than in Nabil Bank. The change in interest rate on deposit and borrowing will have higher impact on Nabil Bank and KBL which produces the higher interest rate risk to the both banks. The standard deviation of ratio of Nabil Bank and KBL is 9.90% and 7.14% with the coefficient of variation of 20.21% and 11.39% respectively. These ratios indicate that the proportion of interest expenses on total expenses fluctuate more in Nabil Bank than the KBL.

4.3.2.3 Gap Analysis (Interest Rate)

Gap Analysis refers to the process of analyzing mismatch between rate sensitive rate asset and the liabilities. In other words, it is the process of indentifying 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:

4.3.2.3.1 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 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 Nabil Bank and KBL is presented below:

Rs. In million

Fiscal Year	Nabil Bank				KBL			
	IRSA	IRSL	Gap	Gap Ratio	IRSA	IRSL	Gap	Gap Ratio
2006/07	564	883	-319	0.64	372	213	159	1.75
2007/08	1952	1360	592	1.44	55	100	-45	0.55
2008/09	553	1681	-1128	0.33	30	293	-263	0.10
2009/10	3118	75	3043	41.57	120	430	-310	0.28
20010/11	2453	1651	802	1.49	452	661	-209	0.68
		Mean	598	9.09		Mean	-133.60	0.67

Source: Annual Reports

Table 4-21 Gap Analysis of IRSA and IRSL of Nabil Bank and KBL.

Above table exhibits the IRSA and IRSL of two commercial banks for 5 years. The table shows that Nabil Bank higher level of gap in each year except fiscal year 2006/07 and 2008/09. Whereas KBL has negative gap in every year except 2006/07. The average gap of Nabil Bank is 5.98 million and KBL is -133.60 million respectively. This average gap shows that Nabil Bank has higher IRSA then IRSL and KBL has less IRSA than IRSL which indicates the high interest rate risk.

4.3.2.3.2 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 Nabil Bank and KBL assuming that the market interest rate will change by 1 percent.

Rs. In million

Fiscal Year	Nabil Bank			KBL		
	RSA	RSL	NIM	RSA	RSL	NIM
2006/07	564	883	-3.19	372	213	1.59
2007/08	1952	1360	5.92	55	100	-0.45
2008/09	553	1681	-11.29	30	293	-2.63
2009/10	3118	75	30.43	120	430	-3.10
20010/11	2453	1651	8.02	452	661	-2.09
		Mean	5.99		Mean	-1.34

Source: Annual Reports

Table 4-22 Net Interest Margin of Nabil Bank & KBL.

Where,

$$\zeta_{NIM} = (\phi_{RSAs} \times \zeta_{r_A}) - ((\phi_{RSLs} \times \zeta_{r_L}))$$

RSA = Rate Sensitive Assets

ζ_{r_A} = Changes in Interest received on Rate Sensitive Asset

RSL= Rate Sensitive Liabilities

ζ_{r_L} = Changes in Interest paid on Rate Sensitive Liabilities

The table above illustrates the net interest margin of Nabil Bank and KBL for 5 fiscal years. When the interest rate changes is assumed to be 1% in both RSA and RSL, Nabil bank shows the higher average net interest margin than KBL which is 5.99% and -1.34% respectively. This means that Nabil bank has higher net interest margin than the KBL.

4.3.2.4 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 2010/11 has been calculated as below:

Rs. In Million

	1-90 Days	91-180 Days	181-270 Days	271-365 Days	Above 1 year	Total
Assets:						
Investment in Foreign Bank	1016	1932	-	356	536	3840
Government of Nepal Securities	1328	1282	-	3879	2255	8744
NR Debt. Paper	-	-	-			
Inter Bank Loan	3781	71	-		194	4046
Loan & Advance	5269	2552	2002	1965	27839	39627
Other Assets	173	4	-	-	-	177
Total Assets	11567	5841	2002	6200	30824	56434
Liabilities:						
Borrowings	1450	200	-	-	-	1650
Saving Deposit	1497				2489	26396
Fixed Deposit	3059	2759	5070	1651	1254	16793
Debt Paper					300	300
Total Liabilities	6006	2959	5070	4651	26453	45139
Net Asset/Liabilities	5561	2882	-3068	1549	4371	11295
Cumulative Gap	5561	8443	5375	6924	11295	
Net Profit/Loss	13.90	21.11	13.44	17.31	28.24	28.24
Cumulative Gap x IRC						

Source: Annual Reports

Table 4-23 Interest Rate Risk Analysis of Nabil Bank for fiscal year 2010/11

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 Nabil Bank has positive gap in the above 1 year time interval. This shows that the bank has lower liabilities than asset in the long term period and higher assets in short term period. The cumulative gap for total time interval is Rs 11295 million and the overall profit of the bank is Rs.28.24 million if the interest rate changes by 1% in year i.e. divided into Five periods (i.e. 25% in each period).

Rs. In Million

	1-90 Days	91-180 Days	181-270 Days	271-365 Days	Above 1 year	Total
Assets:						
Investment in Foreign Bank	348	37	35	69	-	489
Government of Nepal Securities	56				-	56
NR Debt. Paper	234	380	91	197	237	1139
Inter Receivable	131	5	3	6	-	145
Inter Bank Loan	664	-		-	-	664
Loan & Advance	4250	2767	2468	1865	3575	14926
Other	131	45	44	44	339	603
Total Assets	5814	3234	2641	2182	4151	18023
Liabilities:						
Borrowings	241	420	-	-	-	661
Saving Deposit	2767	609	609	609	5735	10329
Fixed Deposit	1748	1124	1385	1806	519	6652
Debt Paper			-	-	400	10329
Total Liabilities	4756	2223	1994	24150	6654	400
Net Asset/Liabilities	1058	1011	647	-233	-2503	18042
Cumulative Gap	1058	2069	2716	2483	-20	-20
Net Profit/Loss	265	5.17	6.79	6.21	0.05	0.05
Cumulative Gap x IRC						

Source: Annual Reports

Table 4-24 Interest Rate Analysis of KBL for fiscal year 2010/11

4.3.2.5 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:

Fiscal Year	Nabil Bank			KBL		
	Average Interest Loan (%)	Average Interest on Deposit (%)	Interest Spread (%)	Average Interest Loan (%)	Average Interest on Deposit (%)	Interest Spread (%)
2007/08	6.63	2.69	3.94	8.31	4.01	4.30
2008/09	7.38	3.22	4.16	9.98	5.81	4.7
2009/10	8.82	4.42	4.40	10.80	7.52	3.28
20010/11	10.52	6.15	4.37	12.66	8.74	3.92
		Mean	4.22		Mean	3.92

Source: Annual Reports

Table 4-25 Interest Rate Spread of Nabil Bank and KBL for 4 years

Above table illustrates the interest rate spread of two commercial banks. The interest rate on loans and advances and deposit of Nabil bank incremental while the interest rate on loans and advances and deposits of KBL is in fluctuating trend. Nabil Bank has highest interest rate of 10.52% on loans and advances and 6.15% on deposit in the fiscal year 2010/11. KBL has highest interest rate of 8.74% on deposit in fiscal year 2010/11. Both interest rate of Nabil Bank are less than KBL. The mean spread of Nabil Bank is higher than KBL. This interest rate spread indicates that Nabil Bank has higher net interest income than KBL, which means higher profit. However, both banks have interest rate spread less than 5%.

4.4 Operational Risk:

Operational risk is the risk of negative effects on the financial result and capital of the bank caused by omissions in the work of employees inadequate internal procedure and processes, inadequate management of information and other systems and unforeseeable external events. The greater dependence on technologies and centralized operation has increased exposure of operation risk to banks. Operational risk may results unexpected losses and reputation problems. Operational risk may results all products and business activities of bank. Though operational risk has significant impact on the banking operations, but remains the most difficult risk categories to quantify. The operation risks of banks are analyzed as below.

4.4.1 Transaction Risk

Transaction risk is the risky of direct or indirect loss resulting 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.

When asked to banks staffs, the major types of transaction risk includes:

4.4.1.1 Cash Shortage and Overage

Banking business basically exchange financial assets with cash. Cash transactions main transaction of banks. So cash short and over is the main transaction risk in banking sector. Cash shortage and over is associated with the employees of cash department. Cash short a staff refers to a situation in which any amount below the actual amount required to be as the cash balance 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 be as the cash balance 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 bank whereas over means the reputation risk because the customer, who pays more might come later on to claim.

According to Mr. Ajit Bhattarai head of operation department 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 of Nabil Bank is around Rs 100 thousand to 150thousands. the average cash short of KBL is around Rs 100 thousands to 125 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.

4.4.1.2 Document Risk

Document risk is the probability of loss that a legal agreement may turn out to be incomplete, insufficient or otherwise unenforceable. It 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 fake 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 questionnaire to Mr. Narendra Prasad Chhatkuli Head of legal and complains of KBL, 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.

4.4.1.3 Settlement Risk

Settlement risk is the risk of potential of loss due to unsettlement of transaction within branches of a bank or between interbank 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.

According to Nabil Banks internal Audit Department staff the major settlement problem of the bank is associated with the draft payment, payment of foreign trade and 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. Similarly, the bank also has to make inter branch transactions. Inter branch transaction refers to the transaction made between branches. While making inter branch transaction, 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 Nabil bank 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 questionnaire 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.

4.4.2 Money Laundering

Money laundering is the process of concealing the source or ownership of illigallygained funds to make them appear legitimate or hiding money to avoid paying taxes or using legally gained money in pursuit of unlawful activities. (Wikipedia, 2013)

In earlier, 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 business, corrupt officials, members of criminal organization 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)

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 is a global issue. In both banks, combating against the money laundering has been a high priority. According to the operation managers of both the banks a comprehensive antimony laundering policy, known as “Know Your Customer (KYC) policy”. The policy is in line with international practices. Banks look following minimum standards while conducting banking business.

- Customer identify 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, legal and compliance department is responsible for monitoring the compliance of Know your customer (KYC) policy. Mr. Binaya Regmi head legal and support department of Nabil 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:

- i. Due Diligence are collected, recorded and monitored information on customers.
- ii. 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.
- iii. Unusual or Suspicious transactions/activities identified should be reported to the Compliance Officer and after verification of the correctness should report ot Senior Management in the appropriate format.

Operation staff of KBL states that bank looks into following transactions:

- i. Customers background, which does not justify the deposited amount
- ii. Customer who have frequent large transaction without any source
- iii. Multiple bank accounts of a same customer in same bank
- iv. Business unit unwillingness 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.

4.4.3 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 Nabil Bank is Infosys technologies System, world renowned software, developed in Bangalore India. The Bank offers Any Branch Banking Service (ABBS) in all branches. Telex and SWIFT are other modes of communication for efficient and effective transmission of information. The main software of KBL is Globus. All the branches have been interconnected with radioactive links so that the customer can get Any Branch Banking Services (ABBS). This computerized system will be in problematic situation when system fails. According to Information Technology (IT) staff of Nabil mentioned that system failure is not usual. The bank itself configures most of the problems related to system; however for the complex problem the bank has been using the help of Infosys technology system India. It staff of KBL states that every day the bank records the transaction in a disk after operating End of Day (EOD) transaction. 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 launched 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.

Nabil Bank is providing Debit and Credit facilities under the Visa and Master Card Network. Nabil Bank has 79 ATM terminals located at different parts of the country and it has POS arrangement as well. Similarly, KBL is providing ATM card in collaboration of visa electron debit card network, which can be used in the ATM counter of Visa Network . KBL has 36 ATMS and POS. Visa Network owns and handles all the administrative function of ATM. KBL 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 of Nabil 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).

IT manager Mr. Basanta Dhakuwa of Nabil bank explained that a technical problem with ATM is also one of the significant problems. Due to the technical problem, the ATM services remain out 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 2 to 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.

4.5 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.

4.5.1 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 and investment on government bills to 150% 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 and 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.

Rs. In million

Fiscal Year	Statutory Ratio (%)	Nabil Bank				KBL			
		Core Capital I	Total RWA	Core Capital/RWA	Excess/Shortfall	Core Capital	Total RWA	Core Capital/RWA	Excess/Shortfall I
2006/07	6	1993	19167	10.40	4.40	1020	9960	10.24	4.24
2007/08	6	2365	27010	8.76	2.76	1359	13070	10.40	4.40
2008/09	6	3045	32501	9.37	3.37	1584	16984	9.33	3.33
2009/10	6	3669	39017	9.40	3.40	1779	16257	10.94	4.94
20010/11	6	4319	44469	9.71	3.71	2205	16146	13.66	7.66
				Mean	9.53			Mean	10.91
				SD	0.60			SD	1.64
				C.V.%	6.26			C.V.%	15.03

Source: Annual Reports

Table 4-26 Core Capital to Total Risk Weighted asset Ratio

The above table illustrates the ratio of core capital to total risk-weighted asset of Nabil Bank and KBL for 5 years. Both banks have maintained secure level of ratio in all the fiscal year. The average core capital to RWA of Nabil bank is 9.53% and KBL is 10.91%. This indicates that KBL has employed higher capital than Nabil

Bank to finance the risk-weighted asset. Again the average excess ratio than the statutory requirement of Nabil Bank and KBL is 3.53% and 4.91% respectively, which shows that KBL can increase its risk-weighted asset more than Nabil Bank. The higher capital ratio does a bank maintain, the higher income and profit. This above figures indicates that Nabil Bank is in slighter riskier position than KBL.

The standard deviation of core capital to RWA ratio of Nabil Bank is 0.60% whereas this ratio of KBL is 1.64% . Similarly the Coefficient of Variation (C.V) of Nabil Bank on core capital to RWA is 6.26% ,whereas C.V or these ratios of KBL is 15.03% .These figures indicate that ratios of Nabil Bank are more fluctuating from average than KBL, which shows inconsistency.

4.5.2 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 bank will be in less risky position and can increase its asset, which ultimately will increase bank's overall profit.

Rs. In million

Fiscal Year	Statutory Ratio (%)	Nabil Bank				KBL			
		Capital fund	RWA	Capital fund/RWA	Excess Shortfall	Capital fund	RWA	Capital fund/RWA	Excess Shortfall
2006/07	10	2308	19167	12.04	2.04	11.18	9960	11.22	1.22
2007/08	10	2998	27010	11.10	1.10	1883	13070	14.41	4.41
2008/09	10	3478	32501	10.70	0.70	1963	16984	11.56	1.56
2009/10	10	4097	39017	10.50	0.50	2006	16257	12.34	2.34
20010/11	10	4705	44469	10.58	0.58	2222	16146	13.76	3.76
			Mean	10.98	0.98		Mean	12.66	2.66
			SD	0.63			SD	1.38	
			C.V.%	5.77			C.V.%	10.93	

Source: Annual Reports

Table 4-27 Total Capital Fund to risk weighted Asset Ratio

Above table demonstrates the total capital fund to risk weighted asset (RWA) of Nabil Bank and KBL for 5 years. Both banks have maintained the capital adequacy ratio higher than the statutory requirement in each fiscal year. The average ratio of Nabil Bank and KBL is 10.98% and 12.66% respectively. This shows that KBL is in better position than Nabil Bank. The average excess/shortfall ratio of Nabil Bank and KBL is 0.98% and 2.66% respectively. This figure indicates that KBL has higher excess ratio than Nabil Bank.

The standard deviation of both total capital fund to risk weighted asset ratio of Nabil Bank is 0.63%, whereas this ratio of KBL is 1.38% . Similarly, the Coefficient of Variation (C.V) of NCC Bank total capital fund to RWA ratio is 5.77% whereas C.V or this ratios of KBL is 10.98%. This figures indicate that ratios of KBL is more fluctuating from average than Nabil Bank, which shows inconsistency.

4.6 Major Findings of the Study

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

Credit Risk

From the analysis of data concentrations, credit processing and market and liquidity-sensitive credit exposures. From the analysis of limit, which is sector wise lending analysis shows that Nabil Bank and KBL have extended 31.36% and 18.34% of total loan in a single sector respectively. Similarly, the exposure on the single sector of Nabil Bank and KBL exceeds 10% of total loan in 4 sectors each. The single sector loan to core capital shows that the ratio crossed 100% 3 sectors of both Nabil Bank and KBL. In regard to concentration risk, Nabil Bank has more risk in manufacturing, whereas KBL has more risk on manufacturing, whole seller and retailer sectors as the single sector credit to core capital ration in these sectors is more than 100%. From the personal interview of the key respondents it was found that both banks have been extending credit after getting approval from the board of director. This clarifies that concentration risk is the main source of credit risk for Nabil Bank and KBL. Similarly, lack of systematic and thorough credit processing is also the major source of credit risk in these banks. The problems in credit processing include lack of thorough credit assessment, absence of testing and validation of new lending techniques, subjective decision-making by senior management, lack of effective credit review process, failure to monitor borrowers or collateral values, and failure of banks to take sufficient account of business cycle effects etc.

From the analysis of lending against various collaterals, it has been found that both the banks have lent highest amount of loan against the movable/immovable property. The average lending over 5 years period of Nabil Bank and KBL against movable/Non-movable property is Rs 25992 million and 19934 million respectively. Similarly, lending against own FDR (i.e. other than prescribed by NRB) is second position for Nabil bank and the lending against other securities is second position for

KBL. Internationally rated bank is in third position for Nabil Bank and lending against FDR of other licensed institution is in third position for KBL. Both banks have not granted any loan without backing any collateral. The key performance indicators of two banks in regard to credit management are found as follows:

The average loans and advances to total asset of Nabil Bank and KBL during the study period are 49.77% and 65.38% respectively. Over this five years period, the proportion of loan asset of Nabil Bank is increasing where KBL has fluctuating. From this, it can be said that Nabil Bank and KBL have been frequently adjusting the proportion of loan. Lower average loan and advances to total asset of Nabil Bank than the KBL (i.e. $49.77\% < 65.38\%$) suggests that Nabil Bank management is more risk averse than KBL and also indicates that Nabil has invested more on the risk free asset such as government bills. However, higher deviation of ratio and variability of Nabil Bank depicts that the ratio of Nabil Bank is more fluctuating from average than KBL.

The core banking function is to mobilize the funds obtained from the depositors and how successfully this function have been discharged by the banks is measured by the ratio of loans and advances to total deposit ratio or simply CD ratio. The average CD ratio of Nabil Bank and KBL is 70.69% and 87.40% respectively during the study period. This implies that KBL has utilized higher portion of deposit than the Nabil Bank. Similarly, the deviation of the ratio of KBL is lower than Nabil bank which indicates the CD ratio has lower variation from the average in case of KBL than the Nabil Bank.

Analysis of non- performing loans to total loans shows that average NPL of Nabil Bank and KBL is 1.51% and 0.85% respectively. Hence Nabil Bank has higher percentage of non-performing loan than KBL, which means that Nabil Bank has more credit risk than KBL. With higher amount of non- performing loan of Nabil Bank, the impact of it will be on the net profit of the bank.

Average ratio of Loan Loss Provision to Non-performing Loan of Nabil Bank and KBL has found to be 154.41% and 207.90% respectively. Hence KBL has higher ratio than Nabil bank, which depicts that the bank has higher provision against the loss amount without any problem, as there is sufficient amount of reserve for nonperforming loan. However, the comparative low ratio of Nabil Bank also suggests that out of non-performing loan, the proportion of bad loans is lower than that of

KBL. The higher amount of bad loan does a bank have, the higher will be the provision.

The average Loan loss Provision to total ratio of Nabil Bank and KBL is 2.05% and 1.58% respectively. The higher percent of LLP of Nabil Bank indicates that the higher amount of non-performing loan than KBL. Because of the higher amount of nonperforming loan of Nabil Bank in total, the provisioning amount is in higher side. This figure indicates that KBL is in better position than Nabil Bank.

The main objective of commercial banks is to earn profit through mobilization of fund. The ratio of returns on loans and advances ratio shows that the average ratio for 5 years of Nabil Bank is 3.73% which indicates that the bank is able to generate net profit from loans and advances, The average ratio of KBL for the period is found to be 1.82%. This figure indicates that Nabil bank has been able to earn more return from its loans and advances than KBL. Similarly the variation on return of Nabil Bank is more fluctuating than KBL.

Correlation coefficient between LLP and loans and advances of Nabil Bank and KBL is 0.91 and 0.73 respectively. This figure indicates that the LLP and loan and advances of Nabil Bank are highly correlated than KBL. Similarly, 6 times Probable Error (P.E) of Nabil bank is lower than the correlation coefficient, which indicates that correlation coefficient is significant and reliable. The 6 time probable error of KBL is more than the correlation coefficient which indicates the correlation coefficient is insignificant.

The correlation between LLP and NPL reveals that there is high positive correlation of both Nabil Bank and KBL. The correlation coefficient of Nabil Bank and KBL is 0.66 and 0.70 respectively. The 6 times P.E shows that the correlation coefficient of both banks are not significant and reliable.

Liquidity Risk:

Liquidity Risk is associated with the funding crisis of a bank which arises due to non-marketability of the asset. The liquidity risk is one of the market risks as the market determines the liquidity of the asset. From the above analysis, the current liquidity position of Nabil Bank and KBL has been ascertained. Besides, funding of asset through liabilities has also been analyzed by categorizing the asset and liabilities into different maturity period, from which liquidity crises and risk associated with asset liabilities mismatch is also found.

Gap Analysis, which is the most common and best tool for analyzing the liquidity risk, has been used to find out the mismatch between asset and liabilities of different time intervals of both banks. From the gap analysis of asset and liabilities of different time intervals, it has been found that over Five years KBL has lower amount of liabilities than asset in each bucket except time bucket on 91-180 days and 181-270 days where as in Nabil Bank the amount of liabilities is less than asset in each bucket except the time bucket of 181-270 and more than 1 year.

As the liabilities cannot be paid by liquidating the asset of that time bucket, it is needed to offset by using the asset of other time interval or through inter-bank borrowing or issuing instruments. Similarly, when the market price of asset/liabilities of certain time interval increase, the bank will suffer a loss in such situation as the liabilities at that interval has more market price than asset. On the contrary, when the market price of asset/liabilities at certain time interval decreases, bank will suffer more loss when the bank has higher amount of asset than liabilities. Therefore, the best situation for the bank is the lower gaps between the asset and liability, as higher on either side is risky to the bank. Through from liquidity point of view the higher the asset than liabilities is better, however, the excess net asset liabilities position also leads the higher idle fund of the banks that ultimately results higher opportunity cost.

The mean net position of Nabil Bank is Rs 1111.28 million, Rs 710.26 million,- Rs 852.02, Rs 423.40 million, and -Rs 471.69 million in time interval 1-90 days, 91-180 days, 181-270 days, 271-365 days and more than 1 year respectively. Likewise the mean net position of KBL is Rs 3340.70 million, Rs 201.10 million, Rs 1858.94 million, Rs 691.70 million, Rs 1266.30 million in time interval 1-90 days, 91-181 days, 182-270 days, 271-365 days and more than 1 year respectively. These gaps show that both banks have managed short time liabilities properly as both Nabil Bank and KBL have positive net gap. Nabil bank has problem in offsetting the long-term liabilities (i.e. above 1 year) as KBL has negative net gap. From the analysis in terms of meeting the liquidity requirement, it can be inferred that Nabil bank is in risk in higher time bucket when the market price of the asset decrease. The average Current ratio of Nabil Bank and KBL over 5 years is 1.69 and 2.50. This figure indicates that KBL has matched its current asset and liabilities more nicely than Nabil Bank. This means that Nabil Bank has used higher amount of current liabilities to finance asset with higher maturity period.

Cash and Bank balance to total assets ratio of both Nabil Bank and KBL shows the proportion of liquid asset in total assets portfolio. The higher ratio does a bank have, the better is the liquidity position of the bank (i.e. lower the liquidity risk) and vice versa. The average ratio for Nabil Bank and KBL in 5 years is 5.38% and 8.09% respectively. This ratio indicates that KBL has kept more liquid asset in its asset portfolio than Nabil bank, which signifies the lower liquidity risk. On the contrary, the higher portion of cash and bank balance also indicates that bank has kept more idle fund.

Another important indicator of liquidity risk is Cash Reserve Ratio (CRR). The CRR is the amount of deposit commercial banks needs to maintain in Nepal Rastra Bank out of their total deposit. The average CRR of Nabil Bank and KBL in 5 years is 4.35% and 5.07% respectively. This shows that KBL has maintained higher amount of liquidity in NRB than Nabil Bank. However, Nabil Bank has shortfall to the statutory requirement by 2.53% in fiscal year 2009/10, where as the KBL has also shortfall to the statutory requirement by 2.5% in fiscal year 2009/10. The standard deviation of CRR of Nabil bank and KBL is 2.32% and 3.17% respectively, which indicates that KBL has more fluctuation in maintaining the CRR than Nabil bank. It is also associated with higher risk.

Interest Rate risk

From above analysis, the following facts have been found regarding the interest risk. The interest income to total income of Nabil Bank and KBL stood very high. The average ratio of Nabil bank and KBL is 81.60% and 89.95% respectively. This means that the main source of income for both the banks is interest income from loans and advances. In the fiscal year 2010/11 the ratio of Nabil bank and KBL is 87.30% and 91.69%. This indicates that both the banks are highly vulnerable to interest risk. As the slight changes in market interest on loan would have a huge impact on bank's income.

Similarly, the interest expenses also have a major portion in total expenses. The average interest expenses to total expenses of Nabil Bank and KBL are 49.01% and 62.69% respectively. The higher ratio also indicates the bank is paying high amount of interest to the depositors. The Standard deviation of the ratio for Nabil Bank and KBL is 9.90% and 7.40% respectively. The higher S.D. of Nabil Bank

indicates that Nabil Bank ratio is more fluctuation than KBL, which is the sign of higher risk.

The gap analysis of interest rate sensitive asset and liabilities of both the banks depicts that Nabil Bank has higher gap than the KBL. The mean gap of Nabil Bank and KBL is Rs. 598 million and Rs 133.60 million respectively. Over the five years, KBL has lower interest rate sensitive asset than interest rate sensitive liabilities, except fiscal year 2006/07 where as Nabil Bank has positive gap in each year except fiscal year 2006/07 and 2008/09. The higher gap of Nabil Bank means that the bank has higher amount of mismatch between IRSA and IRSL. The higher amount of mismatch represents that the bank does not have hedged the asset and liabilities properly to minimize the risk. This figure also indicates that Nabil has higher vulnerability of interest rate changes than KBL Bank.

The net interest margin (NIM) of Nabil Bank and KBL over 5 years is Rs 5.99 million and -1.34 million respectively. The higher amount of NIM of Nabil bank than KBL shows that the impact of changes in interest rate on Nabil bank is higher than the KBL . This means when there is a change in interest rate on Rate Sensitive Asset and Liabilities, Nabil bank will earn more profit than KBL.

Interest rate risk analysis, according to NRB directive no. 5, depicts that Nabil Bank and KBL has cumulative net gap (i.e, between asset and liabilities) of Rs 11295 million and -Rs 20 million respectively. The higher gap means that Nabil Bank has higher amount of asset than liabilities. In different time bucket, Nabil bank has higher amount of assets than liabilities except time bucket 181-270 days whereas KBL has higher amount of assets in short term time bucket 1-90, 91-180 and 181-120 days bucket there is a 1% change in interest rate on both rate sensitive asset and liabilities, the net profit of Nabil bank and KBL will be Rs 28.24 million and -Rs 0.05 million respectively. The higher amount of cumulative net profit of Nabil bank indicates that Nabil bank has a positive impact with changes in interest rate than KBL.

Average interest rate spread of Nabil and KBL is 4.22% and 3.92% respectively. The higher amount of spread of Nabil Bank indicates that the net interest income (i.e. interest income less interest expenses) of Nabil bank is more than KBL. This means Nabil bank earns more profit than KBL.

Operation Risk

The major findings related with operation risk are as below:

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 and settlement risk. According to the staff of both banks it has been found that cash shortage and over is a regular phenomenon as to error is human. The average cash short is around 100 to 150 thousands In Nabil Bank and around 100 to 125 thousands of KBL, there is provision of teller risk fund to safeguard the loss from cash short.

Similarly, in documentary business such as Letter of Credit (L.C) there is a risk of opening a L.C. in providing loan against the false document. Similarly, there is also a risk of purchasing or discounting a counterfeit checks and bills by a bank. This risk arises mainly due to negative intension of clients and failure of banks to take timely precaution. According to the key respondents of both banks, it has been found that there is no such an incident that the bank has suffered a huge loss due to acceptance of counterfeit document. Settlement risk is also another source of operation risk, which arises mainly in inter-branch transaction. The timely unsettlement of transaction within the branch or banks means that the bank can neither record such transaction as an income nor as an expense. To minimize the settlement of risk, both the banks have reconciliation department. This department is concerned with reconciling the inter-branch and inter-bank transaction in different time arrivals. According to the interview to the key person of reconciliation department of both the banks, it has been found that normally inter-branch transactions can remain outstanding only for 2-3 days, where as inter-bank transaction may remain for 2-3 months. However, both the banks have been making proper follow up for unreconciled transaction with the correspondence bank.

Money laundering is also one of the important sources of risk for commercial banks. For combating the money laundering, both the banks have their own Know your Customer (KYC) policy. It includes proper identification of customers before making transaction. In both banks, Compliance Department is concerned with tracing all doubtful transactions and evaluation the compliance of KYC policy. The bank continuously identifies and verifies the following transaction,

- Cash transaction above Rs. 500,000.
- Remittance of Foreign Currency of more than USD 10,000.
- Credit Facilities approved beyond Rs 10 million

According to the staff of both banks, the main factors that bank look in customer includes,

- Customer identify before opening an account and/or making an account operational.
- Detailed interview to customers before opening a new account to ascertain purpose of opening an account, sources of funds etc.

System Risk

System risk refers to operational risk, which arises due to the failure in computerized system. It is the risk associated with the new computerized technology. From the analysis of the interview of the key respondents following findings has been identified:

Both Nabil bank and KBL have adopted the centralized computerized system. Nabil bank uses Infosys technology system, the world renowned software and KBL uses Globus software. To minimize the system risk, in both the banks, multiple layers of security have been applied to the bank's online banking system to ensure transaction secure. High precaution has been taken for data security. Both the banks have proper back up system in case of major break down of hardware and software. In case of card business, both banks do not see any risk in terms of debit card. The major risk in card business is also associated with technology risk. The major technological risks include system failure, over payment of cash and settlement risk etc. From the interview of key respondents of both banks, it has been found that the banks have not suffered a huge loss due to cash overpayment. For reducing the risk, both the banks are providing training to their employees.

From the above, it has been found that both the banks have been giving focus on operation risk. In both the banks, Internal Audit Department makes regular audit of each department of all braches to ascertain operational procedure of the department. It also verifies and monitors whether the department properly comply with the operational guidelines or not. This helps to reduce the operation risk associated with mistake made by employees or the likely fraud from employees.

Banking Risk and Capital Adequacy Measures

Analysis of capital adequacy measures of both banks reveals following findings:

The average Core Capital to Total Risk Weighted Asset of Nabil bank and KBL is 9.53% and 10.91% respectively. Both banks have not maintain the statutory requirement made by NRB throughout the study period whereas KBL has maintained the higher percentage of core capital than the Nabil bank. The average ratio indicates that KBL has higher proportion of Core Capital to finance the risk-weighted asset than Nabil bank. However, the standard deviation and variation is higher in KBL than Nabil bank which indicates that KBL ratio fluctuates more than Nabil Bank.

The average Capital Fund to Total Risk Weighted Asset of Nabil Bank and KBL is 10.98% and 12.66% respectively. Both banks have maintained the NRB statutory requirement through out the study period. The average ratio indicates that KBL has higher proportion of Capital Fund to finance the risk-weighted asset than Nabil bank which indicates that KBL ratio fluctuates more than Nabil bank.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

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 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 2 banks were taken as sample using judgment sampling method. Nabil bank and KBL have been taken for comparative study. Both primary and secondary data have been used in this study. Primary data has been collected mainly from questionnaire with key position staff. Annual reports and other publication of these banks and NRB are the basis of secondary data. The data collection from various sources are recorded systematically and presented. Appropriate statistical and financial tools have been applied to analyze to meet the objective of the study.

The major risk in Nabil bank and KBL is associated with credit decision as the proportion of credit risk on total risk is high, the financial statement analysis of these banks also indicates that the portion of credit risk is more. The average loan and advances to total asset ratio of Nabil bank and KBL is 49.77% and 65.38% respectively. This means that loan and advances hold major portion in total asset. Similarly, the mobilization of deposit in credit, which is indicated by Credit Deposit ratio, also suggests that major portion of deposit is invested on loan and advances. The average CD ratio Nabil bank and KBL is 70.69% and 87.40% respectively. Similarly, the interest income holds 81.60% and 89.95% of total income in Nabil bank and KBL respectively. This figure indicates that credit risk has covered significant ground in these banks.

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 Nabil bank is more than that of KBL (i.e.1.51%>0.85%). In contrary to this, KBL has provisioned more reserve than Nabil bank against the NPL.

Collateral is also one of the important factors while extending credit. When the borrower defaults, collateral is the only mean to cover such losses. The credit practice of both banks is not lending without collateral which is good parts of lending practice. 100% of provision is not to be made for this sort of loan, which reduces the bank's profit.

Similarly, credit concentration on single sector of Nabil Bank and KBL shows that both banks have very high amount of concentration in single sector. In manufacturing sector, Nabil bank has 31.36% of total loan and KBL has 18.34% in manufacturing and 15.17% in wholesaler and retailer sector, which is the sign of putting all eggs in one basket. Improper portfolio management also remains one of the significant problems in credit management of these banks. Likewise, average return on loans and advances of Nabil bank and KBL are 3.73% and 1.81%. This indicates that Nabil bank able to earn higher net profit by utilizing the loans and advances.

There is high positive correlation between LLP and Loan and Advances in both the banks. This indicates that there is a change in LLP of both banks when there is a change in loans and advances. Likewise LLP and NPL of both banks are high positively correlated. The positive correlation coefficient indicates that the provisioning amount will increase when there is an increase in NPL and vice versa.

After the credit risk, market risk such as liquidity risk and interest rate risk have significant impact on organizational prosperity. The liquidity risk of banks is mainly studied by analyzing the asset liabilities mismatch in various time buckets and other ratio analysis such as current ratio, cash reserve ratio, cash and bank balance to total asset ratio etc. The gap analysis shows that both banks have managed its asset and liabilities in short time bucket more properly. In long term bucket, KBL has

negative gap. From this analysis we found that KBL are in riskier position in long term bucket when the market price of the asset decreases.

Similarly, Nabil bank has lower current ratio than that of KBL, which means that Nabil bank has used more current liabilities to finance the current asset or higher amount of current liabilities of Nabil bank has been used both to finance current asset and long term asset than of KBL. Likewise, KBL bank holds higher amount of cash and bank balance than that of Nabil bank which means that in comparison to Nabil bank, KBL has more liquidity.

The CRR depicts that on an average KBL has maintained slightly more bank balance in NRB than Nabil bank. However, Nabil bank has shortfall to the statutory requirement in the fiscal year 2010/11, which reflects the poor liquidity management by the banks.

Another part of market risk is the interest rate risk. The high proportion of interest income on total income of both banks also indicates the high level of interest rate risk, and when there is a change in interest rate this will severely hurt the bank's net income. The average interest income to total income ratio of Nabil bank and KBL are 81.60% and 89.95%. This indicates that high dependent in interest base income which is the sign of high interest rate risk.

The gap analysis of both Rate Sensitive Asset and liabilities of both the banks depicts that Nabil bank has higher than that of KBL. The higher gap of Nabil bank 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 Nabil bank has higher vulnerability of interest rate changes than KBL.

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

The interest rate risk analysis according to NRB directive no. 5 shows that Nabil has higher amount of cumulative net profit than the KBL which indicates that Nabil 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. Likewise, document risk arises due to transaction against the counterfeit documents. However, the key respondents of both the banks cleared that the banks has not made any loss out of counterfeit documents.

Similarly, settlement risk is also another source of operation risk, which arises mainly in inter-branch and inter-bank transaction. Both the banks have reconciliation department to minimize the settlement risk. This department is concerned with reconciling the inter-branch and inter-bank transaction in different time intervals. It has been found from the key respondent's interview that normally inter-branch transactions can remain outstanding only for 2-3 days, where as inter-bank transaction may remain outstanding for 2-3 months.

Both the banks have well defined Know Your Customer (KYC) policy for preventing the money laundering. This policy clearly outlines the procedure for checking and verifying the suspicious transaction. Similarly, this policy has made provision to the required documents and information before opening an account by customers. Compliance and Internal Audit Departments are concerned with tracking all the suspicious and huge level of transaction on daily basis.

Likewise system risk is also one of the major sources of operation risk in banks. Nabil bank and KBL have adopted the computerized system, which raises the possibility of system risk. Both banks have provided high caution for data business, the major risk includes system failure, overpayment of cash and settlement risk. For minimizing such risk, both banks have been various preventive measures.

In commercial banks, minimizing the risk is the major challenges. For combating the risk, both the banks have taken several measures. One of the major measures is capital adequacy ratio. The capital adequacy ratio depicts that both have higher CAR than statutory requirement. Therefore these banks are fulfilling the capital fund requirement mainly form the core capital and supplementary capital. In risk weighted asset, both the banks have higher portion of on balance sheet asset than off balance sheet asset.

5.2 Conclusion

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 problems and challenges. In current scenario, the major challenge of commercial banks is competition among commercial banks.

Proper risk management is required to remain competitive in the market and achieve the goals. The major banking risks include credit risks includes credit risk, market risk (i.e. liquidity risk, interest risk, operation risk etc). Among these risks, credit risk has the major impact on banking 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. Similarly, tactfully dealing with market interest movement by adjusting the interest sensitive asset and liabilities also remain challenge to these banks. To remain alert and natural disaster, technology and employees, fault and fraud of customers and outsiders are the challenges for these commercial banks.

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 one 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 department 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 and 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. Similarly, employees' training is also the major tools for minimizing the operation risk in these banks.

For minimizing the loss arising due to occurrence of the above risks, capital and reserve have been maintained by these banks within the standard prescribed by NRB. However, the trend of Capital Adequacy ratio of banks are above the standard.

Though both the banks have their own set of procedures for assessing various risks and their management, problems are still prevalent in these banks. In Nabil bank major problem is a high amount of lending in manufacturing risk. In NCC bank, the major problem is a high amount of lending in manufacturing sector and wholesaler and retailer non performing loan. As the increase in total loan brings increase in NPL, proper adjustment is needed for managing the NPL. Similarly, asset liabilities mismatch is also the problem in both the banks. Both banks are in riskier position in the asset and liabilities of longer maturity period when the market price of asset liabilities decrease. Similarly, managing CRB to statutory requirement is also on of the problems in these banks.

5.3 Recommendation

From the above analysis of the various risk management procedure of both Nabil and KBL, following recommendations are made to the banks in respect to different risk management:

5.3.1 General Recommendation

Following general recommendations can be made to these banks regarding all types of risk management;

- i. 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.
- ii. 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 risks can be operational. Similarly, handling of new system and procedures also assist banks to decrease its operation risk.
- iii. Both banks should give focus in the system of check and balance, which helps to reduce the risk.
- iv. 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.
- v. It is often said, "Prevention is better than cure". Hence it is recommended for both the banks to take preventive measures before the risk occurs 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.

5.3.2 Specific Recommendation

Specific recommendations are especially made for particular organizations for specific risk.

Recommendation to Nabil Bank and KBL

The recommendation suggested to Nabil bank and KBL have been categorized under different risks head.

Credit Risk

- i. Nabil Bank and KBL 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.
- ii. Both the banks need to properly diversify its lending portfolio. The high amount of lending in manufacturing sectors by Nabil bank and in manufacturing and retailer sectors by KBL is needed to be diversified into various sectors, which will decrease concentration risk.
- iii. Both the banks have extended the highest amount of loan against movable and non-movable property, which has 100% risk weight. So both these banks need to diversify its lending against different securities.
- iv. NPL of Nabil bank is increasing with the increase in loan and advances. So, Nabil bank needs to be more careful while taking credit decision.
- v. 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.
- vi. Both the banks must operate within sound, well-defined credit-granting criteria. These criteria should include a clear indication of the bank's target market and a thorough understanding of the borrower or counterparty, as well as the purpose and structure of the credit, and its source of repayment.
- vii. Both the banks must establish a system of independent ongoing assessment of the banks credit risk management processes and the results of such reviews should be communicated directly to the board of directors and senior management.

- viii. These banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential standards and internal limits. Banks should establish and enforce internal controls and other practices to ensure that exceptions to policies, procedures and limits are reported in a timely manner to the appropriate level of management for action. Both banks must have a system in place for early remedial action on deteriorating credits, managing problem credits and similar workout situations.

Liquidity Risk

- i. Asset liabilities mismatch needs to be given higher priority in both Nabil bank and KBL. Both the banks have high mismatch amount, which needs to be frequently revised and brought under control.
- ii. Both banks need to set up policy for the minimize mismatch amount between asset and liabilities.
- iii. Bank has problem in maintaining the CRR, which is below the statutory requirements. So enough Nabil Bank requires taking care for maintaining CRR and also by KBL.

Interest Rate risk

- i. Interest income has major portion in total income of both Nabil Bank and KBL. As there is change in interest rate, it will have huge impact on total income. So both the banks need to increase their fees and commission based income to minimize income concentration risk.
- ii. Both the banks need to monitor the gap between both types of asset and liabilities. The gaps need to be closer in both, the banks for proper interest risk management.
- iii. Interest risk analysis according to NRB directive should not be prepared for reporting purpose only. It needs to be taken as a tool for proper risk management.

Operation risk

- i. 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.

- ii. 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.
- iii. 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.

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Annex-1(A)
Statements of financial position of Nabil Bank Ltd. for 5 years

Rs in

Million

Capital and Liabilities	2010/11	2009/10	2008/09	2007/08	2006/07
Share Capital	2030	2029	966	689	492
Reserve and Suppliers	2537	1808	2165	1748	1565
Debenture and Bonds	300	300	300	240	-
Borrowings	1650	75	1681	1360	883
Deposit Liabilities	49696	46411	37348	31915	23342
Bills payable	416	425	463	238	83
Purposed Dividend Payable	609	435	463	238	509
Income Tax Liabilities	44	25	80	39	-
Other liabilities	859	644	503	466	379
Total	58141	52152	43867	37132	27253
Assets	2011	2010	2009	2008	2007
Cash Balance	744	636	674	511	270
Balance with NRB	1474	549	2649	1830	1113
Balance with Banks and FIS	218	215	49	330	16
Money at call and short notice	2453	3118	553	1952	564
Investment	13081	13703	10826	9940	8945
Loan, Advances and Bills purchased	38034	32269	27590	21365	15546
Fixed assets	935	780	661	598	287
Non banking assets	-	-	-	-	-
Other Assets	1202	882	865	606	512
Total	58141	52152	43867	37132	27253

Annex 1(B)

Statements of financial position of KBL for 5 years

Rs in
Million

Capital and Liabilities	2010/11	2009/10	2008/09	2007/08	2006/07
Share Capital	1604	1306	1305	1070	750
Reserve and Suppliers	610	480	320	295	275
Debenture and Bonds	400	400	400	400	-
Borrowings	661	430	293	100	213
Deposit Liabilities	16986	17432	15710	12774	10557
Bills payable	8	42	70	65	17
Purposed Dividend Payable	7	157	7	-	-
Income Tax Liabilities	-	-	-	(9)	11
Other liabilities	216	239	433	332	95
Total	20492	20486	18538	15027	11918
Assets	2011	2010	2009	2008	2007
Cash Balance	525	574	549	566	191
Balance with NRB	527	1664	1121	245	385
Balance with Banks and FIS	117	485	106	124	97
Money at call and short notice	452	120	30	55	372
Investment	3533	2298	1511	2139	1678
Loan, Advances and Bills purchased	14626	14766	14593	11335	8929
Fixed assets	306	286	248	222	189
Non banking assets	-	-	-	3	2
Other Assets	406	292	380	338	75

Total	20492	20486	18538	15027	11918
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Annex- 2(A)

Income statement of Nabil Bank for 5 years

Rs. in Million

Particulars	2010/11	2009/10	2008/09	2007/08	2006/07
Interest income	5254	4050	2798	1978	1588
Interest expenses	2955	1960	1153	758	556
Net Interest Income	2290	2090	1645	1220	1032
Commission and Discount	471	399	324	254	238
Exchange Fluctuation Income	276	277	252	196	210
Total Operating Income	3046	2766	2221	1670	1480
Staff Expenses	454	367	340	263	240
Other operating Expenses	401	334	265	221	188
Operating Profit before Provision for possible Losses	2191	2065	1616	1186	1052
Provision for Possible Losses	109	356	45	64	14
Operating profit	2082	1709	1570	1122	1038
Non operating income/(Exp.)	7	6	2	24	5
Loan loss Provision Written Back	7	40	11	11	11
Profit from Regular Activities	2096	1755	1583	1157	1054
Profit/Loss from extra-ordinary activities	3	34	44	40	41
Net Profit after considering all activities	2099	1789	1627	1197	1095
Provision for staff Bonus	191	163	148	109	100
Provision for income tax	570	486	448	343	321
* Current years	569	472	471	340	314
* Up to Previous years	-	1	1	1	7
* Deferred Tax	1	12	(24)	2	-
Net Profit/Loss	1338	1141	1031	745	674

Annex 2(B)

Income statement of KBL for 5 years

Rs in

million

Particulars	2010/11	2009/10	2008/09	2007/08	2006/07
Interest income	2251	1871	1375	957	791
Interest expenses	1566	1189	816	499	397
Net Interest Income	685	682	559	458	394
Commission and Discount	100	97	79	48	41
Other operating Income	53	29	20	18	15
Exchange Fluctuation Income	37	38	41	42	20
Total Operating Income	875	846	699	566	470
Staff Expenses	168	143	116	90	74
Other operating Expenses	213	202	169	148	104
Exchange Fluctuation Loss	-	-	-	-	-
Operating Profit before Provision for possible Losses	494	501	414	328	291
Provision for Possible Losses	114	13	58	64	25
Operating profit	380	488	356	264	267
Non operating income/(Exp.)	1	1	1	16	1
Loan loss Provision Written Back	13	14	47	7	6
Profit from Regular Activities	394	503	404	287	274
Profit/Loss from extra-ordinary activities	-	-	1	(4)	(1)
Net Profit after considering all activities	394	503	405	283	273

Provision for staff Bonus	36	46	38	26	25
Provision for income tax	107	141	109	82	78
* Current years	100	140	114	80	78
* Upto Previous years	3	2	3	-	-
* Deferred Tax	4	(1)	(8)	2	-
Net Profit/Loss	251	316	258	175	170

Annex - 3

Lending of Nabil Bank and KBL in Last five years

Rs in million

Fiscal Year	Nabil	KBL
2006/07	15546	8929
2007/08	21365	11335
2008/09	27590	14593
2009/10	32269	14766
2010/11	38034	14626

Annex-4

Deposit of Nabil Bank and KBL in Last five years

Rs in Million

Fiscal Year	Nabil	KBL
2006/07	23342	10557
2007/08	31915	12774
2008/09	37348	15711
2009/10	46411	17432
2010/11	49696	16986

Annex-5

Net Profit of Nabil Bank and KBL for Last years

Rs in Million

Fiscal Year	Nabil	KBL
2006/07	674	170
2007/08	746	175
2008/09	1031	261
2009/10	1141	317
2010/11	1338	251

Annex-6(A)

Loan Classification of Nabil Bank in Past Five Years

Rs in Million

Fiscal Year	Pass	Restructured	Sub Standard Loan	Doubtful Loan	Bad Loan
2006/07	15638	86	120	14	44
2007/08	21588	11	66	426	52
2008/09	27767	7	113	46	66
2009/10	3254343	1.26	59.02	22.73	404.53
2010/11	38215.66	22.14	170.21	104.66	392.84

Annex-6(B)
Loan Classification of KBL Bank in Past Five Years

Rs in Millions

Fiscal Year	Pass	Restructured	Sub Standard Loan	Doubtful Loan	Bad Loan	Total
2006/07	8958	39	10.28	39	17	10081
2007/08	11332.15	37.76	58.32	78.97	15.19	11522.39
2008/09	14724.72	6	13.08	31.73	19.72	14795.25
2009/10	14886.64	3.93	10.15	34.18	31.18	14966.085
2010/11	14758	4	10	9.5	145	14926.50

Annex-7(A)
Core Capital of Nabil Bank

Rs in Millions

No.	Particulars	2006/07	2007/08	2008/09	2009/10	2010/11
1	paid-up Capital	491	689	966	1449	2030
2	Share Premium	-	-	-	-	-
3	Non-Redeemable Preference Share	-	-	-	-	-
4	General Reserve Fund	984	1134	1341	1569	1837
5	Retained Earnings	113	163	57	3	493
6	Capital Redemption Reserve	-	-	-	-	-
7	Net Profit after Provision Tax and Bonus (Current Year)	-	-	-	-	-
8	Capital Adjustment Fund	105	-	-	-	-
9	Other Free Reserve	-	-	-	-	-
10	Dividend equalization Reserve	3	3	3	3	3
11	Prepaid bonus share	197	276	483	580	-
12	Dividend equalization reserve	100	100	100	100	-
13	Deferred tax reserve	-	-	95	35	34
	Less	-	-	-	-	-
	Investment in Securities	-	-	-	-	-
	As per NRB Directive No.8(4)(2)	-	-	-	-	-
	Core Capital	1993	2365	3045	3669	4319

Annex-7(B)
Core Capital of KBL

Rs In. Million

No.	Particulars	2006/07	2007/08	2008/09	2009/10	2010/11
1	Paid-up Capital	750	1070	1244	1306	1485
2	Share-Premium	-	-	-	-	4
3	Purposed bonus equity share	-	-	-	-	-
4	Non-Redeemable Preference Share	-	-	-	-	-
5	General Reserve Fund	85	120	198	235	286
6	Retained Earnings	35	41	37	21	3
7	Net Profit after Provision Tax and Bonus (Current Year)	-	-	-	-	-
8	Capital Adjustment Fund	-	-	-	-	-
9	Purpose Bonus	150	108	-	-	-
10	Other Free Reserve	-	-	-	7	3
	Less	-	-	-	-	-
	Investment in Securities	-	-	-	-	-
	As Per NRB Directive No.8(4)(2)	-	-	-	-	-
	Core Capital	1020	1359	1584	1779	2202

Annex-8(A)
Interest Bearing Deposits of Nabil

Rs in Million

F/Y	2006/07	2007/08	2008/09	2009/10	2010/11
Deposits	19584	26187	31369	37790	43239

Annex-8(B)
Interest Bearing Deposits of KBL

Rs in Million

F/Y	2006/07	2007/08	2008/09	2009/10	2010/11
Deposits	10066	12063	14882	16611	16058

Annex 9(A)
Risk Weighted Asset of Nabil Bank

Rs in Million

S N	Particulars	2006/07		2007/08		2008/09		2009/10		2010/11	
		Asset	RWA	Asset	RWA	Asset	RWA	Asset	RWA	Asset	RWA
1	Balance Sheet Asset	27621	16946	37554	23724	43850	28641	51920	34650	58049	39812
2	OFF Balance Sheet Items	5695	2221	7791	3286	10734	3860	12329	4367	11973	4657
	Total Assets	33316	19167	45345	27010	54584	32501	64249	39017	70022	44469

Annex 9(B)
Risk Weighted Asset of KBL

Rs in Million

SN	Particulars	2006/07		2007/08		2008/09		2009/10		2010/11	
		Asset	RWA	Asset	RWA	Asset	RWA	Asset	RWA	Asset	RWA
1	Balance Sheet Asset	12052	9402	15218	12309	18739	16192	20593	15239	20535	14933
2	OFF Balance Sheet Items	1414	558	1882	761	2612	792	2782	1018	2861	1213
	Total Assets	13466	9960	17100	13070	21351	16984	23375	16257	23396	16146