CHAPTER-ONE

INTRODUCTION

1.1 Background

Nepal sandwiched between two giant countries, India and China, is one of the lank locked countries, and survives with her own natural beauty in Asia. Its half-century of experiments and efforts toe raise the quality of life of its populace is defeated. Almost half of its population lies under absolute poverty line, especially living in rural areas are deprived of even basic needs and facilitates like enough calories pure drinking water sanitation facilities, electricity, road facility etc. some of the basic human indicators like life expectancy, literacy, nutrition level etc. also show that Nepal occupies among the nation to eliminate the massive poverty persisting in the country through gradual development of the total nation and by providing and availing basic needs to poor resource mobilization and its utilization, weak infrastructure development and more over unstable eco-political environment.

Banking plays significant role in the economic development of a country. Bank is a resource for the economic development which maintains the self-confidence of various segments of society and extends credit to the people. So, 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 is to mobilized idle resources into the most profitable sector after collecting them form scattered source commercial bank contributes is significantly and the formation and mobilization of internal capital and development effort.

The concept of the banking has been developed from the ancient history with the effort of ancient goldsmiths who develop the practice of storing people's gold and valuables under such arrangements the depositors would have their gold for safekeeping would get back their gold and valuable after paying a small amount as fee for safekeeping and serving.

The role of money in an economy is very important. Proper and well-planned management of money directs, determines and enhances the health and productivity of total financial sector and the performance of financial sector affect the growth of economy. Hence, money is the topic to manage and banks are the manager. The existence of a bank is for the change in every aspect of human being and its presence is for the upliftment of people. Banks are the back bone of the economy. They act as intermediaries to channel funds to productive business companies and projects.

The financial institutions are:
Commercial Banks
Development Banks
Finance Companies
Saving and credit Associations
Mutual Saving Banks
Credit Unions
Insurance Companies
Pension Funds
Investment Bankers
Securities Brokers and Dealers

Banks grants loan and advances to industries, people and companies that result in the increase in the productivity of nation. For example: the loan against to agricultural sector enhances the agricultural product on. The loan amount can be used by the farmers as per their need to produce their product that will promote the agriculture on. Similarly the loan and advances to different people and corporate bodies help to increase their income and profits. They can use the amount as per their need at right place at the right time. Bank is a business organization where monetary occurs. It creates fund from its clients saving and lends the same to needy person or business companies in term loans, advances and investment. So proper financial decision making is more important in banking transactions for its efficiency and profitability. Most of the financial decision making loan management it plays the vital role in the business succession management of lending policy is needed.

The source of finance is the most essential for the establishment and operation of any profit and non-profit institutions. Profit oriented institutions usually obtain these source through ownership capital, public capital through the issues of share and through financial institutions such as banks, in the form of credits, overdrafts etc commercial banks, others banking institutions (OBIs), Non Bank Financial Institutions occupy important role in mobilizing financial resources. There are about 17 insurance companies including deposit insurance and Credit Guarantee Corporation, one Employee Provident Fund and one Citizen Investment Trust belong to this type of financial institutions. Apart from this, securities such as corporate shares debentures and bonds.

Banking plays a significant role in the economic development of a country. Nepal Bank Limited (NBL) is the first commercial bank of the country. Commercial banks are the heart of the financial institutions. They hold the deposits of many persons, government establishments and business units. They made funds available through their lending and investing activities to borrowers, individuals, business firms and government establishments. In dong so, they assist both the flow of good and services from the procedures to consumers and financial activities of the government, they provide a large proportion of the medium of exchange they are the media through which monetary policy is affected. These facts show that the commercial banking system of the nation is important to the functioning of the economy. Bank is a resources for the economic development, which maintains the self-confidence of various segments of society and extends credit to the people.

The more development financial system of the world characteristically fall into three parts. The Central Bank. The commercial banks and other financial institutions. They are known as financial intermediaries. The banking business has its genesis from its function of lending in banking business is the most fundamental function of a bank. The importance of lending in banding business is undoubtedly unchanged and remains vital as it was early days of this business. Lending has its different forms. It can be divided into fund based and non-fund based lending.

The fund based lending can be further divided into cash credit, overdraft, demand and term credits, bills purchased and discount and export packing credit, project loan, etc. Similarly, non-fund based credit can be classified into documentary credit, guarantee and bill co-acceptance facility.

1.2 History of Bank

Bank of Venice set up in 1157 in Venice, Italy, is regarded as first modern bank. Subsequently, Bank of Barcelona (1401) and Bank of Gonea (1407) were established. The Lombard migrated to England and other parts of Europe from Italy and expansion of the modern banking. Bank of Amsterdam set up in 1609 was very popular. The bank of Hindustan established in 1770 is regarded as the first bank in India. These modern banks gradually replaced goldsmiths and money lenders, Though bank of England was established in 1694, the growth of banks accelerated only after the introduction of banking Act 1833 in united Kingdom as it allowed to open joint stock company Banks.

1.2.1 Origin of Bank in Nepal

The history of banking in Nepal starts right from the establishment of Nepal Bank ltd in 1937. Before the inception of this Bank, the traditional ways of banking seemed to be in existence. Even today we find dominance of so called rich people in lending money. Despite of operation of many commercial banks, role of non banking system is equally significant particularly in the rural area. Realizing the importance of banking sector for economic development, Nepal Bank limited set up as a commercial bank in bank in 1937. Being a commercial bank Nepal Bank Limited paid more attention to profit generating business.

Having felt a need of central bank to control and direct the commercial banks and help the government formulate monetary policies, Nepal Rastra Bank was set up in 1956, since then it has been functioning as government bank and contributing to the growth of financial sector. Speedy development of the country is possible only when competitive banking service reaches in hidden place and corners of the country. Being a central bank NRB had its own limitation to go to the profitable sector. To cope with these difficulties, government set up Rastriya Banijya Bank in 1996 as a fully government owned commercial bank.

Since the introduction of RBB, the commercial banks are to carry out commercial transaction as well as the function of development bank. However the need of bank particularly focusing on the agricultural sector was still missing despite of having agro based economy in the country. To develop agricultural sector and to make necessary fund available for the farmers, agricultural development bank was established in 1968. SCBNL Bank Ltd named as Nepal Arab Bank Ltd was established on July 12th 1984 under a technical service arrangement with Dubai Bank limited. Now there are 17 commercial banks, 60 finance companies, 26 development banks, 11 rural micro finance development banks and 20 saving and credit co-operation sector.

1.2.2 Commercial Bank

Nepal commercial Bank Act 2031 BS defines "A commercial bank is a bank which deals in money exchange, accepting deposit, advancing loan and commercial transaction except specific banking related to co-operative, agriculture, industry and other objective" Under the Nepal commercial Bank Act 2031 BS the commercial banks are these banks which provide short term and long term debt whenever necessary for trade and commerce. They accept deposits from public and grant loan in different forms. They purchase and discount the bill for exchange foreign currency.

The commercial banks pool together the savings of the community and arrange for productive use. It fulfills the financial needs of modern business. They accept deposit from public which are repayable on demand or on short notice. They cannot afford to invest their funds in long term securities or loan. Their business is restricted to financing the short term needs. They provide the working capital required for trade and industry. They cannot afford to supply the block capital required for the purchase of fixed assets.

1.3 Statement of Problem

Most major banking problems have been caused by weakness in credit management. Banks should now have a keen awareness of the need to identity measure, monitor and control credit as well as to determine that they hold adequate capital against it. These risks that they are adequately compensated for risks incurred. So, to establish creditability position is a major issue in commercial banking sector during these days.
It is no debate that high profitable or successful organization can easily fulfill the every need of the organization, customers and can serve the society. To improve the profitability situation of the bank, it is necessary to establish the higher creditability

position of the bank. Thus, the creditability is the major source and building better creditability position is the major strategy of every commercial bank.
Credit is the most effective and sincere area in commercial bank. It is regarded as the heart of every commercial bank. But the banking sector is far from this fact. Thus, credit management is considered as the heart issues in Nepalese Commercial banking sector.

Credit management concept has appeared as a major research gap in Nepalese Commercial banking sector. there is lack of such scientific and empirical research that could identify the issues of credit management in Nepalese commercial banks. In this regard, the performance of Nepalese commercial banks is to be analyzed in terms of their credit. Some research questions regarding to the credit practices, credit efficiencies, liquidity position, industrial environment, management quality, organization climate, are considered as a clear evident in present situation. Thus, the specific research questions regarding credit management in Nepalese commercial banking sector are identified as follows:

1) Is the credit practices adopted by commercial banks in good position?

2) What is the credit efficiency of the Nepalese Commercial banks?

3) Is there any relationship between credit position and profitability situation?

4) How efficiently banks are managing their liquidity position, assets and capital structure etc.?

5) How far have banks been able to convert the mobilized resources into investment?

6) How the banks are preparing in terms of net income and earning per share?

7) In which sector the banks made more investment in credit portfolio?

8) Is amount of non performing asset and loan loss provision in increasing trend?

9) Which credit collection policy should be followed by the banks to decrease loan loss provision and non performing loan?

10) How can maximize the profit and minimize the credit risk?

Nepal is a small country with small market economic condition of the country is degrading due to conflict since 2052 B.S. But the situation has been changed peace process is going on. Overall economic sectors either manufacturing or commercial sectors have undergone heavy losses. However, the financial institutions are increasing

regularly. Liquidity is maximum with the financial institution are competing among themselves to advance credit to limited opportunity sectors.
Non-performing credit of the banks are increasing year by year. To control such type of state, the regulatory body of the bank and financial institutions Nepal Rastra Bank (NRB) has renewed its directives of the credit loss provision.

1.4 Objectives of Study

There is no doubt that the role of commercial banks is significant in the development of the country. Banks help in the development of the country by providing credit to the necessary sectors.
The breakdown of the objectives of the study is as follows:

1. To study and analyze the functions, procedures and activities of commercial banks.

2. To evaluate the credit contribution on total profitability and recovery status of the banks under study.

3. To study the loan and advances, profitability and deposit position of the commercial banks under study.

4. To examine the level of non performing loan investments and portfolio behavior that exists within the banking industry.

7. To provide suggestions to the concerned banks on the basis of major findings of the study.

1.6 Scope of Study

There are few researchers in commercial banking and especially on their lending practice insufficient books for the study. Lending is one the essential and main functions where the whole banking business is rested upon. Thus, a study on the commercial banks and especially in their lending and investment practices carry a great significant to various groups but in particular is directed to certain groups of people/ organization

There are twenty six commercial banks functioning in our country at present but there are only few researches in credit practices of joint venture commercial banks. Credit practices are one of the main functions of commercial banks where the whole banking business is rested upon. Thus the study on four commercial banks and especially in their credit practices and policies carry a great significance to the shareholders of the banks, to the banking professionals, to the students who want to know about credit practice of commercial banks. This study has proposed to measure the efficiency of proposed banks in their credit practices. This study adds new idea and findings about concerned commercial banks. So the study is expected to fill the research gap and add to the input to financial literature relating to credit practice.

1.7 Limitation of the Study

Main source of the data collection is from the bank publications which may not be always reliable because they may publish the reports according to their profit policy and market situation. Availability of data is another limitation of the study. There are some difficulties to get sufficient information as banks hesitate to provide data easily. Another limitation is the time limitation. Thus every study has its own limitation and the pointed limitations of this study are as follows;

1. This study is concentrate only on there factors that are related with credit practices
.
2. This study has focused on the credit behavior only between five banks.

3. Whole study is based on data of five year period.

4. Some of the statistical as well as financial tools of comparison and analysis shall be used in this study. Hence the drawbacks and weakness of those tools may adversely affect the outcomes of the study.

5. The basic purpose of the study is to fulfill the requirement for the masters in business study, the study lacks sufficient time to collect information and analyze them.

1.8 Organization of Study

To make research work better, it is needed to organize the whole things and divide the work as related chapter. So this thesis is organized in the following sequences:

Chapter 1 Introduction

Chapter 2 Review of Literature

Chapter 3 Research Methodology

Chapter 4 Data Presentation and Analysis

Chapter 5 Summary, Recommendation and Conclusion

CHAPTER-TWO

REVIEW OF LITERATURE

Introduction

Review of literature means the study of relevant topics in the related field of research or reviewing related research studies and findings such that all part studies their conclusions ad deficiencies may be known and further research can be done.

This chapter is basically concerned with review of literature relevant to the topic " A Study on Credit Management of Nepalese Joint Venture Commercial Banks" every study is very much based on the past research knowledge. The previous study cannot be ignored because they provide the foundation to the present study. There must be continuity in research. This continuity in research is ensured by linking the present study with past research studies. This chapter describes the conceptual framework and highlights the literature that is available in concerned subject as to my knowledge.

2.1 Conceptual Review

Basically, conceptual framework describes the following terms, which are closely related to the research work.

2.1.1 Credit Management

Credit in finance is a term used to denote transaction involving the transfer of money on other property on promise of repayment, usually at a fixed future date. "In economics, the term credit refers to a promise by one party to pay another for money borrowed or goods or services received. It is a medium of exchange to receive money or goods on demand at some future date." (Jingan, 1997:167).

"Credit is of utmost importance to a country. It is impossible to think of the present day economics without the use of credit. Credit is an indispensable lubricant and a tool of convenience for the economic progress of a country. But its uncontrolled use brings untold problems for economy"(Jhingan,1997:171).Some factors(such as Boom and recession, economic development, currency conditions, political system and conditions, banking system, speculation, credit policy of a central bank) on which volume of credit(credit expansion and credit contraction) depends in a country.

According to khan and Jain two terms of credit are available to borrowers: "(i) loan arrangement- under this arrangement the entire amount of loan is credited by the bank to the borrowers account. In case of the loan is repaid in installments, interest is payable on actual balances outstanding.(ii) Overdraft arrangement- under this arrangement certain facilities are available to the borrowers which are not available under the loan arrangement. With the overdraft arrangement, the borrower is allowed to over dew on his current account with the bank up to a stipulated limit. Within this limit any numbers of drawings are permitted. Repayments can be made whenever desired during the period. The interest liability of the borrower is determined on the basis of the actual amount utilized" (Khan & Jain, 1988:645).

Credit management includes the sound credit policy and practices, loan approval and disbursement process, credit appraisal, credit audit etc. the goal of credit management is to maximize the bank's risk adjusted rate of return by maintaining the credit risk exposure within acceptable parameters. Credit management strongly recommends analyzing and managing the credit risks. Credit risk defined as the possibility that a borrower will fail to meet its obligations in accordance with the agreed terms and conditions. Credit risk is not restricted to lending activities only but includes off balance sheet and inters book exposures. For most banks, loan are the largest and most obvious source of credit risk, however other sources of credit risk exist throughout the activities of bank including in the banking bank, in the trading book and both on and off balance sheet.

"Loan and advances dominate the assets side of balance sheet of any bank. Similarly earnings from such loans and advances occupy a major space in income statement of the bank. Lending can be said to be the raision d'etre of a bank. However, it is very important to be remind that most of the bank failures in the world due to shrinkage in the value of loan and advances. Hence, loan is known as credit risk or default risk." (Dhahal & Dhahal, 2002:23).

Credit policy is essential part of credit management. Formulating and implementing sound policy is important to find the deviation between practice and policy and to establish a standard for control. "The credit policy of a firm provides the framework to determine (a) whether or not to extend credit to a customer and (b) how much credit to extend. Credit policy decision of a firm has two broad dimensions: (i) credit standards and (ii) credit analysis. A firm has to establish and use standards in making credit decisions, develop appropriate sources of credit information and methods of credit analysis." (Khan & Jain, 1988:696).

Early banking system served mainly depositories for funds, while the other modern system has considered the supply of credit and their purpose. A bank not accepts money on deposits, but it also lends money and creates own credit. Commercial bank Act 2031 has laid emphasis on the functions of commercial bank while defining it. Commercial banks provide short debts necessary for trade and commerce. They take deposits from public and grant loans in different forms. They purchase and discount bills for exchange promissory notes and exchange foreign currency. Beginning with simple function of accepting deposits for the purpose of making of loans, commercial banking has progressively assumed wider function and greater responsibilities in the economic area. Some of the fundamental functions of commercial banks are:

(a) Receiving deposit from public
(b) Making loan and advances
(c) Money creation
(d) Agency services
(e) General utility services

Lending is the most fundamental function of all commercial banks. The income and profit of the bank depends upon the lending procedure applied by the bank. And lending policy and investment in different securities also affect the income and profit. Lending has its different forms. It can be divided into fund based and non fund based lending. The fund based lending can be further divided into cash credit, overdraft, demand and term loans, bill purchased, discounted, export, loan syndication, bridge loan etc. Similarly non fund based credit can be classified into documentary credit, guarantees and bill co-acceptance facilities.

2.1.2 Investment Policy-Concept

The income and profit of the bank depends upon its investment policy, lending policy and investment of its fund in different securities. In the investment procedures and policies it is always taken in mind that “the greater the credit created by the bank, the higher will be the profitability. A sound lending and investment policy is not only the prerequisite for bank’s profitability, but also crucially significant for the promotion of commercial savings of a financially backward country like Nepal.

The banks are such type of institutions, which deal money and substitute for money. They also deal with credit and credit instruments. To collects fund and mobilize them in a good investment is not a joke for such an institutions. An investment of fund may be the question of life and death of the bank. Thus the banker must think seriously before making an investment decision. The investment policy of a bank consists of earning high returns on its un- loaned resources. But it has to keep in view the safety and liquidity of resources so as to meet the objectives of profitability conflicts with those of safety and liquidity the wise investment policy its strike a judicious balance among them. Therefore a bank should lay down its investment policy in such a manner so as to ensure the safety and liquidity of its funds and at the same time maximum its profit.

Chery and Moses said, “The investment objective is to increase systematically the individual wealth, defined as asset minus liabilities. The higher the level of designed wealth the higher it will be received. An investor seeking higher return must be willing to face higher level of risk.” (Chery & moses,1988:465).

Credit and investment command number 1 and number 2 positions and investment at times serves as substitute of loan. That is why when loan demands weakens; a bank increases securities in investment portfolio. Similarly banks start shedding securities from investment portfolio when loan demand increases to entertain loan request. This warrants careful management of investment portfolio so that net interest income/spread (excess of interest income over interest expenses) can be maximized."(Dhahal & Dhahal, 2002:88).

Every bank manager should have awareness about the major risks associated with the securities. Because price of securities are affected by the some kind of risk like credit risk, interest rate risk and liquidity risk. These are the sources of investment risk. "The policy should specify what rated securities it wants to held in the portfolio. If unrated, whether it buys or not. Since risk is overpriced during recession and under priced during boom, banks prefer buying medium grade and high grade securities during recession and boom respectively. Normally banks buy investment rated securities only."(Dhahal & Dhahal,2002:92)

2.1.3 Lending and Consideration for Sound Lending and Investment

The major source of income and profit generation to each and every banks and financial institution is its loan investment in different sectors .If loan are not distributed properly and cautiously then it may be the main cause of the failure of the company .As prescribed by Hrishikes Bhattacharya in his book "Banking strategy ,credit appraisal and lending decisions, a Risk-Return Framework," the important consideration which the finance company should review and analyze in briefly illustrated below.

- **Principle of Sound Lending**

a. Safety

Every finance company must invest in those opportunities which is safe against losses are risky. Collateral should be accepted which is not so depreciable and whose value hold constancy.

b. Security

Finance company should accept that kind of security which is commercial, durable, marketable and high market price. In those cases, "MAST" should be applied for the investment.

Where,
M = Marketability
A = Ascertain ability
S = Stability
T = Transferability

c. Profitability

A financial institution can maximize its volume of wealth through maximization of return on their investment and lending .So, they must invest their fund where they gain Maximum profit. The profit of these companies mainly depends on the interest rate, volume of loan, its time period and nature of investment in different securities.

d. Liquidity

People deposit money at these companies with confidence that they will be repaid their money when they need it. To maintain such confidence of the depositors, the company must keep this point in mind while investing its excess fund in different securities or at time of lending in different securities or at time of lending so that it can meet or short-term obligation when they become due for payment.

e. Purpose of Loan

Why does a customer need a loan? This is very important question for any banker. If borrowing misuses the loan granted by these companies they can never repay and company will passes heavy bad debts. Detailed information about the scheme of the project or activities should be examined before lending.

f. Diversification

"A financial institution should not lay all its eggs on the same basket." In order to minimize risk, diversification on its investment on different sectors should be adopted which helps to sustain loss according to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies, so the loss can be recovered.

g. Legality

Illegal securities will bring out many problems for the investor. The financial companies must follow the rules and regulations as different directions issued by Nepal Rastra Bank and other concerning bodies while mobilizing is funds.

h. Tangibility

Though it may be considered that tangible property doesn't yield and income apart from direct satisfaction of possession of property, many times, intangible securities have lost their finance company should prefer tangible security to intangible one.

i. National Interest

Even if an advance satisfies all the aforesaid principals, it may still not be suitable. The lending program may run counter to national interest. Central Bank may have issued directives prohibiting finance companies to allow particular types of advices. (Bhattacharya,1998:156).

Major information for analyzing the potential of borrower for lending

a. Payment record and credit information from concern field
b. Income level and its source
c. Residence (local or migrates)
d. Marital status (single ,married, widowed or divorced)
e. Age factor
f. References
g. Reserves, assets and collateral

Basic of granting loan and analysis of credit risk

World is surrounded by certain risk associated with the related field of task. The risk is vital factor which can be seen in the field of lending and investing money by finance companies. It is true that "There is no return without risk." But by using certain criteria's they can minimize some portion of risk associated with it. with respect to this ,finance institution approach the loan request by analyzing five 'C_s' of credit risk as illustrated by Hrishikes Bhattacharya

a. Character of the applicant
b. Capacity of qualification and work experience
c. Capital of the proposed plan
d. Collateral for security and its safety ness
e. Conditions of credit environment and credit information

Additionally come external factor also directly and indirectly affect on loan granting decision. They can be political crisis, national and international economic condition, policy and practice, cultural practice etc. (Bhattacharya,1998,124).

Basic requirement in a borrower / Lending documentation

Finance companies cannot lend money to just anyone blindfold. It should be confident regarding the trustworthiness and intentions of the probable beforehand. The borrower, on the other hand, should provide finance companies with all portioning documents that the company seeks to build confidence on borrower. There are some requirements that should be fulfilled by the client to stand him as a probable borrower .the basic requirement that the borrower should submit with loan proposal are as follows:

A. If applicant is an individual

a) Applicant should be Nepali citizen. Citizenship certificate should be submitted.
b) Should have good knowledge about work they intend to commerce.
c) Normally the applicant should not have taken loan from any other institutions previously.
d) Applicant should present the job planning scheme with perfect business plan.
e) Personal information is also required.
f) Business and income tax registration certificate with renewal.
g) Quotation and personal guarantee with reference of well recognized personal.
h) Certificate of ownership.
i) Driving license if required.
j) Description of securities with full proof evidence.
k) Other documentation as per company rules whichever required

B) If the applicant is partnership firm

a) The firm should be registered in related department.
b) The firm should be registered in related department.
c) The person dealing with the borrowing of the firm should specify in the partnership contract.
d) Income Tax Registration certificate with renewal.
e) And other required and possible items from point A.

C) If the applicant is private limited company or public limited company

a) Company should be registered.
b) Working place, project place should be specified and all the assets should be in the name of company.
c) Audited Balance sheet, profit and loss account, and other required financial documents at least of one year should be presented.
d) If the work place or project place is leased the lease contract should be presented.
e) The authorized person should apply for the loan.
f) Loan amount applied must be within the limit of memorandum of the company or must be decided by the board.
g) Decision of the promoters.
h) Personal information of the main person is required.
i) Written personal guarantee of the proprietors is required.
j) Citizenship of promoters and proprietors is required.
k) And other required and possible documents from A and B should be presented.

1. Basic feature of collateral

Collateral is the most important item for granting loan. Loan should be grant by analyzing details related to collateral. Generally in Nepalese practice land and building; gold silver and some classified document are accepted as safe and reliable collateral ,but there are some features which must be analyzed by finance companies, they are;

a) Market availability
b) Price stability
c) Durability
d) Storing facility
e) Transportation
f) Profitability

Guidelines of Assessing Risk

Risk is dependent upon the quality found in each 'c' and the combination of these five 'C_s'. Assuming the same conditions prevail, the following guideline is generally suggested.(Bhattacharya,1998;135).

Table No. 2.1
Guidelines of Assessing Risk

Applicant characteristics	**Credit risk**
Character +capacity	Very low
Character + capacity without capital	Low to moderate
Character + capacity but insufficient capital	Low to moderate
Capacity + capital but impaired character	Moderate
Capacity + capital without character	High
Character + capital without capacity	High
Character + no capital + No capacity	Very high
Capital + No character + No capacity	Very high
Capital + No character + No capital	Fraudulent

Source: Book by Hrishikes Bhattacharya, 1998

2.1.4 Objectives of Sound Credit Policy

Considering the importance of lending to the individual bank and also to the society it serves it is imperative that the bank meticulously plus its credit operations. Second credit policy whose objectives are as follows is a foundation in this direction; (Dhahal & Dhaha,2002:115).

1. To have performing assets

Performing assets are those loans that repay principal and interest to bank from the cash flow it generates. Loans are risky assets though a bank invests most of it resources in granting loan and advances. If an individual bank has around 10% non performing assets/loans (NPAS), it sounds the death knell of that bank ceteris paribus (all other thing remain constant).The objectives of sound loan policy is to maintain the financial health of the bank which results in safety of depositors' money and increase in he returns to the shareholders. Since the loan is a risk asset there is inherent risk in every loan. However, the bank should not take risk above a certain degree irrespective of returns prospect.

2. To contribute to economic development

Sound credit policy is required to ensure that loans are given to the productive sector which contributes to the society in a number of ways cited above.

3. To give guidance to lending officials

A borrower should be assured that there will be no discrimination whether he deals with one officer or another and one branch or another .A sound credit policy is impetrative to achieve a uniform standard procedure throughout the organization. In the absence of a sound credit policy it is likely that individual loan officers make judgment inconsistent from each other and also inconsistent with the organizational goal.

4. To establish standard for control

Every policy requires periodic follow up to ensure its proper implementation. A sound policy helps to determine the variance between actual performance and practices and to take corrective actions. A sound policy is always flexible and works a guideline rather than as a straitjacket. However, if the deviation between the practice and policy is observed, proper education to lending offices or amendment of the policy becomes inevitable.

These objectives can be summarized as the sound policies help commercial banks to maximize quality and quantity of investment and thereby achieve the own objectives of profit maximization. Formulation of sound policies and coordinates planned efforts pushes forward the forces of economic growth. Sound policy is also important to find the deviation between the practice and policy and establish a standard for control.

2.1.5 Essentials of Credit

According to ML Jhingan the following are the essential features of credit:

1. Trust and confidence

Trust is the fundamental element of credit. The lender will lend his money or goods on the trust and confidence that the borrower or buyer will pay back the money or price in time.

2. Time element

All credit transactions involve time element .Money is borrowed or goods are bought with a promise to repay the money or pay the price on some future date.

3. Transfer of goods and service

Credit involves transfer of goods and services buy the seller to the buyer on the pay back promise of the buyer on some future date.

4. Willingness and Ability

Credit depends on a person's willingness and ability to pay the borrowed money. In fact, credit of a person's depends on his character, capacity and capital. It is these three 'C_s' on which a man's credit depends. A person who is honest and fair in his dealings possesses the capacity of making his business a success. Such a person can get credit easily.

5. Purpose of credit

Banks and financial institutions give large amount of credit for productive purposes rather than for consumption purposes.

6. Security

Security in the form of property, gold, silver, bonds or shares is an important element for raising credit.

2.1.6 Defects of credit

Credit creation or credit function is the demand of economy. It helps in the economic prosperity as it is economical, it increases productivity of capital, it encourages investment in the economy, and it helps in the expansion of internal and external trade of a country. Thus it is important for the overall economic development of country. But sometimes excess supply of credit may be harmful. “According to ML Jhingan, credit is a dangerous tool if it is not properly controlled and managed. The following are some of the defects of credit”: (Jhingan,1997:155).

1. Too much and too little credit is harmful

Too much and too little credit is harmful for the economy. Too much of credit leads to inflation, which causes direct and immediate damage to creditors and customers. On the developing country, too little of credit leads to deflation which brings down the level of output, employment and income.

2. Growth of monopolies

Too much of credit leads to the concentration of capital and wealth in the hands of a few capitalists. This leads to growth of monopolies which exploit both consumers and workers.

3. Wastage of resources

When banks create excessive credit, it may be used for productive and unproductive purposes. If too much of credit is used for production, it leads to over capitalization and over production and consequently to wastage of resources. Similarly if credit is given liberally for unproductive purposes it also leads to wastage of resources.

4. Cyclical fluctuations

When there is an excess supply of credit, it leads to a boom. When it contracts, there is a slump. In a boom output, employment and income is increased which leads to over production. On the contrary, they decline during a depression thereby leading to under consumption. Such cyclical fluctuation brings about untold miseries to the people.

5. Extravagance

Easy availability of credit leads to extravagance on the part of people. People indulge in conspicuous consumption. They buy those goods which they do not need even. With borrowed money; they spend recklessly on luxury articles. The some is the case with businessmen and even governments who invert in unproductive enterprises and scheme.

7. Speculation and uncertainty

Over issue of credit encourages speculation which leads to abnormal rise in prices? The rise in prices, in turn, brings an element of uncertainty into trade and business. Uncertainty hides economic progress.

8. Black money

Excessive supply of credit encourages people to a mass money and wealth. For this they tend to adopt underhand means and exploit others. To become rich, they evade taxes, conceal income and wealth and thus hoard black money.

9. Political instability

Over issue of credit leading to hyper inflation leads to political instability and even the downfall of government.

2.1.7 Lending procedures

According to Bhuwan Dahal and Sarita Dahal, lending procedures include loan approval and disbursement process: Dhahal & Dhahal,2002:134).

- **Loan approval process**

Loan is approved by approving authority only after being convinced that the loan will be repaid together with interest. There are many processes involved to approve the loan which has been appended below:

1. Application

A borrower is normally required to submit an application to the bank along with required documents: project proposal, historical financial statements and documents pertaining to company's legal existence.

2. Conducting the interview

Though the documents submitted gives various information about the borrowers is of great importance. Normally, such as interview takes place at the bank premise.

3. The credit analysis

There is a practice of analyzing $5c_s$ of credit by the financial institutions.

a) Character
b) Capacity
c) Condition
d) Collateral
e) Capital

4. Forecast and risk rating system

Based of the findings of historical analysis, and in light of present and foreseeable future environment, the analyst has to forecast impending major risks. The analyst should also highlight to what extent inherent risks will be mitigated and how unmitigated risks can be covered.

5. Return

The amount of loan has got inherent cost as it is obtained from either shareholder or depositor or creditor. The analysis should be made to calculate total return and compare whether it meets banks standard.

6. Liquidation

The analyst should ascertain bank's ability to recover loan in case of liquidation of the borrower. If liquidation analysis reveals insufficient security, additional security may be asked for.

7. Credit worthiness and debt structure

If analyst finds the borrower creditworthiness and decides to extend loan, he should structure the debt facility to be extended.

- **Loan disbursement process in various lines of credit approved by the bank have been presented below**

Overdraft:

Borrower can draw a cheque in current a/c up to the approved limit at any time as per the need.

Demand loan:

Loan is disbursed as when demanded by the borrower by debiting demand loan a/c and by normally crediting current a/c.

Short term loan:

Full limit is disbursed as per schedule normally fixed in advance by debiting long term loan a/c.

Documentary negotiation:

Upon submission of the compliant documents, documents are negotiated and fund is credited to the borrower's a/c less margin, if any.

Bills purchase:

Banks purchase the bills drawn on other branches/banks and credit the proceeds to the borrower's a/c less commission and margin, if any.

Letter of credit:

A letter of credit is established on behalf of the customer in favor of the exporter/seller for the import of goods and service unto the approved limit since this is a contingent liability for the back, bank credit customer's account. Normally, a certain percent fund is taken from the customers and the customer's margin a/c is credited.

Guarantee:

Guarantee is issued on the behalf of customer in favor of the other party uptown the approved limit. Since this is also a contingent liability, banks credit customers guarantee a/c normally a certain percent amount is taken from the customer and the customer's margin a/c is credited.

2.2 Review of Rules, Regulation and Directives of NRB Regarding Credit Management of Commercial Banks

Various rules, regulation, acts and directives are reviewed while preparing the concept of this study. Different types of directives, which are issued for the commercial banks to manage credit in a proper way, obviously, these directives and actions towards the commercial banks by NRB are playing the great role for the comparative analysis of credit management of the commercial banks.

NRB is the leader of the money market. It is the chief of all the banks operating in the country. It supervises, regulates and controls the functions of commercial banks and other financial institutions. Various directives must have direct or indirect impact while making decisions to discuss those rules and regulations which are formulated by NRB in terms of investment and credit to priority sector, deprived sector, other institutions, single borrower limit, CRR, loan loss provision, capital adequacy ratio, interest spread, productive sector investment etc. A commercial bank is directly related to the fact that how much fund must be collected as paid up capital while being established at a certain place of the nation, how much fund to expand the branch and counters, how much flexible and helpful the NRB rules are important. But we discuss only those, which are related to investment function of commercial banks. The main provision established by NRB in the form of prudential norms in above relevant are briefly discussed here:

2.2.1 "Regulation to Maintain Minimum Capital Fund by the Commercial Bank as per NRB Directive"

Capital adequacy ratio is the relationship between capital funds to total risk weighted assets of the bank. The higher the CAR, the less levered the bank and safer from depositor's point of view because the proportion of shareholders' stake to the risk weighted assets is also high.

Risk weight is assigned to various assets and off balance sheet items of the bank to arrive at the risk weighted assets. Banks in Nepal are required to have minimum 6% core capital and 12% total capital fund of total risk weighted assets.

Table No.:2.2

Fund Required on the basis of WRA(%)

Core capital	Capital fund
6	12

Source: NRB directives 2006/07/2007/08

Classification of Capital:

To calculate the capital fund, commercial banks should classify the capital in two parts;

a) Core capital
b) Supplementary capital

And,
Capital fund= core capital + supplementary capital

Provision for pass loan made up to 1.25% of total risk weighted assets is treated as supplementary capital.

$$\text{Capital fund ratio} = \frac{\text{core capital} + \text{supplementary capital}}{\text{Sum of weighted risk assets}} \times 100$$

Where, sum of weighted risk assets= Total WRA appeared in balance sheet+ Total WRA appeared outside the balance sheet

2.2.2 "Loan Classification and Loan Loss Provisioning"

A bank is required to classify their loan on the basis of overdue aging schedule and provide on a quarterly basis as follows:

a. Pass loan

All loan and advances whose principal amount is past due for period up to three months should be included in this category. These loans are classified as performing loans.

b. Substandard

All loans and advances that are past due for a period up to six months should be included in this category. Sub standard loan is classified as non performing loan.

c. Doubtful

All loan and advances that are due for a period of six months to one year should be included in this category. Doubtful loan is also from the category of non performing loan.

d. Loss

All loan and advances which are due for a period of more than one year should be included in this category.

- **Provision for loss loan:**

Loan should be classified as loss in the following cases,

a. No security or security not as per contract.
b. Borrower as been declared as bankrupt.
c. In the case of borrower not found.
d. Purchased or discounted bill are not repayable within 90 days from due date.
e. Loans amount has not been used for taken purpose.
f. Loan provided for blacklisted borrowers.

2.2.3 Loan Loss Provision

The loan loss provision on the basis of outstanding loans and advances and bills purchased classified as per directives, which is as follows:

Table No.:2.3
Classification of Loans

Classification of loans	Loan loss provision
Pass	1%
Substandard	25%
Doubtful	50%
Loss	100%

Source: NRB Directives 2006/07/2007/08

- Bank can reschedule and restructuring loan if nonperforming loan receiver submit the external/internal reasons. If loan is restructured and rescheduled, provision requirement for such loan is minimum 12.5%.

- If priority and deprived sector loan is restructured and rescheduled, such loan will have to be provisioned at 25% of the provision percentage to loan loss.

- Provision requirement in case of loan given against personal guarantee only is additional 20% for pass, substandard and doubtful loans.

- Loss provision for performing loan is called general loan loss provision and loss provision for non performing loan is called specific loan loss provision.

2.2.4 "Directives Relating to Single Borrower Credit Limit"

With the objectives of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size borrowers to the bank loans. NRB has directed commercial bank to set an upper limit for single borrower limit. According to the directive, commercial banks may extend credit to single borrower or group of related borrowers in such a way that the amount if fund based loan 9 overdraft, trust receipt, term loan etc) and advances up to 25%of care capital and non fund off the balance sheet facilities like letters of credit, guarantees, acceptances, commitments is up to 50%of its core capital fund ,but in case of advances and facilities to be used for the purpose of importing specified merchandize by the following public corporations, the exemption in the limit of credits and facilities is not applicable:

Table No.:2.4
Public Corporation and their Specified Merchandize

Name of corporation	Merchandize
Nepal oil corporation	Petrol, Diesel, Kerosene and LPG gas
Agriculture Input corporation	Fertilizers, seeds
Nepal food corporation	Cereals

Source: NRB Directives 2006/07/2007/08

2.2.5 Directives Regarding Investments in Shares and Securities by Commercials Banks

1) Arrangement as to implementation of investment K policy under approval of the board of directors

Banks should prepare written policy relating to investments in the shares and securities of organized institutions. Such policies should be implemented only under the approval of restrictions as to investment by the banks securities by NRB.

2) Arrangement relating to investment in shares and securities of organized institutions

a) Bank may invest in shares and securities of any organized institution not exceeding 10% of the paid up capital of such organized institution. Any amount of investment made in excess of this limit for the purpose of calculation of the capital fund, should be deducted from the core capital fund.

b) The total amount of investment should be restricted to 30% of the paid up capital of the bank. Any amount of investment made on excess of 30% of paid up capital of the bank, for the purpose of calculation of the capital fund, should be deducted from the core capital fund.

c) Banks should invest in the X shares and securities of organized institutions, which are already listed in the stock Bank exchange.

d) Where the shares and securities are not listed within the period prescribed, provisioning equivalent to the whole amount of such investment be provided and credited to investment adjustment reserve. The outstanding amount in such reserve should not be utilized for any other purpose till the sold shares and securities of the organized institution are listed. The outstanding amount in investment adjustment reserve should be included supplementary capital.

e) Banks should not invest in any shares, securities and hybrid capital instruments issued by any banks and financial institutions licensed by NRB where such investment exists prior to issuance of this directive such investment should be brought within there strives limitations imposed by this directive within 3 years.

2.2.6 Directives Regarding Interest Rate Spread

The interest rate spread is the difference between the interest taken from loan and advance or investment and the interest given to the depositor. As NRB direction lending rate and deposit rate should not exceed 5%. Such rates are calculated as under:

WALR= Interest income for a month/Total interest-earned asset
WADR= Interest expense for a month/Total deposit outstanding
Interest spread= WALR-WADR
Where;
WALR= Weighted average lending rate
WADR=Weighted average deposit rate

2.2.7 Requirements to Extend Loans and Advances to Productive and Priority Sector (Including Deprived Sector)

Commercial banks are requires to extends loans and advances in the productive , priority and deprived sector as follows:

of total advances,

- 40%to productive sector, including
- 12% to priority sector, including
- 0.25-3% to deprived sector

Productive sector credit

Productive sector credit includes advances to priority sector and other productive sector. Priority sector in turn includes deprives sector.

Priority sector credit

Priority sector is defined to include micro and small enterprises which help to increase production, employment and income as prioritized under the national development plans with an objective to uplift the living standard of low income people are progressively reducing the prevalent unemployment, poverty, economic inequality and backwardness. Micro and small enterprises are classified as agriculture enterprises, cottage and small industries and services. In addition, other businesses specified by NRB from time to time are also included under micro and small enterprises. All credit extended to priority sector up to the limit specified by NRB are termed as priority sector credit. .Commercial banks extend credit under priority sector programs specified by NRB time to time.

Deprived sector credit

Deprived sector includes low income and particularly socially backward women, tribes, lower caste, blind, hearing impaired and physically handicapped persons and squatter family. all credit extended for the enticements of the economic and social status of deprived sector unto the limit specified by NRB is termed as “Deprived Sector Credit.”

Examination of the fulfillment of priority or deprived sector lending shall be made at the end of each quarter (i.e. mid act, mid Jan, mid April and mid July) on the basis of total outstanding loan and advances(except investments) as of immediately preceding six months. On the failure of fulfilling such lending, penalty in shortfall amount at the maximum prevailing lending rate of the bank during the examination period shall be imposed under sub section 2 of section 32 of NRB act, 2012. If the priority sector lending is fulfilled, bit the deprived sector is not, the penalty is imposed on shortfall amount and if both sector lending is not fulfilled, then the penalty is imposed on greater shortfall amount for one sector only.

2.3 Review of Previous Studies

Several studies have been conducted on the field of credit management, within the country and aboard. So, under this section, the available literatures related to credit management are divided into two parts i.e. Review from international context and Review from Nepalese context.

2.3.1 Review from International Context

In international context, various studies have been done on the field of credit management and a different article has been presented to clarify the topic. Among these articles and book, some are tried to reviews as the following way:

2.3.1.1 Meir Kohn's Study

According to Meir Kohn illustrated in his book entitled "Financial market and institution" has illustrated that:

"The gain to borrower is obvious, if these investments are sufficiently productive, you will be happy to pay interest on the loan to pay back in the future more purchasing power than you received. Lending is to gain from trade. The interest you pay gives lender a better return than they could achieve otherwise, what are their alternatives? They could make productive investment themselves. But finding productive investment is difficult .Some people are much better at it than others. Typically savers do better by lending their money to that highly productive use for it than by making investment themselves."

1. The committee examined the existing system of lending and recommended the following broad changes in the credit system.
2. The credit needs of borrowers are assessed on the basis of their business plans.
3. Bank credit only is supplementary to the borrower's resources and not is replacement of them, i.e. banks not to finance one hundred percentage of borrower's requirement.
4. Borrowers are required to hold inventory and receives according to norms prescribe by reserve bank of India from tome to time.
5. Credit be made available in different components only, depending upon the nature of holding of various current assets.
6. In order to facilities a close watch on the operations of borrowers, they are required to submit at regular intervals, data regarding their business and financial operations both for part and future period. (Meir,1996:49).

2.3.1.2 H.D Crosse's Study

H.D Crosse says in this regard "lending is the essences of commercial banking, consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management. Well conceived lending policies and careful lending practices are essential if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit."(Crosse,1963:98).

Credit creating function or lending is very important for all commercial banks. But doing credit function without applying policies and practices is not enough to lead the success. So to manage the different kind of credit function, to maximize return and to minimize credit risk, every bank should be conscious about formulation and implementation of credit policies and practices.

2.3.1.3 Peter S. Rose's Study

Peter S. Rose has emphasized on the factors affecting default risk and interest rates. He opines that "Another important factor causing one interest rate to differ from another in the global market place is the degree of default risk carried by individual assets. Investors in financial assets face many different kinds of risk, but one of the most important is default risk the risk that a borrower will but make all promised payments at the agreed upon times. All debts except some government securities, subject to varying degrees of default risk." (Rose,2003:206).

Default risk is one kind of investment risk, which is created from non payment of interest and principal by the security issuer at the fixed future date. A bank management should have awareness abuts such risk. Approving authority should that the loan will be repaid together with interest, for this loan approval process should conduct in better way.

2.3.1.4 M. Radhaswami and S. Vesudevan's Study

"The mechanism of credit creation is used to expand the business. Fluctuation of credit facilities gratitude by banks has an important bearing, on the level of economic activity. Explains of bank credit is followed by increase in production, employment ,sales and prices .In a developing economy the banks offer more and more credit and increase the resources of the industries, thereby causing faster economic development. Banks plays a decision role in the individual development of the country. The credit facilities extended by banks must be uniform and rational. Otherwise there will be haphazard development off country. The flow of credit should flow steadily and evenly through various sectors of the economy. If credit flows is artificially or arrested, it would be irreparable harm to economy just as cutting of blood vessel would lead to fatal results."(Radhaswami & Vesudeyan,1979:133)

Banking companies are such type of institution which deals with credit and credit instruments. Good circulation of credit is very much important for those institutions. Unsteady and unevenly flow of credit negatively affects the economy. Thus, to collect fund and utilize it in a good investment cannot be a lighter part of fund may be the question of life and death of a banker.

2.3.2 Review from Nepalese Context

In Nepalese context, here are some independent studies which related to the present study .study materials related to this topic are presented in the following ways:

a. Review of relevant studies from report and articles
b. Review from unpublished thesis

In the first section, effort has been made to examine and review of some relates articles and reports published in different journals, magazines, newspaper and books while in second section, and unpublished thesis works conducted by various students have been received.

2.3.2.1 Review from Reports and Articles

Shekhar Bahadur Pradhan in his article Deposits mobilization its problem and prospects” has expressed that “deposit is the life blood of any financial institution i.e. commercial banks, financial companies and co-operative or non government organization.” In consideration of ten commercial banks, nearly three dozens of finance companies, the latest figure produce a strong feeling that a serious review must be made on problems and prospects of deposit sector .Beside few joint venture banks, other organizations rely heavily on the business deposits receiving and credit disbursement.

In the light of this, Pradhan has pointed out following problems of deposits mobilization in Nepalese perspective.

1. Due to lack of education, most of Nepalese people do not go for saving in institutional manner, however they are very much se saving as from cash and ornament. Their reluctance to deal with institutions system are governed by their lower level of understanding about financial organization, process requirement, office hour withdrawals system, availability of depositing facilities and so on.
2. Due to the lesser office hour of banking system people prefer for holding the cash in the personal possession.
3. Unavailability of the institutional services in the rural area.
4. No more mobilization and improvement of the employment of deposits in the loan sectors.

Pradhan has not only pointed out the problems but also suggested for the prosperity of deposit mobilization. They are given as:

- By adding service hours system will definitely be sand appropriate step.
- If deposit mobilizations materialize by providing sufficient institutions service in rural area, the generated fund can be used somewhere else by the bank which can be taken as major achievement. NRB could be endorsing this deposit collection by continuing to subsidize overhead cost for little longer period .A full scale of field office system could be taken back and made manpower strength deputed to cut down overhead cost.
- NRB also organize training program to develop skilled manpower.
- By spreading co-operative to the rural areas, mini banking services are to be launched.

- Last Pradhan mentioned, deposit mobilization carried out effectively is in the interest of depositors, society, financial sector and the nation. Lower level of deposit rising allows squeezed level of loan delivery leaving more room to informal sectors. That is why higher priority to deposit mobilization has all the relevance. (Pradhan,2053:24).

In an article, Mahesh Bhattarai is trying to indicate the problems of bank bad debt and non performing assets. According to him, "If a bank cannot recover its loan lending, banks cash flow will be badly affected. Similarly it can affect the close relationship between depositors. Bhattarai,1998.62).

"Why does loan become defaulter"? This study finds out the causes that makes loan default. "When the due date is over the loans become default. But why do the due dates be over?

Generally increase in interest rates; decreases in economic activities cause decrease in the capacity of debtor and sometimes the debtor knowingly do not pay back the loan. Other than these reasons in the context of Nepal lack of credit policy, lack of information about the loan holder (three c's: capacity, character, and capital), unhealthy competition and small market area, causes loan defaults. Default loan increases the resources mobilization cost and reduces the profit earning capacity of a bank. Therefore increases in default loans are the indicator of problematic situations to the bank.- (Neupane, 2000:142).

In an article, "challenges of non-performing loan management in Nepal", Uma Karki has mentioned the causes of increasing trend of non-performing loan. She identifies the major causes such as poor loan analysis, guarantee oriented loan system, depreciation of valued assets, misuse of loan, lack of regular supervision of loan. (Karki,2002:87)
Default risk is one kind of investment risk of non payment of loan at the fixed future date. In Nepalese context, when interest rate is increased it causes the decreases in economic activities as well as capacity of borrower. Sometimes debtors knowingly do not pay back the loan, and invest the loan in unproductive sector. Such kind of activities occurs continuously, if there is lack of sound credit policy, improper credit analysis, lack of information about loan holders and lack of regular supervision. So banks should formulate and implement sound credit policy. Loan approval and disbursement process should be conducted in better way. Proper credit analysis and regular supervision can control the credit risk.

Another article entitled "lending operation of commercial banks of Nepal and its impact on GDP." Dr. Sunity Shrestha has found all the dependent variables (i.e. agriculture, industrial, commercial, general and social sectors) except service sector; she found correlation between GDP and lending of commercial banks in various sector of economy except through service sector investment." (Sharma,2052:23-27).

“The bank gives loan to various sectors. This is necessary for long term survival of the bank. Even if any sector is doing very well, the bank does not put its total money in that sector. If the bank concentrates its lending only in one sector, failure of the sector may cause bankruptcy of the bank.” (Dhahal & Dhahal,2002:116).

Loan mix is components of established credit policy. It is a kind of strategy in credit management for banks to be success. In context of Nepal, here are different sectors in economy such as priority sector, deprived sector, productive sector, government sector etc. So, there should be diversification in investment of every commercial bank. Making investment or lending to various sectors is necessary for the long term survival of banks.

2.3.2.2 Review from Unpublished Thesis

Study connected by Ramesh Parajuli(2005/06) on “Credit management of commercial bank’s in the context of financial sector reform program” - is based on three years data of 2057/058, 2058/059, 2059/060. Mr. Parajuli’s study has relation with this study. This study has emphasized on importance of credit related reform program in financial sector. The main objective of this study is to find out the relevancy of the financial sector reform program.
A study of Nepal NIBL Bank Ltd, Investment Bank Ltd and Nepal Bank Ltd has outlined his major findings as follows;

Liquidity position of all the sample banks is quite near about to the standard of 1:2. Among the three sample banks, NIBL and NIBL have low volume of non performing assets with respect to the total assets, where as on an average in SCBNL. SCBNL has bad profitability position and two banks (NIBL and NIBL) have quite considerable profit. The trend of deposit utilization in NIBL and NIBL bank is quite strong but poor in SCBNL. There are not significant shortcomings regarding the provision for loan in NIBL. But there is low provision for sub standard loan in NIBL bank and SCBNL is not being able to maintain the preferred provision apart from for pass loan.

He has recommended that the financial sector reform program should be continued, the appropriate policies and more focus should be given to improve the credit management of SCBNL. He has also recommended that the SCBNL should properly mobilize the deposit to the profit generating sector and should focus on the quality of loan than volume of loan.

Mr. Ojha (2002) conducted a study; “Lending practices- A study of SCBNL, SCBNL and HBL” of period from 1997 to 2001 has outlined his major findings as follows:
SCBL’s contribution in loans and advances is the lowest and this has low degree of variation and low growth rate as compare to SCBNL and HBL. So he has recommended SCBNL to give extra priority on productive and priority sector loan. He has recommended SCBL, SCBNL and HBL to follow the NRB directives strictly. The ratio

of total income to total expenses of SCBNL and HBL is below than SCBL and below the combined mean of three banks. This ratio trends to be unfavorable due to the comparatively higher operating cost of these banks also. The productivity of the expenses in SCBL is significantly higher than SCBNL and HBL. He has recommended these banks to improve their operational efficiency and increases the productivity of expenses made. He has also recommended lowering gap in interest charged and interest offered. Lowering gap results in high volume and advances and helps in increasing sustainable lending practices.

Mr. Dhugana (2002) conducted a study “A comparative study on investment policy of Nepal Bangladesh bank limited other joint venture banks” concluded that NBBL has not good deposit collection it has not made enough cash and negligible amount of investment in government securities. NBBL has highest loan and advances to total deposit ratio, loan and advances to total working fund ratio, lowest loan loss ratio and higher investment on share and debenture to total working fund ratio. NBBL has followed stable policy. NBBL is not in better position on regarding off-balance transaction. NBBL is able to manage its assets regarding its on balance transaction. Lending position, investment position and net profit position of NBBL is not better in compare to HBL. But it has better position in comparison to NSBL. He has suggested increasing the liquidity of NBBL, to invest in government securities instead of keeping idle fund. He has also suggested providing project oriented approach. He has suggested NBBL for developing effective portfolio management. He has also suggested developing innovative approach for bank marketing upgrades the banking facility, liberal lending policy and effective cost management cost.

Mr. Satish Raj Regmi (2005/06), in his thesis entitled “credit practices of joint venture banks with reference to Nepal NIBL bank Ltd and Nepal Bangladesh Bank Ltd” has emphasized to analyze the credit practices of concerned joint venture commercial banks. This study is based on five years data 1988-2003/04 of concerned banks .He has found that liquidity position of both banks is satisfactory, on the basis of asset management ratio; NBBL is in better position than NSBL. He has also found that, in credit portfolio, both banks have invested more in private sector than other sector. Further he has found that, NBBL has better lending efficiency than that of NSBL. Deposit mobilization per branch ratio and credit mobilization per branch ratio of NSBL is higher than NBBL. At last, he has found that the profitability position of NBBL is better than that of NSBL.

He has recommended that the NBBL should give focus on it liquidity position. Both banks should follow the NRB directives which help them to reduce credit risk. He has also recommended that the both bank should adopt sound credit collection policy and the marketing strategies should be innovative.

2.4 Important Terminology

In this section of the study efforts have been made to clarify the meaning of some important terms used in this study, they are given as:

a. Deposits

- Deposits mean the amount in a current, saving or fixed account of a bank or financial institution. For a commercial bank, deposit is the most important source of liquidity for bank's financial strength; it is treated as a barometer. In the word of Eugene' "A bank deposits are the amounts that it owes to its customers" deposits are the lifeblood of the commercial banks. The deposit of a bank is affected by various factors like:

- Types of customers
- Physical facilities of bank
- Management and accessibility of customer
- Types and range of the services offered by the bank.

In addition to the above, the prevailing economic conditions exert a decisive on the amount of deposit the bank receives.

b) Loan and advances

Loan advances and overdraft are the main sources of income for a bank. Bank deposits can be crossed beyond a desired level but the level of loans, advances and overdrafts will never cross it, the facilities of granting loan, advances and overdrafts are the main services in which customers of the bank can enjoy. Funds borrowed from banks are much cheaper than those has excessively increased due to cheaper interest rate, further an increase in economic and business activities always increase the demand for funds. Due to limited resources and increasing demand for loans, there is some fear those commercial banks and other financial institutions too. It may take more preferential collateral while granting loans causing unnecessary botheration to the general customers. Such loan from those institutions would be available on special request only and this is a chance of utilization of resources of economically less productive fields. These are the undesirable effects of too low interest rate.

c) Investment on government shares, securities and debentures

Commercial banks invest on government shares, securities and debentures to earn some interest and dividend. This is the secondary sources of income to the bank. A commercial bank may extend credit by purchasing government securities, shares and bond for several reasons, some of them are:

- It may want to space its maturities so that the inflow of cash coincide with expected withdrawals by depositors of large loan demands of its customers.
- It may wish to have high grade marketable securities to liquidate, if its primary sources of reserves become inadequate.
- It may also be forced to invest because the demands for loans have decreased of are more sufficient to absorb its excess reserves.

  However investment portfolio pf commercial bank is established and maintained with a view to the mature of bank's liabilities. That is because depositors may demand funds in great volume without previous notice to banks; the investment must be of a type that can be marketed quickly with little of no shrinkage in value.

d) Investment on other companies shares and debentures

Due to excess fund but least opportunity to invest those funds in much more profitable sector and also to meet the requirement of Nepal Rastra bank directives many commercial banks have to utilize their funds to purchase shares and debentures of many other financial and non-financial companies. Now a days, most of commercial banks have purchased the shares of regional development bank, NIDC and other development banks.

e) Other use of funds

Commercial banks must maintain the minimum bank balance with NRB as prescribed by the bank. Similarly, they have to maintain the cash balance in local currency in the value of bank. Again a part of funds should be used for bank balance in foreign bank and to purchase fixed assets like land, building, furniture, computers, stationary etc.

a) Off balance sheet activities

Off balance sheet activities cover the contingent liabilities etc. Off balance sheet activities involve contracts for future purchase or sale of assets and all these activities are contingent obligations. These are not recognized as assets and liabilities in balance sheet. Some good examples of these items are letter of credit, letter of guarantee, commission, bills for collection etc. Now a day, such activities are stressfully highlighted by some economists and finance specialists to expand the modern transactions of a bank. These activities are very important as they are good source of profit to the bank, though they have risk.

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research simply means to search again and again. It is a systematic activity to achieve truth or finding solution to a problem. It is a process of a systematic and in-depth study or research of any particular topic, subject or area of investigation backed by the collection, compilation, presentation and interpretation of relevant details or data. Methodology is the research method used to test the hypothesis. So the research methodology refers to the overall research process, which a researcher conducts during his/her study. “The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find truth which is hidden and which has not been discovered at yet.”(Kothari, 1990:7).

This basic framework of this study is descriptive as well as analytical. In order to reach and accomplish the objectives of this study, different activities are carried out and different stages are crossed during the study period. For this purpose, the chapter aims to present ad reflect the methods and techniques those are carried out and followed during the study period.

3.2 Research Design

Research Design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. There are many methods of research design and this study will be based on recent historical data. Mostly, secondary data and information will be collected, evaluated, verified and synthesized to reach a conclusion. To achieve the objective of this study descriptive data. Different journals and articles relevant with the study, annual reports of different fiscal years of concerned banks, NRB Directives, banking and financial statistics report published by NRB and other related materials are collected and studied for analysis. With the help of maintained research design, the study evaluates the credit management of joint venture commercial banks.

3.3 Population and Sample

There are altogether 27 commercial banks functioning all over the country at present, which are taken as a population of this study work. Among them, this study comprises only five commercial banks namely, SCBNL, NIBL, HBL, EBL and NBBL Banks, which have been selected as a sample for this research study.

3.4 Nature and Sources of Data

This study is mainly based on secondary data. These data are collected from published sources like, annual reports, balance sheet, prospectus, newspaper, journal, web sites and other sources. Besides this in some case, as per research need. The secondary data published on annual reports of concerning organizations.The secondary data are extracted from published annual reports of the bank, published articles, journals, reports, previous related studies etc.

3.5 Data Collection and Processing Techniques

Even this study is based on secondary data, adequate effort and time is given to get these essential materials, Annual reports of concerned banks, annual report of SEBO are obtained from respective offices. To some extent opinion survey or informal interview and questionnaire are conducted to obtain more information prove the reliability of the different published data. Various published data cannot be used in their original form due to poor data base. Thus for analysis purpose further these data need to be verified and simplified. Available data, information and figures are rechecked and tabulated in the analytical manner with supporting interpretations.

3.6 Data Period Covered

This study is based on only five year data of each joint venture bank i.e. from 2003/04 to 2007/08 B.S.

3.7 Methods of Data Analysis

Presentation and Analysis of the collected data is the core part of research work. The collected raw data are first presented in systematic manner in tabular form and are then analyzed by applying different financial and statistical tools to achieve the research objectives. Besides some charts and tables have been presented to analyze and interpret the findings of the study.

3.7.1 Financial Tools

Various financial tools and statistical tools used are as follows:
Financial tools basically help to analyze the financial strength and weakness of a firm. Ratio analysis is a part of the whole process of analysis of financial statements of any business or industrial concerned especially to take output and credit decisions. Ratio analysis is used to compare firm's financial performances and status that of the other firm's or to it overtime. Even though there are many ratios to analyze and interpret the financial statement those ratios that are related to the investment operation of the bank have been covered in this study.

3.7.1.1 Liquidity Ratios

This ratio measure the liquidity position of a firm .It measures the firm's ability to meet its short term obligations or its current liabilities. It measures the speed with which a bank's assets can be converted into cash to meet deposit with drawl and other current obligations.

One of the most important functions of commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community. Demand for deposits, with drawl, pay maturity in time and convert non cash assets into cash to satisfy immediate need without loss to bank and consequent Impact or long run profit. As a financial analytical tool, the following liquidity ratios have been used to come into facts and findings of the study.

a. Current ratio

Current ratio indicates the ability of banks to meet its current obligation. It measures liquidity position of financial institutions. It is calculated dividing current assets by current liabilities. It measures short term solvency, so it is often called solvency ratio and working capital ratio. It is calculated by applying this formula,

$$\text{Current ratio X} \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets normally comprised with cash and bank balance, investment, money at call, bills for collection, loan and advances, customers acceptance and discount, purchased bills, other receivable and prepaid expenses.

Similarly, the current liabilities include those obligations which mature within one year from the data of their financial statement. They are current payment, cash margin, and current saving deposit; inter bank reconciliation account, bills payable, provision for overdrafts, accrued expenses and bills for collection and customer's acceptance outstanding expenses etc.

b. Liquid fund to total deposit ratio

Liquid fund to total deposit ratio indicates the banks strength to meet uncertain outflow or deposits. It occurs by dividing liquid fund. Liquid fund are those assets, which can be converted into cash in a short period without any decline in their value.

$$\text{Liquid fund to C. L ratio X} \frac{\text{Liquid fund}}{\text{Current liability}}$$

Liquid fund consists of cash in hand, balance with NRB, balance with other banks and money at call.

c. Cash and bank balance to total deposit ratio

Deposit is one of the major liabilities of commercial banks. Bank has to manage its liquidity to meet depositors demand. This ratio measures the availability of bank's highly liquid or immediate funds to meet its unanticipated calls on all types of deposits.

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

Total deposit includes current deposit, savings deposit, fixed deposit, call and short deposit and other type of deposits. Cash and bank balance consists of cash in hand, cheques and other cash items, balance with domestic banks, foreign cash on hand.

d. Cash and bank balance to interest sensitive deposit ratio

Saving deposit is deposited by public in a bank with an objective of increasing their wealth. Interest rate plays important role in the follow of interest sensitive deposit. Fixed and current deposits are not interest sensitive. Fixed deposit has a fixed term to maturity and current deposits do not carry an So fixed and current deposits are not sensitive toward interest rate. The ratio of cash and bank balance to interest sensitive deposits measures the bank ability to meet its sudden outflow of interest sensitive deposits due to the change in interest rate.

$$\text{Cash and bank balance to interest sensitive deposit ratio X} \frac{\text{Cash and bank balance}}{\text{Saving deposit}}$$

e. Cash and bank balance to current asset ratio

Cash and bank balance are the most liquid current assets. This ratio measures the percentage of most liquid fund with the current assets. Higher ratio indicates the bank's sound ability to meet the daily cash requirement of their customer's deposit. Low ratio is also dangerous. If bank maintain low ratio, bank may not able to make the payment against cheques. So bank has to maintain cash and bank balance to current assets ratio properly. This ratio is calculating dividing cash and bank balance by current assets.

$$\text{Cash and bank balance to current assets ratio X} \frac{\text{cash and bank balance}}{\text{current assets}}$$

f. Loan and advances to current assets ratio

Loan and advances is the major component in total assets, which indicates the banks ability to canalize its deposit in the form of loan and advances to earn high return. If sufficient loan and advances cannot granted it should be pay interest on those utilized deposit funds and may lose earning. So commercial banks provide loan and advances in appropriate level to find out portion of current assets, which is granted as loan and advances. This ratio is calculated by dividing loan and advances to current assets. Loan and advances includes short term loan and advances, overdraft, cash credit, local and foreign bills purchased and discounted.

$$\text{Loan and advances to current assets ratio X} \frac{\text{Loan and advances}}{\text{Current assets}}$$

3.7.1.2 Assets Management Ratio

Assets management ratio measures the proportion of various assets and liabilities in balance sheet. The proper management of assets and liability ensures its effective utilization. Commercial banks should manage its assets and liabilities properly to earn profit. The banking business converts the liability into assets by way of its lending and investing functions. Asset and liability management ratio measures its efficiency by multiplying various liabilities and performing assets. The following are the various ratios relating to asset and liability management, which are used to determine the efficiency of the bank concerned in managing it s assets and efficiency in portfolio management.

a. Total assets to total liability ratio

Total assets to total liability ratio measures the volume of total assets of the bank. The total assets of the bank should play active role in profit generating through lending activities. This ratio measures the banks ability to multiply its liability into assets. Higher ratio signifies overall increases of credit. Higher ratio indicates the higher productivity. It is calculated by dividing total assets by total liabilities.

$$\text{Total assets to total liability ratio X} \frac{\text{Total assets}}{\text{Total liability}}$$

b. Loan and advances to total assets ratio

Loan and advances is an important part of total assets (total working fund). Total working fund play important role in profit earning through fund mobilization. So bank should carefully mobilize the total assets. The ratio of loan and advances to total assets measures the volume of loan and advances in the structure of total assets. A high ratio indicates better in mobilization of funds as loan and advances and vice versa.

$$\text{Loan and advances to total assets } X \frac{\text{Loan and advances}}{\text{Total assets}}$$

c. Total investment to total deposit ratio

A commercial bank may mobilize its deposit by investing its fund in different securities issued government and other financial and non- financial companies. Effort has been made to measure the extent to which the banks are successful in mobilizing the total deposit on investment. A high ratio is the indicator of high success to mobilize the banking fund as investment and vice-versa.

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

d. Loan and advances to total deposit ratio

This ratio is calculated to find out successfully the banks are utilizing their deposits on loan and advances for profit generating activities. Greater ratio indicates the better utilization of total deposits.

$$\text{Loan and advances to total deposit ratio } X \frac{\text{Loan and advances}}{\text{Total deposit}}$$

e. Investment to total and advances and investment ratio

This ratio measures the contribution made by investment in total amount of loan and advances and investment. The proportion between investment and loan and investment measures the management attitude towards risk assets and safety assets. Investment and loan and advances in whole do not provide the quality of assets that a bank has created. The ratio indicates the mobilization of funds in safe area and vice-versa.

$$\text{Investment to loan and advances and investment ratio } X \frac{\text{Investment}}{\text{Loan and advances and investment}}$$

3.7.1.3 Activity Ratio

Activity ratio measures the performance efficiency of an organization from various angles of its operations. These ratios indicate the efficiency of activity of an enterprise to utilize available funds, particularly short term funds. These ratios are used to determine the efficiency, quality and the contribution of loan and advances in the total profitability. The efficiency of a firm depends to a large extent on the efficiency with which its assets are managed and utilized. This ratio also shows the utilization of available fund. The following activity ratios measures the performance efficiency of the bank to utilize funds

a. Loan loss provision to total loans and advances ratio

NRB has directed the commercial banks to classify its loan and advances into the category of pass, substandard, doubtful, and loss. NRB has classified the pass and substandard loan as performing loan and other two types of loan as non-performing loans. The provision created against the pass and substandard loan is called the general loan loss provision and provision created against the doubtful and loss loan is called specific loan loss provision. The provision for loan loss reflects the increasing probability of non-performing loan. The provision of loan mean the net profit of the banks will come down by such amount. Increase in loan loss provision decreases in profit result to decreases in dividends but it's positive impact is that strengthens the financial conditions of the banks by controlling the credit risk and reduced the risks related to deposits.

Loan loss provision to total loan and advances ratio is calculated by dividing loan loss provision by total loan and advances. The low ratio indicates the good quality of assets in total volume of loan and advances.
High ratio indicates more risky assets in total volume of loan and advances.

$$\text{Loan loss provision to total loan and advances X} \frac{\text{Loan loss provision}}{\text{Total loan and advances}}$$

b. Non performing loan to total loan and advances ratio

Non performing loans to total loan and advances ratio shows the percentage of non-recovery loans in total loan and advances. This ratio is calculated dividing non-performing loan by total loan and advances.

$$\text{Non - performing loan to total loan and advances X} \frac{\text{Non - performing loan}}{\text{Total loan and advances}}$$

c. Interest expenses to total deposit ratio

This ratio measures the percentage of total interest paid against total deposit. A high ratio indicates higher interest expenses on total deposit. Commercial banks are dependent upon its ability to generate cheaper fund. The cheaper fund has more probability of generating loan and advances and vice-versa.

$$\text{Interest expenses to total expenses ratio } X \frac{\text{Interest expenses}}{\text{Total deposit}}$$

d. Interest expenses to total expenses ratio

This ratio measures the percentage of interest paid against total expenses. The high ratio indicates the low operational expenses and vice-versa. The ratio indicates the costly sources of funds.

$$\text{Interest expenses to total expenses ratio } X \frac{\text{Interest expenses}}{\text{Total expenses}}$$

e. Interest expenses to total working fund ratio

This ratio measures the percentage of total interest paid against the total working fund. A high ratio indicates the higher interest expenses on total working fund and vice versa.

$$\text{Interest expenses to total working fund ratio } X \frac{\text{Interest expenses}}{\text{Total working fund}}$$

f. Deposit mobilization per branch

This ratio shows the average mobilization of deposit. This ratio is calculated dividing total deposit by no. of branches. Higher ratio shows the higher collection of deposit per branch.

$$\text{Deposit mobilization per branch } X \frac{\text{Total deposit}}{\text{No. of branch}}$$

f. Credit mobilization per branch

This ratio measures the average mobilization of credit. This ratio is calculated by dividing total loan and advances by no. of branches. Higher ratio indicates the higher lending per branch.

$$\text{Credit mobilization per branch } X \frac{\text{Total loan and advances}}{\text{No. of branches}}$$

3.7.1.4 Loan and advances portfolio

To analyze the portfolio behavior of loans and advances of the bank for the study period, trend of loans and advances granted to various sectors of the economy fore various purposes have been measured.

a. Priority sector credit to total credit ratio

Priority sector includes micro and small enterprises. Micro and small enterprises are classified as agriculture enterprises, cottage, small industries and services. This ratio is calculated by dividing priority sector credit by total credit.

b. Deprived sector credit to total credit ratio

Deprived sector credit includes low income and particularly socially backward women, tribes, lower caste, blind, hearing impaired and physically persons and squatter family. Deprived sector credit to total credit ratio can be calculated by dividing deprived sector credit by total credit.

c. Private sector credit to total credit ratio

Private sector credit to total credit ratio can be calculated by dividing private sector credit to total credit. Higher credit ratio to private sector indicates higher profit and higher risk.

d. Credit to government enterprises

Credit to government enterprises is another option that the commercial banks have to mobilize their funds.

3.7.1.5 Profitability Ratio

This ratio is related to profit of business. Profit is essential for survival of the banks, so it is regarded as the engine that drives the banking business and indicates economic progress. Profitability ratio is used to indicate and measure the overall efficiency of a firm in terms of profit and financial performance. It is calculate to measure the management ability regarding how they will have utilized their funds. For better performance profitability ratio should be higher, so following are the various types of ratios which shows the contribution of loan and advances in profit and help to decide investor whether to invest in particular firm or not:

a. Interest income to total income ratio

This ratio measures the volume of interest income in total income. The high ratio indicates the banks performance on other fee-based activities. The high ratio indicates the high contribution made by lending and investing activities.

$$\text{Interest income to total income ratio X} \frac{\text{Interest income}}{\text{Total income}}$$

b. Interest income to interest expenses ratio

This ratio measures the gap between interest rate offered and interest rate charged. NRB has restricted the gap between interest taken in loan, advances and interest offered in deposits. The credit creation power of commercial banks has high impact on this ratio.

$$\text{Interest income to interest expenses ratio X} \frac{\text{Interest income}}{\text{Interest expenses}}$$

c. Operating profit to loan and advances ratio

Operating profit to loan and advances ratio measures the earning capacity of commercial banks. This ratio is calculated dividing operating profit by loan and advances.

$$\text{Operating profit to loan and advances ratio X} \frac{\text{Operating profit}}{\text{Loan and advances}}$$

d. Return on loan and advances ratio

This ratio measures the earning capacity of commercial banks through its fund mobilization as loan and advances. Higher ratio indicates greater success to mobilize fund as loan and advances and vice-versa. Mostly loan and advances includes loan cash credit, overdraft, bill purchased and discounted.

$$\text{Return on loan and advances X} \frac{\text{Net profit}}{\text{Loan and advances}}$$

e. Return on total working fund ratio

This ratio is measuring a profitability indicator with respect to each financial recourses investment of bank's assets. If the bank's total working fund is well managed and effectively utilized, the return on such assets will be higher and vice-versa.

$$\text{Return on total working fund X} \frac{\text{Net profit}}{\text{Total working fund}}$$

f. Total interest earned to total working fund ratio

This ratio shows the banks successes in mobilizing their assets to generate high income. A high ratio is an indicator of high earning power of the bank on its total working fund and vice-versa.

$$\text{Interest earned to total working fund ratio X} \frac{\text{Total interest earned}}{\text{Total working fund}}$$

i. Return on equity ratio

Equity capital is an owned capital of any bank. If bank can mobilize its equity capital properly, they can earn high profit. The return on equity capital measures the extent to which a bank is successful to mobilize its equity.

$$\text{Return on equity X} \frac{\text{Net profit}}{\text{Total capital}}$$

3.7.1.5 Growth Ratio

Growth ratios represent how the commercial banks maintain the economic and financial position. Under this topic, three types of growth ratios are studied which are as follows:

b. Growth ratio of total deposit
c. Growth ratio of total loan and advances
d. Growth ratio of net profit

Growth ratios are directly related to the fund mobilization and investment management of commercial bank. These ratios can be calculated by dividing the last period figure by the first period figure than by referring to the compound interest table. The high ratio indicates better performance of a bank and vice-versa.

3.7.2 Statistical Tools

Some important statistical tools are used to achieve the objective of the study. Following tools of measuring the degree of dispersion will be used in the analysis:

1. Arithmetic mean

Arithmetic mean of a given set of observation is their sum of divided by the number of observation. In general x_1, x_2…….x_n are the given number of observation, their arithmetic mean can be derived in this way;

$$X \text{ X} \frac{X_1 \Gamma X_2 \Gamma X_3 \Gamma .... \Gamma X_n}{N}$$

Where,
X= Variables
ΣX=Arithmetic mean

N=Number of observation

The arithmetic mean is a single value of selection which represents them in average. Out of the various central tendencies a mean is one o f the useful tools to find out the average value of given data. Furthermore it is very much useful with respect of financial analysis and it is also easy to calculate.

2. Karl person’s coefficient of correlation

Out of several mathematical method of measuring correlation the Karl Pearson popularity known as Pearson’s coefficient of correlation widely used in practice to measure the degree of relationship between two variables. Two variables are said to have correlation when the value of one variable is accompanied by the change in the value of the other .So it is measured by following formulae using two variables: (Bhajracharya,2056:250).

$$r \text{ X} \frac{XY}{\sqrt{X^2}\sqrt{Y^2}}$$

Where,
r = Coefficient of correlation
ΣXY = Sum of product of deviation in two series
ΣX^2 = Sum of squared deviation in X series
ΣY^2 = Sum of squared deviation in Y series
The value of this coefficient can never be more than +1 or less than -1. Thus +1 and -1 are the limit of this coefficient. Thus r = +1 implies that correlation between variables in +ve and vice versa. Here, zero denotes no correlation.

3. Standard deviation

The standard deviation measures the absolute dispersion or variability of distribution: the greater the amount of dispersion or variability the greater the standard deviation, for the greater will be the magnitude of the deviation of the values from their mean. A small standard deviation means a high degree of uniformity o f the observation as well as homogeneity of series; a large standard deviation means just the opposite. Standard deviation is defined as the positive square roots of the mean of square of deviation taken from the asthmatics mean. It is denoted by σ.
Formulae to calculate the standard deviation are given below:

$$\text{ó X}\sqrt{\frac{X^2}{N}}$$

Where,

$$X = (\bar{X} \, Z \, x)$$

$$ó \, X \sqrt{\frac{Fx^2}{N}}$$

Where,

X=($\bar{X}$ -x) and F denotes the frequency.

$$\pm \, X \sqrt{\frac{X^2}{N} \, Z \, \frac{X}{N}}^{\,2}$$

4. Coefficient of variation

Standard deviation if the absolute measure of dispersion. The relative measure of dispersion based on standard deviation as known as the coefficient of standard deviation. The coefficient of dispersion based on S.D. multiplied by 100 is known as coefficient of variation (CV). If x be the arithmetic mean and σ be the S.D. of the distribution, the CV is defined by

$$CV \, X \frac{\pm}{X^*} \mid 100$$

It is the independent of unit. So, two distributions can bitterly be compared with the help of CV for their variability.

5. Probable error(PE)

Probable error of the correlation coefficient by PE is the measure of testing the reliability of the calculated value of correlation. If r be the calculated value of correlation of a sample of n pair of observations, Then PE is defined by:

$$PE_r \, X \frac{1 \, Z \, r^2}{\sqrt{N}}$$

If correlation (r) < PE, it is insignificant , so, perhaps there is no evidence of correlation and,

If correlation (r) > PE , it is significant. (Bhajracharya, 2056:257).

6. Trend analysis

"Ratio Analysis enables a firm to take the time dimension into account. In other words, whether the financial position of a firm is improving or deteriorating over the years. This is made possible by the use of trend analysis. The significance of a trend analysis of ratios lies is the fact that the analyst can know the direction of movement, i.e. whether the movement is favorable or unfavorable. For example, ratio may be low as compared to the norm or standard but the trend may be upward. On the other hand, though the present level may be satisfactory but the trend may be declining one. Thus trend analysis is of great significance.” (Khan & Jain,1988:157).

Trend analysis measures the scenario of the variables for the different period. This tool is used to find out the trend of different financial indicators. To find out the actual situation of the different factors for various years, trend analysis is the most useful. It doesn’t provide the analytical figures as cause and effects but it shows the actual figure. It may be downward sloping, upward sloping of constant over the period.

The straight line trend is given by the following formula:

Y= a + bx

Where,
Y= Values of dependent variables
a= y intercept
b= Slope of the trend line
x= Values of independent variable (Time)

$a \text{ X} \frac{\phi y}{n} \qquad b \text{ X} \frac{\phi xy}{\phi x^2}$

Σy= Sum of the observation in series Y
Σxy= Sum of the observation in series X and Y
Σx^2= Sum of square of the observation in series X

“The straight line trend implies that irrespective of the seasonal and cyclical swings and irregular fluctuations, the trend value increase or decrease by a constant absolute amount ‘b’ per unit of time. Hence, the linear trend values from a series in arithmetic progression, the common difference being ‘b’ the slope of the trend line.”

7. Hypothesis T-test, analysis

Student’s t-values are computed in order to test whether the difference between the financial ratios of the two groups is statistically significant or not. When a sample is less than 30, we use t-test. The basis fundamental assumption of this test is as follows.
The parent population from which the sample is drawn is normally distributed.
The sample is random and independent to each other.

The population S.D. is not known.

In order to fulfill the objective of this research study, following hypothesis is formulated for testing:

Null hypothesis, H_0: $\mu_1=\mu_2$ “There is no significance difference between the mean ratios of two banks”

Alternative hypothesis, H_1:$\mu_1\neq\mu_2$“There is significance difference between the mean ratios of two banks”

The t-value is calculated as:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2\left(\frac{1}{x_1}+\frac{1}{x_2}\right)}}$$

Where,
x_1= the mean of the first bank
x_2= the mean of the second bank
n_1=number of observation in the first bank
n_2=number of observation in the second bank
S_2=combined variance
d_1=squares of the deviation taken from the mean of the first bank
d_2=squares of the deviation taken from the mean of the second bank

The value of variance is calculated as follows:

$$S_2 = \frac{\sum\left(x_1-\overline{x_1}\right)^2 + \sum\left(x_2-\overline{x_2}\right)^2}{n_1+n_2-2}$$

The degree of freedom is calculated as n_1+n_2-2. If the calculated value of ‘t’ is greater the table values of the ratios of the two groups is statistically significant.

7. Hypothesis F-test, analysis

Students F-test value at 5% level of significance are computed to test whether the financial ratios of five banks differ significantly or not. In order to fulfill the objectives of research study, null hypothesis and alternative hypothesis are formulated as follows:

Null hypothesis, H_0: $\mu_1=\mu_2$ “The ratios of five banks are not significantly different”
Alternative hypothesis, H_1:$\mu_1=\mu_2$ “The ratios of five banks are significantly different”
F value can be calculated as follows:

Table No.3.1
Hypothesis F-test

Sources of Variation	**Sum of squares**	**Degree of freedom**	**Mean sum of squares**	**F-ratio**
Within Banks	SSC	k-1	MSC	$\frac{MSC}{MSR}$
Within Banks	SSR	N-k	MSR	
	SST	N-1		

SSC= $\frac{(\sum x_1)^2}{n_1} + \frac{(\sum x_2)^2}{n_2} + \frac{(\sum x_3)^2}{n_3} + \frac{(\sum x_4)^2}{n_4} + \frac{(\sum x_5)^2}{n_5} - \frac{T^2}{N}$

SST= $\sum x_1^2 + \sum x_2^2 + \sum x_3^2 + \sum x_4^2 + \sum x_5^2 - \frac{T^2}{N}$

SSR= SST-SSC

MSC= $\frac{SSC}{k-1}$

MSR= $\frac{SSR}{N-k}$

Where,

SSC= Sum of squares between banks

SSR= Sum of squares of ratios within banks

SST= Total sum of squares

MSC= Mean sum of square of columns

MSR= Mean sum of square of error

CHAPTER-FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is the important for the researcher because this chapter is the extract of all the previously discussed chapters. This chapter consists of mainly three parts: summary, conclusion and recommendation. In summary part, revision or summary of all four chapters is made. In conclusion part, the result from the research is summed up and in recommendation part, suggestion and recommendation is made based on the result and experience of theses. Recommendation is made for improving the present situation the concerned parties as well as further research.

5.1 Summary

Overall national development of any country depends upon the economic development of that country and economic development largely depends upon financial infrastructure of the country. Therefore, the primary goal of any nation including Nepal is rapid economic development to promote the welfare of the people and the nation as well. Nepal being one of the least developed countries has been trying to embark upon the path of economic development by economic growth rate and developing all sectors of economic.

Basically, the entire research work focuses on the study on credit management of SCBNL, NIBL, HBL, EBL and NBBL. This banks are composed as per credit management activities by taking five years data from the year 2003/04 to 2007/08.

The development and expansion of financial institution is essential for economic growth of the country. JVBs are such financial institutions which collect funds from depositors and mobilize its fund as loan and advances according to the need of client .A term credit plays a vital role in the economy. Better management of the credit is essential to make high return for every JVBs .JVBs want to maximize return and minimize credit risk. Credit management strongly recommends analyzing and managing the credit risk. When borrower will fail to meet its obligation in accordance with the agreed terms and conditions, then credit risk problem is arises. So, to minimize such risk, all JVBs should have to establish and use standards in making credit decisions. Loans are risky assets though a bank invests most of its resources in granting loan and advances. The loan provided by JVBs in different sector contributes to the society and whole economy, because credit function is the demand of economy but sometimes credit becomes dangerous tool if it is properly managed and controlled. Too much and too little credit is harmful. Too much credit leads to inflation which causes direct and immediate damage to creditors and customers and too little credit lead to deflation which brings down the level of output, employment and income. So, the directives stipulated by NRB for JVBs become essential to manage credit in proper way and playing great role of the comparative analysis of credit management of JVBs.

The researcher has identified the research problem of five JVBs .The objectives which are determined on the basis of research problem. In order to carry out this study, the primary as well as secondary sources of data have been used. The analysis is performed with the help of financial and statistical tools. The presentation and analysis of data providers the clear picture in terms of financial strength and weakness of these JVBs. The analysis is associated with comparison and interpretation. Various financial ratios of five commercial banks are analyzed such as liquidity ratio, assets management ratio, activity ratio, profitability ratio and growth ratio. Under statistical analysis, some relevant statistical tools such as trend analysis, coefficient of correlation analysis and hypothesis test are used .This study helps to analyze the portfolio behavior of lending and measuring the ratio of loan and advances made in different sector. It is also helpful to analyze the credit contribution on total profitability.

The data which are used in this study, obtained from the annual reports of concerned commercial banks, SEBO, NRB and different journals and newspaper. The present study has been undertaken to examine and evaluate the financial performance of five JVBs .The financial statement of five years i.e. 2003/04 to 2007/08 has been examined for the purpose of the study. The analysis and interpretation of data has been done boy applying the wide variety of methodology as stated in Chapter Three.

Major findings are derived in earlier chapter.All five banks are not being able to maintain the appropriate standard of current ratio. From analysis it is found that HBL and SCBNL have not ability to satisfy the credit needs of the community, NIBL is found in slightly better position and EBL and NBBL are found in average position. NBBL has better efficiency to manage its assets in profitable manner but SCBNL and HBL have not better efficiency to manage its assets in profitable manner. Similarly, HBL has high expectation of loan loss so greater loan loss provision has been made but EBL has been seen safe from loan loss. NBBL has high and EBL has low percentage of non recovery loan. SCBNL and HBL are successful in collecting the fund in the chepest possible price but NIBL has been paying high interest against total deposit. From credit portfolio view, it has been found that SCBNL should give focus on private, priority and deprived sector to invest. EBL and NIBL has been higher intensity to invest in private and government sector. Similarly, SCBNL shows better performance regarding profitability ratio. NIBL has not better position regarding profitability ratio. According to mean growth ratio, it is found that EBL is successful to maintain the economic and financial position in better way. NBBL has also high growth rate of net profit but SCBNL has not been seen well. The primary data are collected in the form of questionnaire and collected fro, respondents to concerned banks. Questionnaires are given to the staffs and customers; regarding the questionnaire their opinions are analyzed.

5.2 Conclusion

On the basis of analysis and findings of this study following conclusion are made

- On the basis of assets management ratio, it has been concluded that NBBL has better position than that of others. It has high total assets to total liabilities ratio, loan and advances to total assets ratio and loan and advances to total deposit ratio. The mean ratios of SCBNL and HBL show their weakness in assets management but they have high ratio of totals investment to total deposit, investment to loan and advances and investment. In conclusion, it can be said that NBBL is able to manage its assets to compete in this competitive banking business and NIBL and EBL are also able to manage its assets in comparison of SCBNL and EBL.

- From the analysis, it is found that the liquidity position of NIBL is better than that of others but HBL and SCBNL have low liquidity position. It shows NIBL has made enough cash and bank balance and it can pay liabilities to its depositors and it has ability to satisfy credit needs of community but from the profit making point of view, holding higher level of amount is also not good for any bank and holding low level of amount creates negative impact on the goodwill and reputation of the bank. So, all these banks should try to maintain their liquidity position as standard.

- In credit portfolio, NIBL has made more investment in priority, deprived and government sector and EBL has made more investment in private sector. In the area of privatization, all these banks have shown good performance but this should increase in the coming future. But the investment made by these banks in priority and deprived sector is below the minimum requirements stipulated by NRB directives. In conclusion, it can be said that SCBNL and HBL should try to mobilize its fund in these sector.

- On the basis of activity ratio, it has been concluded that HBL has been made greater loan loss provision, but EBL is felling sage from loan loss than others. Similarly, NBBL has high percentage of non performing loan and EBL has low percentage of it. So these banks should try to adopt sound credit collection policy which helps to control loan loss and decreases non performing loan. If they do not so, it will causes great losses. It can also conclude that SCBNL is successful in collecting the fund in cheapest possible price but NIBL has been paying high interest against total deposit and total working fund and EBL has been paying high interest against total expenses.

- On the basis of profitability ratio, it has been concluded that the profitability position of SCBNL is comparatively better than that of others. SCBNL is able to charge high interest rate but it has low rate of interest offered in deposit. So it can conclude that SCBNL has better profitability of funds invested in banks assets and has been seen able to mobilize its assets and able to utilize of resources of owners but NIBL has not better profitability position.

- On the basis of growth ratio, in conclusion it can be said that EBL is successful to maintain the economic and financial position in better way as it has better growth ratio of deposit and loan and advances but SCBNL has not been seen better in terms of growth ratio. HBL has higher mean ratio of deposit mobilization and credit mobilization per branch.

- So, it can be concluded that CB_s should search the new investment potentiality toward the deprived and priority sector for poverty elimination. During analysis it is known that the main causes of dissatisfaction are not getting promotion, bonus scheme, overload of work, low pay scales etc. so, banks should try to provide better facilities to their staffs.

5.3 Recommendations

On the basis of analysis and findings of this study following recommendations are made

- In practice, the JVBs are urban based, serve quite, a few elite, and affluent, big customers and heavily depended on fee based activities. To meet social responsibilities it is recommended to these banks should promote and mobilize the funds in rural areas. In this study it its found that the commercial banks are hesitated to invest in rural areas because of the reason of risk but it is very important to invest and to mobilize its fund in rural areas to eliminate poverty and to develop economy.

- All commercial banks should have greater efficiency to utilize of funds provided by outsiders .Depositors money has mainly tied up in loans. The largest amount of the bank in the assets side is loan and advances. Negligence in administering these assets could be the main cause of a liquidity crisis in the bank. The study has been reveals that NBBL’s loan and advances to total deposit ratios are higher than other banks. So, other four banks are strongly recommended to follow liberal lending policy and invest more and more amount of total deposit in loan and advances.

- In commercial banks the liquidity position affects external and internal facts such as the prevailing interest rate, supply and demand position of loans, central banks requirement and the growth position of financial market .In this study it has been seen that all five banks are not able to maintain the appropriate standard of current ratio but comparatively NIBL has better liquidity position but SCBNL and HBL have unsatisfactory liquidity position. So, these banks are recommended to increase cash and bank balance to satisfy the credit needs of community. They are also suggested to keep the reasonable amount of liquidity to maintain their short term solvency.

- Increase in loan loss provision decreases the profit result. If high loan loss is expected, greater loan loss provision is made in income statement and this will lead to low profit and possible losses .If loan are not distributed properly and cautiously then it may be main cause of the failure of the banks. From this study it is found that HBL has high expectation of loan loss so it has been made greater loan loss provision and the non performing loan to total loan and advances of NBBL is higher than those others. So these banks are recommended to adopt sound credit collection policy. It helps them to decrease loan loss provision and non performing loan. So these banks must be careful in strengthen credit collection policy.

- The development of competition reduces the non fund based income along with shore in credit market for traditional areas of lending. So these banks are recommended to innovate with new areas of lending and also more to rural sector in search of new lending area.

- The main focus of commercial banks in to be enough profit. The management of the firm is interested in operating efficiently of the firm's profitability ratios but commercial banks should be careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and its customer's .Comparatively, SCBNL has been able to utilize resources of owners. The profitability position of SCBNL and EBL is better than that of others .So, banks are recommended to utilize its risky assets and shareholders fund to gain high profit margin.

- Strictly followed NRB directives, helps to reduce credit risk arising from borrowers' defaulter, lack of proper credit appraisal, defaulter by black listed borrowers and professional defaulters. Government has established credit information beuro which will provide suggestion to commercial banks. So these banks are recommended to follow NRB directives.

- Looking at the current trend of banking business these banks must be very much careful on formulating marketing strategy to serve it s customer. The marketing strategy should be innovative that would attract and retain the customer. So these banks are recommended to develop an innovative approach to bank marketing for its well being and sustainability in the market.

- Operating income level of these banks does not seem satisfactory. So these banks should increase their operations and efficiency by mobilizing their resources in profit generating sector. By using modern technology, computer network experts and well trained personnel, these banks should control operating expenses

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APPENDIX-I

From capital and liabilities of Balance Sheet

a) Paid up Capital **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	491.65	491.65	491.65	491.65	491.7
NIBL	119.95	143.94	424.89	425.16	689.3
HBL	300.00	390.00	429.00		
EBL	118.42	220.86	399.32	455	755
NBBL	233.65	463.58	463.58		

b) Reserves **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	571.18	654.77	822.53	990.2	960.2
NIBL	94.61	135.45	144.7	199.76	219.2
HBL	420.59	468.11	634.13	787.92	898.24
EBL	98.54	131.59	157.83	225.33	172
NBBL	93.53	56.60	115.55	187.16	257.15

c) Shareholder’s Equity **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	1062.83	1146.42	1314.18	1481.68	1398
NIBL	238.55	560.34	569.86	626.64	598.2
HBL	720.59	858.11	1063.13	1324.17	1541.74
EBL	319.4	390.91	472.83	540.33	506.6
NBBL	327.18	520.18	579.13	650.74	720.73

d) Current Deposit **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	2850.97	2703.83	3034.00	2688.97	2843.5
NIBL	2359.99	1086.70	1300.07	1672.68	1774.1
HBL	2252.13	2634.37	3503.14	4145.45	5045.16
EBL	470.07	481.92	562.39	719.76	1025.2
NBBL	681.52	789.56	935.73	997.89	1302.63

e) Saving Deposit **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	4817.14	4972.06	5220.72	5994.52	7026.4
NIBL	1060.15	1274.69	1633.03	2043.02	2458.80
HBL	9144.47	9163.95	10870.54	11759.60	12852.41
EBL	1384.06	1735.37	2757.95	3730.61	4806.9
NBBL	1848.86	1850.22	2268.55	2873.81	3447.44

f. Fixed Deposit **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	7667.54	2446.85	2252.54	2310.57	2078.6
NIBL	2929.35	3132.68	3337.57	3352.27	4086.35
HBL	4927.37	5480.84	3205.37	4710.18	6107.43
EBL	2284.64	2711.58	2794.74	2897.96	3444.5
NBBL	1948.54	1958.85	1990.93	2279.71	2878.86

g) Total Deposit **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	15839.01	15506.44	13447.67	14119.03	14586.8
NIBL	6612.29	5572.47	6522.92	7198.32	8645.8
HBL	17532.40	18619.37	21007.37	22010.34	24814.01
EBL	4574.51	5466.61	6694.95	8063.90	10097.8
NBBL	5724.13	5723.28	6170.70	7741.64	8942.8

h) Total Liabilities **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	17034.3	16482.8	15248.43	15263.91	15682.23
NIBL	7046.25	6460.79	6996.48	7813.76	9656.35
HBL	18779.98	19814.32	22292.09	23437.81	26519.91
EBL	4883.18	6216.27	7579.37	9068.24	10897.5
NBBL	6082.21	5836.47	6865.68	8845.59	9136.33

i) Current Liabilities **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	17226.21	16384.73	15135.42	15153.13	15665.17
NIBL	7043.64	6459.41	6992.43	7808.29	9186.72
HBL	18747.46	19433.25	21899.93	23030.89	26502.71
EBL	4874.79	6063.87	7420.73	8928.24	10665.6
NBBL	6079.38	5815.18	6865.68	7933.44	9130.33

j) Non Performing Loan **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL		564.87	449.63	144.51	286.68
NIBL	483.39	289.77	426.94	345.82	441.01
HBL		797.61	1092.75	1147.47	1001.34
EBL	118.02	42.38	111.19	21.29	128.81
NBBL	325.38	396.67	420.87	399.96	572.39

k) Loan Loss Provision **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	591.80	363.95	357.73	360.50	348.66
NIBL	242.84	285.14	327.11	388.17	525.46
HBL		643.41	842.75	967.76	1026.64
EBL	62.79	95.75	141.12	211.71	281.41
NBBL	158.88	276.37	313.33	361.61	269.46

APPENDIX-II

From Assets side of Balance Sheet

a) Cash and Bank Balance **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	812.9	1051.82	1144.77	970.49	595.5
NIBL	1945.14	1619.96	1333.54	864.42	723.74
HBL	1435.18	1264.67	1979.21	11951.87	12424.52
EBL	834.99	592.76	1139.57	631.81	1054.2
NBBL	1134.78	683.65	692.71	782.88	740.52

b) Liquid Fund **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	6284.9	4999.3	4162.1	3916.9	1345.2
NIBL	2348.2	1403.2	1331.6	775	459.6
HBL	7192.6	7658.8	8281.7	8613.5	8173.2
EBL	824.1	809.2	1156.1	869.7	1624.2
NBBL	1529.9	810.7	692.7	1150.0	1428.3

c) Current Assets **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	13161.68	13313.4	13868.3	14244.04	16528.58
NIBL	7166.11	6787.45	7404.57	8345.34	10259.39
HBL	17359.42	14165.33	16881.45	18495.86	21326.26
EBL	5049.85	6359.66	7836.89	9399.95	12088.4
NBBL	6260.47	6192.12	7224.66	9364.43	9742.7

d) Investment **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	7704.31	8199.51	6031.17	5836.07	4353.3
NIBL	373.63	599.06	1207.28	1907.52	2607.7
HBL	4083.16	9157.11	10175.44	9292.11	11692.34
EBL	901.72	1657.87	1653.97	2535.65	2119.7
NBBL	419.81	667.46	1816.15	2477.41	

e) Total Assets **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	18367.15	17629.25	16562.61	16745.61	18332.6
NIBL	7284.79	7021.14	7566.33	8440.40	10345.37
HBL	19500.58	20672.45	23355.23	24762.04	27844.69
EBL	5202.58	6607.18	8052.20	9608.56	12241.5
NBBL	6409.39	6356.65	7444.81	9364.43	98571.30

f) Loan and Advances **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	8324.44	7437.90	7755.95	8189.99	11078
NIBL	4188.41	4299.25	4468.72	5143.66	6619
HBL	9015.35	8913.73	10001.85	11951.87	12424.52
EBL	3005.76	3948.48	4908.46	5884.12	7914
NBBL	4256.28	4613.70	4542.70	5646.70	5912.57

APPENDIX- III

From profit and loss Account

a) Total Expenses **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	1101.59	1229.53	812.06	769.35	752.89
NIBL	454.9	451.5	496.84	502.07	493.5
HBL	1140.23	1040.75	1094.28	1099.05	1238.13
EBL	362.46	413.55	499.45	573.94	600.4
NBBL	481.57	544.62	514.12	541.64	

b) Interest Expenses **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	578.36	462.08	317.35	282.94	243.54
NIBL	271.79	288.58	291.82	255.92	254.2
HBL	732.69	578.13	554.13	491.54	561.96
EBL	236.14	257.05	306.41	314.44	299.5
NBBL	310.48	285.01	276.71	286.30	241.63

c) Total income **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	1573.31	1639.11	1340.51	1333.65	1365.33
NIBL	505.23	508.38	565.89	611.61	636.21
HBL	1572.92	1387.34	1443.54	1516.32	1757.8
EBL	464.12	539.78	634.08	783.19	846.64
NBBL	574.94	570.56	636.24	710.83	756.02

d) Total Interest Income **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	1266.70	1120.18	1017.87	1001.62	1033.3
NIBL	444.56	399.63	469.74	493.60	518.2
HBL	1326.38	1149.00	1201.23	1245.89	1446.46
EBL	385.02	443.82	520.17	657.25	720.7
NBBL	465.03	473.30	496.81	567.10	607.09

e) Operating Profit **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	471.72	409.58	528.45	564.30	612.44
NIBL	50.33	56.88	69.05	109.54	142.71
HBL	432.69	346.59	349.26	417.27	519.74
EBL	100.66	126.23	134.63	209.25	246.24
NBBL	93.37	25.94	122.12	169.19	-

f) Net profit **(Rs. in million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
SCBNL	291.37	271.63	416.25	455.32	817.9
NIBL	12.51	40.85	48.75	60.86	57.38
HBL	280.69	235.02	212.12	263.05	752.4
EBL	69.70	85.33	94.17	143.57	275.8
NBBL	65.36	9.28	82.13	127.48	228.8

APPENDIX- IV

Credit and Advances Portfolio Classification

Sector wise classification of SCBNL **(Rs. in million)**

Sector	2003/04	2004/05	2005/06	2006/07	2007/08
Government	101.3	64.7	20.8	20.3	0.60
Private	8071.8	7007.3	7676.1	8114.8	1108
Priority	725.2	647.96	895.8	878.9	803.2
Deprived	-	137.1	286.2	271.6	311.1
Other	336.7	335.1	645.1	766.7	1159.1

Sector wise classification of EBL **(Rs. in million)**

Sector	2003/04	2004/05	2005/06	2006/07	2007/08
Government	-	-	60	69.2	-
Private	2963.7	3939.6	4970.9	6047.4	7914
Priority	343.7	428.5	550.618	619.946	718.601
Deprived	-	101.7	131.019	172.852	225.124
Other	201.3	62.3	263.1	378.9	662.2

Sector wise classification of NIBL **(Rs. in million)**

Sector	2003/04	2004/05	2005/06	2006/07	2007/08
Government	88.3	87.4	50.0	72.9	43.0
Private	4002.7	4441.2	4711.2	5418.0	6576.0
Priority	426.2	512.3	797.1	1033.3	831.3
Deprived	65.9	89.4	172.1	212.4	212.5
Other	91.7	-	14.4	56.1	142.0

Credit to priority and deprived sector of HBL % **(Rs. in million)**

Sector	2003/04	2004/05	2005/06	2006/07	2007/08
Deprived	2.67	2.16	2.42	2.88	2.95
Priority	7.71	8.75	4.82	3.77	5.69

APPENDIX-V

Calculation of Correlation Coefficient

Correlation between total deposit and loan and advances of SCBNL

(Rs. in million)

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Deposit	15839.01	15506.44	13447.67	14119.03	14586.8
Loan and advances	8324.44	7437.90	77755.95	8189.99	11078.0
r					-0.013
$P.E_r$					0.3024

Correlation coefficient between deposit and loan and advances of NIBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Deposit	6612.29	5572.47	6522.92	7198.32	8645.8
Loan and advances	4188.41	4299.25	4468.72	5143.66	6619.o
r					0.8192
$P.E_r$					0.09921

Correlation coefficient between deposit and loan and advances of HBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Deposit	17532.40	18619.37	21007.37	22010.34	24814.01
Loan and advances	9015.35	8913.73	10001.85	11951.87	12424.52
r					0.7125
$P.E_r$					0.1489

Correlation coefficient between deposit and loan and advances of EBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Deposit	4574.51	5466.61	6694.95	8063.90	10097.8
Loan and advances	3005.76	3948.48	4908.46	5884.12	7914.00
r					0.9978
$P.E_r$					0.001326

Correlation coefficient between deposit and loan and advances of NBBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Deposit	5724.13	5723.28	6170.70	7741.64	8942.80
Loan and advances	4256.28	4613.70	4542.70	5646.70	5912.57
r					0.9681
$P.E_r$					0.01899

Correlation coefficient between Total Investment and loan and advances of SCBNL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Investment	7704.31	8199.51	6031.17	5836.07	4353.30
Loan and Advances	8324.44	7437.90	7755.95	8189.99	11078.0
r					0.3993
$P.E_r$					0.2542

Correlation coefficient between Total Investment and loan and advances of NIBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Investment	373.63	599.06	1207.28	1907.52	2607.7
Loan and Advances	4188.41	4299.25	4468.72	5143.66	6619.0
r					0.7417
$P.E_r$					0.2017

Correlation coefficient between Total Investment and loan and advances of HBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Investment	4083.16	9157.11	10175.44	9292.11	11692.34
Loan and Advances	9015.35	8913.73	10001.85	11951.87	12424.52
r					0.7214
$P.E_r$					0.1450

Correlation coefficient between Total Investment and loan and advances of EBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Investment	901.72	1657.87	1653.97	2535.65	2119.70
Loan and Advances	3005.76	3948.48	4908.46	5884.12	7914.0
r					0.9365
$P.E_r$					0.0372

Correlation coefficient between Total Investment and loan and advances of NBBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Investment	419.81	667.46	1816.15	2477.41	2216.50
Loan and Advances	4256.28	4613.70	4542.70	5646.70	5912.57
r					0.8327
$P.E_r$					0.0927

Correlation coefficient between Total Income and loan and advances of SCBNL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Income	1573.31	1639.11	1340.51	1333.65	1365.33
Loan and Advances	8324.44	7437.90	7755.95	8189.99	11078.00
r					-0.3847
$P.E_r$					0.2577

Correlation coefficient between Total Income and loan and advances of NIBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Income	505.23	508.38	565.89	611.61	636.21
Loan and Advances	4188.41	4299.25	4468.72	5143.66	6619.00
r					0.7582
$P.E_r$					0.1286

Correlation coefficient between Total Income and loan and advances of HBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Income	1572.92	1387.34	1443.54	1516.32	1757.8
Loan and Advances	9015.35	8913.73	10001.85	11951.87	12424.52
r					0.666
$P.E_r$					0.1683

Correlation coefficient between Total Income and loan and advances of EBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Income	464.12	539.78	634.08	783.19	846.64
Loan and Advances	3005.76	3948.48	4908.46	5884.12	7914.00
r					0.9688
$P.E_r$					0.0186

Correlation coefficient between Total Income and loan and advances of NBBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Income	574.94	570.56	636.24	710.83	756.02
Loan and Advances	4256.28	4613.70	4542.70	5646.70	5912.57
r					0.9459
$P.E_r$					0.0318

Correlation coefficient between Loan loss provision and loan and advances of SCBNL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Total Income	591.80	363.95	357.73	360.50	348.66
Loan and Advances	8324.44	7437.90	7755.95	8189.99	11078.00
r					-0.1401
$P.E_r$					0.2965

Correlation coefficient between Loan loss provision and loan and advances of NIBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Loan loss provision	242.84	285.14	327.11	388.17	525.46
Loan and Advances	4188.41	4299.25	4468.72	5143.66	6619.00
r					0.7082
$P.E_r$					0.1507

Correlation coefficient between Loan loss provision and loan and advances of HBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Loan loss provision		643.41	842.75	967.76	1026.64
Loan and Advances	9015.35	8913.73	10001.85	11951.87	12424.52
r					0.8456
$P.E_r$					0.0862

Correlation coefficient between Loan loss provision and loan and advances of EBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Loan loss provision	62.79	95.75	141.12	211.71	281.41
Loan and Advances	3005.76	3948.48	4908.46	5884.12	7914.00
r					0.9921
$P.E_r$					0.0047

Correlation coefficient between Loan loss provision and loan and advances of NBBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Loan loss provision	158.88	276.37	313.33	361.61	269.46
Loan and Advances	4256.28	4613.70	4542.70	5646.70	5912.57
r					0.5410
$P.E_r$					0.2139

Correlation coefficient between Interest income and net profit of SCBNL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Interest Income	1266.70	1120.18	1017.87	1001.82	1033.30
Net profit	291.37	271.63	416.25	455.32	817.90
r					-0.5408
$P.E_r$					0.2140

Correlation coefficient between Interest income and net profit of NIBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Interest Income	444.56	399.63	469.74	493.60	518.20
Net profit	12.51	40.85	48.75	60.86	57.38
R					0.7161
$P.E_r$					0.1473

Correlation coefficient between Interest income and net profit of HBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Interest Income	1326.38	1149.00	1201.23	1245.89	1446.46
Net profit	280.69	235.02	212.12	263.05	752.4
R					0.9277
$P.E_r$					0.0421

Coefficient between Interest income and net profit of EBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Interest Income	385.02	443.82	520.17	657.25	720.70
Net profit	69.70	85.33	94.17	143.57	257.80
R					0.8873
$P.E_r$					0.0643

Correlation coefficient between Interest income and net profit of NBBL

Year	2003/04	2004/05	2005/06	2006/07	2007/08
Interest Income	465.03	473.30	496.81	567.10	607.09
Net profit	65.36	9.28	82.13	127.48	228.8
R					0.8787
$P.E_r$					0.0689

APPENDIX-VI

Trend Value

Trend Value of Total Deposit of SCBNL (2003/04-2007/08) (Rs. in million)

Year	Total Deposit y	x=X-2005/06	x^2	Xy	y=a+bx(14699-399.18x)
2003/04	15839.01	-2	4	-31678.02	15478.156
2004/05	15506.44	-1	1	-15506.44	15088.97
2005/06	13447.67	0	0	0	14699.79
2006/07	14119.03	1	1	14119.03	14310.60
2007/08	14586.8	2	4	29173.6	13911.43
	73498.95		10	-3891.83	

$a \text{ X} \frac{y}{N} = \frac{73498.95}{5} = 14699.79$ $\qquad b \text{ X} \frac{xy^2}{x^2} = \frac{\text{Z}3891.83}{10} = -389.18$

Trend value of Total deposit of SCBNL (2008/09-2012/13)

Year	x	Y=a+bx (14699.79-389.18x)
2008/09	3	13532.241
2009/10	4	13143.058
2010/11	5	12753.875
2011/12	6	12364.69
2012/13	7	11975.50

Trend value of Total deposit of NIBL(2003/04-2007/08)

Year	Total Deposit y	X=X-2005/06	x^2	xy	Y=a+bx(6910.36+569.28x)
2003/04	6611.29	-2	4	-13224.58	5771.78
2004/05	5572.47	-1	1	-5572.47	6341.07
2005/06	6522.92	0	0	0	6910.36
2006/07	7198.32	1	1	7198.32	7479.64
2007/08	8645.8	2	4	17291.6	8048.93
	34551.8		10	5692.87	

$a \text{ X} \frac{y}{N} = \frac{34551.8}{5} = 6910.36$ $\qquad b \text{ X} \frac{xy}{x^2} = \frac{5692.87}{10} = 569.29$

Trend value of Total deposit of NIBL (2008/09-2012/13)

Year	X	Y=a+bx
2008/09	3	8618.22
2009/10	4	9187.50
2010/11	5	9756.79
2011/12	6	10326.08
2012/13	7	10895.36

Trend value of Total deposit of HBL(2003/04-2007/08)

Year	Total Deposit y	x=X-2005/06	x^2	Xy	y=a+bx(20796.69+1795.19x)
2003/04	17532.40	-2	4	-35064.8	17205.86
2004/05	18619.37	-1	1	-18619.37	19001.27
2005/06	21007.37	0	0	0	20796.69
2006/07	22010.34	1	1	22010.34	22592.11
2007/08	24814.01	2	4	49628.02	24387.53
	103983.49		10	17954.19	

$a\ \mathrm{X}\frac{y}{N} = \frac{103983.49}{5} = 20796.69$ $\qquad$ $b\ \mathrm{X}\frac{xy^2}{x^2} = \frac{17954.19}{10} = 569.29$

Trend value of Total deposit of HBL(2008/09-2012/13)

2008/09	x	Y=a+bx
2009/10	3	26182.95
2010/11	4	27978.37
2011/12	5	29773.79
2012/13	6	31569.21
2008/09	7	33364.63

Trend value of Total deposit of EBL(2003/04-2007/08)

Year	Total Deposit y	x=X-2005/06	X^2	Xy	y=a+bx(6679.5+136.43x)
2003/04	4574.51	-2	4	-9149.02	4250.77
2004/05	5466.61	-1	1	-5466.61	5615.16
2005/06	6694.95	0	0	0	6979.55
2006/07	8063.90	1	1	8063.90	8343.93
2007/08	10097.8	2	4	20195.6	9708.32
	34897.77		10	1364.38	

$a\ \text{X}\frac{y}{N} = \frac{34897.77}{5} = 6979.5$ $\qquad$ $b\ \text{X}\frac{xy^2}{x^2} = \frac{1364.38}{10} = 136.43$

Trend value of Total deposit of EBL(2008/09-2012/13)

Year	X	Y=a+bx
2008/09	3	11072.7
2009/10	4	12437.09
2010/11	5	13801.48
2011/12	6	15165.87
2012/13	7	16530.25

Trend value of Total deposit of NBBL(2003/04-2007/08)

Year	Total Deposit y	x=X-2005/06	x^2	Xy	y=a+bx(6860.51+845.55x)
2003/04	5724.13	-2	4	-11448.26	5169.37
2004/05	5723.28	-1	1	-5723.28	6014.94
2005/06	6170.70	0	0	0	6860.51
2006/07	7741.64	1	1	7741.64	7706.08
2007/08	8942.8	2	4	17885.6	8551.65
	34302.55		10	8455.7	

$a\ \text{X}\frac{y}{N} = \frac{34302.55}{5} = 6860.51$ $\qquad$ $b\ \text{X}\frac{xy^2}{x^2} = \frac{8455.7}{10} = 845.55$

Trend value of Total deposit of NBBL(2008/09-2012/13)

Year	X	Y=a+bx
2008/09	3	9397.16
2009/10	4	10242.7
2010/11	5	11088.26
2011/12	6	11933.8
2012/13	7	12779.36

Trend value of Loan and advances of SCBNL(2003/04-2007/08)

Year	Loan and advancesy	x=X-2005/06	X^2	Xy	y=a+bx(8557.25+625.92x)
2003/04	8324.44	-2	4	-16648.88	7305.41
2004/05	7437.90	-1	1	-7437.9	7931.33
2005/06	7755.95	0	0	0	8557.25
2006/07	8189.99	1	1	8189.99	9183.17
2007/08	11078	2	4	22156	9809.09
	42786.25		10	6259.21	

$$a \text{ X} \frac{y}{N} = \frac{42786.25}{5} = 8557.25 \qquad b \text{ X} \frac{xy^{2}}{x^{2}} = \frac{6259.21}{10} = 625.92$$

Trend value of Loan and advances of SCBNL(2008/09-2012/13)

Year	X	y=a+bx
2008/09	3	10435.01
2009/10	4	11060.93
2010/11	5	11686.85
2011/12	6	12312.77
2012/13	7	12938.69

Trend value of Loan and advances of NIBL (2003/04-2007/08)

Year	Loan and advances y	x=X-2005/06	X^2	Xy	y=a+bx(4943.80+570.5x)
2003/04	4188.41	-2	4	-8376.82	3902.68
2004/05	4299.25	-1	1	-4299.25	4373.24
2005/06	4468.72	0	0	0	4943.8
2006/07	5143.66	1	1	5143.66	5514.35
2007/08	6619.00	2	4	132.38	6084.91
	24719.04		10	5705.59	

$$a \text{ X} \frac{y}{N} = \frac{24719.04}{5} = 4943.80 \qquad b \text{ X} \frac{xy^{2}}{x^{2}} = \frac{5705.59}{10} = 570.55$$

Trend value of Loan and advances of NIBL(2008/09-2012/13)

Year	x	y=a+bx
2008/09	3	6655.47
2009/10	4	7226.03
2010/11	5	7796.59
2011/12	6	8367.15
2012/13	7	8937.74

Trend value of Loan and advances of HBL(2003/04-2007/08)

Year	Loan and advances y	x=X-2005/06	x^2	xy	y=a+bx(10461.46+985.71x)
2003/04	9015.35	-2	4	-18030.7	8490.04
2004/05	8913.73	-1	1	-8913.73	9475.75
2005/06	10001.85	0	0	0	10461.46
2006/07	11951.87	1	1	11951.87	11447.17
2007/08	12424.53	2	4	24849.04	12432.88
	52307.32		10	9857.18	

$$a\,X\frac{y}{N} = \frac{52307.32}{5} = 10461.46 \qquad b\,X\frac{xy^{2}}{x^{2}} = \frac{9857.18}{10} = 985.71$$

Trend value of Loan and advances of HBL(2008/09-2012/13)

Year	X	y=a+bx
2008/09	3	13418.59
2009/10	4	14404.3
2010/11	5	15390.01
2011/12	6	16375.72
2012/13	7	17361.43

Trend value of Loan and advances of EBL(2003/04-2007/08)

Year	Loan and advances y	x=X-2005/06	x^2	xy	y=a+bx(5132.16+1175.22x)
2003/04	3005.76	-2	4	-6011.92	2781.74
2004/05	3948.48	-1	1	-3948.48	3956.95
2005/06	4908.46	0	0	0	5132.16
2006/07	5884.12	1	1	5884.12	6307.37
2007/08	7914.00	2	4	15828	7482.58
	25660.82		10	11032.12	

$$a\,X\frac{y}{N} = \frac{25660.82}{5} = 5132.16 \qquad b\,X\frac{xy^{2}}{x^{2}} = \frac{11752.12}{10} = 1175.2$$

Trend value of Loan and advances of EBL(2008/09-2012/13)

Year	x	y=a+bx
2008/09	3	8657.8
2009/10	4	9833.01
2010/11	5	11008.22
2011/12	6	12183.43
2012/13	7	13358.64

Trend value of Loan and advances of NBBL(2003/04-2007/08)

Year	Loan and advances y	x=X-2005/06	x^2	xy	y=a+bx(4994.39+434.88x)
2003/04	4256.28	-2	4	-8512.56	4125.43
2004/05	4613.70	-1	1	-4613.70	4559.91
2005/06	4542.70	0	0	0	4994.39
2006/07	5646.70	1	1	5646.70	5428.87
2007/08	5912.57	2	4	11825.14	5863.35
	24971.95		10	4344.88	

$a\ X \frac{y}{N} = \frac{24971.95}{5} = 4994.39$ $\qquad b\ X \frac{xy^2}{x^2} = \frac{4344.88}{10} = 434.48$

Trend value of Loan and advances of NBBL(2008/09-2012/13)

Year	x	y=a+bx
2007	3	6297.83
2008	4	6732.31
2009	5	7166.79
2010	6	7601.27
2011	7	8035.75

Trend value of Net profit of SCBNL(2003/04-2007/08)

Year	Net profit y	x=X-2004/05	x^2	xy	y=a+bx(390.64+63.82)
2003/04	291.37	-2	4	-582.74	263.00
2004/05	271.63	-1	1	-271.63	326.82
2005/06	416.25	0	0	0	390.64
2006/07	455.32	1	1	455.32	454.46
2007/08	817.9	2	4	1037.26	518.28
	1953.2		10	638.21	

$a\ X \frac{y}{N} = \frac{1853.2}{5} = 390.60$ $\qquad b\ X \frac{xy^2}{x^2} = \frac{638.21}{10} = 63.82$

Trend value of Net profit of SCBNL(2008/09-2012/13)

Year	X	y =a+bx
2008/09	3	582.1
2009/10	4	645.92
2010/11	5	709.74
2011/12	6	773.56
2012/13	7	837.38

Trend value of Net profit of NIBL(2003/04-2007/08)

Year	Net profit y	x=X-2005/06	x^2	xy	y=a+bx(44.07+10.97x)
2003/04	12.51	-2	4	-25.02	22.13
2004/05	40.85	-1	1	-40.85	31.1
2005/06	48.75	0	0	0	44.07
2006/07	60.86	1	1	60.86	55.04
2007/08	57.38	2	4	114.76	66.01
	220.35		10	109.75	

$a\ \mathrm{X}\frac{y}{N} = \frac{220.35}{5} = 44.07$ $\qquad$ $b\ \mathrm{X}\frac{xy^{2}}{x^2} = \frac{109.75}{10} = 10.97$

Trend value of Net profit of NIBL(2008/09-2012/13)

Year	X	y = a+bx
2008/09	3	76.98
2009/10	4	87.95
2010/11	5	98.92
2011/12	6	109.89
2012/13	7	120.86

Trend value of Net profit of HBL(2003/04-2007/08)

Year	Net profit y	x=X-2005/06	x^2	Xy	y=a+bx(259.83+8.31x)
2003/04	280.69	-2	4	-561.38	243.21
2004/05	235.02	-1	1	-235.02	251.52
2005/06	212.12	0	0	0	259.83
2006/07	263.05	1	1	-263.05	268.14
2007/08	308.27	2	4	616.54	276.45
	1299.15		10	83.19	

$a\ \mathrm{X}\frac{y}{N} = \frac{1299.15}{5} = 259.83$ $\qquad$ $b\ \mathrm{X}\frac{xy^{2}}{x^2} = \frac{470.44}{10} = 47.04$

Trend value of Net profit of HBL(2008/09-2012/13)

Year	X	y =a+bx
2008/09	3	284.76
2009/10	4	293.07
2010/11	5	301.38
2011/12	6	309.38
2012/13	7	318.00

Trend value of Net profit of EBL(2003/04-2007/08)

Year	Net profit y	x=X-2005/06	x^2	xy	y=a+bx(133.71+47.04x)
2003/04	69.70	-2	4	-139.4	39.63
2004/05	85.33	-1	1	-85.33	86.67
2005/06	94.17	0	0	0	133.71
2006/07	143.57	1	1	143.57	180.75
2007/08	275.8	2	4	515.6	227.80
	668.57		10	470.44	

$a\,X\frac{y}{N} = \frac{668.57}{5} = 133.71$ $\qquad$ $b\,X\frac{xy^{2}}{x^{2}} = \frac{470.44}{10} = 47.04$

Trend value of Net profit of EBL(2008/09-2012/13)

Year	X	Y=a+bx
2008/09	3	274.84
2009/10	4	321.89
2010/11	5	368.93
2011/12	6	415.97
2012/13	7	463.02

Trend value of Net profit of NBBL (2003/04-2007/08)

Year	Net profit y	x=X-2005/06	x^2	Xy	y=a+bx(84.75+26.65x)
2003/04	65.36	-2	4	-130.72	31.45
2004/05	9.28	-1	1	-9.28	58.1
2005/06	82.13	0	0	0	84.75
2006/07	127.48	1	1	127.48	111.14
2007/08	139.52	2	4	279.04	138.05
	423.77		10	266.52	

$a\,X\frac{y}{N} = \frac{423.77}{5} = 84.75$ $\qquad$ $b\,X\frac{xy^{2}}{x^{2}} = \frac{266.52}{10} = 26.$

Trend value of Net profit of NBBL(2008/09-2012/13)

2008/09	X	y=a+bx
2009/10	3	164.7
2010/11	4	191.35
2011/12	5	218.00
2012/13	6	244.65
2008/09	7	271.3

APPENDIX-VIII

F-Test

a. F-test of hypothesis in loan and advances to total assets ratio

X_1	X_2	X_3	X_4	X_5	X_1^2	X^2_2	X_3^2	X^2_4	X_5^2
0.4532	0.5749	0.4623	0.577	0.6640	0.205	0.330	0.213	0.332	0.440
0.4219	0.6123	0.4311	0.5976	0.7258	0.1779	0.374	0.185	0.357	0.526
0.4682	0.5906	0.4282	0.6095	0.6106	0.2192	0.348	0.183	0.3714	0.372
0.4890	0.6163	0.4826	0.6123	0.0.5946	0.2391	0.379	0.232	0.3749	0.353
0.604	0.6395	0.4462	0.6464	0.5998	0.364	0.408	0.1990	0.4178	0.359
t=2.43	3.03	2.25	3.04	3.19	1.206	1.843	1.014	1.85	2.05

Total (T) = $x_1 + x_2 + x_3 + x_4 + x_5 = 13.94$

$$\frac{T^2}{N} = \frac{13.94^2}{25} = 7.772$$

Sum of squares between banks

$$SSC = \frac{(x_1)^2}{n_1} + \frac{(x_2)^2}{n_2} + \frac{(x_3)^2}{n_3} + \frac{(x_4)^2}{n_4} + \frac{(x_5)^2}{n_5} - \frac{T^2}{N}$$

$$= \frac{(2.43)^2}{5} + \frac{(3.03)^2}{5} + \frac{(2.25)^2}{5} + \frac{(3.04)^2}{5} + \frac{(3.19)^2}{5} - 7.77$$

$$= 0.1462$$

Total sum of squares, SST = $x_1^2 + x_2^2 + x_3^2 + x_4^2 + x_5^2 - \frac{T^2}{N} = 0.196$

Sum of squares of ratios within banks, SSR= SST- SSC= .196- .146 =0.05

b. F-test of hypothesis in loan and advances to total deposit ratio

X_1	X_2	X_3	X_4	X_5	X_1^2	X^2_2	X_3^2	X^2_4	X_5^2
0.5255	0.6334	0.5142	0.6570	0.7435	0.276	0.401	0.264	0.431	0.552
0.4796	0.7715	0.4787	0.7222	0.8061	0.230	0.595	0.229	0.521	0.649
0.5767	0.6850	0.4761	0.7331	0.7361	0.332	0.469	0.226	0.537	0.541
0.5800	0.7145	0.5430	0.7296	0.7293	0.336	0.510	0.294	0.532	0.531
0.7594	0.7655	0.5007	0.7837	0.6611	0.576	0.585	0.250	0.614	0.437
2.92	3.56	2.51	3.62	3.675	1.75	2.56	1.263	2.635	2.710

Total (T) = $x_1 + x_2 + x_3 + x_4 + x_5 = 16.285$

$$\frac{T^2}{N} = \frac{(16.285)^2}{25} = 10.60$$

$$SSC=\frac{(\sum x_1)^2}{n_1}+\frac{(\sum x_2)^2}{n_2}+\frac{(\sum x_3)^2}{n_3}+\frac{(\sum x_4)^2}{n_4}+\frac{(\sum x_5)^2}{n_5}-\frac{T^2}{N}$$

$$=\frac{(2.92)^2}{5}+\frac{(3.56)^2}{5}+\frac{(2.51)^2}{5}+\frac{(3.62)^2}{5}+\frac{(3.675)^2}{5}-10.60$$

$$=0.21$$

Total sum of squares, SST = $\sum x_1^2+\sum x_2^2+\sum x_3^2+\sum x_4^2+\sum x_5^2-\frac{T^2}{N}$ = 0.318

Sum of squares of ratios within banks, SSR= SST- SSC= 0.318-0.21=0.108

c. F-test of hypothesis in interest income to interest expenses ratio

X_1	X_2	X_3	X_4	X_5	X_1^2	X^2_2	X_3^2	X^2_4	X_5^2
2.1901	1.6356	1.8102	1.6304	1.4977	4.796	2.675	3.276	2.658	2.243
2.4242	1.3848	1.9874	1.7265	1.6606	5.876	1.9176	3.949	2.980	2.757
3.2074	1.6096	2.1677	1.6976	1.7954	10.287	2.5908	4.698	2.881	3.223
3.5400	1.9287	2.534	2.09	1.9807	12.531	3.719	6.421	4.368	3.923
4.2428	2.0385	2.5739	2.406	2.512	18.00	4.155	6.624	5.788	6.310
15.6	8.595	11.07	9.55	9.445	51.49	15.057	24.968	18.675	18.456

Total (T) = $\sum x_1+\sum x_2+\sum x_3+\sum x_4+\sum x_5$ =54.26

$$\frac{T^2}{N}=\frac{(54.26)^2}{25}=117.76$$

$$SSC=\frac{(\sum x_1)^2}{n_1}+\frac{(\sum x_2)^2}{n_2}+\frac{(\sum x_3)^2}{n_3}+\frac{(\sum x_4)^2}{n_4}+\frac{(\sum x_5)^2}{n_5}-\frac{T^2}{N}$$

$$=\frac{(15.6)^2}{5}+\frac{(8.595)^2}{5}+\frac{(11.07)^2}{5}+\frac{(9.55)^2}{5}+\frac{(9.445)^2}{5}-117.76$$

$$=6.26$$

Total sum of squares, SST = $\sum x_1^2+\sum x_2^2+\sum x_3^2+\sum x_4^2+\sum x_5^2-\frac{T^2}{N}$ = 10.886

Sum of squares of ratios within banks, SSR= SST- SSC= 10.886-6.26s

APPENDIX-IX

T-Test

1. Test of hypothesis in loan and advances to total assets ratio
a. Between SCBNL and NIBL

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2\left(\frac{1}{n_1} - \frac{1}{n_2}\right)}} \qquad S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

$$t = \frac{.487 - .606}{\sqrt{0.00114}}$$

=(0.19416+0.003426)/8

=-3.53

=0.00285

/t/=3.53

b. Between SCBNL and HBL

$$t = \frac{.487 - .608}{\sqrt{.0010988}} \qquad S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

-3.66 = (0.019416+0.002564)/8

/t/=3.66 = 0.002747

c. Between EBL and NIBL

$$t = \frac{0.608 - 0.606}{\sqrt{0.0002995}} \qquad S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= 0.1176 = (0.0025646+0.00342624)/8

= 0.000748

d. Between SCBNL and HBL

$$t = \frac{0.487 - 0.450}{\sqrt{0.0011008}} \qquad S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (0.019416+0.0026000)/8

= 1.12 = 0.0027520

e. Between HBL and NIBL

$$t = \frac{0.450 - 0.606}{\sqrt{0.0003013}} \qquad S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= -9.017 = (0.0026000+0.00342624)/8

/t/= 9.017

= 0.00075328

f. Between HBL and EBL

$$t = \frac{0.450 - 0.638}{\sqrt{0.0007548}}$$

=- 9.875

/t/= 9.875

$$S^2 = \frac{\sum (x_1 - \overline{x_1})^2 + \sum (x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

= (0.0026000+0.0025646)/8

= 0.000645

g. Between HBL and NBBL

$$t = \frac{0.450 - 0.638}{\sqrt{0.0007548}}$$

t= -6.96

/t/= 6.96

$$S^2 = \frac{\sum (x_1 - \overline{x_1})^2 + \sum (x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

= (0.0026000+0.124962)/8

= 0.0018870

h. Between EBL and NBBL

$$t = \frac{0.608 - 0.638}{\sqrt{0.0007530}}$$

t= -1.09

/t/= 1.09

$$S^2 = \frac{\sum (x_1 - \overline{x_1})^2 + \sum (x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

= (0.0025646+0.0124962)/8

=0.0018826

i. Between SCBNL and NBBL

$$t = \frac{0.487 - 0.638}{\sqrt{0.00159561}}$$

t= -3.78

/t/= 3.78

$$S^2 = \frac{\sum (x_1 - \overline{x_1})^2 + \sum (x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

= (0.019416+0.0124962)/8

=0.0039890

j. Between NIBL and NBBL

$$t = \frac{0.606 - 0.638}{\sqrt{0.000796122}}$$

t= -1.134

/t/= 1.134

$$S^2 = \frac{\sum (x_1 - \overline{x_1})^2 + \sum (x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

= (0.00342624+0.124962)/8

= 0.0019903

2. Test of Hypothesis in Loan and Advances to Total Deposit Ratio

a. Between SCBNL and NIBL

$$t = \frac{0.584 - 0.713}{\sqrt{0.0029227}}$$

t= -2.38

/t/= 2.38

$$S^2 = \frac{\sum (x_1 - \overline{x_1})^2 + \sum (x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

= (0.045155+0.0133005)/8

= 0.007306

b. Between SCBNL and EBL

$$t = \frac{0.584 - 0.725}{\sqrt{0.0026659}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= -2.73

/t/= 2.73

= (0.045155+0.0081643)/8

= 0.0066649

c. Between EBL and NIBL

$$t = \frac{0.725 - 0.713}{\sqrt{0.00107324}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= 0.3669

= (0.0081643+0.0133005)/8

= 0.0026831

d. Between SCBNL and HBL

$$t = \frac{0.584 - 0.502}{\sqrt{0.0024100}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= 1.673

= (0.045155+0.003045)/8

= 0.006025

e. Between HBL and NIBL

$$t = \frac{0.502 - 0.713}{\sqrt{0.0008172}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= -7.210

/t/= 7.210

= (0.00304523+0.0133005)/8

= 0.0020432

f. Between HBL and EBL

$$t = \frac{0.502 - 0.725}{\sqrt{0.00056047}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= -9.449

/t/= 9.449

= (0.00304523+0.0081643)

= 0.00140119

g. Between HBL and NBBL

$$t = \frac{0.502 - 0.735}{\sqrt{0.00068336}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t=-8.91

/t/=8.91

= (0.00304523+0.01062216)/8

= 0.0017078s

h. Between EBL and NBBL

$$t = \frac{0.725 - 0.735}{\sqrt{0.0009393}}$$

$$S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t=-0.326

/t/=0.326

= (0.0081643+0.01062216)/8

= 0.0023483

i. Between SCBNL and NBBL

$$t = \frac{0.584 - 0.735}{\sqrt{0.0027888}}$$

t= -2.90

/t/= 2.90

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (0.045155+0.01062216)/8

= 0.00697214

j. Between NIBL and NBBL

$$t = \frac{0.713 - 0.735}{\sqrt{0.0011961}}$$

t= -0.647

/t/= 0.647

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (0.0133005+0.01062216)/8

= 0.00299033

3. Test of Hypothesis in Interest Income to Interest Expenses Ratio

a. Between SCBNL and NIBL

$$t = \frac{3.120 - 1.719}{\sqrt{0.153508}}$$

t= 3.57

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (2.7935+0.276666)/8

= 0.38377

b. Between SCBNL and EBL

$$t = \frac{3.120 - 1.910}{\sqrt{0.1614}}$$

t= 3.01

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (2.7935+0.435286)/8

= 0.4035

c. Between EBL and NIBL

$$t = \frac{1.910 - 1.719}{\sqrt{0.03559}}$$

t= 1.01

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (.435286+.276666)/8

= 0.088994

d. Between SCBNL and HBL

$$t = \frac{3.120 - 2.214}{\sqrt{0.16209}}$$

t= 2.25

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (2.7935+0.448461)/8

= 0.40524

e. Between HBL and NIBL

$$t = \frac{2.214 - 1.719}{\sqrt{0.036256}}$$

t= 2.60

$$S^2 = \frac{\sum(x_1 - \bar{x}_1)^2 + \sum(x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}$$

= (0.448461+0.276666)/8

= 0.090640

f. Between HBL and EBL

$$t = \frac{2.214 - 1.910}{\sqrt{0.044187}} \qquad S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= 1.44 = (0.448461+0.435286)/8

= 0.110468

g. Between HBL and NBBL

$$t = \frac{2.214 - 1.889}{\sqrt{0.05295}} \qquad S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= 1.41 = (0.448461+0.610567)/8

= 0.1323785

h. Between EBL and NBBL

$$t = \frac{1.910 - 1.889}{\sqrt{0.05229}} \qquad S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= 0.091 = (0.435286+0.610567)/8

= 0.1307316

i. Between SCBNL and NBBL

$$t = \frac{3.120 - 1.889}{\sqrt{0.17026}} \qquad S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= 2.98 = (2.7935+0.610567)/8

s= 0.42550

j. Between NIBL and NBBL

$$t = \frac{1.719 - 1.889}{\sqrt{0.04436}} \qquad S^2 = \frac{\sum(x_1 - \overline{x_1})^2 + \sum(x_2 - \overline{x_2})^2}{n_1 + n_2 - 2}$$

t= -0.81 = (0.276666+0.610567)/8

/t/= 0.81 = 0.1109041