

# CHAPTER - I

## INTRODUCTION

### **1.1 Background of the Study**

Commercial bank is known as organize corporate business house that receives and holds deposits or fund from other and makes loans or extends credit and transfer funds by written orders of depositors or customer. A bank is an institution for keeping, lending and exchanging etc money. Generally Bank is known as Central bank, Commercial bank, Development bank, Exchange bank, Saving bank, Cooperative bank, Merchant bank, Housing bank, Equipment bank, Infrastructure bank and Mutual fund. As a whole Bank refers to Commercial Bank at present. A bank is a major player among of financial institutions. A bank involves in a process of collecting scattered money and to help its mobilization in different sectors according to need of customers. Bank helps to develop saving habit of people, which in-turns help to make other people to invest for their business. Banking loan helps to invest in industrial sector, commercial sector, production sector, trade & commerce and agriculture sector as well. Bank also helps to develop international business by initiating as a mediator to exporter & importer. This way banks help to strengthen the national development.

A commercial bank refers to such a type of bank which primarily established to perform the functions of accepting deposits and providing loans to customers. Deposits accepted by commercial banks are in the form of saving, current and fixed deposits. Advancing credit in the form of short term credit as well as long-term credit. Bank also perform other subsidiary function like safety vault, bank overdraft, documentary credit, traveler's cheques, payment of bills, purchase of government bond and security, make guarantee hire purchasing, issue of draft and letter of credit(L.C), exchange of foreign currency, home banking etc. They also render or provide innumerable number of subsidiary services.(Shrestha, 2009:05-10)

Banking plays significant role in the economic development of a country. Commercial banks are those financial institutions mainly dealing with activities of the trade, commerce, industry and agriculture that seek regular financial and other helps from them for growing and flourishing. The objectives of commercial banks are to mobilize idle resources into the most profitable sector after collecting them from scattered sources. Bank accepts deposits from the public, which are repayable on demand or on short notice. They cannot afford to invest their funds in long-term securities or

loans. They provide the working capital required by trade and industry in their day-to-day transactions. They grant loans in the form of cash, credits and overdrafts. They need to keep appropriate liquidity so that they can provide cash at the same time if needed.

The source of finance is most essential element for the establishment and operation of financial institute. Profit oriented institutions usually obtain these sources through ownership capital, public capital through issue of shares and debentures, borrowing through banking institution as credit or loan. Now days, the essential sources of the organization for financial supporting is the credit, overdrafts and others provided by banking institution. Now a day inter banking loan is main source of every bank and financial institution. Its helps to fulfill short term demand of cash any bank must maintain adequate cash and bank balance to meet its day-to-day management of cash resources for remote contingencies. All the commercial banks are operates under rules, regulations and direct supervision of Central Bank.

Credit risk management is the most crucial part of commercial banking and that of other financial institution too. 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. (Parajuli, 2003:05)

The return of any banks basically depends upon its sound lending policy, lending procedure and investing its fund in different securities and different sectors of market. A sound fund mobilizing policy is not only prerequisite for bank profitability but also crucially significant for the promotion of commercial saving of backward country like Nepal.

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. (*Limbu, 2008:32*)

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.

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. (*Joshi, 2004:35-37*).

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 (*Limbu, 2008:41*).

The world business scenario has been changing very fast. Most countries around the globe have efficiently eliminated state monopolies of business. The volume of international trade has been increasing year after year. Due to globalization many international companies have been actively

doing their business across the national boundaries. This competitive market barrier is becoming the major problem for the survival. Now due to these factors, financial institutions face significant change in a time of new alignments in domestic market and increased international competition.

### **1.1.1. Development of Banks in Nepal**

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.

(Parajuli, 2009:07)

The actual banking system of Nepal starts from the establishment of Nepal Bank Limited (NBL) 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 decades 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. (Sharma, 2006:10)

### **1.1.2Profile of Sample Banks**

#### **A. Himalayan Bank Ltd. (HBL)**

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.

Legacy of Himalayan lives on in an institution that's known throughout Nepal for its innovative approaches to merchandising and customer service. Products such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following our lead by introducing similar products and services. Therefore, we stand for the innovations that we bring about in this country to help our Customers besides modernizing the banking sector. With the highest deposit base and loan portfolio amongst private sector banks and extending guarantees to correspondent banks covering exposure of other local banks under our credit standing with foreign correspondent banks, we believe we obviously lead the banking sector of Nepal. The most recent rating of HBL by Bankers’ Almanac as country’s number 1 Bank easily confirms our claim.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like 'Any Branch Banking Facility', Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. HBL has developed exclusive and proprietary online money transfer software- HimalRemit™. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customers' needs and wants stand first.

Himalayan Bank Limited holds of a vision to become a Leading Bank of the country by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the Bank. To become the Bank of first choice is the main objective of the Bank. The Bank's mission is to become preferred provider of quality financial services in the country.

#### **B. Nabil Bank Limited.**

Nabil Bank Limited, the first foreign joint venture commercial bank of Nepal, started operations in July, 1984. It was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, the bank provides a full range of commercial banking services through its 47 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. Nabil Bank Ltd, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Highly qualified and experienced team of the bank manages day-to-day operations and risk management. Bank is fully equipped with modern technology, which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Tele-banking system.

From its inception period in 1984 as the first joint venture bank, to commence operations in the Kingdom of Nepal, the bank have been a leader in terms of bringing the very best international standard banking practices, products and services to the kingdom. To achieve this mission, it has a core set of values by which we live. The values are C.R.I.S.P., i.e. Customer Focused, Result

Oriented, Innovative, Synergistic and Professional. They are committed to live our values everyday in everything we do, for it is, these values that make us uniquely NABIL Bank Limited.

The bank is a full services bank providing an entire range of products and services, starting with deposit accounts in local and foreign currency, Visa and Master-Card denominated in rupees and dollars, Visa Electron Debit Cards, Personal Lending Products for Auto, Home and Personal loans, Trade Finance Products, Treasury Services and Corporate Financing. Main aim is to be able to meet customer's entire gamut of financial requirements that is why it prides us in being 'Your Bank at Your Service'

## **1.2 Focus of the Study**

Present situation of Nepalese market is not so good for any kind of business, banking business is totally focus on lending business, which is naturally a risky business, as per present situation finance companies are playing the vital roles in the growth of Nepalese economy. So what kinds of precautions are taken by bank for its survival is very serious subject. As loan is the core area of the commercial banking. It plays the significance impact on the finance companies 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 HBL and NABIL bank, there is the wide spread suspicion on the performance on the commercial bank.

So the main focus point of this study are what types of risk are existing in the banking business, what is the technique and framework of credit risk management, what central bank plans to control the commercial bank and what is the current condition of banks regarding the credit risk position.

## **1.3. Statement of the Problem**

Financial institutions are becoming main sources of mobilizing the financial resources in a development country like Nepal. Although banking industries in general appears as a most profitable sector, the industry has to immense with many challenges to sustain and outpace those within the industry. The major problem of the banking sector is the raising competition, due to large number of financial industries, and weak economy situation of the country. In present scenario the liquidity crises and bankruptcy of some financial institutions are the witnessed of many kinds of difficulties in banking sector.

A sound lending policy is essential for the good performance of the bank. Lending policy should be

carefully analyze and managed through credit policy guidelines. The large amount of commercial bank 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. So, the main challenge of the banking sector is to invest in productive as well as profitable sector, maintain the liquidity position and to manage the accumulated non-performing loan.

Therefore the credit risk management has become the crucial part of banking industries. To find out the credit risk status of HBL and NABIL bank, descriptive and analytical research design has been done using the secondary data. Some statistical and financial tools have also been applied to examine facts and descriptive techniques have been adopted to evaluate funds mobilizing performance between HBL and NABIL Bank Limited. In order to analyze the credit risk management of HBL and NABIL bank following research problems have been formulated.

1. What are the total position of liquidity, asset management and profitability of HBL and NABIL bank?
2. What are problems and weakness in credit risk management of banks?
3. What are relationship between total investments, deposits, loans and advances net profit and asset?
4. What is the status of credit management of HBL as compared to NABIL bank in general?

#### **1.4. Objectives of the Study**

The main objective of the study is to evaluate the credit risk management of HBL and NABIL bank in Nepal. In order to achieve this, the following specific objectives have been formulated.

- ) To evaluate the liquidity, asset management and profitability of the sample HBL and NABIL banks.
- ) To identify problems and weakness in credit risk management of HBL and NABIL bank through risk ratio.
- ) To examine and compare the relationship between total investments, deposits, loans and advances net profit and asset.
- ) To offer suitable suggestions based on findings of this study.



### **1.5. Rationale 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 financial Institution, 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 HBL and NABIL banks. This study would be valuable in regards to credit risk of Nepalese commercial banks it would giant information to speed up the process.

The proposed study would be of enormous assistance to the executives of commercial banks on how they should manage the different composition of loans.

The study would be important as it provides theoretical as well as conceptual framework of different aspect of credit risk management.

### **1.6. Limitations of the Study**

The study has following limitations.

- ) The study has been based on the secondary data provided by concern bank and 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 2004/05 to 2008/09
- ) 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.

### **1.7. 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 which are as follows:

## **Chapter-I: Introduction**

This chapter 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.

## **Chapter-II: Review of literature**

The second chapter of the study assures readers that they are familiar with important research that has been carried out in similar areas.

## **Chapter-III: Research Methodology**

It describes about the various source of data related with study and various tools and techniques employed for presenting the data.

## **Chapter-IV: Presentation and Analysis of data**

This chapter analysis the data related with study and presents the finding of the study and also comments briefly on them.

## **Chapter-V: Summary, Conclusion and Recommendation**

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**

This chapter presents the conceptual review of credit risk management including different types of risk that exist in finance companies, credit risk management system and credit risk management frame work and techniques. The Central Bank's regulations regarding the risk management has also been discussed. This chapter focuses on the review of literature relevant to understand credit and credit management of finance companies. Several research works have been done in various aspects of finance companies, especially financial performance, investment policy, resource mobilization, lending policy, compliance of NRB directives by banks etc. There are some books, journals, articles, other studies done related with lending and investment aspect of banks. Some of the relevant studies, literatures on lending and investment are reviewed below. This chapter is categorized into two different headings.

- The conceptual Review

- Review of Related Studies

Review of Journal and Articles

Review of Thesis

#### **2.1 The Conceptual Review**

The conceptual review reflects the concept credit and credit management of Bank and finance companies. Here deals various thought and concept relating to the credit risk or credit risk management.

##### **2.1.1. Features of Sound Lending Policy**

There are basically five principles for the sound lending policy:-

(Limbu, 2008:15-20)

1) Liquidity: - Liquidity refers to that state of position of a bank that pronounces its capacity to meet its entire obligation. In other words, 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.

2) Safety and Security: - Bank must take care while investing its fund. It should never invest its fund in those securities, which are too volatile since a small change causes a great loss. The bank should accept that type of securities, which are commercial, durable, marketable and of high market value. For this purpose, MAST should be followed:

M= Marketability

A= Ascertain ability

S= Stability

T= Transferability

3) Profitability: - Commercial banks invest on those sectors that derive the maximum income. Hence the investment or granting of loan and advances by them are highly influenced by profit margin. Generally the profit of commercial banks depends upon the interest rate of the bank, volume of loan provided, time period of loan and nature of investment on different securities.

4) Suitability: - 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. Bank must keep in mind the overall development plans of the nation and the credit policy of the concerned authority i.e. Central Bank.

5) Diversification: - Diversification reduces the risk of recovery. The bank must not invest the funds in specific sector but to the various sectors so that when something goes wrong in one particular sector other will recover.

### **2.1.2 Types of Risk Faced by Financial Institution**

*(Shrestha, 2007: 15-22)*

#### **i.) Credit risk**

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 arise from the natural disasters, errors in processing and settlement of transactions safeguarding of assets, system failure, fraud and forgery.

Against the above backdrops, the main attributes of various risks that can be faced by a banker while evaluating a loan proposal may be expressed by the following functional relationship.

$$\text{Credit Risk (CR)} = f(\text{BR, FR, DR, CR, FR})$$

Where,

- f = function of
- BR = Business\operation risk
- FR = Financial risk
- DR = Default/settlement risk
- FR = Fiduciary risk

It is not practically possible to assign a particular coefficient to each of the risk factors stated above as the degree of each varies from case to case.

### ***Business or Operational Risk***

It is defined as the potential volatility of the performance of the unit concerned, caused by the very nature and type of business operations involved. The board elements of such risk can be classified as.

- Critical risk
- Production risk
- Labor risk
- Operational risk
- Marketing and selling risk

However, the most important component of this category is the macro system risk associated with the industry. The operational economic environment, in general and the fiscal and monetary policies of the government provide as additional dimension to the risk structure.

### ***Financial risk***

This risk measures the relative stability of the unit in response to change in its own capital structure, i.e. debt-equity base or exogenous factors in terms of generation of profit. In other words, financial Risk depicts whether or not the company would be in a position to generate sufficient profit, after paying debt interest, to finance satisfactory divided besides plugging back adequate quantum into the business.

### ***Default or Settlement risk***

The term “Default” mean any failure to meet all or some terms of the lending agreement. Hence, this risk measures the probability of adherence of the borrower to the terms and conditions of the

agreement, as it will ultimately be reflected in the repayment capability. This risk indicated the propensity and ability of the entrepreneur to pay back the bank loan.

### ***Cost base risk***

This risk indicated the degree of income or profit generated within a unit from a given cost structure. It is a fact as the business develops, cost incurred on various items also increases, and giving rise to incremental income. A developing concern would have incremental income, which shall be more than incremental cost or expenditure. A high value of non- performing assets may not lead to increase profit to the unit.

### ***Fiduciary risk***

This risk refers to the eventuality of losses arise out of off balance sheet financial guarantee and other contingent liabilities (e.g. guarantee etc.) of associates substantial risk. Careful analysis is required at the time of credit appraisal.

## **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
- ) Operational Risk

### **a. Liquidity Risk**

Anthony Saunders says" Liquidity risk arises whenever financial institutions' liability holders, such as depositors or insurance policyholders, demand immediate cash for their financial claims".

In banking sector, Liquidity risk is created when banks hold different sizes of assets and liabilities. Extreme illiquid assets in bank may result 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.

## **b. Interest Rate Risk**

Interest Rate Risk is the incurred by a financial institution when the maturities of its assets and liabilities are mismatched. Interest Rate Risk is probability of decline of earnings, due to the adverse movement of interest rates in various markets. The 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.

## **c. 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 risk of the counter parties or settlement risk. While such type of risk crystallization will not cause principal loss, banks may have to undertake fresh transaction in the cash/spot market to replace the failed transactions. Thus, the bank may incur replacement cost, which depends upon the currency rate movements.

## **d. Operational Risk**

Operational Risk is associated with problems of accurately processing, setting and taking or making delivery to 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 the operational risk as "the risk of loss resulting from inadequate or failed internal processes, [people and system or from external events."

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

### **2.1.3 Credit Risk Management(Shrestha, 2009:31-40)**

Financial environment is dynamic. In this dynamic financial environment fluctuation in interest rates, exchange rates and commodity and real estate prices are not something new. These fluctuations in economic and financial variables weaken the corporate strategies and performance of

bank. Thus it's necessary that banks have a framework of risk management. Effective credit risk management allows a finance company to reduce risk and potential non-performing assets. Once finance companies understand their risks and their costs, they will be able to determine their most profitable business and thus price product according to the risks. Therefore, the finance companies must have an explicit credit risk strategy by organizational changes, risk measurement techniques and fresh credit processes and systems.

There are five areas that credit risk management should focus on.

- a) Credit sanctioning and monitoring process.
- b) Approach to collateral
- c) Credit risks arise from new business opportunities.
- d) Credit exposures relative to capital or total advances.
- e) Concentration on correlated risk factors

#### **2.1.4 Credit Risk Management Technique**

“As the majority of the finance companies’ assets are in the form of loan, as the lending function is simple and create the value of the companies. The main danger is the chance of the borrower not to pay the loan amount. So the proper and prudent management of the credit risk is very necessary”.

*(Miller & Merton, 1995: 483-489)*

##### **A. Risk based Pricing**

It has been established that risk based pricing requires lenders to change the rate that compensates for the riskiness of the loan. The pricing procedure needs to be straightforward and not based solely on historical loan loss experience. In practice, loan pricing tends to flow the prime rate plus basis. Because the prime rate is not the lowest rate a bank charges, the credit worthiest customers can negotiate discounts from the prime rate. The discount prime rate is what banks use to attempt to compete with open market instruments such as commercial paper and corporate bonds.

##### **B. Assets Restriction**

Banks lenders and other creditors have a claim on the borrower’s assets. As long as the market value of assets exceeds the value of liabilities, creditors are protected because proceeds from the sale of assets cover all the claims. Alternatively, as long as positive net worth exists, business firms are not going to turn over to creditor’s assets that exceed the value of claims against them. Thus one way for lenders to protect themselves is to try to ensure that the value of assets always exceeds than value of



claims. Restriction amount of debt a borrower takes on and restricting the variability of the value of assets are the basic ways of meeting this objectives.

### **C. Monitoring**

If lenders have a contractual right to monitor assets value continuously and to seize assets, then loan losses can be minimized either by auditing asset values and seizing assets before shortfalls exists or by requiring the posted value if collateral assets to equal or exceed the promised payments. For private loans, for which finance companies have considerable expertise in organization, monitoring with continuous surveillance is costly.

#### **2.1.5. 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 assets ranges from zero for cash, balance at NRB and investment in government bonds to 100% for loans and advances. The higher risk weighted asset means lower will be the capital adequacy ratio as CAR is the ration between Capital fund and Risk Weighted Asset.

According to unified directive 2005, the capital fund includes two types of capital.

#### **A. Primary Capital**

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

1	Issued Capital
2	Share Premium
3	Irredeemable Preference Share
4	General Reserve Fund
5	Retained Earning
6	Capital Redemption Reserve
7	<i>Net Profit After Tax, Tax, &amp; Bonus( Current Year)</i>
8	Capital Adjustment Fund Other Free Reserve
9	Other Free Reserve

## 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 includes:

**Table: 2.2**

### **Supplementary Capital**

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

## 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 Assets 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, money at call, loan against 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 deposits receipts, money at call, loan against internationally rated bank's guarantee and other investment on internationally rated banks. 100% risk weighted assets includes investment on investment on shares and debenture, loans and advances, fixed assets, other investment, all other assets (excluding tax paid and accrued interest receivable).(Sudan, 2007:35)

Off balance sheet assets includes four types of 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 rates 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 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**

$$\text{Capital Adequacy ratio} = \frac{\text{Core Capital}}{\text{Total Risk Weighted assets}}$$

**ii Capital Adequacy ratio for Total Capital Fund**

$$\text{Capital Adequacy ratio} = \frac{\text{Capital Fund}}{\text{Total Risk Weighted assets}}$$

According to NRB directive 2005, the stator Capital Adequacy Ratio (CAR) for core capital is 6%, where as CAR for total capital fund is 12% for fiscal year 2005/06.

“Commercial bank is a bank which exchanges money, deposits money, accepts deposits, grant loans and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industries or for such specific purposes”. (Commercial bank Act 2031 B.S)

**Good Bank Advance**

In order to make good advance, banker has to ensure the character of the borrower, nature of the proposition, security, and capacity of the borrower to utilize the credit, source of repayment and profitability of the advance.(Limbu, 2008:52)

- 1) The character of the Borrower: The banker should thoroughly enquire into the integrity and reliability of the borrower. The local manager already knows much of the information concerning the customer. The success of the loan very much depends on the truth of representation of the facts made by the customer and his capacity to run the scheme to a successful conclusion.
- 2) Collection of credit information: In case of new customer the banker has to collect credit information before deciding to make and advance to the customer. In foreign countries, there are specialized credit agencies that collect information relating to the status and financial standing of businessmen and sell the information to the bankers. Examples of such credit agencies are Seyd. & Co. in England and Dun & Bradstreet in U.S.A.

- 3) Nature of the proposition: Banks prefer to advance of short periods, especially for working capital requirements. There are specialized institution to finance for the acquisition of fixed assets and new venture.
- 4) Security: Banker should rely more on the customer and his proposition. However, it is still risky to lend without security. It is clear that in respect of such advances you would stand absolutely exempt from the risk of loss, but the moment you being to make expectation to the rule, by granting advances to this client or that without security, you leave the solid ground of safety for the treacherous swamps of banking risks.
- 5) Capacity of the borrower to utilize the credit: The banker must reasonable, be sure about the capacity and integrity of the customer regarding utilization of credit for the purpose for which it is taken. The customer must have the marginal competence and hard working nature.
- 6) The amount: Bank should see that the amount of loan required is properly arrived at after taking into account all relevant expenses. Quite often the customer misses such items as taxes, overheads, legal expenses, and bank interest. If the amount stated is insufficient, the proposition will be affected by shortage of funds. If the bank is not in a position to lend the required amount, the customer will have to either go slow with his expansion or seek assistance from the other institutions. Sometimes, the proposition may be financed by more than one bank in consortium basis. In deciding the amount to be advanced banker always ensure that the stake of proprietor in the business is more than now own. If this is not ensured, the customer is likely to be reckless in the utilization of funds.
- 7) Sources of repayment: The banker should enquire the source from which repayment is promised. Where the request is for funds required as additional working capital, and the borrower promises to repay the advance out of profits over a period, the proposal requires careful consideration, and the banker after calling for full information should ascertain the rate at which the customer can reasonable hope to repay the advance. Before giving advance the banker should ensure that the repayment programmed has been properly drawn up and realistic. The sources from which repayment come must be clear. Banks mostly prefer self-liquidating advances.
- 8) Profitability of the advances: Interest on advances is the main sources of the banks revenue and the interest charged on advances depend in several factors such as prevailing bank rate, the rate of interest paid on deposits, and the risk involved in the particular advance and any other special consideration.

### **Steps involved in the Appraisal of Credit Risks**

Credit appraisal is an art, which every practical banker should master from out of experience can never be reduce to an absolute seen . In spite of several technical aids the ability to make a correct loan decision very much depends on the shrewd and critical judgment, common sense perspective intelligence and discriminating sense of the lending banker. However, the usual steps involved in the appraisals of credit risk are:-

1. Initial interview with the customer. In the initial interview the banker should ascertain the following:
  - a. The character , capacity and integrity of the borrower
  - b. The purpose for which the loan is being requested-whether productive or unproductive
  - c. Prospects of his proposal whether it will succeed or fail
  - d. Repayment capacity of the borrower including a consideration of the source of repayment.
  - e. The collateral that is being offered as security must be investigated as to the following.
    - i) Whether it is easily marketable
    - ii) Value of the security at present
    - iii) Whether the value is likely to be stable or it is the security such that its value fluctuates considerably and
    - iv) In case of default in payment, is it easily transferable?

### **Credit investigation of the customer**

For credit investigation of the customer, the banker looks into:

- i) Past history of the account
- ii) Reports from other bankers and people in the same line of business in the case of new customer
- iii) Search of document like memorandum of articles, registration papers, annual report available with the Registrar of joint stock companies
- iv) A visit to customers place of business
- v) Analysis of Balance sheet and profit and loss Account and funds flow analysis in the case of existing companies
- vi) In the case if new companies or new projects of existing companies, there must be a critical appraisal of the projects which includes the following :
  1. Examination of technical feasibility
  2. Whether project is economically viable

3. The competence of the managerial personnel to successfully complete and run the project
4. Examination of the cash budget to ensure the repayment programmed.

“Credit Appraisal, the process of judging the soundness of credit proposal by carefully assessing the risks involved in extending credit to the proposal submitted by the borrowers. Appraisal involves basically two aspects: determination of the quantum of credit to be given and the safety of such credit .In the past the bankers were mostly guided by the security offered, the character of the borrower and their past experience, if any in relation to the borrower. Now the process of credit appraisal has become sophisticated involving a detailed study of business plans, analysis of balance sheets, profit and loss accounts, cash flow and fund flow-both past and projected. Ratio analysis techniques are used to analyses the balance sheet and profit and loss accounts”. (Shawmy, 1979:142)

Short-term loans are given essentially to meet the working capital gap, a part of which the borrower has to meet from out of long term sources. The bank manager ensures that the business plan submitted by the borrower is capable of achievement. The borrower submits the following statement during the loan application.

- 1) Operating statement showing the gross sales, cost of sales(with all the details), gross profit, operating profit after deducting interest, selling , general and administrative expenses, provision for taxes and interest and net profit after taxes.
- 2) Position regarding current assets and current liabilities. If the peak requirements of finance are on a date different from the balance sheet date, then information should also be given as on that date.
- 3) Computation of maximum permissible bank finance for working capital
- 4) Performa statement of stocks and receivables
- 5) Analysis of balance sheet with the help of analytical and comparative tools
- 6) Funds flow statement.

(Shrestha, 2009:45).

### **Term loans:**

Term loans are medium and long term credits given for purchase of assets, like land, building and machinery and equipment. The amounts of terms loans are fixed primarily in relation to the total costs of the projects. Recently, there has been a phenomenal expansion in the demand for the term credit from the industry. In spite of the extension of several special financial institutional started to

provide such credit, there is still a credit gap, which the commercial banks can fill because of the resources at their disposal. Banks in the past were cautious in extending term credit as they considered such credit non-liquid and risky. However, a substantial portion of the short term credit is “rolled over” by the commercial banks in this country. The overall financial position of the bank’s deposits, its capital funds and the general level of its advances deposits ratio limit the quantum of term lending.(Shrestha, 2007:47)

### **Aspects of Appraisal:**

Appraisal of term-loans requires a dynamic approach, involving as it does among others, a projection of future trends of output and scales and estimates of costs return and flow of funds. There are four broad aspects of an appraisal technical feasibility, economic feasibility, financial or commercial feasibility and managerial competence. The scope of appraisal and the emphasis placed on each aspect would depend on the circumstances of each case.

The examination of technical feasibility consists of an assessment of the various requirements of the actual production process with a careful enquiry into the availability, accessibility and quality of the goods and services needed.

The testing of economic feasibility will be with reference to the earning capacity of the project. The appraisal of managerial competence is of importance because in a dynamic economic environment, the ability of an enterprise to forge a head of others depends upon the quality of its management. The repayment prospects of a loan thus vitally depend upon the competence and integrity of the management.(Regmi, 2004:53)

The most important aspect of the term loan appraisal is the financial aspect. The term lending institutions have to ensure that the projects to be handled by them meet the minimum financial criteria:

1. The estimated cost of the project is reasonable and complete and has a chance of materializing
2. The financial arrangement is comprehensive without leaving any gaps and ensures availability of cash as and when needed.
3. The estimates of earning and operating costs are as realistic as circumstances permit.

4. The borrower's repaying capacity as judged from the project operations is demonstrable with a reasonable margin of safety.
5. The financial analysis considers the cost of the project, cost of production and profitability, performed financial statements, cash flow statement and income statements.

### **Ratio Analysis:**

The banker has to apply ratio analysis to financial statements for three or four years to know the trends or patterns in financial structures and inter-relationship of facts. One of the important ratios is the debt-equity ratio. From the lender's point of view the financial structure should reveal a satisfactory balance of "owned funds" i.e. equity and borrower funds i.e. debt.

### **Inspection:**

The pre-sanction and a follow-up of loan proposals in order to keep a watch on the progress of the projects are of considerable importance. There is an extension of financial appraisal and therefore form a part of the work of lending institution.

### **Loan Agreement:**

On the basis of a thorough financial appraisal, the terms and conditions of the loan are settled. In drawing up their terms of loan, the principal consideration should be that it should ensure financial viability of the borrowing concern and as at the same time allowing a margin of safety to the lending institution. Most of the time lending institution charges a uniform rate of interest on all loans. But it is preferable to have variables rates of interest according to the degree of risk involved.

(Singh, 1998:182)

### **Security against Term loan:**

In the case of term loans, scientific financial assessment is of paramount importance. However in the absence of credit information bureaus, which can give information about the credit worthiness of the borrowers but the consideration of security assumes importance. In India, the security generally accepted by the term lending, institution loan proceeds and non-industrial assets as supplementary security. Assets can be valued on the basis of book value or current market value or replacement value. In valuing the assets it is better to combine one or more of the methods so that the resulting valuation safeguards of the interest of the lender and also works out to be equitable to the borrower. A proper valuation of security requires the assistance of legal experts



## **Participation Arrangements:**

Where the amount of loan is too large for a single lending institution, some form of participation arrangement so the part of different institution would be necessary. Such arrangement can also serve other purpose such as underwriting of shares, issuing guarantees etc.

“The investment (credit) policies of banks are conditional, to great extent, by the national policy framework, every banker has apply his own judgment for arriving at a credit at a credit decision, keeping of course his bank’s credit policy also in mind and also state that” The field of investment is more challenging as it offers relatively greater scope to bankers for judgment and discretion in selecting their loan portfolio. But this higher degree of freedom in the field of credit management is also accompanied by greater risk, particularly during recent years, the credit function has become greater complex”. (Singh, 1998:184)

## **2.1.6. Review of Unified NRB Directives, 2010**

### **2.1.6.1 Credit Risk**

Credit risk is the major risk that banks are exposed to during the normal course of lending and credit underwriting. Within Basel II, there are two approaches for credit risk measurement: the standardized approach and the internal ratings based (IRB) approach. Due to various inherent constraints of the Nepalese banking system, the standardized approach in its simplified form, Simplified Standardized Approach (SSA), has been prescribed in the initial phase.

### **2.1.6.2 Simplified Standardized Approach (SSA):**

In comparison to Basel I, SSA aligns regulatory capital requirements more closely with the key elements of banking risk by introducing a wider differentiation of risk weights and a wider recognition of credit risk mitigation techniques. The advantage of implementing this approach is twofold. This approach allows transitional advantage for countries like us by avoiding excessive complexities associated with the advanced approaches of Basel II while at the same time it will produce capital ratios more in line with the actual economic risks that banks are facing, compared to the present Accord.

Under this approach commercial banks are required to assign a risk weight to their balance sheet and off-balance sheet exposures. These risk weights are based on a fixed weight that is broadly aligned with the likelihood of a counterparty default. As a general rule, the claims that have already been deducted from the core capital shall be exempt from risk weights for the measurement of credit risk.

All kinds of claims including loans & advances as well as investments shall be risk weighed net of specific provisions. Generally provision related to any receivable or investment is not defined as general or specific. In such situation, the total provision against any claim/exposure (other than the loans and advances) shall be considered as specific provision. However, provisions eligible for the supplementary capital shall not be allowed for netting while calculating risk weighted exposures. In case of loans, advances and bills purchased the provisions created in lieu of Pass loans only are classified as General loan loss provision. All other provisions are components of specific loan loss provision. Hence, general loan loss provision doesn't comprise provisions created in respect of rescheduled/restructured and non performing loans. It also doesn't include additional provisions created for personal guarantee loans or lending in excess of Single Obligor Limits. However, provisions created in excess of the regulatory requirements and not attributable to identifiable losses in any specific loans shall be allowed to be included in the General Loan Loss Provision.

In order to be consistent with the Basel-II framework, the credit risk for the regulatory capital purpose shall be computed by segregating the exposure in the following 11 categories.

- a) Claims on government & central bank
- b) Claims on other official entities
- c) Claims on banks
- d) Claims on corporate & securities firms
- e) Claims on regulatory retail portfolio
- f) Claims secured by residential properties
- g) Claims secured by commercial real state
- h) Past due claims
- i) High risk claims
- j) Other assets
- k) Off balance sheet items

### **2.1.6.3 Risk Measurement and Risk Weights:**

#### **a. Claims on government & central bank**

1. All claims on Government of Nepal and NRB shall be risk weighed at 0 %.
2. Claims on foreign government and their central banks shall be risk-weighted on the basis of the consensus country risk scores as follows:

ECA risk scores	0-1	2	3	4 to 6	7
Risk weights	0%	20%	50%	100%	150%

**b. Claims on other official entities**

3. Claims on the Bank for International Settlements, the International Monetary Fund, the European Central Bank and the European Community will receive a 0% risk weight.

4. Following Multilateral Development Banks (MDBs) will be eligible for a 0% risk weight

- ) World Bank Group, comprised of the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC),
- ) Asian Development Bank (ADB),
- ) African Development Bank (AfDB),
- ) European Bank for Reconstruction and Development (EBRD),
- ) Inter-American Development Bank (IADB),
- ) European Investment Bank (EIB),
- ) European Investment Fund (EIF),
- ) Nordic Investment Bank (NIB),
- ) Caribbean Development Bank (CDB),
- ) Islamic Development Bank (IDB), and
- ) Council of Europe Development Bank (CEDB).

5. The standard risk weight for claims on other Multilateral Development Banks will be 100%.

6. Claims on public sector entities (PSEs) will be risk-weighted as per the ECA country risk scores.

ECA risk scores	0-1	2	3 to 6	7
Risk weights	20%	50%	100%	150%

**c. Claims on banks**

7. All claims, irrespective of currency, excluding investment in equity shares and other instruments eligible for capital funds, on domestic banks/financial institutions that fulfill Capital Adequacy Requirements will be risk weighed at 20% while for the rest, it will be 100%.

Banks should make use of the publicly available information of the immediately preceding quarter of the respective banks to gauge their status on capital adequacy.

8. Claims on a foreign bank excluding investment in equity shares and other instruments eligible for capital funds shall be risk weighed as per the ECA Country risk score subject to the floor of 20%. The primary basis for applying the ECA Country Risk score shall be the country of incorporation of the bank. Where the bank is a branch office, the ECA score of the country where the corporate office is located shall be used while in the case of a subsidiary the basis shall be the country where the subsidiary is incorporated.

ECA risk scores	0-1	2	3 to 6	7
Risk weights	20%	50%	100%	150%

However, the claims on foreign banks incorporated in the SAARC region and which operate with a buffer of 1% above their respective regulatory minimum capital requirements may be risk weighed at 20%. The banks shall be responsible to submit the latest capital adequacy position of such banks and demonstrate that they fulfill the eligibility requirements. Such capital adequacy position submitted by the banks should not be prior to more than one financial year. Moreover, such claims shall be subject to a supervisory review and supervisors may require the bank to risk weigh the claims on ECA country risk scores where the review process deems necessary.

**d. Claims on corporate & securities firms**

9. The risk weight for claims on domestic corporates, including claims on insurance companies and securities firm will be 100%. The domestic corporates includes all firms and companies incorporated in Nepal as per prevailing Acts and regulations.

10. The claims on foreign corporate shall be risk weighed as per the ECA Country risk score subject to the floor of 20% as follows:

ECA risk scores	0-1	2	3	4 to 6	7
Risk weights	0%	20%	50%	100%	150%

**e. Claims on regulatory retail portfolio**

11. Claims<sup>5</sup> that qualify all criteria listed below may be considered as regulatory retail portfolio and risk weighed at 75%, except for past due loans. Such claims however, have to be in strict compliance with the Product paper developed by the bank and approved by their respective board of directors

Criteria:

- ) *Orientation criteria:* - exposure is to an individual person or persons or to a small business. Bank should obtain written declaration from the borrower to the effect that their indebtedness is within the threshold across all banks and FIs..

) *Product criteria:* - The exposure takes the form of any of the following:

Revolving credits and lines of credit, (including overdraft, hypothecation etc.)

Term loans and leases (e.g. hire purchase, auto loans and leases, student and educational loans)

Small business facilities and commitments,

Deprived sector loans up to a threshold of Rs.10 million (Ten Million only)

) *Granularity criteria:* - NRB must be satisfied that the regulatory retail portfolio is sufficiently diversified to a degree that reduces the risks in the portfolio, warranting the 75% risk weight. No aggregate exposure<sup>7</sup> to one counterpart can exceed 0.5 % of the overall regulatory retail portfolio.

) *Low value individual criteria:* - The total aggregated exposure to one counterpart<sup>8</sup> cannot exceed an absolute threshold of Rs.10 million (Nepalese Rupees Ten Million only)

12. Banks which have claims that fulfill all criterion except for granularity may risk weigh those claims at 100%

#### **f. Claims secured by residential properties**

13. Lending to individuals meant for acquiring or developing residential property which are fully secured by mortgages on residential property, that is or will be occupied by the borrower or that is rented, will be risk-weighted at 60%. However, banks should ensure the existence of adequate margin of security over the amount of loan based on strict valuation rules. Banks have to develop product paper and get it approved from the board of directors to regulate this kind of lending. The claims in order to be eligible for this category have to be in strict compliance with this product paper

14. Where the loan is not fully secured, such claims have to risk weighed at 150%

15. When claims secured by residential properties are or have been past due at any point of time during the last two years, they shall be risk-weighted at 100%, net of specific provisions.

#### **g. Claims secured by commercial real estate**

16. Claims secured by mortgages on commercial real estate, except past due, shall be risk weighed at 100%. Commercial real estate hereby refers to mortgage of Office buildings, retail space, multi-purpose commercial premises, multi-family residential buildings, multitenanted commercial premises, industrial or warehouse space, hotels, land acquisition, development and construction etc.

#### **h. Past due claim**

17. Any loan, except for claim secured by residential property, which is or has been past due at any point of time during the last two years, will be risk-weighted at 150% net of specific provision.

#### **i. High risk claims**

18. 150% risk weight shall be applied for venture capital and private equity investments.

19. Exposures on Personal loan in excess of the threshold of regulatory retail portfolio and lending against securities (bonds and shares) shall attract a risk weight of 150%. Similarly, exposures on credit card shall also warrant a risk weight of 150%.

20. Investments in the equity and other capital instruments of institutions, which are not listed in the stock exchange and have not been deducted from Tier 1 capital, shall be risk weighed at 150% net of provisions.

21. Investments in the equity and other capital instruments of institutions, which are listed in the stock exchange and have not been deducted from Tier 1 capital, shall be risk weighed at 100% net of provisions.

22. The claims which are not fully secured or are only backed up by personal guarantee shall attract 150% risk weight.

23. Where loan cannot be segregated/or identified as regulatory retail portfolio or qualifying residential mortgage loan or under other categories, it shall be risk weighed at 150%.

#### **j. Other assets**

) With regard to other assets, following provisions have been made,  Interest receivable/claim on government securities will be risk-weighted at 0%.

) Investments in equity or regulatory capital instruments issued by securities firms will be risk-weighted at 100%.

) Cash in transit and other cash items in the process of collection will be risk-weighted at 20%. For this purpose, cash items shall include Cheque, Draft, and Travelers Cheques.

) Fictitious assets that have not been deducted from Tier 1 capital shall be risk weighed at 100%.

) All other assets will be risk-weighted at 100% net of specific provision.

**k. Off balance sheet items**

24. Off-balance sheet items under the simplified standardized approach will be converted into equivalent risk weight exposure using risk weight as follows:

Off Balance Sheet Exposure	Risk Weight
Any commitments those are unconditionally cancelable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness (for example bills under collection)	0
% Forward exchange contracts.	10%
Short Term Trade-related contingencies Contingent liabilities arising from trade-related obligations, which are secured against an underlying shipment of goods for both issuing and confirming bank and are short term in nature. This includes documentary letters of credit, shipping guarantees issued and any other trade-related contingencies with an original maturity up to six months.	20%
Undertaking to provide a commitment on an off-balance sheet items	20%
Unsettled securities and foreign exchange transactions between bank to bank and between bank and customer	20%
Long Term Trade-related contingencies Contingent liabilities arising from trade-related obligations, which are secured against an underlying shipment of goods for both issuing and confirming bank and are long term in nature. This includes documentary letters of credit, shipping guarantees issued and any other trade-related contingencies with an original maturity of over six months	50%
Performance-related contingencies Contingent liabilities, which involve an irrevocable obligation to pay a third party in the event that counterparty fails to fulfill or perform a contractual non monetary obligation, such as delivery of goods by a specified date etc. This includes issue of performance bonds, bid bonds, warranties, indemnities, underwriting commitments and standby letters of credit in relation to a non monetary obligation of counterparty under a particular transaction.	50%
Long term irrevocable Credit Commitments Any un-drawn portion of committed credit lines sanctioned for a period of more	50

than 1 year. This shall include all unutilized limits in respect of revolving working capital loans except for trade finance exposures e.g. Overdraft, Cash credit, working capital loan etc.	
Short term irrevocable Credit Commitments Any un-drawn portion of committed credit lines sanctioned for a period of upto 1 year. This shall include all unutilized limits in respect of revolving working capital loans except for trade finance exposures e.g. Overdraft, Cash credit, working capital loan etc.	20
Repurchase agreements, securities lending, securities borrowing, reverse repurchase agreements and equivalent transactions. This includes sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the purchasing bank.	100
Direct credit substitutes any irrevocable off-balance sheet obligations which carry the same credit risk as a direct extension of credit, such as an undertaking to make a payment to a third party in the event that a counterparty fails to meet a financial obligation or an undertaking to a counterparty to acquire a potential claim on another party in the event of default by that party, constitutes a direct credit substitute. This includes potential credit exposures arising from the issue of financial guarantees and credit derivatives, confirmation of letters of credit (acceptances and endorsements), issue of standby letters of credit serving as financial guarantees for loans, securities and any other financial liabilities, and bills endorsed under bill endorsement lines (but which are not accepted by, or have the prior endorsement of, another bank).	100
Unpaid portion of partly paid shares and securities	100
Other Contingent Liabilities	100

#### **2.1.6.4 Credit Risk Mitigation**(Shrestha, 2010,55-60)

Banks may use a number of techniques to mitigate the risks to which they are exposed. The prime objective of this provision is to encourage the banks to manage credit risk in a prudent and effective manner. As such, credit risks exposures may be collateralized in whole or in part with cash or securities, or a loan exposure may be guaranteed by a third party. Where these various techniques meet the minimum conditions mentioned below,



## **a. Minimum conditions for eligibility**

In order to obtain capital relief towards credit risk mitigation, there are certain basic condition that needs to be fulfilled. Supervisors will monitor the extent to which banks satisfy these conditions, both at the outset of a collateralized transaction and on an on-going basis.

1. *Legal certainty:* - Collateral is effective only if the legal mechanism by which collateral is given is robust and ensures that the lender has clear rights over the collateral to liquidate or retain it in the event of default. Thus, banks must take all necessary steps to fulfill local contractual requirements in respect of the enforceability of security interest. The collateral arrangements must be properly documented, with a clear and robust procedure for the timely liquidation of collateral. A bank's procedures should ensure that any legal conditions required for declaring the default of the customer and liquidating the collateral are observed. Where the collateral is held by a custodian, the bank must seek to ensure that the custodian ensures adequate segregation of the collateral instruments and the custodian's own assets. Besides that, banks must obtain legal opinions confirming the enforceability of the collateral arrangements in all relevant jurisdictions.

2. *Low correlation with exposure:* - In order for collateral to provide protection, the credit quality of the obligor and the value of the collateral must not have a material positive correlation. For example, securities issued by the collateral provider - or by any related group entity - would provide little protection and so would be ineligible.

3. *Maturity Mismatch:* - The maturity of the underlying exposure and the maturity of the hedge should both be defined conservatively. The effective maturity of the underlying should be gauged as the longest possible remaining time before the obligor is scheduled to fulfill its obligation. The collateral must be pledged for at least the life of the exposure. In case of mismatches in the maturity of the underlying exposure and the collateral, it shall not be eligible for CRM benefits.

4. *Currency Mismatch:* - Ideally the currency of the underlying exposure and the collateral should be the same. Where the credit exposure is denominated in a currency that differs from that in which the underlying exposure is denominated, there is a currency mismatch. Where mismatches occur, it shall be subject to supervisory haircut of 10%.

5. *Risk Management*: - While CRM reduces credit risk, it simultaneously may increase other risks to which a bank is exposed, such as legal, operational, liquidity and market risks. Therefore, it is imperative that banks employ robust procedures and processes to control these risks, including strategy, consideration of the underlying credit, valuation, policies and procedures, systems, control of roll-off risks, and management of concentration risk arising from the bank's use of CRM techniques and its effect with the bank's overall credit profile. In case where these requirements are not fulfilled, NRB may not recognize the benefit of CRM techniques.

6. *Qualifying criteria for guarantee*:- A guarantee (counter guarantee) to be eligible must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and irrefutable. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable in that there must be no clause in the contract that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure. It must also be unconditional in that there should be no clause in the protection contract outside the control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counter party fails to make the payments due. On the qualifying default or non-payment of the counter party, the bank may in a timely manner pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the bank, or the guarantor may assume the future payment obligations of the counter party covered by the guarantee. The bank must have the right to receive any such payments from the guarantor without first having to take legal actions in order to pursue the counter party payment.

#### **b. Eligible Collaterals**

1. Cash deposit (as well as certificates of deposit or fixed deposits or other deposits) with the bank. The banks may only claim these as CRM only if it has specific authority to recover the amount from this source in case of default.
2. Fixed Deposit Receipts/Certificates of deposits/other deposits of other Banks and FIs, who fulfill the capital adequacy requirements, subject to a 20% supervisory haircut.
3. Gold.
4. Securities issued by the Government of Nepal and Nepal Rastra Bank.
5. Guarantee of the Government of Nepal

6. Financial guarantee/counter guarantee of domestic banks and FIs who meet the minimum capital adequacy requirements subject to a haircut of 20%.
7. Securities/Financial guarantee/Counter guarantee issued by sovereigns.
8. Securities/Financial guarantee/Counter guarantee issued by MDBs in the list specified in 3.3 b (3 & 4)
9. Securities/Financial guarantee/Counter guarantee issued by banks with ECA rating 2 or better. The supervisory haircut shall be 20% and 50% for the banks with ECA rating of 0- and 2 respectively.

### **c. Methodology for using CRM**

Step 1: Identify the accounts eligible for capital relief under credit risk mitigation.

Step 2: Assess the value of the exposure and the eligible collateral. The value of the eligible collateral is the lower of the face value of the instrument or the outstanding amount of exposure.

Step 3: Adjust the value of the eligible collateral in respect of the supervisory haircut in terms of currency mismatch and other eligibility requirements.

Step 4: Compare the adjusted value of the collateral with the outstanding exposure.

Step 5: The value of the eligible CRM is the lower of the adjusted value of the collateral and the outstanding exposure.

Step 6: Plot the eligible CRM in the appropriate category of credit risk.

The sum total of net amount of eligible CRM as per “Form No.4 Exhibit of claims with eligible credit risk mitigants” shall be consistent with the “Form No.3 Eligible Credit Risk Mitigants” prescribed in this framework.

### **2.1.6.5 Internal Capital Adequacy Assessment Process**

The internal capital adequacy assessment process (ICAAP) is a comprehensive process which requires board and senior management oversight, monitoring, reporting and internal control reviews at regular intervals to ensure the alignment of regulatory capital requirement with the true risk profile of the bank and thus ensure long-term safety and soundness of the bank. The key components of an effective ICAAP are discussed below.(Shrestha, 2010:56-60)

#### **a. Board and senior management oversight**

Bank management is responsible for understanding the nature and level of risk being taken by the bank and how this risk relates to adequate capital levels. It is also responsible for ensuring that the

formality and sophistication of the risk management processes is commensurate with the complexity of its operations. A sound risk management process is the foundation for an effective assessment of the adequacy of a bank's capital position. The boards of directors of the bank are responsible for setting the bank's tolerance for risks. The board should also ensure that management establishes a mechanism for assessing various risks, develops a system to relate these risks to the bank's capital level and sets up a method for monitoring compliance with internal policies. It is equally important that the board instills strong internal controls and thereby an effective control environment through adoption of written policies and procedures and ensures that the policies and procedures are effectively communicated throughout the bank. The analysis of a bank's current and future capital requirements in relation to its strategic objectives is a vital element of the strategic planning process. The strategic plan should clearly outline the bank's capital needs, anticipated capital expenditures, desirable capital level, and external capital sources. Senior management and the board should view capital planning as a crucial element in being able to achieve its desired strategic objectives.

#### **b. Sound capital assessment**

Another crucial component of an effective ICAAP is the assessment of capital. In order to be able to make a sound capital assessment the bank should, at minimum, have the following:

- ) Policies and procedures designed to ensure that the bank identifies, measures, and reports all material risks,
- ) A process that relates capital to the level of risk,
- ) A process that states capital adequacy goals with respect to risk, taking account of the bank's strategic focus and business plan, and
- ) A process of internal control reviews and audits to ensure the integrity of the overall management process.

#### **c. Comprehensive assessment of risks**

All material risks faced by the bank should be addressed in the capital assessment process. Nepal Rastra Bank recognizes that not all risks can be measured precisely. However, bank should develop a process to estimate risks with reasonable certainties. In order to make a comprehensive assessment of risks, the process should, at minimum, address the following forms of risk.

**1. Credit risk:** Banks should have methodologies that enable them to assess the credit risk involved in exposures to individual borrowers or counterparties as well as at the portfolio level. The credit review assessment of capital adequacy, at a minimum, should cover risk rating systems, portfolio

analysis/aggregation, large exposures and risk concentrations. Internal risk ratings are an important tool in monitoring credit risk. Internal risk ratings should be adequate to support the identification and measurement of risk from all credit exposures, and should be integrated into an institution's overall analysis of credit risk and capital adequacy. The ratings system should provide detailed ratings for all assets, not only for problem assets.

**2. Credit concentration risk:** Risk concentrations are arguably the single most important cause of major problems in banks. A risk concentration is any single exposure or group of exposures with the potential to produce losses large enough (relative to a bank's capital, total assets, or overall risk level) to threaten a bank's health or ability to maintain its core operations. Lending being the primary activity of most banks, credit risk concentrations are often the most material risk concentrations within a bank. However, risk concentrations can arise in a bank's assets, liabilities, or off-balance sheet items, through the execution or processing of transactions (either product or service), or through a combination of exposures across these broad categories. Credit risk concentrations are based on common or correlated risk factors, which, in times of stress, have an adverse effect on the creditworthiness of each of the individual counterparties making up the concentration. Such credit concentrations are not addressed in the minimum capital requirements for credit risk. Thus, Banks should have in place effective internal policies, systems and controls to identify, measure, monitor, and control their credit risk concentrations. Banks should explicitly consider the extent of their credit risk concentrations in their assessment of capital adequacy under review process. These policies should cover the different forms of credit risk concentrations to which a bank may be exposed to. Such concentrations include but are not limited to:

- ) Significant exposures to an individual counterparty or group of related counterparty. Banks might also establish an aggregate limit for the management and control of all of its large exposures as a group,
- ) Credit exposures to counterparties in the same economic sector or geographic region,
- ) Credit exposures to counterparties whose financial performance is dependent on the same activity or commodity, and
- ) Indirect credit exposures arising from a bank's CRM activities (e.g. exposure to a similar type of collateral or credit protection provided by a single counterparty or same collateral in cases of multiple banking).

A bank's framework for managing credit risk concentrations should be clearly documented and should include a definition of the credit risk concentrations relevant to the bank and how these concentrations and their corresponding limits are calculated. Limits should be defined in relation to a bank's capital, total assets or, where adequate measures exist, its overall risk level. A bank's management should conduct periodic stress tests of its major credit risk concentrations and review the results of those tests to identify and respond to potential changes in market conditions that could adversely impact the bank's performance.

**3. Operational risk:** The failure to properly manage operational risk can result in a misstatement of an institution's risk/return profile and expose the institution to significant losses. Gross income, used in the Basic Indicator Approach is only a proxy for the scale of operational risk exposure of a bank and can in some cases underestimate the need for capital. Thus, Banks should develop a framework for managing operational risk and evaluate the adequacy of capital as prescribed by this framework. The framework should cover the bank's appetite and tolerance for operational risk, as specified through the policies for managing this risk, including the extent and manner in which operational risk is transferred outside the bank. It should also include policies outlining the bank's approach to identifying, assessing, monitoring and controlling/mitigating the risk.

**4. Market risk:** The prescribed approach for the computation of capital charge for market risk is very simple and thus may not be directly aligned with the magnitude of risk. Likewise, the approach only incorporates risks arising out of adverse movements in exchange rates while ignoring other forms of risks like interest rate risk and equity risks. Thus, banks should develop a framework that addresses these various forms of risk and at the same time perform stress tests to evaluate the adequacy of capital. The use of internal models by the bank for the measurement of market risk is highly encouraged.

**5. Liquidity risk:** Liquidity is crucial to the ongoing viability of any financial institution. The capital positions can have a telling effect on institution's ability to obtain liquidity, especially in a crisis. Each bank must have adequate systems for measuring, monitoring and controlling liquidity risk. Banks should evaluate the adequacy of capital given their own liquidity profile and the liquidity of the markets in which they operate. Banks are also encouraged to make use of stress testing to determine their liquidity needs and the adequacy of capital.

**6. Other risks:** Although the 'other' risks, such as reputation and strategic risk, are not easily measurable, banks are expected to take these into consideration as well while deciding on the level of capital.

## **2.2. Review of Related Studies**

Present section deals about findings of earlier scholars on the concerned field of the study. It helps to develop the study as link in a chain of research that is developing and emerging the knowledge about the related field.

### **2.2.1. Review of Journals and Articles**

The effort has been made in this present section to examine and review the some related articles published in different books and journals.

**Shrestha, (1996)**, in his article *Portfolio Management in Commercial Bank Theory and Practice* states that due to slowdown in the world economy and deteriorating law and order situation of the country, many sectors of the economy are already sick. When any sector of economy catches cold, bank start sneezing. From this perspective, the banking industry as a whole is not robust. In case of investors having lower income, portfolio management may be limited to small saving income. But on the other hand, portfolio management means to invest funds in various schemes of mutual funds like deposits, shares and debentures for the investors with surplus income. Therefore portfolio management becomes very important both for an individual's as well as institutional investors. Large investors would like to select the best mix of investment assets.

**Chhetri, (2003)**, In the article entitled "*Non Performing Assets: A Need for Rationalization*", the writer has attempted to provide connotation of the term NPA and its potential sources, implication of NPA in financial sector in the South East Asian region. He has also given possible measures to contain NPA. "Loan and advance of financial intuitions are meant to be serviced either part of principal of the interest of the amount borrowed in stipulated time as agreed by the parties at the time of Loan settlement. Since the date becomes past dues, the loan becomes non-performing asset. The book of the account with lending institution should be effectively operative by means of real transaction affected on the part of the debtor in order to remain loan performing.

He said that there is serious implication of NPAs, on financial institutions. He further added that the liability of credit institution does not limit to the amount declared as NPA but extends to extra

amount that required for provisioning depends upon the level of NPAs and their quality. As per his view, rising level of NPAs create a psyche of worse environment especially in the financial sector. He mentioned that by reviving the activities of the financial institution like waiving interest, rescheduling the loan, writing off the loan, appointing private recovery agent, taking help of tribunals and law of land, etc, NPAs can be reduced.

Finally he concluded that financial institutions are beset with the burden of mounting level of NPAs in developing countries. "Such assets do bar of income flow of the financial institution while claiming additional resources in the form of provisioning thereby hindering gain investment. Rising level of NPAs cannot be taken as stimulus but the vigilance demanded to solve the problem like this, eventually will generate vigor to gear up the banking and financial activities in more active way contributing to energizing growth."

**Ghimire, (2004)**, in his article titled "*Credit Sector Reform and NRB*" has tried to highlight the effects of change or amendment in NRB directives regarding loan classification and loan loss provisioning. "Although the circumstances leading to financial problem or crisis in many Nepali banks differ in many respects, what is common among most of the banks is the increased size of nonperforming assets (NPAs), to resolve the problem of the losses or likely losses of this nature facing the industry. NRB, as the central bank, has amended several old directives and issued many new circulars in the recent years.

According to him opinion since majority of the loans of most of the commercial banks of the country at present fall under substandard, doubtful and even loss categories, loan loss provisioning now compared to previous arrangement would be dramatically higher. The new classification and provisioning norms are much lent able as they help to strengthen banks financially.

In the conclusion he has mentioned that in the recent years NRB has worked for management and reform of the credit of the financial institution more seriously and NRB has adopted reforms aimed not just at dealing with problems but also at strengthening banking supervision to reduce the likelihood of future crisis, "All prudential directives of NRB in connection of credit sector reform have been made revised after April 2001. To adapt to such changes there can be some difficulties and for a better and harmonized reform NRB should continue to be supportive, proactive and also participative to take opinions of bankers for a change in regulation/policy taking place in the future.



**Khattri, (2004)**, in his article "*One Umbrella Act's Pros and Cons*" has analyzed the ordinance pros and cons, in general speaking termed as Umbrella Act. He has expressed his disagreement in the ordinance regarding the qualification of the Board of Directors' composition. The qualification set is out of the total number of directors, two thirds have to be graduates in law, banking and statistics. Another requirement is five years work experience either in banking or public limited companies or in a gazette level government posts. He argues why a science graduate or someone with engineering background cannot be the director, it is not justifiable to question on the capacities of the people with these background i.e. in the past some successful General Manager and Directors in Nepal Industrial Development Corporation (NIDC) were engineers. He further writes that activities like project financing and asset valuation require engineers and similarly that there cannot be any reason for the position of director in banks to be graduates in some specified fields only. For CEO of the "Ka" category, qualification required is masters Degree in the chosen few subject and the term would be of four years. The act however does not mention the renewal of the CEO's term. The Board or AGM of the institution should decide the CEO's tenure.

**Pierpaolo Grippa, S. Iannotti and Fabrizio Leandri ( 2006 )** ,journal entitled to "Italian Banks' Workout Activity: Costs, Timing and Recovery Rates" evidence shows that banks respond to lengthy court procedures by increasing the use of private agreements with debtors before engaging in legal actions. The average duration of the recovery process remains, nevertheless, long enough to cause a substantial impact on the amount recovered net of recovery costs. Some other factors, such as collateral or personal guarantees, have a significant impact on recovery rates whose high dispersion is likely to depend more on hard-to-identify idiosyncratic factors.

The main findings are as follows:

- (i) As far as recovery channels are concerned, there is a predominance of private agreements (41% of non-performing loans closed in 1999), followed by bankruptcy procedures and foreclosure (10%),
- (ii) Recovery length varies according to the type of procedure and the geographical area: ranging from six to seven years for bankruptcy procedures and legal compositions to around two years for private agreements. Foreclosures are lengthier than recoveries based on pledged securities. (iii) Both are lengthier in the centre and south of Italy than in the north,

The cost of personnel engaged in recovery activities adds up to 1% of overall operational costs, while the costs of external professional services are 1.3% in terms of nominal value of non-performing loans, the average annual cost of recovery activity has been estimated to be 1.2% of the nominal value of non-performing loans.

(iv) For all the defaulted positions settled by 1999, the average recovery was 37%, there was considerable dispersion of recovery rates among banks.

**Nelson M. Waweru (2009)**, his study entitled to “ Commercial banking crises in Kenya: causes and remedies” investigates the causes of nonperforming loans, the actions that bank managers have taken to mitigate that problem and the level of success of such actions. Using a sample of 30 managers selected from the ten largest banks the study found that national economic downturn was perceived as the most important external factor. Customer failure to disclose vital information during the loan application process was considered to be the main customer specific factor. The study further found that Lack of an aggressive debt collection policy was perceived as the main bank specific factor, contributing to the non performing debt problem in Kenya.

### **2.3 Review of Thesis**

**Parajuli, S. (2003)**, in his dissertation “*Credit management of joint venture banks*” states that concept of financial reform emerged since 1980s with economic liberalization. Nepal Government and NRB published the economic and monetary policy to support such reform. As the result of these policies various jointed venture bank established in the private sector.

Under the structural adjustment program of the IME the financial sector was further liberalized in 1987. The focus of NRB was placed on indirect monetary control. The agricultural development bank of Nepal and Nepal industrial development corporation were allowed to issue debentures to increase their financial resources. NRB strengthened its regulation and supervision of banking and financial institution and the commercial banks were granted virtually freedom to fix their interest rates on deposit in July 1989 except for the priority sector credit. The credit information Bureau was established in 1989. NRB started to control the financial institutions with strengthening to supervision and monitoring system. It has also pointed out the need of having deposit taking institutions act which it's on umbrella act of all deposit taking institution. Some of the main elements of financial sector reform strategy published by NG in December 2000 such as restructuring the government owned banks strengthening the commercial banks regulation accounting and auditing system improving the regulation and supervision on non banking deposit institutions.

The main statement of the problem of the study is government owned banks are in critical condition they are unable to recover the credit. Financial sector reform programs are not being able to achieve the expected target. Performance on the credit is poor in the government banks. Amount of non -

performing assets is increasing. Generally, it is accepted If bank maintain low ratio, bank may not able to make the payment of against cheque that disadvantage sector in the economy such as the farmer and the small business have been neglected by the banking industry. In other words such sectors in the economy are not receiving the financial supports as commercial banks hesitate to be involved in these sectors where they do not see adequate profit. The main objectives of his research are: procedures of granting loans, examine the level of non performing loan, relevancy of the financial sectors reform program, measure the comparative output of credit management in joint venture bank and government.

**Regmi, P (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 of this study are:

1. 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.
2. 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.
3. Co-efficient of 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 while NBBL is positive.
4. Trend analysis of total deposit of NSBL and NBBL are found in increasing trend. The increment ratio on deposit of NSBL is lower in comparison to NBBL.

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, S. (2005)**, in his dissertation “*Credit management with special reference to Nepal SBI Bank Limited*” illustrates that lending is one of the most important parts of function of a commercial bank and composition of loan and advances directly affects the performance and profitability of the bank. There is intense competition in banking business with limited market and less investment opportunities available. Every bank is facing the problem of default loan and there is always possibility of a certain portion of the loan and advances, profitability deposits position of Nepal SBI Bank Limited is analyzed and its contribution in total profitability has been measured.

The main statement of the problem of his study is the credit management is the essence of commercial banking. Consequently, the formulation and implementation of sound Credit policies are among the most important responsibilities of bank directors and management. Well-conceived credit policies and credit careful credit practice are essential if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit-credit management effects on the company’s profitability and liquidity so it is one of the crucial decisions for the commercial banks. Measuring the credit performance in quality, efficiency and contribution of profitability, liquidity position and its effect on credit performance and measure the growth rate and propensity of growth based on trend analysis are the main objective of his dissertation.

**Sharma, K. P. (2006)**, took following objective in his study of "*Loan and Credit Management of Joint Venture Banks*".

- ) To analyze the effectiveness of lending policy of the selected sample banks.
- ) To measure the performance in quality, efficiency of sample banks
- ) To offer suitable suggestions based on findings of this study

To meet the above objective, the sources of data of commercial bank are analyzed by using financial tools such as ratio analysis, frequency, mean, standard deviation are used. Among many joint venture banks the researcher took two banks EBL and NBBL with five years data.

In findings, the current ratios of these banks are considerable but mean liquid fund to total deposit ratios are fewer consistencies and are not which shows the minimum deposit mobilization. Likewise,

assets to total liabilities ratios are also fluctuating. Similarly, loan and advances to total deposit ratio, mean ratio of loan and advance and investment to total deposit ratio shows the deposit mobilization in income generating sector are being nearly equal to 1. Loan and advances to shareholders equity ratio shows how well the investment made by investor. These ratios of both banks are above 10 and are fewer consistencies.

In conclusion, the overall performance of Nepal Bangladesh Bank Limited is satisfactory then Everest Bank Limited. The liquidity position of NBBL is better than that of EBL. As loans and advances of NBBL is increasing trend deposit is also increasing trend during the study period. There is increasing trend in profit of NBBL shows that improvement in performance and success of the firm. Purpose wise loan classification show that the NBBL and EBL banks have given priority to industrial and commercial sector lending, as well as priority and deprived sector lending. NBBL has higher lending portion in these sectors than EBL. From the selected bank NBBL has performed well in increasing growth ratio of deposit, loans and advances, investment and profit. NBBL has good lending procedure, preliminary screening is done of all the loan application, credit appraisal and financial position of the business and cash flows of the proposal is given high importance, which is essential criterion for loan approval. The banks follow NRB guidelines of loans classification and provisioning which makes strong financial position of the bank instead of holding high volume of non-performing assets. After comparatively study of NBBL and EBL banking performance, it can be concluded that NBL has better performance than that of EBL.

**Bishal, Sudan (2007)**, took following objective in his study of "*Lending Policy of Joint Venture Banks*". The main objective of his study is to analyze the fund mobilizing policy adopted by NABIL and Himalayan Bank Limited. The specific objectives of the study are as follows:

- ) To measure the relationship of total deposits with total investment, loan and advances and net profit.
- ) To evaluate the comparative growth ratio on total investment, loans and advances, total deposits and net profit of HBL and NABIL Bank Limited.
- ) To evaluate financial and investment efficiency, profitability and liquidity position of HBL and NABIL Bank Limited.
- ) To analyze the sources and uses of funds of HBL and NABIL Bank Limited.

To achieve the objectives of the study, descriptive and analytical research design has been used for secondary data. Some statistical and financial tools have also been applied to examine facts and

descriptive techniques have been adopted to evaluate funds mobilizing performance of HBL and compare to NABIL Bank Limited.

In findings, the mean ratio of cash and bank balance to total deposits and investment on government securities of HBL is more consistent and that of NABIL. The average study of cash and bank balance to current assets ratio, investment on government securities, the mean ratio of loan and advances to total deposits, the mean ratio of investment on government securities to total working fund, return on loan and advances and return on working funds HBL is more consistent than that of NABIL. The mean ratio of total interest paid to total working fund, liquid funds, correlation coefficient between deposit and total investment, between deposit and loan and advances, growth rate of loan and advances and liquidity risk ratio of HBL is higher than NABIL. The total deposits to total investment ratio of HBL and NABIL are in increasing trend. There is significant difference between mean ratios of loan and advances to total deposits and total investment to total deposit of HBL and NABIL.

From the above analysis, it can be concluded that the liquidity position of NABIL was not satisfactory whereas HBL is comparatively better than that of NABIL. NABIL has made enough investment in government securities than HBL but weak position in mobilizing the collected deposits as loan and advances and NABIL.

**Limbu, Ram (2008)**, in his dissertation, "*Credit Management of NABIL Bank Limited*" highlighted that aggregate performance and condition of Nabil bank. In the aspect of liquidity position, cash and bank balance reserve ratio shows the more liquidity position. Cash and bank balance to total deposit has fluctuating trend in 5 years study period. Cash and bank balance to current deposit is also fluctuating. The average mean of Cash and bank balance to interest sensitive ratio is able to maintain good financial condition

The main objectives of the research study are as follow.

- ) To evaluate various financial ration of the Nabil Bank.
- ) To analyze the portfolio of lending of selected sector of banks
- ) To determine the impact of deposit in liquidity and its effect on lending practices.
- ) To offer suitable suggestions based on findings of this study.

In the aspect of assets management ratio, assets management position of the bank shows better performance in the recent years. Non-performing assets to total assets ratio is decreasing trend. The bank is able to obtain higher lending opportunity during the study period. Therefore, credit

management is in good position of the bank. In leverage ratio, Debt to equity ratio is in an increasing trend. High total debt to total assets ratio poses' higher financial risk and vice-versa. It represents good condition of Total assets to net worth ratio. In the aspect of profitability position, total net profit to gross income, the total interest income to total income ratio of bank is in increasing trend. The study shows the little high earning capacity of NABIL through loan and advances. Earning per share and The Price earning ratio of NABIL is in increasing trend. These mean that the better profitability in the coming last years. It represents high expectation of company in market and high demand of share. Thus, credit management is in a good position.

The study is conducted on credit management of Nabil Bank, which is one of the leading banks in Nepal. NABIL has been maintaining a steady growth rate over this period. In the study every aspect of banks seems to be better and steady in every year. Its all analysis indicates better future of concern bank.

**Shrestha, Sumnima.** (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 following specific objectives have been formulated

- ) 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.

**Shrestha, Sarina (2010)**, on her research, "*A Study on the Credit risk Management of Nepalese Commercial Banks*" aims following objective taking Kumari Bank and Machhapuchre Bank.

- ) To examine the credit risk position of the selected commercial banks in Nepal
- ) To analyze the credit risk management system and practices of KBL and MBL
- ) To evaluate the organizational structure of KBL and MBL to manage the credit risk.

From the analyses of credit risks, following major findings have been obtained:

1. From the analysis of primary data, it is found that the majority of the respondents of both banks have favored with the bank's single sector, which is up to 10 % of total loan. However, the sector wise lending analysis portrays that KBL and MBL have extended up to 19.88 % and 30.12% of loan in a single sector respectively in FY 2005/06. Similarly, the exposure on the single sector of KBL and MBL exceeds 10 % of total loan in 3 and 5 sectors respectively. MBL has very high loan concentration on manufacturing sector of 199.35% of the core capital.
2. Similarly, lack of systematic and thorough credit processing is also the major source of credit risk in these banks. The problems in credit processing include lack of thorough credit assessment, absence of testing and validation of new lending techniques, subjective decision-making by senior management, lack of effective credit review process, failure to monitor borrowers or collateral values, and failure of banks to take sufficient account of business cycle effects etc.
3. Likewise, KBL has ranked Character, Collateral and Capacity of borrower first, second and third criterion for granting credit where as MBL ranked Character, Capacity and Capital first, second and third priority respectively. The hypothesis test on the preference of the bank's staff also



proves that there is no significant difference between observed and expected frequency of ranking.

4. Lending analysis against various collaterals: it has been found that both the banks have lent highest amount of loan against the movable/ immovable property. The average lending over 5 years period of KBL and MBL against movable/ immovable property is Rs. 2,987 million and 2,673 million respectively.

In conclusion, the major banking risks include credit risk, market risk (i.e. liquidity risk, interest risk, operation risk etc). Among these risks, credit risk has the major impact on banking (i.e. more than 60 %). With the increase in NPL, the loan loss provisioning will also increase simultaneously leading to decrease in profit. The decrease in profit results in low dividend to shareholder and bonus to employees.

For proper management of the credit risk, both banks have their own set of policies and practices, which is in consistence with NRB guidelines. For credit risk management, both banks have Credit Policies Guidelines (CPG). Though both the banks have their own set of procedures for assessing various risks and their management, problems are still prevalent in these banks. In credit risk, single sector loan concentration is the main problem in both the banks. In MBL, the major problem is a high amount of lending in manufacturing sector, lending without collateral, non-performing loan & organizational structure for handing credit risk. In KBL, with the increase in total loan, NPL is also increasing. So, proper adjustment is needed for managing the NPL.

## **2.4 Research Gap**

The purpose of this research is to development some expertise in one's area, to see what new contribution can be made and to receive some ideas, knowledge and suggestions in relation to credit management of selected commercial banks. Thus, the previous studies cannot be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies.

From the review of various literatures, it has been found many research work have been done on the study of NRB Directives, its compliance and analysis of credit management through loan loss provision, non-performing loans and capital adequacy, however, on the credit risk management which is the most important aspect of the banking sector. So, the researcher can make further research on liquidity, asset management, profitability and other risk from actual practices followed

by the management of Nepalese commercial banks besides the NRB directives to manage and control the credit risks etc.

Here, attempt to fill this gap the measurement of credit risk of Nabil Bank Ltd. And Himalyan Bank Limited, various financial ratios and various statistical tools are used for analyzing data which all are not found in previous research. Here regression analysis have done which rarely found in another research. This study also aims to find out the organizational structure of NABIL and HBL for the proper implementation and compliance of NRB Directives and to manage the credit risk. So this may be the appropriate research in the area of credit risk management of Bank and financial institutions.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

This chapter deals with the research methodology employed in the entire aspect of the study. Research methodology is the process of arriving at solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. The research has been done on topic "Credit Risk Management of Himalayan Bank and Nabil Bank Ltd." In order to reach and accomplish the objectives of the study, different activities will be carried out. In other words, research methodology refers to the various methods of practices applied by the researcher in the entire aspect of the study. This chapter includes the research design, population and sample, nature and sources of data and analysis of data.

#### **3.1 Research Design**

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. 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 Himalayan Bank and Nabil Bank Ltd. The study is based on secondary data. So the descriptive and analytical research designs have been used.

#### **3.2 Population and Sample**

The method of selecting for study a small portion of the population to draw conclusion about characteristics of the population is known as sampling. Sampling may be defined as the selection of part of the population on the basis of which a judgment or inference about the universe is made. Here judgmental sampling method is applied for this research. There are total 30 commercial bank are operation in Nepal at the time of proposal registration. Therefore 30 commercial banks are taken as population and only two Banks have been considered in this study.

#### **Sample Bank**

1. Himalayan Bank Limited
2. Nabil Bank Limited

Total 30 commercial are regarded as a population of the study. It is not possible to cover the entire bank under the study. So these two banks are taken as sample. The reasons behind selecting these two banks as sample both are very complete in their capital, performance and profit. These two banks are compared in market as per EPS, MPS and net worth as well. Other main reason is available of data these two commercial banks.

### **3.3 Sources of Data**

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. Therefore, the major sources of secondary data are Annual Report of concern Bank, Internet and E-mails, NRB directives, Newspaper, journals, articles and various magazines and thesis of Central Library of T. U., Library of Lumbini Banijya Campus and Library of Shanker Dev Campus

### **3.4 Data Collecting Procedures**

The annual reports of the concerned banks were obtained from their head office and their websites. The main source of data are annual report of concern financial institute. NRB publication, such as Banking and Financial Statistics Economic Reports, Annual Reports of NRB etc .has been collected from the personal visit of concerned department of NRB at Baluwatar. Besides, a details review materials are collected from the library of Lumbini Banijya Campus, Shanker Dev Campus and central library of T.U.

### **3.5 Tools and Techniques used**

In this study, various financial and statistical tools have been used to achieve the objective of the study. According to the pattern of data available, the analysis of data will be done. The various tools applied in this study have been briefly presented as under:

- Financial tools
- Statistical tools

### **3.6 Financial Tools**

Financial performance is analyzed through the use of two important tools. The financial tool is one of the most important tool, which includes ratio analysis and the other one financial statement analysis have been used in this study. Financial tools are used to examine the financial strength and

weakness of bank. Although there are many financial ratios, only selected ratios are used in this study.

### **3.6.1 Analysis of Financial Ratios**

The techniques of ratio analysis in of considerable significance in studying the financial stability, liquidity, profitability and the quality of management of the business and industrial concerns, the important ratios that are studied for this purpose are given below.

### **3.6.2 Ratio Analysis**

Ratio analysis is a technique of analysis and interpretation of financial statement. To evaluate the performances of an organization by creating the ratios from the figure of different accounts consisting in balance sheet and income statement is known as ratio analysis. Five types of ratios have been analyzed in this study, which are related to fund mobilization of the banks. They are presented below:

#### **A. Liquidity Ratio**

Liquidity ratio measures the ability of the firm to meet its current obligations. A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community. Liquidity provides honor strength health and prosperity to an organization. It is extremely essential for an organization to meet its obligations as they become due. A firm should ensure that it has not lack of liquidity and also that it is not too much highly liquid.

**i) 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.

**ii) Cash and Bank Balance to Total Deposits Ratio:** - Cash and bank balance is said to be first line defense of every bank. The ratio between the cash and bank balance and total deposit measures the ability of a bank to meet the unanticipated call on all types of deposit. Higher the ratio greater will be

the ability to meet the sudden demand of deposit. But every ratio is not desirable since bank has to pay interest on deposit. This also maximizes the cost of fund to the bank.

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

Where,

Cash and bank balance is composed up of cash on hand including foreign cheques and other cash item, balance with domestic banks and aboard. Deposits include current, saving, fixed money at short call notice and other types of deposits.

**iii) Cash and Bank Balance to Current Assets Ratio:** - This ratio shows the bank's liquidity capacity on the basis of cash and bank balance that is the most liquid assets. High the ratio indicates the bank's ability to meet the daily cash requirements of their customer deposits and vice versa. But the high ratio is not preferred as the bank has to pay more interest on deposit and will increase the cost of fund. Low ratio is also very dangerous, as the bank may not be able to make the payment against the cheques presented by the customers. We have,

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

**iv) Investment on Government Securities to Current Assets Ratio:** - This ratio is used to find out the percentage of current assets invested on government securities, treasury bills and development bonds. We can find out as:

Investment on Govt. securities to total current assets ratio =

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

Where,

Investment on Government Securities involves treasury bills and development bonds etc.

## **B. Assets Management Ratio:**

“A set of ratio which measure how efficiently a firm is managing its assets and whether or not the level of those assets is properly related to the level of operation. In this study this ratio is used to

indicate how effectively the selected banks have arranged and invest their limited resources. The assets management ratios measure how effectively the firm is managing its assets. These ratios are designed to answer this question, does the total amount of each type of assets as reported on the balance sheet seem reasonable or not? If a firm has excessive investments in assets, then its capital cost will be unduly high and its stock price will be suffer” (Brigham, 1989).

**i) Loan and Advances to Total Deposits Ratio:** - This ratio is calculated to find out how successfully the selected banks are utilizing their collections or deposits on loan and advances for the purpose of earning profit. We have,

$$\text{Loan and Advances to Total Deposits Ratio} \times \frac{\text{Loan and Advances}}{\text{Total Deposits}}$$

**ii) Total Investment to Total Deposits Ratio:** - Investment is one of the major sources of earning profit. It shows how properly firm's deposit has been invested on government securities and shares and debentures of other companies.

$$\text{Total Investment to Total Deposits Ratio} \times \frac{\text{Total Investment}}{\text{Total Deposits}}$$

**iii) Loan and Advances to Total Working Fund Ratio:** - This ratio shows the ability of selected banks in terms of earning high profit from loan and advances. Loan and advances to working fund ratio can be calculated by dividing loan and advances amount by total working fund.

$$\text{Loan and Advances to Total Working Fund Ratio} \times \frac{\text{Loan and Advance}}{\text{Total Working Fund}}$$

**iv) Investment on Government Securities to Total Working Fund Ratio:** - Investment on government securities to working fund ratio shows how much part of total investment is there on government securities in percentage, it is calculated for this purpose by following formula:

$$\text{Investment on Govt. Securities to TWF Ratio} \times \frac{\text{Investment on Govt. Securities}}{\text{Total Working Fund}}$$

**v) Investment on Shares and Debentures to Total working Fund Ratio:** Investment on shares and debentures to total working fund ratio shows the investment of banks on the shares and

debentures of other companies in terms of total working fund. This ratio can be obtained dividing on shares and debentures by total working fund. It is calculated as:

$$\text{Investment on Shares and debn. to TWF Ratio} \times \frac{\text{Investment on Share and Debenture}}{\text{Total Working Fund}}$$

### C. Profitability Ratio:

This ratio is related to profit of the banks is essential for the survival of the bank, so it is regarded as the engine that drives the banks and indicates economics progress. It calculated to measure the overall efficiency of the banks.

**i) Return on Loan and Advances Ratio:** - Return on loan and advances ratio shows how efficiently the banks have utilized their resources to earn good return from provided loan and advances. This ratio is computed as,

$$\text{Return on Loan and Advances Ratio} \times \frac{\text{Net Profit / Loss}}{\text{Loan and Advances}}$$

**ii) Return on Total Working Fund Ratio:** - Return on total working fund ratio measures the profit earning capacity by utilizing available resources i.e. total assets. Return will be higher if the bank's working fund is well managed and efficiently utilized. Maximizing taxes, this in the legal options available will also improve the return. We have,

$$\text{Return on Total Working Fund Ratio} \times \frac{\text{Net Profit}}{\text{Total Working Fund}}$$

**iii) Total Interest Earned to Total Working Fund Ratio:** - This ratio reflects the extent to which the banks are successful in mobilizing these total assets to acquire income as interest. 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. We have,

$$\text{Total Interest Earned to TWF Ratio} \times \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$



**iv) Total Interest paid to Total working Fund Ratio:** - This ratio measures the percentage of total interest expenses on total working fund and vice-versa. This ratio is calculated as,

$$\text{Total Interest paid to Total Working Fund Ratio} = \frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

#### **D. Risk Ratios:**

Commonly, risk means chance or possibility of loss, uncertainty which lies in the business transaction of investment management. When a firm wants to bear risk and uncertainty, profitability and effectiveness of the firm is increased. This ratio checks the degree of risk involved in the various financial operations. For this study following risk ratios are used to analyze and interprets the financial data and investment policy.

**i) Liquidity Risk Ratio:** - The liquidity risk of the bank defines its liquidity need for deposit. The cash and bank balance are the 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:

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

**ii) Credit 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 credit risk ratio shows proportion of non-performing assets in the total investment plus loan and advances of a bank it is computed as:

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

### **3.7 Statistical Tools**

Under this heading some statistical tool such as coefficient of correlation analysis between different variables, trend analysis of deposit, loan and advances, net profit and EPS are used to achieve the objective of the study.

### 3.7.1 Average Mean

An average is a single value related from a group of values to represent them in some way, a value, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group. There are various types of averages. Arithmetic mean (AM, Simple & Weighted), median, mode, geometric mean, harmonic mean are the major types of averages. The most popular and widely used measure representing the entire data by one value is the AM. The value of the AM is obtained by adding together all the items and by dividing this total by the number of items.

Mathematically:

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n}$$

Where,  $\bar{X}$  = Arithmetic mean

$\sum X$  = Sum of all the values of the variable X

n = Number of observations

### 3.7.2 Coefficient of Variation (CV)

The coefficient of variation reflects the relation between standard deviation and mean. The relative measure of dispersion based on the standard deviations known as coefficient of variation. The coefficient of dispersion based on standard deviation multiplied by 100 is known as the CV. It is used for comparing variability of two distributions, the CV is defined as,

$$CV = \frac{s}{\bar{X}} \times 100$$

Greater the CV, the more variable or conversely less consistent, less uniform, less stable and homogenous than the consistent more uniform, more stable and homogenous. This nature of CV uses that actual size of working capital.

### 3.7.3 Correlation Coefficient (r)

Correlation analysis is the statistical tools that we can use to describe the degree to which one variable is linearly related to another. Coefficient of correlation is the measurement of the degree of relationship between two casually related sets of figures whether positive or negative. Its values lie somewhere ranging between -1 to +1. If the both variables are constantly changing in the similar direction, the value of coefficient will be +1, two variables take place in opposite direction. The correlation is said to be perfect negative. In this study, simple correlation is used to examine the

relationship of different factors with working capital and other variable.

$$\text{Correlation Coefficient (r)} = \frac{\text{CoVariance of X \& Y}}{\sqrt{\sigma_x \sigma_y}}$$

i) Correlation Coefficient between Deposit and Loan & Advances.

Deposit have played a very important role in performance of commercial banks and similarly loan & advances are important to mobilize the collected deposits. Coefficient of Correlation between deposit and loan & advances measures the degree of relationship between the two variables. In this analysis, deposit is independent variable (X) and loan & advances is dependent variables(Y). The main objectives of computing 'r' between these two variables are to justify whether deposits are significantly used on loan & advances in a proper way or not.

ii) Correlation Coefficient between Deposit and Total Investment

Coefficient of correlation between deposit and total investment measures the degree of relation between these two variables. Here deposit is independent variable (x) and total investment is dependent variable(y). The purpose of computing coefficient of correlation between deposit and total investment is to find whether deposit is significantly used as Investment or not.

### **3.7.4 Regression Analysis**

The easiest way to evaluate the performance of a firm is to compare its current ratios with past ratios. When financial ratios over a period of time are compared it is known as the regression analysis. It gives an indication of the direction of change and reflects whether the firm's financial performance has improved, deteriorated or remain constant over time. The projections are based on the following assumptions:

The least square method to regression analysis has been used in measuring the regression analysis. This method is widely used in practice. The straight-line trend of a series of data is represented by the following formula.

$$Y = a + bx$$

Here,

Y is the dependent variable, a is y intercept or value of y when x=0, b is the slope of the trend line or amount of change that comes in y for a unit change in x.

## **CHAPTER – IV**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Introduction**

This chapter deals with the presentation, analysis and interpretation of relevant data HBL and NABIL 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 finance company as well as other cases or problems of HBL and NABIL can be visualized. For analysis, different types of analytical methods and tools such as financial analysis and statistical analysis are used.

#### **4.2 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.

##### **4.2.1 Evaluation of Liquidity, Asset Management and Profitability Through 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. A single ratio will not depict a true picture of the unit. Hence a combination of ratios must be analyzed to drive a true picture. Ratio analysis has been already discussed in previous chapter. Here, different ratios of HBL and NABIL will be calculated, analyzed and interpreted.

##### **A. 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 obligations. Inadequate liquidity can lead to unexpected cash short falls that must be covered at excessive costs reducing profitability. In the worst case, inadequate liquidity can lead to the liquidity insolvency of the institution. 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.

**(i) Current Ratio:**

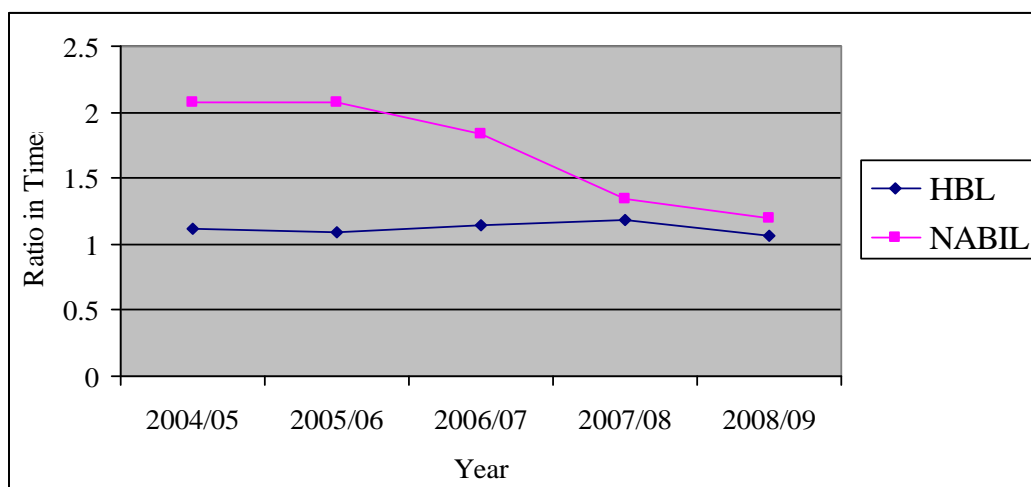
This ratio measures the liquidity position of the commercial banks. It indicates the ability of Banks to meet the current liquidity.

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

Year	Ratio (in times)	
	HBL	NABIL
2004/05	1.12	2.08
2005/06	1.09	2.08
2006/07	1.14	1.83
2007/08	1.19	1.34
2008/09	1.06	1.20
<b>Mean</b>	1.12	1.71
<b>S.D.</b>	0.0495	0.414
<b>C.V.</b>	0.0442	0.243

Source: Annual Report of Concern Bank

**Figure 4.1**  
**Current assets to Current liabilities Ratio**



Above table and figure shows the current ratio of selected commercial banks during the study period. The current ratio of HBL bank is fluctuating and NABIL is in decreasing trend. In general, it can be said that all the banks have sound ability to meet their short-term obligations. In the case of NABIL current ratio has high ratio in each year. In an average, liquidity position of NABIL is greater than HBL i.e.  $1.71 > 1.12$  due to high mean ratio. So, NABIL is sound in meeting short-term obligation than HBL. Likewise, S. D. and C.V. of HBL is less than NABIL i.e.  $0.0495 < 0.414$  and  $0.0442 < 0.243$ . It can be said that current ratio of HBL is more consistent than NABIL. Lastly from the above analysis it is known that NABIL 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 HBL and NABIL bank.

**(ii) 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.

$$\text{Cash and Bank Balance to Total Deposits Ratio} \times \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

**Table: 4.2**

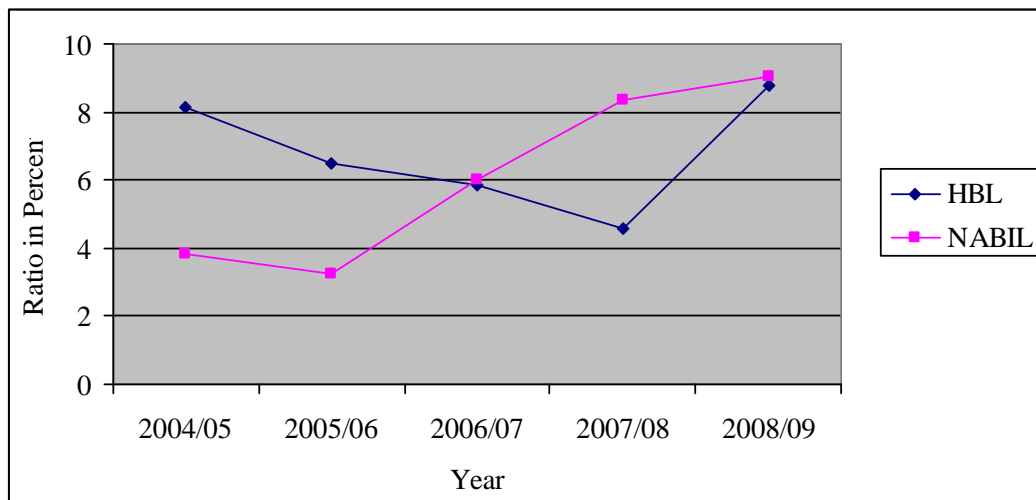
**Cash and Bank Balance to Total Deposits Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	8.12	3.83
2005/06	6.48	3.26
2006/07	5.85	5.99
2007/08	4.55	8.37
2008/09	8.79	9.03
<b>Mean</b>	6.76	6.09
<b>S.D.</b>	1.715	2.596
<b>C.V.</b>	0.254	0.426

Source: Annual Report of Concern Bank

**Figure No: 4.2**

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



The table and figure No 4.2 analysis that the cash and bank balance to total deposits ratio of the HBL

is in decreasing trend whereas ratio of NABIL is in increasing trend except in 2005/06. The higher ratio of HBL and NABIL are 8.79% and 9.03% respectively in the year 2008/09 respectively. The average ratio of HBL is greater than that of NABIL (i.e. 6.76% > 6.09%). It signifies that HBL has sound liquid fund to make immediate payment to the depositors from the mean point of view.

However if we see the latest data NABIL has sound liquid fund make immediate payment to the depositor

**(iii) 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:

$$\text{Cash and Bank Balance to Current Assets ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

**Table: 4.3**

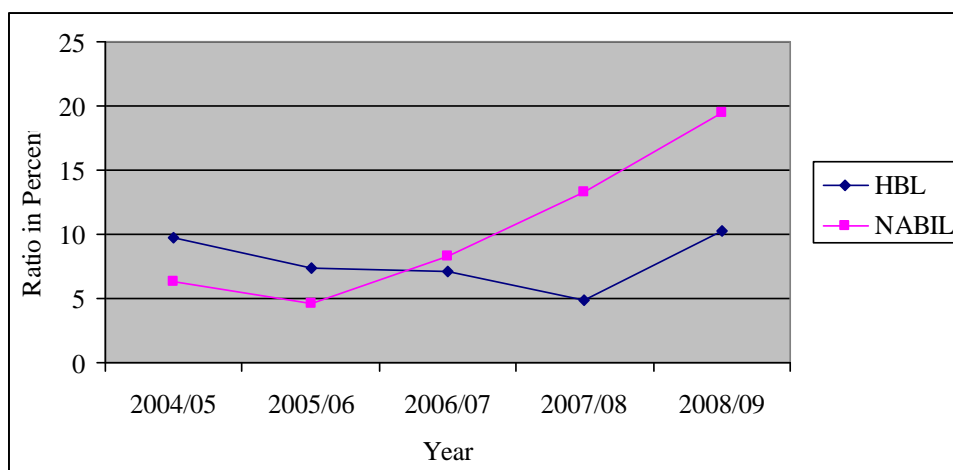
**Cash and Bank Balance to Current Assets Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	9.74	6.34
2005/06	7.42	4.55
2006/07	7.08	8.25
2007/08	4.92	13.27
2008/09	10.22	19.45
<b>Mean</b>	7.88	10.37
<b>S.D.</b>	2.153	6.03
<b>C.V.</b>	0.273	0.58

Source: Annual Report of Concern Bank

**Figure: 4.3**

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



Above table and figure shows that the cash and bank balance to current assets ratio of HBL is in decreasing trend except in 2008/09 and NABIL is increasing trend beside 2005/06 and in increasing trend thereafter. The highest ratio of HBL is 10.22% in year 2008/09 and lowest ratio 4.92% in year 2007/2008. The mean ratio is 7.88% .Similarly, the highest ratio of NABIL is 19.45% in 2008/09 and lowest ratio is 4.55% in 2005/2006.The mean ratio of NABIL is 10.37%. While observing the data, we notice that NABIL has higher mean ratio. In the preceding two years HBL had higher ratio and in succeeding three years NABIL has higher ratio. It means NABIL has slightly sound liquid assets than that of HBL out of its current assets from the mean point of view. According to the each year data in the preceding three years HBL was in good condition and in succeeding two years NABIL is in good condition. Lower C.V. of HBL shows that it has consistency in the ratios i.e.  $0.273 < 0.581$  than NABIL.

#### (iv) 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 (%)	
	HBL	NABIL
2004/05	27.84	34.91
2005/06	23.08	16.60
2006/07	26.01	28.36
2007/08	25.37	23.09
2008/09	14.13	21.38
<b>Mean</b>	23.29	24.87
<b>S.D.</b>	5.394	7.013
<b>C.V.</b>	0.232	0.282

*Source: Annual Report of Concern Bank*



**Figure: 4.4**

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

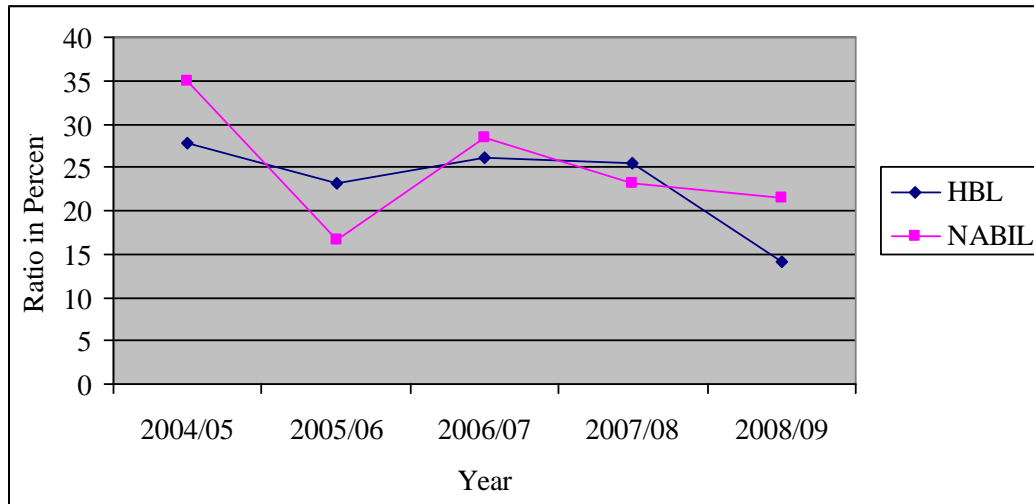


Table and figure no 4.4 shows that the investment on government treasury bills to current assets of HBL and NABIL are in fluctuating trend. The highest ratio of HBL is 27.84% in 2004/05 and NABIL is 34.91% in 2004/05. And the lowest ratio of HBL and NABIL are 14.13% in 2008/09 and 16.60% in 2005/06 respectively. From the table we also notice that mean ratio of HBL and NABIL are 23.29% and 24.87% respectively. NABIL has higher ratio except in 2005/06 and 2007/08 and mean too. It means NABIL has invested more money in risk free assets than that of HBL. In another word HBL has emphasizes on more loans and advances and other short term investment than investment in govt. securities. However in the latest year HBL has invested more in govt. securities out of its current assets than that of NABIL. Higher C.V. and S.D. of NABIL shows that it has inconstancy in the ratios (i.e.  $0.282 > 0.232$  and  $17.013 > 5.394$ )

**B. 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:

**(i) 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,

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

**Table: 4.5**

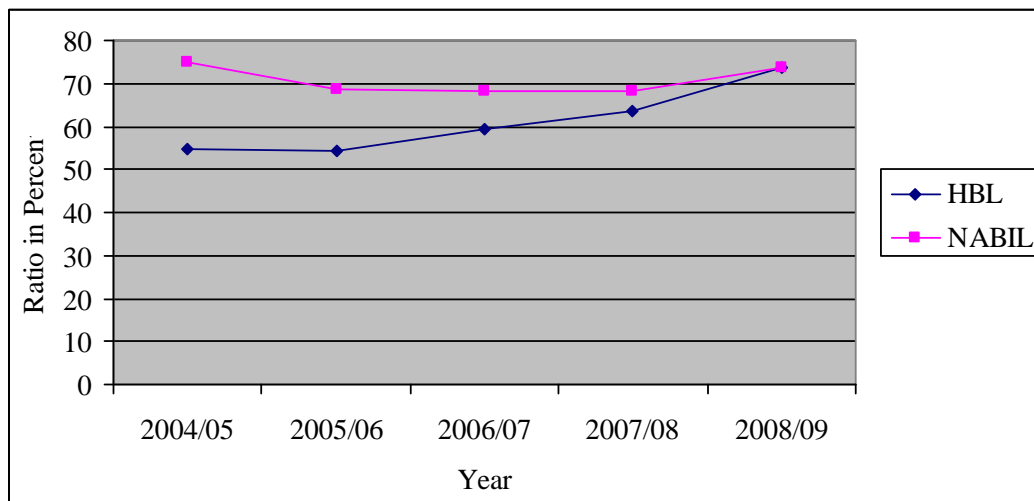
**Loan and Advances to Total Deposits Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	54.94	75.05
2005/06	54.40	68.64
2006/07	59.50	68.13
2007/08	63.37	68.18
2008/09	73.58	73.87
<b>Mean</b>	61.16	70.77
<b>S.D.</b>	7.847	3.396
<b>C.V.</b>	0.128	0.048

*Source: Annual Report of Concern Bank*

**Figure: 4.5**

**Loan and Advances to Total Deposits Ratio**



A high ratio of loan and advances indicates better mobilization of collected deposits and vice versa. But it should be noted that too high ratio might not be better from liquidity and default point of view. The above table and figure shows that these two banks have mobilized their collected deposits in variable trend. In average HBL has mobilized 61.16% and NABIL has mobilized 70.77% of their collected deposit in loan and advances. NABIL has higher ratio in each year and average too. According to NRB directives above 70% to 90% of loan and advances to total deposit ratio is able to better mobilization of collected deposit. So all of the year HBL has not met the NRB requirement however NABIL has met the NRB requirement. Higher S.D. and C.V. (i.e.  $7.847 > 3.396$  and  $0.128 > 0.048$ ) of HBL shows that HBL has inconsistencies in the ratios. The loan and advance to total deposit ratio is presented in following figure.

**(ii) 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. We have,

**Table: 4.6**

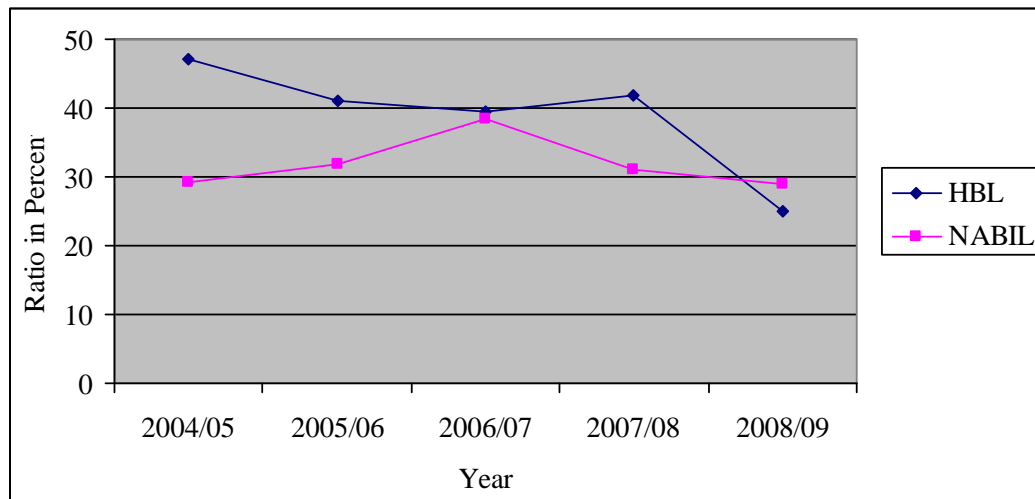
**Total Investment to Total Deposits Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	47.12	29.25
2005/06	41.10	31.94
2006/07	39.35	38.32
2007/08	41.89	31.14
2008/09	25.12	28.99
<b>Mean</b>	38.92	31.93
<b>S.D.</b>	8.238	3.784
<b>C.V.</b>	0.212	0.118

*Source: Annual Report of Concern Bank*

**Figure: 4.6**

**Total Investment to Total Deposits Ratio**



From the Table and Figure No 4.6, it is observed that the investment to total deposit ratio of HBL and NABIL are in fluctuating trend. The mean of the ratio of HBL and NABIL are 38.92% and 31.93% respectively. HBL has higher ratio in each year and mean too. It signifies HBL has successfully allocated its deposit in investment portfolio in comparison with NABIL. Lower C.V. of NABIL shows that NABIL has constancies in the ratios i.e.  $0.212 > 0.118$ . it means HBL has more volatility in ratio than NABIL.

**(iii) 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. We have,

$$\text{Loan and Advances to TWF Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Working Fund}}$$

**Table: 4.7**

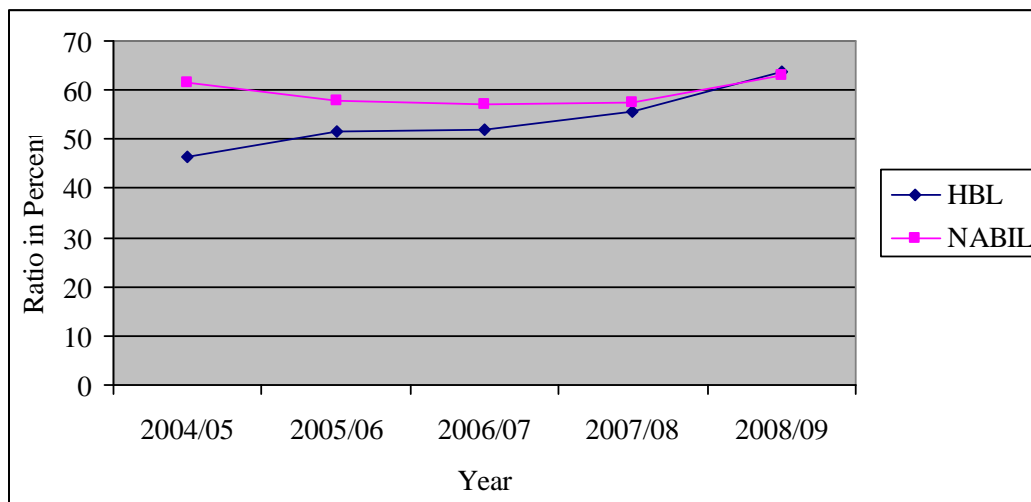
**Loan and Advances to Total Working Fund Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	46.59	61.60
2005/06	51.54	57.87
2006/07	51.85	57.04
2007/08	55.78	57.54
2008/09	63.72	62.89
<b>Mean</b>	53.89	59.39
<b>S.D.</b>	6.387	2.664
<b>C.V.</b>	0.118	0.045

Source: Annual Report of Concern Bank

**Figure: 4.7**

**Loan and Advances to Total Working Fund Ratio**



Above table and figure shows that loan and advances to total assets ratio of HBL is in increasing trend and NABIL is in fluctuating trend. While observing their ratios, NABIL is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio in each year. The mean of HBL and NABIL are 53.89% and 59.39% respectively. So NABIL has higher ratio than that

of HBL. It reveals that in total assets, NABIL has high proportion of loan and advances. Lower S.D. and C.V. of NABIL show that NABIL has consistency in the ratios.

**(iv) 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.

$$\text{Investment on Govt. Securities to Total Working Fund} = \frac{\text{Total Investment on Govt. Securities}}{\text{Total Working Fund}}$$

**Table: 4.8**

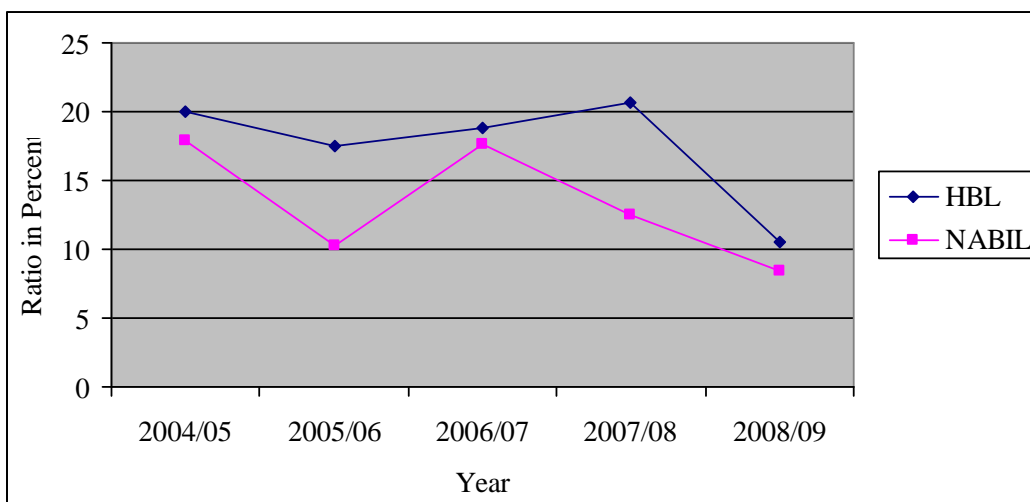
**Investment on Govt. Securities to Total Working Fund Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	19.95	17.91
2005/06	17.46	10.31
2006/07	18.81	17.64
2007/08	20.65	12.51
2008/09	10.51	8.45
<b>Mean</b>	17.47	13.36
<b>S.D.</b>	4.077	4.276
<b>C.V.</b>	0.233	0.320

Source: Annual Report of Concern Bank

**Figure: 4.8**

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



Above table and figure shows that the investment on government treasury bills to total working fund

of HBL and NABIL are in fluctuating trend. The highest ratio of HBL is 20.65% in 2007/08 and NABIL is 17.91% in 2004/05. And the lowest ratio of HBL and NABIL are 10.51% and 8.45% in 2008/09 respectively. From the table we notice that mean ratio of HBL and NABIL are 17.47% and 13.36% respectively. HBL has higher ratio in every year. It means NABIL has invested lower money in risk free assets than that of HBL. HBL has invested more money in risk free assets out of its total assets. In another word NABIL has emphasizes on more loans and advances and other short term investment than investment in govt. securities out of its total assets. Higher S.D. and C.V. of NABIL show that NABIL has inconstancies in the ratios.

**(v) Investment on Shares and Debentures to Total Working Fund Ratio**

The main purpose of this ratio is to examine that portion of commercial banks and finance’s total working fund that has been invested into investment on share and debentures. This ratio is calculated by dividing investment on share and debenture by total working fund.

**Table: 4.9**

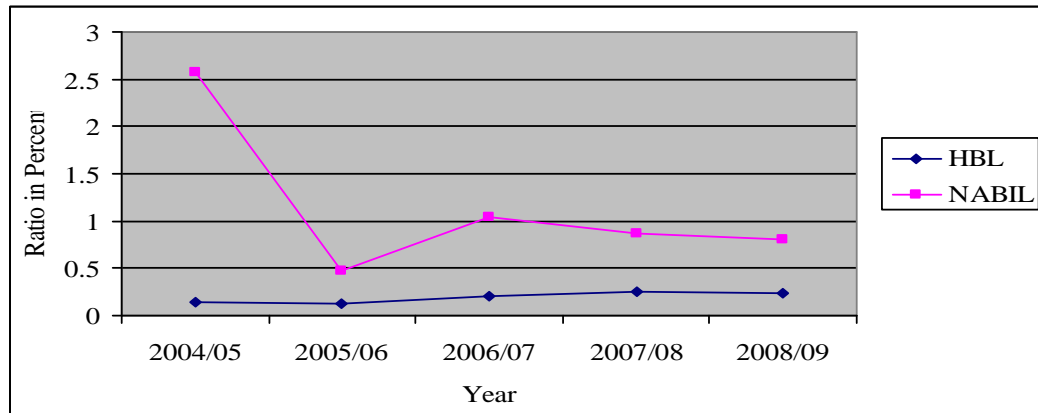
**Investment on Shares and Debentures to Total Working Fund Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	0.15	2.58
2005/06	0.13	0.47
2006/07	0.21	1.05
2007/08	0.25	0.87
2008/09	0.23	0.81
<b>Mean</b>	0.19	1.16
<b>S.D.</b>	0.052	0.823
<b>C.V.</b>	0.267	0.712

*Source: Annual Report of Concern Bank*

**Figure: 4.9**

**Investment on Shares and Debentures to Total Working Fund Ratio**



Above table and figure shows that the investment on share and debenture to total working fund of HBL is in fluctuating trend. NABIL has also fluctuating trend of these ratio. The highest ratio of HBL is 0.25% in 2007/08 and NABIL is 2.58% in 2004/05, where the lowest ratio of HBL is 0.11% in 2005/06 and of NABIL is 0.47% in same year 2005/06.

From the table we notice that mean ratio of HBL and NABIL are 0.19% and 1.16% respectively. NABIL has higher ratio in every year and mean too. It means NABIL has invested more money in risky assets out of its total assets than that of HBL. In another word HBL has emphasizes on more govt. securities rather than investment on share and debenture out of its total assets.

**C. Profitability Ratios**

**(i) 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:

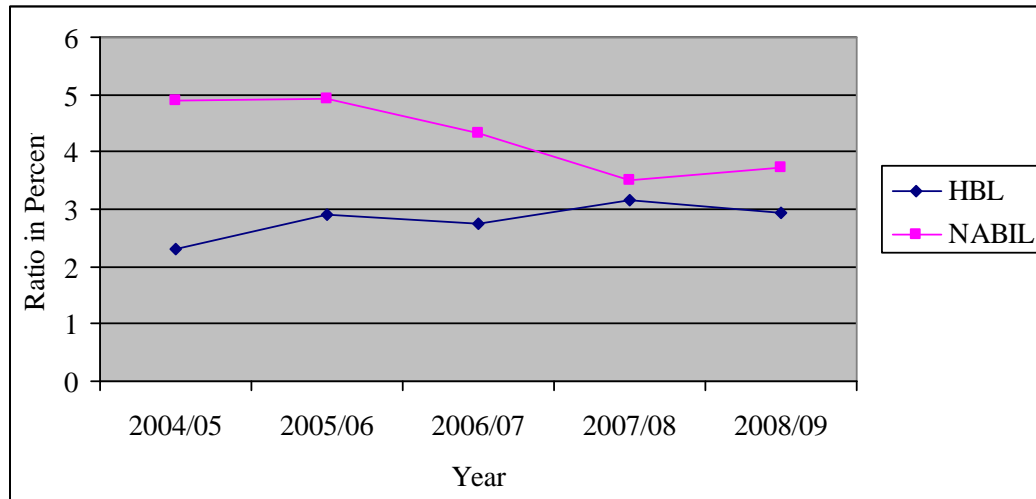
**Table: 4.10**

**Return on Loan and Advances Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	2.29	4.91
2005/06	2.90	4.92
2006/07	2.76	4.34
2007/08	3.15	3.49
2008/09	2.95	3.74
<b>Mean</b>	2.81	4.28
<b>S.D.</b>	0.322	0.657
<b>C.V.</b>	0.115	0.153

**Figure: 4.10**

**Return on Loan and Advances Ratio**



*Source: Annual Report of Concern Bank*

Above table and figure shows that return on loan and advances ratio of HBL are in increasing trend and NABIL are in decreasing trend. The highest ratio of HBL is 3.15% in the year 2007/ 08 and lowest ratio 2.29% in year 2004/05. The mean ratio is 2.63%. This shows the normal earning capacity of HBL in loan and advances. Whereas highest ratio of NABIL is 4.92% in year 2005/06 and lowest ratio is 3.34% in 2006/07. The mean ratio is 4.28% of NABIL.

From the table we notice that NABIL has higher ratios in each year and mean too. So it seems successful by generating higher ratio. It can be concluded that NABIL has better utilized the loan and advance for the profit generation in comparison with HBL. However if we see the latest data HBL has improved it self. It is bad aspect of NABIL as it has decreasing trend. The return on loan and advance is presented in following figure.

**(ii) 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: 4.11**

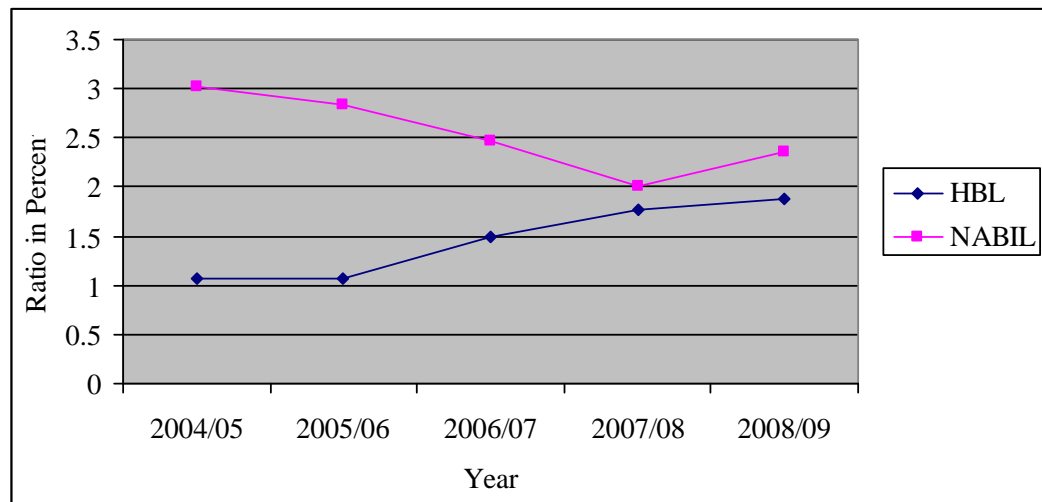
**Return on Total Working Fund Ratio**

Year	Ratio in Percent (%)	
	HBL	NABIL
2004/05	1.07	3.02
2005/06	1.06	2.84
2006/07	1.50	2.47
2007/08	1.76	2.01
2008/09	1.88	2.35
<b>Mean</b>	1.45	2.54
<b>S.D.</b>	0.381	0.40
<b>C.V.</b>	0.262	0.158

Source: Annual Report of Concern Bank

**Figure: 4.11**

**Return on Total Working Fund Ratio**



Above table and figure shows that ROA of HBL is in increasing trend and NABIL has decreasing trend. NABIL seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of HBL (i.e. 2.54% > 1.45%) of total assets in an average. NABIL has also higher ratio in each year. It indicates NABIL has utilized their total asset in income generating purpose. However it noted that HBL is doing well in the latest year whereas NABIL is not doing well in the latest year as it has decreasing trend of ratios. Lower C.V. of NABIL shows that it has consistency in the ratios (i.e. 0.158 < 0.262).

**(iii) 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 there by, maximizing return on its equity

capital. Return on equity plays the measuring role of profitability of bank. It reflects, the extend to which the bank has been successful to mobilize or utilize its equity capital. A high ratio indicates higher successful to mobilize its owned capital and vice-versa. Following table shows the return on equity of HBL and NABIL during the study period.

**Table: 4.12**

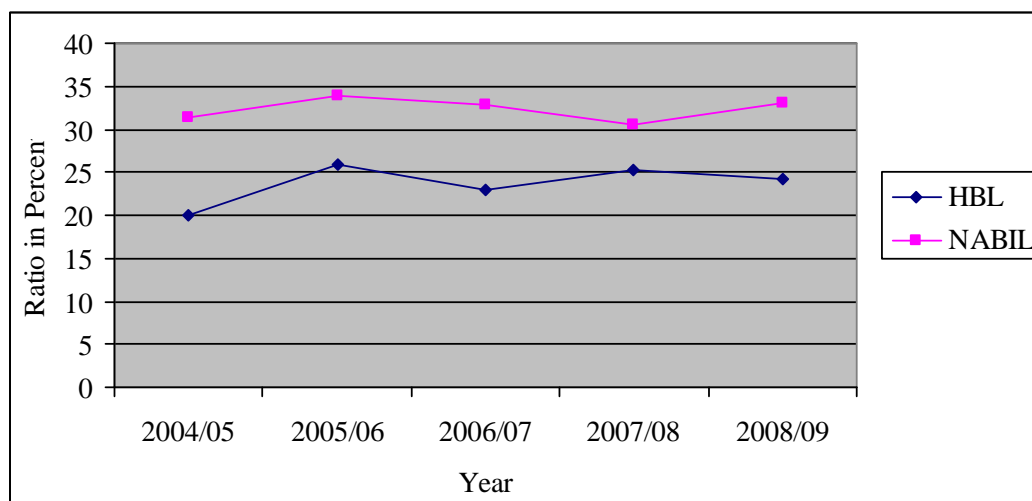
**Return on Equity Ratio**

Year	Ratio (%)	
	HBL	NABIL
2004/05	19.99	31.34
2005/06	25.90	33.91
2006/07	22.91	32.79
2007/08	25.30	30.60
2008/09	24.13	32.98
<b>Mean</b>	23.65	32.32
<b>S.D.</b>	2.343	1.333
<b>C.V.</b>	0.099	0.041

*Source: Annual Report of Concern Bank*

**Figure: 4.12**

**Return on Equity Ratio**



From the above table and figure, we notice that ROE of HBL and NABIL are fluctuating trend. NABIL seems successful in managing and utilizing the shareholder capital in order to generate revenue since its ROE ratio is higher than that of HBL (i.e. 32.32% > 23.65%) of total equity in an average. NABIL has also higher ratio in each year. However it noted that HBL is doing well in the latest year as it has increased its ROE in the latest year drastically. Lower C.V. and S.D. of NABIL

shows that it has consistencies in the ratios (i.e.  $0.041 < 0.099$ ). In conclusion NABIL has utilized its shareholder capital in order to generate revenue than HBL.

**(iv) 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:

$$\text{Total Interest Earned to Total Working Funds Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

**Table: 4.13**

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

Year	Ratio (%)	
	HBL	NABIL
2004/05	5.01	6.22
2005/06	5.32	5.87
2006/07	5.17	5.83
2007/08	5.43	5.33
2008/09	5.85	6.38
<b>Mean</b>	5.36	5.93
<b>S.D.</b>	0.318	0.406
<b>C.V.</b>	0.059	0.068

Source: Annual Report of Concern Bank

**Figure: 4.13**

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

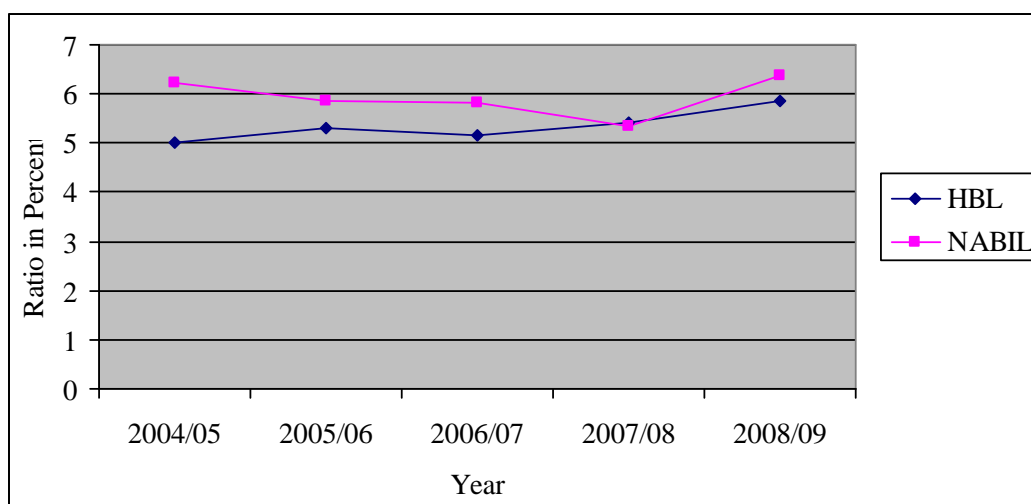


Table and Figure No 4.13 shows that HBL has increasing trend of ratio except in 2006/07 and NABIL has decreasing trend of ratio except in 2008/09. However, NABIL seems more conscious

about managing its assets in order to earn more interest ratio because it has higher ratio in many year except in 2007/08 and average ratio is also higher. HBL has 5.36% average ratio whereas NABIL shows 5.93% average ratio. The mean ratio of NABIL is more than that of HBL. In comparison, NABIL seems effective in earning interest to some extent but it must break the decreasing trend in coming year. HBL is effective in 2007/08 as it has higher ratio. Lower C.V. and S.D. of HBL shows that it has consistencies in the ratios.

**(v) 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: 4.14**

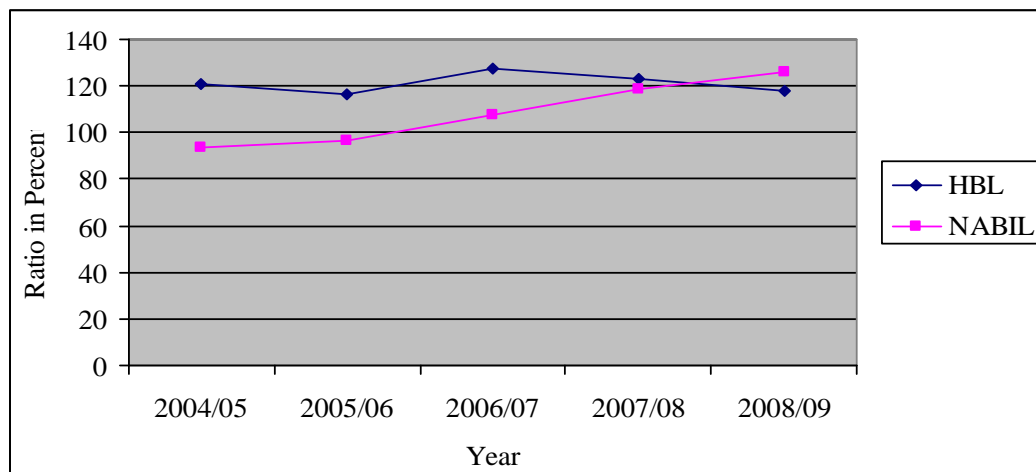
**Total Interest Earned to Total Operating Income Ratio**

Year	Ratio (%)	
	HBL	NABIL
2004/05	120.94	93.83
2005/06	116.72	96.36
2006/07	127.43	107.27
2007/08	122.92	118.45
2008/09	117.82	126
<b>Mean</b>	121.17	108.38
<b>S.D.</b>	4.282	13.878
<b>C.V.</b>	0.035	0.128

Source: Annual Report of Concern Bank

**Figure: 4.14**

**Total Interest Earned to Total Operating Income Ratio**



Above table and figure shows Interest Earned to Operating Income Ratio of HBL and NABIL. Both banks has fluctuating ratio during study period. HBL has greater share of total interest earn in its total operating income in all years. The mean ratio of HBL and NABIL are 121.17 % and 108.38% respectively. HBL has higher ratio, it indicates the high contribution in operating income made by lending and investing activities (core banking activity). NABIL has lower ratio, it indicates that high contribution in operating income do not made by lending and investing activities (core banking activity).High contribution in operating income made by lending and investing activities (core banking activity) is not good for long run but in short run it is not so bad. Thus, from short-term view, HBL is in good condition but from long-term view, NABIL is in good condition. In overall, NABIL has managed sound interest earned to operating income ratio. The S.D. and C.V of HBL is 4.282, 0.035 similarly NABIL has 13.878, 0.128. It indicates NABIL has relatively inconsistent in interest earned to total operating income as it has higher C.V than that of HBL.

**(vi) Total Interest paid to Total Working Fund Ratio**

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

$$\text{Total Interest Paid to Total Working Funds Ratio} = \frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

**Table: 4.15**  
**Total Interest Paid to Total Working Fund Ratio**

Year	Ratio (%)	
	HBL	NABIL
2004/05	1.95	1.42
2005/06	2.12	1.60
2006/07	2.24	2.04
2007/08	2.28	2.04
2008/09	2.33	2.63
<b>Mean</b>	2.18	1.95
<b>S.D.</b>	0.152	0.47
<b>C.V.</b>	0.07	0.241

*Source: Annual Report of Concern Bank*

**Figure: 4.15**

***Total Interest Paid to Total Working Fund Ratio***

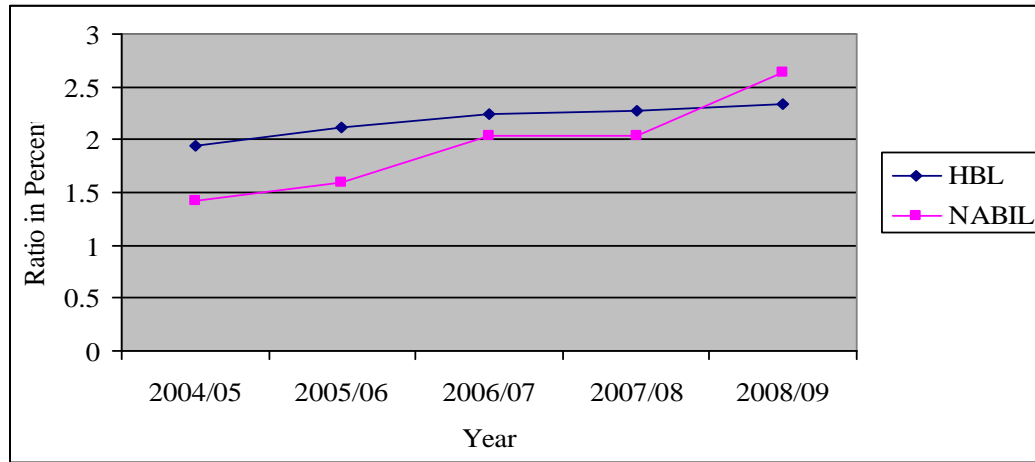


Table and Figure No 4.15 shows Total Interest Paid to Total Working Fund of HBL and NABIL has increasing trend. The highest ratio of HBL is 2.33 in 2008/09 and lowest ratio is 1.95 in 2004/05. Similarly highest ratio of NABIL is 2.63 in 2008/09 and lowest ratio is 1.42 in 2004/05. Due to the higher ratio in each year and average too of HBL, it seems less conscious about borrowing cheaper fund. Lower C.V of HBL shows that it has homogeneity in the ratios (i.e.  $0.07 < 0.241$ ).

**4.2.2 Identification of Credit Risk Management Through Risk Ratio**

Risk and uncertainty is a part of business loss. All the business activities are influenced by risk, so business organization can not 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 HBL and NABIL.

**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 no-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: 4.16**

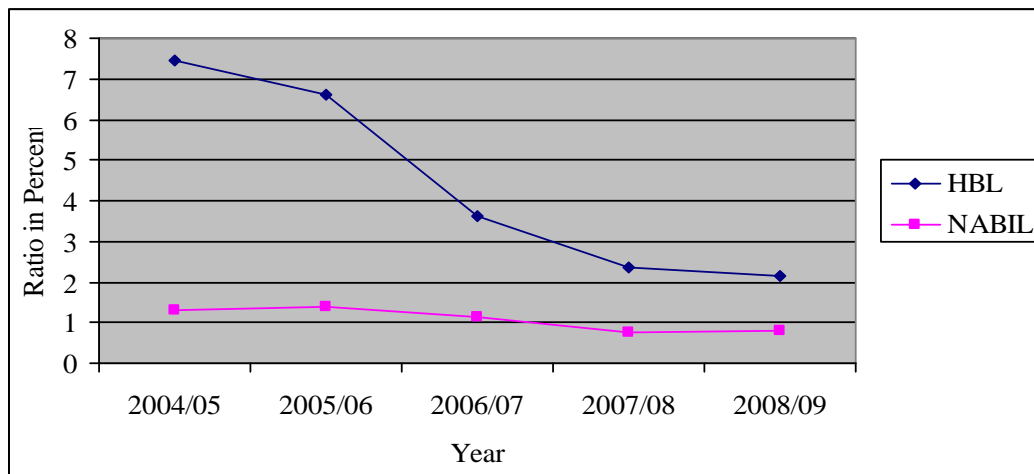
**Non performing loan to total loan and advances ratio**

Year	Ratio (%)	
	HBL	NABIL
2004/05	7.44	1.32
2005/06	6.60	1.38
2006/07	3.61	1.12
2007/08	2.36	0.74
2008/09	2.16	0.81
<b>Mean</b>	4.43	1.07
<b>S.D.</b>	2.443	0.29
<b>C.V.</b>	0.551	0.27

*Source: Annual Report of Concern Bank*

**Figure: 4.16**

**Non performing loan to total loan and advances ratio**



Above table and figure shows that NPL to total loan and advances of HBL is in decreasing trend and NABIL has fluctuating trend. Decreasing trend is the good sign of the efficient credit management. NABIL seems effective in all years due to low ratio but fluctuating tend. From mean point of view, non-performing loan to total loan and advances ratio of HBL and NABIL are 4.43% and 1.07% respectively during the study period. 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, NABIL has efficient operating of credit management than that of HBL from the mean point of view and individual ratios of each year.

**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:

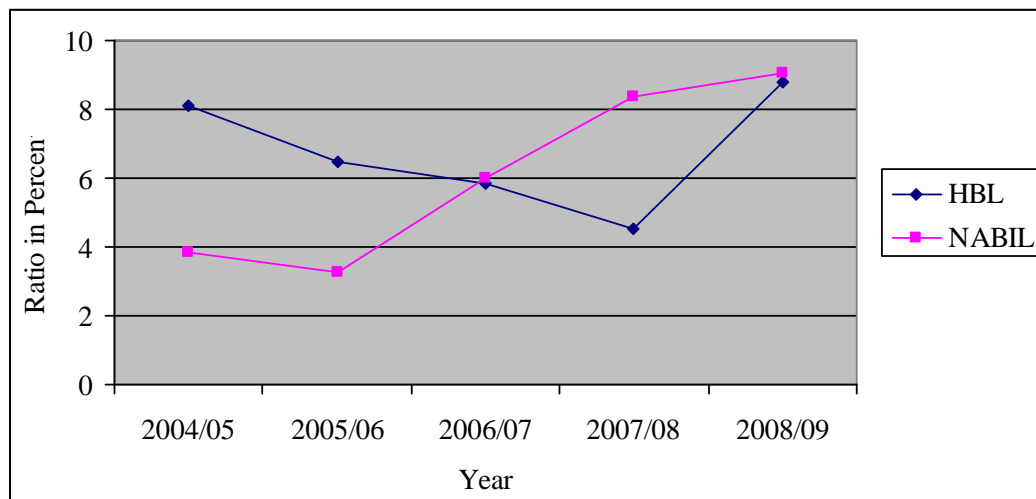
$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

**Table: 4.17**  
**Liquidity Risk Ratio**

Year	Ratio (%)	
	HBL	NABIL
2004/05	8.12	3.83
2005/06	6.48	3.26
2006/07	5.85	5.99
2007/08	4.55	8.37
2008/09	8.79	9.03
<b>Mean</b>	6.76	6.10
<b>S.D.</b>	1.715	2.596
<b>C.V.</b>	0.254	0.426

Source: Annual Report of Concern Bank

**Figure: 4.17**  
**Liquidity Risk Ratio**



From the Table and Figure No 4.17 analysis, cash and bank balance to total deposits ratio of the HBL is in decreasing trend except 2008/09 whereas ratio of NABIL is in increasing trend except 2005/06. The higher ratio of HBL and NABIL are 8.79% and 9.03% respectively in the year 2008/09



respectively. The average ratio of HBL is greater than that of NABIL (i.e. 6.76% > 6.10%). It signifies that HBL has sound liquid fund to make immediate payment to the depositors from the mean point of view. However if we see the latest data NABIL has sound liquid fund make immediate payment to the depositor.

**C) Credit 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 credit risk ratio shows proportion of non-performing assets in the total investment plus loan and advances of a bank it is computed as:

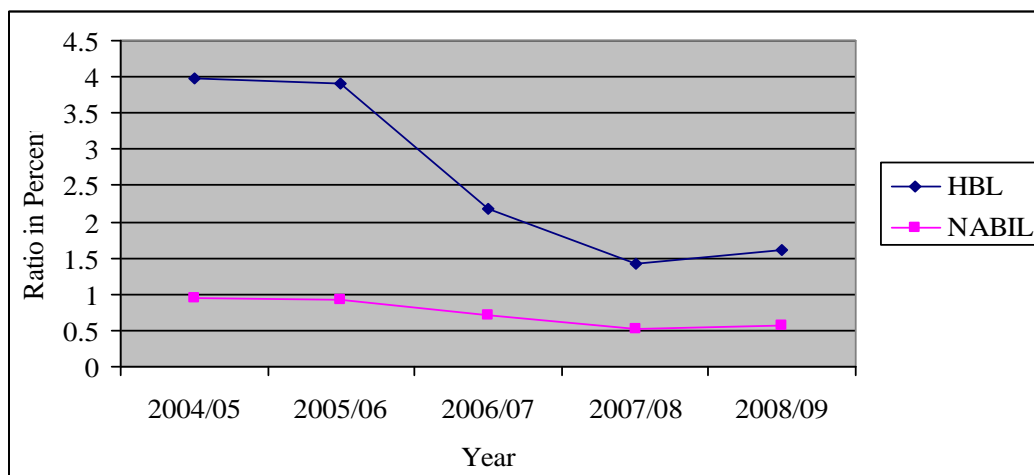
$$\text{Credit Risk Ratio} = \frac{\text{Nonperforming loan (NPL)}}{\text{Total Investment \& Loan and advances}}$$

**Table: 4.18**  
**Credit Risk Ratio**

Year	Ratio (%)	
	HBL	NABIL
2004/05	3.98	0.94
2005/06	3.91	0.93
2006/07	2.17	0.71
2007/08	1.42	0.51
2008/09	1.61	0.58
<b>Mean</b>	2.62	0.73
<b>S.D.</b>	1.243	0.197
<b>C.V.</b>	0.475	0.268

Source: Annual Report of Concern Bank

**Figure: 4.18**  
**Credit Risk Ratio**



The above table shows the credit risk ratio of HBL and NABIL. The analysis shows that HBL and NABIL have the credit risk ratio in decreasing trend beside 2008/09. HBL has highest and lowest ratio of 3.98% and 1.42% in the year 2004/05 and 2007/08 respectively. Similarly NABIL has the highest and lowest ratio of 0.94% and 0.51% in the year 2004/05 and 2007/08 respectively. The mean ratio of NABIL is lower than that of HBL (i.e.0.58% < 1.61%). Above data shows that HBL has the higher credit risk ratio. The following figure shows the credit risk ratio.

#### 4.2.3 Relationship between Total Investments, Deposits, Loans and Advances Net Profit and Asset Through 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.

##### A) Relationship between Total Deposits and Total Investment

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

**Table: 4.19**

#### Relationship between Total Deposits and Total Investment

Name of Bank	Base of Evaluation			
	r	r <sup>2</sup>	P.E.	6 x P.E.
<b>HBL</b>	-0.331	0.1096	0.2686	1.6116
<b>NABIL</b>	0.960	0.9216	0.0236	0.1419

*Source: Through SPSS Data Editor*

The Table No 4.19 shows that coefficient of correlation between deposits and investment of HBL is -0.331 i.e. negative correlation between these two variables. And the value of coefficient of determination (R<sup>2</sup>) is only 0.1096 which means 10.96% of investment decision depend upon deposit and only 89.04% investment is depend upon other variables. Similarly probable error is 0.2686 and 6 x P. E. is 1.6116 which shows that R is highly lower than 6 x P. E. Therefore it reveals that relationship between deposits and investment is insignificant.

Likewise, in case of NABIL, coefficient of correlation between investment and deposit ( $r$ ) is 0.960 that means there is a high degree of positive correlation between two variables. The value of coefficient of determination ( $R^2$ ) is also 0.9216 which means 92.16% of investment decision depend upon deposit and 7.74% investment is depend upon other variables. Similarly probable error is 0.0236 and  $6 \times P. E.$  is 0.1419 which shows that  $R$  is greater than  $6 \times P. E.$  Therefore it reveals that relationship between deposit and investment is significant i.e. correlation is certain. This correlation coefficient indicates that the NABIL has performed better a little bit in order to provide investment through deposit than that of HBL.

### **B) Relationship between Total Deposits and Loans and Advances**

The following table describes the relationship between total deposits and loan and advances of HBL and NABIL with comparatively under five-year period. In this case, total deposits are independent variable say ( $X$ ) and loan and advances is dependent variable say ( $Y$ ).

**Table: 4.20**

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

Name of Bank	Base of Evaluation			
	$r$	$R^2$	P.E.	$6 \times P.E.$
<b>HBL</b>	0.973	0.9467	0.01607	0.0964
<b>NABIL</b>	0.989	0.9781	0.0066	0.0396

*Source: Through SPSS Data Editor*

From the Table 4.20 we can find that the coefficient of correlation between deposits and loan and advances of HBL and NABIL are 0.973 and 0.989 respectively. This shows the positive relationship between these two variables i.e. loan and advances and deposits of both banks. By considering coefficient of determination ( $R^2$ ), the value of  $R^2$  is 0.9467 incase of HBL and 0.9781 incase of NABIL. The value of  $R^2$  of HBL is 0.9467, which means only 94.67% of loan and advances decision is determined by deposit and rest 5.33% loan and advances depend upon other variables. The value of  $R^2$  of NABIL is 0.9781, which means that 97.81% of loan and advances is determined by deposit and only 2.19% loan and advances depend upon other variables.

In view of the probable error of HBL and NABIL, the value of  $R$  of HBL and NABIL are more than the 6 times of P.E, which indicate there is significant relationship between deposits and loan and advances of both banks.

### C) Co-efficient of Correlation between Loan and advance and Net Profit

Co-efficient of correlation between total assets and net profit is used to measure the degree of relationship between two variable i.e. Loan and advance and net profit of HBL and NABIL 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 HBL and NABIL for the study period.

**Table No. 4.21**  
**Correlation between Loan and Advance and Net profit**

Name of Banks	Evaluation Criterions			
	r	R <sup>2</sup>	P.Er.	6 P.Er.
HBL	0.977	0.9545	0.0137	0.0823
NABIL	0.968	0.9370	0.0190	0.1140

*Source: Through SPSS Data Editor*

Above table shows correlation coefficient between, Loan and advance and net profit is 0.977 of HBL. It refers that there is positive correlation between these two variables. Here, 95.45 percent of net profit is contributed by Loan and advance as its coefficient of determination of 0.9545 shows. Moreover, this relationship is significant because the coefficient of correlation is more than 6 P.Er. Likewise NABIL also high degree positive correlation i.e. 0.968 between Loan and advance and net profit. The coefficient of determination R<sup>2</sup> is 0.9370, which indicates that 93.70 percent variability in net profit is explained by Loan and advance. Moreover, more correlation coefficient than 6P.Er. Shows that the relationship between Loan and advance and net profit is significant for NABIL. In conclusion, HBL has more significant relationship between Loan and advance and net profit than that of NABIL.

### D) 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 2004/05/04 to 2008/09.

**Table No. 4.22**

**Correlation between Total Investment and Net Profit**

Name of Banks	Evaluation Criteria			
	r	R <sup>2</sup>	P.Er.	6 P.Er.
HBL	-0.379	0.1436	0.2583	1.5499
NABIL	0.854	0.7293	0.08165	0.4899

*Source: Through SPSS Data Editor*

Above table shows correlation coefficient between total investment and net profit of HBL is -0.379 which implies there is negative correlation between total investment and net profit. In addition, coefficient of determination of HBL is only 0.1436. It means only 14.36 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 less than 6P.Error. On the other hand NABIL has positive correlation between total investment and net profit i.e. 0.854. The coefficient of determination of NABIL is 0.7293 it means 72.93 percent of Profit is contributed by total investment. This relationship is significant as its correlation coefficient is more than 6 P.Er. Thus it can be concluded that the degree of relationship between total investment and net profit of HBL and NABIL nearly same. This correlation coefficient indicates that the NABIL has performed better a little bit in order to generate net profit through investment than that of HBL.

**E) Coefficient of correlation of Total Deposit between HBL and NABIL**

Coefficient of correlation of total deposit between HBL and NABIL and shows their linear relationship.

**Table No. 4.23**

**Correlation between Total Deposit of HBL and NABIL**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.992	0.9841	0.0048	0.0288

*Source: Through SPSS Data Editor*

This table shows how the total deposit of HBL and NABIL is positively related. 0.992 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 high than 6 P.Er. As the 0.9841 of coefficient of determination, this shows the 98.41 percent of the degree of relationship.

The degree of relationship between these two banks is also high.

**F) Coefficient of correlation of Total Investment between HBL and NABIL**

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

**Table No. 4.24**  
**Correlation between Total Investment of HBL and NABIL**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
-0.193	0.0372	0.2904	1.7425

*Source: Through SPSS Data Editor*

The above table reveals that there is negative correlation between HBL and NABIL in case of total investment. It implies that the total investment of HBL and NABIL don't move in the same direction. Here  $R < 6$  P.Er. Therefore, correlation coefficient is insignificant. This can be said that HBL and NABIL increase its total investment as different direction. The coefficient of determination is 0.0372, which shows the only 3.72 percent of the degree of relationship.

**G) Coefficient of Correlation of Loan & Advances between HBL and NABIL**

The coefficient of correlation of loan & advances between HBL and NABIL has been given below.

**Table No. 4.25**  
**Correlation between Loan & Advances of HBL and NABIL**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.991	0.9821	0.0054	0.0324

*Source: Through SPSS Data Editor*

Above table shows that there is high degree positive correlation between the loan & advances of HBL and NABIL. The correlation coefficient between two banks is 0.991. 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 0.9821, which shows the 98.21 percent of the degree of relationship.

## H) Coefficient of Correlation of Net Profit between HBL and NABIL

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

**Table No. 4.26**

### **Correlation between Net Profit of HBL and NABIL**

Evaluation Criteria			
R	R <sup>2</sup>	P.Er.	6 P.Er.
0.950	0.9025	0.0294	0.1765

*Source: Through SPSS Data Editor*

Above statistics shows that there is high degree positive correlation between profits of HBL and NABIL, which is indicated by correlation coefficient of 0.950, This relationship is significant because its correlation coefficient is more than 6 P.Er. The coefficient of determination is 0.9025 which shows the 90.25 percent of the degree of relationship.

## 4.3 Regression Analysis

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

### A) Regression 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 Himalayan Bank Limited and Nabil bank for further eight year

$$Y = a + bx$$

Where,

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

X = deviation from some convenient time periods.

Let regression line be

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

Where x = X - Middle year

Here,

$$a = SY/N$$

$$b = SXY/SX^2$$

HBL

NABIL

$$a = 29575$$

$$a = 529.25$$

$$b = 2508.661$$

$$b = 106.752$$

$$Y_c = 29575 + 2508.661 X \text{ HBL}$$

$$Y_c = 25419.73 + 5719.35 X \text{ NABIL}$$

**Table No. 4.27**

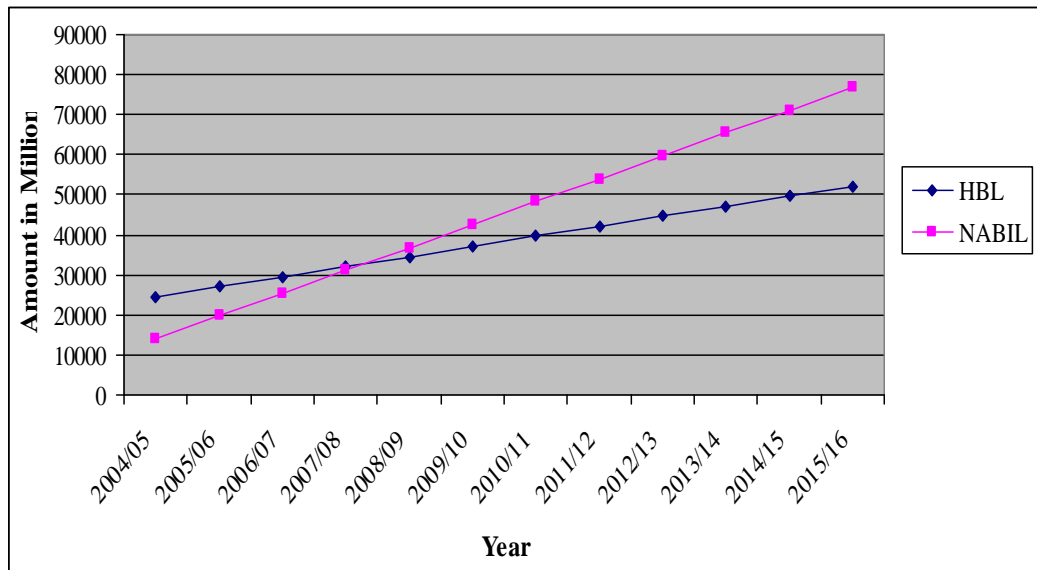
Regression Analysis of Total Deposit of HBL and NABIL		
Year(x)	HBL	NABIL
2004/05	24557.68	13981
2005/06	27066.34	19700.4
2006/07	29575	25419.7
2007/08	32083.66	31139.1
2008/09	34592.32	36858.4
2009/10	37100.98	42577.8
2010/11	39609.64	48297.1
2011/12	42118.31	54016.5
2012/13	44626.97	59735.8
2013/14	47135.63	65455.2
2014/15	49644.29	71174.5
2015/16	52152.95	76893.9

*Source:* Annul Report of Concern Bank



Figure No 4.19

**Regression Line of Total Deposit of HBL and NABIL**



Above table and figure shows that total deposit of NABIL and HBL. Both Banks is in increasing trend. The rate of increment of total deposit for NABIL seems to be higher than that of HBL. The increasing trend of total deposit of NABIL is more aggressive and high rather than HBL. It indicates NABIL has more prospect of collecting Total deposit. The regression analysis has projected deposit amount in fiscal year FY 2008/09 to FY 2015/16. From the above regression analysis it is clear that NABIL has higher position in collecting deposit than HBL.

**B) Regression Analysis of Loan & advances**

Here, the trend values of loan & advances Between NABIL and HBL have been calculated for further Eight year. The following Table shows the actual and trend values of NABIL and HBL.

$$Y = a + bx$$

Where,

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

X = deviation from some convenient time periods.

Let regression line be

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

Where x = X - Middle year

Here,

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

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

HBL

$$a = 18541.199$$

$$b = 2855.434$$

$$Y_c = 18541.199 + 2855.434 X \text{ HBL}$$

$$Y_c = 17601.89 + 4245.003 X \text{ NABIL}$$

NABIL

$$a = 17601.89$$

$$b = 4245.003$$

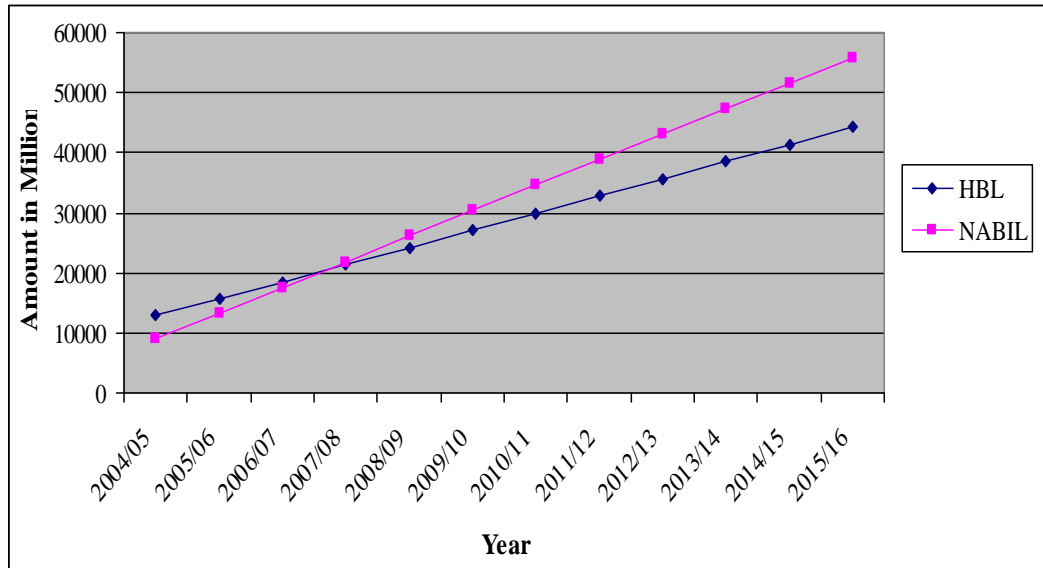
**Table No. 4.28**

<b>Regression Analysis of Total Loan and Advance of HBL and NABIL</b>		
Year(x)	HBL	NABIL
2004/05	12830.33	9111.88
2005/06	15685.77	13356.9
2006/07	18541.2	17601.9
2007/08	21396.63	21846.9
2008/09	24252.07	26091.9
2009/10	27107.5	30336.9
2010/11	29962.94	34581.9
2011/12	32818.37	38826.9
2012/13	35673.8	43071.9
2013/14	38529.24	47316.9
2014/15	41384.67	51561.9
2015/16	44240.11	55806.9

*Source:* Annul Report of Concern Bank

Figure No 4.20

**Regression line of Total Loan and Advance of HBL and NABIL**



Above table and figure depicts that loan & advances of NABIL and HBL. Both Banks has in increasing Regression. The increasing trend of NABIL is higher than HBL. The actual value of loan & advances for HBL is quite fluctuating in relation to NABIL. The trend projected for further seven year FY 2008/09 to FY 2015/16 From the above analysis, it is clear that both NABIL and HBL is mobilizing its collected deposits and other funds in the form of loan & advances. Above table and figure shows the NABIL has highly mobilizing loan & advances than the HBL.

**C) Regression Analysis of Total Asset**

Under this topic, an attempt has been made to analyze regression analysis total asset of HBL and NABIL for further seven years

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

X = deviation from some convenient time periods.

Let regression line be

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

Where x = X - Middle year

Here,

a =

b =

HBL

NABIL

a = 34134.066

a = 29553.97

$$b = 2862.85$$

$$b = 6816.49$$

$$Y_c = 34134.066 + 2862.85 X \text{ HBL}$$

$$Y_c = 29553.97 + 6816.49 X \text{ NABIL}$$

**Table No. 4.29**

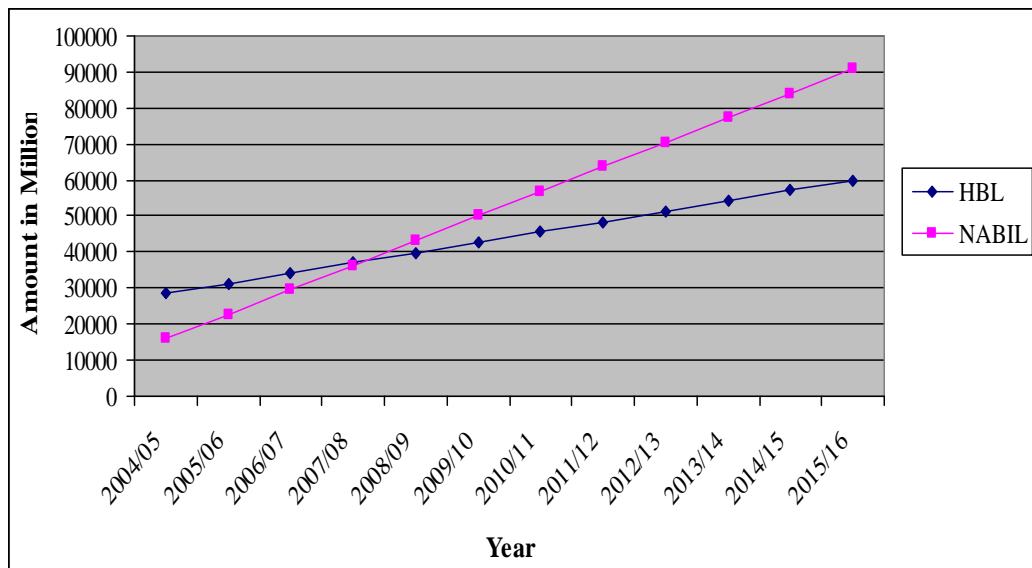
Regression Analysis of Total Asset Between HBL and NABIL		
Year(x)	HBL	NABIL
2004/05	28408.37	15921
2005/06	31271.22	22737.5
2006/07	34134.07	29554
2007/08	36996.92	36370.5
2008/09	39859.77	43187
2009/10	42722.62	50003.4
2010/11	45585.47	56819.9
2011/12	48448.32	63636.4
2012/13	51311.17	70452.9
2013/14	54174.02	77269.4
2014/15	57036.87	84085.9
2015/16	59899.72	90902.4

Source: Annul Report of Concern Bank

Appendix - 3

**Figure No 4.21**

**Regression Line of Total Asset between HBL and NABIL**



Above table and figure shows the regression of Total asset between NABIL and HBL. Both Bank NABIL and HBL have increasing trend in total asset. NABIL has little high and upward trend of

increasing, but HBL has moderately increasing trend of asset. The trend of total asset projected to FY 2015/16. The forecasted trend projected that the NABIL has greater increment rate in total asset than the increment rate of HBL. The figure indicates NABIL has highly mobilized the total asset rather than HBL.

**D) Regression Analysis of Net Profit**

Here, the regression values of net profit of NABIL and HBL have been calculated for five years FY 2004/05 to FY 2008/09 and forecasting for the next eight year till FY 2015/16.

$Y = a + bx$

Where,

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

X = deviation from some convenient time periods.

Let regression line be

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

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

Here,

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

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

HBL

NABIL

$a = 721.212$

$a = 529.25$

$b = 113.467$

$b = 106.752$

$Y_c = 721.212 + 113.467 X \text{ HBL}$

$Y_c = 529.25 + 106.752 X \text{ NABIL}$

**Table No. 4.30**

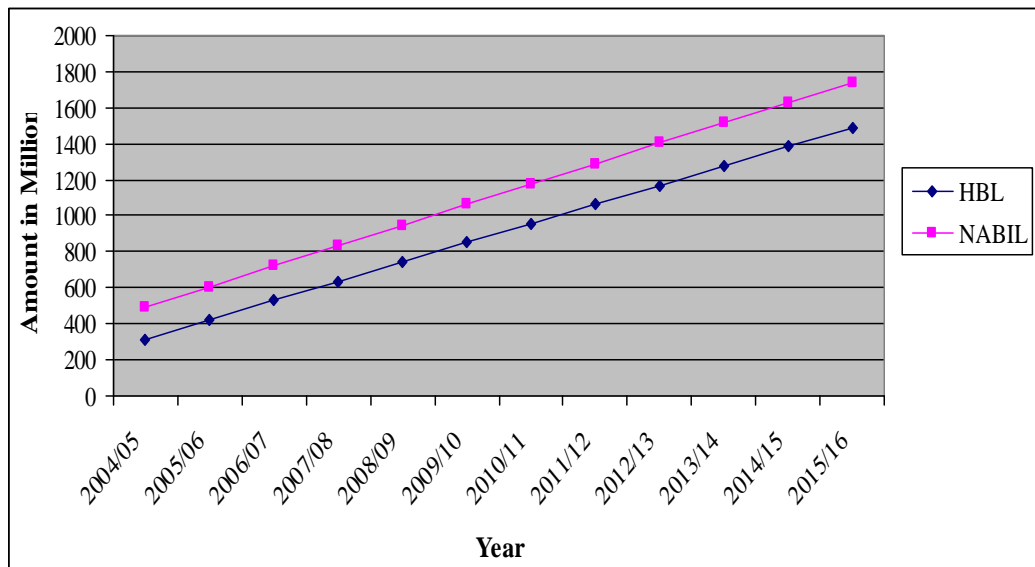
Regression Analysis of Net Profit Between HBL and NABIL		
Year(x)	HBL	NABIL
2004/05	315.746	494.278
2005/06	422.498	607.745
2006/07	529.25	721.212
2007/08	636.002	834.679
2008/09	742.754	948.146
2009/10	849.506	1061.61
2010/11	956.258	1175.08
2011/12	1063.01	1288.55
2012/13	1169.762	1402.01
2013/14	1276.514	1515.48
2014/15	1383.266	1628.95
2015/16	1490.018	1742.42

Source: Annual Report of Concern Bank

Appendix - 4

**Figure No 4.22**

**Regression line of Net Profit between HBL and NABIL**



The above table and figure reveals the trend of Net profit of HBL and NABIL. Net profit both bank HBL and NABIL forecasted in increasing trend. The trend of increasing value of net profit of HBL is aggressive than NABIL. The net profit of HBL and NABIL has been increasing every year by Rs.113.467 million and Rs. 106.752 million respectively. The trend of Net profit projected to FY

2015/16 i.e. further seven year. Above statistics shows that both the banks have inconsistent net profit throughout the study period. In conclusion, NABIL is doing better in order to generate net profit during the projected study period in conclusion the prospect of profit generating capacity of HBL is high than the NABIL.

#### **4.4 Major Findings of the Study**

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

- 1) In an average, liquidity position of NABIL is greater than HBL i.e.  $1.71 > 1.12$  due to high mean ratio. So, NABIL is sound in meeting short-term obligation than HBL. Likewise, S. D. and C.V. of HBL is less than NABIL i.e.  $0.414 < 0.0495$  and  $0.243 < 0.0442$ . It can be said that current ratio of HBL is more consistent than NABIL. However they have not met the standard ratio.
- 2) The mean ratio of cash and bank balance to total deposits of HBL is higher than NABIL. It means the liquidity position of HBL is higher than NABIL. It shows the higher position regarding the meeting of demand of its customer on their deposit at any time than NABIL. However if we see the latest data NABIL has sound liquid fund make immediate payment to the depositor.
- 3) The average study of cash and bank balance to current assets ratio of NABIL is higher than HBL. It shows that HBL has taken more risk to meet the daily requirement of its customer's deposit than NABIL. In the preceding three years HBL had higher ratio and in succeeding two years NABIL has higher ratio. According to the each year data in the preceding three years HBL was in good condition and in succeeding two years NABIL is in good condition.
- 4) Mean ratio of current assets on government securities HBL and NABIL are 23.29% and 24.87% respectively. NABIL has higher ratio except in 2005/06 and 2007/08 and mean too. It means NABIL has invested more money in risk free assets than that of HBL. In another word HBL has emphasizes on more loans and advances and other short term investment than investment in govt. securities. However in the latest year HBL has invested more in govt. securities out of its current assets than that of NABIL.
- 5) In average HBL has mobilized 61.16% of its collected deposit in loan and advances that is less than that of NABIL (i.e.70.77%). According to NRB directives above 70% to 90% of loan and advances to total deposit ratio is able to better mobilization of collected deposit. So HBL hasn't met the NRB requirement or they haven't properly utilized its deposit to provide loan, but NABIL meet the NRB requirement.

- 6) The mean ratio of the total investment to total deposit HBL and NABIL are 38.92% and 31.93% respectively so HBL has higher ratio. It signifies HBL has successfully allocated its deposit in investment portfolio in comparison with NABIL.
- 7) Loan and advances to total assets ratio of HBL is in increasing trend whereas ratio of NABIL is in fluctuating trend. While observing their ratios, NABIL is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio in each year and mean too.
- 8) Mean ratio of investment in govt. securities out of its total assets HBL and NABIL are 17.47% and 13.36% respectively. HBL has higher ratio than NABIL. HBL has invested more money in risk free assets out of its total assets. In another word NABIL has emphasizes on more loans and advances and other short term investment than investment in govt. securities out of its total assets
- 9) Mean ratio of investment on share and debenture to total working fund HBL and NABIL are 0.19% and 1.16% respectively. NABIL has higher ratio in every year and mean too. It means NABIL has invested more money in risky assets out of its total assets than that of HBL. In another word HBL has emphasizes on more govt. securities rather than investment on share and debenture out of its total assets.
- 10) NABIL has higher return on loan and advances in each year and mean too. So it seems successful by generating higher ratio. It can be concluded that NABIL has better utilized the loan and advance for the profit generation in comparison with HBL. However if we see the latest data HBL has improved it self. It is bad aspect of NABIL as it has decreasing trend.
- 11) NABIL seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of HBL (i.e. 2.54% > 1.45%) of total assets in an average. NABIL has also higher ratio in each year. However it noted that HBL is doing well in the latest year whereas NABIL is not doing well in the latest year as it has decreasing trend of ratios.
- 12) NABIL seems successful in managing and utilizing the shareholder capital in order to generate revenue since its ROE ratio is higher than that of HBL (i.e. 32.32% > 23.65%) of total equity in an average. NABIL has also higher ratio in each year. However it noted that HBL is doing well in the latest year as it has increased its ROE in the latest year drastically whereas NABIL is not doing well in the latest year as it has decreasing trend of ratios.
- 13) NABIL seems more conscious about managing its assets in order to earn more interest ratio because it has higher ratio in many years except in 2007/08 and average ratio is also higher.



HBL has 5.36% average ratio whereas NABIL shows 5.93% average ratio. The mean ratio of NABIL is more than that of HBL. In comparison, NABIL seems effective in earning interest to some extent but it must break the decreasing trend in coming year.

- 14) The mean ratio of Interest Earned to Operating Income of HBL and NABIL are 121.17 % and 108.38% respectively. HBL has higher ratio, it indicates the high contribution in operating income made by lending and investing activities (core banking activity). NABIL has lower ratio, it indicates that high contribution in operating income do not made by lending and investing activities (core banking activity). High contribution in operating income made by lending and investing activities (core banking activity) is not good for long run but in short run it is not so bad. Thus, from short-term view, HBL is in good condition but from long-term view, NABIL is in good condition. In overall, NABIL has managed sound interest earned to operating income ratio.
- 15) HBL has increasing trend of interest paid to working fund ratio whereas NABIL has fluctuating trend of ratio. Due to the higher ratio in each year and average too of HBL, it seems less conscious about borrowing cheaper fund.
- 16) NABIL seems effective in all years in the ratios of NPL to total loan and advances. From mean point of view, non-performing loan to total loan and advances ratio of HBL and NABIL are 4.43% and 1.07% respectively during the study period. 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, NABIL has efficient operating of credit management than that of HBL from the mean point of view and individual ratios of each year.
- 17) The mean ratio of liquidity risk of HBL is higher than NABIL. It means HBL has sound liquid fund to make immediate payment to the depositors However if we see the latest data NABIL has sound liquid fund make immediate payment to the depositor.
- 18) In case of credit risk ratio, HBL has the higher risk than NABIL. However both banks have decreasing trend of credit risk. The average ratio of HBL is greater than that of NABIL (i.e.  $2.62 > 0.72\%$ ).
- 19) NABIL has the higher degree of correlation coefficient between deposit and investment. But HBL has negative correlation. It states that NABIL is in better position in the mobilization of deposits as investment. There is significant relationship between correlation of coefficient of deposit and investment of NABIL and HBL has insignificant relationship between correlation of coefficient of deposit and investment.

- 20) Correlation coefficient between deposit and loan and advances of HBL is a little bit lower than NABIL. It indicates that NABIL is successfully mobilizing its deposits as loan and advances a little bit. There is significant relationship between correlation coefficient of deposits and loan and advances HBL and NABIL
- 21) HBL has more significant relationship between Loan and advance and net profit than that of NABIL. And both have significant result.
- 22) The degree of relationship between total investment and net profit of NABIL is 0.854 But HBL has negative. This correlation coefficient indicates that the NABIL has performed better than HBL. NABIL banks have significant and HBL has insignificant result in this regard.
- 23) Total deposit of HBL and NABIL is positively related. 0.992 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 high than 6 P.Er. As the 0.9841 of coefficient of determination, this shows the 98.41 percent of the degree of relationship. The degree of relationship between these two banks is also high.
- 24) There is negative correlation between HBL and NABIL in case of total investment. It implies that the total investment of HBL and NABIL move in different direction. Here  $R < 6$  P.Er. Therefore, correlation coefficient is insignificant. This can be said that both HBL and NABIL increase its total investment as same direction but in the form moderate. The coefficient of determination is 0.0372, which shows the only 3.72 percent of the degree of relationship.
- 25) There is high degree positive correlation between the loan & advances of HBL and NABIL. The correlation coefficient between two banks is 0.991. 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 0.9821 which shows the 98.21 percent of the degree of relationship.
- 26) There is high degree positive correlation between profits of HBL and NABIL, which is indicated by correlation coefficient of 0.950, This relationship is significant because its correlation coefficient is more than 6 P.Er. The coefficient of determination is 0.9025 which shows the 90.25 percent of the degree of relationship.
- 27) NABIL and HBL have increasing trend in collecting deposit the rate of increment of total deposit for NABIL seems to be higher than that of HBL Here NABIL has better position in collecting deposit than HBL.

28) The regression line of loan & advances for both banks is upward slopping. It refers that both the banks are increasing in disbursement of loan & advances. The regression line of loan and advances for NABIL seems high growing than HBL. It refers that NABIL is more aggressive in mobilizing its loan and advance.

29) The total investment regression line of NABIL and HBL is upward slopping where as NABIL has aggressive upward slopping of total investment regression line. It refers that NABIL has better increasing regression of total investment than HBL.

The regression line of Net profit for NABIL and HBL is upward slopping But NABIL has aggressively and HBL has smoothly. The position of NABIL is better in order to generate profit than HBL

## **CHAPTER -V**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

The researcher has identified that the background of the topic, history, research problem and set objectives to solve research problems, investment policy of selected commercial banks and are described in introduction chapter. The first chapter give the overall view, procedures, and the basic concept of the thesis as well as it also present the systematic presentation and finding of the study.

To make this study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to under take this research more precisely. This section also includes concept of banking, commercial banks, joint venture banks, investment and investment policy. This chapter is categorized by two topics: the conceptual review and review of journal and articles, which also include the unified NRB directives,2010, risk measurement and risk weight on the basis of the consensus country risk scores. The related journal and articles has been reviewed to get the basic knowledge and the view of different literature. This chapter also includes the different review of previous thesis which help to know their objectives, problems and finding, which also provide the guidelines and techniques for the further process of the research.

Research methodology has been described in 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. This chapter includes 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, official report, economic journal, financial statement of Concern Company etc. The five 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, regression

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.

## **5.2 Conclusion**

The overall aspect of liquidity position of NABIL is comparatively better than HBL. But the cash and bank balance to total deposit in the preceding years and investment to govt. securities to current assets in the succeeding years of HBL is better.

According to the mean ratio, Assets management aspect of NABIL is better than HBL which is justified by higher Mean loan & advances to total deposit ratio, loan & advances to total assets, lower interest earned to operating ratio, higher interest earned to total assets ratio, investment in share and debentures to total assets for NABIL whereas investment to total deposit ratio and investment on govt. securities to total assets of HBL is higher. All these ratios show that NABIL has emphasis on loan and advances out of its total assets rather than investment (i.e. investment in other sector and investment in risk free assets). It shows that NABIL has taken more risk than that of HBL. HBL has comparatively more investment in govt. securities and other investment which is less productive however it is low risky.

Overall profitability ratios show that NABIL has earned higher profit in relation to every aspects of the bank than HBL which is justified by higher mean return on loan and advances, return on total assets, return on equity, total interest earned to total working fund, lower interest earned to total operating ratio, lower interest paid to total assets of NABIL. However if we see the latest data HBL has done well in many aspects of profitability ratio which is justified by the increasing trend of return on total loan ratio, return on total assets ratio, return on equity ratio, total interest earned to total working fund.

NABIL has better management of loan & advances because of having lower average non performing loan & advances to total loan ratio. Both banks have decreasing trend of ratio which is the good indication of credit management. Liquidity risk of HBL is lower from the mean point of view. In the latest years NABIL has lower liquidity risk.

While observing mean ratio and individual ratio NABIL has lower credit risk However HBL has also decreasing trend of ratios.

Both commercial banks HBL and NABIL have positive correlation between deposit and loan & advances, total assets and net profit, but there negative correlation between deposit and total investment & total investment and net profit of HBL. Comparatively NABIL has strong relationship between these variables. It is also found that there is positive correlation between total deposit, loan & advances, net profits, total investment of two banks. Total deposit, loan & advances, net profit of HBL and NABIL are in increasing trend.

From the entire research study, overall all financial performance of NABIL is better than HBL. But HBL is also operating smoothly in many aspects.

Similarly, NABIL and HBL are adopting active in some cases and passive investment policy in some cases. Commercial banks are not providing investment priority to the rural sectors but being a developing country it is very necessary to give investment priority to the rural area. Therefore, the banks should formulate sound credit and investment policies which can minimize interest rate spread and non-performing assets. Good credit and investment policy ensures maximum amount of credit to all sectors with proper utilization.

### **5.3 Recommendations**

On the basis of entire research study, analysis and observation, the following recommendations are given to HBL bank and NABIL bank is presented below, which would help to draw some outline and make reforms in the respective banks.

#### **Better Liquidity Position**

Generally banks have to maintained liquid assets. The current ratio of the two banks, HBL and NABIL is greater than one but less than two. This can be regarded as normal liquidity position. The liquidity position affects external and internal factors such as prevalent investment situations, central bank requirements and so on. Considering the growth position of financial market, the lending policy management capabilities, strategic planning and fund flow situation, bank should maintain enough liquid assets to pay short-term obligations. However it is recommended to maintain sound liquidity position to HBL and NABIL by creating current ratio 2:1.

#### **Invest More in Government Securities**

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, it has found that NABIL has not made significant

amount of fund in Government securities. NABIL is recommended to invest more funds in Government securities instead of keeping them idle.

### **Follow liberal Lending Policy**

To get success in competitive banking environment, deposit must be utilized as loan & advances. The largest item of bank assets side is loan & advances. It has been found in the overall years that HBL's loan & advances to total deposit ratio is lower than that of NABIL. It means HBL has not properly used their existing fund as loan & advances in the all years. So HBL is recommended to follow liberal lending and credit policy and to invest more deposit in loan & advances.

### **Evaluate Investment Opportunities & Identify Possible Risk**

NABIL has a large possible risk because there is large amount of doubtful loan & advances and risky investment in shares and debenture. So it is recommended to evaluate the investment opportunities and alternatives using statistical, capital budgeting and other financial tools to avoid large amount of doubtful debt and risk.

### **Diagnosis the Causes of Increasing Non-performing Assets**

Non-performing assets are higher in HBL according to the individual and mean though it has lower loan and advances to total deposit. The recovery of loan & advances is most challenging job to the bank. So HBL should diagnosis the root cause of higher non-performing assets. The bank should try to analyze thoroughly the financial strength of their borrowers before granting loan and advances.

### **Formulate Sound and Effective Credit and investment Policy**

Both the banks are recommended to formulate and implement the sound and effective credit and investment policy to increase volume of total investment and loan & advances that helps to meet required level of profitability as well as social responsibility. The banks should consider rural areas in making investment policy.

### **Create New Opportunity for Investing Areas**

Last political instability directly affected the economic sector such as hotel & tourism, hydropower, other manufacturing and trading sector. Bank loan & 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.

## BIBLIOGRAPHY

- Adhikari, S. P. (2002). *Scope of Inter-Bank Business* (Seventh Edition), Kathmandu: Indu Chhapakhana.
- Bajracharya, B. B. (2047 B.S.). *Monetary Policy and Deposit Mobilization in Nepal*, Rajat Jayanti Smarika, Kathmandu: Rastriya Banijya Bank., 124
- Baxley, J. B. (1987), *Banking Management*. New Delhi: Subject publication.
- Bhalla, V.K. (1997). *Investment Management*, (Fourth Edition) New Delhi: S. Chand & Company Ltd.
- Bishal, S. (2007). *Lending Policy oan and credit management of Joint Venture Banks*. An Unpublished Master's Degree Thesis, Kathmandu: T.U.
- Chaudhary, A. K. & Sharma P. K. (2058), *Statistical Methods*, First Edition, Kathmandu: Khanal Books Prakshan.
- Crosse, H.K. (1963). *Management Policies for Commercial Banks*, Second Edition, New Jersey: Englewood Cliffs, Prentice Hall, Inc.
- Chhetri, Deependra B. (2003), *Non-Performing Assets: A Need for Rationalization*, Nepal Rastra Bank Samachar, Kathmandu: NRB, 114-117.
- Desai, V.R. Mutalik (1967). *Banking Development in India*, Bombay: Pc Mansktol and Sons Pvt. Ltd.
- Dungana, Bhisma Raj (2004). *Banking Promotion*, A Journal of Banking Promotion Committee, Kathmandu: NRB, 9: 125-127
- Francis, J. C. (1991). *Investment Analysis and Management*, New York: Mc Graw Hill, International Edition.
- Gittman and Jochnk, L.J. (1990). *Fundamental of Investment*, New York: vv Harper and Row Publisher.
- Gupta, G.P. (1984). *Banking System, its Role in Export Development*, New Delhi: S. Chand and Company.
- Ghimire, (2004). *Credit Sector Reform and NRB"*, New Business Age, Vol-6:47-49
- Kothari, C.R. (1992). *Quantitative Techniques*, New Delhi: Vikash Publishing House Pvt. Ltd.
- Khatti, (2004). *"One Umbrella Act's Pros and Cons"*, New Business Age, Vol.3:18-20
- Limbu, Ram (2008), *Credit Management of NABIL Bank Limited*. An Unpublished Master's Degree Thesis, Kathmandu: Shanker Dev Campus.



- Munakarmi, S. P. (2002), *Management Accounting*, Kathmandu: Buddha Academic Enterprises Pvt. Ltd.
- Miller, M. and Merto, H. (1995). *Investment and Risk Analysis*, New Delhi: Prentice Hall of India Pvt. Ltd.
- Nelson, M. Waweru (2009), “*Commercial banking crises in Kenya: causes and remedies*”
- Pandey, I. M. (1975), *Financial Management*, New Delhi: Vikash Publishing House Pvt. Ltd.
- Pradhan, R. S. (1998), *Financial Management Practice in Nepal*, New Delhi: Vikash Publishing House.
- Pierpaolo Grippa, S. Iannotti and Fabrizio Leandri (2006), “*Italian Banks’ Workout Activity: Costs, Timing and Recovery Rates*”
- Parajuli, S. (2003), *Credit management of joint venture banks*, An Unpublished Master’s Degree Thesis, Kathmandu: T.U.
- Regmi, P. (2004), *A study on credit practices of joint venture commercial banks with reference to Nepal SBI Bank Ltd. And Nepal Bangladesh Bank Ltd.* An Unpublished Master’s Degree Thesis, Kathmandu: T.U.
- Sharpe, J. William and Gordon, J. Alexander. (1996), *Investment*, New Delhi: Prentice Hall of India.
- Shrestha, S. R. (1996), *Portfolio Management in Commercial Bank Theory and Practice*, Nepal Bank Patrika, Kathmandu: 12: 89.
- Shrestha, Shiba Raj, (1997), “*Modus Operandi of Risk Appraisal and in Bank lending*” A journal of banking promotion, Kathmandu: 8:55-64
- Subedi, Kamal (2004), “*Growth in Major Commercial Banks*, New Business Age, Kathmandu: 4: 47- 48
- Swamy, R. and Basudeven, S.V. (1979), *A Text Book of Banking; Law, Practice and Theory of Banking*, New Delhi: S. Chand & Company Ltd.
- Shrestha, S. R. (1996), *Portfolio Management in Commercial Bank Theory and Practice*, Nepal Bank Patrika, Kathmandu: 12: 89.
- Shrestha, S. (2005), *Credit management with special reference to Nepal SBI Bank Ltd.* An Unpublished Master’s Degree Thesis, Kathmandu: T.U.

Sharma, K.P.. (2006), *Loan and credit management of Joint Venture Banks*. An Unpublished Master's Degree Thesis, Kathmandu: Shanker Dev Campus.

Shrestha, Sumnima. (2009), *Credit risk management of Nabil Bank Limited and Nepal Investment Bank Limited in Nepal*. An Unpublished Master's Degree Thesis, Kathmandu: Shanker Dev Campus

Shrestha, Sarina. (2010), *A study on the credit risk management of Nepalese Commercial Banks" aims following objective taking Kumari Bank and Machhapuchre Bank'*. An Unpublished Master's Degree Thesis, Kathmandu: Shanker Dev Campus.

The American Bankers Association. (1972), *Principle of Bank Operation*, New York: American Institute of Banking.

### Websites

[www.nabilbank.com](http://www.nabilbank.com) 2010 September

[www.himalayanbank.com](http://www.himalayanbank.com) 2010 September

[www.nrb.org](http://www.nrb.org) 2010 September

[www.nepalstock.com](http://www.nepalstock.com) 2010 September

[www.sebonp.com.np](http://www.sebonp.com.np) 2010 September

## Appendix - 1

### A. Calculation of Total Deposit of Himalayan Bank Limited

Year(x)	Total deposit(Y)	X = x - 2005/06	X <sup>2</sup>	XY
2004/05	24814.012	-2	4	-49628
2005/06	26490.852	-1	1	-26490.9
2006/07	30048.418	0	0	0
2007/08	31842.79	1	1	31842.79
2008/09	34681.35	2	4	69362.7
Tot n= 5	Y =147877.42	X = 0	X <sup>2</sup> = 10	XY =25086.61

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

$$a = \frac{\sum Y}{N} \qquad b = \frac{\sum XY}{\sum X^2}$$

Here, HBL

$$a = 27041.28$$

$$b = 2489.93$$

$$Y_c = 27041.28 + 2489.93 X \text{ of HBL}$$

### B. Calculation of Total Deposit of Nabil Bank Limited

Year(x)	Total deposit(Y)	X = x - 2005/06	X <sup>2</sup>	XY
2004/05	14853.4	-2	4	-29706.8
2005/06	19101.07	-1	1	-19101.1
2006/07	24491.09	0	0	0
2007/08	31304.82	1	1	31304.82
2008/09	37348.26	2	4	74696.52
Tot n= 5	Y =127098.64	X = 0	X <sup>2</sup> = 10	XY =57193.47

$$Y = a + bx$$

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,

$$a = SY/N$$

$$b = SXY/SX^2$$

NABIL

$$a = 529.25$$

$$b = 106.752$$

Where as

$$Y_c = 25419.73 + 5719.35 X \text{ NABIL}$$

## Appendix - 2

### A. Calculation of Loan and advances of Himalayan Bank Limited

Year(x)	Loan and advances(Y)	X = x - 2005/06	x <sup>2</sup>	XY
2004/05	13451.168	-2	4	-26902.3
2005/06	15761.977	-1	1	-15762
2006/07	17793.724	0	0	0
2007/08	20179.61	1	1	20179.61
2008/09	25519.52	2	4	51039.04
Tot n= 5	Y = 92705.999	X = 0	X <sup>2</sup> = 10	XY = 28554.34

$$Y = a + bx$$

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,

$$a = SY/N$$

$$b = SXY/SX^2$$

HBL

NABIL

$$a = 18541.199$$

$$b = 2855.434$$

$$Y_c = 18541.199 + 2855.434 X \text{ HBL}$$

**B. Calculation of Loan and advances of NABIL Bank Limited**

Year(x)	Loan and advances(Y)	Xx-005/06	x <sup>2</sup>	XY
2004/05	10586.17	-2	4	-21172.3

2005/06	12922.54	-1	1	-12922.5
2006/07	15545.78	0	0	0
2007/08	21365.05	1	1	21365.05
2008/09	27589.93	2	4	55179.86
Tot n= 5	Y =88009.47	X = 0	X <sup>2</sup> = 10	XY = 42450.03

$$Y = a + bx$$

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,

$$a = SY/N$$

$$b = SXY/SX^2$$

NABIL

$$a = 17601.89$$

$$b = 4245.003$$

Where as

$$Y_c = 17601.89 + 4245.003 X \text{ NABIL}$$

### Appendix - 3

#### A. Calculation of Total Asset of Himalayan Bank Limited

Year(x)	Total Asset	X = x - 2005/06	x <sup>2</sup>	XY
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2004/05	28871.34	-2	4	-57742.7
2005/06	30579.81	-1	1	-30579.8
2006/07	34314.87	0	0	0
2007/08	36857.62	1	1	36857.62
2008/09	40046.69	2	4	80093.38
Tot n= 5	Y = 170670.33	X = 0	X <sup>2</sup> = 10	XY = 28628.51

$$Y = a + bx$$

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,

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

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

HBL

$$a = 34134.066$$

$$b = 2862.85$$

$$Y_c = 34134.066 + 2862.85 X \text{ HBL}$$

**B. Calculation of Total Asset of NABIL Bank Ltd.**

Year(x)	Total Asset(Y)	X = x - 2005/06	X <sup>2</sup>	XY
2004/05	17186.33	-2	4	-34372.7
2005/06	22329.97	-1	1	-22330
2006/07	27253.39	0	0	0

2007/08	37132.76	1	1	37132.76
2008/09	43867.4	2	4	87734.8
Tot n= 5	Y = 147769.85	X = 0	X <sup>2</sup> = 10	XY =68164.93

$$Y = a + bx$$

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,

$$a = \frac{SY}{N} \qquad b = \frac{SXY}{SX^2}$$

NABIL

$$a = 29553.97$$

$$b = 6816.49$$

Where as

$$Y_c = 29553.97 + 6816.49 X \text{ NABIL}$$

#### Appendix - 4

##### A. Calculation of Net Profit of Himalayan Bank Limited

Year(x)	Net profit	X = x - 2005/06	x <sup>2</sup>	XY
2004/05	308.277	-2	4	-616.554
2005/06	457.458	-1	1	-457.458
2006/07	491.824	0	0	0



2007/08	635.87	1	1	635.87
2008/09	752.83	2	4	1505.66
Tot n = 5	Y = 2646.26	X = 0	X <sup>2</sup> = 10	XY=1067.52

$$Y = a + bx$$

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,

$$a = SY/N$$

$$b = SXY/SX^2$$

HBL

$$a = 721.212$$

$$b = 113.467$$

$$Y_c = 721.212 + 113.467 X \text{ HBL}$$

**B. Calculation of Net Profit of NABIL Bank Ltd.**

Year(x)	Net profit(Y)	X = x - 2005/06	x <sup>2</sup>	XY
2004/05	519.32	-2	4	-1038.64
2005/06	635.26	-1	1	-635.26
2006/07	673.96	0	0	0
2007/08	746.47	1	1	746.47

2008/09	1031.05	2	4	2062.1
Tot n= 5	Y =3606.06	X = 0	X <sup>2</sup> = 10	XY =1134.67

$$Y = a + bx$$

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,

$$a = SY/N$$

$$b = SXY/SX^2$$

NABIL

$$a = 529.25$$

$$b = 106.752$$

Where as

$$Y_c = 529.25 + 106.752 X \text{ NABIL}$$

### Appendix - 5

#### List of 30 Licensed Commercial Banks in Nepal :

- A) Nepal Bank Ltd.
- B) Rastriya banijya Bank
- C) Nepal Arab bank Ltd.
- D) Nepal Investment Bank Ltd.
- E) Standard Chartered Bank Ltd.
- F) Himalayan Bank Ltd.
- G) Nepal SBI Bank Ltd.
- H) Nepal Bangladesh Bank Ltd.
- I) Everest Bank Ltd.
- J) Bank Of Kathmandu Ltd.
- K) Nepal Credit And Commercial Bank Ltd.
- L) Lumbini Bank Ltd.

- M) Nepal Industrial And Commercial Bank Ltd.
- N) Machhapuchhre Bank Ltd.
- O) Kumari Bank Ltd.
- P) Laxmi bank Ltd.
- Q) Siddhartha Bank Ltd.
- R) Agricultural Development Bank Ltd.
- S) Global Bank Ltd.
- T) Citizen Bank International Ltd.
- U) Prime Commercial Bank Ltd.
- V) Bank Of Asia Ltd.
- W) Sunrise Bank Ltd.
- X) Development Credit Bank Ltd.
- Y) NMB Bank
- Z) Kist Bank Ltd.
- AA) Janta Bank Nepal Ltd.
- BB) Mega Bank Nepal Ltd.
- CC) Commerz And Trust Bank Ltd.
- DD) Civil Bank Ltd.