CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Credit management is concerned with making sure that organization, who buys goods or service on credit, or individuals who borrow money, can afford to do so and what they pay their debts on time. Credit job exist with in any industry sector eg manufacturing, distribution, telecom, utilities local authority, financial services, and within any size company from SMES (small medium Enterprise) to large corporate.

Credit management lies at the heart of every business, and in today's economic climate assessing credit risk and ensuring that customers pay on time can make the difference between prosperity and disinter formulating policy, planning, cash collection organizing and managing the required resources every element is vital.

Lending is one of the most important functions of commercial bank. Credit in finance is the term used to denote transactions involving the transfer money or other property on promise of repayment usually at fixed future date. The person who deposit money in the bank they becomes creditors and the person who borrows money from the bank they become debtor of the banks. The principal function of credit is first to transfer property in the name of bank, which want to take loan. The transfer is temporary made for a long price and interest. In present context lending money has become one of the main sources of revenue to the bank. It plays an intermediary in channeling funds from lenders savers to borrowers/spenders. The quality of loan. Quality of borrower and quality of securities determine the health of any banker at the time of providing loan bank should follow some principle s that bankers should follow while granting loan. Besides that the character of person receiving credit, the capacity of borrower of utilize the fund, the percentage of borrower stake in the business are the basic elements, which measures the quality of borrow and the quality of loan. "The classical economic functions of and other financial intermediaries all over the world have-remained virtually uncharged in modern times. What have been changed are the institutional structure, the instrument and the techniques and used in performing these function.

The concept of the banking has been developed from the ancient history with the effort of ancient goldsmiths who developed the practice of storing people's gold and valuables under such arrangement the depositors would leave 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 up liftmen 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
- Developments banks
- Finance companies
- Savings and credit associations
- Mutual saving banks
- Credit unions
- Insurance companies
- Pension funds
- Investment companies
- 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 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 product 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 transaction 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, so efficient management of lending policy is needed.

1.2 Information about Banks Under Study

1.2.1 Concept of commercial Bank

"Commercial bank deals with other people's money. They have to find ways of keeping liquid so that they could meet the demand of their customer's. In their anxiety to make profit the banks can't afford to lock up their fund in assets which are not easily realizable. The depositor's confidence could for cash promptly and fully.

Commerce is the financial transactions related to selling and buying activities of goods and services. Therefore Commercial view point. They perform all kinds of banking functions as accepting deposit, advancing credits, credit creation and agency functions. They provide short-term credit, medium term credits and long terms credit to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit, etc.

The Commercial Bank pool together the savings of the community and arrange for their productive use. They supply the financial needs of modern business. They accept deposits from the public, which are repayable on demand or on sort notice. They cannot afford to invest their funds in long-term securities or loans. Their business is restricted to financing the short-term need of trade and industry. In their day-to-day transactions they cannot afford to supply the block capital required for the purchase of fixed assets. They grant loans in the form of cash credit and overdrafts. They also render a number of subsidiary services such as collection of bills and cheques, safe keeping of valuables of their customers etc. They provide short-term accommodation by discounting the bills of exchange. Commercial banks in general advance loan for short periods to industry and agricultural" (Radhaswamy, 1979; 495)

Commercial banks are 'financial intermediaries' for they borrow from those who are not immediately spending all their current receipts and they lend to those who have intentions of immediate spending on goods beyond the range of their own current receipts.

1.2.2 Nepal Investment Bank Ltd. (NIBL)

Nepal investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and, French partners. The French partner (holding 50% of the capital of NIBL) was credit Agricola Indosuez. A subsidiary of one often largest banking group- in the world. It's authorized capital is 130,00,00,000.00, issued capital is 65,00,00,000.00 and paid of capital is 57,39,90,700.00.

With decision of credit Agricola Indosuez to divert, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on April 2002 the 50% shareholding of credit Agricola Indosuez in Nepal Indosuez in Nepal Indosuez ban Ltd.

The name of the bank has been change to Nepal Investment Bank Ltd. upon approval of bank's annual General meeting. Nepal Rastra Bank and company Register's office with the following shareholding structure.

- A group of companies holding 50% of the capital.
- Rashtriya Banijya bank Holding 15% of the capital.
- Rashtriya Beema Sansthan Holding the 15% percentage.

The remaining 20% being held by the general public (which means the NIBL is a company listed on the Nepal Stock Exchange.)

There are 41 branches of Nepal investment bank limited. All its branches including rural areas are interconnected to the banks internet system provide online real time any branch banking system customers,

1.2.3 Bank of Kathmandu (BOK)

Bank of Kathmandu Ltd. was incorporated in 1993 and came into operation in March 1995 as a joint venture bank with Siam commercial Bank of Thailand. The head office of the bank is situated at Kamal Pokhari, Kathmandu. Nepal. Its authorized capital is 1,00,00,00,000.00, issued capital is 50,00,00,000.00 and paid up capital is 46,35,80,900.00 At the beginning, this bank was managed by Siam commercial bank of Thailand and later on Siam commercial bank divests their share holding and now its is fully owned and managed by Nepali professional the majority the majority of the shares are owned by general public which is 57.73% (Annual report BOK, 2006;13)

Bank of Kathmandu, since it s inception, has been using information technology for its mainstream banking. There are 44 branches of bank of Katmandu limited. All its branches including rural areas are interconnected to the bank's internet system provide online real time any Branch banking system to its valued customers. Continuous updates. Upgrades and replacement of its equipment and software have become one often major focuses of the bank to stand up to the challenges passed by the fast changing environment.

Bank of Kathmandu has well-developed correspondent relationship with over 150 banks globally to help its customers to carry out their business worldwide promptly and conveniently. Bank of Kathmandu have maintained accounts in major currencies. In the internationally renowned banks as well tired up with various inkstand money Transfer Companies (IMTC) like X-press money service Ltd., money Gram. International money Express Pvt. Ltd etc. For efficient execution of international banking business and also enables inflow of foreign exchange earnings to the country with high security. this bank come into operation with a objectives of catering new business yet not identified and offering new banking products and services with a modern look by adopting modern banking technology.

Banks of Kathmandu has entered into the 16th year of successful operation. During its 15th year of operation, it is has become one of the leaders in the banking sector and was able to establish a good banking image in the banking history of Nepal. It ha gain lot of popularity among it's, due to its pioneer service provided to its customers.

Bank of Kathmandu Limited has become a prominent name in the Nepalese banking sector. It would like to express its sincere gratitude to its customers, shareholders, employees and other stakeholders for their support and co-operation for leading the bank of the present highest of achievements. It wishes to reiterate here that whatever activity it undertakes; it puts in conscious efforts to glorify its corporate slogan, "We make your life easier".

It would also like to elucidate that Bank of Kathmandu is committed to delivering quality service to customers, generating good return to shareholders, providing. Attractive incentives to employees and serving the community through stronger corporate social responsibility endeavor.

Bank of Kathmandu limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

BOK also aims to facilitate the nation's economy and to become more competitive globally. To achieve these, BOK has been focusing on its set objectives right from the beginning.

To highlight its few objectives:

To contribute to the sustainable development of the nation by mobilizing domestic savings and channeling them to productive areas, to use the latest banking technology to provide better, reliable and efficient services at a reasonable cost, to facilitate trade by making financial transactions easier, faster and more reliable through relationships with foreign banks and money transfer agencies, to contribute the overall social development of Nepal.

1.3 Statement of the Problem

Most major banking problems have been awareness of the need to identify 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 their every need of the organization. Customers and can serve the society. To improve the profitability situation of the bank. It is necessary to stability 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 ate 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:

a. Is the credit practices adopted by commercial banks in good position? Or not
b. What is the credit efficiency of the Nepalese commercial banks?
c. Is there any relationship between credit position and profitability situation? Or not
d Loan disbursement and recovery policy adopted by commercial banks are practicable or not?

1.4 Objectives of the Study

It is no doubt that the role of the 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. Therefore the main objectives of the study are to find out the credit management position of the 'NIBL' and 'BOK'.

a. To analyze the credits and the advances provided by the sample banks.
b. To find out the strength and weakness in the credit administration of sample banks.
C To analyze the relationship between credit position and profitability situation of the sample banks.
d To find out the credit disbursement and recovery policy of the sample banks.

1.5 Significant of the Study

At present the joint venture banks are gaining a wide popularity thought their efficient management and professional services and playing an eminent role in the economy. This study no doubt will have importance to various groups but in particular is directed to a certain groups of people organizations, which are:

a. Importance to Shareholders.

b. Importance to management of these banks for the evaluation of the performance of their banks, and in comparison with other banks.

c. Importance of "outsiders" which are mainly the customers, findings agencies.

d. Importance to government bodies or the policy makers such as the central bank.

e. Interested outside parties such as investors, customers (depositors as well as credit takers): competitors personnel of the banks, stock brokers, dealers, market makers and students who wants to know about credit practice of commercial bank.

1.6 Focus of the Study

This study confirms the analysis of credit advances (i.e. credit disbursed and recovery) of two commercial banks. The present study analytically discloses the strength and weakness of the commercial banks in relation to credits disbursed and their recovery.

Here researcher has focused this resource mainly to highlight and examine the credit management of the selected bank ignoring other aspects of bank transaction. to highlight the credit management of the bank, the research is based on the certain statistical tools i.e. mean, standard deviation, coefficient of correlation, coefficient of determination and trend analysis hypothesis with a view to find out the true picture of the bank. The main objective of this research is to analyze the credit management through the use of appropriate financial tools.

1.7 Limitation of the study

Although this study will try it's almost care to cover most of the important sectors it is still subject to the following limitations, which are as follows:

1. The main purpose of the study is to fulfill the partial requirement of MBS thesis
2. This research study is concentrates only on those factors that are related with credit practices.
3. This study is associated only to the financial performance of 'NIBL' and 'BOK'.

4. In this study only selected financial and statistical tools and techniques are used.
5. The study is based on only the past five years period. (05/06 to09/010)
6. The study deals with mainly secondary data. Therefore reliability of conclusion of the study will be based on the accuracy of secondary data

1.8 Organization of the Study

The Study will involves following chapters.

chapter-I (Introduction), this chapter will include background of the study introduction of 'NIBL' and 'BOK', statement of the problem, objectives, significance, focus, limitation, organization of the study it self.

Chapter- II (Review of Literature), this chapter deals with the review of literature it includes reexamination or appraisal of existing works in relevant areas and includes the concept of credit management of commercial banks it’s roles and review of previous thesis too.

Chapter-III (Research Methodology), this chapter will include research design data collection, method of analysis and research variables.

Chapter-IV (Presentation and Analysis of Data), this chapter will include data processing, data analysis and interpretation.

Chapter-V (Summary, Conclusion & Recommendation), this last chapter will contain the findings of whole study after which major conclusion and recommendations are specified.

CHAPTER -II
REVIEW OF LITERATURE

The review of literature is a crucial aspect because it denotes planning of the study. The main purposes of literature reviews is to find out what works have been done in area of the research problem under study and what has not been done in the field of books, report, journals and research studies published by various institution unpublished dissertations submitted by master level students have reviewed.

It is divided into two headings:

- Conceptual Review
- Review of related studies

2.1 Conceptual Review of Credit management

The review of textbook and other reference materials such as: newspaper, magazines, research articles, journals and past thesis have been included in this topic. Credit administration involves the creation and management of risk assets. The process of lending takes in to consideration about the people and system required for the evaluation and approval of loan requests, negotiation of terms, documentation, disbursement, knowledge of the process and awareness of its strengths and weakness are important in setting objectives and goals for lending activates and for allocating available funds to various lending functions such as commercial, installment and mortgage portfolios.

Monetary policy and deposit mobilization in Nepal has concluded that mobilization of the domestic saving is one of the prime objectives of the monetary policy in Nepal, and commercial banks are the most active financial intermediary for generating resources in the form of deposit of private sector and providing credit to the investors in different sectors of the economy.

Book named "banking Management" say that in banking sector or transaction, an unavoidableness of loan management and its methodology is regarded very important. Under this management, many subject matters like the policy of loan flow, the documents of loan administration, audit of loan, the condition of loan flow the provision of security, this management plays a great role in healthy competitive activates (Bhandari, 2003;170).

2.1.1 Concept of Credit

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

Credit is a present right to a future payment. It is the power to obtained goods or services by giving a promise to pay money (or goods) one demand or at a specified date in the futures. It may be defined as the power to sewer commodities or services at the present time in returned for some equal rent or services at a future date. A credit in Low, commence and economics is the right which one person, the creditor has to compel another person, the debtor to pay or do something. It may be called a "short sale" Of money, it means "sale on trust".

Credit is financial assets resulting from the delivery of cash or other assets by a lender to a borrower in return for an obligation of repy on specified date on demand. Banks generally grants credit on four ways (Chhabra and Taneja, 1991:4)

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

2.1.2Types of Credit

Overdraft:

It denotes the excess amount withdraw over their deposits. An extension of credit from a lending institution when an account reaches zero. An overdraft allows the individual to continue withdrawing money even if the account has no found in it basically the bank allows peoples to borrow a set amount of money this is overdraft.

Cash Credit:

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

Term Credit:

It refers to money lent in lump sum to there borrowers. It is principal form of medium term debt financing having maturities of 1 to 8 years. Barely and Myers urge that bank credits with maturities exceeding 1 years are called term credits. The firm agrees to pay interest based on the bank's prime rate and to repay principal in the regular installments. Special patterns of principal payments over time can be negotiated to meet the firm's special needs (Richard, 1996; 80).

Working capital credit:

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

Priority or Deprived Sector Credit:

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

- Advances to poor/downtrodden/week/derived people up to Rs. 30,000 for generating income or employment.
- Institutional Credit to Rural Development Bank.
- Credit to NGOs those are permitted to carryout banking transaction for lending up to Rs. 30,000.

Hire-purchase financing (Installment Credit)

Hire-purchase credits are characterized by periodic repayment of principal and interest over the maturity of the credit. Hirer agrees to take the goods on hire at a stated rental including their repayment of principal as well as interest with an option to purchases. A recent survey of commercial banks indicates those bank are planning to offer installment credits on a variable rate basis. It can be secured and unsecured as well as direct and indirect installment credit.

Housing Credit (Real Estate Credit)

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

Project Credit

Project credit is granted to the customers as per project viability. The borrowers have to invest certain proportion to the project from their equity and the rest will be financed as project credit. Construction credit is short-term credits made to develops for the purpose of completing proposed projects. Maturities on construction credits range from 12 months to as long as 4 to 5 years, dependig on the size of the specific project. The basic guiding principal involved in disbursement policy is to advance funds corresponding to the completion stage of the project. Hence, what percent of the credit will be disbursed at which stage of completion must be spelled in disbursement policy? term of credit needed for project fall under it.

Consortium Credit

No single financial institution grant credit to the project due to single borrower limit or other reasons and two or more such institution may consent to grant credit facility to the project among them. financiers bank equal (or Likely) charge on the project's assets.

Credit card and Revolving lines of Credit

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

Charge cards and credit lines tied to demand deposit accounts are the two most common reveling credit agreements. It can be further divided into credit cared, automatic overdrafts lines and large credit lines.

- **Off-Balance Sheet Transaction**

In fact, bank guarantee and letter of credit refer to off balance sheet transactions of financial institution. It is also known as contingent liability. Contingent liability pinpoints the liability which may or may not arise during the happening of certain event. Footnotes are kept as reference to them instead of recording in the books of accounts. it is non funded based remunerative facilities but more risky than the funded until adequate collateral are not taken. Lets its two varieties be described separately.

- **Bank Guarantee**

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

- **Letter of credit (L/C)**

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

2.1.3 Lending Criteria (credit standard)

While screening a credit application, 5-Cs (five credit system) to be first considered supported by documents. They are:

1. Character

Character is the analysis of the applicant as to his ability to meet the obligations put forth by the lending institution. For this analysis, generally the following documents are needed.

- Memorandum and Articles of Association.
- Registration certification.

- Tax registration certificate (Renewed)
- Resolution to borrow.
- Authorization person authorizing to deal with the bank.
- Reference of other lenders with whom the applicant has dealt in the past or bank A/C statement of the customer.

2. Capacity

Describes customer's ability to pay. It measured by applicants past performance records and followed by physical observation. For this, an interview with applicant's customer's suppliers will further clarify the situation, Documents relating to this area:

- Certified balance sheet and profit loss account for at least past 3 year.
- In case of the personal loan they have to summit the proof source of income.
- References or other lenders with whom the applicant has dealt in the past or bank A/C.

3. Capital

This indicates applicant's capacity to inject his own money. By capacity analysis, it can be concluded that whether borrower is truing to play with lender's money only or is also injecting his own fund to the project. For capital analysis, financial statements, like certified balance sheet, profit and loss account is the only tools.

4. Collateral

Collateral is the security proposed by the borrower. Collateral may be of either nature immovable or immovable. Moveable collateral comprises right from stock, inventories to playing vehicles. In case of immovable it may be land with or without building or fixtures, plant machineries attached to it.

5. Conditions

Once the funding company is satisfied with the character, capacity, capital and collateral then a credit agreement (Sanction letter) is issued in favor of the Borrower stating conditions of the credit to which borrower's acceptances is accepted.

2.1.4 Principles of sound lending policy

Lending constitutes the main business of a banking company a major chunk of the profits of a bank comes out of this function. But no lending can take place without some inherent risks. As bankers are trustees of the depositor's money, they cannot take undue risks. A banker has to follow a cautions policy and conduct the business of lending on the basis of certain sound principles. Here are some of the important principles of sound lending.

1. Safety

The main business of banking consists in borrowing various types of deposits such as current, saving and fixed deposits and lending such deposits to needy borrowers in the form of advances and discounting of bills. This obviously implies that safety of such funds should be ensured. Otherwise the banker will not be in position to repay his deposits and once the confidence of the depositors is shaken, he cannot carry on the banking business.

If the banker has to ensure safe lending he has to look to the three C's if the borrower namely character, capacity and capital., character of the borrower is important because that determines his willingness to repay the loan, his capital and capacity to run the business successfully determine his capacity to pay the safety of the loan depends on both his capacity to repay and willingness to repay.

Banks will have to keep a portions of the deposits received for honoring the demands made by the customers. Only the balance can be safely. the banks endeavor is of the course to lend as much of the deposits as possible without which he will not be in a position to meet his interest, obligations and the maintenance of establishment. Therefore, he has to lend with a view to earn interest but lend it safe.

2. Liquidity

By liquidity is meant the readiness with which the bank can convert the assets into cash. Liquidity means short-term solvency of the borrower.

A banker is essentially the lender of short-term funds because he knows that the bulk of his deposits are repayable on demand or at short notice. As the banker's deposits are subject to the legal obligation of being repayable on demand and at short notice, he must ensure liquidity also while lending, so that in times of need, he will be able to convert the assets into cash.

Bank can ensure high liquidity by keeping all deposits in the form of cash only. In such a case, he will not be in position to meet the interest obligations and expenditure of the establishment. From experience, he has learnt that he can safely lend out a substantial portion of the funds. but while lending he should try to ensure liquidity, i.e. in times of need, he must be able to obtain repayment of the money within a reasonably short time. Liquidity also implies that the assets can be sold without any loss. Thus the concept of liquidity has twin aspects namely quick sale ability or convert ability of the assets and the absence of risk of loss in such conversion.

3. Profitability

Commercial banks obtain funds from shareholders and naturally if dividend is to be paid on such shares it can only be paid by earning Profits. Even in the case of public sector banks although they are service motivated they will have to justify their existence by earning profits. This is not possible unless the funds are employed profitably. From out of the revenue earned, the banker has to pay interest on deposits, salary to the staff, meet other establishment expenses, build-up reserves and the balance must permit the payment of dividend to shareholders. So for the bank to sustain on a long run, it has to seek many profitable sectors where it can mobilize its collected fund. Before lending, a banker has to see that the advance and credit is on the whole profitable. Lending rates are affected by banks' internal policy like credit rating of the borrower, bank rate of NRB, inter-bank competition and NRB's guidelines on lending rates.

4. Purpose of Loan

Nowadays, the purpose for which loans are granted has acquired precedence over the principle of security. If a loan in required for a non-productive or speculative purpose, a banker will be reluctant to entertain the proposal. Loans for social functions, ceremonies, pleasure trips or for repayment of prior loans are not favored by a banker, as they are unproductive in nature. But it is very difficult for the bank to ensure the advance has been used for the purpose for which it was taken. A person may take a loan obviously for a productive use, but may spend it on speculation. The central bank through its directives, also determines the policy to be followed by the banks with regard to the purpose for which advances may not be granted. So a banker should enquire the purpose for which it is taken for safe lending.

5. Security

Traditionally, bankers have been security oriented. The security offered against a loan can be of various types. It may vary from a piece of land or a building to a commercial paper or bullion. Whatever may be the security, a banker has to realize that it only cushion to all back upon in case of need and its adequacy alone should not form the sole consideration for advance. It must be ensured that the security when accepted must be adequate, readily marketable, easy to handle and free from encumbrances.

6. Diversification of loans

There is a very familiar saying that "Do not put all the eggs in the same basket". Banker should try to diversify loans as far as possible, so that he may minimize his risks in lending. If the banker lends only to one industry or only too few big firms or concentrates in a certain geographical area, the risk is great. He should diversify lending, so that he may not affected by the failure of one industry or of a few big borrowers. A banker who puts all his eggs in one basket is not prudent banker.

7. National Interest and suitability

Bankers must ascertain on what type of business the customer is involved whether it saves the national interest or not, whether the firm is acting responsibly towards the society that it is operating in like brick industry or the cement industry and the precautions taken by it against environment pollution. Central bank issues directives, prohibiting banks to invest in various sectors such as the import of arms and ammunitions etc. Also bankers must remain vigilant of the law and order situation where borrower carries its business.

2.1.5 Some Important Banking Terms

The study in this section comprises of some important banking terms for which efforts have been made to clarify the meaning, which are frequently used in this study, which are given below.

A. Deposits

Deposit is the most important source of liquidity for a commercial bank. It is also the main source of fund that a bank usually uses for the generation of profit. Therefore, the efficiency depends on its ability to attract deposits. Banks collects the scattered savings of the public through various accounts type like saving, current, fixed etc. Deposit being the borrowed amount from the depositors or from general public and institutions, it constitutes the liability of a bank. The management of a bank is always influencing it through deliberate policy action; the deposits of a bank are affected by various factors. They are as follows.

- Types of customers
- Physical facilities of bank
- Management accessibility of customers
- Types and range of service offered by the bank.
- Interest rate paid on deposits.
- Goodwill and financial position of the bank

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

B. Loan and Advances

"Loan, advance and overdraft are the main sources of income for a bank. Bank deposit can cross beyond a desired level but level of loans, advances and overdraft will never cross it. The facilities of granting loan, advances and overdrafts are the main services in which customer of the bank can enjoy.

Fund borrowed from bank are much cheaper than those borrowed from unorganized money lenders. The demand for loan has excessively increased due to cheaper interest rate. Furthermore, an increase in an economic and business activity always increases the demand for the fund. Due to limited resources and increasing loans, there is some fear that commercial banks and other financial institutions too may take more preferential collateral while granting loans causing unnecessary trouble to the general customers.

In addition to this, some portion of loan advances and overdraft includes that amount which is given to staff of the bank for house loan, vehicle loan, personal loan and others. In mobilization of commercial banks fund, loan advance and overdrafts have occupied a large portion.

C. Investment on Government Securities, Share and Debenture

"Though a commercial bank can earn some interest and dividend from the investment of government securities, share and debenture, it is not the major portion of income, but it is treated as a second source of banking business. A commercial bank may extend credit by treating it as a second source of banking business." A commercial bank may extend credit by purchasing government securities bonds and shares for several reasons.

Some of them are given as:

- It may want to space it maturates so that the inflow of cash coincide with expect withdrawals by depositors or large loan demands of its customers.
- It may wish to have high grade marketable securities to liquidate if its primary reserve becomes inadequate.
- It may also be forced to invest because the demand for loans has decreased or is not sufficient to absorb its excess reserves.

However, investment portfolio of commercial bank is established and maintained primarily with a view of nature of banks. Liabilities that is since depositors may demand fund in great volume without previous notice to banks. The investment must be of a type that can be marketed quickly with little or no shrinkage in value.

D. Investment on other Company's Share and Debentures

Most of commercial banks invest their excess fund to the share and debenture of the other financial and non-financial companies. Due to excess fund but least opportunity to invest those funds in much more profitable sector and to meet the requirement of NRB directives, the commercial banks purchase shares and debenture of regional development bank, NIDC and other development banks.

E. Liquidity

Liquidity is the ability of bank to meet its obligations on time, especially in relation to repayment of inter-bank borrowings and customer deposits. Liquidity management is a very crucial job of commercial bank and the bank should maintain adequate amount of cash in its vault and NRB for its daily operation and administrative purpose. As per the arrangement of NRB effective from fiscal year 2006/07, the commercial banks are required to maintain cash reserve of 5% with NRB of its total deposit liability with NRB. The previous provisions of cash in vault maintenance have been withdrawn now.

F. Capital Adequacy

Capital is the blood of any business without which business cannot be run or established. In financial term, capital is the excess of assets over liabilities and can be defined as the wealth, which is employed for the production. Capital is required by a bank as a cushion to absorb losses, which should be borne by shareholders ratherthan depositors and to finance the infrastructure of the business. Capital adequacy is to maintain adequate amount of capital or fund to safeguard the money of the depositors against any possible loss. NRB require banks to maintain a certain capital adequacy ratio based on the total risk weighted assets and the banks are supposed to meet the minimum requirement of CAR.

G. Off-Balance Sheet Activities

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 or liabilities on balance sheet. Some examples of these items are letter of credit, letter of guarantee, bills of collection etc. These activities are very important; as they are the good source of profit of bank through they have risk. Nowadays, some economists and finance specialists to expand the modern transactions of a bank stressfully highlight such activities.

H. Banking Risks

Normally, banks confront different kinds of risks, which are categorized as follows:

- **Credit Risks**

Credit risk arises whenever another party enters into an obligation to make payment or deliver value to the bank. This risk is mostly associated with the lending.

- **Liquidity Risk**

Liquidity risk arises when bank itself fail to meet its obligation. The bank required to make payments to the different parties at different times, when they fall due to other parties, its the liquidity risk.

- **Yield Risk**

It is the risk that bank's assets may generate less income than expense generated by its liabilities.

- **Market risk**

The risk of loss resulting from Movements in the market price of financial instruments in which the bank has a position is the market risk. Such instruments include bonds, equities, foreign exchange and associated derivative products.

- **Operational Risk**

The risk of failure in the banks procedures or controls, whether from external or internal causes or as a result of error or fraud with is the institution is the operational risk.

- **Ownership / Management Risk**

The risk that shareholders directors or senior management be unfit for their respective positions or dishonest.

2.1.6 Project appraisal

Before providing credit to the customer, bank makes analysis of project from various aspects and angles. It will help the bank to see whether project is really suitable to invest. The purpose of project appraisal answers the following questions:

- Is the project technically sound?

- Will the project provide a reasonable return?
- Is the project in line with the overall economic objectives of the economy?

Generally, the project appraisal involves the investigation from the following.

- Financial aspect
- Economic aspect
- management / Organizational aspect
- legal aspect

2.1.7 Provisions of NRB for Extending Advances & Investment in Productive, Priority and Deprived Sector

Productive Sector

Productive Sector include advances to Priority Sector and Other productive Sector which includes advance and investment in shares and debentures of small, medium and large industries as defined in industrial enterprises act; pre-shipment credit like purchase of merchandise, processing, assembling, packaging etc.; export bill financing, advances for purchase of public transport like truck, bus, tempo etc, and agricultural/farm equipment; investments on shares and debentures of government/semi-government or private sector agricultural insurance, godown, banking or like companies etc.

As per NRB regulation, commercial banks are required to extend 40% of the total advances to productive sector.

- **Priority Sector Credit Program**

"Priority sector" is defined to include micro and small enterprises which help increases production, employment and income as prioritized under the national development plans with an objective to uplift the living standard of general public particularly the deprived and low income people by progressively reducing the prevalent unemployment, poverty, economic inequality and backwardness. Micro and small enterprises are classified into agricultural enterprises, cottage and small industries and service, In addition, other businesses as specified by NRB from time to time are also included under Micro and small enterprises. All credits extended to priority sector up to the limit specified by NRB are termed as "Priority Sector Credit."

- **Deprived Sector Lending**

"Deprived Sector" includes low income and particularly socially backward women, tribes, lower caste, blind, hearing impaired and physically handicapped persons and squatters (Sukumbasi) family. All credits extended for the operation of self-employment oriented micro-enterprises for the upliftment of economic and social status of deprived sector up to the limit specified by NRB is termed as "Deprived sector Credit". "Deprived Sector Credit" is considered as integral part of priority sector credit and this credit comprise micro-credit programs and projects also.

The businesses under the Priority Sector Credit Program have been classified under the following four major heads:

- Agriculture and Agro-bases business
- Cottage and small industries
- Services
- Other business

Lending in Deprived Sector will be included in Priority Sector for the purpose of compliance test for 12% credit to Priority sector.

Deprived sector credit is advances up to Rs. 30,000 per borrower family meant for weak, poor and deprived people extended in the following manner by the commercial banks shall qualify to be included under deprived sector credit:

- Direct investment made by the commercial banks themselves in income generating employment oriented programs.
- Investments made by commercial banks in share capital Rural Development banks, Rural Micro Finance Development Center and other Development Banks established with an objective to extend credit to deprived sector.
- Advances to the Rural Development Banks and other Development Banks engaged in the similar poverty alleviation programs.
- Advances to Cooperatives, Non-governmental Organization and Small Farmers Cooperatives approved by NRB for carrying out banking transactions.
- Advances to Micro-Finance Institutions (Rural Development Banks and other financial institutions, cooperatives and non-governmental organizations

approved by NRB for intermediation) stipulating the condition to disburse such credit to deprived sector only.

- Loans extended by commercial banks to development banks engaged in micro credit activities with stipulated condition to disburse the credit only to the deprived sector up to Rs. 30,000 a family shall be eligible for the purpose of inclusion under Deprived Sector Credit.

Effective from FY 2000/01, Nabil and HBL shall compulsorily extend advances to the deprived sector by 3% of its total outstanding credit.

❖ **Regulation relating to Loan Classification and Loan Loss Provisioning**

With an objective to minimize the possible loss of credits extended by commercial banks as provided under section 32(1) of Nepal Rastra Bank Act 2012 (with amendment) relating to development and regualtion and banking system. This directive in respect of loan classification & provisioning has been issued in exercised of authority under section 56 of bank and financial institutions act 2063.

❖ **Classification of Outstanding Loan and Advances on the Basis of Aging**

Banks shall classify outstanding principal amount of loan and advances on the basis of aging.

Classification of Loans and Advances'

Loan and advance shall be classified into the following 4 categories:

Pass

Loans and Advance whose principal amount are not past due for a period up to 3(three) months shall be included in this category. These are classified and defined as performing Loans,

Substandard

All loans and advances that are past due for a period of 3 month to 6 month shall be included in this category.

Doubtful

All loans and advance which are past due for a period of 6 month to 1(one) year shall be included in this category.

Loss

All loans and advances which are past due for a period for more than 1 (one) year as well as advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future shall be included in this category.

Loans and advances failing in the category of Sub-standard doubtful and loss are classified and defined as **Non-Performing Loan.**

Note:

- If it is appropriate in the views of the Bank management there is not restriction in classifying the loan and advances from low risk category. For instance, Loan falling under sub-standard may be classified into Doubtful or loss and loans falling under Doubtful may be classified into loss category.
- The term loan and advances also includes Bills purchased and Discounted.

❖ **Submission of Return Relating to Classification of Loan and Advances**

Bank Shall, As of Mid of October, January, April and July, prepare the statement of outstanding loans & advances classified on the basis of aging & submit the particulars as per the enclosed Directives form No. 3 to the Banking Operation Department & Inspection & Supervision Department of Nepal Rasta Bank within 1(one) month from the end of each quarter.

Classified loans and Advances under the currently existing arrangement are required to be classified as per the time Table in four phases:

❖ **Relating to collateral**

All collateral used back loan and advance shall be adequate to cover up the principal and interest and shall also be legally secured. In the event of non-realization of principal and interest of loan, there must be no difficulty in acquiring the title of the collateral asset.

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

Loans and advances fully secured by gold, silver, fixed deposit receipts "Pass" category.

However, where collateral of fixed deposit receipt or NRB Bonds is placed a security against loan for other purposes, such loans has to be classified on the basis of aging per clause 2.

- **Additional Arrangement in Respect of "Loss Loan"**

Even if the loan is not past due, loans giving any or all of the following discrepancies shall be classified as "Loss".

- No security at all or security that is not in accordance with the borrower's agreement with the bank,
- The borrower has been declared bankrupt,
- The borrower is absconding or cannot be found,
- Purchased or discounted bills are not realized within 90 days from the due date.
- The credit has not been used for the purpose originally intended.
- Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.
- Loans provided to the borrowers included in the black list and where the **Credit Information Bureau** blacklists the borrower.
- Additional Arrangement in Respect of Term Loan,

In respect of term loans, the classification shall be made against the entire outstanding loan on the basis of the past due period of over due installment In the even of conversion of continent liabilities of the bank e.g. letters of credit, un-matured guarantees, in to the liability of the bank, such amount becomes recoverable from the customers. Hence, such amount shall also be classified as per the classification norms applicable to loans and advances and accordingly be provided with requisite provisioning.

Prohibition to Recover Principal and Interest by Overdrawing the Current Account and Exceeding the Overdraft Limit Principal and interest on loans and advances shall not be recovered by overdrawing the borrower's current account or where overdraft facility has been extended, by overdrawing such limit, However, this arrangement shall not be construed as prohibitive for recovering the principal and interest by debiting the customer's account and recovery is made as such resulting in overdraft, which is not settled within one month, such overdrawn, principal amount shall also be liable to be included under the outstanding loans and such loans shall be liable to be included under the outstanding loan and such loan shall be downgraded by one step from its current Classification. In respect of recognition of interest, the same shall be as per the clause relating to income recognition mentioned in Directives No.4.

Loan Loss Provisioning

The Loan loss provisioning, on the basis of the outstanding loans and advances and purchase classified as per this Directives, shall be provided as follows:

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

Note: loan loss provision set aside for performing loan is defined as "general loan loss provision" and loan loss provisions set aside for Non-performing loan is defined as "Specific Loan Loss Provisions".

❖ **Additional Provisioning in the case of Personal Guarantee Loans**

Where the loan is extended only against personal guarantee, a statement of the assets equivalent to the personal guarantee amount not claimable by any other shall be obtained, Such loans shall be classified as per above and where the loans fall under the category of Pass, Substandard and Doubtful, in additional to the normal loan loss provision applicable for the category, an additional provision by 25% point shall also be provided. Classification of such loans and advances shall be prepared separately.

❖ **Rescheduling and Restructuring of loan**

In respect of loans and advances falling under the category Substandard, Doubtful or Loss, banks may reschedule or restructure such loans only upon receipt of a written Plan of Action from the borrower citing the following reason:

- The internal and external causes contributing to determination of the quantity of loan.

- The reduced degree of risk inherent to the borrower/enterprise, determined by analyzing its balance sheet and profit & loss account in order to estimate recent cash flows & to project future ones, in addition to assessing market condition.
- Evidence of existing of adequate loan documentation.
- An evaluation of the borrower/enterprises' management with particular emphasis on efficiency, commitment & high standards of business ethics.

In addition to written Plan of Action for rescheduling or restructuring of loan per Clauses (13.1) above, payment of interest according to the loan contract as originally specified should have been collected. The loan loss provision, in respect of rescheduled restructured and swap loans, shall be provide at minimum 12.5% Separate statement shall be pared for loans classified & provision made as per Clause 13.3 above.

Provisioning against Priority Sector Credit

Full provisioning as per clause (11) shall be made against the uninsured priority and deprived sector loans. However, in respect of insured loans; the requested provisioning shall be 25% of the percentage state under clause (11).

Adjustment in Provisioning

Expect in the following cases, banks are prohibited from making any adjustments in their loan loss provision amount.

- The loan has been completely written off:
- The principal amount of loan and interest has been fully settled by the borrower.
- Loan has been classified or reclassified and vision for loan loss is made.

However, no such adjustments shall be made in the case of reclassified loan by way of rescheduling of restructuring.

Action to be taken in cases of Noncompliance

In cases where a bank has been found not complying the regulations in respect of loan classification and provisioning. Nepal Rastra Bank may ask for classification.

If the bank's response is not satisfactory, Nepal Rastra Bank shall initiate following action in exercises of its authority under section 23 (1) of Nepal Rastra Bank Act. 2012.

Require reclassification of loan and advances and accordingly adjust the loan loss provisioning within 3 months. If the banks do not comply to the directive issued as per sub-clause 16.1 above, the following additional action shall be initiated in exercise of the authority under section 32 of Nepal Rastra Bank Act 2012 with amendment.

- Suspend declaration and distribution of dividends (including bonus shares).
- Suspend extension of loan.
- Suspend acceptance of deposits.

All earlier circulars issued by Nepal Rastra Bank relating to loan classification and loan loss provisioning have been related.

2.2 Review of Related Studies

2.2.1 Review of Articles

Shrestha, (1998) in her article "Lending operations of commercial banks of Nepal and its impact on GDP" presented the objectives of make an analysis of contribution of commercial bank's lending to the Gross Domestic Product (GDP) of Nepal. She has set a hypothesis that there has been a positive impact of lending of commercial banks to the GDP. In research methodology. she has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial, service, general and social sectors as independent variables. A multiple regression technique has been applied to analyze the contribution.

The multiple analysis have shown that all the variable expect service sector lending have positive impact on GDP. Thus in conclusion, she has accepted the hypothesis, i.e. there has been positive impact on GDP by the lending of commercial banks in various sectors of economy, except service sector investment."

2.2.2 Review of Thesis

Joshi, (1999) has studied on "Lending policy of Commercial Banks in Nepal' The main objectives of this study is to examine the role of commercial bank in its functions as well as performance ; to show the relationship between deposit and loan advance, to identify major weakness of lending policy of the commercial banks and to suggest lending policy to process the utilization of the resources and they are still lazy to pay active role to utilizes these sources collected from different sectors accordance with the need of the economy. He recommended that Nepal Rastra Bank has significant roled the overall economic policy of the country NRB must take safe of lending policy and role to solve various problems, which have been arising in the banking development.

Acharya, (2001) has studied on "Deposit mobilization of commercial bank in Nepal". The main objective is to impact of interest rate on deposit mobilization as well as credit ratio increase or decrease as the change in interest rate. Besides this, the objective is to know the efficient utilization of the accumulated deposits. She has found out that the commercial bank have not been successful in the mobilization of the deposits collected by the commercial banks. It is because of the fact, the commercial banks have not able to motivate and facilitate to their cents except at change in the rate of interest. The problems are to attracting the savings to the maximum possible extent to channeling these savings into those sectors of the economy where there are most needed and to extending banking facilities in the country to unbaked areas. The changes of interest rates in loan are also recommended. Commercial banks should extend long term and medium term credit in addition to short term credit.

Panta, (2001) in his thesis paper "A study of commercial banks deposits and it’s utilization" got to notice that the percentage of the total credit supplied by commercial banks within five years period (1995-2000) is more or less same while in the collection of deposits. The percentage has increased too much. Thus, the increasing gap between collection and utilization shows economic requirement and to contribute the economic upliftment of the country, commercial banks should a fair sector wise and planned policy.

The purpose of this research is to develop some expertise in one's to see what new contribution can be made and to receive some ideas, knowledge and suggestions in relation to credit management of NB bank. Thus, the previous studies can't be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with past research studies. Here, is clear that the new research cannot be found on those exact topics, i.e. Credit Management: A study on Nepal Bangladesh Bank Limited. Therefore, to fulfill this gap, this research is selected. To complete this research work: many books, journals, articles, and various published and unpublished dissertation are followed as guideline to make the research easier and smooth. In this regard, here we are going to analyze the different procedure of credit management, which is considered only on NB bank. Our main research problem is to analyze whether the NB bank has right level of liquidity as well as is able to utilize its resources effectively or not. To achieve, this main objective, various financial and statistical tools are used. Similarly, trend analysis of investment and profit are reviewed to make this research complete. Therefore, this study is useful to the concern bank as well as different persons: such as shareholders; investors, policy makers, stockbrokers, state of government etc.

Aryal, (2003) has submitted a thesis entitled to, "A Evaluation of credit investment and Recovery of Financial Public Enterprises in Nepal" a case of ADB/N. His research statement of problem was as; because of high interest rate of non institutional sources, people are unable to pay their credit at fixed time. These institutions compel them to transfer their property to the moneylender resulting himself or herself as a landless person.

ADB/N is one of the major financial institutions supporting for the people for the different purpose like agro, industries, tea, coffee, livestock farming etc. ADB/N. provides the credit for individual and cooperative sector to all collection amounts is not good. However, ADB/N has increased its effort to collect its credit. It is said that those people who really need do not receive sufficient amount of credit from ADB/N. His major findings are actual credit disbursement, collection and outstanding are increasing in decreasing rate. Yearly increase in credit disbursement is higher than that of collection. Positive relation between credit disbursement and collection that is

0.996 Targeted credit collection and disbursement fixed by planning and project department is not significantly different than the actual. Most of the customs are unaware of the policy of the bank. He recommends the borrowers should be about the credit, its use and its payment procedures and schedule; Greater attention should be given to increase the credit collection and to collect old outstanding amount of credit and renewal of it. To accelerate the collection, credit should be followed continuously in a regular interval of time. The behavioral of the personal should be strictly supervised in granting credit in proper investment proposal because of most of the bad credit disbursement is due to weak decision of the personal.

Parajuli (2004), has concluded in his study entitled, "Credit management of commercial banks in the content of financial reform program". The researcher main objectives were to study procedure of granting loans to find relevancy of financial sector reform program, to examine the level of NPL's. The data used in this research in both primary and secondary data. Financial and statistical tools are used in this research.

This research analysis has found that there should extra cautions for financial liberalization and reforms of the financial sector. Therefore, financial sector reform program policies are equally viable to the private and public bank too. This thesis recommend that more focus should be given to improve the credit management of NBL such as credit granting procedures the credit files, value of collection and marinating the loan loss provision adequately.

In this research, the different procedures while granting loans and loss provision are missing.

Maskey, (2006) in his thesis paper "A study on lending performance with reference to Nabila bank ltd., standard chartered bank ltd and Nepal investment bank ltd. The thesis gives the objectives of study in the relationship among different financial indicators relating to loans and advances, total investment, profitability ,deposit and non performing loans in commercials banks under the study. In this study financial and statically tools are used. The data used in this research in mainly secondary nature of concerned banks and website of Nepal stock exchange.

Conclusion is gives as the banks are following NRB guideline of loan classification and provision which makes bank financially strong instead of holding high volume of NPA is addition to all the guidelines followed by NRB and the banks internal policy. There is missing to give the fact of why the non performing rates are not being relatively affected beyond the precautions of the banks to keep the collateral. Also primary data collection is limited through the questionnaire with banking officials only. The actual lender opinion about lending polices is missing.

Poudyal ,(2007) conducted as study on “A study on credit (lending) practices of joint venture commercial bank with reference to HImalyan bank limited and Nepal ,SBI bank limited” The major financing were as follows.

The liquidity ratio of HBL which indicates is more stable and consistent than NSBIL, which indicates stable policy of HBL. He concludes that NSBIL has not made enough cash and bank balance and it has made negligible amount of investment in governance securities. On the basic of assets management ratio he concluded that NSBIL is able to manage it’s assets to complete in this competitive banking of credit portfolio both bank has mad more investment in private sector than other sectors.

On the basic of analysis of lending efficiency of these two concerned banks, NSBL has better efficiency ratio than that of HBL. The overall profitability position of HBL is comparatively better than that of NSBIL.

Table No 2.1

The Summarized of review of Article and Thesis

S.N.	Study	Area covered	Major finding
1	Shrestha,(1998)	“lending operation of commercial bank of Nepal and it’s impact on GDP”	-This Article finding the “positive impact on GDP by the lending of commercial banks in various sectors of economy, except service sectors investment.
2	J0shi (1999)	“Lending policy of commercial banks in Nepal”	-This thesis finding the relationship between the deposit and loan advance, to identify major weakness of lending policy of the commercial bank.
3	Acharya(2001)	“Deposit mobilization of commercial bank in Nepal”	-This thesis finding the commercial bank have not been successful in the mobilization of the deposit collected by the commercial banks
4	Aryal (2003)	A evaluation of credit investment recovery of financial public enterprises in Nepal”	This thesis finding the actual credit disbursement,collection and outstanding are increasing in decreasing rate. Yearly increasing in credit disbursement is higher than that of collection. -The positive relation between credit disbursement and collection that is 0.96 targeted credit collection and disbursement fixed by planning and project department is not significantly different than the actual.
5	Parajuli (2004)	“Credit management of commercial banks in the context of financial reform program”	-This thesis finding the more focus should be to improve the credit granting procedures the credit files.
6	Maskey(2006	“lending performance to nabil bank,scbl and nibl”	-This thesis finding the actual lender about lending is missing.
7	Poudyal(2007)	“A study on credit practices of joint venture commercial bank with reference (HBL,NSBIBL)	-This thesis finding the liquidity ratio of HBLis more stable and consistent than NSBIBL -NSBIBL has not made enough cash and bank balance and it has made negligible amount of investment in governance securities.

2.3 Research Gap

The review of above relevant literature has contributed to enhance the fundamental understanding and knowledge, which is required to make study mindful and purposive. There have been lost of articles published related to investment policy and loans and advance o commercial banks. There are various researches conduced on investment policy of commercial banks ,impact and implementation of NRB guideline in commercial banks but it has been found that no such has been made in the credit management of banking sector and the increasing challenges faced by commercial banks few these have been prepared on the credit management . These researches are related only with trend of credit .so this study can make further research on credit management and their policy. Hence the researcher has attempted to fulfill this research gap by taking reference to Nepal investment bank limited and bank of Katmandu limited.

CHAPTER-III
RESEARCH METHODOLOGY

3.1 Introduction

The research methodology is a systematic way to solve the research problems in other words. Research methodology describes the methods and process applied in the entire aspects of the study. The present research has followed analytical descriptive as well as exploratory methodology and there is composed of as following section

.

3.2 Research Design

A Research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Research Design is the plan. Structure and strategy of investigation conceived so as to obtain answers to research questions and to control variances. There are many methods of research design and this study will be based on recent historical data. Mostly secondary data and information to 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 and clients.

3.3 Population Sample

A population in most studies usually consists of large group because of its large size it is fairly difficult to collect detailed information form each member of population. Rather than collecting information from each member, a sub group is chosen which is believed to be representative of population. This sub-group is called a sample and the method of choosing is done by sampling. The sampling allows the researcher more time to make an intensive study of a research problem. The total commercial banks shall constitute the sample under the study. So, among the various commercial banks under the banking industry 'NIBL' and 'BOK' will be taken sample for the study

Table No 3.1

List of licensed of Commercial Banks

No.	Population Banks	Samples Banks
1	Nepal Bank Limited	**Nepal Investment Bank Limited (Established as Nepal Indo-suez Bank Ltd.)**
2	Rastra Banijya Bank	
3	Nabil Bank Limited (Established as Nepal Arab Bank Limited)	
4	Neapl Investment Bank Limited (Established as Nepal Indo-suez Bank Ltd.)	
5	Standard Chartered Bank Limited (Established as Nepal Grindlays Bank Ltd.)	
6	Himalayan Bank Limited	
7	Nepal Bangladesh Bank Limited	
8	Nepal SBI Bank Limited	
9	Everest Bank Limited	**Bank of Kathmandu Limited**
10	Bank of Kathmandu Limited	
11	Nepal Credit and Commerce Bank Limited (Established as Bank of Cylon)	
12	Lumbani Bank Limited	
13	Nepal Industrial and Commerce Bank Limimed	
14	Machhapuchhre Bank Limited	
15	Kumari Bank Limited	
16	Laxmi Bank Limited	
17	Siddhartha Bank Limited	
18	Agriculture Development Bank Limited	
19	Global Bank Limited	
20	Citizen Bank International Limited	
21	Prime Commercial Bank Limited	
22	Sunrise Bank Limited	
23	Bank of Asia Nepal Limited	
24	Development Credit Bank Limited	
25	NMB Bank Limited	
26	Kist Bank Limited	
27	Civil bank limited	
28	Mega bank limited	
29	Century bank limited	
30	Janata bank Nepal limited	
31	Commerz and trust bank Nepal limited	

(Source: - www.nrb.org.np)

3.4 Sources of Data Collection

It is use only secondary sources of data collection.

Secondary Data

The secondary data are those, which have already been collected by some one else and already, been passed through the statistical process.

The study is mainly based on secondary data. So, the major sources of secondary data for this study will be taken are as follows:

a. Annual reports of the banks
b. Previous studies and reports
c. Journals and other published and unpublished related document and reports Various internet websites
d. Other published materials
e. Nepal stock exchange and related commercial bank etc.

3.5 Tools/Methods of Data Analysis

To make the study more specific and reliable, the researcher uses two types of tool for analysis,

a) Financial Tools
b) Statistical Tools

3.5.1 Financial Tools

Financial tools are used to examine the financial strength and weakness of the Bank. In this study, following financial tools are used.

A. Liquidity Ratio:

Liquidity refers to the ability of a firm to meet its short term or current obligations as and when they fall due for payment. So liquidity ratios are used to measure the ability of a firm to meet its short term obligations and form them the present cash solvency as well as ability to remain solvent in the event of adversities of the same can be examined.

Inadequate liquidity can lead to unexpected cash short falls that must be covered at inordinate cost, thus reducing profitability. In the worst case, inadequate liquidity can lead to the liquidity insolvency of the institution. On the other hand, excessive liquidity can lead to low asset yields and contribute to poor earnings performance.

To find out the ability of banks to meet their short term obligations, which are likely to mature in the short period, these ratios are calculated. The following ratios are developed under the liquidity ratios to identify the liquidity position.

i. Cash and Bank Balance to Total Deposit Ratio:

This ratio shows the ability of banks immediate funds to cover their deposit. Higher the ratio shows higher liquidity position and ability to cover the deposits and vice versa. It can be calculated by dividing cash and bank balance by deposits. This ratio can be calculated using the following formula.

$$\mathrm{X}\frac{Cash\ and\ Bank\ Balance}{Total\ Deposits}$$

ii. Cash and Bank Balance to Current Deposits Ratio

This ratio computed to disclose the soundness of the finance company to pay total calls made of current deposits. It can be expressed as:

$$\mathrm{X}\frac{Cash\ and\ Bank\ Balance}{Current\ Deposits}$$

B. Activity/ Efficiency Ratio:

It is also known as turn over or efficiency ratio or assets management ratio measures how efficiently the firm employs the assets. Turn over means the number of times and assets flow through a firm's operations and into sales. Greater rate of turnover or conversion indicates more efficiency of a firm in managing and utilizing its assets being other things equal. Various ratios are examined under this heading.

i) Credits and Advance to Total Deposits Ratio:

Commercial banks utilize the outsider's fund for profit generation purpose. Credits and advances to deposit ratio shows whether the banks are successful to utilize the outsiders funds (i.e. total deposits) for the profit generating purpose on the credit and advances or not. Generally, a high ratio reflects higher efficiency to utilize outsider's fund and vice-versa. The ratio can be calculated by using following formula.

$$\text{Credits and advances to total deposits ratio} = \frac{\textit{Credits and Advances}}{\textit{Total Deposits}}$$

ii) Credits and Advances to Fixed Deposit Ratio:

Fixed deposits are the long term interest bearing obligations and credits and advances is the major sources of investment to generate the income by the commercial banks. The ratio measures how many times the amount is used in credits and advances in comparison to fixed deposit for the income generating purpose. The ratio is slightly differ with the former one, because it only includes the fixed deposits, where as the former on includes all the deposits. The following formula is used to obtain this ratio.

$$\text{Credits and advances to fixed deposit ratio} = \frac{\textit{Credits andAdvances}}{\textit{Fixed Deposits}}$$

iii) Credits and Advances to Total Assets Ratios:

It measures the ability in mobilizing total assets into credit and advances for generating income. A higher ratio is considered as and adequate symbol for effective utilization of total assets of bank to credit and advances of which creates opportunity to earn more and more. It is calculated as:

$$\text{Credit and Advances to total assets ratio} = \frac{\textit{Credits and Advances}}{\textit{Total Assets}}$$

iv) Performing Assets to Total Assets Ratio:

It tells the percent of performing assets on total assets. It is useful to know the fact that whether the good credit is increasing or not. We can generate more earning by increasing good credit and reducing bad and inferior credit. It teaches us to invest sources of final only on good credit (i.e. profitable venture). It is computed as:

Performing Assets Ratio = $\frac{Performing\,Assets}{Total Assets}$

v) Credit Loss Provision to Credit and Advances ratio:

It measures the percentage of credit loss provision on credit and advances. Credit loss provision on credit is given to reduce risk of non payment of released credit. It is computed as:

$$\text{Credit Loss Provision Ratio} = \frac{\text{Total Credit Loss Provision}}{\text{Total Credit Due}}$$

vi) Overdue Credit to Total Credit Ratio:

It shows the percentage of non performing credits to total credits. Banks performance is good if the percentage is low and vice versa. It also shows the credit recovery efficiency of the bank. Credit loss provision should be provisioned on the basis of overdue credit classification. It computed as:

Overdue Credit to total credit = $\frac{Overdue\,Credit}{Total\,Credit}$

C. Leverage Ratio:

The use of finance is refers by financial leverage. When a firm borrows money, it promises to make series of fixed payments, which create financial leverage. These ratios are also called solvency ratios or capital structure ratio. These ratios indicate mix of funds provided by owner and lenders. As a general rule, there should be an appropriate mix of debt and owner’s equity in financing the firm’s assets. To judge the long term financial position of the firm leverage ratios are calculated. This ratio highlights the long term financial health, debt servicing capacity and strength and weaknesses of the firm. Following ratios are included under leverage ratios.

i) Long term Debt to net worth ratio

Long term debt to net worth ratio measures the relative proportion of outsiders and owner’s funds employed in the total capitalization. Here, long term debt includes the amount of fixed deposits and credits of the bank and net worth includes paid up capital, reserve and surplus and undistributed profit. The formula used to determine capita, reserve and surplus and undistributed profit. The formula used to determine the ratio is:

$$= \frac{Long\,Term\,Debt}{Net\ Worth}$$

ii) Total Debt to Net worth Ratio:

The ratio is calculated to find out the proportion of the outsider's fund and owner's fund to finance for the total assets. It also called the proportion of outsider's claim and insider's claim on total assets of the bank. Generally very high the ratio is unfavorable to the business because the debt gives third parties legal claims on the company these claims are for interest payments at regular intervals, plus repayment of the principal by the agreed time. On the other hand, very low ratio is also unfavorable from the shareholders point of view. They want this ratio to be high so that they can have better returns with smaller capital. It is calculated as follow:

$$= \frac{Total\ Debt}{Net\ \ Worth}$$

It examines the relationship between borrowed funds (i.e. total debt) and total assets. It shows the relative extent to which the firm is using borrowed money. A lower ratio is preferable since it reduces the distress of the creditors by using more amount of equity on total assets. It is computed as:

$$\text{Total Debt} = \frac{Total\ Debt}{Total\ Assets}$$

D. Profitability Ratios:

Profit is the difference between revenues and expenses over a period of time. A company should earn profit to survive and to grow over a long period of time. So profits and essential but profit earning is not the ultimate aim of company and it should never be earned at the cost of employees, customer and society.

"Profitability ratio is the indicators of degree of managerial success in achieving firm's overall goal". It shows the overall efficiency of the business concern. The following ratios are calculated under the profitability ratio:

i. Net Profit/Loss to Total Assets Ratio:

The ratio is useful to measure how well management uses all the assets in the business to generate an operating surplus. Higher the ratio indicated the higher efficiency in the utilization of total assets and vice-versa. The ratio is low due to low profit. In other words, it is low utilization of bank assets and over use of higher interest bearing amount of debt and vice-versa.

In this study, Net profit/loss to total assets ratio is examined to measure the profitability of all the financial resources in bank assets and is calculated by applying the following formula:

$$= \frac{Net\ \mathrm{Pr}ofit / Loss}{Total\ Assets}$$

ii) Interest Income to Total Credit and Advances:

It tells the income as interest from total credit and advances. It is useful to know the fact that whether the credit has given good return or not. We can increase interest income by taking good issuing and recovery credit policy. High return shows the soundness of credit policy. It calculated by using the following formula:

$$\text{Interest Income to total credit and advances} = \frac{Interest\ Income}{Total\ Credit\ and\ Advances}$$

E. Other Ratios:

i. Earning Per Share (EPS)

EPS is one of the most widely quoted statistics when there is a discussion of a company's performance or share value. It is the profit after tax figure that is divided by the number of common shares to calculate the value of earnings per share. This figure tells us what profit the common shareholders for every share held have earned. A company can decide whether to increase or reduce the number of shares on issue. This decision will automatically alter the earning per share. The profits available to ordinary shareholders are represented by net profit after taxes and performance dividend. Symbolic expression of EPS is given below.

$$= \frac{Net\ Income\ after\ Taxes}{Number\ of\ Common\ Stocks\ Outs\tan ding}$$

ii) Price earning Ratio (P/E Ratio):

The P/E ratio is widely used by the security analysis to value the firm's perfomance as expected by investors. It shows the price currently paid by the market for each rupee of currently reported earning per share. It is also called multiplier. Here, the expression takes place as follows:

$$= \frac{Market\ Price\ Per\ Share}{Earning\ Per\ Share}$$

iii) Capital Fund Ratio:

It shows how much the bank is sound on the basis core capital fund and secondary capital fund. Bank should maintain the directives given by NRB on capital fund. It is calculated by the formula:

$$\text{Capital fund ratio} = \frac{Primary\ Capital + Supplementary\ Capital}{Weighted\ Average\ Assets}$$

(Weighted average assets= Risk weight age on balance sheet items + Risk weight age on off- balance items.)

3.5.2 Statistical Tools Used:

for supporting the study, statistical tool such as mean, standard deviation, coefficient of variation, correlation, trend analysis, hypothesis and diagrammatic cum pictorial tools have been used under it.

i. Arithmetic Mean (Average):

"Average is statistical constants which enables us to comprehend in a single effort the significance of the whole. It represents the entire data by a single vale. It provides the gist and gives the bird's eye view of the huge mass of unwieldy numerical data. It is calculated as:

$$\bar{x} = \frac{\sum X}{N}$$

Where,

$\bar{x}$ = Arithmetic mean

N = Number of observations

$\sum X$ = Sum of observations

ii. Standard Deviation (S.D):

"The standard deviation is the square root of mean squared deviations from the arithmetic mean and is denoted by S.D. or ∃". It is used as absolute measure of dispersion or variability. It is calculated:

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

Where,

S.D. (∃) = Standard deviation

X = Value of each of the n observation

$\bar{x}$ = Mean of the sample

n = Number of observations in the sample

iii. Coefficient of Variation (C.V.)

The co-efficient of variation (C.V.) is the relative measure based on the standard deviation and is defined as the ratio of the standard deviation to the mean expressed in percent. It is independent of units. Hence it is a suitable measure for comparing variability of two series with same or different units. A series with smaller C.V. is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the other and vice versa. It is calculated as:

C.V = $\frac{\pm}{\bar{X}}$

Where,

$\bar{x}$ = Mean

∃ = Standard Deviation

C.V. = Coefficient of Variation

iv. Correlation Coefficient (r):

Correlation may be defined as the degree of linear relationship existing between two or more variables. These variables are said to be correlated when the change in the value of one results change in another variable. Correlation may be positive, negative or zero. Correlation can be classified as linear or non- linear. Here we study simple correlation only. "In simple correlation the effect of others is not excluded rather these are taken as constant considering them to have no serious effect on the dependent variable." It is calculated as:

$$rx_1x_2 = \frac{N \quad X_1X_2 \, Z(\quad X_1)(\quad X_2)}{\sqrt{N \quad X_1^{\,2} \, Z(\quad X_1)^2}\sqrt{N \quad X_2^{\,2} \, Z(\quad X_2)^2}}$$

Where as,

rx_1x_2 = Correlation between X_1 and X_2

$X_1.X_2$ = Product of No. of observation and sum of production of X_1 and X_2

$X_1 \quad X_2)$ = Production of Sum of X_1 and sum of X_2

v. Coefficient of Determination (r^2)

It explains the variation percent derived in dependent variable due to the any one specified variable. It denotes the fact that the independent variable is good predictor of the behavior of the dependent variable. It is square of correlation coefficient. Precision & strength of rx_1x_2 is measured by means determination i.e. r^2.

vi) Probable Error (P.E.)

Probable error of the correlation coefficient doneted by P.E. is the measure of testing the reliability of the calculated value of r. If r be the calculated value r from a sample of n pair of observations, then P.E. is defined by. P.E. $= 0.6745 \, \frac{1 Z r^2}{\sqrt{n}}$

Coefficient of Correlation (r) always 'falls between -1 to +1. The value of correlation signifies the negative correlation and inputs signifies the positives correlation. As the value of correlation coefficient research near to the value of zero, it is said that there is no significant relationship between the variables. The coefficient of correlation shall be interpreted based on probable error (P.E). If the value of correlation coefficient is greater than 6 times the value of probable error, the correlation coefficient is greater than 6 times the value of probable error, the correlation coefficient is deemed as significant and reliable. If the value of correlation coefficient is less than probable error, the correlation coefficient is said to be insignificant and there is no evidence of correlation.

vii) Test of Hypothesis:

The test of hypothesis is a process of resting of significance regarding the parameter of the population on the basis of the sample drawn from the population. The computed value of the statistics may differ from the hypothetical value of the parameter due to sampling fluctuations. Hence the difference are small, we consider that it has arisen due to sampling fluctuation. Hence the difference is considered to be insignificant and the hypothesis is accepted. If difference is large we consider that it has not arisen due to sampling fluctuation but it is due to some other reasons. Hence the difference is considered to be significant and the hypothesis is rejected.

i) Set up hypothesis

ii) Set up significance level

iii) Setting a test criteria

v) Making decisions

To test the significance of different ratios between 'NIBL' and BOK, the researcher uses small sample't' test. 't' values were calculated and compared with table value of 't' with ($n_1 + n_2$-20) degree of freedom. The following hypothesis was tested in this study.

i) H_0: There is no significance difference in credit and advances to total assets ratio between 'NTBL' and BOK.

   H_1: There is significance difference in credit and advances to total assets ratio between 'NIBL' and 'BOK'.

ii) H_0: There is no significance difference in performing assets ratio between 'NIBL' and 'BOK'

   H_1: There is significance difference in performing assets ratio between 'NIBL' and 'BOK'.

iii) H_0: There is no significance difference in interest income to total credit and advances ratio between 'NIBL' and 'BOK'.

   H_1: There is significance difference in interest income to total credit and advances ratio between 'NIBL' and 'BOK'

iv) H_0: There is no significance difference in provision for credit loss ratio between 'NIBL' bank and 'BOK'

   H_1: There is significance difference is provision for credit loss ration between 'NIBL' and 'BOK'

The formula for‘t’ test for two independent samples:

$$t = \frac{\bar{X}_1 \, Z \, \bar{X}_2}{\sqrt{S^2 \; \frac{1}{n_1} \, \Gamma \, \frac{1}{n_2}}}$$

Where,

$$S^2 = \frac{\phi(X_1 \, Z \, \bar{X}_1)^2 \, \Gamma \, \phi f X_2 \, Z \, \bar{X}_2 \, \mathring{A}^2}{n_1 \, \Gamma \, n_2 \, \Gamma \, 2}$$

S^2 is an unbiased estimate of $\exists^2$ and it follows‘t’ distribution with $n_1 + n_2$-2 degree of freedom (d.f.).

X_1 - $\bar{X}_1$ and X_2 - $\bar{X}_2$	=	Deviation of Variables
X_1 and X_2	=	Arithmetic Means variables
$(X_1 - \bar{X}_1)^2$ And $(X_2 - \bar{X}_2)^2$	=	Variance of deviation

Decision: if‘t’ value is greater than tabulated value the null hypothesis is rejected and if ‘t’ value is less than tabulated value the null hypothesis is accepted or if $t_{cal>}$ $t_{tab,}$ H_1 is accepted i.e. H_o is rejected.

CHAPTER –IV
PRESENTATION AND ANALYSIS OF DATA

Presentation and analysis of data is very important stage of research study. It is main purpose is to change the unprocessed data into understandable form. It is the process of organizing the data tabulating and then placing that data in presentable form by using various tables, figures and sources.

“Credit management” is one of the most important factors that has been developed to facilitate effective performance of bank management. Credit management is the formal expression of the commercial banks goals and objectives stated in financial term for specific future period of time. Credit is the very basic indicator for determining profit.

The main purpose of the objective is to assess the credit management in selected commercial banks. Present chapter will discuss the various aspects of credit management and their actual accomplishment. Actually, credit management is a fundamental managerial tool, which is applied in commercial banks. For this, respect, it will analyze the data by using various financial and statistics tools to meet the stated objectives of the study. It also compares the data between selected banks. Besides, it also presents the various funding generated from data analysis.

4.1 Financial Conditions of Selected Nepalese Commercial Banks.

Financial analysis assists in identifying the major strength and weakness firm. It indicates whether a company has enough cash to meet its obligations ability to utilize properly their available resources. Financial analysis can also used to assess the company’s liability as an ongoing enterprise and determine whether a satisfactory return is being earned for the risks return. The necessary to find out the comparative financial condition of the banks in terms of credit practices necessary to find out the comparative credit practices in those banks, for research purpose, financial condition of both the banks in terms of credit practices. Credit efficiency has analyzed the comparative credit position selected commercial banks.

4.2 Financial & Statistical Tools Analysis

Here we study and analyzed the data by using financial and statistical tools.

Ratio Analysis

Calculation of different ratios of 'NIBL' and 'BOK' and analyze and interpret them.

A Liquidity Ratio:

I) Analysis of cash and bank balance to total deposits ratio.

Table No. 4.1

Cash & bank balance to total deposits ratio. (Rs.in million)

Fiscal year	NIBL			BOK		
	Cash & bank balance (Rs)	Total deposits (Rs)	Ratio (%)	Cash & bank balance (Rs)	Total deposits (Rs)	Ratio (%)
2005/06	2336.52	18927.31	12.34	533.32	10485.36	5.09
2006/07	2441.51	24488.86	9.97	1102.54	12388.93	8.90
2007/08	3754.94	34451.73	10.90	1142.80	15833.74	7.22
2008/09	7918.00	46697.98	16.96	1889.17	18083.98	10.45
2009/10	6815.89	50094.73	13.06	1660.70	19186.95	8.66
Mean($\overline{X}$)			12.65			8.06
S.D.(¢)			2.45			1.81
C.V.			19.36			22.46

Source: Annual Report of 'NIBL' & 'BOK'.

Cash & bank balance to total deposit of 'NIBL' has been observed as 12.34/, 9.97%, 10.90%, 16.96%, 13.06% in the duration of the study period .from the table No.4.1,it is clear that 'NIBL' has fluctuating trend. Liquidity position in terms of cash and bank balance to total deposit ratio of 'NIBL' is found 12.65% as average in the 5 years. Study period. From this, 'NIBL' has enough cash & bank balance to cover its deposit demand. Standard deviation and coefficient variance is 2.45% and 19.36% respectively.

The ratio of 'BOK' is also in fluctuation trend. The lowest ratio is 5.09% in f/y 2005/06 and highest ratio is 10.45% in f/y 2008/09. The average ratio in the study period is 8.06% . This bank has satisfied cash and bank balance to meet the depositors demand. Standard deviation is 1.81% and C.V. is 22.46%respectively.

B Activity / Efficiency Ratio

I) Credit & Advances to Total Deposit Ratio:

Table No.4.2

Credit & advances to total deposits ratio (Rs.in million)

Fiscal year	NIBL			BOK			Combined ratio (%)
	Total credit & advances	Total deposit	Ratio (%)	Total credit & advances	Total deposit	Ratio (%)	
2005/06	12776.21	18927.31	67.50	7259.08	10485.36	69.23	68.37
2006/07	17286.43	24488.86	70.59	9399.33	12388.93	75.87	73.23
2007/08	26996.65	34451.73	78.36	12462.64	15833.74	78.71	78.54
2008/09	36827.16	46697.98	78.86	14647.30	18083.98	80.99	79.95
2009/10	40968.44	50094.73	81.78	15116.25	19186.95	78.78	80.28
Mean($\overline{X}$)	-	-	75.42			76.72	
S,D, (¢)	-	-	5.42			4.80	
C.V. (%)	-	-	6.96			5.31	

Source: Annual Report of 'NIBL' & 'BOK'.

Figure No. 4.1

Relation Between Credit & advances to total deposits of NIBL

(Rs.in million)

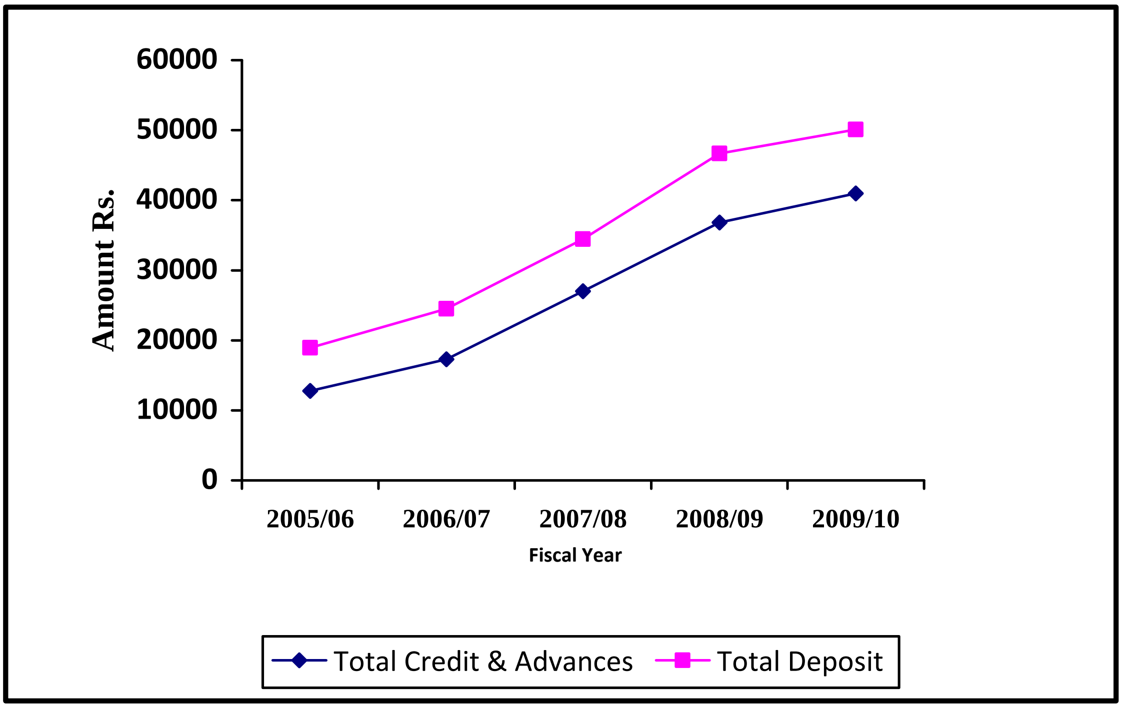
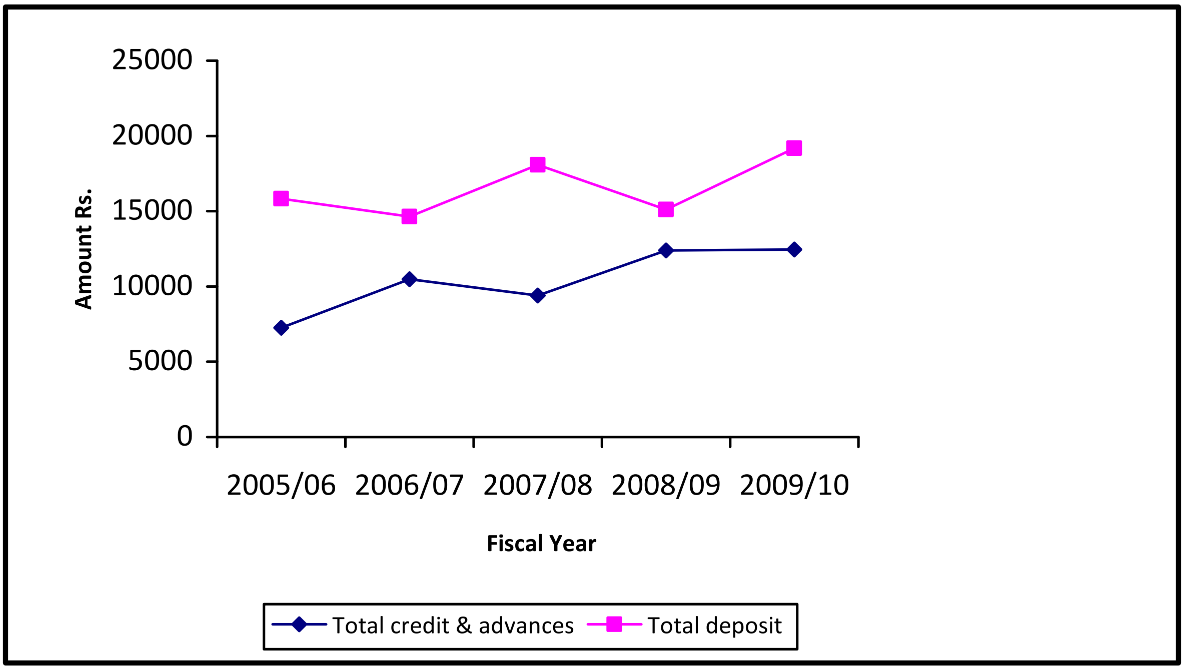


Figure No. 4.2

Relation Between Credit & advances to total deposits of BOK (Rs.in million)



From the above table No.4.2, the average ratio of credit and advances to total deposits of 'NIBL' is 75.42%. The highest ratio is 81.78% in F/Y 2009/10. The average ratio is 76.72% Similarly, the standard deviation and coefficient of variance are 5.42% and 6.96% respectively. And from the Figure No .4.1 shows that the amount of total credit and advances and total deposit both are increasing trend.

The average ratio of 'BOK' is 76.72% .the highest ratio is 80.99% in the F/Y 2009/10 and the lowest ratio is 69.23% in F/Y 2005/06. The standard deviation of ratio is 4.80% and coefficient of variance is5.31%. From the Figure No. 4.2 the amount of total credit and advances is increasing trend and the amount of total deposit is decreasing trend.

It clears from the above table that the ratio for the commercial banks is around 80%. Total deposits are the main sources of bank to provide credit and advances. Large percentage almost 80% of total deposits goes as credit and advances to customers. Therefore it is seemed, banks are heavily dependent on credit and advances to make profit from their investment.

Table no.2 shows that as the deposits increases, the credit and advances also increases and vice versa. Therefore it indicates that there is strong relationship between total deposits and total credit and advances, which can be proved by the statistical tools 'correlation.'

Table No. 4.3
Correlation coefficient (r) between credit & advances to total deposits(%)

particulars	NIBL	BOK
R (Correlation Coefficient)	1.00	0.99
P.E.(r)=$0.6745 \times \frac{(1 - r^2)}{\sqrt{n}}$	0	0.006003
6.P.E.	0	0.0361
R^2 (Coefficient of determination)	1	0.98

The correlation coefficient of 'NIBL' is 1. There is highest degree of perfect positive relationship, which means in the ratio of total deposits increases, credit and advances also increases in same ratio and vice versa.

The correlation coefficient of 'BOK' is 0.99. There is high degree of relationship between credit and advances to total deposits. Which means total deposit increases, credit and advances also increases and vice versa...

The correlation coefficients(r) of both banks are higher than 6 P.E. as shown in table No. 4.3. So, correlations of coefficient of both banks are significant. The coefficient of determent between them (credit and advances to total deposits) of 'NIBL' is 1, which means 100% changes in credit and advances are affected by total deposits. And the coefficient of determinations of 'BOK' is 0.98, which means 98% change in credit and advances are affected by total deposits.

II) Analysis of Credit & Advances to Fixed Deposits Ratio:

Table No. 4.4
Credit & Advances to Fixed Deposits Ratio **(Rs.in million)**

Fiscal year	NIBL			BOK		
	Total credit & advances	Fixed deposits	Ratio (%)	Total credit & advances	Fixed deposit	Ratio (%)
2005/06	12776.21	5412.97	236.02	7259.08	2709.75	267.89
2006/07	17286.43	7516.69	229.97	9399.33	3037.17	309.48
2007/08	26996.65	7944.23	339.83	12462.64	3703.76	336.49
2008/09	36827.16	11633.38	316.56	14647.30	4474.62	327.34
2009/10	40968.44	16825.15	243.61	15116.25	6383.58	236.70
Mean($\overline{X}$)			273.10			295.58
S.D. (σ)			45.71			37.71
C.V. (%)			16.74			12.75

Source: Annual Report of 'NIBL' & 'BOK'.

Figure No.4. 3

Relation Between Credit & advances to Fixed deposits of NIBL

(Rs.in million)

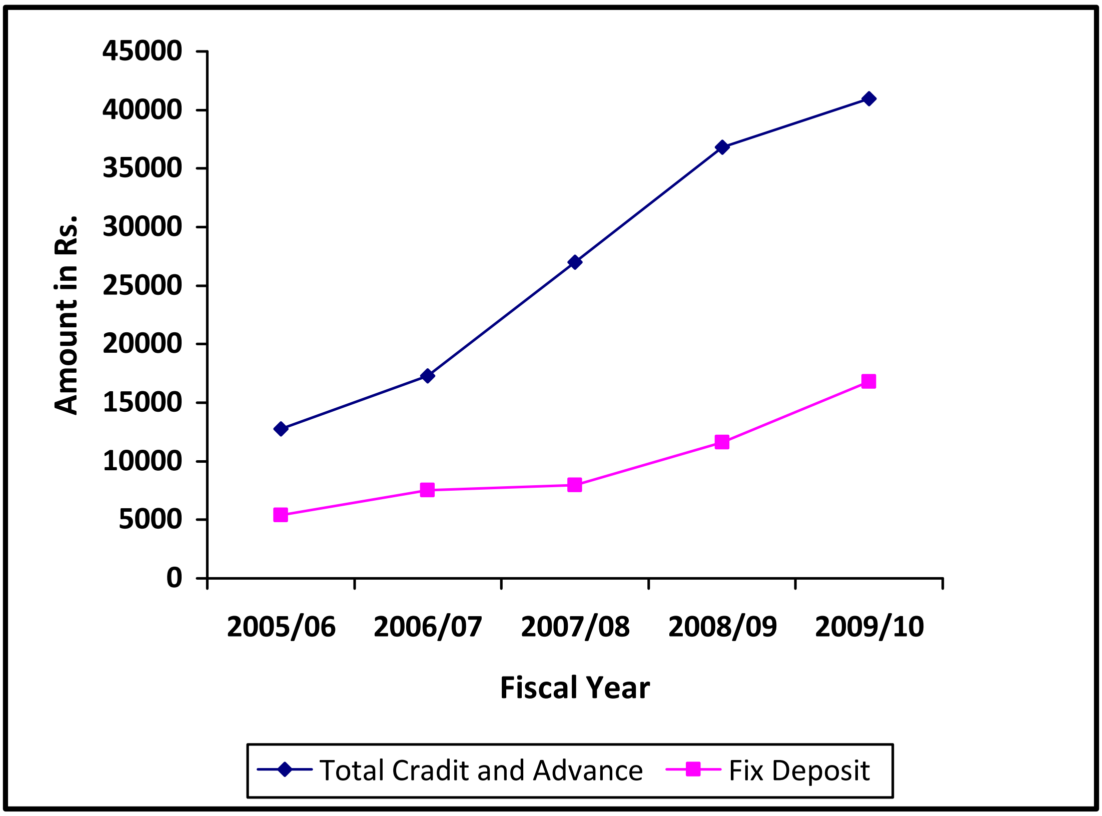
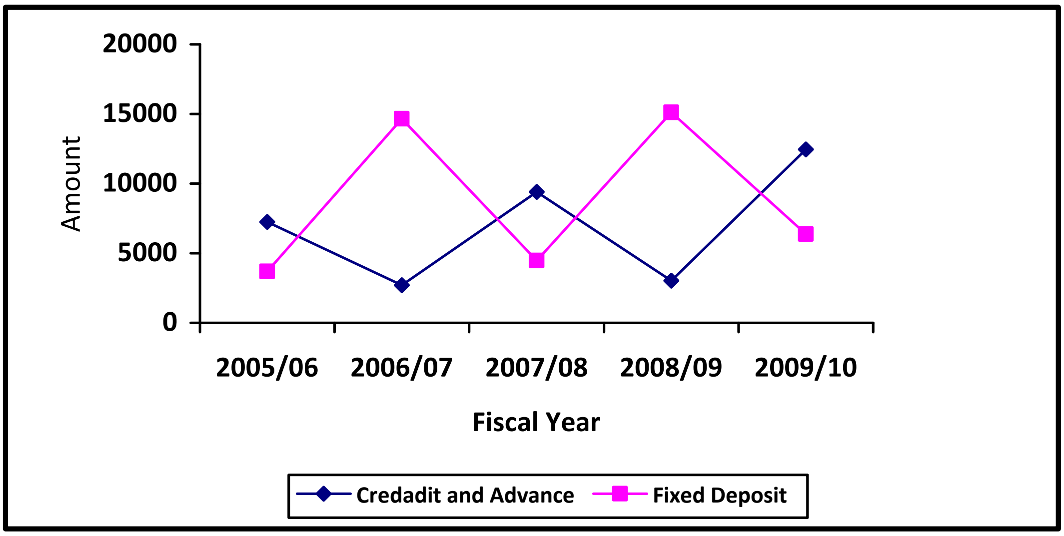


Figure No.4. 4

Relation Between Credit & advances to Fixed deposits of Bok

(Rs.in million)



From the above table No. 4.4 show that the ratio of credit and advance to fixed deposits ratio in five year for the selected companies. Credit and advance to fixed deposit. Ratio 'NIBL'range the higher of 339.83/in the F/Y 2007/2008.ratio of 'Book's higher also in 2007/2008.with 336.49 is and lowest 236.70 in F/Y 2009/2010.From the Figure No.4.3 show that the total credit and advances to fixed deposit both are increasing but total credit and advances is highly increasing and fixed deposit is slowly increasing of NIBL.From the Figure No 4.4 shows that the total credit and advance to fixed deposit both are fluctuations trend.

From the mean point of view it can be said that ratio of 'BOK'is higher than 'NIBL'.

III) Credit & Advances to Total Assets Ratio:

Credit & advances is the major part of total assets for the bank. This ratio indicates the volume of credit & advances out of the total assets. A high degree of the ratio indicates that the bank has been able to mobilize its fund through lending function .however lending always carries a certain risk of default. Therefore a high ratio represents low liquidity and low ratio represents low productivity with high degree for safety in terms of liquidity.

Table No.4. 5

Credit & Advances to Total Assets Ratio

(Rs.in million)

Fiscal year	NIBL			BOK			Combined ratio (%)
	Total credit & advances	Total Assets	Ratio (%)	Total credit & advances	Total Assets	Ratio (%)	
2005/06	12776.21	21330.14	59.90	7259.08	12278.33	59.12	59.51
2006/07	17286.43	27590.84	62.65	9399.33	14570.10	64.51	63.58
2007/08	26996.65	38873.31	69.45	12462.64	17721.93	70.32	69.88
2008/09	36827.16	53739.44	68.53	14647.30	20496.01	71.46	69.99
2009/10	40968.44	57305.41	71.49	15116.25	22102.92	68.39	69.94
Mean($\overline{X}$)			66.40			66.76	
S.D. (¢)			4.38			4.49	
C.V. (%)			6.6			6.73	

Source: Annual Report of 'NIBL' & 'BOK'.

Figure No.4. 5

Relation Between Credit & advances to Total Assets of NIBL

(Rs.in million)

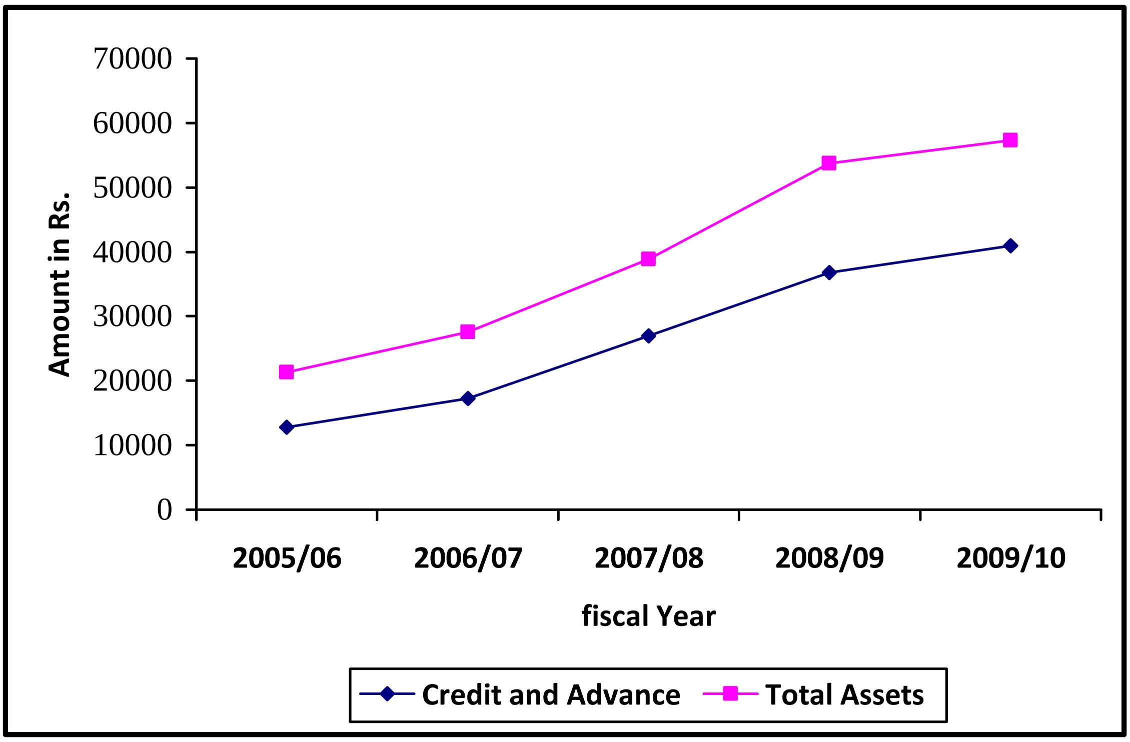
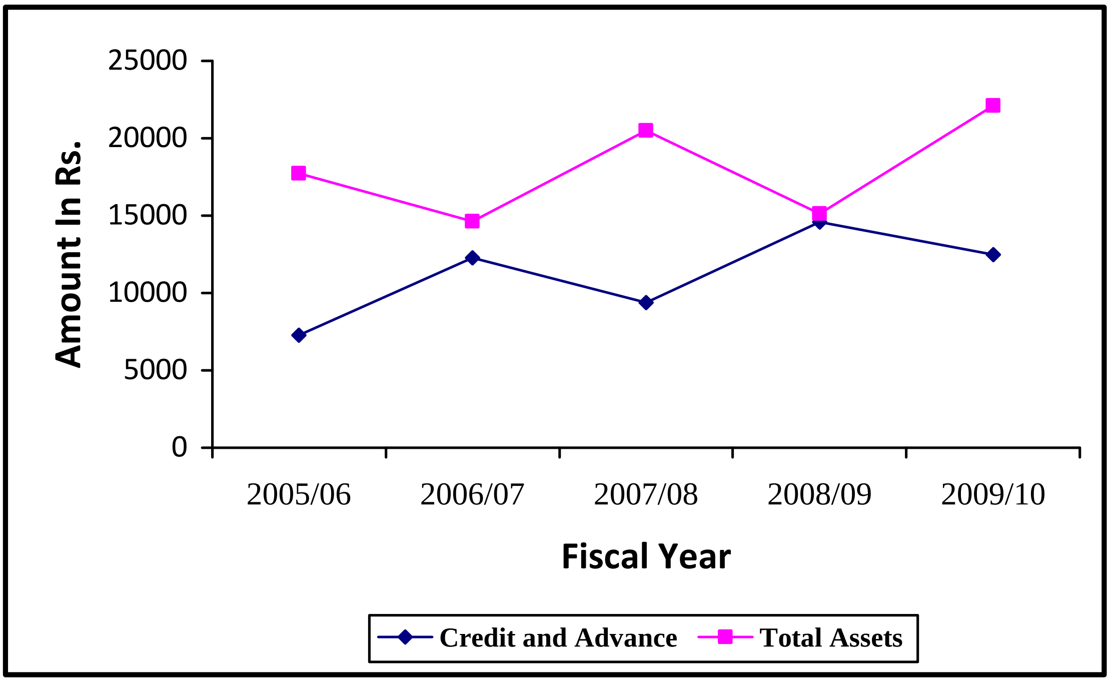


Figure No.4. 6

Relation Between Credit & advances to Total Assets of BOK

(Rs.in million)



From the above table No. 4.5 shows that the ratio of credit & advances to total assets in five years for the selected companies. Credit and advances to total assets ratio 'NIBL' ranges the highest of 71.49% in the f/y 2009/1 0. Ratio of 'BOK' is highest in the f/y 2008/09 with 71.46% and lowest 59.12 % in F/Y 2005/06.From the Figure No 4..5 sow s that the total credit and advances to total assets both are increasing trend of NIBL and both are fluctuation trend of BOK from the Figure No 4.6.

From the mean point of view, it can be said that mean ratio of 'BOK' is highest than 'NIBL'. It can be concluded that higher the mean ratio it indicates good lending performance. Here, 'NIBL' should focus to increase lending performance. From the standard deviation point of view 'BOK' has more risky than 'NIBL'. The S.D. of 'NIBL' is 4.38% and the S.D. of 'BOK' is only 4.49%.

IV) Credit Loss Provision to Credit & Advances Ratio:

The provision credit loss reflects the increasing probability of non-performing loan. Increase in loan loss provision decreases in profit result to decrease in dividends. But its positive impact is that strengthens the financial conditions of banks by controlling the credit risk and reduces the risks related to deposits.

The low ratio indicates the good quality of assets in total volume of loan & advances. High ratio indicates more risky assets in total volume of credit & advances.

Table No. 4. 6

Provision for credit loss to total credit & advances ratio

(Rs.in million)

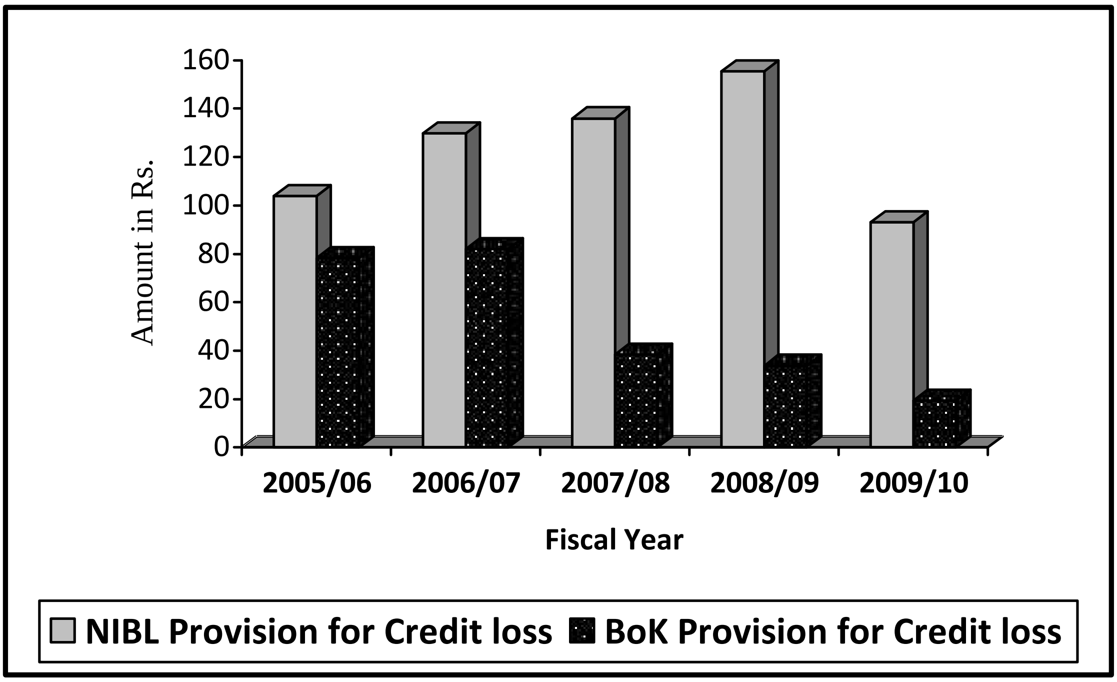
Fiscal year	**NIBL**			**BOK**		
	Provision for credit loss	Total credit & advances	Ratio (%)	Provision for credit loss	Total credit & advances	Ratio (%)
2005/06	103.81	12776.21	0.81	78.38	7259.08	1.08
2006/07	129.72	17286.43	0.75	81.89	9399.33	0.87
2007/08	135.99	26996.65	0.51	38.44	12462.64	0.31
2008/09	155.48	36827.16	.042	33.75	14647.30	0.23
2009/10	93.06	40968.44	0.23	19.40	15116.25	0.13
Mean($\overline{X}$)			0.47			0.52

Source: Annual Report of 'NIBL' & 'BOK'.

Figure .No 4.7

Column Chart of Provision for Credit loss NIBL and BOK

(Rs.in million)



Above table No.4.6 shows the credit loss provision to total credit and advances of selected over the study period. Ratio of 'NIBL' ranges highest 0.81% in the F/Y 2005/056 and lowest 0.23% in the F/Y 2009/10. Average ratio of 'NIBL' is 0.47% .F/Y 2005/06 , 2007/07 and2007/2008 are above the average and ratio in F/Y 2008/09 and 2009/10 are below the average. The ratios are in decreasing trend. Ratio of 'BOK' ranges highest 1.08% in f/y 2005/06 and lowest 0.13 in the f/y 2009/10. And the ratio are also decreasing trend. Above the Figure No. 4.7 shows that the amount of credit loss provision is fluctuation trend.

Here average credit loss provision to total credit and advances ratio of 'BOK' is higher than the 'NIBL' .higher ratio indicates the increased volume of non-performing credit and vice versa. Credit loss provision to total credit advances ratio of 'NIBL' and 'BOK' both are in a decreasing trend. Above the Figure No .4.7 shows that the amount of credit loss provision is in a decreasing trend. So, the decreasing credit loss ratio indicates efficient credit policy and gradual increment on the performance of company. This shows the satisfactory for the both banks.

C) Leverage Ratio

I) Total Debt to Equity (net worth) Ratio:

Table No.4.7

Total debt to equity ratio (Rs.in million)

Fiscal year	NIBL			BOK		
	Total debt	Equity (net worth)	Ratio (times)	Total debt	Equity (net worth)	Ratio (times)
2005/06	19914.69	1415.43	14.07	11438.60	837.73	13.65
2006/07	25712.72	1878.00	13.69	13588.12	981.97	13.83
2007/08	36865.20	2686.00	13.72	16379.85	1342.1	12.20
2008/09	43587.35	3880.00	11.23	20147.54	1741.57	11.56
2009/10	53278.78	4585.39	11.62	21957.28	2606.66	8.42
Mean($\overline{X}$)			12.87			11.93

Source: Annual Report of 'NIBL' & 'BOK

.

Total debt to equity ratio of both bank are in decreasing trend. But in overall, the ratio may be called as a downward trend as in the above table nNo.4.7. the ratio of 'NIBL' IS 14.07, 13.69, 13.72, 11.23, and 11.62 times respectively in F/Y 2005/06, 2006/07 , 2007/08,2008/2009 and2009/2010 respectively of the research period. And the average ratio of 'BOK' is 11.93 times.

It means both the banks are seeking low gearing capital structure. Excess amount of debt capital structure results heavy burden in payment of interest. Risk of liquidation increases if the debt can not be repaid in time. High gearing ratio may provide high return to the equity share holder if the bank makes profit. So, it is analyzed that bank has taken the policy of minimizing risk in economic crisis period. And from this, it shows that both banks are slowly decreasing in depends on outsider fund. And going to maximum utilization of its own equity.

ii) Total Debt to Total Assets Ratio:

Table No.4. 8

Total debt to total assets ratio: (Rs.in million)

Fiscal year	NIBL			BOK		
	Total debt	Total Assets	Ratio (%)	Total debt	Total Assets	Ratio(%)
2005/06	19914.69	21330.14	93.36	11438.60	12278.33	93.16
2006/07	25712.72	27590.84	93.19	13588.12	14570.10	93.26
2007/08	36865.20	38873.31	94.83	16379.85	17721.93	92.42
2008/09	43587.35	53739.44	81.10	20147.54	20496.01	98.30
2009/10	53278.78	57305.41	92.97	21957.28	22102.92	99.34
Mean($\overline{X}$)			91.09			95.30

Source: Annual Report of 'NIBL' & 'BOK'

The ratio of 'NIBL' found as 93.36, 93.19, 94.83, 81.10 and 92.97 percentage from f/y 2005/06 to F/Y2009/10 respectively. The average ratio in 5-year research period is 91.09%. Total debt to total assets ratio of 'BOK' are 93.16, 93.26, 92.42, 98.30 and 99.34 percentage respectively from f/y 2005/06 to F/Y 2009/10. The average ratio is 95.30%. It shows that the bank has not great deviation in the ratio for the five years.

Overall, both banks have increasing trends trend of total debt to total assets ratio. This shows both bank's debt are increasing in compare to total assets. From this both banks are slowly increasing in not depends on outsider fund. This shows, although the amounts of total assets are increasing, the assets to net worth (equity) ratio are decreasing because of high rate of increase in equity.

From this analysis both banks are heavily not depends outsider's fund to meet its financial needs.

iii) Total assets to equity (net worth) ratio:

Table No 4.9
Total assets to equity (net worth) ratio

(Rs.in million)

Fiscal year	NIBL			BOK		
	Total Assets	Equity (net worth)	Ratio (times)	Total Assets	Equity (net worth)	Ratio (times)
2005/06	21330.14	1415.43	15.07	12278.33	837.73	14.65
2006/07	27590.84	1878.00	14.70	14570.10	993.27	14.68
2007/08	38873.31	2686.00	14.47	17721.93	1342.1	13.20
2008/09	53739.44	3880.00	13.85	20496.01	1741.57	11.76
2009/10	57305.41	4585.39	12.50	22102.92	2606.66	8.48
Mean($\overline{X}$)			13.99			12.55

Source: Annual Report of 'NIBL' & 'BOK'.

The ratio of 'NIBL' is highest in the F/Y 2005/06 is 15.07 times and F/Y 2009/10, it is too much decrease which is 12.50 times. Although the amount of total assets is increasing, the assets to net worth (equity) ratio are decreasing because of high rate of increase in net worth. The average ratio is 13.99 times.

Similarly, the ratio of 'BOK' is in the decreasing. The average ratio is 12.55 times .the highest ratio is 14.68 times in F/Y 2006/07.and the lowest ratio is 8.48 times in F/yY2009/10 of the study.

D) PROFITABILITY RATIO:

I) Net Profit to Credit and Advances Ratio:

It analyze the contribute of credit and advances to net profit. This ratio expresses the relationship between net profit and credit and advances. The formula for ascertainment of this ratio is as follows:

Net profit to credit and advances= net profit/credit & advances.

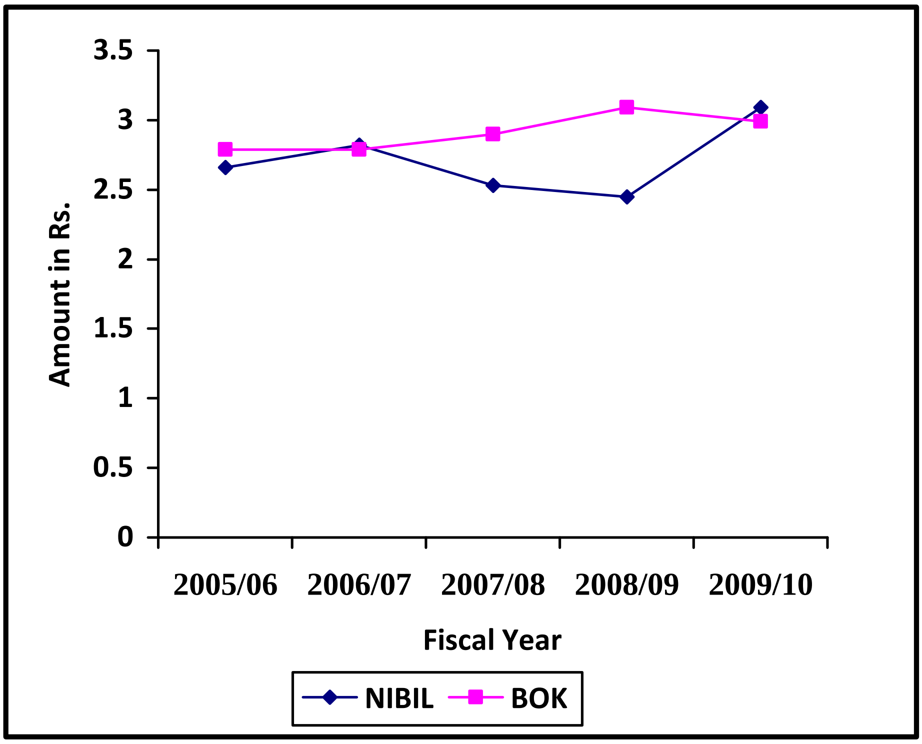
Table No. 4.10
Net profit to credit & advances ratio (%)

Fiscal year	NIBL	BOK
	Ratio (%)	Ratio (%)
2005/06	2.66	2.79
2006/07	2.82	2.79
2007/08	2.53	2.90
2008/09	2.45	3.09
2009/10	3.09	2.99
Mean($\overline{X}$)	2.71	2.91

Source: Annual Report of 'NIBL' & 'BOK' (Refer Appendix IX &X) .

Figure No. 4.8

Net profit to credit & advances ratio of NIBL & BOK (%)



The table No.4.10 and Figure No 4.8 shows that the ratio of net profit to credit and advances in ‘NIBL’ was 2.66, 2.82, 2.53 ,2.45 and 3.09 respectively. Similarly, the ratio of ‘BOK’ was 2.79, 2.79, 2.90 ,3.09 and 2.99 respectively. For mean point of view.’BOK’ has higher net profit to credit and advance ratio. It shows that ‘BOK’ earns more profit rather than ‘NIBL’. In the terms of providing credit and advances.

II) Analysis of Interest Income to Total Credit and Advances Ratio:

Interest income to credit & advances is one of the major sources of income for a commercial bank. The high volume of interest income is indicator of good performance of lending activities.

Table No.4.11
Interest income to total credit & advances ratio (%)

Fiscal year	**NIBL**	**BOK**
	Ratio (%)	Ratio (%)
2005/06	7.32	9.89
2006/07	7.33	8.71
2007/08	6.93	8.30
2008/09	7.89	8.02
2009/10	10.51	10.02
Mean($\overline{X}$)	8	9
S.D. (¢)	1.29	0.82
C.V (%)	16.13	9.11

Source: Annual Report of ‘NIBL’ & ‘BOK’ (Refer Appendix IX &X)

Table No. 4.11 shows the ratios of interest income to credit and advances of the selected companies over the study period. Interest income to credit and advances ratio of ‘NIBL’ range from the highest of F/Y 2009/10, of 10.51% and to the lowest of 6.93% in the F/Y 2007/08. The mean ratio is 8. And the standard deviation is 1.29 and the coefficient of variance is 16.13%. Similarly, the mean interest income to credit and advances of the ‘BOK’ is 9. highest ratio is also in the F/Y 2009/10 of 10.02% and the lowest ratio is in the F/Y 2008/10 of 8.02. And the standard deviation is 0.82 and coefficient of variance is 9.11 % from this, the mean ratio of interest to credit and advances of ‘BOK’ is higher than the ‘NIBL’. But the coefficient of variance of ‘BOK’ is less than the ‘NIBL’.

From the point view of average ratio, ‘BOK’ has higher than the ‘NIBL’. So, ‘BOK’ has best performance.

iii) Non-Performing (Over-Due) Credit to Total Credit Ratio:

NRB has directed all the commercial banks to create loan loss provision against the doubtful and bad debts. But our concerned banks have not provided data on non-performing credit in balance sheet and profit & loss A/C. to measure the volume of non-performing credit to total loan & advances the main indicator of 'NIBL' and 'BOK' has been used. This ratio shows the percentage on non-recovery loans in total credit and advances.

Table No. 4.12
Non-performing (over-due) credit to total credit & advances ratio :(%)

Fiscal year	**NIBL**	**BOK**	**Combined ratio (%)**
	Ratio (%)	Ratio (%)	
2005/06	2.07	2.72	2.30
2006/07	2.37	2.51	2.44
2007/08	1.12	1.86	1.49
2008/09	0.58	1.27	0.93
2009/10	0.62	1.51	1.06
Mean($\overline{X}$)	1.35	1.97	

Source: Annual Report of 'NIBL' & 'BOK' (Refer Appendix IX &X)
.

Table No.4. 12 show the non-performing credit to total credit and advances over the study period. Ratio of 'NIBL' ranges highest of 2.37%, and lowest 0.58%, it shows decreasing trend in subsequent year. Likewise the ratio of 'BOK' ranges the highest of 2.72 and lowest 1.27%. The mean of 'NIBL' and 'BOK' are 1.35% and 1.97% respectively. The ratio of 'NIBL' in the first two years are above the average and rest F/Y are the below the average rate. And the ratio of 'BOK' in the first two year above the average rate and below the average in the last three fiscal year. And in comparison between two banks, the average ratio of 'NIBL' has the lowest non-performing credit to total credit & advances. This 'NIBL' is best performer than the 'BOK'.

Banking sector is seriously affected by the non-performing credit. Both banks are not far from this above fact. If non-performing credit increases, the overall banking business will be affected. So provisioned amount will increase and profit will decrease. So, it is suggested that both banks ('NIBL' & 'BOK') to be sincere while granting credit and to do effective follow-up for recovery of non-performing credit.

IV) Interest Expenses to Total Deposit Ratio:

This ratio measure the percentage of total interest paid against total deposit. A high ratio indicates higher interest expenses on total deposit. Commercial banks are dependent up on its ability to generate cheaper fund has moves the probability of generating credit and advances and vice-versa.

Table No. 4.13
Interest expenses to total deposit ratio :(%)

Fiscal year	**NIBL**	**BOK**
	Ratio (%)	Ratio (%)
2005/06	2.52	2.74
2006/07	2.71	2.55
2007/08	2.79	2.59
2008/09	3.53	3.06
2009/10	4.99	4.34
Mean($\overline{X}$)	3.31	3.06

Source: Annual Report of 'NIBL' & 'BOK' (Refer Appendix IX &X)

.

Above table No. 4.13 shows the cost of deposit of selected banks over the study period. The ratio of 'NIBL' ranges highest 4.99% in the fiscal year 2009/10 and lowest 2.52% in the fiscal year 2005/06. Average ratio of 'NIBL' is 3.31%, the ratio in F/Y 2005/06 ,2006/07 and 2007/08 are below the average and ratio in F/Y 2008/09 and2009/10 are above the average. And the ratio of 'BOK' ranges highest in the F/Y 2009/10 and lowest in the F/Y 2006/07. Here average interest expenses to total deposit ratio of 'NIBL' is higher than of 'BOK' ratio. Higher ratio indicates the increased cost of deposit. 'BOK' is able to collect the cheaper deposit than that of 'NIBL'.

v) Interest Expenses to Total Expenses Ratio:

The 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.

Table No. 4.14
Interest expenses to total expenses ratio

(Rs.in million)

Fiscal year	NIBL			BOK		
	Interest expenses (Rs)	Total expenses (Rs)	Ratio (%)	Interest expenses (Rs)	Total expenses (Rs)	Ratio (%)
2005/06	490.95	1110.89	44.19	308.16	692.14	44.52
2006/07	685.53	1498.36	45.75	339.18	791.39	42.86
2007/08	992.16	2053.68	48.31	417.54	981.65	42.54
2008/09	1686.27	3605.33	46.77	563.11	1025.57	54.90
2009/10	2553.84	4335.96	58.90	182.16	568.25	32.07
Mean($\overline{X}$)			48.78			43.38

Source: Annual Report of 'NIBL' & 'BOK'.

Above table No.4.14 shows the interest expenses to total expenses ratio of selected companies over the study period. Ratio of 'NIBL' ranges highest 58.90% in the F/Y 2009/10 and lowest 44.19% in F/Y 2005/06. Average ratio of 'NIBL' is 48.78%, ratio in F/Y 2005/06, 2006/07 and 2008/09 are below the average and ratio in the F/Y 2007/08 and 2009/10 are above the average. So, this shows the fluctuation trend of the ratio. Ratio of 'BOK' ranges highest 54.90% in the F/Y 2008/09/06 and lowest 32.07% in the F/Y 2009/10. Average ratio of 'BOK' 43.38%. Here ratio in f/y 2005/06 and 2008/09 is higher the average and ratio of remaining f/y are below the average. Although this shows fluctuation trend, it is not any clear direction because it is fluctuation.

In comparison of two banks average interest expenses to total expenses ratio of 'NIBL' is higher than 'BOK'. 'BOK' has low ratio. It indicates that 'NIBL' has low operational expenses than 'BOK'.

VI) Interest Income to Total Income Ratio:

This ratio measures the volume of interest income in total income. The high ratio indicates the high contribution made by lending and investment whereas low ratio indicates low contribution made by lending & investment and high contribution by other fee based activities in total income.

Table No. 4.15

Interest Income to Total Income ratio (Rs.in million)

Fiscal year	NIBL			BOK		
	Interest income	Total income	Ratio (%)	Interest income	Total income	Ratio (%)
2005/06	1172.74	1461.43	80.25	718.12	894.58	87.68
2006/07	1584.99	1999.76	79.26	819.00	1051.00	77.93
2007/08	2194.28	2750.41	79.78	1034.16	1297.75	79.69
2008/09	3267.11	3895.52	83.87	1347.76	1704.42	79.07
2009/10	4653.52	5345.32	87.05	388.50	482.16	80.57
Mean($\overline{X}$)			82.04			80.99

Source: Annual Report of 'NIBL' & 'BOK

Table No. 4.15 shows the interest income to total income ratio of the selected banks over the study period. The ratio of 'NIBL' ranges highest 87.05% in the F/Y 2009/10 and lowest 79.26% in the F/Y 2006/07. The average ratio is 82.04%, ratio in F/Y 2005/06 ,2006/07 and 2007/08 are below the average and ratio in rest of the F/Y above the average. Ratio of 'BOK' ranges highest 87.68% in the F/Y 2005/06 and the lowest is 77.93% in the F/Y 200/07. The average ratio is 80.99%, the ratio of F/Y 2005/06 is higher the average and below in the rest of the F/Y.

The average interest income to total income ratio of NIBL is 82.04% and BOK is 80.99%. The lowest ratio of BOK indicates its low dependency in fund based activities. The highest ratio of NIBL indicates higher dependency on fund based activities.

Trend Analysis of Combined Ratio (%)

Table No. 4.16

Particulars	2005/06	2006/07	2007/08	2008/09	2009/10
1) Trend analysis of combined credit & advances to total deposit ratio (%)	68.37%	73.23%	78.54%	79.95%	80.28%
2) Trend values of combined credit & advances to total assets ratio (%)	59.51%	63.58%	69.88%	69.99%	69.94%
3) trend values of combined overdue(non-performing) credit to total credit & advances ratio (%)	2.30%	2.44%	1.49%	0.93%	1.06%

Figure No.4.9

Trend analysis of combined

credit & advances to total deposit ratio - %)

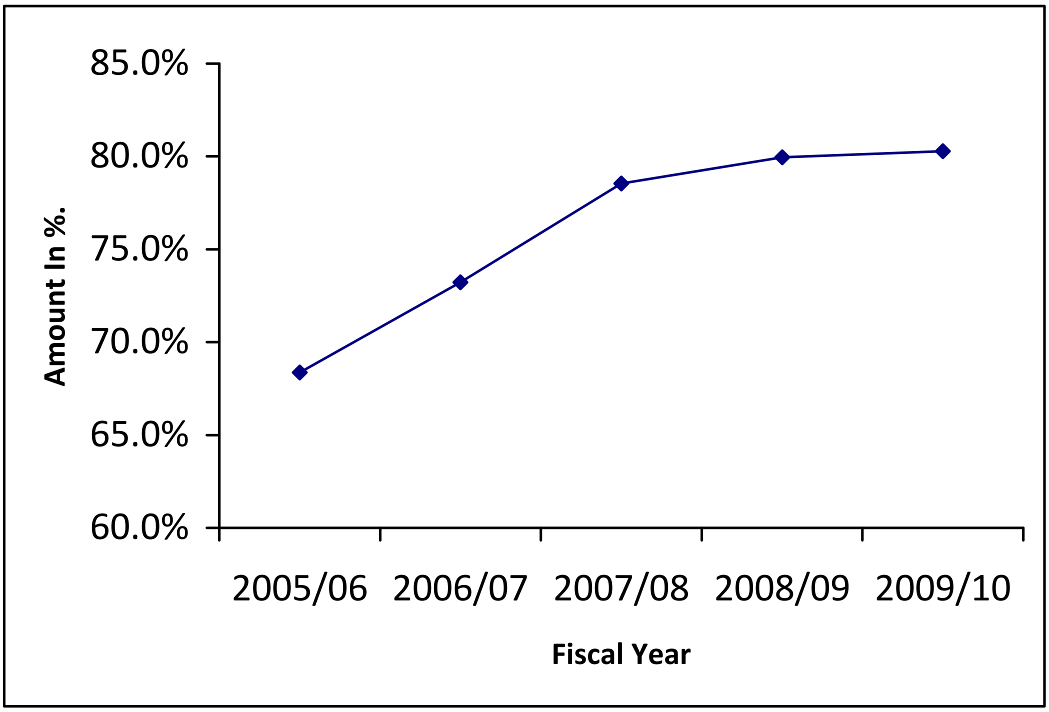
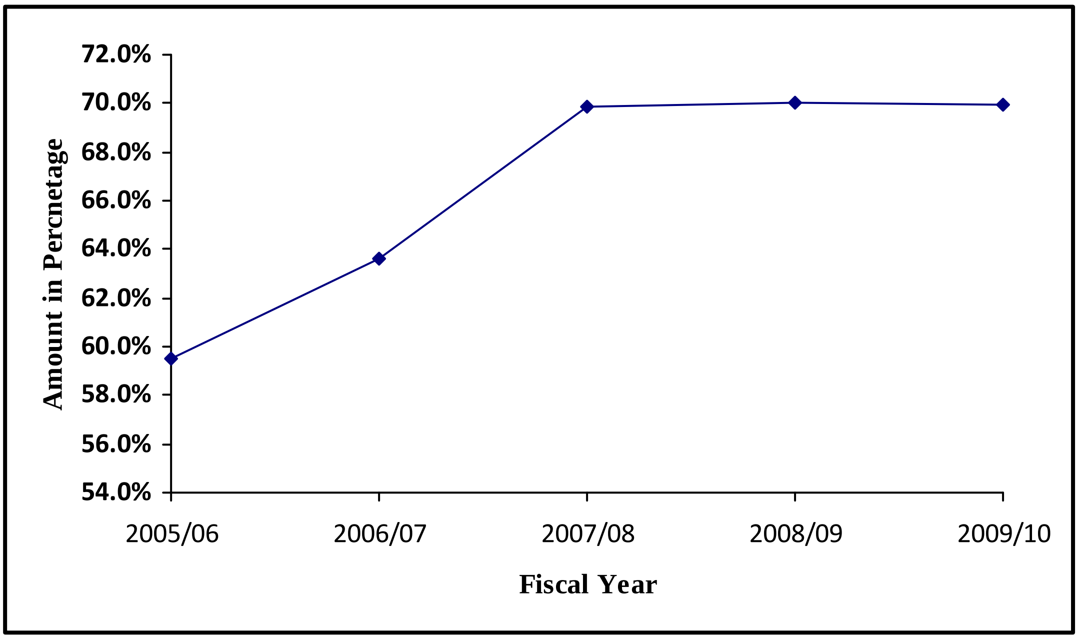


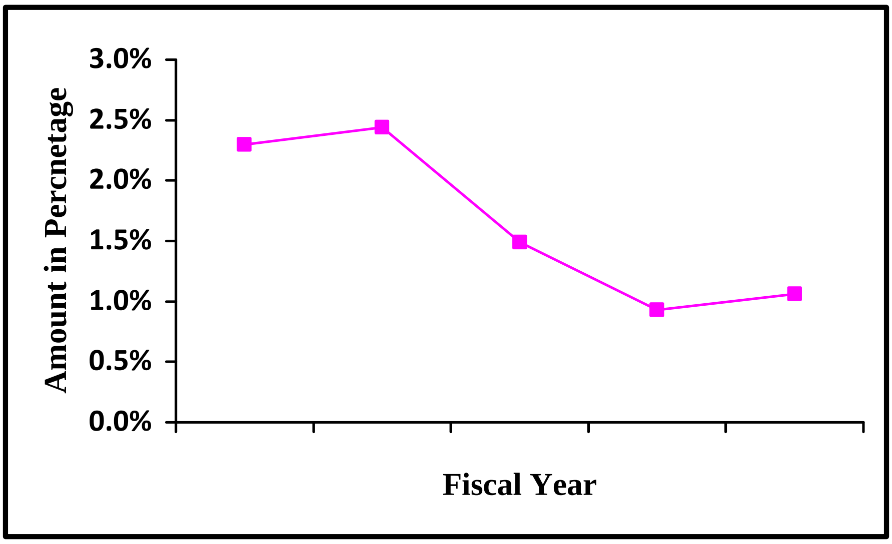
Figure No.4.10

Trend values of combined credit & advances to total assets ratio (%)



FigureNo.4.11

Trend values of combined overdue(non-performing) credit to total credit & advances ratio(%)



The trend values of the combined credit and advances are increasing trend, the table No. 4.16 and Figure No 4.9 shows that the trend values are 68.37%, 73.23% , 78.54% 79.95% and80.28 in f/y 2005/06 to 2009/10 respectively .

The trend values of the combined credit and advances to total assets ratio is in increasing trend ,the table No.4.16 and Figure No 4.10 shows that the trend values are 59.51% , 63.56% , 69.86% ,69.99 and 69.94 in f/y 2005/06to 2009/10 respectively .

The trend values of the combined overdue (non-performing) credit and total credit & advances ratio in decreasing trend except f/y 2008/09 of the research period. Therefore overdue credit is as decreasing trend year by year except f/y 2008/09. It is maximum utilization of the assets of the banks. On this period it is controlled credit & advances and saving the losses.

In overall the trend values indicates that the research period of time the amount of credit & advances are increasing faster than deposits.

E) Others Ratios:

I) Shareholder's Income Per Share (EPS) (Rs)

Table No. 4.17

Shareholder's income per share (EPS)

Fiscal year	NIBL	BOK
	Rs.	Rs.
2005/06	59.35	43.67
2006/07	62.57	43.50
2007/08	57.87	59.94
2008/09	37.42	54.68
2009/10	52.55	43.08
Mean($\overline{X}$)	53.95	48.97

Source: Annual Report of 'NIBL' & 'BOK' (Refer Appendix IX &X)

.

The shareholder's income per share of 'NIBL' is fluctuate in different year. The highest amount is Rs.62.57 in F/Y 2006/07 and lowest amount is Rs.37.42 in F/Y 2008/09. The average income is Rs.53.95. and the same average amount of 'BOK' is Rs.48.97. thus, both are in satisfaction level.

I) Price Earning Ratio :(P/E Ratio)

Table No. 4.18

Price earning ratio (Times)

Fiscal year	'NIBL' (Times)	'BOK' (Times)
2005/06	21.23	19.46
2006/07	27.63	31.61
2007/08	42.33	39.21
2008/09	37.10	33.37
2009/10	13.42	19.50
Mean($\overline{X}$)	28.34	28.63

Source: Annual Report of 'NIBL' & 'BOK' (Refer Appendix IX &X)

P/E ratio of the 'NIBL' is fluctuation each year. The P/E ratio the 'BOK' is also fluctuation each year. The year P/E ratio of 'NIBL' is less than 'BOK'.

I) Weight Average Interest Rate Spread:

Table No. 4.19

Weighted average interest rate spread (%)

Fiscal year	NIBL	BOK
	Interest rate (%)	Interest rate (%)
2005/06	3.90	3.64
2006/07	3.99	4.04
2007/08	4.00	4.35
2008/09	3.94	4.72
2009/10	4.36	5.16
Mean($\overline{X}$)	4.04	4.4

Source: Annual Report of 'NIBL' & 'BOK' (Refer Appendix IX &X)

.

Interest rate affects the amount of deposit, which in turn affect the credit and advances. If the deposits interest rate decreases, bank minimizes the credit interest rate. On the other hand if the liquidity is maximum, interest rate is decreases.

The interest rate of 'BOK' is more consistencies. The average interest rate is 4.4%. The interest rate of 'NIBL' is in decreasing which indicates the liquidity is increasing year by year in the bank.

4.3 Test of Hypothesis:-

To test the significance of different ratio between 'NIBL' & 'BOK', Here only uses'' test.

Table No. 4.20

Calculated valued of 't' under different assumptions

S.n.	Assumption of null & alternative hypothesis	't' cal	't' tab, at 5%. for 8 d.f.
1	H_0: there is no significance difference in credit and advances to total assets ratio between 'NIBL' and 'BOK'. H_1: there is significance difference in credit and advances to total assets ratio between 'NIBL' and 'BOK'.	0.11	2.306
2	H_0: there is no significance difference in interest income to total credit and advances ratio between 'NIBL' and 'BOK'. H_1: there is significance difference in interest income to total credit and advances ratio between 'NIBL' and 'BOK'.	1.29	2.306
3	H_0: there is no significance difference in provision for credit loss ratio between 'NIBL' and 'BOK'. H_1: there is significance difference in provision for credit loss ratio between 'NIBL' and 'BOK'.	0.91	2.306

Decision:-

S.N.1: the calculated value is less than tabulated value. Calculated value of ‘t’ is 0.11 and tabulated value of ‘t’ is 2.306. It means ‘H_0’ is accepted at 5% level of significance for 8 degree of freedom. ‘H_1’ is rejected. Therefore there is no significance difference in credit and advances to total assets ratio of ’NIBL’ and ‘BOK’.

S.N.2: the calculated value is also less than tabulated value. Calculated value of ‘t’ is 1.29 and tabulated value of ‘t’ is 2.306. it means ‘H_0’ is accepted at 5% level of significance for 8 degree of freedom. ‘H_1’ is rejected. So, there is no significance difference in interest income to total credit and advances of ‘NIBL’ and ‘BOK’.

S.N.3: the calculated value is less than tabulated value. Calculated value of ‘t’ is 0.91 and tabulated value of ‘t’ is 2.306. It means ‘H_0’ is accepted at 5% level of significance for 8 degree of freedom. ‘H_1’ rejected. There is no significance difference in provision for credit loss to total credit and advances ratio of ‘NIBL’ and ‘BOK’.

4.4 Major Findings:-

1 On average of 5 years of research period, cash and bank balance to total deposits ratio of ‘NIBL’ and ‘BOK’ is 12.65% and 8.06% respectively.

2 Average credit and advances to total deposit ratio of ‘NIBL’ &’BOK’ are 75.42% and 76.72% respectively. ‘BOK’ has maintained higher credit and advances to total deposit. In this way, it shows that ‘BOK’ seems to be strong to mobilize its total deposit as credit & advances. However higher ratio does not mean it is always better from the point of liquidity. Both banks are capable to use around 80% of deposit on credit and advances. If maintained this, it help make consistency on the profitability of the banks. Correlation of coefficient of ‘NIBL’ is 1 and ‘BOK’ is .99 This shows, the relation of ‘NIBL’ is higher degree of perfect positive relationship, which means total deposits increases, credit and advances also increases and vice-versa. And the relationship of ‘BOK’ is highest degree of positive relationship, which means in the ratio of total deposit increases, credit & advances also increases in same ratio and vice-versa.

3 Fixed deposits are the main sources of granting credit. Credit & advances of ‘NIBL’ is almost 273.10% of fixed deposits and the same for ‘BOK’ is almost 295.8% of fixed deposits have positive correlation impact on credit and

advances.

4 Average credit and advances to total assets of ‘NIBL’ and ‘BOK’ are 66.40% and 66.76%. It can be concluded that the higher mean ratio indicates the good lending performance. Here, ‘BOK’ has slightly good lending performance than ‘NIBL’. And ‘NIBL’ should focus to increase credit and advances to total assets ratio to increase lending performance.

5 Credit loss provision of ‘NIBL’ is decreasing trend so the decreasing loan loss ratio indicates efficient credit policy and gradual increment on the performance of the company. Here credit loss provision to total credit & advances of ‘BOK’ also in decreasing trend. This shows the satisfactory for both banks.

6 Total debt to equity ratio of ‘NIBL’ is in decreasing trend. This shows that the bank is decreasing the utilization of loan and going toward utilization of its own equity. And minimizing the risk. On the other hand, although ‘BOK’ also decreasing trend. It’s also going to maximum utilization of its own equity and decreasing taking the loan and minimizing the risk.

Overall, both banks have increasing trends of total debt to total assets ratio. This shows both bank’s debt are increasing in compare to total assets. From this both banks are slowly increasing in not depends on outsider fund.

7 The average ratio is of NIBL 2.71% and the ratio of ‘BOK’ is of BOK 2.91% In comparison in the point of average ratio, ‘BOK’ has earned more profit than ‘NIBL’ in the term of providing credit & advances.

8 ‘NIBL’ has lowest non-performing credit & advances; this ‘NIBL’ is best performer than the ‘BOK’. Banking sector is seriously affected by the non-performing credit. Both banks are not far from this above fact. If non-performing credit increases, the overall banking business will be affected. So provision amount will increase and profit will decrease. So, it is suggested that both banks (‘NIBL’& ‘BOK’) to be sincere while granting credit and to do effective follow up for recovery of non-performing credit.

9 Average interest expenses to total deposit ratio of ‘NIBL’ is higher than ‘BOK’. Higher ratio indicates the increased cost of deposit. ‘BOK’ is able to collect the cheaper deposit than that of ‘NIBL’.

10 Average interest expenses to total expenses ratio of ‘NIBL’ is higher than ‘BOK’.’BOK’ has low interest ratio.

11 Average interest income to total income ratio of ‘NIBL’ is 82.04% and ‘BOK’ is 80.99%.the lowest ratio of ‘BOK’ indicates its low dependency in fund-based activity. The highest ratio of ‘NIBL’ indicates greater dependency on fund-based activities.

12 The average shareholder’s income per share (EPS) of ‘NIBL’ is Rs. 53.95 and ’BOK’ is Rs. 48.97 although average EPS of ‘NIBL’ is higher than ‘BOK’. Thus, both banks are in satisfaction level.

13 P\E ratio of both banks (‘NIBL’ & ‘BOK’) is fluctuation. The average P\E ratio of ‘NIBL’ is less than ‘BOK’.

14 Interest rate affects the amount of deposit, which is turn affect the credit and advances. If the deposits interest rate decreases, bank minimizes the credit interest rate. On the other hand, if the liquidity is maximum, interest rate is decreases. The average interest rate of ‘NIBL’ is 4.04% and ‘BOK’ is 4.4%. So, the average interest rate of ‘BOK’ is higher than ‘NIBL’. Which indicates the liquidity of ‘BOK’ is low and the liquidity of ‘NIBL’ is higher.

Test of hypothesis shows that there is no significance difference in credit and advances to total assets ratio of ‘NIBL’ and ‘BOK’. And there is no significance difference in provision for credit loss to total credit and advances ratio of ‘NIBL’ and ‘BOK’. But there is no significance difference in interest income to total credit and advances of ‘NIBL’ and ‘BOK’.

CHAPTER -V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

As the final chapter of the study, this chapter briefly explains the summary of the study, tries to fetch out findings and conclusions and attempts to offer suggestions and recommendations for strengthen the financial position of the sample banks.

5.1 Summary and Conclusion

Development of any nation depends on capital invested and mobilized in productive sectors like industries, trade and business of every corners of the country .in fact, the development of economy of the world is this result of substantial investment in such productive sectors in order to boost up the economy and the social life of any country. It is extremely essential to have a mechanism through which small amount of saving can be collected and transferred into efficient uses. Hence, finance plays a vital role and thus contributes in the economic development of nation and the banks provide such financial services.

The basis of business is borrowing from individuals, firms and occasionally government i.e. receiving deposit from them with these resources and bank's own capital, banks disburse loan or extend credit and also invest in securities. Bank is an institution, which deals with the transaction of money. They perform several financial monetary and economic growth of the country.

At present, 31 commercial banks have been operating in Nepal. After the adaptation of liberal policy by the government in 1990 number of the banks and financial institutions are increasing day by day. They have been providing high quality banking services to the people .there is cut throat competition between banks and financial institutions.

This research has been under taken to evaluate the credit management of commercial banks. Two banks 'NIBL' and 'BOK' are under the study and five year financial statements of respective banks have been used for the study. The study has been divided into five chapters which include introductions review of literature, research methodology, presentation and analysis of data, summary, conclusion and recommendation. This study based in secondary data, which include published annual report and other publication of banks, other related information was gathered for from the concerned banks, Nepal rastra bank. Nepal stock exchange, securities board of Nepal. Different websites. The data have been analyzed by using financial and statistical tools like ratio analysis, correlation coefficient, trend analysis, hypothesis analysis etc.

The study shows that over the period, average cash and bank balance to total deposit ratio of ‘NIBL’ and ‘BOK’ is 12.65 and 8.06, standard deviation is 2.45% and 1.81% coefficient of variance is 19.36% and 22.46% are respectively. From this, it is sufficient for the liquidity position. Average credit and advances to total deposit ratio of ‘NIBL’ and ‘BOK’ is 75.42% and 76.72%. Both banks are capable to use credit & advances around the 80% of total deposits. If maintained this, it help make consistency on the profitability of the banks. The standard deviation of ‘NIBL’ and ‘BOK’ is 5.42% and 4.80% respectively and the coefficient of variance (C.V) is 6.96% and 5.31% are respectively. And correlation coefficient between credit & advances to total deposit of ‘NIBL’ is 1 and ‘BOK’ is 0.99. Average credit & advances to fixed deposits ratio of ‘NIBL’ is 273.10%, standard deviation is 45.71% and coefficient of variance is 16.74% and the credit & advances to fixed deposits ratio of ‘BOK’ is 295.58%, standard deviation is 37.71% and coefficient of variance is 12.75%. Average credit & advances to total assets of ‘NIBL’ and ‘BOK’ is 66.40% and 66.76% respectively. And standard deviation and coefficient of variance of ‘NIBL’ is 4.38% and 6.6% respectively. standard deviation and coefficient of variance of’ BOK’ is 4.49% and 6.73% respectively. It can be concluded that the higher mean ratio indicates the good lending performance. Credit loss provision to credit & advances ratio ‘NIBL’ and ‘BOK’ both are in decreasing trend from the F\Y 2005\06. So the decreasing credit loss ratio indicates efficient credit policy and gradual increment on the performance of the company. The average total debt to equity ratio of ‘NIBL’ is 12.87 times and ‘BOK’ is 11.93 times. Here both banks are seeking low gearing capital structure. It indicates bank has taken the policy of minimizing risk in economic crisis period. average total debt to total assets ratio are mixed trend. The average total assets to net worth (equity) ratio of ‘NIBL’ is 11.99 times and ‘BOK’ is 12.55 times.

The average net profit to credit & advances ratio of ‘NIBL’ is 2.71% and ‘BOK’ is 2.91%. The average ratio of ‘BOK’ is higher than ‘NIBL’. The average interest income to total credit and advances ratio of ‘NIBL’ is 8%, standard deviation is 1.29% and coefficient of variance is 16.13% .and the average ratio of ‘BOK’ is 9%, standard deviation is 0.82%, coefficient of variance is 9.11% from the point view of average ratio, ‘BOK’ has higher than the ‘NIBL’.

Banking sector is seriously affected by the non-performing loan increasing , the overall banking business will be affected so provision amount will increases and profit will decreases .so , it is suggested that both banks (‘NIBL’ & ‘BOK’) to be sincere while granting credit and to do effective follow-up for recovery of non-performing loan. The average non-performing credit to total credit & advances of ‘NIBL’ is 1.35% and ‘BOK’ is 1.97% .From the point view of mean ‘NIBL’ is in stronger position the ‘BOK’, because ‘NIBL’ has lesser than ‘BOK’ .the mean of interest expenses to total deposit ratio of ‘NIBL’ is 3.31% and ‘BOK’ 3.06%. Here, the ratio of ‘NIBL’ is higher than ‘BOK’. Higher ratio indicates the increase cost of deposit ‘BOK’ is able to collect the cheaper deposit than ‘NIBL’. The higher ratio indicates the low operational expenses and vice-versa. So, the ‘NIBL’ is 82.04% and ‘BOK’ is 80.99%. The lowest ratio of ‘BOK’ indicates its low dependency in fund-based activity. And the highest ratio of ‘NIBL’ indicates its high dependency in fund-based activity. The average shareholder’s income per share (EPS) of ‘NIBL’ is Rs.53.95 and ‘BOK’ is Rs.48.97. the average price earning (P\E) ratio of ‘NIBL’ is 28.34 times and ‘BOK’ is 28.63 times. And the average interest rate of ‘NIBL’ is 4.04% and ‘BOK’ 4.4%.

5.2 Recommendation

The findings of the study reflect both positive and negative results with respect to the financial performance of the sampled banks. But the recommendations have been presented for the improvement of the negative of the banks.

- Cash & bank balance of the both banks (‘NIBL’ & ’BOK’) are enough. Bank’s efficiency should be increased to satisfy the demand of depositors at low level of cash and bank balance. Unused cash & bank balance don't provide return to the bank therefore some percentage of the cash and bank balance should be invested somewhere in profitable sectors.

- ❖ As there are highly perfect positive correlation of 'NIBL' and highly positive correlation of 'BOK' between 'credit and advances to total deposit'. For both banks it is recommended them to increase their total deposit to make more credit and advances.

- ❖ Banking sector is seriously affected by the non-performing credit increases; the overall banking business will be affected. So, provisioned amount will increases and profit will decrease. So, it is suggested that both banks ('NIBL' & 'BOK') to be sincere while granting credit and to do effective follow-up for recovery of non-performing credit.
- ❖ Banks should do lot exercise in more credit creation banks should regularly follow the credit customer to confirm that whether the customers have utilized their credit for the same purpose committed at the time of taking credit from the bank. Bank should strictly bank the policy of nepotism and favoritism. On the basis of capability and efficiency, employee's recruitment, placement and promotion should be executed.
- ❖ Banks should reduce the interest rate for credit and advances. This will help them to maintain more competitive. Bank could do better by offering modern banking facilities and new product for the development of naming industry.
- ❖ Other recommendation for the achievement of target goals and objective of commercial banks. From above study, analysis and observation with facts we must conclude with a reasonable realistic solution. Some of important and valuable suggestion for strength of commercial bank establishment, sustainable growth. Commercial banks have to canalize fund by gradually for capital formation in the country. Commercials banks from urban areas to rural areas, where they can collect.

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Appendix - I

Cash and bank balance to total deposit

1 .calculation of average mean and standard Deviation

F.Y	Ratio of NIBL (x_1)	$(X_1 - \bar{X}_1)^2$	Ratio of BOK (x_2)	$(X_2 - \bar{X}_2)^2$
2005/06	12.34	0.091	5.09	8.82
2006/07	9.97	7.1824	8.90	0.71
2007/08	10.90	3.063	7.22	0.50
2008/09	16.96	18.58	10.45	5.71
2009/010	13.06	0.17	8.66	0.36
	$X_1 = 63.23$	$(X_1 - \bar{X}_1)^2 = 29.09$	$X_2 = 40.32$	$(X_2 - \bar{X}_2)^2 = 16.1$

Now we have,

$$\bar{X}_1 = \frac{X_1}{N}$$

$\bar{X}_1$ = Arithmetic mean of Nepal Investment Bank

N = Number of observation

$$x_1 = \frac{X_1}{N} = \frac{63.23}{5} = 12.65$$

again , $\bar{X}_2 = \frac{X_2}{N}$

$\bar{X}_2$ = Arithmetic mean of BOK

N = Number of observation

$$x_2 = \frac{X_2}{N} = \frac{40.32}{5} = 8.06$$

Calculation of standard deviation

Now we have,

$$\text{S.D} (\sigma_1) = \sqrt{\frac{(X_1 - \bar{X})^2}{n_1}}$$

S.D (σ_1) = Standard deviation of NIBL

X_1 = Valuation of each of the n observation of NIBL

$\bar{X}_1 =$ Mean of NIBL

N_1 = Number of observation of NIBL

S.D. (± 1) $\sqrt{\dfrac{ƒX_1 \,Z\, \overline{X}_1 Å^2}{n_1}}$

= $\sqrt{\dfrac{29.09}{5}}$ X2.45

S.D. (± 2) = $\sqrt{\dfrac{ƒx_2 \,Z\, \overline{X}_2 Å^2}{n_2}}$

S.D (± 2) Standard deviation of BOK

X_2 Value each of the n observation of BOK

$\overline{X}$ X Mean of BOK

N_2 = Number of observation of BOK

S.D (± 2) = $\sqrt{\dfrac{ƒx_2 \,Z\, \overline{X}_2 Å^2}{n_2}}$

= $\sqrt{\dfrac{16.1}{5}}$ X3.22

Calculation of Coefficient variance (C.V)

$C.V_1 = \dfrac{\pm_1}{\overline{X}_1}$

$\overline{X}_1$ X Mean of NIBL

± 1 = Standard devotion of NIBL

$C.V_1$ = Coefficient of Variance of NIBL

$C.V_1 = \dfrac{\pm_1}{\overline{X}_1}$

= $\dfrac{2.45}{12.65}$ X19.36

$C.V_2 = \dfrac{\pm_2}{\overline{X}_2}$

$\dfrac{3.22}{8.06}$ X39.95

Appendix - II

Credit and advances to total deposit

Calculation of average mean & Standard Deviation

F.Y	Ratio of NIBL (x_1)	$(X_1 - \bar{X}_1)^2$	Ratio of BOK (x_2)	$(X_2 - \bar{X}_2)^2$
2005/06	67.5	62.73	69.23	56.10
2006/07	70.59	23.32	75.87	0.73
2007/08	78.36	8.64	78.71	3.96
2008/09	78.86	11.83	80.99	18.23
2009/010	81.78	40.45	78.78	4.24
	$\sum X_1 = 377.09$	$\sum (X_1 - \bar{X}_1)^2 = 146.98$	$\sum X_2 = 383.58$	$\sum (X_2 - \bar{X}_2)^2 = 83.25$

Now we have,

$$\bar{X}_1 = \frac{\sum X_1}{N}$$

$\bar{X}_1$ = Arithmetic mean of Nepal Investment Bank

N = Number of observation

$$\bar{x}_1 = \frac{\sum X_1}{N} = \frac{377.09}{5} = 75.42$$

again , $\bar{X}_2 = \frac{\sum X_2}{N}$

$\bar{X}_2$ = Arithmetic mean of BOK

N = Number of observation

$$\bar{x}_2 = \frac{\sum X_2}{N} = \frac{383.58}{5} = 76.72$$

Calculation of standard deviation

Now we have,

$$\text{S.D } (\sigma_1) = \sqrt{\frac{\sum (X_1 - \bar{X})^2}{n_1}}$$

S.D (σ_1) = Standard deviation of NIBL

X_1 = Valuation of each of the n observation of NIBL

$\bar{X}_1 =$ Mean of NIBL

N_1 = Number of observation of NIBL

S.D. (± $_{1}$) $\sqrt{\dfrac{ƒX_1 \; \text{Z} \overline{X}_1 \text{Å}}{n_1}}$

= $\sqrt{\dfrac{146.98}{5}}$ X5.42

S.D. (± $_2$) = $\sqrt{\dfrac{ƒx_2 \; \text{Z} \overline{X}_2 \text{Å}}{n_2}}$

S.D (± $_2$) Standard deviation of BOK

X_2 Value each of the n observation of BOK

$\overline{X}$ X Mean of BOK

N_2 = Number of observation of BOK

S.D (± $_2$) = $\sqrt{\dfrac{ƒx_2 \; \text{Z} \overline{X}_2 \text{Å}}{n_2}}$

= $\sqrt{\dfrac{83.25}{5}}$ X4.80

Calculation of Coefficient variance (C.V)

$C.V_1 = \dfrac{\pm_1}{\overline{X}_1}$

$\overline{X}_1$ X Mean of NIBL

± $_1$ = Standard devotion of NIBL

$C.V_1$ = Coefficient of Variance of NIBL

$C.V_1 = \dfrac{\pm_1}{\overline{X}_1}$

= $\dfrac{5.42}{75.42}$ X6.96

$C.V_2 = \dfrac{\pm_2}{\overline{X}_2}$

= $\dfrac{408}{76.72}$ X5.31

Calculation of Correlation coefficient (r) of NIBL Bank

F.Y	(X_1)	X_2	X_1X_2	X_1^2	X_2^2
2005/06	12776.21	18927.21	241818010	163231452	358239278
2006/07	17286.43	24488.86	423324964	298820662	599704264
2007/08	26996.65	34451.73	930081297	728819111	1186921700
2008/09	36827.16	46697.98	1719753981	1356239714	2180701336
2009/010	40968.44	50097.73	2052302940	1678413076	2509481974
	X_1=134854.89	X_2=174660.51	X_1X_2=567281192	X_1^2=4225524105	X_2^2=5835048552

$$rX_1X_2 = \frac{N \quad X_1X_2 - (\quad X_1)(\quad X_2)}{\sqrt{N \quad X^2{}_1 - \quad X_1{}^2}\ \sqrt{N \quad X^2{}_2 - \quad X_2{}^2}}$$

Where,

X_1 = Amount of (Rs in million)Credit and advance of NIBL

X_2 = Amount of (Rs in million)Total Deposit of NIBL

rx_1x_2 = Correlation between x_1 & x_2 of NIBL

X_1X_2 = Production of No. of observation and sum production of X_1 & X_2 NIBL

$$rx_1x_2 = \frac{N \quad X_1X_2 - (\quad X_1)(\quad X_2)}{\sqrt{N \quad X^2{}_1 - \quad X_1{}^2}\ \sqrt{N \quad X^2{}_2 - \quad X_2{}^2}}$$

$$= \frac{5 \times 5367281192 - 134854.89 \times 174660.51}{\sqrt{5 \times 4225524105 - (134854.89)^2} \times \sqrt{5 \times 5835048552 - (174660.51)^2}}$$

$$= 1$$

Calculation of Correlation coefficient (r) of BOK Bank

F.Y	(X_1)	X_2	X_1X_2	X_1^2	X_2^2
2005/06	7259.08	10485.36	76114067.07	52694242.45	109942774.3
2006/07	9399.33	12388.93	116447641.4	88347404.45	153485586.5
2007/08	12462.64	15833.74	197330201.5	155317396	250707322.4
2008/09	14647.30	18083.98	2648814803	214543397.4	327030332.6
2009/010	15116.25	19186.95	290034733	228501014.1	368139050.3
	X_1=58884.6	X_2=75978	X_1X_2=9448081233	X_1^2=7394034544	X_2^2=1209305066

$$rX_1X_2 = \frac{N \quad X_1 X_2 - (\quad X_1)(\quad X_2)}{\sqrt{N \quad X^2{}_1 - \quad X_1{}^2}\sqrt{N \quad X^2{}_2 - \quad X_2{}^2}}$$

Where,

X_1 = Amount of (Rs in million)Credit and advance of BOK

X_2 = Amount of (Rs in million)Total Deposit of BOK

rx_1x_2 = Correlation between x_1 & x_2 of BOK

X_1X_2 = Production of No. of observation and sum production of X_1 & X_2 NIBL

$$rx_1x_2 = \frac{N \quad X_1 X_2 - (\quad X_1)(\quad X_2)}{\sqrt{N \quad X^2{}_1 - \quad X_1{}^2}\sqrt{N \quad X^2{}_2 - \quad X_2{}^2}}$$

$$= \frac{5 \times 944808123.3 - 58884.6 \times 75978.96}{\sqrt{5 \times 739403454.4 - (58884.6)^2}\sqrt{5 \times 1209305068 - (75978.96)^2}}$$

$= 0.99$

Appendix - III

Credit and Advance to Fixed Deposit

Calculation of average mean and standard Deviation

F.Y	Ratio of NIBL (x_1)	$(X_1 - \bar{X}_1)^2$	Ratio of BOK (x_2)	$(X_2 - \bar{X}_2)^2$
2005/06	236.02	1374.93	237.89	766.74
2006/07	229.97	1860.20	309.48	193.21
2007/08	339.83	4452.89	336.49	1673.63
2008/09	316.56	1888.77	327.34	1008.70
2009/010	243.61	859.66	236.70	3466.85
	$X_1 = 1365.99$	$(X_1 - \bar{X}_1)^2 = 10446.45$	$X_2 = 1477.79$	$(X_2 - \bar{X}_2)^2 = 7109.12$

Now we have,

$$\bar{X}_1 = \frac{X_1}{N}$$

$\bar{X}_1$ = Arithmetic mean of Nepal Investment Bank

N = Number of observation

$$x_1 = \frac{X_1}{N} = \frac{1365.99}{5} = 273.10$$

again , $\bar{X}_2 = \frac{X_2}{N}$

$\bar{X}_2$ = Arithmetic mean of BOK

N = Number of observation

$$x_2 = \frac{X_2}{N} = \frac{1477.90}{5} = 295.58$$

Calculation of standard deviation

Now we have,

$$\text{S.D } (\sigma_1) = \sqrt{\frac{(X_1 - \bar{X})^2}{n_1}}$$

S.D (σ_1) = Standard deviation of NIBL

X_1 = Valuation of each of the n observation of NIBL

$\bar{X}_1$ = Mean of NIBL

N_1 = Number of observation of NIBL

S.D. ($\pm_{1)}$ $\sqrt{\frac{ƒX_1 \, \mathrm{Z} \overline{X}_1 Å}{n_1}}$

= $\sqrt{\frac{10446.45}{5}}$ X45.71

S.D. ($\pm_2$) = $\sqrt{\frac{ƒx_2 \, \mathrm{Z} \overline{X}_2 Å}{n_2}}$

S.D ($\pm_2$) Standard deviation of BOK

X_2 Value each of the n observation of BOK

$\overline{X}$ X Mean of BOK

N_2 = Number of observation of BOK

S.D ($\pm_2$) = $\sqrt{\frac{ƒx_2 \, \mathrm{Z} \overline{X}_2 Å}{n_2}}$

= $\sqrt{\frac{7109.12}{5}}$ X37.71

Calculation of Coefficient variance (C.V)

$C.V_1 = \frac{\pm_1}{\overline{X}_1}$

$\overline{X}_1$ X Mean of NIBL

$\pm_1$ = Standard devotion of NIBL

$C.V_1$ = Coefficient of Variance of NIBL

$C.V_1 = \frac{\pm_1}{\overline{X}_1}$

= $\frac{45.71}{273.140}$ X16.74

$C.V_2 = \frac{\pm_2}{\overline{X}_2}$

$\frac{37.71}{295.58}$ X12.75

Appendix - IV

Credit and Advance to total Assets

Calculation of average mean and standard Deviation

F.Y	Ratio of NIBL (x_1)	$(X_1 - \bar{X}_1)^2$	Ratio of BOK (x_2)	$(X_2 - \bar{X}_2)^2$
2005/06	59.90	42.25	59.72	58.37
2006/07	62.65	14.06	65.51	5.06
2007/08	69.45	9.30	70.32	12.67
2008/09	68.53	7.37	71.46	22.09
2009/010	71.49	25.91	69.39	2.66
	$X_1 = 332.02$	$(X_1 - \bar{X}_1)^2 = 96.06$	$X_2 = 333.8$	$(X_2 - \bar{X}_2)^2 = 100.85$

Now we have,

$$\bar{X}_1 = \frac{X_1}{N}$$

$\bar{X}_1$ = Arithmetic mean of Nepal Investment Bank

N = Number of observation

$$x_1 = \frac{X_1}{N} = \frac{332.02}{5} = 66.40$$

again , $\bar{X}_2 = \frac{X_2}{N}$

$\bar{X}_2$ = Arithmetic mean of BOK

N = Number of observation

$$x_2 = \frac{X_2}{N} = \frac{333.8}{5} = 66.76$$

Calculation of standard deviation

Now we have,

$$\text{S.D } (\pm_1) \sqrt{\frac{(X_1 - \bar{X})^2}{n_1}}$$

S.D ($\pm_1$) = Standard deviation of NIBL

X_1 = Valuation of each of the n observation of NIBL

$\bar{X}_1 =$ Mean of NIBL

$N_1 =$ Number of observation of NIBL

S.D. ($\pm_{1)}$ $\sqrt{\frac{\int X_1 \, Z \overline{X}_1 \text{Å}}{n_1}}$

$= \sqrt{\frac{96.06}{5}} \; X 4.38$

S.D. ($\pm_2$) = $\sqrt{\frac{\int x_2 \, Z \overline{X}_2 \text{Å}}{n_2}}$

S.D ($\pm_2$) Standard deviation of BOK

X_2 Value each of the n observation of BOK

$\overline{X}$ X Mean of BOK

N_2 = Number of observation of BOK

S.D ($\pm_2$) = $\sqrt{\frac{\int x_2 \, Z \overline{X}_2 \text{Å}}{n_2}}$

$= \sqrt{\frac{100.85}{5}} \; X 4.49$

Calculation of Coefficient variance (C.V)

$C.V_1 = \frac{\pm_1}{\overline{X}_1}$

$\overline{X}_1$ X Mean of NIBL

$\pm_1$ = Standard devotion of NIBL

$C.V_1$ = Coefficient of Variance of NIBL

$C.V_1 = \frac{\pm_1}{\overline{X}_1}$

$= \frac{4.38}{66.40} \; X 6.6$

$C.V_2 = \frac{\pm_2}{\overline{X}_2}$

$\frac{4.49}{66.76} \; X 6.73$

Appendix - V

Interest income to total credit and advance

Calculation of average mean and standard Deviation

F.Y	Ratio of NIBL (x_1)	$ƒX_1 Z\overline{X}_1 Å$	Ratio of BOK (x_2)	$ƒX_2 Z\overline{X}_2 Å$
2005/06	7.32	0.46	9.89	0.79
2006/07	7.33	0.45	8.71	0.084
2007/08	6.93	1.14	8.30	0.49
2008/09	7.89	0.012	8.02	0.96
2009/010	10.51	6.30	10.02	1.040
	X_1 X39.98	$(X_1 \text{ Z} \overset{z}{X}_1)^2$ X8.37	X_2 X44.94	$(X_2 \text{ Z} \overset{z}{X}_2)^2$ X3.367

Now we have,

$$\overline{X}_1 = \frac{X_1}{N}$$

$\overline{X}_1$ = Arithmetic mean of Nepal Investment Bank

N = Number of observation

$$x_1 \text{X} \frac{X_1}{N} = \frac{39.98}{5} \text{X8}$$

again , $\overline{X}_2 = \frac{X_2}{N}$

$\overline{X}_2$ = Arithmetic mean of BOK

N = Number of observation

$$x_2 \text{X} \frac{X_2}{N} = \frac{44.94}{5} \text{X9}$$

Calculation of standard deviation

Now we have,

$$\text{S.D } (\pm_1) \sqrt{\frac{ƒX_1 \text{ Z}\overline{X} Å}{n_1}}$$

S.D ($\pm_1$) = Standard deviation of NIBL

X_1 = Valuation of each of the n observation of NIBL

$\overline{X}_1$ X Mean of NIBL

N_1 = Number of observation of NIBL

S.D. (± $_1$) $\sqrt{\dfrac{ƒX_1 \, Z\overline{X}_1 Å^2}{n_1}}$

= $\sqrt{\dfrac{8.37}{5}}$ X1.29

S.D. (± $_2$) = $\sqrt{\dfrac{ƒx_2 \, Z\overline{X}_2 Å^2}{n_2}}$

S.D (± $_2$) Standard deviation of BOK

X_2 Value each of the n observation of BOK

$\overline{X}$ XMean of BOK

N_2 = Number of observation of BOK

S.D (± $_2$) = $\sqrt{\dfrac{ƒx_2 \, Z\overline{X}_2 Å^2}{n_2}}$

= $\sqrt{\dfrac{3.367}{5}}$ X0.82

Calculation of Coefficient variance (C.V)

$C.V_1 = \dfrac{±_1}{\overline{X}_1}$

$\overline{X}_1$ X Mean of NIBL

± $_1$ = Standard devotion of NIBL

$C.V_1$ = Coefficient of Variance of NIBL

$C.V_1 = \dfrac{±_1}{\overline{X}_1}$

= $\dfrac{1.29}{8}$ X16.13

$C.V_2 = \dfrac{±_2}{\overline{X}_2}$

$\dfrac{0.82}{9}$ X9.11

Appendix - VI
Hypothesis test
Credit and Advance to Total Assets

F.Y	Ratio of NIBL(X_1)	$(X_1 - \bar{X}_1)^2$	Ratio of Book	$(X_2 - \bar{X}2)^2$
2005/06	59.90	42.25	59.12	58.37
2006/07	62.65	14.06	64.51	5.06
2007/08	69.45	9.30	70.32	12.67
2008/09	68.49	7.37	71.46	22.09
2009/010	71.49	25.91	68.39	2.66
	$X_1 = 332.02$	$(X_1 - \bar{X}_1)^2 = 96.06$	$X_2 = 333.8$	$(X_2 - \bar{X}_2)^2 = 100.85$

$\bar{X}_1 = 66.40$ $\bar{X}_2 = 66.76$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

$$S^2 = \frac{(X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

S^2 is an unbiased estimate of n^2 and follows 't' distribution with $n_1 + n_2 - 2$ degree of freedom (d.F)

$X_1 - \bar{X}_1$ *and* $X_2 - \bar{X}_2$ = Deviation of variables

$(X_{1}-\bar{X})^2$ and $(X_2 - \bar{X}_2)^2$ =Variation of variable

Here,

$$S^2 = \frac{(X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

$$\frac{(96.06) + (100.85)}{5 + 5 - 2} = 24.61$$

$$t = \frac{66.40 - 66.76}{\sqrt{24.61\left(\frac{1}{5} + \frac{1}{5}\right)}}$$

= -0.11

= | 0.11 |

Appendix - VII
Hypothesis test
Interest income to total Credit and Advance

F.Y	(X_1)	X_2	$(X_1 - \bar{X}_1)^2$	$(X_2 - \bar{X}_2)^2$
2005/06	7.32	9.89	0.46	0.79
2006/07	7.33	8.71	0.45	0.084
2007/08	6.93	8.30	1.14	0.49
2008/09	7.89	8.02	0.012	0.96
2009/010	10.51	10.02	6.30	1.040
	$X_1 = 39.98$	$X_2 = 44.94$	$(X_1 - \bar{X}_1)^2 = 8.37$	$(X_2 - \bar{X}_2)^2 = 3367$

$\bar{X}_1 = 8$ $\qquad\qquad$ $\bar{X}_2 = 9$

$$t = \frac{X_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

$$S^2 = \frac{(X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

S^2 is an unbiased estimate of n^2 and follows 't' distribution with $n_1 + n_2 - 2$ degree of freedom (d.F)

$X_1 - \bar{X}_1$ *and* $X_2 - \bar{X}_2 =$ Deviation of variables

$(X_1 - \bar{X})^2$ and $(X_2 - \bar{X}_2)^2$ =Variance of variables

Here,

$$S^2 = \frac{(X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

$$\frac{8.37 + 3.367}{5 + 5 - 2} = 1.47$$

$$t = \frac{8 - 9}{\sqrt{1.47 \left(\frac{2}{5}\right)}}$$

$= -1.29$

$= \left| 1.29 \right|$

Appendix - VIII

Hypothesis test

Provision for credit loss to total credit and Advance

F.Y	(X_1)	X_2	$(X_1 - \bar{X}_1)^2$	$(X_2 - \bar{X}_2)^2$
2005/06	0.81	1.08	0.073	0.3136
2006/07	0.75	0.87	0.044	0.1225
2007/08	0.51	0.31	0.009	0.044
2008/09	0.42	0.23	0.0144	0.084
2009/010	0.23	0.13	0.0961	0.152
	$X_1 = 2.73$	$X_2 = 2.62$	$(X_1 - \bar{X}_1)^2 = 0.23$	$(X_2 - \bar{X}_2)^2 = 0.72$

$\bar{X}_1 = 0.54$ $\bar{X}_2 = 0.52$

$$t = \frac{X_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

$$S^2 = \frac{(X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

S^2 is an unbiased estimate of n^2 and follows 't' distribution with $n_1 + n_2 - 2$ degree of freedom (d.F)

$X_1 - \bar{X}_1$ and $X_2 - \bar{X}_2$ = Deviation of variables

$(X_1 - \bar{X})^2$ and $(X_2 - \bar{X}_2)^2$ =Variance of variables

Here,

$$S^2 = \frac{(X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

$$\frac{0.23 + 0.72}{5 + 5 - 2} = 0.1187$$

$$t = \frac{0.54 - 0.52}{\sqrt{0.1187 \left(\frac{1}{5} + \frac{1}{5}\right)}}$$

= 0.91

Appendix- IX

The Annual Report of Nepal investment bank limited (Principal indicator)

Rs. in '000'

Particulars	Indicators	F/Y 2005/06	F/Y 2006/07	F/Y 2007/08	F/Y 2008/09	F/y 2009/10
1.percent of net profit /Gross income	percent	23.99	25.07	25.33	22.97	23.67
2. Earning per share	Rs.	59.35	62.57	57.87	37.42	52.55
3. Market value per share	Rs.	1,260	1,729	2,450	1,388	705
4.Price Earning Ratio	Percent	21.23	27.63	42.33	37.10	13.42
5.Dividend (including bonus) on share capital	Percent	55.46	30.00	40.83	20.00	25.00
6.Cash dividend on share capital	Percent	20.00	5.00	7.50	20.00	25.00
7.Intrest income/loan and advance	percent	7.32	7.33	6.93	7.89	10.51
8.Staff Expenses /Total operating Expenses	percent	38.77	37.39	37.41	38.50	39.23
9.Interst Expenses on total deposit and borrowing	percent	2.52	2.71	2.79	3.53	4.99
10.Exchange Gain /Total income	Percent	8.60	6.77	6.03	4.79	4.19
11.Staff bonus /Total Expenses	Percent	41.84	49.76	54.50	57.53	64.61
12.Net profit /loan and advance	Percent	2.66	2.82	2.53	2.45	3.09
13.Net profit /Total assets	Ratio	1.61	1.79	1.77	1.68	2.19
14.Total operating Expenses /total assets	Percent	1.43	1.38	1.27	1.09	1.23
15.Adequacy of capital fund on Risk Weighed assets						
a. core capital	Percent	7.97	7.90	7.71	8.56	8.50
b.supplementary capital	Percent	4.01	4.26	3.57	2.68	2.05
c.Total capital fund	Percent	11.97	12.17	11.28	11.24	10.55
16.Lqudity (crr)	Percent	13.61	10.47	10.91	10.32	7.77
17. Non –performing credit /total credit	Percent	2.07	2.37	1.12	0.58	0.62
18.Weighed Average interest rate spread	Percent	3.90	3.99	4.00	3.94	4.36
19.Book net worth	Rs.in '000'	1,415,440	1,878,124	2,686,786	3,907,840	4,585,393
20.Total share	No.	5,905860	8,013,526	12,039,154	24,070,689	24,090977
21.Total Staff	No.	390	514	622	766	877
Book value per share	Rs.	240	234	223	162	190

Appendix- X

The Annual Report of Bank of Kathamandu limited (Principal indicator)

Amount in NPR

Particulars	Indicators	F/Y 2005/06	F/Y 2006/07	F/Y 2007/08	F/Y 2008/09	F/y 2009/10
1.percent of net profit /Gross income	percent	35.11	38.75	41.89	41.42	37.93
2. Earning per share	NPR	43.67	43.50	59.94	54.68	43.08
3. Market value per share	NPR	850	1,375.00	2,350.00	1,825.00	840.00
4.Price Earning Ratio	Ratio	19.46	31.61	39.21	33.37	19.50
5.Dividend (including bonus) on share capital	Percent	48.00	20.00	42.11	47.37	30.00
6.Cash dividend on share capital	Percent	18.00	20.00	2.11	7.37	15.00
7.Intrest income/loan and advance	percent	9.89	8.71	8.30	8.02	10.02
8.Staff Expenses /Total operating Expenses	percent	10.50	11.08	12.64	14.99	11.35
9.Interst Expenses on total deposit and borrowing	percent	2.74	2.55	5.59	3.06	4.34
10.Exchange Gain /Total income	Percent	8.91	7.98	7.32	8.12	6.26
11.Staff bonus /Total Expenses	Percent	50.95	54.98	58.27	45.14	43.43
12.Net profit /loan and advance	Percent	2.79	2.79	2.90	3.09	2.99
13.Net profit /Total assets	Ratio	1.65	1.80	2.04	2.25	2.18
14.Total operating Expenses /total assets	Percent	4.59	4.32	5.05	4.77	6.35
15.Adequacy of capital fund on Risk Weighed assets						
a. core capital	Percent	10.71	9.43	9.57	9.81	9.41
b.supplementary capital	Percent	3.18	3.18	2.37	1.88	1.44
C .Total capital fund	Percent	14.52	12.62	11.93	11.68	10.85
16.Lqudity (CRR)	Percent	7.64	8.02	7.57	7.58	8.32
17. Non –performing credit /total credit	Percent	2.72	2.51	1.86	1.27	1.51
18.Weighed Average interest rate spread	Percent	3.64	4.04	4.35	4.72	5.16
19.Book net worth	NRP	230.67	164.68	222.51	206.25	175.40
20.Total share	No	4,635,809	6,031,413	6,031,413	8,443,979	11,821,571
21.Total Staff	No	177	179	390	489	475
22.Capital Adjustment Reserve	percent	10.00	10.00	0.00	0.00	0.00