

# CHAPTER – I

## INTRODUCTION

### 1.1 Background of the Study

The credit risk is the potential financial loss resulting from the failure of customers to honor fully the terms of a loan or contract. On the other hand, the market risk includes balance sheet risk and trading risk such as potential risk to earning and capital resulting from changes in interest rate, liquidity conditions, impact of foreign exchange rate fluctuations etc. Meanwhile, Operating risk arises from the natural disasters, errors in processing and settlement of transactions safeguarding of assets, system failure, fraud and forgery.

Credit risk management is the heart of commercial banking; consequently the formulation and implementation of lending policies are among the most important responsibilities of directors and management. Well formulated lending policies and careful lending practices are essential if a bank is to perform its credit. Credit management affects on the company's profitability and liquidity so it is one of the crucial decisions for the financial institutions. The banks take almost care in analyzing the creditworthiness of the borrowing customer to ensure that the interest and the principal amount on loans are timely recovered without much trouble and legal process. A sound lending policy is essential for the good performances of the bank and further to attain economic objectives directed towards acceleration of the development. Lending policy should be carefully analyzed and the banks should be careful while performing its credit creation effectively and to minimize the risk factor.

Liquidity refers to availability of liquid assets or that state of position of a bank that pronounces its capacity to meet its entire obligation. It refers to the capacity of bank to pay cash against deposits. People deposit money at the bank in different accounts with the confidence that the bank will repay their money when they need. To maintain such confidence of the depositors, the bank must keep this point in mind while investing its excess fund in different securities at the time of lending. So that it can meet current or short - term obligation when they become due for payment.

Bank should always know the purpose of loan demanded by a customer because if the borrower misuse the loan granted by the bank he will never able to repay interest and principal. In order to avoid such circumstances, loans should be allowed to the selected borrowers and it should demand all the essential detailed information about the scheme of project in which the bank is lending for. Finance companies must keep in mind the overall development plans of the nation and the credit policy of the concerned authority i.e. central bank.

Banking plays a significant role in the development of nations. Bank is a financial institution which primary classes in borrowing and lending. Modern bank prefers varieties of functions. Therefore, it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the word 'Bank' in different ways. "A commercial bank is dealer in money and it substitutes for money such a cheque or bills of exchange, it also provides a variety of financial service".

Banks are those financial institutions that offer the widest range of financial services especially credit, savings, and payment services and perform the wisest range of financial services of any business firm in the economy. As a financial institution a bank links the surplus unit with the deficit unit of the economy. Banks today provide a number of financial services to their customers. This multiplicity of bank's functions and services has led to banks being labeled "financial departmental stores" and to such advertising slogans as your bank – a full service financial institution. Customers can satisfy virtually every type of financial services needs at one financial institution in one location.

Financial intermediaries are those institutions, which mediate between the savers in the community and the users of the savings. Commercial bank is also one of the financial intermediaries. Commercial bank plays an important role in directing the affairs of the economy in various ways. The operations of commercial banks record the economic pulse of the economy. The size if their transaction actions mirror the economic happening of the country .Example is mass failure of commercial bank in 1930 reflected the phenomenon of several global depressions in the world. Commercial banks have played a vital role in giving a direction to economy's

development over time by financing the requirements of trade and industry in the country.

### **1.1.1 Origin of Bank in Nepal**

The concept of the banking has been developed from the ancient history with the effort of ancient goldsmiths who developed the practice of storing people's gold and valuable treasures under such arrangement the depositors would leave their gold for safekeeping and given a receipt by the goldsmith. Whenever, the receipt was presented the depositors would get back their gold and valuable treasures after paying a small amount as fee for safekeeping and saving.

The Banking system in Nepal was developed gradually from the past. The history states that King Gunakamadev had received loans from the public in the 8<sup>th</sup> century to renovate "Kathmandu City". The foundation of banking system in Nepal was established by a businessperson named Shankhadhar Shakha in 10<sup>th</sup> century. He had paid back all the loans taken from the public and since then Nepal Sambat had started in our country. This tells us that the system of lending money and paying back started long time back in our country. Later on in the 14<sup>th</sup> century, King Jayasthiti Malla divided the people into 64 castes according to their occupation, amongst them 'TANKADHARI' one is that dealt with the lending of money to the public. Main objective of the 'TANKADHARI' was to earn profit by providing money as a loan to people and taking certain interest rate. Prime Minister Ranadeep Singh established 'TEJARATH ADDA' in the 1933<sup>th</sup> B.S In order to protect people from higher interest rate, The 'TEJARATH ADDA' was responsible for providing loans to the people working in the government offices based on the security and the public based on the collateral they deposited in the 'TEJARATH ADDA' was not to earn profit, it charged its creditors with a low interest rate of 5% per annum. It was only subjected to lend but did not accept deposits, hence it could not be counted as a bank. However, it can be said that 'TEJARATH ADDA' was the main financial institution that led to the development of modern banking system into the country.

The actual banking system of Nepal starts from the establishment of Nepal Bank Limited as the first modern bank in our country Nepal in B.S. 1994 Kartik 30<sup>th</sup> according to the Nepal Bank Act 1993. NBL was the first bank to be established in

Nepal and prior to this, there was no such organized banking system in the country. Therefore year B.S. 1994 is said to be the Golden year for modern banking system in Nepal.

After two decade Nepal Rastra Bank established in 14<sup>th</sup> Baisakh, 2013 BS as a being central bank of Nepal under “Nepal Rastra Bank Act 2012” to perform the function of the central banking in Nepal. It established to promote, control, direct, supervision and manages banking activities and to in the country under the provision of Brussels International monetary conference (IMC). Main objective of Nepal Rastra Bank was to make economic assistance, issue and exchange of Nepalese note and currency, good govern of banking system etc. and use of own Nepalese note in whole country Nepal.

Nepal Industrial Development Corporation (NIDC) was established In 2016 BS under NIDC act 2016.it established for promote industrialization in Nepal. Main objective of NIDC was to provide technical and financial assistant for industry and commerce. Subsequently another fully state owned commercial bank “Rastriya Banijya Bank” was established on 10<sup>th</sup> Magh, 2022 BS under Rastriya Banijya Bank act 2021 which was the second commercial bank of Nepal. With the establishment of RBB, a noticeable progress could be seen in banking industry of Nepal. It brought a revolution in the banking industry. People could easily make business transactions with other countries. Both the banks have majority of shares owned by the government of Nepal. Rastriya Banijya Bank is fully owned by the government. In 2024 magh 7<sup>th</sup> BS Agriculture Development Bank (ADB) was established under Agricultural Development Bank act 2024. ADB was established combined merge of cooperative bank and bhumisudhar Bachat Corporation.

### **1.1.2 Profile of Sample Bank**

#### **A. Nepal Investment Bank Limited (NIBL)**

Nepal Investment Bank Ltd. (NIBL), (previously known as Nepal Indosues Bank Ltd.) was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was credit Agricole Indosuez, a subsidiary of one largest banking group in the world. With the decision of credit Agricole Indosuez to divest, a group of companies comprising of

bankers, professionals, industrialists and businessmen has acquired on April 2002 the 50% shareholding of credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure. Rastriya Banijya Bank holds 15%, Rastriya Beema Sansthan holds 15%, General Public holds 20%, and the Nepalese promoters hold 50%.

NIBL managed by a team of experienced bankers and professionals having proven track record, can offer you what you're looking for. Besides commercial banking services, the bank also offers industrial and merchant banking services. The bank has total forty branches in Nepal. Bank will be aggressively opening new branches at different parts of the Kingdom to serve its customers better. Recently bank has opened its new branch outside the valley in the Damauli. Investment Bank Limited has always been committed to providing a quality service to its valued customers, being truly a Nepali Bank. All customers are treated with utmost courtesy as valued clients. The bank, wherever possible, offers tailor made facilities to its clients, based on the unique needs and requirements of different clients. To further extend the reliable and efficient services to its valued customers, Investment Bank Limited has adopted the latest banking technology. This has not only helped the bank to constantly improve its service level but has also prepared the bank for future adaptation to new technology. The Bank already offers unique services such as the pre-paid mobile recharging system through its ATM, SMS Banking and Internet Banking to customers and will be introducing more services like these in the near future. Recently it has brought a new scheme that everyone can open its own saving Account in Re. 1.00 ([www.nibl.com.np](http://www.nibl.com.np)).

### **B. Bank of Kathmandu Ltd. (BOK)**

Bank of Kathmandu (BOK) is a culmination of a comprehensive vision of the Promoters to take the Nepalese economy to newer realm in the global market. The promoters' comprehensive vision and the government's overwhelming support gave birth to BOK as one of the private sectors banks of the country in 1993 which commenced its commercial business in March, 1995.

BOK was established by a group of distinguished civil servants and renowned businessmen in collaboration with the SIAM Commercial Public Company Limited (SCB) - a leading bank of Thailand. Upon establishing BOK as one of the reputed banks in a short period, the Nepalese promoters decided to conclude the technical service agreement with SCB and BOK to be arranged by the Nepalese professionals as it could further enhance its business performance years ahead under the Nepalese management. With the well-acclaimed capabilities of the Nepalese management team, BOK has successfully enhanced its capital structure, profitability; reach to the customers and image in the market. It has created a position in the industry in a shortest possible span of time. Since, BOK is established with the objective of providing prompt and quality services the clients. Its total 48 branches as well as number of eligible staffs have been increasing. Therefore, it has become leading Commercial banks in Nepal ([www.bok.com.np](http://www.bok.com.np)).

## **1.2 Statement of the Problem**

As financial institutions are becoming main sources of mobilizing the financial resources, the large amount of commercial banks funds are concentrated on total loan portfolio. Therefore, the success and failure of the bank largely depend on the total credit risk management of finance companies. In order to analyze the credit risk management of commercial bank following research problems are formulated.

- i. What is the status of liquidity risk of NIBL and BOK?
- ii. What is the condition on assets management risk of NIBL and BOK?
- iii. What is the profitability and risk portion of NIBL & BOK?

## **1.3 Objectives of the Study**

The main objective of the study is to evaluate the credit risk management of commercial bank in Nepal. In order to achieve the basic objective, the other specific objectives of the study are:

- ) To assess the status of liquidity risk of NIBL and BOK.
- ) To analyze assets management ratio of NIBL and BOK.
- ) To analyze profitability and risk ratio of NIBL and BOK.

## **1.4 Significant of the Study**

Loan is the main product of commercial bank. It plays the significance impact on the financial institution's liquidity and profitability. But the most worry factor in banking industry is the total management of loan. Due to the excessive amount of non-performing assets in finance companies, there is the wide spread suspicion on the performance on the commercial bank.

Nepal Government has just enacted the debt recovery act and approved the long waited regulation on debt recovery to speed up the financial reforms in the financial sector. As the proposed study is focused on the total aspect of credit risk management of commercial bank, it would giant information to speed up the process.

The proposed study would be of enormous assistance to the executives of commercial bank on how they should manage the different composition of loans. The study would be important as it provide theoretical as well as conceptual framework of different aspect of credit risk management.

## **1.5 Limitations of the Study**

The study has been subject of the following limitations.

- ) The study has been based on the secondary data provided by Nepal Rastra Bank.
- ) The study is based on data and information provided by commercial bank.
- ) The study has been limited to the viewpoint of the credit risk management.
- ) The study covers the time period of 2006 to 2012.
- ) Differences macro indicators of the global as well domestic economy, which has the impact on the total performance of credit management of commercial bank, have been ignoring.

## **1.6 Organization of the Study**

The present study is organized in such way that the stated objectives can easily be fulfilled. The structure of the study will try to analyze the study in a systematic way.

The study report has presented the systematic presentation and finding of the study. The study report is designed in five chapters.

Chapter one describes the basic concept and background of the study. It has served orientation for readers to know about the basic information of the research area, various problems of the study, objectives of the study and need or significance of the study. The second chapter of the study assures readers that they are familiar with important research that has been carried out in similar areas. The third chapter describes about the various source of data related with study and various tools and techniques employed for presenting the data.

The fourth chapter analysis the data related with study and presents the finding of the study and also comments briefly on them. Final chapter on the basis of the results from data analysis, the researcher concluded about the performance of the concerned organization for better improvement.

## **CHAPTER – II**

### **REVIEW OF LITERATURE**

In this part, focus has been made on the conceptual framework and the review of literature that is relevant to the investment Credit Risk Management of Nepal Investment Bank and Bank of Kathmandu Limited. Review of literature is based on available literature in the field of research. Every possible effort has been made to grasp knowledge and information that is available from libraries; document collection center helps to take adequate feed back to broaden the information to study. The first part of the chapter includes the conceptual framework and the second part includes the review of various related studies.

#### **2.1 Conceptual Review**

##### **2.1.1 Concept of Credit**

Credit is the sum amount of money lent by the creditor (Bank) to the borrower (Customers) either on the basis of security or without security. Sum of the money lent by a bank, is known as credit (Oxford Advanced Learners Dictionary, 1992). Credit and advances is an important item on the asset side of the balance sheet of a commercial bank. Bank earns interest on credits and advances, which is one of the major sources of income for banks. Bank prepares credit portfolio, otherwise it will not only add bad debts but also affect profitability adversely (Varshney & Swaroop, 1994).

Credit is financial assets resulting from the delivery of cash or other assets by a lender to a borrower in return for an obligation of repay on specified on demand. Banks generally grants credit on four ways (Chhabra & Taneja, 1991):

- ) Overdraft
- ) Cash Credit
- ) Direct Credit
- ) Discounting of Bills

## **2.1.2 Types of Credit**

### **Overdrafts**

It denotes the excess amount withdrawn over their deposits. In other words bank provide sum limit of money to their value customer according to their believeness and level of transaction.

### **Cash Credit**

The credit is not given directly in cash but deposit account is being opened on the name of credit taker and the amount credited to that account. In this way, every credit creates deposit.

### **Term Credit**

It refers to money lent in lump sum to the borrowers. It is principle form of medium term debt financing having maturities of 1 to 10 years.

Barely and Myers urge that bank credits with maturities exceeding 1 years are called term credits. The firm agrees to pay interest based on the bank's prime rate and to repay principle in the regular installments. Special patterns of principle payments over time can be negotiated to meet the firm's special needs (Richard, 1996).

### **Working Capital Credit**

Working capital denotes the difference between current liabilities & current assets. It is granted to the customers to meet their working capital gap for supporting production process. A natural process develops in funds moving through the cycle are generated to repay a working capital credit.

### **Priority or Deprived sector Credit**

Commercial banks are required to extend advances to the priority and deprived sector 12% of the total Credit must be toward priority sector including deprived sector. Rs.2 million for agriculture cum service sector and Rs.2.5 million for single borrowers are limit sanctioned to priority sector. Institutional support to 'Agriculture Development bank' and 'Rural Development Bank' are also considered under this category. Deprived sector lending includes:

- ) Advances to poor/downtrodden/weak/deprived people up to Rs 30,000 for generating income or employment.
- ) Institutional Credit to Rural Development Bank.
- ) Credits to NGOs those are permitted to carryout banking transactions for lending up to Rs.30, 000.

### **Hire Purchase Financing (Installment Credit)**

Hire-Purchase credits are characterized by periodic repayment of principle and interest over the maturity of the credit. Hirer agrees to take the goods on hire at a stated rental including their repayment of principle as well as interest with an option to purchase.

A recent survey of commercial banks indicates those banks are planning to offer installment credits on a variable rate basis. It can be secured and unsecured as well as direct and indirect installment credits on a variable rate basis.

### **Housing Credit (Real Estate Credit)**

Financial institutions also extend credit to their customers. It is different types, such as residential building, commercial complex, construction of warehouse etc. It is given to those who have regular income or can earn revenue from housing project itself.

### **Project Credit**

Project credit is granted to the customers as per project viability. The borrowers have to invest certain proportion to the project from their equity and the rest will be financed as project credit. Construction credit is short-term credits made to developers for the purpose of completing proposed projects. Maturities on developers for completing proposed projects. Maturities on construction credits range from 12 months to as long as 4 to 5 years, depending on the construction credits range from 12 months to as long as 4 to 5 years, depending on the size of the specific project . The basic guideline principle involved in disbursement policy is to advance funds corresponding to the completion policy is to advance funds corresponding to the

completion stage of the project. Term of credit needed for project fall under it (Johnson, 1940).

### **Consortium Credit**

No single financial institution grant credit to the project due to single borrower limit or other reason and two or more such institutions may consent to grant credit facility to the project of which is baptized as consortium credit. It reduces the risk of project among them. Financials bank equal (or likely) charge on the project's assets.

### **Credit Cards and Revolving Lines of Credit**

Banks are increasingly utilizing cards and revolving lines of credit to make unsecured consumer credit. Revolving credit line lowers the cost of making credit since operating and processing cost are reduced. Due to standardization, centralized department processes revolving credits resulting reduction on administration cost. Continued borrowing arrangement enhances cost advantages. Once the credit line is established, the customer can borrow and repay according to his needs and the bank can provide the fund to the customer at lower cost.

### **Off-Balance Sheet Transaction**

In fact, bank guarantee and letter of credit refer to off balance sheet transactions of financial institution. It is also known as contingent liability. Contingent liability pinpoints the liability, which may or may not arise during the happening of certain event. Footnotes are kept as references to them instead of recording in the books of accounts.

It is non-funded based remunerative facilities but more risky than the funded until adequate collateral are not taken. Lets its two varieties be described separately.

### **Bank Guarantee**

It used for the sake of the customers in favor of the other party (beneficiary) up to the approved limit. Generally, a certain percent amount is taken as margin from the customer and the customer's margin account is credited.

### **Letter of Credit (L/C)**

It is issued on behalf of the customer (buyer/importer) in favor of the exporter (seller) for the import of goods and services stating to pay certain sum of money on the submission of certain documents complying the stipulated terms and conditions as per the agreement of L/C. It is also known as importers letter of credit since the bank of importer do not open separate L/C for the trade of same commodities (Jhonson, 1940).

### **2.1.3 Meaning of Risk**

Risk refers to uncertainty on the investment faced by the investors. It is the possibility that actual outcomes may be different from those expected. Risk can be defined as the possibility of deviation of the actual return from the expected return. Kupper (2000) defines risk as the volatility of corporation's market value. Risk management, on the other hand, is the process of measuring or assessing risk and then developing strategies to manage the risk. In general, the strategies employed include transferring the risk to another party, avoiding the risk, reducing the negative affect of the risk, and accepting some or all of the consequences of a particular risk.

### **2.1.4 Types of Risk Faced by Commercial banks**

Risk and uncertainties are the integral part of banking business. In banking sector, risk refers to the possibility that the bank will turn into liquidation. There are several inherent risk in banking which can be classified into three broad categories i.e. Credit Risk, Market Risk and Operational Risk. Primarily, risk in the banking context is credit risk through lending, which occupies about 60% of total risk portfolio. Therefore, this study is mainly focused on the credit risk. However, the brief introductions of Market Risk and Operational Risk have also been included. The major sources of risk in banking business are briefly discussed as below:

#### **i. Credit Risk**

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Anthony Saunders defines the credit risk as "the risk that the promised cash flows

from loans and securities held by FIs (Financial Institutions) may not be paid in full". Credit risk involves inability or unwillingness of a customer or counterparty to meet commitments in relation to lending, trading, hedging, settlement and other financial transactions. Santomero (1997) views credit risk is generally made up of transaction risk or default risk and portfolio risk. The portfolio risk in turn comprises intrinsic and concentration risk. The portfolio risk depends on both external and internal factors. The external factors are the state of the economy, wide swings in commodity/equity prices, foreign exchange rates and interest rates, trade restrictions, economic sanctions, Government policies, etc. The internal factors are deficiencies in loan policies/administration, absence of prudential credit concentration limits, inadequately defined lending limits for Loan Officers/Credit Committees, deficiencies in appraisal of borrowers' financial position, excessive dependence on collaterals and inadequate risk pricing, absence of loan review mechanism and post sanction surveillance, etc.

Another variant of credit risk is counterparty risk. Counterparty risk comes from non-performance of a trading partner. The non-performance may arise from counterparty's refusal to perform due to an adverse price movement caused by systematic factors, or from some other political or legal constraint that was not anticipated by the principals. Diversification is the major tool for controlling nonsystematic counterparty risk.

Counterparty risk is like credit risk, but it is generally viewed as a more transient financial risk associated with trading than standard creditor default risk. In addition, counterparty's failure to settle a trade can arise from other factors beyond a credit problem.

So, the goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Bank should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization.

## **ii. Market Risk**

Market risk is the risk incurred in the trading of assets and liabilities due to changes in interest rates, exchange rates, and other asset prices. So, Market risk is exposure to the uncertain market value of the firm's asset. Major factors affecting Market risk are:

- ) Liquidity Risk
- ) Interest Rate Risk
- ) Foreign Exchange Risk

### **Liquidity Risk**

Liquidity risk arises whenever financial institutions' liability holders, such as depositors or insurance policyholders, demand immediate cash for their financial claims. When liability holders demand cash immediately – that is, put their financial claims back to the FI – the FI must either borrow additional funds or sell off assets to meet the demand for the withdrawal of funds. An institution is said to have liquidity if it can easily meet its liability holders' demand for cash either because it has cash on hand or can otherwise raise or borrow cash.

In banking sector, Liquidity risk is created when banks hold different sizes of assets and liabilities and mismatch occurs in maturity of the assets and liabilities. Extreme illiquid asset in bank may result in bankruptcy where as excess liquid asset may carry interest rate risk over the period of time. As it is fatal risk, prudent liquidity management is the primary function of banking sector. Liquidity management is also to make sure that expected shortfall amounts are funded at a reasonable cost, ensure excess fund are invested properly with reasonable returns and without carrying any interest rate risk to the bank

### **Interest Rate Risk (IRR)**

Interest rate risk is the risk incurred by a financial institution when the maturities of its assets and liabilities are mismatched. Interest Rate Risk is the probability of decline in earnings, due to the adverse movements of the interest rates in various markets. The applicable interest earned on assets and liabilities and hence net interest margin is the function of market variables and it may get changed overnight or over a

period of time according to the market situation. Changes in the interest rate can significantly alter net interest income depending on the mismatch of assets and liabilities held by the bank. Changes in interest rates also affect the market value of bank's equity.

### **Foreign Exchange Risk**

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

### **iii. Operational risk**

Operational risk is associated with the problems of accurately processing, settling, and taking or making delivery on trades in exchange for cash. It also arises in record keeping, processing system failures and compliance with various regulations. The Basel Committee on Banking Supervision, Basel September (2000), defines operational risk as "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events." However, applying an explicit regulatory capital charge against operational risk is a relatively new and evolving idea. Basel II requires banks to hold capital against the risk of unexpected loss that could arise from the failure of operational systems.

Operational risk arises from inadequate control systems, operational problems and breaches in internal controls, fraud and unforeseen catastrophes leading to unexpected losses for a bank. Many of the operational-risk-related functions such as regulatory compliance, finance management, frauds, IT, legal, and insurance are carried out by the staff and thus human resources itself becomes a cause for operational risk (Leippoldy, 2003).

### **2.1.5 Review of NRB Directives**

The main focus of this study is to analyze the directives of Nepal Rastra Bank related to Credit Risk Management of Commercial Banks. The directives issued from time to time are one of the tools used by the central bank to control and monitor the commercial banks. In the present context, the directives are issued by NRB quite regularly. In 2069 Shrawan 1st NRB, by using the rights given by the Nepal Rastra Bank Act 2058, has issued unified directives to regulate all three categories of financial sectors in Nepal to ensure that the banking industry functions as per the international standard and also to have more effective control mechanism for overall financial sector. In this new unified directive, loan classification and provisioning of loans of financial institutions are mentioned on Ejajat Prapta Directive No. 2/069 with the objective to minimize the possible risks associated with credits extended by financial institutions in the form of overdraft, loans and advances, bills purchased and discounted. Therefore, as per this new unified directive No. 2, banks should classify the loans and advances on the basis of aging of principal amount into the following 4 categories.

#### **A. Classification of Loans and Advances:**

##### **a. Pass Loan**

Loan and advances which principal amount payment are not due yet or if the due has not exceeded the due date for a period of 3 months are included under this category. Such loans and advances are defined as Performing Loan.

##### **b. Substandard Loan**

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

##### **c. Doubtful Loan**

All the loans and advances, which principal amounts are due for a period of 6 months to 1 year, are included under this category.

#### **d. Bad Loan**

All the loans and advances which principal amount has crossed the due date for a period of more than 1 year as well as the advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future shall be included in this category.

- ) Pass Loans and advances are defined as Performing Loans.
- ) Loans and Advances falling under the category of Sub-standard, Doubtful, and Bad Loan are classified and defined as Non- Performing Loan..

#### **Notes:**

- ) There is no restriction to grade the loans and advances from low-risk category to high-risk category. For e.g. Substandard loans and advances can be graded to the Doubtful or Bad Loans Category and the Doubtful loans and advances can be graded under the Category of Bad Loans on the basis of the internal discretion of the bank's management.
- ) The term "Loans and advances" also includes the Bills Purchase and Discounts.

#### **Additional arrangements in respect of Pass Loan**

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

If the working capital loans of one year maturity period is renewed that can be graded into pass loan category. In working capital loans, if the interest payments are not timely made, such loans can be graded as per the due days.

#### **Additional arrangements in respect of "Bad Loan"**

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

- ) Insufficient collateral.

- ) If the borrower has been declared bankrupt.
- ) The borrower is absconding or cannot be found
- ) Purchased or discounted bills are not realized within 90 days from the due date
- ) If the non-funded facilities like Letter or credit, guarantee, and other liabilities turn into funded facilities and is not repaid within 90 days.
- ) Misuse of Loan.

**Note:** Here misuse of Loans means if the loan has not been used for the original purpose for which it was taken, the business for which is the loan is taken is not in operation, the incomes from the concerned business are used for other purposes instead of repaying of loan, and if the misuse of the funds are proved on inspection by the inspector or by the auditor.

- ) Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation
- ) Loans provided to the borrowers who are blacklisted by the Credit Information Center.
- ) If the project or business for which the loan is provided is not in the condition of operating or if it is closed.
- ) Credit card loan not written off which is due since 90 days.

#### **Additional arrangements in respect of Term Loan**

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

**Note:** Term Loan means the loans with the maturity period of greater than 1 year.

#### **Letter of Credit and Guarantees**

If non-funded facilities such as letter of credit, guarantees and other liabilities turn into funded liabilities and have to be paid by the financial institutions, these credits have to be categorized into “Pass Loan” up to 90 days and if not paid within 90 days then treated as “Bad Loan”.

### **Rescheduling and restructuring of Loan**

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

- ) Evidence of adequate collateral and documentation regarding Loans.
- ) An evaluation of the borrower/ enterprise's management with particular emphasis on efficiency, commitment and high standards of business ethics.

In the written plan of action, the borrower should mention the internal and external causes contributing to deterioration of the quality of loan.

The reduced degree of risk inherent to the borrower/ enterprise determined by analyzing its balance sheet and profit and loss account in order to estimate recent cash flows and to project future one, in addition to estimate recent cash flows and to project future ones, in addition to assessing market conditions.

**Note:** Rescheduling means to extend the loan payment period that have been borrowing by the customer.

Restructuring means to change the loan type and terms and conditions and including the changes in loan payment schedule.

ii. To reschedule or restructure the loans, it is mandatory that at least 25% of past due interest up to rescheduled or restructured date should be paid by the borrower. If all interests have been recovered before renewal of loans, it can be categorized into Pass Loan.

### **B. Loan Loss Provisioning**

- ) The loan loss provisioning on the basis of the outstanding loans and advances and bills purchases are classified as per the new unified directives 2069, shall be provided as follows:

<b>Classification of Loan</b>	<b>Loan Loss Provision</b>
Good	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Bad	100 Percent

Loan loss provision set aside for performing loan is defined as “General Loan Loss Provision” and Loan Loss provision set aside for Non-Performing Loan is defined as “Specific Loan Loss Provision”.

Where the banks provide for loan loss provisioning in excess of the proportion as required under directives of NRB, the whole amount of such additional provisioning may be included in General Loan loss Provision under the supplementary Capital.

- a) For rescheduled/restructured loan, loan loss provision should be at least 12.5%.
    - b) In Case of rescheduling or restructuring or swapping of insured or guaranteed priority sector credit, the loan loss provisioning shall be provided at one fourth of the percentage mentioned in clause (a)
    - c) If interest and principle of rescheduled / restructured loans have been served regularly for two years, such loans can be converted into “Pass Loan” Category.
  - ) Priority sector or deprived sector loans which are not insured should be provisioned as per above clause no. 1.
  - ) Additional Provisioning in the case of Personal Guarantee Loans

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

### **C. Directive No 3 (Single obligor limit)**

Single obligor limit refers to the limit of credit facility to a single person, a firm, a company or a group of borrowers. That means, there is certain limit beyond which a bank cannot provide credit facilities to a borrower or the borrowers who comes under the same group. NRB has provisioned single obligor limit while providing credit facilities by the bank. According to unified directive No 3, the single obligor limit for the fund-based loan is 25 % of core capital where as for non-fund based loan is 50 % of core capital.

The main reason of 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 Provision 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.

### **Security wise Lending**

NRB has issued a directive for the commercial banks to send security wise lending report on a monthly basis. The main objective of this report is to identify the different securities on the basis of 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 be approved by the board of directors.

### **D. Directive No. 1-Capital Adequacy Ratio**

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

According to unified directive 2069, the capital fund includes two types of capital,

#### **a. Primary Capital**

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

**Table: 2.1**  
**Primary Capital**

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

*Source: www.nrb.org.np*

#### **b. Supplementary Capital**

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

**Table: 2.2**  
**Supplementary Capital**

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

*Source: www.nrb.org.np*

### **c. Capital Fund**

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

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

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

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

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

#### **i. Capital Adequacy Ratio for Core Capital**

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

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

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

According to NRB directive 2069, the statutory Capital Adequacy Ratio (CAR) for core capital is 6%, where as CAR for total capital fund is 10% for fiscal year 2069/070.

## 2.2 Review of Related Studies

Under this heading the review of relevant studies and research article published in different economic journals, bulletins, dissertation papers, magazines, newspaper, websites, NRB directives and other related materials have been consulted.

### 2.2.1. Review of Journals

Sharma (2002) states that NRB has instructed to then Chairman of Machhapuchchhre Bank to step down from his position, as chairman. The decision was taken after the central bank's Monitoring and Supervision Department found out that the chairman was the Managing Director of another Company that was blacklisted by the Credit Information Center Ltd. (CIC). The decision goes by the latest directives of the central bank, which clearly states that no person involved in the firms blacklisted by the CIC, will be allowed to hold a sensitive and responsible post in the Board of Directors of Financial Institutions.

Irony to this action of NRB, the then chairman claims that the blacklisting of the said company was done only in 1998 and he was associated with that company only until 1996. Hence, he opined that he need not step down of his position as chairman and that NRB was wrong in instructing to him to do so.

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

exactly happened after the instruction of NRB. This article highlights the importance of compliance with the directives issued by NRB.

Lawrence (2006) has taken Basel II as a big opportunity for risk management. There are three stages in the credit process: the first is the simple risk control of the business-avoiding being over concentrated in any one sector, estimating the probability of defaulting and assessing recovery. In emerging markets, such as China, collection and recovery processes have to be better understood. The legal governance structure of liens has to be vastly improved and this will come in time with the new legal regulations being legislated. However, banks cannot afford to count on the legal system as has been painfully learnt from the Netting cases or the sovereign jurisprudence. These are operational risks that must be taken account of.

The second phase is the link between economic capital and return. Clearly banks would like to set minimum rates of return they expect to earn on their portfolios after provisioning. The link between economic profit and risk is the next stage in advancing the practice of credit risk management.

Finally, the third stage is when risk management is used as a strategic management tool to align Risk Adjusted Return on Economic Capital (RAROC) with ROE.

In most emerging markets, where many commercial banks have been protected from foreign banking invasion, the landscape is now changing. In Malaysia, new legislation will allow regional banks to bank locally and in China, the new foreign bank regulations will allow investment banks, commercial banks and fund managers to enter the market, putting stress on the current “big four” oligopolistic structure. It is precisely in emerging markets where Basel II is an invaluable tool to go through the three stages set out above. This regulation is thus an important catalyst to implement all processes including analytic modeling – this includes better predictability of probability of default, exposure at default and loss given default - the business architecture that goes with it including the right corporate governance, the organization, the risk monitoring and reporting.

Banks that fail to have deep understanding of credit risk management will continue being caught in the time warp of the old banking paradigm and be targets for acquisitions by larger banks that have stronger risk management policies in place.

The only key to survival and sustainable success is to reengineer and reform the risk strategy that maximizes shareholder value. It would thus be fallacious for the CEO to think of Basel II as just a compliance issue but he should rather use it as an opportunity to really get on top of using risk management as a cornerstone of strategic decision making.

### **2.2.2. Review of Thesis**

Pandey (2002) has carried out in his study "Credit Risk Management of Himalayan Bank Limited with reference to other Commercial Bank" 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 bank and the result are the followings:

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

All the aforesaid result lead to one direction the bank will be financially healthy and stronger in the future. HBL will be able to withstand tougher economic situation in

the future with adequate capital and provision for losses. The tough time through which the bank is 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 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 and 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. However, besides Loan Loss Provision and capital adequacy, the other factors like concentration risk, sector-wise lending risk can further be discussed. A study on the organizational structure or management techniques applied for the proper implementation of NRB directives and for management of credit risk can also be made.

Shrestha (2003) in her thesis “Impact and Implementation of Nepal Rastra Bank (NRB)’s Guidelines (Directives) on commercial banks. A study of Nabil Bank Ltd. and Nepal SBI Bank Ltd.” has tried to find out the following things:

- ) Impact of NRB directives on commercial banks.
- ) Whether the directives are actually implemented and are being monitored by NRB or not.

She has stated that both NABIL and Nepal SBI are implementing the NRB directives.

She concludes that all the changes in NRB Directives made both positive and negative impacts on the commercial banks. Even though this study is limited to only two sample (i.e. Nabil Bank and Nepal SBI Bank, among the entire population, it clears the new directives issued by NRB make good impact to more than bad impact on the various aspect of the banks. It can be seen that the provision has been changed and the increased provisioning amount has decreased the profitability of commercial banks. Apart from, loan exposure has been cut down to customers due to the borrower limits have been brought down by NRB. Therefore reduction in loan amount result to decrease the interest income from loans, which will decrease the profits of the banks in coming years. Decreasing profitability push towards lesser dividends to the shareholders and less bonus to employees. Not only the negatives sides but also there

are positive sides of new directives. Recently the problems of banks are increasing operating cost and decreasing loan amount resulting decrease in profits of the banks but it shows it is only for short time there because the directives are more effective to protect the banks from bad loans, which protect the banks from bankruptcy as well as protection of deposits of depositors. Increase in capital adequacy ratio strengthen the banks financial position, loan related provision will made safety of loans except the risk reducing provision would protect the bank from liquidation. Above all it can be concluded that newly issued directives are more effective than previous one although it has brought some problems towards banks. To increase the decreasing profits of the banks, they should research the alternatives like more investment in other business, bank should adopt new technology according to the demand of time and must not depend on only interest income for profit.

In this thesis as well, researcher has studied the impact of NRB directive, especially related to loan loss provisioning, on selected banks. There exists a gap regarding the study of management teams formed by the commercial banks to manage the credit risk besides those NRB directives. Similarly, commercial banks compliance in regard to those directives as well as banks policy and procedure to manage credit risks can be studied further.

Regmi (2004) conducted a thesis “A study on credit practices of joint venture commercial banks with reference to Nepal SBI Bank Ltd. And Nepal Bangladesh Bank Ltd.”

The basic objectives of this thesis are:

- ) To determine impact of deposit in liquidity and its effect on lending practices.
- ) To know the volume of contribution made by both bank in lending.
- ) To examine lending efficiency and its contribution in profit.
- ) To analyze trend of deposit utilization towards loan and advances and net profit and their projection for next five years.

The major findings

- In terms of liquidity ratio, current ratio of NSBL is higher than that of NBBL. The ratio of liquid fund to current liability of NSBL is higher than NBBL. This shows that NBBL has less consistency than NSBL. The ratio of cash and bank balance to deposit

of NSBL is higher than that of NBBL. Cash and bank balance to interest-sensitive deposit measures the liquidity risk arising from fluctuation of interest rate in the market. The ratio of cash and bank balance to interest sensitive deposit of NSBL is higher than NSBL. NSBL has poor position due to high volume of interest sensitive liability in deposit mix.

-The ratio of loans and advances to total assets of NBBL is higher than NSBL. Likewise mean ratio of loans and advances to total deposit of NBBL is higher than NSBL. The mean ratio of investment to loans and advances and investment of NSBL is higher than that of NBBL. Likewise the ratio of total investment to total deposit of NSBL is higher than that of NBBL.

-The ratio of credit to government enterprises to total credit of NBBL is higher than that of NSBL. The mean ratio of **credit to bills** paid and discount to total credit ratio of NBBL is higher than that of NSBL. NSBL has contributed 95.91% in private sector loan, 2.51% in government sector loan and 1.56% in bills paid and discounts. Likewise NBBL has contributed 90.83% in private sector loan, 4.29% in government sector loan and 4.84% in bills paid and discounts.

-Among the various measurement of profitability ratio return on equity (ROE) and earnings per share (EPS) reflects the relative measure of profitability. The performance of NBBL is better than NSBL. Return on equity and earnings per share of NBBL are higher than that of NSBL in all years.

The correlation between deposit and loans & advances of both banks have positive value. Also co-efficient of correlation between total income and loans & advances of both bank have positive relation. Coefficient of correlation between net profit and loans & advances of NSBL is negative as other variables like increase in interest suspense and loan loss provision affects net profit. Coefficient of correlation between net profit and loans & advances of NBBL is positive.

This study is mainly focused on the lending practices and the volume of credit in comparison to the deposits. Therefore, the major gap in this research is study of the risk involved in the lending practices or the study of credit risk. Therefore, further study on the risk involved in creating credit can be made.

Shrestha (2005) on “A study of Nonperforming Loan & loan loss provision of Commercial Bank, A case study of NABIL, SCB and NBL” has made study about a part of credit risk associated with those banks. The main objectives of her study were:

- ) To find out the proportion of non-performing loan in the selected commercial banks.
- ) To find out the factors leading to accumulation of nonperforming loan in commercial banks.
- ) To study and analyze the guidelines and provisions pertaining to loan classification and loan loss provisioning.
- ) To find out the relationship between loan and loan loss provision in the selected commercial bank.
- ) To study and the impact of loan loss 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 and SCBNL. She concludes that the SCBL shows the risk-averse attitude. Likewise the non-performing loan to total loan is found highest in NBL, NABIL and SCBNL. Likewise the Loan Loss Provision is also highest in NBL where as the SCBL has the least Loan Loss Provision.

Likewise, the NBL has the highest portion of Loss loan followed by NABIL and SCBL. This study is more concentrated on non-performing loans; however, there exists lots of areas in credit risk management where further research is called for. In context of credit risk, collateral risk, concentration risk, organization risk management system can be studied.

Shrestha, (2009) “Credit risk management of Nabil Bank Limited and Nepal Investment Bank Limited in Nepal” The main objective of the study is to evaluate the credit risk management. In order to achieve this, the specific objectives have been formulated.

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

) To offer suitable suggestions based on findings of this study.

The liquidity position of NIB is comparatively better than NABIL. Commercial banks have to maintain more liquid assets but the current ratios of some banks are below the standard of 1:1. The mean current ratio of NABIL is 1.89 and NIB is 1.99 the current ratio of NIB is little higher than NABIL. Cash and bank balance to total deposit ratio of NIB has higher than NABIL

The loan & advances to total deposit ratio of NABIL is lower than NIB. The total investment to total deposit of NABIL is higher than NIB i.e. 34.40% > 27.45%. It shows the NABIL is mobilizing its funds on investment in various securities efficiently. The loan & advances to total assets ratio of NIB is greater than NABIL. Investment on government securities to total assets ratio of NABIL is higher than NIB. This indicates that NABIL has invested more portions of total assets on government securities. So an asset management aspect of NABIL is better than NIB.

The profitability position of NABIL and NIB are Return on loan & advances ratio of NABIL is higher than that of NIB i.e. 4.64% > 2.46%. Return on total assets ratio of NABIL is slightly higher than NIB i.e. 2.61% > 1.79%. However, NABIL seems successful in managing and utilizing the available assets in order to generate revenue

The credit risk ratio shows the proportion of no-performing loan in total Loan & Advances. Average credit risk ratio of NIB is higher than NABIL. These Ratios indicate the more efficient operating of credit management of both banks according to NRB directives because according to NRB directives NPL ratio must be less than 5%. The liquidity risk of the bank defines its liquidity need for deposit. The average mean ratio of NIB is greater than that of NABIL. The analysis shows that both banks have the Asset Risk Ratio in fluctuating trend.

Dhakal Laxmi (2011) has conducted a research an "Credit Management (A Comparative study of Himalayan Bank Ltd & Nabil Bank Ltd.)" The main objectives of her study were:

- ) To analysis the volume of contribution on profit made by credit & advances.
- ) To analyze the deposit collection & utilization trend.
- ) To analyze the Non performing assets & their impacts.

) To provide suitable & beneficial suggestions on findings of this study.

The basic finding of this study was that the return on loan and advance ratio of NABIL & HBL is fluctuating trend. The liquidity position of both banks is good. NABIL has very low degree of this provision over the total lending than HBL.

### **2.3 Research Gap**

In this research credit risk management of Nepal Investment Bank Ltd and Bank of Kathmandu Ltd. is done by measuring various ratios, trend analysis and various statistical tools as well and financial tools. There has been lots of article published related to credit risk of commercial banks. There are various researchers conducted on credit risk management of financial institution. However no one has done a study on 'Credit Risk Management' with NIBL and BOK. Therefore, the research attempts to study in this area. This study tries to show credit risk management by applying and analyzing various financial tools like liquidity ratio, asset management ratio, profitability ratio and risk ratio as well as different statistical tools like average mean, coefficient of correlation and trend analysis. Probably this is the appropriate research in the area of credit risk management of Bank and financial institutions. So this research is helpful and beneficial to all concern research worker, student, banker, investor and stakeholder.

## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

The research has been done on credit risk management of Nepal Investment Bank Limited and Bank of Kathmandu Limited. In order to reach and accomplish the objectives of the study, different activities will be carried out. For this purpose, the chapter aims to present and reflect the methods and techniques that are carried out and followed during the study period. The research methodology that is adopted for the present study is mentioned in this chapter, which deals with research design, sources of data, data collection, processing and tabulating procedure and methodology.

#### **3.1 Research Design**

To achieve the objective of this study, analytical and descriptive research designs have been used. A Research Design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari; 1992).

Research design is the plan, structure and strategy of investigation conceived to obtain answers to the research question and to control variances. To achieve the objectives of the study, descriptive and analytical research design has been used. Some statistical and financial tools have also been applied to examine facts and descriptive techniques have been adapted to Credit Risk Management of NIBL and BOK. The study is based on secondary data. So the descriptive and analytical research designs have been used.

#### **3.2 Sources of Data**

There are two sources of data collection. The research is based on secondary source of data. All the adequate data are collected from secondary sources. This refers to data that are already used and gathered by others. Secondary data are mostly used for this research purpose. So the major sources of secondary data are:

) Annual Report of NIBL& BOK.

- ) Internet and E-mails.
- ) NRB directives.
- ) Economy survey of Government of Nepal and Ministry of finance.
- ) Newspaper, journals, articles and various magazines.
- ) Thesis of Central Library of T. U. and Library of Prithvi Narayan Campus.

### **3.3 Population and Sample**

With regard to the availability of the financial information, two samples were identified purposively from the banking sector. Here, the total 32 commercial banks shall constitute the population of the data and single bank under the study constitute the sample under the study. So among the various commercial banks in the banking industry, Here Nepal Investment Bank Limited and Bank of Kathmandu Limited have been selected as sample for the present study.

#### **Sample Bank**

Nepal Investment Bank Limited

Bank of Kathmandu Limited

### **3.4 Data Collection Procedure**

Different tools and techniques were adopted while collecting the data for this study. Collected secondary information was analyzed during the research study. However, during the study, an information gap was found.

### **3.5 Data Analysis Tools**

Presentation and analysis of data is one of the important part of the research work. The collected raw data will first be presented in systematic manner in tabular form and then will be analyzed by applying different financial and statistical tools to achieve the research objectives. Besides these some graph charts and tables will be presented to analyze and interpret the findings of the study. The tools applied are-

Financial tools

Statistical tools

## Financial Tool

### i. Liquidity Ratios

This ratio measures the liquidity position of a firm. It measures the firm's ability to meet its short-term obligations. As a Financial Analytical tools, following liquidity ratios will be used.

#### a. Current Ratio

This ratio shows the bank's short-term solvency. It shows the ratio of current assets over the current liabilities. This ratio can be computed by dividing the total current assets by total current liabilities which can be presented as:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Higher ratio indicates the strong short-term solvency position and vice-versa.

#### b. Cash and Bank Balance to Total Deposit Ratio

Cash and bank balances are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositor. This ratio can be computed by dividing cash and bank balance by total deposit and can be presented as:

$$\text{Cash and bank balance to total deposit ratio} = \frac{\text{Cash and bank balance}}{\text{Total deposits}}$$

Cash and bank balance includes cash in hand, foreign cash in hand, cheques and other cash items, balance with domestic and foreign banks. The total deposit includes deposits made by customers through different accounts like current (demand deposit), saving, fixed deposit, call deposit and other deposit accounts.

#### c. Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets viz. cash and bank balance among the total current assets of the bank. Higher ratio shows the bank's ability to meet its demand for cash. The ratio is computed by dividing cash and bank balance by current assets, presented as under;

$$\text{Cash and bank balance to current assets ratio} = \frac{\text{Cash and bank balance}}{\text{Current assets}}$$

#### **d. Investment on Government Securities to Total Current Assets Ratio**

This ratio is calculated to find out the percentage of current assets invested on government securities viz. treasury bills and development bonds. The ratio is stated as under;

Investment on Govt. securities to total current assets ratio =

$$\frac{\text{Investment on Govt. Securities}}{\text{Current Assets}}$$

#### **ii. Assets Management Ratios**

Asset management ratio measures the proportion of various assets and liabilities in balance sheet. The proper management of assets and liability ensures its effective utilization. The banking business converts the liability into assets by way of its lending and investing functions. The following are the various ratios relating to determine the efficiency of the subjected bank in managing its assets and in portfolio management.

##### **a. Loan and Advances to Total Deposit Ratio**

This ratio is also called credit- deposit ratio (C D ratio). It is calculated to find out how successfully the bank is able to utilize its total deposits on loan and advances for profit generating purpose. Greater ratio implies better utilization of total deposits. This ratio can be obtained by dividing loan and advances by total deposit as under;

$$\text{Loan \& Advances to total deposit ratio} = \frac{\text{Loan and advances}}{\text{Total deposits}}$$

##### **b. Total Investment to Total Deposit Ratio**

Investment is one of the major forms of credit creation to earn income. This implies the utilization of firm's deposit on investment on government securities, shares & debentures of other companies and banks. This ratio can be calculated by total investment divided by total deposit as:

$$\text{Total investment to total deposit ratio} = \frac{\text{Total investment}}{\text{Total deposits}}$$

### **c. Loan and Advances to Working Fund Ratio**

Loan and advances is the major component in the total working fund (total assets), which indicates the ability of bank to utilize its deposits in the form of loan and advances to earn high return. The ratio is computed by dividing loan and advances by total working fund, which is stated as under;

$$\text{Loan and advances to working fund ratio} = \frac{\text{Loans and advances}}{\text{Total working fund}}$$

### **d. Investment on Government Securities to Total Asset Ratio**

This ratio shows that bank's investment on government securities in comparison to the total working fund. This ratio can be computed by dividing investment on government securities by total working fund, which can be presented as;

$$\text{Investment on Govt. Securities to total working fund} = \frac{\text{Investment on Govt. Securities}}{\text{Total working fund}}$$

## **iii. Profitability Ratios**

Profitability ratios are used to indicate and measure the overall efficiency of a firm in terms of profit and financial performance. For better performance, profitability ratios of firm should be higher. Under this, the following profitability ratio will be computed.

### **a. Total Interest Earned to Total Working Fund Ratio**

This ratio is computed to find out percentage of interest earned to total assets (working fund). Higher ratio implies better performance of the bank in terms of interest earning on its total working funds. This fund is computed by dividing total interest earned by total working fund can be presented as;

$$\text{Total interest earned to total working fund ratio} = \frac{\text{Total interest Earned}}{\text{Total working fund}}$$

### **b. Return on Loan and Advances Ratio**

This ratio indicates how efficiently the bank utilizes its resources in the form loans and advances. This also measures the earning capacity of its loans and advances. This ratio is computed by dividing net profit (loss) by loans and advances which can be expressed as;

$$\text{Return on loan and advances ratio} = \frac{\text{Net profit (loss)}}{\text{Loans \& advances}}$$

### **c. Return on Total Working Fund Ratio (ROA)**

This ratio measures the overall profitability of all working fund i.e. total assets. It is also known as return on assets (ROA). This ratio is calculated by dividing net profit (loss) by total working funds. This can be presented as;

$$\text{Return on total working fund ratio (ROA)} = \frac{\text{Net profit (loss)}}{\text{Total working fund}}$$

The numerator indicates the portion of income left to the internal equities after deduction all costs, charges and expenses.

### **d. Return on Equity (ROE)**

Net worth refers to the owner's claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the bank has used funds of the shareholders. This ratio can be computed by dividing net profit by total equity capital (net worth). This can be calculated as;

$$\text{Return on Equity (ROE)} = \frac{\text{Net profit (loss)}}{\text{Total equity capital}}$$

Here, total equity capital includes shareholders' reserve including profit and loss account, general loan loss provision and share capital i.e. ordinary share preference share capital.

### **e. Total interest Earned to Total Operating Income Ratio**

Total interest earned to total operating income ratio reveals that portion of interest income on total operating income of the firms. The major sources of income for the bank are interest income so the banks should mobilize their funds in more interest generating sectors considering the risk and return.

$$\text{Total interest Earned to Total Operating Income Ratio} = \frac{\text{Total interest earned}}{\text{Total operating Income}}$$

#### **iv. Risk Ratio**

Risk and uncertainty is a part of business loss. All the business activities are influenced by risk, so business organization cannot achieve a good return as per their desires. The profitability of risk makes banks investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So the banks options for high profit have to accept the risk and manage it efficiently. A bank has to have idea of the level of risk of risk that one has to bear while investing its funds. Through following ratios, effort has been made to measure the level of risk inherent in the BOK and HBL.

##### **a. Credit Risk Ratio/Non-Performing Loan to Total Loan Ratio**

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, credit risk ratio is expressed as the percentage of non- performing loan to total Loan & Advances.

Bank utilizes its collected funds by providing credit to different sections. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk involved in the project. The credit risk ratio shows the proportion of non-performing assets in total Loan & Advances. Higher ratio indicates more risky assets in the volume of Loan & Advances of the bank and vice-versa.

##### **b. Liquidity Risk Ratio**

The liquidity risk of the bank defines its liquidity need for deposit. The cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposit as the liquidity needs. The ratio of cash and bank balance to total deposit is an indicator of bank's liquidity of need. This ratio is low if funds are kept idle as cash balance but this reduces profitability, when the banks makes loan, its profitability increase and also the risk. Thus, higher liquidity ratio indicates less profitable return and vice-versa. This ratio is calculated as below:

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

### c. Asset Risk Ratio

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk involved in the project. Generally Asset risk ratio shows proportion of non-performing assets in the total investment plus loan and advances of a bank it is computed as:

$$\text{Credit Risk Ratio} = \frac{\text{Total Investment } \Gamma \text{ Loan and Advances}}{\text{Total Assets}}$$

### Statistical Tools

For supporting the study, statistical tool such as Mean, Standard Deviation, Coefficient of Variation, Correlation and diagrammatic cum pictorial tools have been used under it.

#### i. Arithmetic Means (average)

Arithmetic mean also called 'the mean' or 'average' as most popular and widely used measure of central tendency. Arithmetic Mean is statistical constants which enables us to comprehend in a single effort of the whole. Arithmetic mean represents the entire data by a single value. It provides the gist and gives the birds' eye view of the huge mass of a widely numerical data. It is calculated as:

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i$$

Where:

$\bar{X}$  = mean value or arithmetic mean

$\sum_{i=1}^n X_i$  = sum of the observation

$n$  = number of observation

#### ii. Correlation Coefficient (r)

Correlation may be defined as the degree of linear relationship existing between two or more variables. These variables are said to be correlated when the change in the

value of one results change in another variable. Correlation is categorized three types. They are Simple, Partial and Multiple correlations. Correlation may be positive, negative or zero. Correlation can be classified as linear or non-linear. Here, we study simple correlation only." In simple correlation, the effect of others is not included rather these are taken as constant considering them to have no serious effect on the dependent.

Formula

$$r_{x_1x_2} = \frac{N \sum X_1X_2 - (\sum X_1)(\sum X_2)}{\sqrt{[N \sum X_1^2 - (\sum X_1)^2]} \sqrt{[N \sum X_2^2 - (\sum X_2)^2]}}$$

Whereas,

$r_{x_1x_2}$  = Correlation between  $X_1$  and  $X_2$

$N \sum X_1X_2$  = No. of Product observation and Sum of product  $X_1$  and  $X_2$

$\sum X_1 \sum X_2$  = Sum of Product  $X_1$  and sum of Product  $X_2$

### iii. Coefficient of variation (c.v.)

The coefficient of variation is measures the relative measures of dispersion, hence capable to compare two variables independently in term of variability.

$$c.v. = \frac{\hat{\sigma}}{x} * 100$$

= Standard deviation

$x$  = sum of the observation

### iv. Probable Error

The probable error of the coefficient of correlation helps in interpreting its value. With the help of probable error, it is possible to determine the reliability of the value of the coefficient in so far as it depends on the conditions of random sampling. The probable error of the coefficient of correlation is obtained as follows:

$$P.E. = 0.6745 \frac{1 - r^2}{\sqrt{N}}$$

Here,  $r$  = Correlation coefficient

$N$  = Number of pairs of observations

If the value of 'r' is less than the probable error, there is no evidence of correlation, i.e., the value of 'r' is not at all significant. Then, if the value of 'r' is more than six times of the probable error, the coefficient of correlation is practically certain, i.e., the value of 'r' is significant.

#### **v. Times series Analysis**

Time series is used to measure the change of financial, economical as well as commercial data. The least square method to trend analysis has been used in measuring the trend analysis. This method is widely used in practice. The straight-line trend of a series of data is represented by the following formula.

$$Y = a + bx$$

Where,

y = Dependent variable

x = Independent variable

a = Y – intercept

b = Slope of the trend line

Y is the dependent variable, a is y intercept or value of y when x = 0, b is the slope of the trend line.

## **CHAPTER – IV**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Presentation and Analysis of Data**

This chapter deals with the presentation, analysis and interpretation of relevant data NIBL and BOK in order to fulfill the objectives of this study. To obtain best result, the data have been analyzed according to the research methodology as mentioned in third chapter. The purpose of this chapter is to introduce the data analysis and interpretation. With the help of this analysis, efforts have been made to highlight the credit risk management of NIBL and BOK can be visualized. For analysis, different types of analytical methods and tools such as financial analysis and statistical analysis are used.

#### **Financial Statement Analysis**

Financial analysis is done by applying various financial tools in order to clear picture on the viability of the project. The financial analysis is done to ascertain the liquidity, profitability, leverage, debt servicing and interest servicing ability of the firm. The concept of financial statement analysis has been already discussed in previous chapter. Here, we study and analyze the data by using accounting tools.

#### **Ratio Analysis**

Ratio is the relationship between two figures. They provide two important facts about the management: the return on investment and the soundness of the company's financial position. Ratio analysis has been already discussed in previous chapter. Here, different ratios of NIBL and BOK are calculated, analyzed and interpreted.

##### **4.1.1 Liquidity Ratio**

Liquidity refers to the ability of a firm to meet its short- term or current obligations. So liquidity ratios are used to measure the ability of a firm to meet its short-term solvency. To find -out the ability of the bank to meet their short-term obligations,

which are likely to mature in the short period, the following ratios are developed under the liquidity ratios to identify the liquidity position.

#### a. Current Ratio

This ratio measures the liquidity position of the commercial banks. It indicates the ability of Banks to meet the current liquidity.

**Table 4.1**  
**Current assets to current liabilities**

Year	Ratio (in times)	
	NIBL	BOK
2006/07	2.174	1.166
2007/08	1.014	0.993
2008/09	1.039	1.044
2009/10	1.099	0.752
2010/11	1.097	1.091
2011/12	1.103	1.096
<b>Mean</b>	1.254	1.023
<b>S.D.</b>	0.412	0.132
<b>C.V.</b>	0.328	0.129

*Source: Annual Report of Concern Bank*

Above table shows the current ratio of NIBL and BOK during the study period. The current ratio of both bank NIBL and BOK are fluctuating trend. In general, it can be said that all the banks have sound ability to meet their short- term obligations. In an average, liquidity position of NIBL is greater than BOK i.e.  $1.254 > 1.023$  due to high mean ratio. So, NIBL is sound in meeting short-term obligation than BOK. Likewise, S. D. and C.V. of NIBL is more than BOK. It can be said that current ratio of BOK is more consistent than NIBL.

Lastly from the above analysis it is known that NIBL has better liquidity position because it has higher ratio. However both banks have not met the standard ratio as the standard ratio is 2:1. The following figure shows the current ratio of NIBL and BOK bank.

**Figure: 4.1**  
**Current assets to Current Liabilities Ratio**

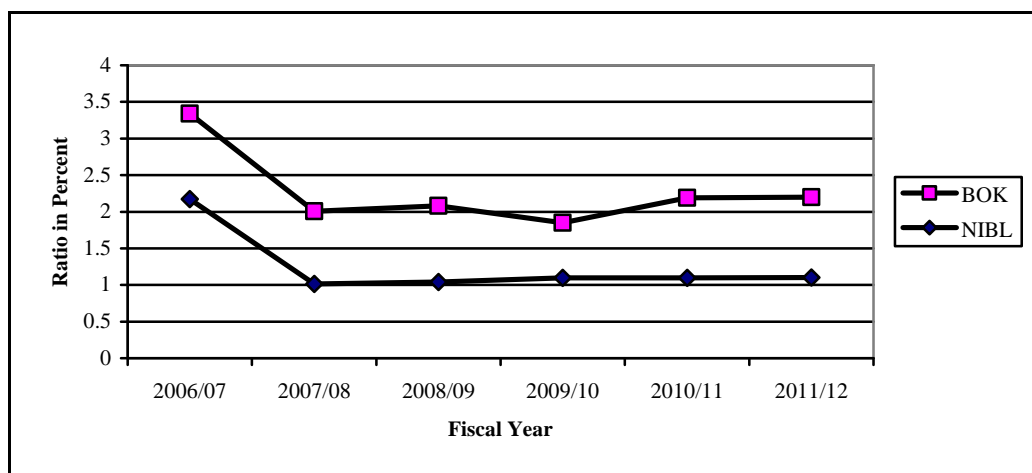


Figure 4.1 clearly shows that the current ratio of NIBL & BOK is fluctuating trend from the fiscal year 2006/07 to 2011/12.

#### **b. Cash and Bank Balance to Total Deposits Ratio**

This ratio measures the bank's ability of withdrawal of fund immediately by their depositors. A higher ratio represents a greater ability to cover their deposits and vice-versa. The large ratio shows the idle cash and bank balance in banks while small ratio shows the utilization of deposit from banking perspective.

**Table: 4.2**  
**Cash and Bank Balance to Total Deposits Ratio**

Year	Ratio in Percent (%)	
	NIBL	BOK
2006/07	9.97	10.622
2007/08	10.9	9.097
2008/09	16.95	12.067
2009/10	13.61	8.852
2010/11	16.23	7.98
2011/12	20.70	13.53
<b>Mean</b>	14.726	10.358
<b>S.D.</b>	3.683	1.939
<b>C.V.</b>	0.250	0.187

*Source: Annual Report of Concern Bank*

From the Table No 4.2 analysis, cash and bank balance to total deposits ratio of the NIBL and BOK are fluctuating trend. The higher ratio of NIBL and BOK are 20.70% and 13.53% respectively in the year 2011/12. The lowest ratio is 9.97% and 7.98%. The average ratio of NIBL is greater than that of BOK (i.e. 14.726% >10.358%). It signifies that NIBL has sound liquid fund to make immediate payment to the depositors from the mean point of view. The S. D. and C.V. of NIBIL is more than BOK. So it can be said that cash and bank balance to total deposits ratio of NIBIL is more inconsistent than BOK. Following figure show the cash and bank balance to total deposit ratio.

**Figure: 4.2**

**Cash and Bank Balance to Total Deposits Ratio**

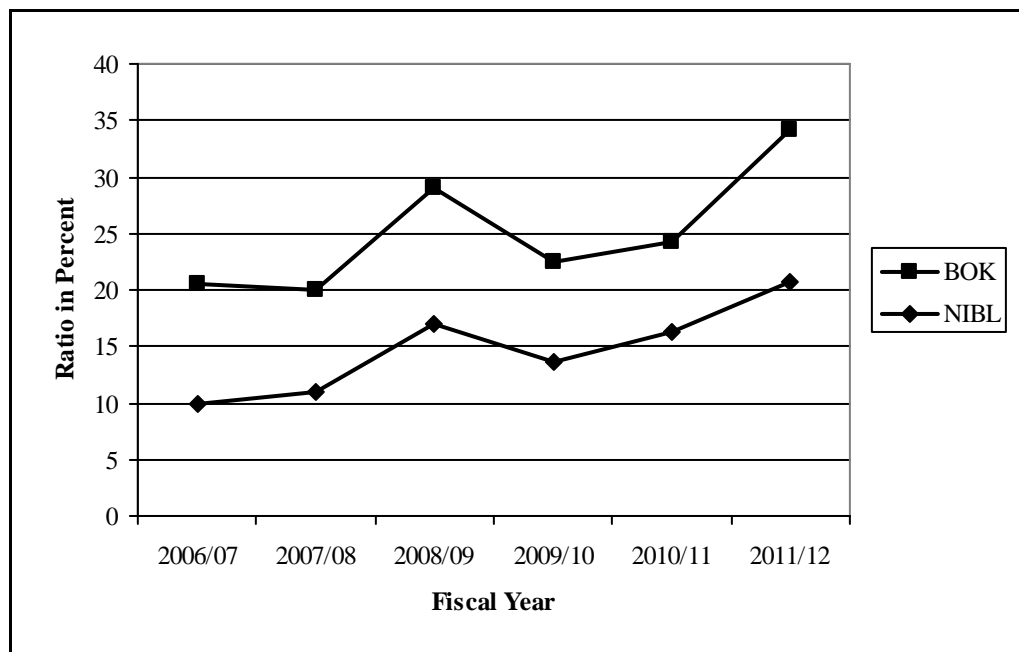


Figure 4.2 clearly shows that the cash and bank balance to total deposit ratio of NIBL & BOK is fluctuating trend from the fiscal year 2006/07 to 2011/12.

**c. Cash and Bank Balance to Current Assets Ratio**

This ratio reflects the proportion of cash and bank balance out of total current assets. It can be calculated as follows:

**Table: 4.3**  
**Cash and Bank Balance to Current Assets Ratio**

<b>Year</b>	<b>Ratio in Percent (%)</b>	
	<b>NIBL</b>	<b>BOK</b>
2006/07	10.65	12.924
2007/08	11.78	12.328
2008/09	17.95	15.116
2009/10	14.75	11.405
2010/11	14.21	6.92
2011/12	18.24	11.93
<b>Mean</b>	14.596	11.770
<b>S.D.</b>	2.834	2.467
<b>C.V.</b>	0.194	0.209

*Source: Annual Report of Concern Bank*

Above table shows the cash and bank balance to current assets ratio of NIBL and BOK. The cash and bank balance to current assets ratio of both banks NIBL and BOK are fluctuating trend. The highest ratio of NIBL is 18.24% in year 2011/12 and lowest ratio 10.65% in year 2006/07. The mean ratio is 14.596%. The S.D and C.V. are 2.834 and 0.194. Similarly, the highest ratio of BOK is 15.116% in 2008/09 and lowest ratio is 6.92% in 2010/2011. The mean ratio of BOK is 11.770%. The S.D and C.V of BOK are 2.467 and 0.209. While observing the data, we notice that NIBL has higher mean ratio. It means NIBIL has slightly sound liquid assets than that of BOK out of its current assets from the mean point of view. Lower S.D and C.V. of BOK shows that it has consistency in the ratios than NIBL. Following figure show the cash and bank balance to current asset ratio.

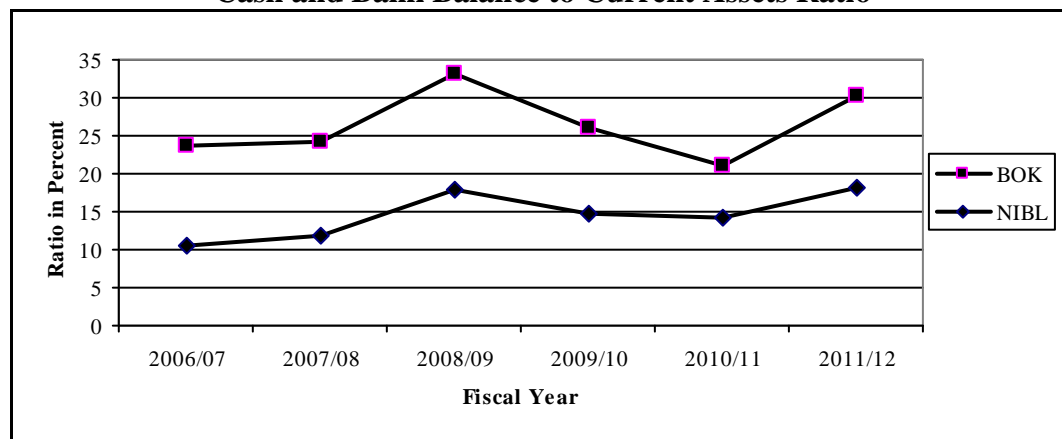
**Figure: 4.3****Cash and Bank Balance to Current Assets Ratio**

Figure 4.3 clearly shows that the cash and bank balance to current assets ratio of NIBL & BOK is fluctuating trend from the fiscal year 2006/07 to 2011/12.

**d. Investment on Government Securities to Current Assets Ratio**

Government Securities can be easily sold in the market or they can be converted into cash. The main purpose of this ratio is to examine that portion of commercial banks current assets that has been invested into different government securities. This ratio is calculated by dividing investment on government securities by current assets.

**Table: 4.4****Investment on Government Securities to Current Assets Ratio**

Year	Ratio in Percent (%)	
	NIBL	BOK
2006/07	13.76	22.90
2007/08	9.89	18.08
2008/09	5.74	12.09
2009/10	9.09	18.74
2010/11	7.50	16.50
2011/12	9.53	17.78
<b>Mean</b>	9.251	17.681
<b>S.D.</b>	2.457	3.193
<b>C.V.</b>	0.265	0.181

*Source: Annual Report of Concern Bank*

Table 4.4 shows that the investment on government treasury bills to current assets of NIBL and BOK. The both bank have fluctuating trend in its ratio. The highest ratio of NIBL is 13.76% in 2006/07 and BOK is 22.90% in 2006/07 and the lowest ratio of NIBL and BOK are 5.74% and 12.09% in fiscal year 2008/09. The S.D and C.V. of NIBL are 2.457 and 0.265 and BOK are 3.193 and 0.181 respectively.

From the table we notice that mean ratio of NIBL and BOK are 9.251 and 17.681 respectively. BOK has higher ratio and mean too. It means BOK has invested more money in risk free assets than that of NIBL. In another word NIBL has emphases on more loans and advances and other short term investment than investment in govt. securities. Higher C.V. and S.D. of BOK show that it has inconstancy in the ratios. Hence BOK meets the SLR according to NRB but NIBL have lower than that limit. Following figure show the investment on government treasury bills to current assets of NIBL and BOK.

**Figure: 4.4**

**Investment on Government Securities to Current Assets Ratio**

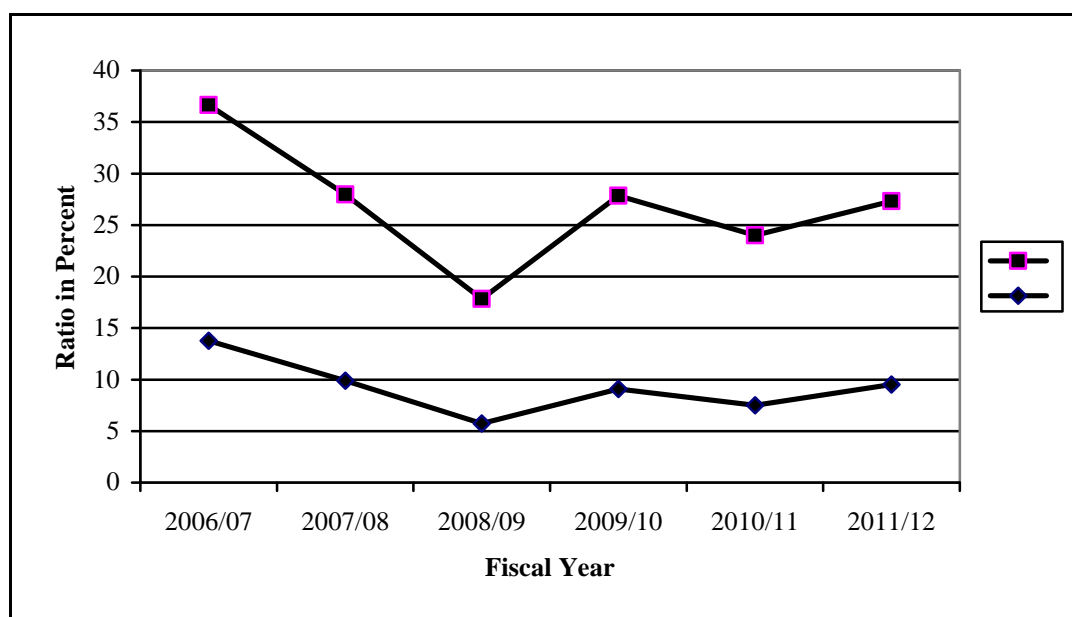


Figure 4.4 clearly shows that investment on government securities to current assets ratio of NIBL & BOK is fluctuating trend from the fiscal year 2006/07 to 2011/12.

### 4.1.2 Assets Management Ratio

Assets management ratio measures the efficiency of the bank and finance company to manage its assets in profitable and satisfactory manner. A commercial bank must manage its assets properly to earn high profit. Under this chapter following ratio are studied:

#### a. Loan and Advances to Total Deposits Ratio

The ratio measures the extent to which the banks are successful to mobilize their total deposits on loan and advances. We have,

**Table: 4.5**  
**Loan and Advances to Total Deposits Ratio**

Year	Ratio in Percent (%)	
	NIBL	BOK
2006/07	72.56	75.869
2007/08	79.91	78.709
2008/09	78.86	80.996
2009/10	80.48	82.029
2010/11	81.96	83.10
2011/12	73.03	75.28
<b>Mean</b>	77.800	79.331
<b>S.D.</b>	3.657	2.973
<b>C.V.</b>	0.047	0.037

*Source: Annual Report of Concern Bank*

Above table show the loan and advance to total deposit ratio of NIBL and BOK. Both banks increasing trend of loan and advance to total deposit ratio. The highest ratio of NIBL and BOL are 81.96% and 83.10%. Similarly lowest ratios are 72.56% and 75.28%. In average NIBL has mobilized 77.80% and BOK has mobilized 79.331% of their collected deposit in loan and advances. BOK has higher mean loan and advance to total deposit ratio. According to NRB directives 80% of loan and advances to total deposit ratio is best mobilization of collected deposit. So current year both bank met the NRB requirement. The S.D. and C.V. of BOK is higher than NIBL (i.e.  $3.657 > 2.973$  and  $0.047 > 0.037$ ). So BOK has inconstancies in the ratios. A high ratio of loan

and advances indicates better mobilization of collected deposits and vice versa. So BOK better mobilize its deposit. The loan and advance to total deposit ratio of NIBL and BOK is presented in following figure.

**Figure: 4.5**  
**Loan and Advances to Total Deposits Ratio**

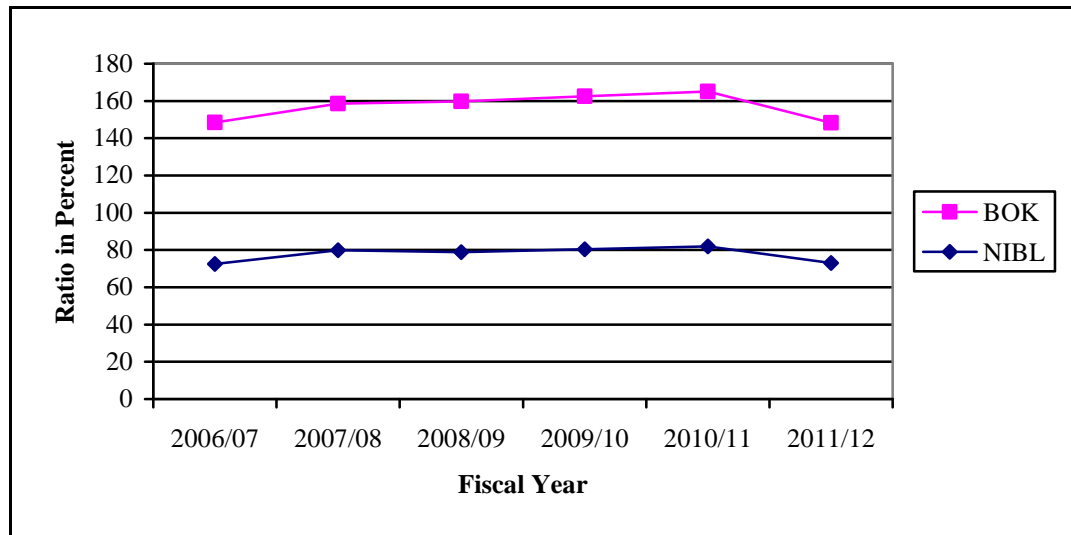


Figure 4.5 clearly shows that the loan and advance to total deposits ratio of NIBL & BOK is increasing trend from the fiscal year 2006/07 to 2011/12.

#### **b. Total Investment to Total Deposits Ratio**

This ratio measures the extent to which the banks are able to mobilize their deposit on investment in various securities. A high ratio indicates the success in mobilizing deposit in securities and vice versa.

**Table: 4.6**  
**Total Investment to Total Deposits Ratio**

<b>Year</b>	<b>Ratio in Percent (%)</b>	
	<b>NIBL</b>	<b>BOK</b>
2006/07	34.37	24.15
2007/08	28.07	20.24
2008/09	15.85	15.39
2009/10	17.24	16.09
2010/11	14.81	20.39
2011/12	18.31	20.99
<b>Mean</b>	21.442	19.542
<b>S.D.</b>	7.231	2.991
<b>C.V.</b>	0.337	0.153

*Source: Annual Report of Concern Bank*

From the Table 4.6, it is observed that the investment to total deposit ratio of NIBL and BOK are in decreasing trend till fiscal year 2008/09. The highest ratio of NIBL and BOK are 34.37% and 24.15% in F/Y 2006/07 and lowest ratios are 14.81% and 15.39% .The mean of the ratio of NIBL and BOK are 21.442% and 19.549% respectively. NIBIL has higher ratio and mean too. It signifies NIBIL has successfully allocated its deposit in investment portfolio in comparison with BOK. The S. D. and C.V. of NIBL and BOK are 7.231 and 0.337 BOK 2.991 and 0.153 Lower S. D and C.V. of BOK show constancies in the ratios. It means NIBL has more volatility in ratio than BOK. The following figure shows the investment to total deposit ratio of NIBL and BOK.

**Figure: 4.6**  
**Total Investment to Total Deposits Ratio**

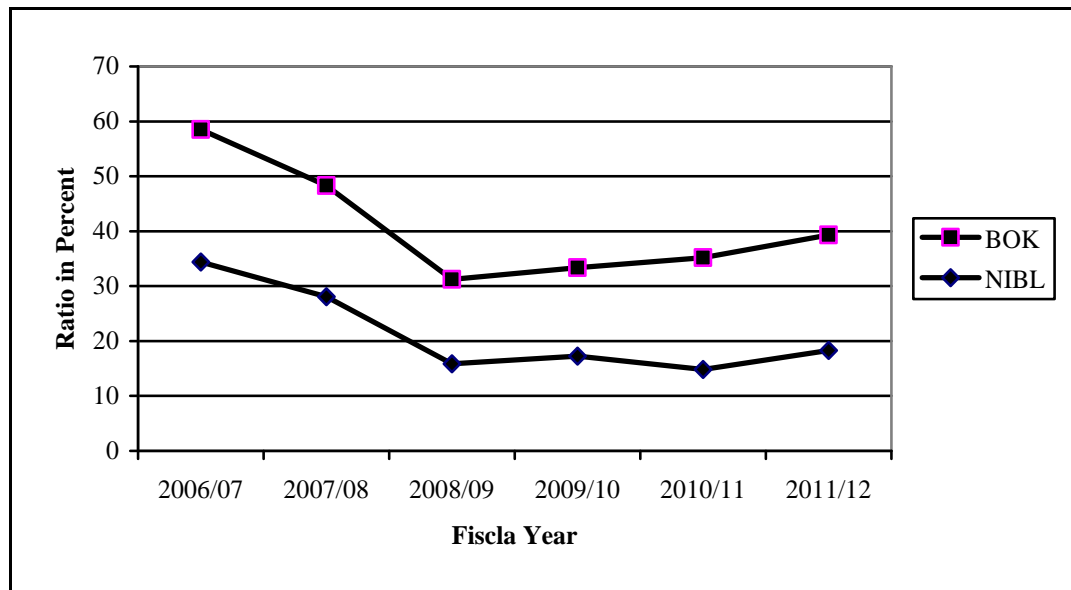


Figure 4.6 clearly shows that the total investment to total deposits ratio of NIBL & BOK is decreasing trend with the comparison of fiscal year 2006/07 to other fiscal year.

#### **c. Loan and Advances to Total Working Fund Ratio**

This ratio reflects the extent to which the commercial banks are success in mobilizing their assets on loan and advances for the purpose of income generation. A high ratio indicates better mobilization of fund on loan and advances and vice versa.

**Table: 4.7**  
**Loan and Advances to Total Working Fund Ratio<sup>64</sup>**

<b>Year</b>	<b>Ratio in Percent (%)</b>	
	<b>NIBL</b>	<b>BOK</b>
2006/07	64.4	64.461
2007/08	70.82	70.323
2008/09	69.47	71.464
2009/10	70.35	71.229
2010/11	70.42	70.55
2011/12	63.32	65.14
<b>Mean</b>	68.130	68.861
<b>S.D.</b>	3.06	2.90
<b>C.V.</b>	0.138	0.122

*Source: Annual Report of Concern Bank*

Above table and shows that loan and advances to total assets ratio of NIBL and BOK are fluctuating trend. While observing their ratios; BOK is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio in each year. The mean of NIBL and BOK are 68.13% and 68.86% respectively. So BOK has higher ratio than that of NIBL. It reveals that in total assets, NIBL has high proportion of loan and advances. Lower S.D. and C.V. of BOK show that constancies in the ratios as well.

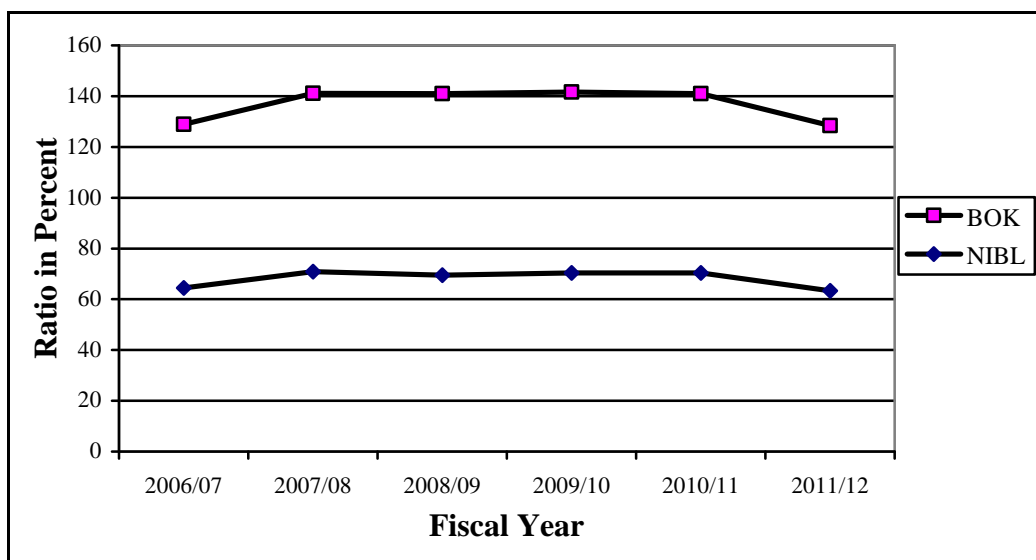
**Figure: 4.7****Loan and Advances to Total Working Fund Ratio**

Figure 4.7 clearly shows that the loan and advance to total working fund ratio of NIBL & BOK is fluctuating trend from the fiscal year 2006/07 to 2011/12.

**d. Investment on Government Securities to Total Working Fund Ratio**

The main purpose of this ratio is to examine that portion of banks and finance total working fund that has been invested into different government securities. This ratio is calculated by dividing investment on government securities by total working fund.

**Table: 4.8****Investment on Govt. Securities to Total Working Fund Ratio**

Year	Ratio in Percent (%)	
	NIBL	BOK
2006/07	11.43	15.99
2007/08	8.12	11.92
2008/09	4.77	8.51
2009/10	7.33	12.63
2010/11	7.36	16.16
2011/12	9.38	17.44
<b>Mean</b>	8.065	13.775
<b>S.D.</b>	4.158	3.068
<b>C.V.</b>	0.516	0.684

*Source: Annual Report of Concern Bank*

Above table shows that the investment on government treasury bills to total working fund of NIBL and BOK are decreasing trend beside last F/Y 2010/11. The highest ratio of NIBL and BOK are 11.43% and 17.44%. The lowest ratio of NIBL and BOK are 4.77% and 8.51% in F/Y 2008/09 respectively. The mean ratio of NIBL and BOK are 8.06% and 13.775% respectively. BOK has higher ratio in every year. It means BOK has invested higher money in risk free assets than that of NIBL. NIBL has invested more money in risky assets out of its total assets. In another word NIBL has emphases on more loans and advances and other short term investment than investment in govt. securities out of its total assets. Higher C.V. of BOK shows that inconstancies in the ratio.

**Figure: 4.8**

**Investment on Govt. Securities to Total Working Fund Ratio**

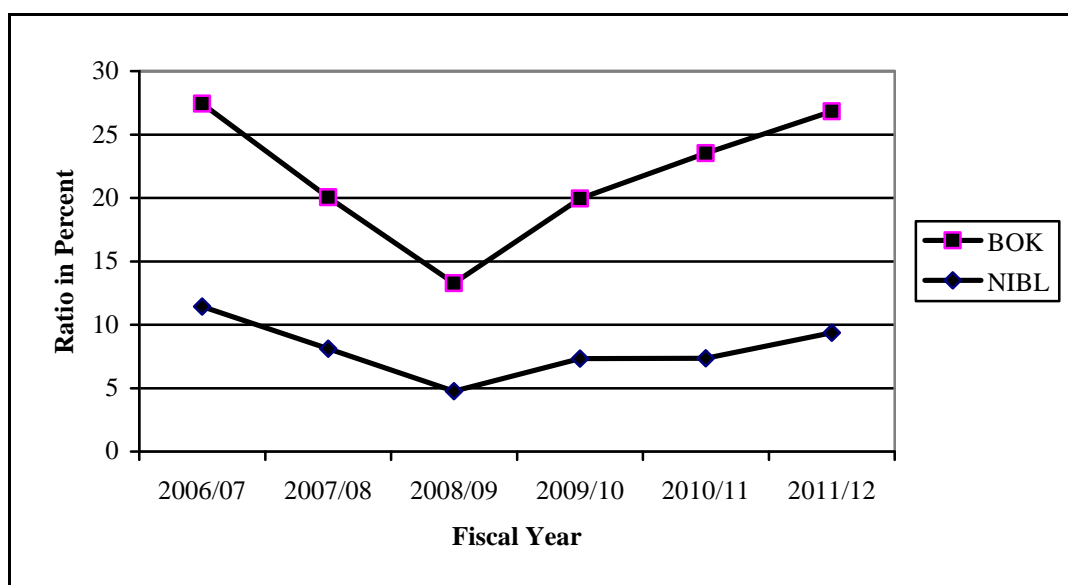


Figure 4.8 clearly shows that the investment on government securities to total working fund ratio of NIBL & BOK is fluctuating trend. From the fiscal year 2007/08 it is decreasing and then it is in increasing trend.

### 4.1.3 Profitability Ratios

#### a. Return on Loan and Advances Ratio

Return on loan and advances ratio measures the earning capacity of a commercial bank on its deposit mobilized on loan and advances higher the ratio greater will be the return and vice versa. It is calculated as follow:

**Table: 4.9**  
**Return on Loan and Advances Ratio**

<b>Year</b>	<b>Ratio in Percent (%)</b>	
	<b>NIBL</b>	<b>BOK</b>
2006/07	2.82	2.79
2007/08	2.53	2.90
2008/09	2.44	3.15
2009/10	3.14	3.07
2010/11	2.86	3.46
2011/12	2.50	3.23
<b>Mean</b>	2.715	3.100
<b>S.D.</b>	0.061	0.286
<b>C.V.</b>	0.023	0.015

*Source: Annual Report of Concern Bank*

Above table shows that return on loan and advances ratio of NIBL and BOK. Both bank have fluctuating trend. The highest ratio of NIBL is 3.14% in the year 2009/10 and lowest ratio 2.44% in year 2008/09. The mean ratio is 2.715%. This shows the normal earning capacity of NIBL in loan and advances. Whereas highest ratio of BOK is 3.46% in year 2010/11 and lowest ratio is 2.79% in 2006/07. The mean ratio is 3.100% of BOK.

The average ratio of BOK has higher than NIBL. So it seems successful by generating return from lending. It can be concluded that BOK has better utilized the loan and advance for the profit generation in comparison with NIBL. The S.D. and C.V. of NIBL are 0.061 and 0.023 and BOK are 0.286 and 0.015. The higher value of NIBL indicates inconsistency in its ratio. The return on loan and advance is presented in following figure.

**Figure: 4.9**  
**Return on Loan and Advances Ratio**

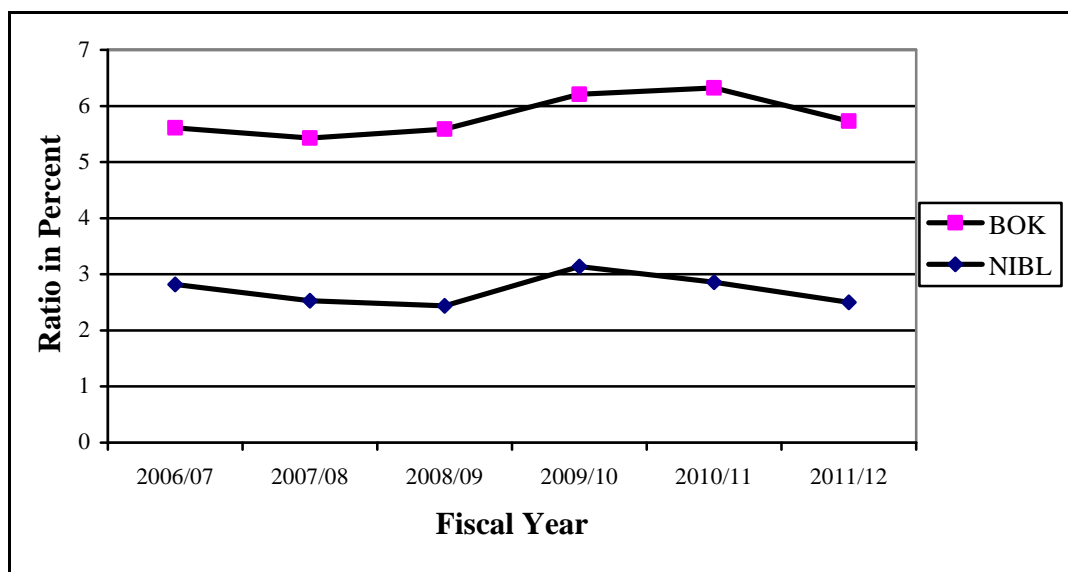


Figure 4.9 clearly shows that the return on loan and advance ratio of NIBL & BOK is fluctuating trend from the fiscal year 2006/07 to 2011/1

#### **b. Return on Total Working Fund Ratio**

Return on total working fund ratio measures the earning capacity of a commercial bank on its deposit mobilized on total working fund, higher the ratio greater will be the return and vice versa. It is calculated as follow:

**Table: 4.10**  
**Return on Total Working Fund Ratio**

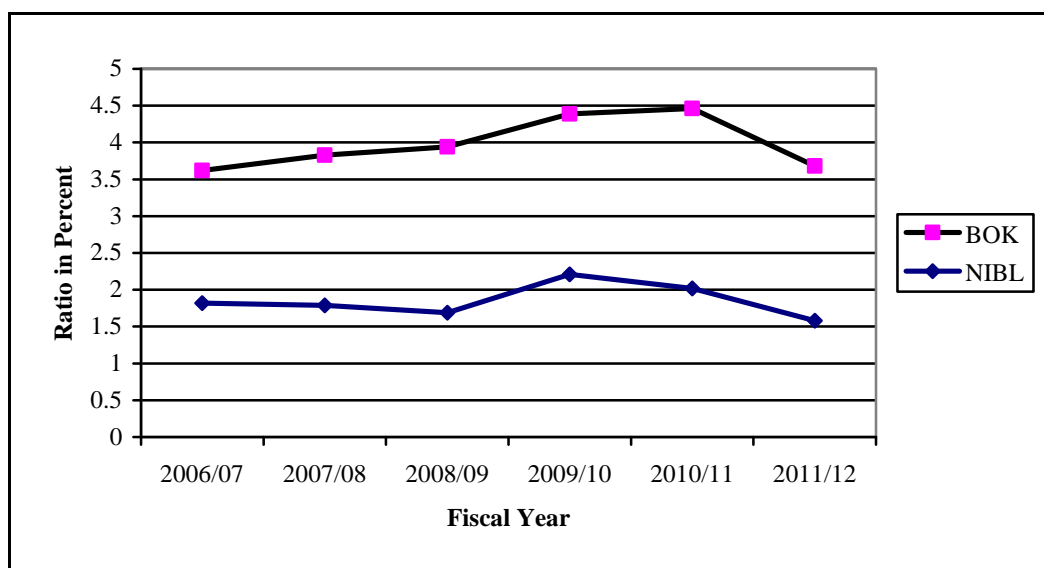
Year	Ratio in Percent (%)	
	NIBL	BOK
2006/07	1.82	1.80
2007/08	1.79	2.04
2008/09	1.69	2.25
2009/10	2.21	2.18
2010/11	2.02	2.44
2011/12	1.58	2.10
<b>Mean</b>	1.852	2.135
<b>S.D.</b>	0.209	0.194
<b>C.V.</b>	0.112	0.091

*Source: Annual Report of Concern Bank*

Above table shows the Return on total asset of NIBL and BOK. The return on total asset of NIBL is fluctuating but increasing trend of BOK. The highest ratio of NIBL is 2.21 in F/Y 2009/10 and lowest ratio is 1.58 in F/Y 2011/12. The average ratio is 1.85 times similarly the highest ratio of BOK is 2.44 in 2010/11 and lowest ratio is 1.80 in F/Y 2006/07. The mean average ratio is 2.135. BOK seems successful in managing and utilizing the available assets in order to generate revenue since its average ratio is higher than that of NIBL. BOK is performing well in end of study period. The S.D. and C.V. of NIBL are 0.209 and 0.112 and BOK has 0.194 and 0.091. NIBL has little higher C.V. and S.D. than BOK. So it signifies more consistency in its ratio than BOK. In this way BOK doing well in generating income from utilizing its total working funds. However it noted that NIBL is doing well in the previous year whereas BOK is not doing well in the latest year. Lower C.V. of BOK shows that it has constancies in the ratios. The following figure shows the return on total working fund ratio.

**Figure: 4.10**

**Return on Total Working Fund Ratio**



Above figure 4.10 shows the Return on total asset of NIBL and BOK. The return on total asset of NIBL is fluctuating but increasing trend of BOK.

**c. Return on Equity**

Equity capital of any bank is its owned capital. The prime objective of any bank is wealth maximization or in other words to earn high profit and thereby, maximizing return on its equity capital. Return on equity plays the measuring role of profitability

of bank through its equity. A high ratio indicates higher successful to mobilize its owned capital and vice-versa.

**Table: 4.11**

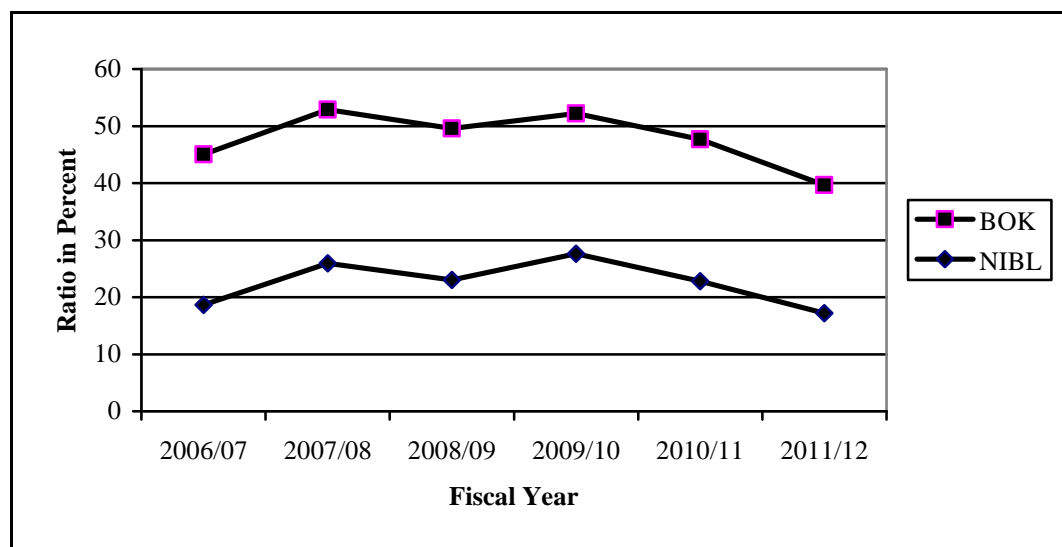
**Return on equity Ratio**

Year	Ratio (%)	
	NIBL	BOK
2006/07	18.65	26.42
2007/08	25.94	26.93
2008/09	23.05	26.51
2009/10	27.61	24.58
2010/11	22.80	24.85
2011/12	17.18	22.50
<b>Mean</b>	22.54	25.30
<b>S.D.</b>	3.684	1.524
<b>C.V.</b>	0.163	0.060

*Source: Annual Report of Concern Bank*

Above table shows the return on equity ratio of NIBL and BOK. The ROE of NIBL and BOK are fluctuating trend. The highest ROE ratio of NIBL is 25.94% in F/Y 2007/08 and lowest is 17.18% in F/Y 2011/12. Similarly highest ratio of BOK is 26.93% in F/Y 2007/08 and lowest ratio is 22.50% in F/Y 2011/12. BOK seems successful in managing and utilizing the shareholder capital in order to generate revenue since its ROE ratio is higher than that of NIBL i.e. 25.30% > 22.54% of total equity in an average. BOK has also higher ratio in each year. However it noted that NIBL is doing well in the latest year as it has increased its ROE in the latest year but BOK has decreased. Lower C.V. and S.D. of BOK shows that it has consistencies in the ratios. In conclusion BOK has utilized its shareholder capital in order to generate revenue than NIBL. The following figures shows the return on equity of NIBL and BOK.

**Figure: 4.11**  
**Return on equity Ratio**



Above figure shows the return on equity ratio of NIBL and BOK. The ROE of NIBL and BOK are fluctuating trend.

#### **d. Total Interest Earned to Total Working Fund Ratio**

This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest. It is calculated as follow:

**Table: 4.12**

#### **Total Interest Earned to Total Working Fund Ratio**

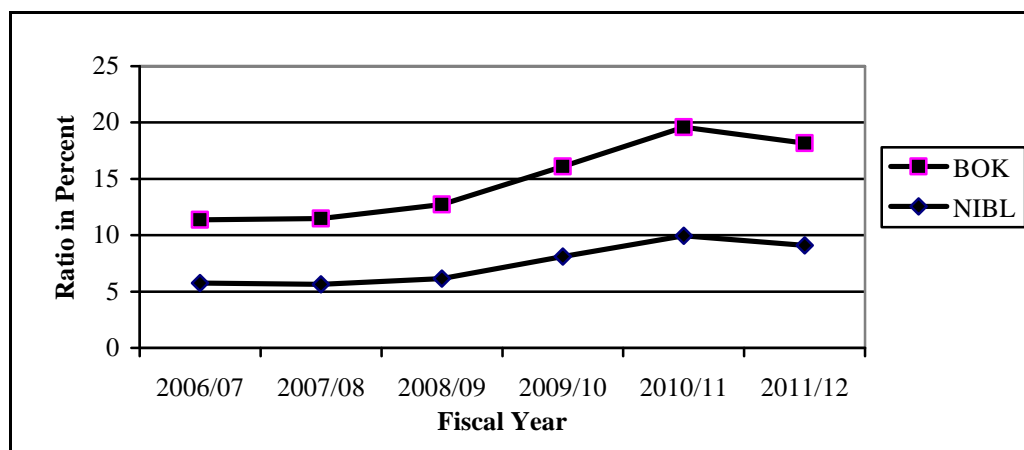
Year	Ratio (%)	
	NIBL	BOK
2006/07	5.74	5.62
2007/08	5.64	5.83
2008/09	6.16	6.58
2009/10	8.12	7.99
2010/11	9.94	9.64
2011/12	9.10	9.07
<b>Mean</b>	7.450	7.455
<b>S.D.</b>	1.694	1.551
<b>C.V.</b>	0.227	0.208

*Source: Annual Report of Concern Bank*

Table 4.13 shows interest earned to total working fund ratio of NIBL and BOK. Both banks have fluctuating increasing trend of ratio. BOK seems more conscious about managing its assets in order to earn more interest ratio because it has higher average ratio. The average ratio of NIBL is 7.45% and BOK is 7.455% average ratio. The mean ratio of BOK is little more than that of NIBL. In comparison, BOK seems effective in earning interest to some extent but it must break the decreasing trend in coming year. Lower C.V. and S.D. of BOK shows that it has consistencies in the ratios. The following figure shows the interest eared to total working fund ratio of NIBL and BOK.

**Figure: 4.12**

**Total Interest Earned to Total Working Fund Ratio**



Above figure 4.12 clearly shows the return on equity ratio of NIBL and BOK is increasing trend from the fiscal year 2006/07 to 2011/12.

**e. Total interest Earned to Total Operating Income Ratio**

Total interest earned to total operating income ratio reveals that portion of interest income on total operating income of the firms. The major sources of income for the bank are interest income so the banks should mobilize their funds in more interest generating sectors considering the risk and return.

**Table: 4.13**  
**Total interest Earned to Total Operating Income Ratio**

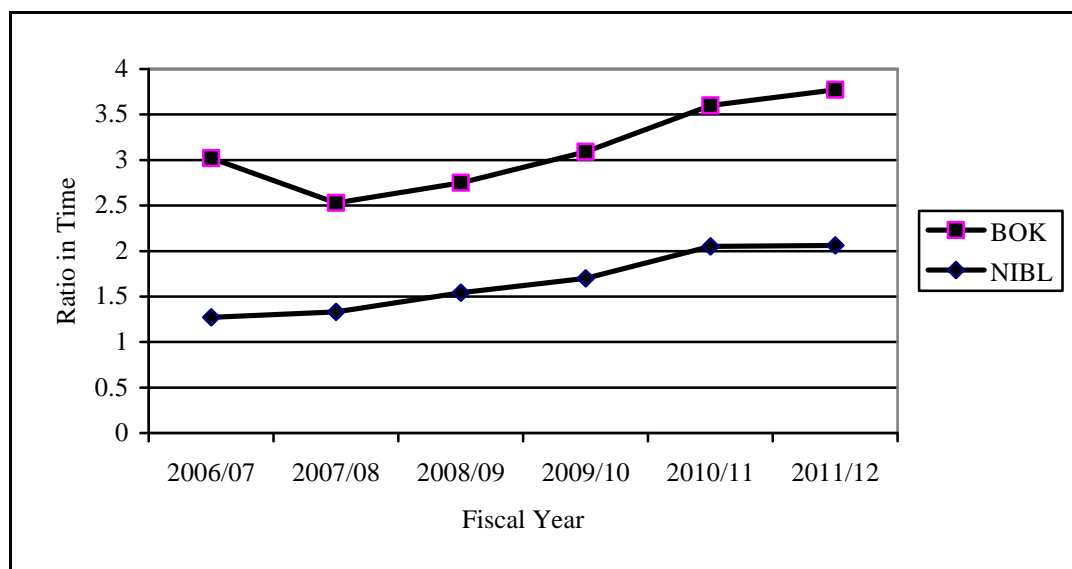
<b>Year</b>	<b>Ratio (in times)</b>	
	<b>NIBL</b>	<b>BOK</b>
2006/07	1.27	1.75
2007/08	1.33	1.20
2008/09	1.54	1.21
2009/10	1.70	1.39
2010/11	2.05	1.55
2011/12	2.06	1.71
<b>Mean</b>	1.658	1.468
<b>S.D.</b>	0.313	0.219
<b>C.V.</b>	0.188	0.149

*Source: Annual Report of Concern Bank*

Above table shows Interest Earned to Operating Income Ratio of NIBL and BOK. NIBL has increasing but BOK has decreasing trend during study period. The highest ratio of NIBL is 2.06 and lowest ratio is 1.27. Similarly highest ratio of BOK is 1.75 and lowest ratio is 1.20 times. The mean ratio of NIBL and BOK are 1.658 and 1.468 times respectively. NIBL has little higher ratio, it indicates the high contribution in operating income made by lending and investing activities (core banking activity) and vice versa. High contribution in operating income made by lending and investing activities is not good for long run but in short run it is not so bad.. The S.D. and C.V of NIBL is higher than BOK. So it indicates that NIBL has relatively inconsistent in interest earned to total operating income. The following figure represents the interest earned to total operating income.

Figure: 4.13

### Total interest Earned to Total Operating Income Ratio



Above figure clearly shows that the interest earned to operating income ratio of NIBL and BOK. NIBL has increasing but BOK has decreasing trend.

#### 4.1.4 Risk Ratio

Risk and uncertainty is a part of business loss. All the business activities are influenced by risk, so business organization cannot achieve a good return as per their desires. The profitability of risk makes banks investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. A bank has to have idea of the level of risk of risk that one has to bear while investing its funds. Through following ratios, effort has been made to measure the level of risk inherent in the NIBL and BOK.

##### a. Credit Risk Ratio/Non-Performing Loan to Total Loan Ratio

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. Credit risk ratio is expressed as the percentage of non-performing loan to total Loan & Advances. Bank utilizes its funds by providing credit to different sections. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk involved in the project. The credit risk ratio shows the

proportion of non-performing assets in total Loan & Advances. Higher ratio indicates more risky assets in the volume of Loan & Advances of the bank and vice-versa.

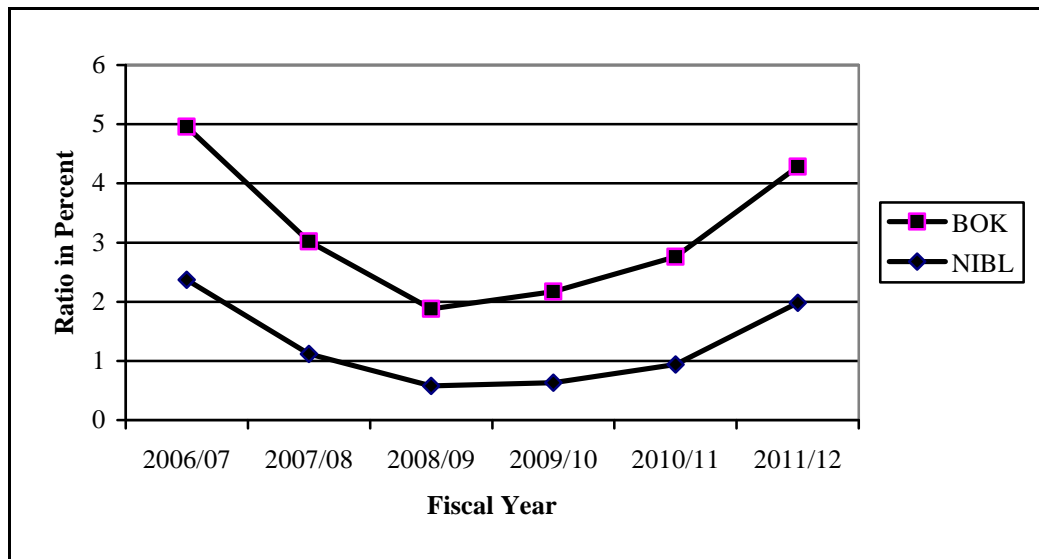
**Table: 4.14**  
**Credit Risk Ratio**

Year	Ratio (%)	
	NIBL	BOK
2006/07	2.37	2.59
2007/08	1.12	1.90
2008/09	0.58	1.30
2009/10	0.63	1.54
2010/11	0.94	1.82
2011/12	1.98	2.30
<b>Mean</b>	1.270	1.908
<b>S.D.</b>	0.674	0.434
<b>C.V.</b>	0.530	0.227

*Source: Annual Report of Concern Bank*

Above table and figure shows that NPL to total loan and advances of NIBL and BOK have fluctuating trend. Decreasing trend is the good sign of the efficient credit management. The highest credit risk ratio of NIBL is 2.37% in F/Y 2006/07 and lowest ratio is 0.58% in F/Y 2008/09. Similarly highest ratio of BOK is 2.59 in F/Y 2006/07 and lowest ratio is 1.30 percent in F/Y 2008/09. The average ratio of NIBL and BOK are 1.270 and 1.908 respectively during the study period. The higher ratio of BOK indicates more NPA in its total loan. These Ratios indicate the more efficient operating of credit management of both banks according to NRB directives because according to NRB directives NPL ratio must be less than 5%. However, in comparison, BOK has efficient operating of credit management than that of NIBL from the mean point of view. The S.D and C.V. of BOK is also lower than NIBL which signifies less risky and more consistency in its ratio. The following figure presents credit risk ratio of NIBL and BOK.

**Figure: 4.14**  
**Credit Risk Ratio**



Above figure 4.14 clearly shows that the credit risk ratio of NIBL and BOK is fluctuating trend.

#### **b. Liquidity Risk Ratio**

The liquidity risk of the bank defines its liquidity need for deposit. The cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposit as the liquidity needs. The ratio of cash and bank balance to total deposit is an indicator of bank's liquidity of need. This ratio is low if funds are kept idle as cash balance but this reduces profitability, when the banks makes loan, its profitability increase and also the risk. Thus, higher liquidity ratio indicates less profitable return and vice-versa.

**Table: 4.15**  
**Liquidity Risk Ratio**

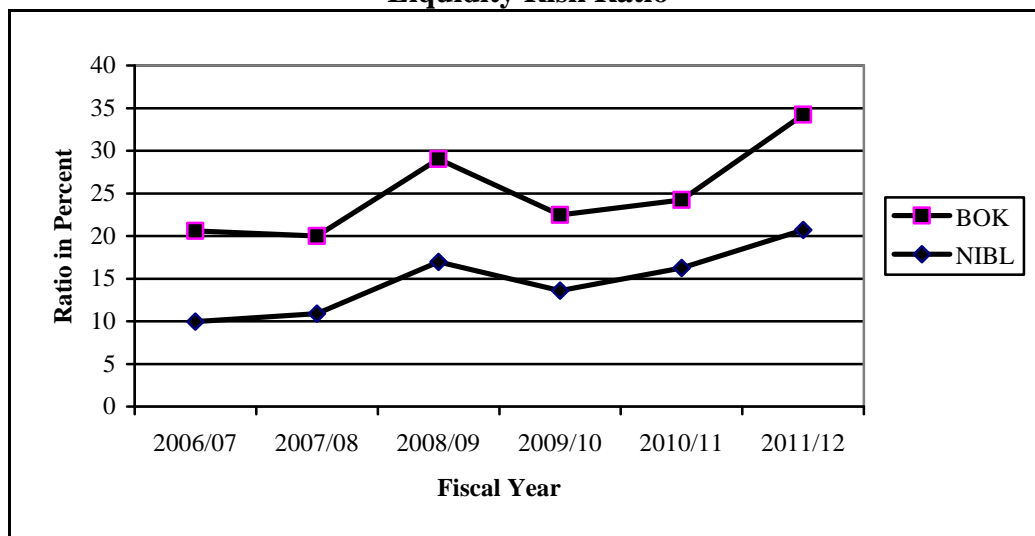
<b>Year</b>	<b>Ratio (%)</b>	
	<b>NIBL</b>	<b>BOK</b>
2006/07	9.97	10.62
2007/08	10.89	9.10
2008/09	16.95	12.07
2009/10	13.61	8.85
2010/11	16.24	7.98
2011/12	20.70	13.54
<b>Mean</b>	14.727	10.360
<b>S.D.</b>	3.685	1.941
<b>C.V.</b>	0.250	0.187

*Source: Annual Report of Concern Bank*

From the Table No 4.16 shows liquidity risk ratio of NIBL and BOK. Liquidity risk ratio of the NIBL and BOK have fluctuating trend over the study period. The highest ratio of NIBL and BOK are 20.70% and 13.54% in the year 2011/12 respectively. Similarly lowest ratio of NIBL and BOK are 9.97% in F/Y 2006/07 and 7.98% in 2010/11. The average mean ratio of NIBL is greater than that of BOK (i.e.14.727% > 10.360%). It signifies that NIBL has sound liquid fund to make immediate payment to the depositors at demand from the mean point of view. It means NIBL kept its more deposit as cash and bank balance but BOK kept less than NIBL. However if we see the latest data both banks have increasing its deposit as cash and bank balance. The following figure shows the liquidity risk ratio of NIBL and BOK.

Figure: 4.15

## Liquidity Risk Ratio



Above figure 4.15 clearly shows that the liquidity risk ratio of NIBL and BOK is fluctuating trend over the study period.

### c. Asset Risk Ratio

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan. While making investment, bank examines the asset risk involved in the project. Generally asset risk ratio shows proportion of non-performing assets in the total investment plus loan and advances of a bank it is computed as:

Table: 4.16

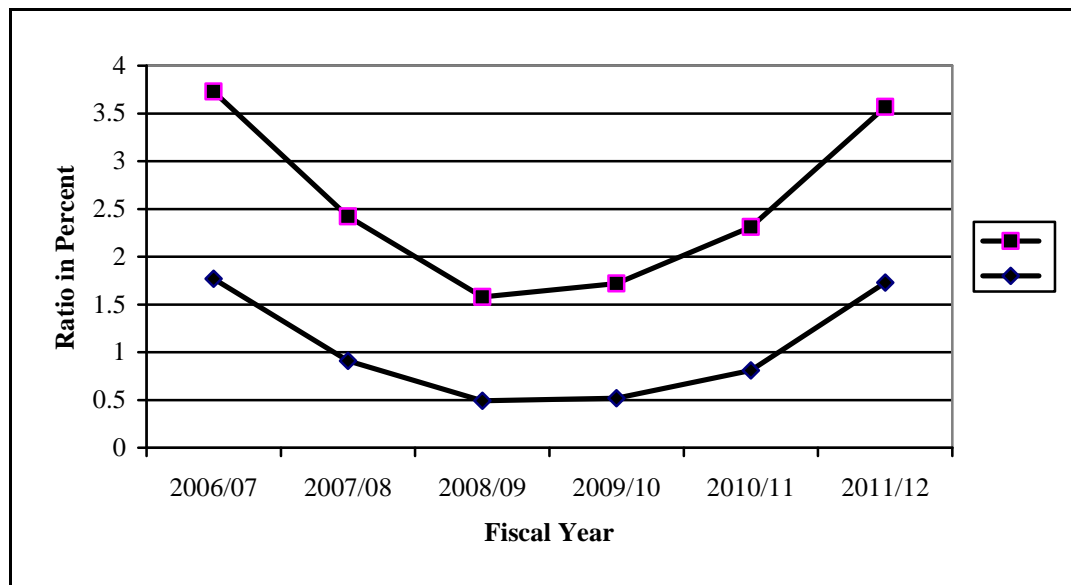
## Asset Risk Ratio

Year	Ratio (%)	
	NIBL	BOK
2006/07	1.77	1.96
2007/08	0.91	1.51
2008/09	0.49	1.09
2009/10	0.52	1.20
2010/11	0.81	1.50
2011/12	1.73	1.84
<b>Mean</b>	1.038	1.517
<b>S.D.</b>	0.275	0.097
<b>C.V.</b>	0.264	0.064

Source: Annual Report of Concern Bank

The above table shows the asset risk ratio of NIBL and BOK. The analysis shows that both banks have fluctuating trend of asset risk ratio. NIBL has highest and lowest ratio is 1.77% and 0.49% in the year 2006/07 and 2008/09 respectively. Similarly BOK has the highest and lowest ratio of 1.96% and 1.09% in the year 2006/07 and 2008/09 respectively. The average mean ratio of NIBL and BOK are 1.038 and 1.517percent. The mean ratio of BOK is higher than that of NIBIL. So BOK has the higher asset risk ratio analyzing mean point of view. The following figure shows the asset risk ratio of NIBL and BOK.

**Figure: 4.16**  
**Asset Risk Ratio**



Above figure 4.16 clearly shows that the assets risk ratio of NIBL and BOK is fluctuating trend.

### **Statistical Analysis**

Statistical tool is one of the important tools to analyze the data. There are various tools for the analysis of tabulated data such as, mean, standard deviation, regression analysis, co-relation analysis, trend analysis, various types of tests etc. There is used following convenient statistical tools are used in this thesis study.

#### 4.1.5 Relationship between Total Deposits and Total Investment

The following table describes the relationship between total deposits and total investment of NIBL and BOK of six years study period. In this case, total deposits are independent variables say (X) and total investment is dependent variable say (Y).

**Table: 4.17**  
**Relationship between Total Deposits and Total Investment**

Name of Bank	Base of Evaluation			
	R	R <sup>2</sup>	P.E.	6 x P.E.
NIBL	0.8075	0.6520	0.0958	0.5749
BOK	0.8140	0.6626	0.0929	0.5575

*Source: Appendix I*

The Table No 4.18 shows that coefficient of correlation between deposits and investment of NIBL and BOK. The correlation between deposits and investment of NIBL is 0.8075 i.e. positive correlations between these two variables. The value of coefficient of #determination (R<sup>2</sup>) of NIBL is 0.6520 which means 65.20% of investment decision depends upon deposit and least are depend upon other variables. Similarly probable error is 0.0958 and 6 x P. E. is 0.5749 which shows that R is higher than 6 x P. E. Therefore it reveals that relationship between deposits and investment is significant.

In case of BOK, coefficient of correlation between investment and deposit (R) is 0.8140 that means there is positive correlation between two variables. The value of coefficient of determination (R<sup>2</sup>) is also 0.6626 which means 66.26% of investment decision depend upon deposit and least investment is depend upon other variables. Similarly probable error is 0.0929 and 6 x P. E. is 0.5575 which shows that R is higher than 6 x P.E. Therefore it reveals that relationship between deposit and investment is significant. Which indicate there is significant relationship between deposits and total investment of both banks.

#### 4.1.6 Relationship between Total Deposits and Loans and Advances

The following table describes the relationship between total deposits and loan and advances of NIBL and BOK with comparatively under six-year period. In this case,

total deposits are independent variable say (X) and loan and advances is dependent variable say (Y).

**Table: 4.18**

**Relationship between Total Deposits and Loans and Advances**

Name of Bank	Base of Evaluation			
	R	R <sup>2</sup>	P.E.	6 x P.E.
NIBL	0.9831	0.9665	0.0092	0.0553
BOK	0.9816	0.9636	0.0100	0.0601

*Source: Appendix II*

From the Table 4.19 we can find that the coefficient of correlation between deposits and loan and advances of NIBL and BOK are 0.9831 and 0.9816 respectively. This shows the highly positive relationship between these two variables i.e. loan and advances and deposits of both banks. By considering coefficient of determination (R<sup>2</sup>) of NIBL & BOK have 0.9665 & 0.9636 respectively. Which means huge 96.65% & 96.36% of loan and advances decision is determined by deposit and rest loan and advances depend upon other variables of both bank respectively. In view of the probable error of NIBL and BOK, the value of R of NIBL and BOK are more than the 6 times of P.E, which indicate there is significant relationship between deposits and loan and advances of both banks.

**4.1.7. Co-efficient of Correlation between Loan and Advance and Net Profit**

Co-efficient of correlation between Loan & Advance and net profit is used to measure the degree of relationship between two variable i.e. Loan and advance and net profit of NIBL and BOK during the study period. Where Loan and advance is independent variable (X) and net profit is dependent variable (Y). The main objective of calculating this ratio is to determine the degree of relationship whether there the net profit is significantly correlated or not and the variation of net profit to loan and advance through the coefficient of determination. The following table shows the 'r', R<sup>2</sup>, P.Er. and 6 P. Er. between those variables of NIBL and BOK for the study period.

**Table: 4.19**  
**Correlation between Loan and Advance and Net profit**

Name of Banks	Evaluation Criterions			
	R	R <sup>2</sup>	P.Er.	6 P.Er.
NIBL	0.9394	0.8825	0.0324	0.1942
BOK	0.9865	0.9732	0.0074	0.0442

*Source: Appendix III*

Above table shows correlation coefficient between Loan and advance and net profit of NIBL and BOK. The correlation coefficient between Loan and advance and net profit of NIBL and BOK are 0.9394 and 0.9865. It refers that there is highly positive correlation between these two variables. The coefficient of determination of NIBL is 0.8825. Which indicate 88.25 percent of net profit is contributed by Loan and advance and least are depend on other variable. Moreover, this relationship is significant because the coefficient of correlation is more than 6 P. Er. Likewise. The coefficient of determination R<sup>2</sup> of BOK is 0.9732, which indicates that 97.32 percent variability in net profit is explained by Loan and advance and least are depend on other variable. Correlation r is greater than 6 P. Er. So the relationship between Loan and advance and net profit is significant for BOK. In conclusion, BOK has more significant relationship between Loan and advance and net profit than that of NIBL.

#### **4.1.8 Coefficient of Correlation between Total Investment and Net Profit**

Coefficient of correlation between total investment and net profit measures the degree of their relationship. In the, correlation analysis, investment is independent variable and net profit is dependent variable. The following Table shows the coefficient of correlation coefficient of determination, probable error and six times of P.Er. During the fiscal year 2006/07 to 2011/12.

**Table: 4.20**  
**Correlation between Total Investment and Net Profit**

Name of Banks	Evaluation Criterions			
	R	R <sup>2</sup>	P.Er.	6 P.Er.
NIBL	0.5973	0.3567	0.1771	1.0628
BOK	0.7452	0.5553	0.1225	0.7347

*Source: Appendix IV*

Above table shows correlation coefficient between total investment and net profit of NIBL and BOK. The correlation coefficient between total investment and net profit of NIBL is 0.5973 which implies there is highly positive correlation between total investment and net profit. In addition, coefficient of determination of NIBL is 0.3567. It means 35.67 percent of Profit is contributed by total investment and rest is contribution by other factor. The correlation is insignificant due to coefficient of correlation is lower than 6 P. Error. On the other hand BOK has positive correlation between total investment and net profit i.e. 0.7452. The coefficient of determination of BOK is 0.5553 it means 55.53 percent of Profit is contributed by total investment and rest are determined by other factor. This relationship is insignificant as its correlation coefficient is less than 6 P.Er. Thus it can be concluded that the degree of relationship between total investment and net profit of NIBL & BOK move same direction. This correlation coefficient indicates that the NIBL has performed a better in order to generate net profit through investment than that of BOK.

#### **4.1.9 Coefficient of correlation of Total Deposit between NIBL and BOK**

Coefficient of correlation of total deposit between NIBL and BOK and shows their linear relationship. The following Table shows the coefficient of correlation coefficient of determination, probable error and six times of P.Er. During the fiscal year 2006/07 to 2011/12.

**Table: 4.21**  
**Correlation between Total Deposit of NIBL and BOK**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.9675	0.9361	0.0176	0.1055

*Source: Appendix V*

This table shows how the total deposit of NIBL and BOK is positively related. 0.9675 of correlation coefficient shows that there is highly positive correlation between these two banks in this regard. This correlation coefficient is also significant because the correlation coefficient is higher than 6 P.Er. As the 0.9361 of coefficient of determination, this shows the 93.61 percent of the degree of relationship. The degree of relationship between these two banks is also high.

#### **4.1.10 Coefficient of correlation of Total Investment between NIBL and BOK**

The coefficient of correlation of total investment between selected commercial banks is shown as follow:

**Table: 4.22**  
**Correlation between Total Investment of NIBL and BOK**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.771	0.594	0.1118	0.6708

*Source: Appendix VI*

The above table reveals that there is positive correlation between NIBL and BOK in case of total investment. It implies that the total investment of NIBL and BOK move positive direction. Here R is higher than 6 P.Er. Therefore, correlation coefficient between two banks is significant. This can be said that NIBL and BOK movements its total investment in same direction. The coefficient of determination is 0.594, which shows there is only 59.40 percent of the degree of relationship.

#### 4.1.11 Coefficient of Correlation of Loan & Advances between NIBL and BOK

The coefficient of correlation of loan & advances between NIBL and BOK has been given below.

**Table: 4.23**

**Correlation between Loan & Advances of NIBL and BOK**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.9758	0.9521	0.0132	0.0791

*Source: Appendix VII*

Above table shows that there is high degree positive correlation between the loan & advances of NIBL and BOK. The correlation coefficient between two banks is 0.9758. It means loan & advances of these two banks moves in the same direction in high proportion. This correlation coefficient is significant in order to show the relationship between loan & advances of these two banks because correlation coefficient is greater than 6 P.Er. The coefficient of determination is 0.9521, which shows there is 95.21 percent of the degree of relationship between two banks.

#### 4.1.12 Coefficient of Correlation of Net Profit between NIBL and BOK

The coefficient of net profit between the selected commercial banks shows the relationship between the banks.

**Table: 4.24**

**Correlation between Net Profit of NIBL and BOK**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.8830	0.7796	0.0606	0.3639

*Source: Appendix VIII*

Above statistics shows that there is high degree positive correlation between profits of NIBL and BOK, which is indicated by correlation coefficient of 0.8830, This relationship is significant because its correlation coefficient is more than 6 P.Er. The coefficient of determination is 0.7796 which shows the 77.96 percent of the degree of relationship between net profit of NIBL and BOK.

## Trend Analysis

Trend analysis plays an important role in the analysis and interpretation of financial statement. Trend in general terms, signifies a tendency. It helps in forecasting and planning future operation. Trend analysis is a statistical tool, which shows the previous trend of the financial performance and forecasts the future financial results of the firms.

### 4.1.13 Trend Analysis of Total Deposit

Deposits are the important part in banking sector hence its trend for next seven years will be forecasted for future analysis. This is calculated by the least square method. Here the effort has been made to calculate the trend values of Total deposit of Nepal Investment Bank Limited and Bank of Kathmandu bank for further six years.

$$Y = a + bx$$

Where,

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$$Y = a + b x \dots \dots \dots (I)$$

Where x = X - Middle year

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NIBL

BOK

$$a = 43813.76$$

$$a = 18772.06$$

$$b = 12524.91$$

$$b = 5090.28$$

$$Y_c = 43813.76 + 12524.91 * X \text{ NIBL}$$

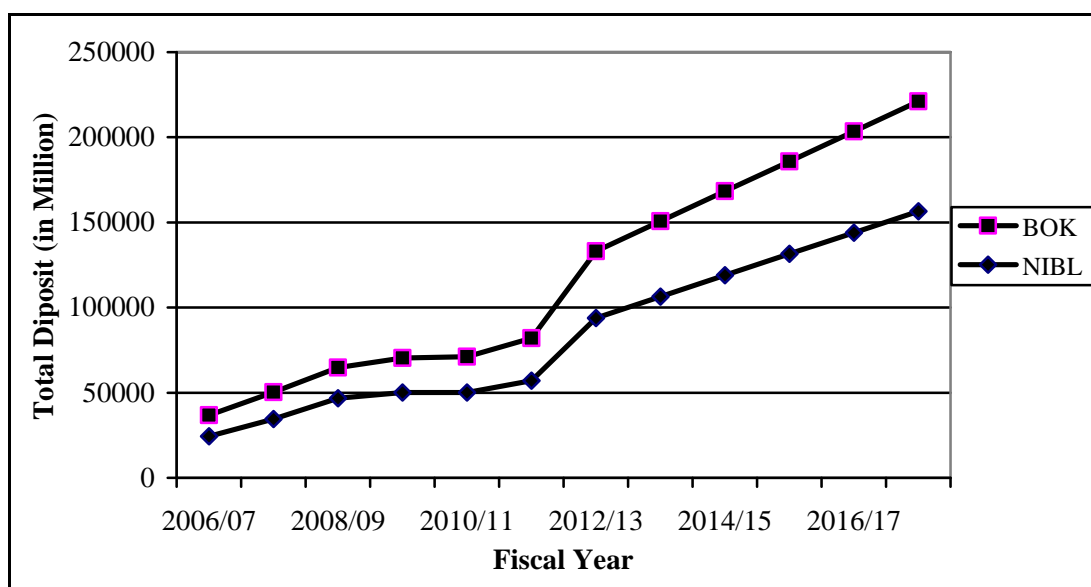
$$Y_c = Y = 18772.06 + 5090.28 * X$$

**Table : 4.25**  
**Trend Analysis of Total Deposit of NIBL and BOK**

Year (x)	NIBL	BOK
2006/07	24488.85	12388.93
2007/08	34452	15833.74
2008/09	46698	18083.98
2009/10	50095	20315.83
2010/11	50138.12	21018.41
2011/12	57010.60	24991.44
2012/13	93913.41	39133.19
2013/14	106438.32	44223.47
2014/15	118963.24	49313.75
2015/16	131488.15	54404.03
2016/17	144013.06	59494.32
2017/18	156537.98	64584.60

*Source: Annul Report of Concern Bank*

**Figure: 4.17**  
**Trend Line of Total Deposit of NIBL and BOK**



Above table and figure shows that total deposit of NIBL and BOK. Both Banks is in increasing trend. The rate of increment of total deposit for NIBL seems to be higher than that of BOK. The increasing trend of total deposit of NIBL is more aggressive

and high rather than BOK. It indicates NIBL has little more prospect of collecting Total deposit. The trend analysis has projected deposit amount in fiscal year FY 2012/13 to FY 2017/18. From the above trend analysis it is clear that NIBL has higher position in collecting deposit than BOK.

#### 4.1.14 Trend Analysis of Loan & advances

Here, the trend values of loan & advances Between NIBL and BOK have been calculated for further Six years. The following Table shows the actual and trend values of NIBL and BOK.

$$Y = a + bx$$

Where,

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$$Y = a + b x \dots \dots \dots (I)$$

Where x = X - Middle year

Here,

$$a = \frac{\sum Y}{N}$$

$$b = \frac{\sum XY}{\sum X^2}$$

NIBL

$$a = 34196.01$$

$$b = 9702.79$$

$$Y_c = 34196.01 + 9702.79 * X \text{ NIBL}$$

BOK

$$a = 14909.39$$

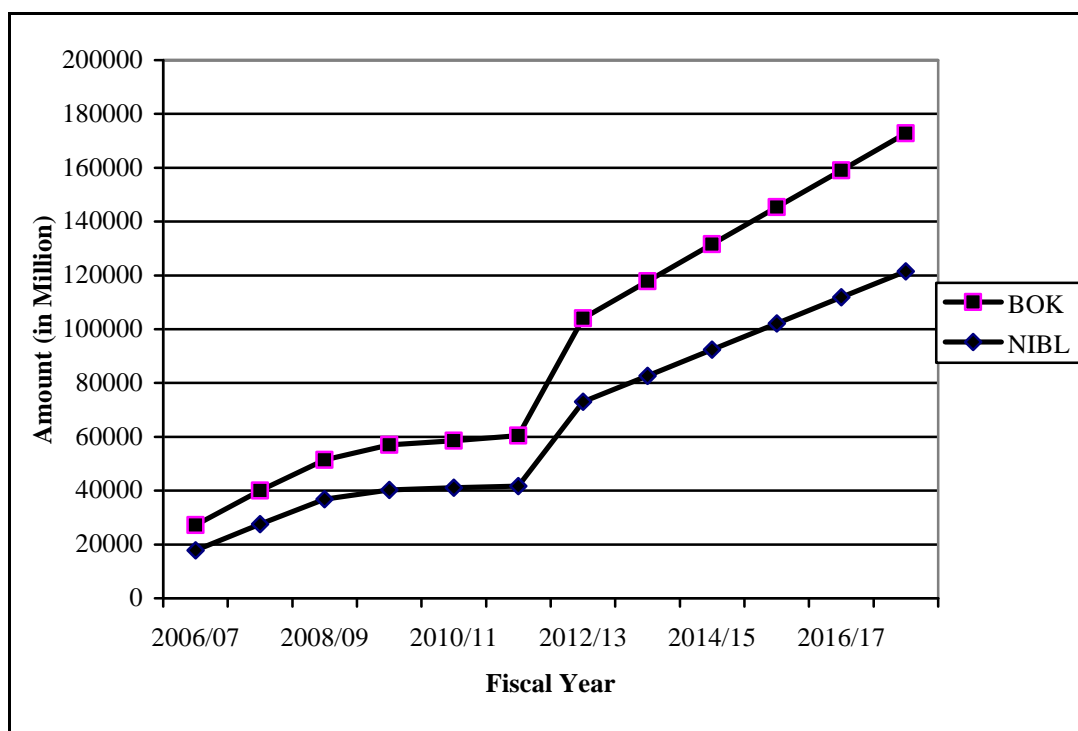
$$b = 4041.15$$

$$Y_c = 14909.39 + 4041.15 * X \text{ BOK}$$

**Table: 4.26****Trend of Total Loan and Advance of NIBL and BOK**

Year (x)	NIBL	BOK
2006/07	17769.1	9399.33
2007/08	27529	12462.64
2008/09	36827.16	14647.3
2009/10	40318.31	16664.93
2010/11	41095.51	17468.19
2011/12	41636.99	18813.93
2012/13	73007.19	31073.98
2013/14	82709.99	35115.12
2014/15	92412.78	39156.27
2015/16	102115.57	43197.42
2016/17	111818.37	47238.57
2017/18	121521.16	51279.71

*Source: Annul Report of Concern Bank*

**Figure: 4.18****Trend line of Total Loan and Advance of NIBL and BOK**

Above table depicts that loan & advances of NIBL and BOK. Both Banks has in increasing trend. The increasing trend of NIBL is aggressive than BOK. The actual value of loan & advances for NIBIL is little higher than in relation to BOK. It is clear that both NIBL and BOK is mobilizing its collected deposits and other funds in the form of loan & advances. Above table and figure shows the NIBL has highly mobilizing loan & advances than the BOK.

#### 4.1.15 Trend Analysis of Total Asset

Under this topic, an attempt has been made to analyze trend analysis total asset of NIBL and BOK for further six years

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$$Y = a + b x \dots \dots \dots (I)$$

Where x = X - Middle year

Here,

$$a = \frac{\sum Y}{N}$$

$$b = \frac{\sum XY}{\sum X^2}$$

NIBL

$$a = 50648.65$$

$$b = 15064.88$$

$$Y_c = 50648.65 + 15064.88 * X \text{ NIBL}$$

BOK

$$a = 21639.21$$

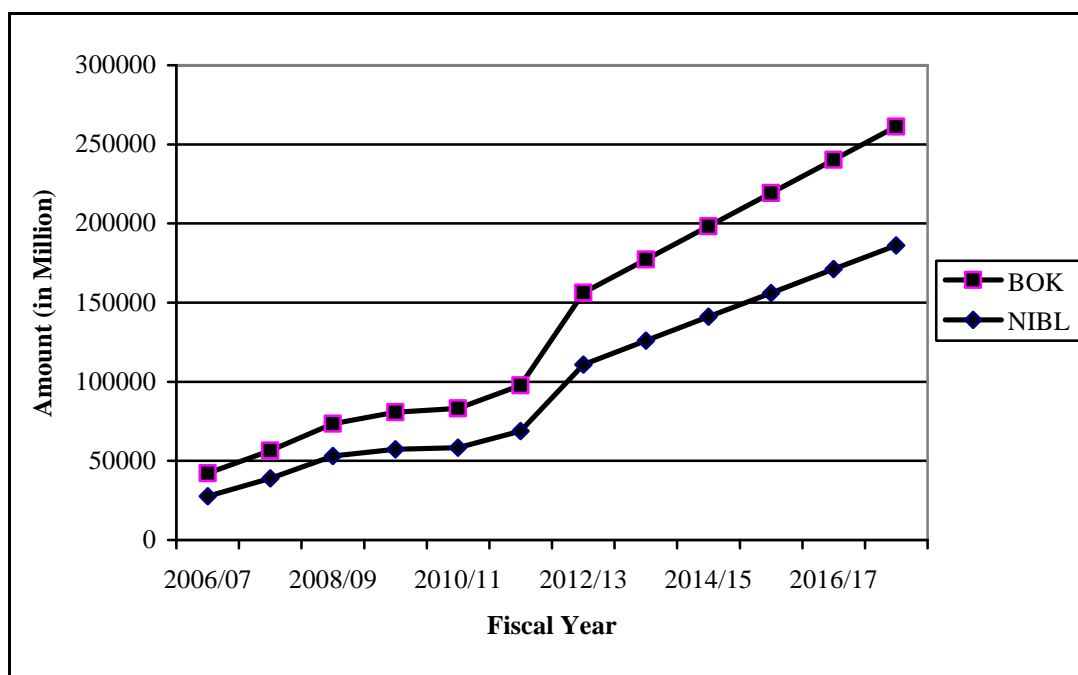
$$b = 5930.16$$

$$Y_c = 21639.21 + 5930.16 * X \text{ BOK}$$

**Table: 4.27****Trend of Total Asset between NIBL and BOK**

Year (x)	NIBL	BOK
2006/07	27590.84	14581.39
2007/08	38873	17721.93
2008/09	53010	20496
2009/10	57305	23396.19
2010/11	58356.82	24757.75
2011/12	68756.23	28881.99
2012/13	110908.15	45359.83
2013/14	125973.03	51289.98
2014/15	141037.91	57220.14
2015/16	156102.78	63150.30
2016/17	171167.66	69080.45
2017/18	186232.54	75010.61

*Source: Annul Report of Concern Bank*

**Figure: 4.19****Trend Line of Total Asset between NIBL and BOK**

Above table shows the Trend of Total asset between NIBL and BOK. Both Bank NIBL and BOK have increasing trend in total asset. NIBL has little high and upward

trend of increasing, but BOK has moderately increasing trend of asset. The trend of total asset projected to FY 2017/18. The forecasted trend projected that the NIBL has greater increment rate in total asset than the increment rate of BOK. The figure indicates NIBL has little highly mobilized the total asset rather than BOK.

#### 4.1.16 Trend Analysis of Net Profit

Here, the trend values of net profit of NIBL and BOK have been calculated for five years FY 2005/06 to FY 2009/10 and forecasting for the next six year till FY 2014/15.

$$Y = a + bx$$

Where,

Y = dependent variable, a = Y-intercept, b = slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$$Y = a + b x \dots \dots \dots (I)$$

Where  $x = X - \text{Middle year}$

Here,

$$a = \frac{\sum Y}{N}$$

$$b = \frac{\sum XY}{\sum X^2}$$

NIBL

$$a = 930.15$$

$$b = 265.12$$

$$Y_c = 930.15 + 265.12 X \text{ NIBL}$$

BOK

$$a = 468.01$$

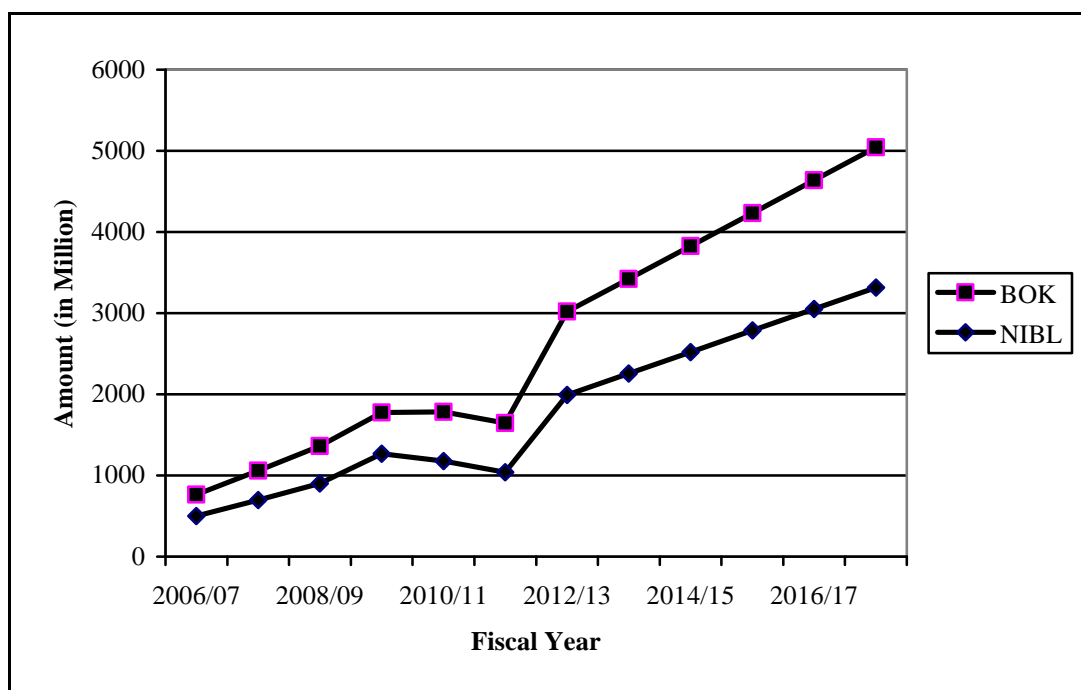
$$b = 139.82$$

$$Y_c = 468.01 + 139.82 * X \text{ of BOK}$$

**Table No. 4.28****Trend Analysis of Net Profit between NIBL and BOK**

Year (x)	NIBL	BOK
2006/07	501.4	262.39
2007/08	697	361.49
2008/09	900.62	461.73
2009/10	1265.95	509.63
2010/11	1176.64	605.15
2011/12	1039.27	607.66
2012/13	1990.62	1027.30
2013/14	2255.74	1167.12
2014/15	2520.85	1306.95
2015/16	2785.97	1446.77
2016/17	3051.09	1586.59
2017/18	3316.21	1726.42

*Source: Annual Report of Concern Bank*

**Figure: 4.20****Trend line of Net Profit between NIBL and BOK**

The above table reveals the trend of Net profit of NIBL and BOK. Net profit both bank NIBL and BOK forecasted in increasing trend. The trend of increasing value of

net profit of NIBL is aggressive than BOK. The net profit of NIBL and BOK has been increasing every year. The trend of Net profit projected to FY 2017/18 i.e. further six years. Above statistics shows that both the banks have inconsistent net profit throughout the study period. In conclusion, NIBL is doing better in order to generate net profit during the projected study period in conclusion the prospect of profit generating capacity of NIBL is high than the BOK because in the beginning BOK higher increment rate but later NIBL exceed. Above figure represent trend line of Net profit of NIBL and BOK.

## 4.2 Major Findings of the Study

From the analysis of the data collected from various sources following findings have been made.

- ) NIBL has sound liquidity position. Whereas BOK has little poor. In an average, liquidity position of NIBL has greater than BOK i.e.  $1.254 > 1.023$  due to high mean ratio. So, BOK is sound in meeting short-term obligation than NIBL. But lower S. D. and C.V. of BOK indicate consistency in ratio.
- ) The mean ratio of cash and bank balance to total deposits of NIBL is higher than BOK. It means the liquidity position of NIBL is higher than BOK. It shows the higher position regarding the meeting of demand of its customer on their deposit at any time than BOK.
- ) The average study of cash and bank balance to current assets ratio of NIBL is higher than BOK. It shows that BOK has taken more risk to meet the daily requirement of its customer's deposit than NIBL. But BOK is more consistency due to lower C.V than NIBL.
- ) Mean ratio of investment on government treasury bills to current assets of NIBL and BOK are 9.25% and 17.61%. It means BOK has invested more money in risk free assets than that of NIBL. NIBL has emphasizes on more loans and advances and other investment than investment in govt. securities.
- ) BOK has mobilized 79.337% of its average collected deposit in loan and advances that is higher than NIBL of 77.80%. According to NRB directives 80% of loan and advances to total deposit ratio is able to better mobilization of

collected deposit. So both banks have about to met the NRB requirement. BOK has little more good condition than NIBL.

- ) The mean ratio of the total investment to total deposit NIBL and BOK are 21.44% and 19.54%. Here NIBL has higher ratio. It signifies NIBL has successfully allocated its deposit in investment portfolio in comparison with BOK. NIBL has more utilized its total deposit as investment.
- ) The loan and advances to total assets ratio of NIBL and BOK are fluctuating trend. Both banks have about equal ratio but BOK mobilize little more of its asset as loan and advances. The mean of NIBL and BOK are 68.13% and 68.86% respectively. Lower S.D. and C.V. of BOK show that consistencies in the ratios as well.
- ) Mean ratio of investment in govt. securities out of its total assets NIBL and BOK are 8.06% and 13.775% respectively. BOK has higher ratio than NIBL. BOK has invested more money in risk free assets out of its total assets. In another word BOK has emphases on more loans and advances and other short term investment than investment in govt. securities out of its total assets.
- ) BOK has higher average return on loan and advances. So it seems successful by generating higher ratio. It can be concluded that BOK has better utilized the loan and advance for the profit generation in comparison with NIBL. BOK seems risk free than NIBL due to lower S.D and C. V.
- ) Mean return on total asset ratio of BOK is higher than NIBL. So BOK seems successful in managing and utilizing the available assets. Lower C.V. of BOK shows that it has consistencies in the ratios.
- ) BOK seems successful in managing and utilizing the shareholder capital in order to generate revenue since its ROE ratio is higher than that of NIBL i.e. 25.30% > 22.54% of total equity in an average. However it noted that NIBL is doing well in the latest year as it has increased its ROE in the latest year drastically. BOK has consistency in ratio.
- ) The average interest earned to total working fund ratio of NIBL and BOK are 7.45 and 7.455 respectively. BOK seems more conscious in managing its assets in order to earn more interest ratio because it has higher ratio. Both banks have increasing trend of interest earned to total asset.

- ) The mean interest earned to operating income ratio of NIBL is higher than BOK. It indicates the high contribution in operating income made by lending and investing activities (core banking activity). High contribution in operating income made by lending and investing activities is not good for long run but in short run it is not so bad. In overall, NIBL has managed sound interest earned to operating income ratio.
- ) The average credit risk of NIBL and BOK are 1.27% and 1.90% respectively. So BOK has more risky asset than NIBL due to higher credit risk ratio. These Ratios indicate the more efficient operating of credit management of both banks according to NRB directives because according to NRB directives NPL ratio must be less than 5%. However, both banks have less than that percent.
- ) The average liquidity risk ratio of NIBL and BOK are 14.72 and 10.36 respectively. The mean ratio of liquidity risk of NIBL is higher than BOK. It means NIBL has sound liquid fund to make immediate payment to the depositors. But its cause to reduces in profit.
- ) In case of average asset risk ratio, BOK has the higher risk than NIBL. However both banks have decreasing trend of credit risk. The average asset risk ratios are 1.03 and 1.51 percent. But has consistency in ratio due to lower C.V.
- ) The correlation coefficient between total deposit and investment of NIBL has 0.8075 and BOK has 0.8140 both bank has positive correlation. The relationship between deposit and investment of NIBL & BOK is significant.
- ) Correlation coefficient between deposit and loan and advances of NIBL and BOK highly positive i.e. 0.9831 & 0.9816 respectively. There is significant relationship between correlation coefficient of deposits and loan and advances NIBL and BOK.
- ) The correlation coefficient between Loan and advance and net profit of NIBL and BOK are 0.9394 and 0.9865. Both banks have highly positive correlated between Loan and advance and net profit. The relationship of both banks has significant of these variables because the coefficient of correlation is more than 6 P.Er.
- ) The degree of relationship between total investment and net profit of NIBL is 0.5973 and BOK has 0.7452. This correlation between these two variables of

NIBL & BOK is positive. The correlation of NIBL is insignificant due to  $r$  is lower than  $6P$ .Error and relation of BOK is significant lower  $r$  than  $6p$ .Er.

- ) Total deposit of NIBL and BOK is positively related. 0.9675 of correlation coefficient shows that there is highly positive correlation between these two banks in this regard. This correlation coefficient is also significant because the correlation coefficient is higher than  $6 P$ .Er. As the 0.9361 of coefficient of determination, this shows the 93.61 percent of the degree of relationship. The degrees of relationship between these two banks are significant.
- ) There is positive correlation between NIBL and BOK in case of total investment. It implies that the total investment of NIBL and BOK move positive direction. Here  $r > 6P$ .Er. So, correlation coefficient is significant. This can be said that both NIBL and BOK increase its total investment as positive direction.
- ) The correlation between the loan & advances of NIBL and BOK is positive. The correlation coefficient between two banks is 0.9758. Loan & advances of these two banks moves in the same direction in high proportion. This correlation is significant because correlation coefficient is greater than  $6 P$ .Er. The coefficient of determination is 0.9521 which shows the 95.21 percent of the degree of relationship.
- ) The positive correlation between profits of NIBL and BOK, which is indicated by correlation of 0.8830. This relationship is significant because its correlation coefficient is more than  $6 P$ .Er. The coefficient of determination is 0.7796 which shows the 77.96 percent of the degree of relationship.
- ) The trends of total deposit of NIBL and BOK have increasing trend. In collecting deposit the rate of increment of total deposit for NIBL seems to be higher than that of BOK. Which indicate NIBL has better position in collecting deposit than BOK.
- ) The trend line of loan & advances for both banks is upward slopping. It refers that both the banks have increasing condition of loan & advances. The trend line of loan and advances for NIBL seems high growing than BOK. It refers that NIBL is more aggressive in mobilizing its loan and advance. Its forecasted for further six year.

- ) The trend line of total asset for NIBL and BOK are upward slopping where as NIBL has aggressive upward slopping of total asset trend line. The forecasted trend projected that the NIBL has greater increment rate in total asset than the increment rate of BOK.
- ) The trend line of Net profit for NIBL and BOK are upward slopping. But NIBL has aggressively and BOK has smoothly. The net profit of NIBL and BOK has been increasing every year. NIBL is doing better in order to generate net profit during the projected study period.

## CHAPTER -V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary

In this chapter, summary and conclusion of the research as well as recommendations are presented separately. After summarizing and concluding the research, recommendations are suggested for the effective credit risk management of commercial banks. The main objective of the study is to analyze the comparative study on credit risk management of Nepal Investment Bank Limited and Bank of Kathmandu Limited. The specific objectives of the study are: **To evaluate the status of the liquidity risk of the banks**, to analyze the liquidity, asset profitability and risk ratios of NIBL and BOK. The research is based on secondary source of data. To make this study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to undertake this research more precisely. This section includes conceptual review and review of related studies. In conceptual review includes concept of banking, meaning risk and types of risk face by banks. Similarly Classification of loan and loan loss provisions. In the review of related studies includes credit related unified NRB directives, review of books articles and journals and review of previous thesis.

Research methodology has been described in the third chapter, which is a way to solve the research problems with the help of various tools and techniques. This chapter includes the various financial as well as statistical tools to analyze the data in order to come to the decisions. It chapter describes the research design, population and sample data collection procedure, data period covered and methods of analysis. This study is mainly conducted on the basis of secondary data collected from annual reports, economic journal, financial statement etc. and authorize web site of concern bank and Nepal stock exchange. The six years financial statement has been examined for the purpose of the study.

The presentation and analysis of data has been made comparative analytical and their interpretation has done in chapter four by applying the wide varieties of methodology as stated in chapter three. It includes the various financial and statistical tools. In case of financial tools ratio analysis is done which consists liquidity ratio, assets management ratio, profitability ratio, risk ratio. Various statistical tools such as arithmetic mean, standard deviation, coefficient of correlation, trend analysis have been applied to fulfill the objective of this study. The major findings of the study are also included in the final section of the presentation and analysis chapter.

In this chapter, summary conclusion and recommendation are included. All the summary and conclusion are made according to obtained data from analysis. Recommendation has made which would be beneficial for all concerned person, management of the bank and other stakeholder

## **5.2 Conclusion**

The following conclusions have been derived by based on the major findigs of this study.

- ) NIBL has sound liquidity position. Whereas BOK has little poor. In an average, liquidity position of NIBL has greater than BOK.
- ) The mean ratio of cash and bank balance to total deposits of NIBL is higher than BOK. It shows the higher position regarding the meeting of demand of its customer on their deposit at any time than BOK.
- ) The average study of cash and bank balance to current assets ratio of NIBL is higher than BOK. It shows that BOK has taken more risk to meet the daily requirement of its customer's deposit than NIBL.
- ) Mean ratio of investment on government treasury bills to current assets of BOK has invested more money in risk free assets than that of NIBL.
- ) The loan and advances to total assets ratio of NIBL and BOK are fluctuating trend.
- ) Mean ratio of investment in govt. securities out of its total deposit of BOK has lower ratio than NIBL. NIBL has invested more money in risk free assets out of its total assets. So it seems successful by generating higher ratio.

- J BOK has better utilized the loan and advance for the profit generation in comparison with NIBL. Mean return on total asset ratio of BOK is higher than NIBL. So BOK seems successful in managing and utilizing the available assets.
- J BOK seems successful in managing and utilizing the shareholder. ROE of BOK is higher than NIBL. BOK seems more conscious in managing its assets in order to earn more interest ratio because average interest earned to total working fund ratio has higher ratio. Both banks have increasing trend of interest earned to total asset.
- J The mean interest earned to operating income ratio of NIBL is higher than BOK. It indicates the high contribution in operating income made by lending and investing activities (core banking activity).
- J BOK has more risky asset than NIBL due to higher average credit risk ratio.
- J The mean ratio of liquidity risk of NIBL is higher than BOK. It means NIBL has sound liquid fund to make immediate payment to the depositors. But its cause to reduce the profit, the average asset risk ratio.
- J BOK has the higher assets risk than NIBL. However both banks have decreasing trend of credit risk.
- J The correlation coefficient between total deposit and investment of NIBL and BOK have positive correlation. The relationship between deposit and investment of NIBL & BOK have significant.
- J The Correlation between deposit and loan and advances of NIBL and BOK are highly positive by 0.9831 & 0.9816. The correlation between Loan and advance and net profit of NIBL and BOK are positive. The relationship of both banks has significant of these variables.
- J The correlation between total investment and net profit of NIBL & BOK is positive. The relation of NIBL BOK is insignificant due to coefficient of correlation is lower than 6 P. Error.
- J Total deposit of NIBL and BOK is highly positive correlated. There is 96.75 percent of the degree of relationship.
- J The total investment of NIBL and BOK is positive correlation. It implies that the total investment of NIBL and BOK move same direction.

- J The correlation between the loan & advances of NIBL and BOK is positive by 0.9758. Loan and advances of these two banks moves in the same direction in high proportion. This relation is significant.
- J There is positive correlation between profits of NIBL and BOK by 0.8830. The relationship is significant because its correlation coefficient is more than 6 P.Er.
- J The trends of total deposit and total asset of NIBL and BOK have increasing trend. The rate of increment of total deposit for NIBL seems to be higher than that of BOK. Which indicate NIBL has better position in collecting deposit than BOK.
- J The trend line of loan & advances and total asset for both banks is upward slopping. The trend line of loan and advances for NIBL seems high growing than BOK. It refers that NIBL is more aggressive in mobilizing its loan and advance.
- J The trend line of Net profit for NIBL and BOK are upward slopping. But NIBL has aggressively and BOK has smoothly. NIBL is doing better in order to generate net profit.

### **5.3 Recommendations**

On the basis of entire research study, observation, analysis and finding of the study, the following recommendations can be made as suggestions to make the credit risk management of NIBL and BOK effective and efficient way

- J Generally, banks have to maintain appropriate liquid assets. The current ratio of the two banks, NIBL and BOK is considerable. But BOK has little lower current asset than standard. So it is recommended to BOK to increase its current ratio. Considering the fund flow situation, bank should maintain enough liquid assets to pay short-term obligations. So, it is recommended to maintain sound liquidity position.
- J Government securities such as Treasury bills, Development bonds, saving certificates etc. are risk less investment alternatives because they are free of default risk as well as liquidity risk and can be easily sold in the market. In this research study, BOK has found more invest in than NIBL. So NIBL

recommended to invest in government securities more. Anyway both bank NIBL and BOK recommended to invest more funds in Government securities instead of keeping them idle and investing in risky sector.

- ) To get success in competitive banking environment, deposit must be utilized as loan and advances as well as investment. The largest item of bank assets side is loan and advances. It has been found that loan and advances to total deposit ratio of NIBL is lower than that of BOK. It means NIBL has not properly used their existing fund as loan and advances. So NIBL is recommended to follow liberal lending policy and to invest more deposit in loan and advances. Both banks recommended meeting C D ratio according to NRB requirement.
- ) BOK seems successful in managing and utilizing the higher return on loan and advances, available assets and shareholder capital than that of NIBL. However it noted that NIBL is doing well in the latest year. So it is recommended to emphasis in these things and tries to maximize in its return.
- ) The interest earned to total working fund ratio and interest earned to operating income of BOK is little higher than NIBL. So it is recommended to NIBL to increase in this regards. It seems less conscious about borrowing cheaper fund. Both banks recommended focusing on increasing income and decreasing in its cost.
- ) All the banks should have to make effort to minimize their risk. Credit risk, and ratio asset risk ratio of BOK is little higher than NIBL. But liquidity risk of NIBL is higher. So it's strongly recommended to reduce in this type of risk. Both banks NIBL and BOK must be more conscious on this part. Making credit policy more transparent, standard and less risky should increase the quality of the credit.
- ) Both the banks are recommended to formulate and implement the sound and effective credit management to increase volume of proper investment and loan and advances and decrease in bad debts that helps to meet required level of profitability as well as social responsibility.
- ) Last political instability directly affected the economic sector such as hotel and tourism, manufacturing and trading sector. Bank loan and advances is

decreasing in this sector. So banks should give priority to these sectors as well as banks should create new investing sector to mobilize deposit.

- ) Keeping all this in consideration, the both banks seems equal performance. Furthermore NIBL recommended investing in government securities and focusing on reducing in its risk. Similarly BOK recommended to maintain current ratio. In the future ahead, the both banks recommended to improve its weaknesses by adopting the innovative approach to marketing. In the light of growing competition in the banking sector, both bank NIBL and BOK should be customer oriented. It should strengthen and activate its marketing function as it is an effective tool to attract and retain the customers.
- ) In the global competitive environment, the bank should develop an innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient and satisfactory way by optimally utilizing the modern technology and offering new facilities to the customers at competitive prices. The bank is also required to explore new market areas. For this purpose, it is recommended to form a strong market department in its central level, which deals with the banking products, places, price and promotion as well.

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