A STUDY ON LOAN MANAGEMENT OF NEPALESE COMMERCIAL BANKS

(With Reference to Bank of Kathmandu and Nepal Credit and Commerce Bank)

A THESIS

Submitted by:

Shruti Shrestha

Nepal Commerce Campus

MBS Symbol No: 768/065

T.U. Registration No: 7-2-355-116-2005

Campus Roll No: 250494/067

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RECOMMENDATION

This is to certify that the thesis

Submitted by

Shruti Shrestha

entitled

A STUDY ON LOAN MANAGEMENT OF NEPALESE COMMERCIAL BANKS

(With Reference to Bank of Kathmandu and Nepal Credit and Commerce Bank.)

Has been prepared as approved by this department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

…………………………………
(Prof. Dr. Sushil Bhakta Mathema)
Head of Research Department
and Thesis Supervisor

………………
(Jyoti Pandey)
Campus Chief

………………………
(Pitambar Ghimire)
Thesis Supervisor

Date: - ……………………

VIVA VOCE SHEET

We have conducted the viva-voce examination of the thesis presented by

Shruti Shrestha

entitled

A STUDY ON LOAN MANAGEMENT OF NEPALESE COMMERCIAL BANKS

(With Reference to Bank of Kathmandu and Nepal Credit and Commerce Bank.)

and found the thesis to be the original work of the student written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for Master's Degree in Business Studies (M.B.S.)

<u>Viva-Voce Committee</u>

Head of Research Department ………………………………………

Member (Thesis Supervisor) ………………………………………

Member (Thesis Supervisor) ………………………………………

Member (External Expert) ………………………………………

Date…………….

DECLARATION

I hereby declare that the work reported in this thesis entitled **“A STUDY ON LOAN MANAGEMENT OF NEPALESE COMMERCIAL BANKS (WITH REFERENCE TO BANK OF KATHMANDU AND NEPAL CREDIT AND COMMERCE BANK)”** submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirements for the Master of Business Studies under the supervision of **Prof. Dr. Sushil Bhakta Mathema** and **Pitambar Ghimire** of Nepal Commerce Campus. TU.

Date:……………………..

…………………....

Shruti Shrestha

Researcher

Nepal Commerce Campus

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Shruti Shrestha

Researcher

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ABBREVIATIONS

A.D.	Anno Dominee
ADB	Agriculture Development Bank
AGM	Annual General Meeting
ANOVA	Analysis of Variance
B.S.	Bikram Sambat
BOK	Bank of Kathmandu
CD	Credit Deposit
CEO	Chief Executive Officer
CIB	Credit information Bureau
F/Y	Fiscal Year
FIs	Financial Institutions
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards.
ISA	International Standards on Auditing
JVBs	Joint Venture Banks
LLP	Loan Loss Provision
Ltd.	Limited
NCC	Nepal Credit and Commerce Bank
NIDC	Nepal industrial Development Corporation
NPA	Non Performing Assets
NPL	Non Performing Loan
NRB	Nepal Rastra Bank
RBB	Rastriya Banijya Bank
SPSS	Statistical Package of Social Science
WTO	World Trade Organization

CHAPTER - I
INTRODUCTION

1.1 Background of the Study

Financial institutions are the organizations that channel the saving of government, business and individuals into loans or investments. So, they position themselves between provider and users of fund. The role of financial institutions is to accumulate funds from various savers and lend those funds to borrowers. Thus, they actively participate in the money market and capital market. Banks, mutual funds, insurance companies are the example of financial institutions. They play key role in the smooth and efficient functioning of the economy.

Financial institution can be considered as the catalyst to the economic growth of a country. The development process of a country involves the mobilization and developed of resources. Development of trade, commerce and industry are the prime requisite for the attainment of the economic political and social goals. To fulfill the purpose of planning, financial functions more often dominate the other functions. “There is always lack of finance in underdeveloped economy because natural resources are either underutilized or unutilized in productive sectors or even other purposes i.e. social welfare and so on. Likewise, underdeveloped countries are not deficient in land, water, mineral, forest or power resources, though they may be untapped; constituting for the rapid development of the economic, there should be proper mobilization of resources. Due to various difficulties or even ignorance of the people, such resources have not been properly utilized. Hoarding could be one of the reasons for this. So, banks and other financial institutions play a vital role to encourage thrift and discourage hoardings by mobilizing the resources ad removing the habit of hoarding. They pursue rapid economic growth, developing the banking habit among the people, collecting the small-scattered resources in one bulk and utilizing them in further productive purposes and rending other valuable services to the country. Thus, this gives the individuals an opportunity to borrow funds against future income, which may improve the economic well being of the borrower.

Financial institution in the economy plays a crucial role in the process of economic growth of the country. Financial institution refers to a business concern that is mainly confined to finance for the development of the trade, commerce and industry. Trade, commerce and industry are the prime factors of the economic development. Bank is a financial institution, which primarily deals in borrowing and lending. Banking is a vital part of national economy and a vehicle for the mobilization of economy's financial resources and extension of loan to the business and service enterprises.

Nepal is one of the least developed countries in the world. It is basically an agricultural, mountainous and landlocked nation surrounding by two large, fast developing nations, China and India. About 80% of the total population is engaged on subsistence farming. Despite its large share in labor market, it paradoxically, contributes 40% to the total GDP. As most of the labor forces are underemployed it is necessary to channel the huge labor force into industrial sector. The economic development of Nepal is still in initial stage. For the economic growth and development, government has initiated various economic policies such as industrial policy, foreign investment policy privatization policy and trade & transit policy.

Nepal has adopted mixed and liberal economic policy with an implicit objective to assist the state and the private sector. Especially after restoration of the democracy, the concept of the liberalization policies has been incorporated as directive principal and state policies. This liberalization has helped in establishing many companies, banks, finance companies and manufacturing industries. Thus these establishments help the country for its development.

The growth of banking is not so long. Compared to other developing or developed countries, the institutional development in banking system of Nepal is far behind. Even though the specific date of the beginning of money and banking deal in Nepal is not obvious, it is speculated that during the reign of the King Mandev the coin "Manank" and "Gunank" during the reign of the king Gunakamadev were in use. After the unification of Nepal, Prithvi Narayan Shaha had minted coin 'Mohar' in his name. An institution called "Taksar" was established in 1989 and it started to issue the coin scientifically. During the reign of Ranodip Singh an office named "Tejarath" was established in Kathmandu in 1993 (B.S.) It used to provide loans to government officials and people against deposit of gold and silver. It had also extended its branches outside Kathmandu valley for providing loan. But this office had no right to accept deposit of public and it had no characteristics of mode banks**.** (Bajracharya 2047:6)

After the establishment of Nepal Bank Limited on 30th Kartik, 1994 (B.S.), modern banking system started in Nepal. Under the Nepal Rastra Bank Act 2012, Nepal Rastra Bank was established in 2013, Baishakh 14th in Nepal. Rastriya Banijya Bank was established in

Government sector in 2022 and Agricultural Development Bank in 2024, 7th Magh. Nepal Arab Bank limited is the 1st joint venture bank established in 2041 under the Commercial Bank Act 2031 and Companies Act 2021**.** (Shrestha, 2004:2)

In this study, I have studied about the loan management of two banks: Bank of Kathmandu and Nepal commerce and credit bank. I want to introduce about those banks in a brief.

Bank of Kathmandu, one of the predominant commercial bank of Nepal, which was established in Nepal on March 1995 under the commercial Bank act 2031& companies act 2021 to develop industry, trade, commerce & the total economy in aggregate. It is a bank with a joint venture with Habib Bank Ltd, Pakistan. This is the bank which introduce credit card for the first time in Nepal. To produce the service to maximum people of Nepal it has established branches at many important locations. Its banking slogan is “We make your life easier". This bank provides loan in different areas such as Housing loan, vehicle loan, education loan, personnel loan etc.

Nepal Credit & Commerce Bank Ltd. (NCC Bank) formally registered as Nepal - Bank of Ceylon Ltd. (NBOC), commenced its operation on 14th October, 1996 as a Joint Venture with Bank of Ceylon, Sri Lanka. It was the first private sector Bank with the largest authorized capital of NRS. 1,000 million. The Head Office of the Bank is located at Siddhartha Nagar, Rupandehi, while its Corporate Office is placed at Bagbazar, Kathmandu. The name of the Bank was changed to Nepal Credit & Commerce Bank Ltd., (NCC Bank) on 10th September, 2002, due to transfer of shares and management of the Bank from Bank of Ceylon, an undertaking of Government of Sri Lanka to Nepalese Promoters. At present, NCC Bank provides banking facilities and services to rural and urban areas of the country through its 22 branches. The Bank has developed corresponding agency relationship with more than 150 International Banks having worldwide network.

The loan policy cannot be sound unless it is based on a clear knowledge of the cost of loan. The cost is determined by the quantity of loan sales, the average collection period and the opportunity cost of capital. Whilst a marginal costing approach should be used which takes only incremental cost into account, the full opportunity cost has to be considered. The overall cost of loan will also be affected by the expected rate of inflation. Foreign accurate assessment of the cost of capital, a discounting approach should be used. A loan package can be differentiated in various ways; by duration, by interest charge, and by the interaction with the rest of the pricing mix.

Loan is regarded as the most income generating asset especially in commercial banks. Loan is regarded as the heart of the commercial banks in the sense that; it occupies large volume of transactions; it covers the main part of investment; most of the investment activities are based on loan; it is the main factor for creating profitability; it is the main source of creating profitability; it determines the profitability. It affects the overall economy of the country. In today's context, it also affects on national economy to some extent. If the bank provides loan to retailer, it will encourage the customer status. Similarly, if loan facility provided to trade & industry, the government will get tax from them and help to stimulate national economy. It is the security against depositors. It is proved from very beginning that loan is the shareholder's wealth maximization derivative. However, other factors can also affect profitability and wealth maximization but the most effective factor is regarded as loan. It is the most challenging job because it is backbone in commercial banks. Thus, effective management of loan should seriously be considered.

Management is the system, which helps to complete the every job effectively. Loan management is also the system, which helps to manage loan effectively. In other words, loan management refers management of loan exposures arising from loans, corporate bonds and loan derivatives. Loan exposures are the main source of investment in commercial banks and return on such investment is supposed to be main source of income.

Loan management strongly recommends analyzing and managing the loan risks. Loan risk is defined as the possibility that a borrower will fail to meet its obligations in accordance with the agreed terms and conditions loan risk is not restricted to lending activities only but includes off balance sheet and inter - bank explores. The goal of the loan risk management is to maximize a bank's risk adjusted rate of return by maintaining the loan risk exposure within acceptable parameters. For most banks, loan are the largest and most obvious sources of loan risk, however, other sources of loan risk exist throughout the activities of a bank, including in the banking book, and in the trading book, and both increasingly facing loan risk in various financial instruments other than land, including acceptances, inter bank transactions and guarantees and the settlement of transactions.

The loan policy of a firm provides the framework to determine whether or not to extend loan and how much loan to extend. The loan policy decision of a bank has two broad dimensions; loan standards and loan analysis. A firm has to establish and use standards in making loan decision, develop appropriate sources of loan information and methods of loan analysis.

1.2 Statement of the Problem

Loan is the most effective and sincere area in banking sector. It is regarded as the heart of every banking sector. But the banking sector is far from this fact. Thus, Loan management is considered as the heart issues in Nepalese Commercial banking sector. Most major banking problems have been caused by weakness in loan management. Banks should now have a keen awareness of the need to identify measure, monitor and control loan as well as to determine that they hold adequate capital against it. These risk that they are adequately compensated for risks incurred. So, to establish loan ability position is a major issue in commercial banking sector during these days.

It is no debate that high profitable or successful organization can easily fulfill the every need of the organization, customers and can serve the society. To improve the profitability situation of the bank, it is necessary to establish the higher loan ability position of the bank. Thus, the loan ability is the major source and building better loan ability position is the major strategy of every commercial bank.

Loan 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, loan management is considered as the heart issues in Nepalese commercial banking sector.

Loan 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 loan management in Nepalese commercial banks. In this regard, the performance of Nepalese commercial banks is to be analyzed in terms of their loan. Some research questions regarding to the loan practices, loan efficiencies, liquidity position, industrial environment, management quality, organization climate, are considered as a clear evident in present situation. Thus, the specific research questions regarding loan management in Nepalese commercial banking sector are identified as follows: -

- Is the quality of management good in Bank of Kathmandu and Nepal Credit and Commerce banks?

- Is there any relationship between loan position and profitability situation in Bank of Kathmandu and Nepal Credit and Commerce banks?

- Is the loan practices adopted by Bank of Kathmandu and Nepal Credit and Commerce bank in good position?

- What is the loan efficiency of the Bank of Kathmandu and Nepal Credit and Commerce banks?

- How do the Bank of Kathmandu and Nepal Credit and Commerce bank manage better loan ability position?

1.3 Objectives of the Study

The main objective of the study is to evaluate the loan management of Nepalese Commercial Banks In order to achieve the basic objective, the following other objectives are

❖ To study the loan portfolio of Bank of Kathmandu and Nepal Credit and Commerce Bank.

❖ To analyze loan practices of Bank of Kathmandu and Nepal Credit and Commerce Bank.

❖ To explore the relationship with loan and advances, non-performing loan and net profit of Bank of Kathmandu and Nepal Credit and Commerce Bank.

1.4 Significance of the Study

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

Present study is very important from the point of view of bank management. The main strategy of every commercial bank is to establish the better loan ability position, which has directly impacted the financial performance of an organization. Besides, it helps to build positive attitude and perception on customer that helps to make the organizational success in terms of better transaction, better turnover, and better profitability most of the earlier researches were focused on financial performance of bank but few researches were focused on loan ability position of bank. From view point of bank loan is the most important in and sincere area. Thus, the present study is very important in viewing an organizational performance or position in terms of loan ability.

1.5. Limitations of the Study

Like every research study, this study also has some limitation viz.-inadequate coverage of commercial banks, time period taken and other variables. The following factors are the basic limitations.

- ❖ The study period will be covered by only five fiscal years i.e. from 2008/09 to 2012/13.
- ❖ The study is mainly based on secondary data collected from different sources.
- ❖ Out of the numerous affecting factors, this study concentrates only on those factors, which are related with loan management, and available in the form required for analyzing the different issues.
- ❖ Due to wide range of data deficiencies only simple technique have been used for the analysis of the data.
- ❖ The study deals with only two commercial banks i.e. Bank of Kathmandu and Nepal Credit and Commerce Bank.
- ❖ The study is fully based on the student's limited financial resources within a limited period.

1.6. Organization of the Study

The study has organized in to five chapters. Which are:-

Chapter I: Introduction of the study

Chapter one deals with background of the study, statement of the problem, objectives of the study, significance of the study, limitations of study and organization of the study.

Chapter II: Review of Literature

Chapter two consists of review of literature. This chapter is subdivided into various sections such as conceptual Review of loan Management, financial analysis, statistical Tools, Factory affecting loan policy, review of related studies, review of previous thesis and research gap.

Chapter III: Research Methodology

Chapter three present methodologies adopted for the research. It comprises research design, population and samples, nature and sources of data, data collecting procedures and tools and techniques employed.

Chapter IV: Presentation and Analysis of Data

Chapter four deals with financial analysis, statistical analysis and the major findings of the study.

Chapter V: Summary, Conclusions and Recommendations

Chapter five consists of summary, conclusion and recommendation about the topic concerned.

CHAPTER - II

REVIEW OF LITERATURE

The purpose of reviewing the literature is to develop some expertise in one's area to see what new contribution can be made and to receive some ideas for developing a research design. Their relevant finding issues, arguments logics and suggestion, which will give a glimpses guide line to go further depth of the study. In other words there has to be continuity in research. This continuity in research is ensured by linking the present study with the post research studies.

2.1 Conceptual Review of Loan Management

Loan is regarded as the most income generating asset especially in commercial banks. Loan is regarded as the heart of the commercial banks in the sense that; it occupies large volume of transactions; it covers the main part of investment; most of the investment activities are based on loan; it is the main factor for creating profitability; it is the main source of creating profitability; it determines the profitability. It affects the overall economy of the country. In today's context, it also affects on national economy to some extent. If the bank provides loan to retailer, it will encourage the customer status. Similarly, if loan facility provided to trade & industry, the government will get tax from them and help to stimulate national economy. It is the security against depositors. It is proved from very beginning that loan is the shareholder's wealth maximization derivative. However, other factors can also affect profitability and wealth maximization but the most effective factor is regarded as loan. It is the most challenging job because it is backbone in commercial banks. Thus, effective management of loan should seriously be considered.

Management is the system, which helps to complete the every job effectively. Loan management is also the system, which helps to manage loan effectively. In other words, loan management refers management of loan exposures arising form loans, corporate bonds and loan derivatives. Loan exposures are the main source of investment in commercial banks and return on such investment is supposed to be main source of income.

Loan management strongly recommends analyzing and managing the loan risks. Loan risk is defined as the possibility that a borrower will fail to meet its obligations in accordance with the agreed terms and conditions loan risk is not restricted to lending activities only but includes off balance sheet and inter - bank explores. The goal of the loan risk management is to maximize a bank's risk adjusted rate of return by maintaining the loan risk exposure within acceptable parameters. For most banks, loan are the largest and most obvious sources of loan risk, however, other sources of loan risk exist through out the activities of a bank, including in the banking book, and in the trading book, and both increasingly facing loan risk in various financial instruments other than land, including acceptances, inter bank transactions and guarantees and the settlement of transactions.

The loan policy of a firm provides the framework to determine whether or not to extend loan and how much loan to extend. The loan policy decision of a bank has two broad dimensions; loan standards and loan analysis. A firm has to establish and use standards in making loan decision, develop appropriate sources of loan information and methods of loan analysis.

“Banking is the business of collecting and safeguarding money as deposits and lending of same. The banker’s business is then to taken the debt of other people to offer his own in exchange and there by to create money. He may be a dealer in debts, but in distress is only the observation of wealth and it would be equally permissible to describe the banker as a liquefies of wealth.”(Brigham, 1983: 81)

A frequently neglected but increasingly of the total marketing package is the role of the provision of loan. Loan policy is sometimes, omitted entirely from an analysis of marketing mix by academics. This is despite empirical findings that although the loan package is unlikely to be the primary factor in determining overall patronage success. It may serve to clinch a contract when suppliers’ offerings are otherwise equally attractive.

The study seeks first and like some other to examine the relative importance of loan policy in marketing decisions and, seconds, to assess the case for differentiating loan packages. It is also presented the result of an empirical survey into the loan policies pursued. In concept, the empirical study is similar to earlier studies.

The loan policy cannot be sound unless it is based on a clear knowledge of the cost of loan. The cost is determined by the quantity of loan sales, the average collection period and the opportunity cost of capital. Whilst a marginal costing approach should be used which takes only incremental cost into account, the full opportunity cost has to be considered. The overall cost of loan will also be affected by the expected rate of inflation. Foreign accurate assessment of the cost of capital, a discounting approach should be used. A loan package can be differentiated in various ways; by duration, by interest charge, and by the interaction with the rest of the pricing mix.

A commercial Bank is business organization that receives and holds deposits of fund from others makes loans or extends loans and transfers funds by written order of deposits.

Commercial Bank is a corporation, which accepts demand deposits subject to check and makes shorts-term loans to business enterprises, regardless of the scope of its other services.

A commercial banker is a dealer in money and substitute for money such as cheque or bill of exchange. He also provides a variety of financial services.

Commercial bank Act 2031 B.S. of Nepal has defined that "A commercial bank is one which exchanges money, deposits money, accepts deposits, grants loans and performs commercial banking functions and which is not a bank mean for cooperative, agriculture, industries for such specific purpose."

Bank and Financial Institutions Ordinance, 2060 has accumulated five banking acts including Commercial Bank Act 2031, which defines the bank with respect to their transactions. This Act is trying to categorize the banking institutions in two ways based on their transactions. According to this Act, "Bank is the institution which performs its transaction under the provisions mentioned on section 47 of this Act."

This Act has laid emphasis on the functions of commercial bank while defining it. Commercial banks provide short-term debts necessary for trade and commerce. They take deposits from the public and grant loans in different forms. They purchase and discount bills for exchange, promissory notes and exchange foreign currency. They discharge various functions on the behalf of their customers provided that they are paid for their services.

Financial activities are necessary for the economic development of the country and commercial banking in this context is the heart of financial system. Optimal investment decision plays a vital role in each and every organization. But especially for the commercial bank and other financial institutions the sound knowledge of investment is the must because this subject is relevant for all surrounding that mobilize funds in different sectors in view of return.

As it is concerned to the commercial banks and other financial institution, they must mobilize (i.e., investment in different sectors) their collections (deposits) and other funds towards the profitable, secured and marketable sectors so that they will be in profit. For this purpose these banks and financial institutions should gather the sufficient information about the firm (client) to which supposed to be invested, these information include as financial background, nature of business as well as its ability to pay the loan back. These all information should be gathered from the viewpoint of security.

The income and profit of the bank depend upon the lending procedure applied by the bank. And, lending policy and investment in different securities also affect the income and profit. In the investment procedures and policies is always taken in mind that “the greater the loan created by the bank, the higher will be the profitability". A sound lending and investment policy is not only prerequisite for bank’s profitability but also crucially significant for the promotion of commercial savings of a developing country like Nepal.

The sound policies help commercial banks maximize quality and quantity of investment and there by, achieve the own objective of profit maximization and social welfare. Formulation of sound investment policies and coordinated and planned efforts pushes forward the forces of economic growth.

Commercial banks as financial institutions perform a number of internal functions. Among them, providing loan is considered as most important one. "Commercial banks bring into being the most important ingredient of the money supply, demand deposit through the creation of loan in the form of loan and investment."

2.1.1 Financial Analysis

Financial analysis is the process of identifying the financial strengths and weakness of the firm by properly establishing relationship between the items of balance sheet and profit and loss account. Financial analysis can be undertaken by management of the firm or by parties outside the firm viz. owners, loaners, investors and others. Ratio analysis is a powerful tool of financial analysis. A ratio is defined as “The indicated quotient of two mathematical expressions” and “as the relationship between two things” (Bhalla, 1997:731)

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides a measure of the relationship between two variables or figures.

Webster's new collegiate Dictionary defines a ratio as "The indicated quotient of two mathematical expressions and as the relationship between or more things". In financial analysis a ratio is used as a benchmark for evaluating the financial position and performance of a firm.

Standard of comparison

The ratio analysis involves comparison for a useful interpretation of financial statements. A single ratio in itself doesn't indicate favorable or unfavorable condition. It should be compared with some standard. Standard of comparison may consist of:

- Past ratios –ratio calculated from the past financial statement of the same firm.
- Projected ratio –ratio developed using the projected or financial statement of the same firm.
- Competitor's ratio –ratio of some selected firms, especially the most progressive and successful competitor, at the same point in time.
- Industry ratio- ratios of the industry to which the firm belongs.

Types of ratios

Several ratios calculated from the accounting data can be grouped into various classes according to financial activity or function to be evaluated. Long term loaners or the other are more interested in the long-term solvency and profitability of the firm. Similarly owners concentrate on the firm's profitability and financial condition. Management is interested in evaluating every aspect of firm's performance. They have to protect the interests of all parties and see that the firm grows profitability. In view of the requirement of various ratios they may classify into following groups.

Loan practices ratio

- **Total loan to total deposit ratio**

The main source of bank's lending depends on its deposit. This ratio is calculated to find out how successfully the banks are utilizing their deposits on loan and advances for profit generating activities greater ratio indicates the better utilization of total deposits.

- **Loan and advances to total assets ratio**

Loans & advance is the major part of total assets for the bank. This ratio indicates the volume of loans & advance 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.

- **Loan and advances to current assets**

Loans & advances is the major component in total Assets, which indicates the ability of banks to canalize its deposit in the form of loan & advances to earn high return. If sufficient loan and advances cannot be granted, it should be pay interest on those utilized deposit funds and may lose earnings. So commercial banks provide loan & advances in appropriate level to find out portion of current assets, which is granted as loan & advances.

- **Interest income to loan and advances**

Interest income to loan & 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.

- **Loan loss provision to total loan and advances ratio**

It describes the quality of assets that a bank is holding. NRB has directed the commercial banks to classify its loan & advances into the category of pass, standard, doubtful and loss and to wake the provision of 1, 25, 50 and 100 percent respectively. NRB has classified the pass and substandard loan as performing loans and other two types of loan as non-performing loans. The provision created against the pass and substandard loan is called the general loan loss provision and provision created against the doubtful and loss loan is called specific loan loss provision. The amount of loan loss provision in B/S refers to general loan loss provision.

The provision for loan 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 loan risk and reduced the risks related to deposits.

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

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

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

Loan efficiency ratio

- **Interest expenses to total deposit ratio**

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

- **Total loan to liabilities ratio**

Banks create loan through loans and advances and multiply their Assets much more times than their liability permits. This ratio measures the ability of a bank to multiply its liability into Assets. The higher ratio of total Assets to total liability ratio is favorable as it increases overall capacity of the organization. The following table shows the ratio of Total assets to total liability of selected commercial banks during study period.

- **Interest expenses to total expenses ratio**

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

- **Non-interest bearing deposit to total deposit ratio**

This ratio measures the volume of non-interest bearing deposits to total deposit. The volume of interest expenses in total expenses represents a large portion of the total expenses. How efficiently the deposits were managed affectively in the total volume of expenses. The banks need to manage the portfolio of the deposits i.e. it has to maintain certain proportion between interest bearing deposits and non-interest bearing deposits by administering the interest rate structure. The higher ratio is favorable but in practices, interest bearing deposits always plays a significant role in the mix of deposit liability.

- **Interest income to total income ratio**

Income is one of the most important factors of each & every organization. Interest income occupies a greater portion of the total income in a banking business. This ratio measures the volume of interest income in total income. It helps to measure the bank's performance on other fee based activities too. 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.

- **Interest from loan, advances and overdraft to total interest income ratio**

This ratio measures the contribution made by interest from loan, advances and overdraft. Loan and advances generate the major portion of interest income. Hence this ratio measures how efficiently the banks have employed their fund and loan and advances & overdraft.

- **Interest suspense to total interest income from loan and advances ratio**

Interest suspense means the interest due but not collected. NRB directives do not allow the commercial banks to book due but unpaid interest into income. The increase in the interest suspense decreases the profit of the company. Such interest is shown in liability side of Balance sheet under the heading "other liability". This ratio, interest suspense to total interest income from loans & advances, measures the composition of due but uncollected interest in the total interest income from loans & advances. The high degree of this ratio indicates the low interest turnover and low degree of this ratio indicates high interest turnover. This ratio also helps to analyze the capacity of the bank in collecting the repayments of the loans & advances.

2.1.2 Statistical Tools

Statistics is a body of methods of obtaining and analyzing data in order to base decision on them. It is a branch of scientific method used in dealing with phenomena that can be described numerically either by counts or by measurement. Thus the word statistics refer it a method of dealing with quantities information. Webster defined statistics as 'the classified facts represented by the condition of the people in state especially those facts which can be stated in numbers or in tables of number or in any tabular or classified arrangement'.

Regression and Correlation

Regression and Correlation Analysis are the techniques of studying how the variations in one series are related to the variation in another series. Measurement of degree of relationship between two or more variables is called correlation analysis and using the relationship between a known variable and an unknown variable to estimate the unknown one is termed as regression analysis. Thus, correlation measures the degree of relationship between the variables while regression analysis shows how the variables are related. Regression analysis shows how the variables are related. Regression and Correlation analysis thus determines the nature and strength of the relationship between two variables**.** (Shrestha, 2055:405)

2.2 Factors Affecting Loan Policy

Generally, the following factors are to be considered to make effective loan management. It is also called the factors of loan policy. It helps to get effective loan worthiness.

Industry environment: - It determines the nature of the industry structure, its attractiveness and the company's position within the industry, structural weakness of a company which is disadvantaged, theaters first way out and security value.

Financial Condition: - It determines the borrower's capacity to repay through cash flow as the "First way –out''. The strength of 'second way-out' i.e. through collateral liquidation is also assessed. Further the possibility to fall back on income of sister concerns in case of financial crunch of the company condition theaters repayment capacity.

Management Quality: - It determines the integrity, competence and nature of alliances of the borrower's management team. Weakness in replacements needs to be evaluated.

Technical strength: - It determines the strength and quality of the technical support required for sustainable operation of the company in terms of manpower and the technology used. Appropriate technical competence of the manpower, the viability of the technology uses, availability of after sales service, cost of maintenance and replacement need to be evaluated.

Security realization: - It determines the control over various securities obtained by bank to secure the loan provided excitability of the security documents and present value of the properties mortgaged with the bank. Weakness in security threatens the bank's second way out.

2.3 Review of Related Studies

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

2.3.1 Review of Articles/Journals

The effort has been made in this present section to examine and review the some related articles published in different economic journals, Bulletins, magazines and newspapers.

Nepal Rastra Bank (NRB) has issued directives to all commercial banks and financial institution ensuring transparency during loan disbursement. As per provision, all commercial banks as well as financial institutions are now required to disclose the name of loan defaulters in every six months. Until now there was no such legal system of disclosing the loan defaulter’s name. The new directives have also barred the financial institutions from lending any amount to the blacklisted defaulter and his family members. The Credit Information Bureau (CIB) can blacklist the firm, company or clear the debt within the stipulated period. As per the set criteria for blacklisting, the CIB would monitor those individuals and companies that have the principle loans of above Rs. 1 million. If the loaner fails to clear the amount within time, or is found mission the loans among others, the loaner can be blacklisted.

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

The investor or whether banks, financial institutions, individuals, private or government sector, must not took the proposal by making decision without having adequate judgment because sometimes they perform out of norms, related studies, policies and techniques. A project appraisal will best viable only if it has accessed through conscious analysis as well as through investment decisions to make its macro and micro level viability effective.

The current volume of the total banking deposits is over 1550-folds higher than what used to be some 38 years ago whereas the Gross Domestic Product (GDP) of the country during the same period price, increased just by 62-folds. Central bank static's shows that the total banking deposit in 1965 used to be just Rs. 129.8 million, but swelled to Rs. 202.13 billion by mi-Jan 2003. Similarly, the total loan and advances of the entire banking system in 1960 stood at Rs. 107 million, which was over 82 percent of them total deposit. However, total loans and advances went up to Rs. 127 billion, comparing almost 63 percent of the total deposit, during the period. As a result both deposit and lending of the banking system witnessed and increase of over 6-folds and 5 folds to Rs.21 billion respectively by 1990s. As a result of economic expansion and private sector development, the nineties witnessed a quantum jump in both deposit mobilization and lending. The deposit of banking system, by the end of 2002, touched Rs. 154.5 billion, which is 7-folds more than the deposit of the nineties. Loans and advances from the banking system touched Rs. 118 billion by June-end 2000 and the amount was double than what it used to be in 1985.

In the post report titled 'Loan Loss provision rises Notably' published in the Kathmandu Post, the reporter had made an endeavor to highlight some facts and figures regarding loan loss provision of commercial banks. 'The banking sector is witnessing a huge surge in loan loss provisioning reserve lately. The increment is primarily a result of a directive issued by Nepal Rastra Bank (NRB) in 2001 that introduced stringent loan provisioning criteria for commercial banks. As per data recently released by the central bank, the total loan loss provision in the country's banking sector increased from around Rs. 8.73 billion in mid-April

2001 to Rs. 13.18 billion in mid-April 2003. The increment is over 51 percent. As per the latest NRB figures, a remarkable surge has been seen in loan provision of Nepal Bank Ltd (NBL). Against the provision of Rs. 1.7 million in mid-April 2002, the loan provision amount surged to whopping Rs. 7.33 billion in a year"

The reporter further states that apart from the two technically insolvent government- invested banks, loan provision of other joint venture private banks has also risen significantly and the notable increments seen in the loan loss provisioning amounts is due to the eight-point prudential directives that the central bank issued in mid- to all commercial banks.

The reporter concludes, "The directives laid down stringent guidelines relating to loan loss provisioning to ensure a good health of the overall banking system. The directive requires loans to be provisioned to the extent of cent percent if payment is defaulted for one year. Likewise, the directives require loans to be provisioned to the extent of 25 per cent if payment is defaulted for over three months and 50 per cent if the period of default extends beyond six months. The earlier directive required progressive provisioning of loans, but allowed maximum of three years, unlike the present system of just year, for loans to be provisioned to the extent of cent percent'.

Mr dhungana BR in his article titled "Loan sector reform and NRB" has tried to highlight the effects of change or amendment in NRB directives regarding loan classification and loan loss provisioning. "Although the circumstances leading to financial problem or crisis in many Nepali banks differ in many respects, what is common acres most of the banks is the increased size of non performing assets (NPAs), To resolve the problem of the losses or likely losses of this nature facing the industry NRB has, as the central bank, amended several old directives and issued many new circulars in the recent years.

As opined by him, since majority of the loans of most of the commercial banks of the country at present falls under substandard, doubtful and even loss categories, loan loss provisioning now compared to previous arrangement would be dramatically higher. The new classification and provisioning norms are very lent able as they help to strengthen banks financially. He added that we also must remember that the old system remained in force from 1991 to 2001, which was probably the most volatile decade of the business operation of the country. He has indicated that Loan loss provisioning as a percentage of total loan of April 12, 001 is 5.2% but as April 13, 2003, it has jumped to 18.39. If only private banks are considered, it is 2.12% of April 2001 where as it is 6.30 % as of April 13, 2003. The total increment in LLP is Rs 11,328.11 million and the total increment in loan is only Rs 7,976.70. He has also stated that tightening provisioning requirements on NPL is essential to ensure that banks remain liquid even during economic downturns.

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

In the article by Mr. Dependra B. Chhetri, titled "Non Performing Assets: A need for Rationalization", the writer has attempted to provide connation of the term NPA and its potential sources, implication of NPA in financial sector in the South East Asian region. He had also given possible measures to contain NPA. "Loans and advances of financial institutions are meant to be serviced either part of principal of the interest of the amount borrowed in stipulated time as agreed by the parties at the time of Loan settlement. Since the date becomes past dues, the loan becomes non-performing asset. The book of the account with lending institution should be effectively operative by means of real transaction effected on the part of the debtor in order to remain loan performing.(chhetri 2007:17)

As stated by the writer, the definition of NPA differs from country to country. In some of the developing countries of Asia Pacific Economic Cooperation (APEC) forum, a loan is classified as non-performing only after it has been arrear for at least 6 months. Similarly, it is after three months, in India. Loans thus defaulted are classified into different categories having their differing implication on the asset management of financial institution. He also stated that NPAs are classified according to international practice into 3 categories namely Substandard, Doubtful and Loss depending upon the temporal position of loan default. "Thus the degree of NPA assets depends solely on the length of time the asset has been in the form of none obliged by the loanee. The more time it has elapsed the worse condition of asset is being perceived and such assets are treated accordingly. "As per Mr. Chhetri's view, failure of business for which loan was used, defective and below standard loan appraisal system loan program sponsored by Government, slowdown in economy/recession, diversion of fund is some of the factors leading to accumulation of NPAs.

He said that there is serious implication of NPAs, on financial institution. He further added that the liability of loan institution does not limit to the amount declared as NPA but extend to extra amount that required for provisioning depends upon the level of NPAs and their quality. As per his view, rising level of NPAs create a psyche of worse environment especially in the financial sector. He mentioned that by reviving the activities of the financial institution like waiving interest, rescheduling the loan, writing off the loan, appointing private recovery agent, taking help of tribunals and law of land etc NPAs can be reduced.

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

2.3.2 Review of Journals

In an article published in New Business Age, Mr. Kamal Subedi titled (2004:48) "Growth in Major Commercial Banks" has compared between the first six month of the fiscal year 2002-03 and 2003-04, which shows that there has been noticeable increase in loan outflow by the commercial banks except of Nepal Bank Ltd (NBL) and Rastriya Banijya Bank (RBB) (the government owned banks). There has been increase in loan-deposit (CD) ratios of all commercial banks except of NBL and RBB in which case it has gone down by 10.41% and 5.99% respectively. It may be because their concentration was only on recovery of the huge Non Performing Assets (NPA). However, Mr. Subedi pointed out that no matter what the size of NPA is and the circumstances are, each bank has to collect the deposit in order to create a lending and to invest in the new ventures. Except RBB all banks have increment in deposit collection.

A decrease in CD ratio (the percentage of the deposit mobilization over the loan) signifies the presence of high liquidity and comparatively lower fund mobilization and vise versa. High liquidity and idle funds will result in lower profits. HBL has the highest growth of 18.47% in CD ratio over the last year. Similarly, NABIL, Kumari Bank Ltd (NCC) and Nepal BOK Ltd (BOK) have recorded growth rates of 6.28%, 11.83% and 7.45% respectively in their CD ratio. However, this ratio of other commercial banks has declined, largely due to factors external to the banks.

As per the NRB directives, all commercial banks have to maintain Loan Loss provision according to the size of overdue loans. Nepal Loan and Commerce Bank (NCCB) were able to decrease its loan loss provision by 27.63% as compared to the previous year indicating a good recovery of interest as well as principal. In case of Nepal Investment Bank (NIBL), growth in loan loss provision (which in fact decreased by 6.73%) was much less than the growth of the total loan (which in fact decreased by 6.73%) was much less than the growth of the total loan (which increased by 53%). Similarly, NBL and HBL were able to maintain a healthy composition of loan loss provision (decreased by 9.49% & 0%) and loan (increased by 3.70% and 26.78%), again signifying good results from their loan recovery efforts. In case of remaining banks, the situation is not satisfactory as the growth of loan loss provision is higher than the growth of loan.

A bank's stability depends on the reserve it maintains. NABIL's reserve growth is very good i.e. 1400% on retained earnings and 67.86% on other reserves. Similarly, all other banks have except NCCB and BOK made noticeable increment in it. The major yardstick to measure the status of the bank (which is the prime concern of shareholders) is the profitability of the banks-the spread between what the banks has earned and expensed. In this regard, NCC has made the significant growth of 181.25% in profit as compared to the previous year. Similarly Standard Chartered Bank (SCBL), NABIL, HBL, BOK, NCC, NIB, NBOK, NICB and NCCB have the growth percentage of 7.72%, 6.33%, 43.73%, 29.83%, 61.8%, 62.76%, 29.76%, 37.89% and 4.03% respectively.

His Majesty's Government of Nepal has promulgated Ordinance to replace several existing laws related to the banks and financial institution like Commercial Bank Act 2031, Finance Act etc related to financial institutions. The major highlights of the ordinance are universal banking that makes all the banks and financial institutions governed by a single act making the legal process much efficient and with less confusion and it have protected the rights and welfare of the depositors and investors.

However this ordinance has lots of unclear issues, which has created confusion to the existing banks and financial institutions. The ordinance has classified the financial institutions into categories replacing the present terms as commercial, development of finance companies. The act has classified the category, as “Ka” category ca mention itself as a Bank, the rest of the category should name itself only as a financial institution. The ordinance has created confusion to the existing development banks and finance companies as what category they belong to? The positive aspect of this ordinance is that the financial institutions which fall under the “Kha” category will also be allowed to carry out several financial activities that were previously allowed to only commercial banks, such as opening current accounts, issuing drafts and traveler’s cheques, dealing in foreign exchange and issuing Letter of Loans. Even the financial institutions, which falls under the category “Ga” are permitted to handle current account, saving account and to some extent, foreign currency transactions. Due to these changes, the consumer will benefit due to the competition among these banks and financial institutions.

In an article published in New Business Age written by Sudir Khatri (2004:18), has analyzed the ordinance Pros and Cons, in general speaking termed as Umbrella Act. He has expressed his disagreement in the ordinance regarding the qualification of the Board of director’s composition. The qualification set is out of the total number of directors, two thirds have to be graduates in specified disciplines-management, commerce, economic, accounting, finance, law, banking and statistics. Another requirement is five years work experience either in banking or public limited companies or in a gazette level government posts. He argues why a science graduate or someone with engineering background cannot be the director, it is not justifiable to question on the capacities of the people with these background as the in the past some successful General Manager and Directors in Nepal Industrial Development Corporation (NIDC) were engineers. He further writes that activities like project financing and asset valuation require engineers and similarly that there cannot be any reason for the position of director in banks to be graduates in some specified fields only. CEO of the “Ka” category qualification required is Masters Degree in the chosen few subject and the term would be four year. The act however does not mention the renewal of the CEOs term. The Board or AGM of the institution should be decided the CEO’s tenure.

Similarly, he points out argument in the requirement of five years work experience. The performance of the public limited companies is so poor that the efficiency of the staff is questionable. In such situation how can one hire someone with the experience in public limited companies? As per the act, it is mandatory to appoint a professional director in the Board chosen from the list of professional experts enlisted by NRB. Such director will not have voting right; it is questionable that can be contribute significantly towards the development of a bank or financial institution without the voting right?

For the existing banks and other financial institutions a two-year period has been granted to apply for the license. Entirely new Memorandum of Association and Articles of Association have to be prepared and a special general meeting of shareholder has to be called. If any institution fails to obtain the license on the said period their license will be seized. However, there is no clear information on whether the institutions can prepare Memorandum of Articles in their own format or are there any prescribed format available or will be made available by the central bank-Nepal Rastra Bank for this purpose.

This ordinance has given the full authority to NRB for monitoring, inspection, supervision etc. NRB is vested with the power to fix interest rates in lending and deposits and the Act also states that NRB can also delegate this authority to the individual banks themselves. However, such delegated authority can be taken bank. This makes banking more risky; it indicate that NRB is interest to take control on fixation of interest rates as when required.

In an article published written by Mr**.** Atma Shrestha (2003: 34) in New Business Age entitled “Entrepreneur-Friendly Loan Policy” has reviewed the present loan policy with main focus of the loan decision being based on the collateral. He argues that only collateral should not be considered as the basis of the loan decision.

Access to finance is vital element for entrepreneurship development in the country. Without it one cannot think of starting business of any sort. It’s mainly due to this reason; most of the students after completing there single-mindedly look for employment opportunity. No other options, mo matter how lucrative and attractive it would be entering into their mind. It has created huge pressure in the labor market. In the absence of entrepreneurial activities in the country, employment opportunity will be very limited and even qualified and competent people do not get job. The established very limited and even qualified and competent people do not get job. The established very limited and even qualified and competent people do not get job. The established notion of the Nepalese bankers that money lent to the wealthy people based on collateral is safe. But is not actually a safe assumption in the face of greater difficulty in loan recovery from these people. Also, this particular segment of market is already over-banked. With the worsening business performance of the Nepalese corporate sector mostly due to the poor management compounded by other factors like sluggish economic conditions and political instability, banks must now explore newer market segment for their sustained growth and success.

Under this backdrop, Nepalese commercial banks must change their policy and must understand that event the people living in the low and middle level of economic pyramid can potentially be lucrative market. They can ignore them only at their peril, especially at the time when the competition in the market consisting of people at upper level of economic pyramid can potentially be lucrative market. They can ignore them only at their peril, especially at the time when the competition in the market consisting of people at upper level of economic pyramid is very intense and has already saturated. In this context, potential entrepreneurs armed with skills, knowledge and readiness to take plunge in the business word can form a formidable market opportunity for the Nepalese banking industry-only if it can come out of the cocoon of traditional collateral-driven lending approach.

At the time when Nepalese banking industry is confronting with the increasing NPA, it might seem unwise and untimely to suggest that commercial banks extend loan to the potential entrepreneurs without collateral. It is not that they must ignore the collateral altogether while making loan decision. Collateral may be one of the important elements of the loan decisions. But this should not be a pre-condition for any loan decision. Lesson should be learned from the past experience of this loan policy that collateral alone does not ensure quality of loan decision. The fluctuation and stagnancy in the real state business has further reinforces this view. More important, Nepalese bankers must themselves have to have entrepreneurship spirit which means, they should not hesitate to take educated risk by giving more weight to the entrepreneurship dimension of the loan proposals while making loan decision. The ability of lending is identifying and investing a distinct competitive advantage in the crowded market. However it’s essential that any government rules and regulations that inhibit the promotion of entrepreneurship in the country must be abolished.

Entrepreneurship development is one of the important conditions for the economic growth of a country. There must be the sprout of entrepreneurship activities in the country for rapid economic growth and progress. However it does not happen automatically. We must create necessary conditions and environment where people with skills, knowledge and hunger to make money by starting their own business ca get easy access to capital.

The ordinance relating to banks and financial institutions has been promulgated that has been bought into existence effective February 4, 2004. The banks and financial institutions Ordinance, 2004 has replaced the existing Agricultural Bank Act, 2024. Commercial Bank Act, Development Bank Act, and Nepal Industrial Development Corporation Act and Finance Companies Acts and has bought all such institutions under the preview of a single Act. Though this ordinance came as an achievement in the financial sector reform program, it's being a matter of debate among the various finance experts that the ordinance having six months existence time should be enacted? At this time since there is no parliament in the country and the parliament is authorized to enact permanent law. It is obvious that the financial sector must go through uncertainty in the future. The ordinance, popularly called as Umbrella Act.

In an article "Comments on Umbrella Ordinance, 2004", published in new business Age, Mr. Tirth Upadhyay**,** President of ICAN has expressed clearly described the Ordinance along with his views? The Ordinance is comprehensive and prescribes in detail the provisions for licensing, incorporation, governance and merger and dissolution procedures for banks and financial institutions (FIs). This is a significant improvement over the existing Acts but apprehension is expressed about the discretionary power that the Ordinance has vested on Nepal Rastra Bank (NRB).

The ordinance is divided into 12 chapters and contains altogether 93 sections. The first chapter defines the various terms used in the Ordinance but has conspicuously omitted to define" security" and "collateral" among some important terms. These words have been frequently used in relation to lending activity but in the absence of universally acceptable definition the ongoing anomalies owing to the ambiguity are expected to continue though it has been clarified that the financial institutions henceforth can lend against personal or corporate guarantees.

Second chapter specifies the procedures for establishing a bank or financial institution and has brought transparency in licensing procedure. The authority has to either issue the license within 120 days of application or notify the reason of refusal within the said period. Further, a foreign bank's presence in Nepal either though a joint venture or branch banking is legally mandated. This provision will probably meet the long outstanding demand of the donors and conforms to Nepal's entry to WTO. Buying back of its share by a financial institution, a unique provision is legal slated by this ordinance, and that could be considered progressive. But it has failed to explain the objective of such provision and at the same time appears to be too restrictive to implement. The ordinance h failed to prescribe condition for enhancing the stake of joint venture partner, fresh issue of shares to strategic partner, issue under Employees Stock option plan and preferential issue that is vital from the investor's perspective.

Chapter 3 deals with the constitution and Board of Directors and appointment of CEO. Henceforth, in addition to directors appointed by the shareholders, meeting, the FIs must have one independent director in its Board appointed from amongst the names in a roster maintained by NRB. Also, the academic qualification of remaining directors has been prescribed that requires that $2/3^{rd}$ of all directors must possess required academic qualification and experience but it has failed to ensure that people of requisite qualification are elected by the general meeting. Similarly, academic qualification for a position of CEO is also prescribed and his /her tenure is limited to four years. But the intention for limiting the tenure of such paid executive remains unexplained. It might prevent young and dynamic person from taking this leadership position. Further, the authority and responsibility specified are not commensurate to the potion of a CEO. As the law does not guarantee vesting of executive authority on CEO, it may be played down at the hands of unscrupulous directors and might inconsistent with the principle of divesting management from investor to professional managers.

Chapter 4 places restriction on using bank of FI's name or carrying out financial transactions by institutions other than those licensed by NRB as per the Ordinance.

Chapter 5 deals with capital adequacy, reserves and provisioning for NPA's. But the more it has tried to be transparent, the more it has vested discretionary powers with NRB. To protect the interest of depositors, the prime concern of legislatures in drafting the law should be continued maintenance of adequate capital and such an important matter should not be left to the discretion of NRB. The lesson should be learnt from the past experiences where NRB's leniency sent two largest banks technically bankrupt. In this regard, it may be pertinent to remind why the Basel Committee recommendation on capital adequacy (that is universally acceptable) is not being made mandatory obligation on the part o the promoters is not created to meet the capital gap within specified time. Such an obligation is vital for protecting the depositor's interest. As has been the case with the two largest banks (i.e. Nepal Bank Ltd. And Rastriya Banijya Bank) and a few other private sector banks in Nepal, continued flouting with NPA's has eaten away not only their equity but the depositor's money as well.

Chapter 6 prescribes the financial transactions that banks a FIs are empowered to undertake. It has attempted to include all types of traditional financial transactions hitherto undertaken by a bank or FI but has failed to visualize the requirement of a modern banking like debt securitization swap and hedge transactions and dealing in other financial derivatives. The finance company will be benefited with this Ordinance as they are now authorized to accept interest free deposit.

Regulatory, inspection and supervision responsibility with regard to FIs continue to remain with NRB. The new provision has enlarged the scope of NRB's regulatory role. Banks set up with foreign shareholding will now be required to submit to NRB the inspection reports prepared by their headquarters. Severe penalty including suspension of Board or taking over the management of FIs has been prescribed if the result of NRB inspection indicates non-compliance with its directives or if the FIs are found to be guilty of engaging in activities that are detrimental to the interest of the shareholders or the depositors.

The deregulated interest rate regime appears to be drifting away as the Ordinance has empowered NRB to intervene in rate fixation but it does not specify the conditions that would oblige NRB to do so. Looking at the current rate of interest offered on deposit on FIs that has gone below the inflation rate, NRB intervention could bring relief to thousands of small depositors especially old, disabled and pensioners whose lifetime saving is at stake.

Loan disbursement and its recovery procedures are covered under Chapter 8 that re-establishes the NRB's authority to regulate lending and minimize the chances of loan going to an unscrupulous borrower or diversion of the funds. The Ordinance has specifically provided for the compulsory registration of all charges on assets pledged as collateral but the agency responsible for such registration (other than real estate) is not identified. The authority of FIs in loan recovery has been extended and it may now reach to other assets of the borrower in case the security for loan falls short or becomes inadequate. The hitherto requirement of disposal of non-banking assets within seven years has been done away with. It may result in accumulation of significant unproductive assets in FIs balance sheet. The role of Loan Recovery Tribunal has been undermined and no role is envisaged for Asset Management Company that is in the offing.

The role of the auditor of FIs has been extended and it goes beyond the scope of expertise of accounting profession. Auditors shall require among others, to certify whether FIs have acted (or failed to act) to protect the interest of depositors or investor and whether the business of FIs has bee conducted satisfactorily. Basis of such opinion is not outlined and accordingly it will serve purpose other than becoming a ritual.

Chapter 10 deals with merger that permits FIs to merge with other FIs only. This is a new provision but does not prescribe the circumstances when such merger will be permitted. The missing part on merger is the safeguard of interest of minority shareholders. It does not entitle shareholders opposed to the merger to ask for compulsory acquisition that is vital for promoting foreign investment.

Chapter 11 prescribes penalty for various offences that could be both various offences that could be both civil and criminal. Chapter 12 has laid down procedures for voluntary winding up of FIs, arbitration and miscellaneous administrative and operational procedures. The client confidentiality is guaranteed but with so many restrictive sub-clauses it is doubtful if the objective would ever be met. Similarly depositor's right is clearly protected by reiterating that there would be no other claimant on deposit kept with FIs other than the depositor himself of his nominee but with such right. The state may interfere in one or other pretext defeating the intension of law and lessening the confidence in the banking system.

For the first time, the law has taken cognizance of international terrorism and NRB is empowered to suspend operation of account related to organization of account related to organization or individual associated with such activity. But it has omitted any anti-money laundering provision. Probably, a separate Act is being envisaged to deal with such transaction.

In conclusion, it could be said that the Ordinance is comprehensive and deals with significant aspect of operation of FIs. However, attempts should be made to limit NRB's discretionary power by framing transparent, prudent and unambiguous policies and regulations. Further work would be necessary to integrate the country's financial sector with international financial sector with international financial market and effort should be directed to encourage adoption of international bet practices like International Financial Reporting Standards (IFRS), International standards on Auditing (ISA). Bassel Committee Recommendation etc.

2.3.3 Review of Previous Thesis

Raja Ram Khadka (2007) in his thesis “A study on the Investment Policy of Nepal Arab Bank Ltd. in comparison to other joint venture banks of Nepal” has compared investment policy of NABIL with NGBL and NIBL. Mr. Khadka has found out that the liquidity position of NABIL is comparatively worse than that of Nepal Grindlays Bank Ltd. (NGBL) and Nepal Indosuez Bank Ltd (NIBL). It is also comparatively less successful in on-balance sheet utilization as well as off-balance sheet operation than that of NGBL and NIBL. In case of profitability ratio he has concluded that the profitability position of NABIL is comparatively not better than that of other joint venture banks (JVBs). NABIL is more successful in deposit utilization but fails to maintain high growth rate of profit in comparison with NGBL and NIBL. He has recommended that NABIL bank should increase cash and bank balance to meet loan demand. NABIL’s loan and advances to total deposits ratios are lower than that of other JVB’s to overcome this situation, NABIL is strongly recommended to follow liberal lending policy and invest more and more percentage amount percentage amount of total deposits in loans and advances. He has focused his study on the investment policy of Nabil bank and has taken NGBL and NIBL average ratios as banking average. Mr. Khadka has recommended to adopt liberal lending policy however has not explained regarding liberal lending and invest more and more percentage amount of total deposits in loans and advances. However while adopting liberal policy on lending he has not explained the consequences like bad debt, default loan, which may arise due to very flexible and liberal lending policy. He has also not explained the regarding what is good liberal lending policy.

A thesis study conducted by Lila Prasad Ojha (2008) on “Lending Practices: A study on Nabil Bank Limited, Standard Chartered Nepal Limited and Himalayan Bank Limited” has found out that the measurement of lending strength in relative term has revealed that the total liability to total assets of SCBNL has the highest ratio. However, the performance of other two banks has not deviated far from the mean ratio of SCBNL and the combined average. SCBNL tendency to invest in government securities have resulted with the lowest ratio of loans and advances to total assets ratio. The steady and high volume of loans and advances throughout the years has resulted Nabil ratio to be the highest. The ratio of loans and advances and investment to deposits ratio has measured the portion of total deposits that is used to increase the income of the banks irrespective of the portfolios of its application. Nabil has deployed the highest proportion of its total deposits in earning activities and this ratio is significantly above the ratio of other two banks. The combined ratio is highly deviated from the mean ratio of Nabil and SCBNL. This is the indicative of that in fund mobilizing activities Nabil is significantly better than SCBNL.

He has further concluded that the overall liquidity strength of SCBNL can be considered the best among the banks. However the liquidity risk arising from interest rate in SCBNL is the most likely. Since the market is highly sensitive towards the interest rate and SCBNL has generally been offering low interest rate as compare to other banks. The analysis of lending strength of HBL in Loans and Advances is the best. However Loans and advances, investments to deposits ratio have upgraded the performance of Nabil. If HBL succeeded in collecting the less cheaper sources of fund in future, the lending strength of HBL would push the performance of Nabil and SCBNL far behind in the coming future. Also the contribution made by HBL in the productive sector of economy is highly appreciable and the best among these three commercial banks. The highest growth rate, proportionately high volume of loans and advances and the best contribution in agriculture and priority and the high level of deposits mobilization of HBL has put this bank in the top position in the lending function as demand by national priority, national development. On basis of the findings and conclusions he has recommended for the banks as the liquidity position of all these three banks is found to be high. He has recommended the banks to look upon new area of lending and investment. The rural economy has always been realizing the loan needs and the dominance of non-organized moneylender in this area has been prevailing. To compromise between the liquidity and loan need of rural economy these banks are highly recommended to expand their loan in this area. SCBNL's contribution in loans and advances is the lowest and this has low degree of variation and low growth rate as compare to Nabil and HBL.SCBNL is recommended to give extra priority on productive and priority sector loan. The increasing provision on loan loss and high volume of non-performing assets in Nabil and HBL certainly attracts the high attraction of any person interested with these banks. The high volume of HBL non-performing assets may have caused due to the failure of industrial and agricultural sector. Nabil's increased non-performing, assets may have caused due to the accumulated bad debts that is kept behind the curtain to show the efficiency of management. He has used different statistical tools like standard deviation, correlation, trend analysis and financial tools for the data analysis and presentation. In his study he has also taken sector wise loan-priority sector, productive sector etc. The different sector wise loan classification are presented and analyzed.

Only secondary data has been used for the study, the overview of the theoretical aspect of the lending practices of the banks has not been analyzed.

A study submitted by Suman Mishra (2008) entitled "Credit management of Everest Bank Limited" illustrate that liquidity position & cash reserve ratio shows the more liquidity position. Cash and bank balance to interest sensitive ratio shows the bank is able to maintain good financial condition. Cash and bank balance to current assets ratio shows that the bank's sound ability to meet the daily cash requirement of their customers deposit. That is why liquidity position of the bank is the better. In the aspect of profitability position, interest income to interest expenses ratio shows the more profitable salivation. In addition, total income to total expenses ratio shows the overall predominance of the bank is satisfactory operating income. Return on loan advances are showing position that is more profitable on of the EBL. Analysis of the assets management ratio, loan advances to total assets ratio shows the better performance but loan and advances to total deposit position in minimum than the averages. Whereas investment in loan and advances is safely and not taking more risk. That's why assets management position of the bank shows better performance in the latest year. After analyzing the lending efficiency of the bank, the loan loss provision to loan advances indicator shows the better performance in the latest year. The interest expenses to total deposit ratios shows the improving efficiency of the bank. EBL bank has sufficient liquidity. It shows that bank has not got investment sectors to utilize their liquid money. This is to recommend that Cash and bank balance of EBL bank is high. Banks efficiency should be increased to satisfy the demand of depositor at low level of cash and bank balance does not provide return to the bank. Therefore some percentage of the cash and bank balance should be invested in profitable sectors. Bank should open their branches in the remote area with the objective to provide the banking services and minimum deposit amounts should be reduced. The main objective of this study is to evaluate the credit management of Everest Bank Limited. Besides, there may be other objectives as well like to examine the impact of deposit in liquidity, loan management procedure, assets management and lending efficiency of the Everest Bank Limited.

A thesis conducted by Subi Joshi (2009) on "A study on financial Analysis of NIBL" has found out that the analysis of the banks shows that the deposit have bee increasing gradually during the study period. However the rate of increase was comparatively low. Total loans and advances have been also increasing. The total investment of the bank has been increasing over the years, which is mainly due to bank strategy of safe lending and also a as a result of increase in customer deposits and limited opportunities for prudent lending. As the loan and advances from the bank is increasing provision for loan loss has also been increasing. The bank has been holding adequate provision for losses over the years and the general loan loss provision was 4% in average of the total risk assets. In her study she has recommended that the bank should focus more on non –risky lending opportunities such as mortgages, housing loans and personal loans. It should carefully examine safety of principal as well as sources of repayment, capital structure, requirement and loan worthiness of a borrower for providing loans. In other words, loan manager should evaluate loan risk by considering well-known five C's of loan viz. character, capacity, capital, collateral and conditions. The financial analysis of NIBL has been analyzed and interpreted in this thesis. Analysis on terms of loan and advances is simply presented with comparison with the previous year data only. On the loans and advances part, it has only simple comparison been done. Whether the loan classifications and provisioning of loans, investment in priority and deprived sector loan investment regulation of NRB's directives has been followed or not has not been explained. The review of above relevant literature has contributed to enhance fundamental understanding and knowledge, which is required to make this study meaningful and purposive. There has been lots of article published related to investment policy published related to investment policy, loan and advances of commercial banks. There are various researches conducted on investment analysis and policy of commercial banks, Impact and Implementation of NRB guidelines in commercial banks but there are a few research conducted on lending aspect of commercial banks.

A study conducted by Niva Shrestha (2011) on the topic 'A study on non-performing loans and loan loss provisioning of commercial banks' revealed that SCBNL had risk averse attitude o the management or they have policy of investing low in the risky assets i.e. loans and advances as compared to NBL AND NABIL because the loans and advance to total asset ratio of NBL, NABIL & SCBNL during the study period was appeared to be 52.3%. 47.0% and 29.34% respectively. The SCBNL has higher proportion of the investment in risk free or nominally risky asset like treasury bills, National Saving bonds etc. In the same way, the proportion of non-performing loan with regard to total loans of NBL, NABIL & SCBNL was found to be 48.37%, 10.67% & 4.38% respectively. That means 51.63%, 89.33% & 95.62% of total loan of NBL, NABIL & SCBNL was found to be performing loan. Not only the public sector bank, even private sector bank like NABIL has higher proportion of non-performing loan. However, in recent years NABIL has shown significant decrement in non-performing asset, which are the result of effective bank loan management and its efforts of recovering bad debts through the recovery of establishment of recovery cell. However the better activity ratio of SCBNL has proved this bank the best in managing the lending portfolio according to the demand of profit-oriented business. The high volume of lending activities and high volume of productive sector loan of Nabil has put this bank in the top position in absolute term.

A study conducted by Rajendra Shrestha (2012) on the topic ‘A study on non-performing assets of Nabil and SCBL’ In the same way, proportion loan loss provision of NBL was found to be significantly higher (i.e. 40.17%) as compared to other two commercial banks. The proportion of NABIL and SCBNL was found to be 5.69% and 4.49%. The average ratio of provision held to non-performing loan of NBL, NABIL & SCBNL was found to be 80.03%, 57.85% and 122.32% respectively shows that the SCBNL has maintained adequate level of provision against non-performing loan where as NABIL was found to be comparatively lower. The NBL was found to be an average position.

A Study conducted by Prashant Parajuli (2012) entitled “Credit management of joint venture banks” states that concept of financial reform emerged with economic liberalization. Nepal Government and NRB published the economic and monitory policy to support such reform. As the result of these policies various jointed venture bank established in the private sector.
Under the structural adjustment program of the IMF the financial sector was further liberalized in 1987. The focus of NRB was placed on indirect monitory control. The agricultural development bank of Nepal and Nepal industrial development corporation were allowed to issue debentures to increase their financial resources. NRB strengthened its regulation and supervision of banking and financial institution and the commercial banks were granted virtually freedom to fix their interest rates on deposit in July 1989 except for the priority sector credit. The credit information Bureau was established in 1989. NRB started to control the financial institutions with strengthening to supervision and monitoring system. It has also pointed out the need of having deposit taking institutions act which it’s on umbrella act of all deposit taking institution. Some of the main elements of financial sector reform strategy published by NG in year such as restructuring the government owned banks strengthening the commercial banks regulation accounting and auditing system improving the regulation and supervision on non-banking deposit institutions. The main statement of the

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

A study conducted by Bishnu Neupane (2012) entitled 'A Study on Loan Risk Management of Commercial Banks in Nepal with reference to Nabil Bank Ltd. And SBI Bank Ltd.' To fulfill the objective of the study all secondary data are compiled, processed and tabulated in the second last chapter. To make the analysis easier and understandable line chart are also used. This study also bounded by many limitations, such as secondary data, unreliability of time and resources are the constraints of the study. In this study the focus is given to the quantities. Qualitative factors are not studies. Therefore the study may not be generalized in all cases and accuracy depends upon the data collected and provided by the concerned organization. This study is mainly based on secondary and primary data provided by concern companies and security board of Nepal (SEBON). Among the listed companies NABIL and SBI have selected as a sample of study. The main objective of the study is to assets the Loan Risk. However due to the time and resource constraints all types of analysis are not conducted and information are gathered from the period of 2007/08 to 2011/12. The major risk in NABIL and SBI is associated with loan decision as the proportion of loan risk on total risk is high. Based on the response of structured questionnaire, it has been found that the proportion of loan risk on total risk is more than 60 %. Similarly, the financial statement analysis of these banks also indicates that the portion of loan risk is more than 60 %. The average loan and advances to total asset ratio of NABIL and SBI is 65.19 % and 68.14 % respectively. This means that loan and advances hold major portion in total asset. Similarly, the mobilization of deposit in loan, which is indicated by Loan Deposit ratio, also suggests that major portion of deposit is invested on loan and advances. The average CD ratio of NABIL and SBI is 86.43 % and 81.52 % respectively. Similarly, the interest income holds 88.38 % and 85.12 % of total income in NABIL and SBI respectively. This figure indicates that loan risk has covered significant ground in these banks. The loan risk of these banks mainly arises due to non-payment of loan by borrowers, poor appraisal of borrowers financial condition and substandard collateral. Poor tracking of borrowers and improper diversification of lending across industries also result in higher loan risk in commercial banks. The major problems in loan risk can be categorized into three areas of concentrations; loan processing, and market- and liquidity-sensitive loan exposures. The main indicators of loan default (i.e. non-performing loan (NPL)) indicate that average NPL of SBI is more than that of NABIL (i.e. 2.98> 0.94). However in recent years (i.e. 2004/05), SBI has been able to reduce the NPL significantly down to 0.39 %. Against the NPL, SBI has provisioned more reserve than NABIL.

A study submitted by Yogendra Maharjan (2013), entitled, "Comparative Study on Non-Performing Assets of Himalayan Bank Ltd. & Lumbini Bank Ltd." have objective of determining the basis of floating loan, causes, impact remedial action and sector which cover high NPA. Further he desires to know the major internal, governmental and regulatory causes that help the NPA growth. In this study he finds that external factors are more responsible than internal factors in the conversion of good loans to bad/loss. He further states among the external factors, factors related with political and economic situation of the country and borrower related factors are found most crucial in the conversion of good loan into bad/loss. While looking for the internal factor it is found that insufficient control and monitoring system are the most contributing factors in the growth of NPA's. Further he finds that lack of assets management companies, execution of the court proceedings and cumbersome legal procedure and economic recession and political instability are the main reasons for the growth in NPA. Finally he recommends that all Nepalese commercial banks should maintain loan loss provision in accordance to the NRB directives. Similarly he says proper financial analysis should be needed before providing the loan to borrower and banks should provide necessary training regarding NPA management to the managers and staffs who are involving in managing NPA. Further he refers the improvement in corporate governance including elimination of cronyism and transparency of corporate management should be advanced under government initiatives. Also suggests that banks having high level of NPA should take immediate actions towards recovering their bad loan as soon as possible.

A study conducted by Sangita Poudel (2013) on the topic 'A study Loan Management of Financial Institution of Nepal" the loans and advances to total deposit ratio of NBL, NABIL and SCBNL during the study period was found to be 57.63%, 56.35% and 35.94% respectively. It indicates that SCBNL has the most consistent and variability during the study period where as the NBL has the higher consistent and variability as comparison to other two banks. NABIL has the moderate level of consistent and variability.

A study conducted by Sagar Koirala (2013) entitled ‘A Study on Credit Management of NABIL Bank Limited’ present that in bank, lending is the most risky business among all. There is no risk in collection of deposits. But only small careless or mistake in the loan portfolio and procedure can shock the bank profitability and survival, when bank is unable to recover the loans with interest. So there should be well managed regulations lending aspects of a bank. Such regulations should be strictly followed while evaluating the loan proposal and providing loans. The present study has been undertaken to examine and evaluate the Credit management of NABIL. The study is based on secondary data from the fiscal year 2008 to 2013. The study has resorted mainly to secondary data that has been first processed and analyzed comparatively. For the fulfillments of the objectives of the study many analyses have been done. Both financial as well as statistical tools have been used to analyze and interpret the facts and information. Under financial tools, various financial ratios related to the investment function of commercial banks i.e. assets management ratio, profitability ratio, leverage ratio, and lending efficiency ratio have been studied and interpreted. Under statistical analysis, some relevant statistical tools, i.e. correlation co-efficient have been studied. This analysis gives clear picture of the credit management of the bank. Financial & statistical tools are used and secondary data were compiled, processed, tabulated and graphed for better presentation. The study conclude that Success of Nabil is milestone in the banking history of Nepal as it has been successful in maintaining a steady growth rate over this period. A notable strength of the bank’s achievement is Nabil registered Operating profit NPR 1706 million. This is 8.66% growth compared to last year the highest in the banking industry% to reach NPR 33030 million in the year. This shows there has been improvement in yield on loan. Deposit growth record 24.26% reaching NPR 46410 million this compared to growth of 11.94% in the market. Likewise loans and advance grew by 17.97%. NABIL has earned a net profit of Rs 1138 million for the fiscal year 2011/12 and this comes to be 10.38% more as compared to the same period in the previous fiscal year. The bank is successful in credit management in last five year due to its proper management and good policies.

2.4 Research Gap

Previous researchers analyzed the loan management by using secondary source of information in terms of loan practices or lending practices. But actually speaking, loan management can be determined by various factors. Among of them, banking environment and management quality in terms of loan may be the strong determinant for loan management in banks. In present context, these are the heart issue in Nepalese commercial banks. The previous scholars could not submit the present facts. Present study tries to define loan management by applying those various facts. It can be very useful or important in this area. Thus, present study may be valuable piece of research work.

CHAPTER - III
RESEARCH METHODOLOGY

This chapter describes the methodology employed in this study. Research methodology is a way to systematically solve the research problem. In other words research methodology describes the methods and processes applied in the entire aspect of the study. This chapter describes research design, population, sampling procedure, sources of data and method applied for the analysis of data.

3.1 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance. It helps the investor to obtain answer to the questions of research and also helps him to control the experimental, extraneous and error variance of particular research problem under study. So the formidable problem that follows in task of defining research is preparation of design of the research project popularly known as research. The purpose of employing the descriptive method is to describe the nature of a condition, as it takes place during the time of the study and to explore the cause or causes of a particular condition. According to Creswell (1994), the descriptive method of research is to gather information about the present existing condition. Since this study is focused on the loan management two commercial banks: Bank of Kathmandu and Nepal commerce and credit bank. Descriptive method is the most appropriate method to use.

3.2 Population and Sample

The term “population” of universe for research means the universe of research study in which the research is based” (Pant, 2000:75). At present there are six joint venture commercial banks operating in Nepal. All the 32 commercial banks are the population of this study. Among them Bank of Kathmandu and Nepal Credit and Commerce Bank are chosen as sample for the present study on the basis of good financial performance.

3.3 Nature and Sources of Data

This study conducted on the basis of secondary data. Secondary data relating to "Investment" e.g. deposit, loan and advances and profit/loss that have been directly obtained from the balance sheet and the P/L a/c of concerned banks annual reports, collected from number of institution and authorities like NRB budget speech, NRB published books, bank bulletin, newspaper, previous studies, security exchange board, Nepal stock exchange Ltd. All the secondary data are observed, processed and tabulating in the time as per need and objectives. Various data and information are collected from the economic journal, periodicals, bulletins magazines and other published and unpublished reports and documents from various sources.

3.4 Data Collecting Procedures

The data used in this study were prepared for the sole purpose of sample banks, conserved personnel, Nepal Rastra Bank and other bulletins. Similarly, researcher visited TU, Centre library (Kirtipur), Library of central department TU, Library of Nepal Commerce Campus (Minbhawan), Library of Shanker Dev Campus (Kathmandu).

3.5 Tools and Techniques Employed

As mentioned earlier, this study is confined to the single analysis of loan risk management of the finance company. To reach the objectives, the collected data are computed and analyzed using financial and statistical tools.

3.5.1 Financial Tools

The measuring instrument, which can be used in financial analysis, is known as financial tools. It helps to calculate the relationship between two financial variables on ratio and percentage basis.

3.5.1.1 Ratio Analysis

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

a) Liquidity Ratio

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

i) Cash and Bank Balance to Total Deposits Ratio: - Cash and bank balance is said to be first line defense of every bank. The ratio between the cash and bank balance and total deposit measures the ability of a bank to meet the unanticipated call on all types of deposit. Higher the ratio greater will be the ability to meet the sudden demand of deposit. But every ratio is not desirable since bank has to pay interest on deposit. This also maximizes the cost of fund to the bank.

$$Cash\ and\ Bank\ Balance\ to\ Total\ Deposits\ Ratio = \frac{Cashand\ Bank\ Balance}{Total\ Deposits}$$

Where**,**

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

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

$$Cash\ and\ Bank\ Balance\ to\ Current\ Assets\ Ratio = \frac{Cashand\ Bank\ Balance}{Current\ Assets}$$

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

$$Inv.on\ Gvt.\sec urities\ to\ Current\ Asset\ Ratio = \frac{Investmenton\ Govt.Securities}{Current\ Assets}$$

Where**,**

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

b) Assets Management Ratio:

"A set of ratio which measure how efficiently a firm is managing its assets and whether or not the level of those assets is properly related to the level of operation. In this study this ratio is used to indicate how effectively the selected banks have arranged and invest their limited resources. The assets management ratios measure how effectively the firm is managing its assets. These ratios are designed to answer this question; does the total amount of each type of assets as reported on the balance sheet seem reasonable or not? If a firm has excessive investments in assets, then its capital cost will be unduly high and its stock price will be suffer" (Brigham, 1989:132).

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

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

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

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

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

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

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

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

v) Investment on Shares and Debentures to Total working Fund Ratio: Investment on shares and debentures to total working fund ratio shows the investment of banks on the shares and debentures of other companies in terms of total working fund. This ratio can be obtained dividing on shares and debentures by total working fund. It is calculated as:

$$\textit{Investment on Shares and debn. to TWF Ratio } = \frac{\textit{Investmenton Shareand Debenture}}{\textit{Total Working Fund}}$$

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

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

$$\textit{Return on Loan and Advances Ratio } = \frac{\textit{Net Profit / Loss}}{\textit{Loan and Advances}}$$

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

$$\textit{Return on Total Working Fund Ratio } = \frac{\textit{Net Profit}}{\textit{Total Working Fund}}$$

iii) Total Interest Earned to Total Working Fund Ratio: - This ratio reflects the extent to which the banks are successful in mobilizing these total assets to acquire income as interest. This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest. We have,

$$\textit{Total Interest Earned to TWF Ratio} = \frac{\textit{Total Interest Earned}}{\textit{Total Working Fund}}$$

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

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

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

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

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

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

$$\textit{Loan Risk Ratio} = \frac{\textit{Total Investment} + \textit{Loan and Advances}}{\textit{Total Assets}}$$

e). Growth Ratio: - The growth ratio represents how well the commercial banks are maintaining their economics and financial position. Higher the ratio batter performance of the bank and vice-versa. Under this topic four types of growth ratio are studied, that are directly related to the fund mobilization of commercial banks. The following ratios are calculated by using the formula of growth rate:

i) Growth ratio of total deposits

ii) Growth ratio of total investment

iii) Growth ratio of loans and advances

iv) Growth ratio of net profit

3.5.2 Statistical Tools

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

a) Karl Pearson's Coefficient of Correlation(r)

Correlation analysis is a statistical tool use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two sets of figures. In this study simple coefficient of correlation is used to determine the relationship of different variables. The data related to different periods are tabulated and their relationship with each other is drawn out. The value of correlation can range from -1 to +1. This tool is used for measuring the intensity or magnitude of linear relationship between two series. It measures correlation coefficient between two variables X and Y is usually denoted by "r" and can be obtained as:

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{\sum X^2 - (\sum X)^2}\sqrt{\sum Y^2 - (\sum Y)^2}}$$

Where,

n= number of observation in series X and Y

$\sum X$= sum of observation in series X

$\sum Y$= sum of observation is series Y

$\sum X^2$= sum of square observation in series X

$\sum Y^2$= sum of observation in series Y

$\sum XY$= sum of the product of observations in series X and Y

Value of 'r' lies between -1 to +1

r= +1, implies that there is a perfect positive correlation between the variables.

r= -1, implies that there is a perfect negative correlation between the variables.

r= o, means that the variables are uncorrelated.

b) Probable Error of Correlation Coefficient (PE)

Probable error of correlation coefficient tests the reliability of an observed value of correlation coefficient. It shows the extent to which correlation coefficient is dependable as it depends upon the condition of random sampling.

Probable error of correlation coefficient is denoted by PE and obtained as:

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

The probable error is used to test whether the calculated value of sample correlation coefficient is significant or not.

A few rules for the interpretation of the significance of correlation coefficient are as follows:

i. If r< PE, then the value of r is not significant i.e. insignificant.
ii. If r> 6 PE, then r is definitely significant.
iii. In other situations, nothing can be calculated with certainty.

c). Coefficient of Determination (R^2):

The coefficient of determination is a measure of the degree of linear association or correlation between two variables one of which happens to be independent and other being dependent variable. In other words coefficient of determination measures the percentage total variable independent variables explained by independent variables. Zero to one is the ranging measurement of this coefficient of multiple determinations. If R^2 is equal to 0.75, which indicates that total variation in the dependent variable. If the regression line is a perfect estimator R^2 will be equal to +1, when there is no correlation the value of R^2 is zero.

d) Least Square Linear Trend

Trend analysis is a very useful and commonly applied tool to forecast the future event in quantitative term on the basis of the tendencies in the dependent variable in the past period. Straight line trend implies that irrespective of the seasonal, cyclic and irregular fluctuation the trend value increases or decreases by absolute amount per unit of time. The linear trend values form a series in arithmetic progression.

Mathematically

Y = a+bx

Where, Y= value of dependent variable

a= y intercept

b= slope of trend line

x= value of independent variable i.e. time

Normal equation fitting above is

$\sum Y = Na + b\sum X$

$\sum XY = a\sum X + b\sum X^2$

Since $\sum X = 0$

$a = \sum Y/N$

$b = \sum XY/\sum X^2$

CHAPTER – IV

DATA PRESENTATION AND ANALYSIS

This chapter is the backbone of the research. In this chapter, both the primary and secondary data are presented in systematic manner. The sources of data were company brochure, annual report, website and library, and banks and stock brokers. Those collected data are presented in systematic formats and analyzed using different appropriate tools and techniques. In this chapter, in addition to that the relationship of the variables is presented in graphs and figures. The analysis of data consists of organizing, tabulating and performing statistical analysis. In this chapter, the secondary data, collected from different sources are presented in understandable from and analyzed separately using both qualitative and quantitative measures whichever is appropriate.

4.1 Financial Analysis

4.1.1 Ratio Analysis

Ratio is the relationship between two figures. They provide two important facts about the management: the return on investment and the soundness of the company's financial position. A single ratio will not depict a true picture of the unit. Hence a combination of ratios must be analyzed to drive a true picture. Ratio analysis has been already discussed in previous chapter. Here, different ratios of BOK and NCC will be calculated, analyzed and interpreted.

4.1.1.1 Assets Management Ratio

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

(a) Loan and Advances to Total Deposits Ratio

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

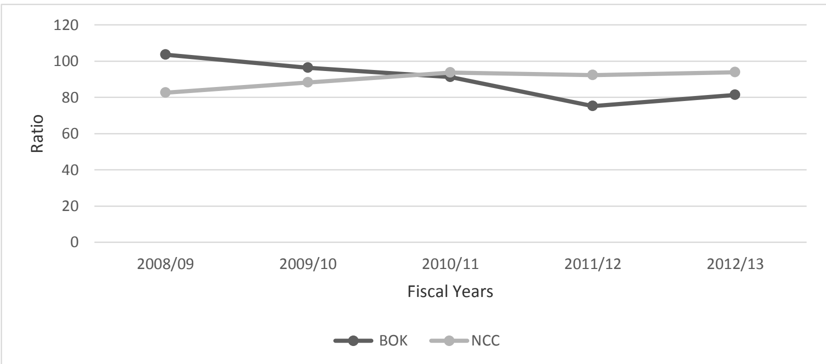
Table: 4.1

Loan and Advances to Total Deposits Ratio

Year	Ratio (%)	
	BOK	**NCC**
2008/09	103.47	82.65
2009/10	96.32	88.29
2010/11	91.30	93.76
2011/12	75.22	92.28
2012/13	81.41	93.87
Mean	89.54	90.17

(Source: Appendix-4)

Figure No: 4.1



A high ratio of loan and advances indicates better mobilization of collected deposits and vice versa. But it should be noted that too high ratio might not be better from liquidity point of view. The Table No 4.1 table shows that these two finance companies have mobilized their collected deposits in variable trend. In average BOK has mobilized 89.54% of its collected deposit in loan and advances that is slightly less than that of NCC. According to NRB directives above 70% to 90% of loan and advances to total deposit ratio is able to better mobilization of collected deposit. So all of the year both BOK and NCC has met the NRB requirement or it has properly utilized its deposit to provide loan.

(b) Total Investment to Total Deposits Ratio

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

Table: 4.2

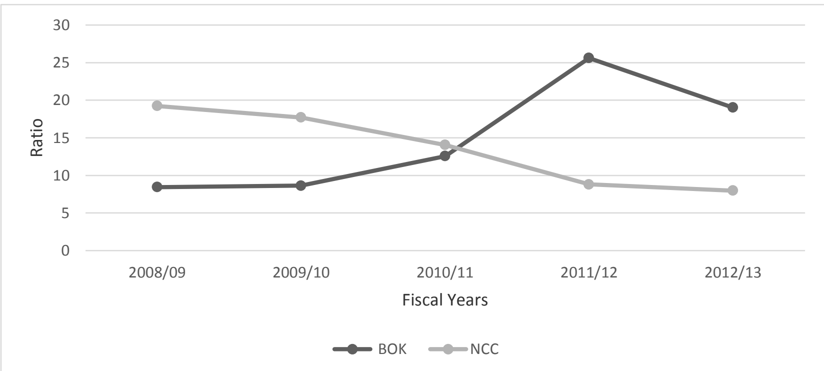
Total Investment to Total Deposits Ratio

Year	Ratio (%)	
	BOK	NCC
2008/09	8.42	19.25
2009/10	8.63	17.69
2010/11	12.57	14.03
2011/12	25.59	8.80
2012/13	19.03	7.96
Mean	14.85	13.55

(Source:- Appendix -5)

Figure: 4.2

Total Investment to Total Deposits Ratio



From the table & figure No 4.2, it is observed that the investment to total deposit ratio of BOK are increased except in 2012/13 whereas of NCC is in decreasing trend. The mean of the ratio of BOK and NCC are 14.85% and 13.55% respectively so BOK has higher ratio. It signifies BOK has successfully allocated its deposit in investment portfolio in comparison with NCC.

(c) Loan and Advances to Total Working Fund Ratio

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

Table: 4.3

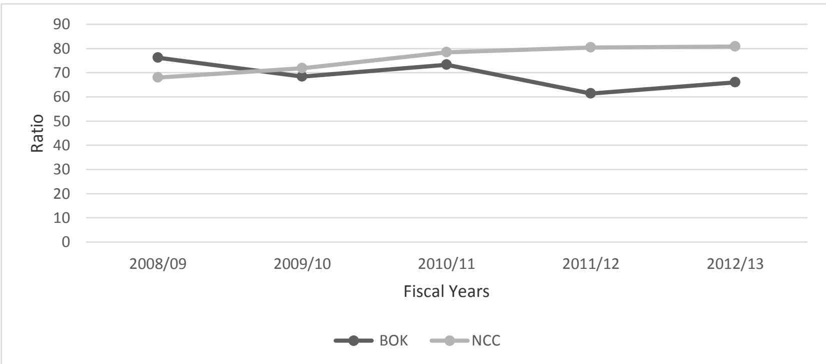
Loan and Advances to Total Working Fund Ratio

Year	Ratio (%)	
	BOK	NCC
2008/09	76.17	68.03
2009/10	68.45	71.86
2010/11	73.24	78.45
2011/12	61.36	80.45
2012/13	66.00	80.90
Mean	69.04	75.94

(Source: Appendix-6)

Figure: 4.3

Loan and Advances to Total Working Fund Ratio



Above table and figure 4.3 shows that loan and advances to total assets ratio of BOK is in fluctuating trend whereas ratio of NCC is in increasing trend. While observing their ratios; NCC is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio in each year.

The mean of BOK and NCC are 69.04% and 75.94% respectively. So NCC has higher ratio than that of BOK. It reveals that in total assets, NCC has high proportion of loan and advances.

(d) Investment on Government Securities to Total Working Fund Ratio

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

Table: 4.4

Investment on Govt. Securities to Total Working Fund Ratio

Year	Ratio (%)	
	BOK	NCC
2008/09	0.54	5.11
2009/10	0.51	4.43
2010/11	0	3.87
2011/12	0	1.49
2012/13	0	1.33
Mean	0.21	3.25

(Source: Appendix -7)

Figure: 4.4

Investment on Govt. Securities to Total Working Fund Ratio

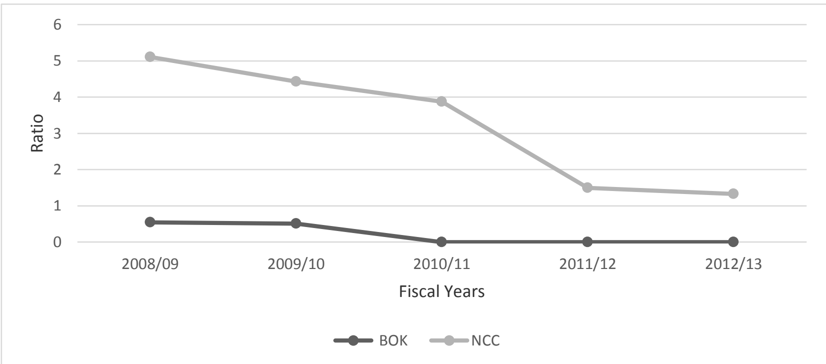


Table and figure No 4.4 shows that the investment on government treasury bills to total working fund of BOK is in decreasing trend in 2nd year and in all subsequent year these are zero whereas these ratio are in decreasing trend in all year except of NCC. The highest ratio of BOK is 0.54% and NCC is 5.11% in 2008/09. And the lowest ratio of BOK and NCC are 0% and 1.33% in 2012/13 respectively.

From the table we notice that mean ratio of BOK and NCC are 0.21% and 3.25% respectively. NCC has higher ratio in every year and mean too. It means NCC has invested more money in risk free assets out of its total assets than that of BOK . In another word BOK has emphases on more loans and advances and other short term investment than investment in govt. securities.

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

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

Table: 4.5

Investment on Shares and Debentures to Total Working Fund Ratio

Year	Ratio (%)	
	BOK	NCC
2008/09	1.52	0.64
2009/10	1.43	0.36
2010/11	0.56	0.14
2011/12	0.41	0.13
2012/13	0.40	0.40
Mean	0.86	0.33

(Source: Appendix -8)

Figure: 4.5

Investment on Shares and Debentures to Total Working Fund Ratio

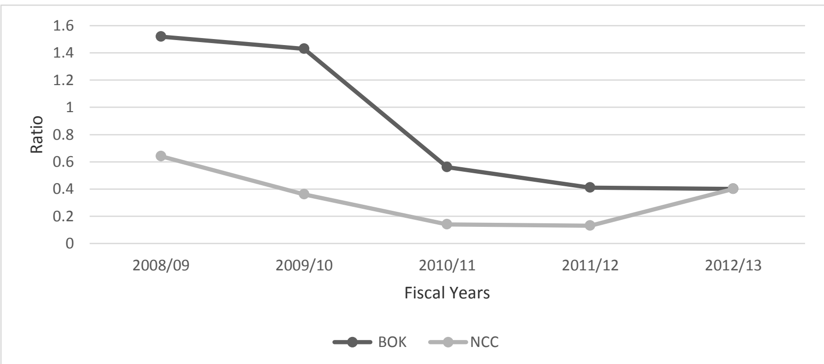


Table and figure No 4.5 shows that the investment on share and debenture to total working fund of BOK is in decreasing trend whereas these ratios of NCC are in decreasing trend in all year except in 2012/13. The highest ratio of BOK is 1.52% and NCC is 0.64% in 2008/09. And the lowest ratio of BOK is 0.40% in 2012/13 and of NCC is 0.13% in 2011/12. From the table we notice that mean ratio of BOK and NCC are 0.86% and 0.33% respectively. BOK has higher ratio in every year and mean also, it means BOK has invested more money in risky assets out of its total assets than that of NCC. In another word, NCC has emphases on more govt. securities rather than investment on share and debenture.

4.1.1.2Profitability Ratios

(a) Return on Loan and Advances Ratio

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

Table: 4.6

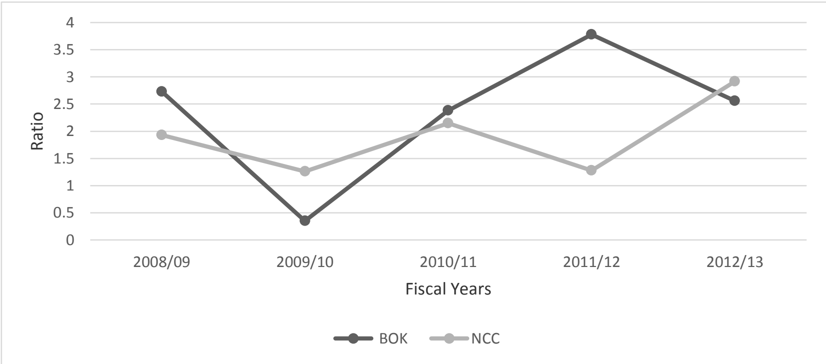
Return on Loan and Advances Ratio

Year	**Ratio (%)**	
	BOK	**NCC**
2008/09	2.73	1.93
2009/10	0.35	1.26
2010/11	2.38	2.15
2011/12	3.78	1.28
2012/13	2.56	2.92
Mean	2.36	1.91

(Source: Appendix-9)

Figure: 4.6

Return on Loan and Advances Ratio



Above table and figure No 4.6 shows that return on loan and advances ratio of BOK and NCC are in fluctuating trend. The highest ratio of BOK is 3.78% in the year 2011/12 and lowest ratio 0.35% in year 2009/10. The mean ratio is 2.36%. This shows the normal earning capacity of BOK in loan and advances. Whereas highest ratio of NCC is 2.92% in year 2012/13 and lowest ratio is 1.26% in 2009/10. The mean ratio is 1.91% of NCC.

From the table we notice that BOK has higher mean ratio. So it seems successful by generating higher ratio. It can be concluded that BOK has better utilized the loan and advance for the profit generation in comparison with NCC.

(b) Return on Total Working Fund Ratio

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

Table: 4.7

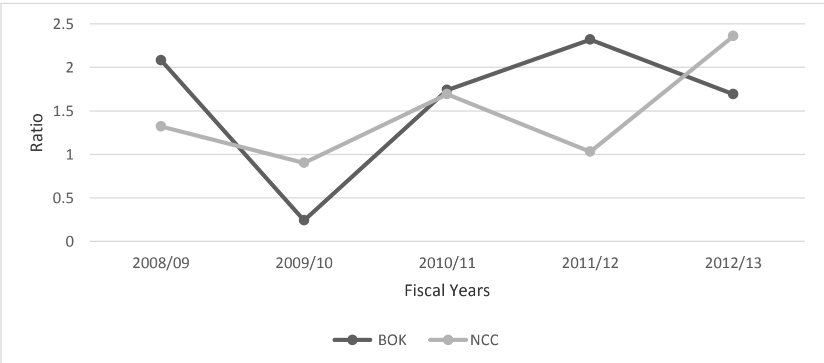
Return on Total Working Fund Ratio

Year	Ratio (%)	
	BOK	**NCC**
2008/09	2.08	1.32
2009/10	0.24	0.90
2010/11	1.74	1.69
2011/12	2.32	1.03
2012/13	1.69	2.36
Mean	1.61	1.46

(Source: Appendix-10)

Figure: 4.7

Return on Total Working Fund Ratio



From the table No 4.7, we notice that ROA of both companies are in fluctuating trend how ever BOK seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of NCC(i.e. 1.61%>1.46%)of total assets in an average.

(c) Total Interest Earned to Total Working Fund Ratio

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

Table: 4.8

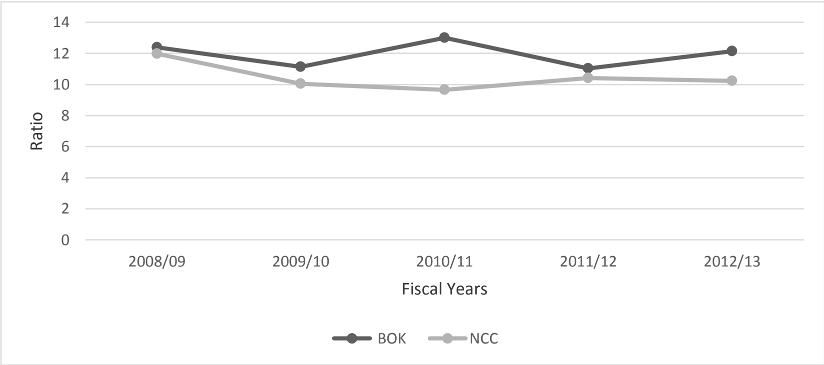
Total Interest Earned to Total Working Fund Ratio

Year	Ratio (%)	
	BOK	**NCC**
2008/09	12.38	11.98
2009/10	11.14	10.04
2010/11	13.00	9.66
2011/12	11.04	10.41
2012/13	12.15	10.24
Mean	11.94	10.46

(Source: Appendix -11)

Figure: 4.8

Total Interest Earned to Total Working Fund Ratio



Above table and figure No 4.8 shows that both banks have fluctuating trend of ratio. However, BOK seems more conscious about managing its assets in order to earn more interest ratio because it has higher ratio in each year and average ratio is also higher. BOK has 11.94% average ratio whereas NCC shows 10.46% average ratio. The mean ratio of BOK is more than that of NCC. In comparison, BOK seems effective in earning interest to some extent although it has lower earning of interest income but it must break the decreasing trend in coming year.

(d) Total Interest paid to Total Working Fund Ratio

This ratio actually reveals the paying capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the paying capacity of interest.

Table: 4.9

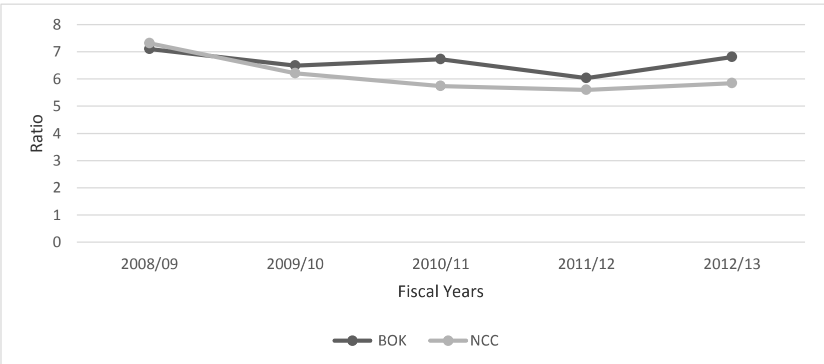
Total Interest Paid to Total Working Fund Ratio

Year	Ratio (%)	
	BOK	**NCC**
2008/09	7.10	7.32
2009/10	6.49	6.21
2010/11	6.73	5.74
2011/12	6.03	5.60
2012/13	6.81	5.85
Mean	6.63	6.14

(Source: Appendix -12)

Figure: 4.9

Total Interest Paid to Total Working Fund Ratio



Above table and figure No 4.9 shows that BOK has fluctuating trend of ratio whereas NCC has decreasing trend of ratio except in 2012/13. Due to the higher ratio in each year and average too of BOK, it seems less conscious about borrowing cheaper fund

4.1.1.3 Liquidity Ratio:

Liquidity refers to the ability of a firm to meet its short- term or current obligations. So liquidity ratios are used to measure the ability of a firm to meet its short-term obligations. Inadequate liquidity can lead to unexpected cash short falls that must be covered at excessive costs reducing profitability. In the worst case, inadequate liquidity can lead to the liquidity insolvency of the institution. To find -out the ability of the bank to meet their short-term obligations, which are likely to mature in the short period, the following ratios are developed under the liquidity ratios to identify the liquidity position.

(a) Cash and Bank Balance to Total Deposits Ratio

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

Table: 4.10

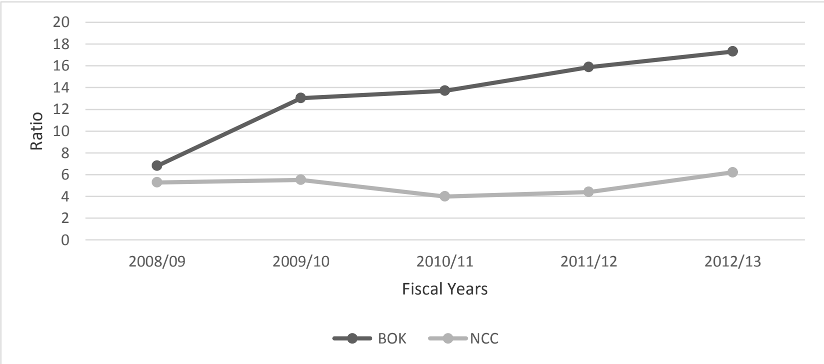
Cash and Bank Balance to Total Deposits Ratio

Year	Ratio (%)	
	BOK	NCC
2008/09	6.81	5.27
2009/10	13.04	5.51
2010/11	13.71	3.97
2011/12	15.87	4.39
2012/13	17.31	6.20
Mean	13.35	5.07

(Source: Appendix-1)

Figure: 4.10

Cash and Bank Balance to Total Deposits Ratio



From the analysis of Table No 4.10, cash and bank balance to total deposits ratio of the BOK is in increasing trend whereas ratio of NCC is in decreasing trend in 2010/11 and in other year these are in increasing trend. The higher ratio of BOK and NCC are 17.31% and 6.20% respectively in the same year i.e. 2012/13. The average ratio of BOK is greater than that of NCC (i.e. 13.35% > 5.07%). It signifies that BOK has sound liquid fund to make immediate payment to the depositors but BOK has excess liquidity rather than that of NCC because of poor investment opportunities.

(b) Cash and Bank Balance to Current Assets Ratio

This ratio reflects the proportion of cash and bank balance out of total current assets.

Table: 4.11

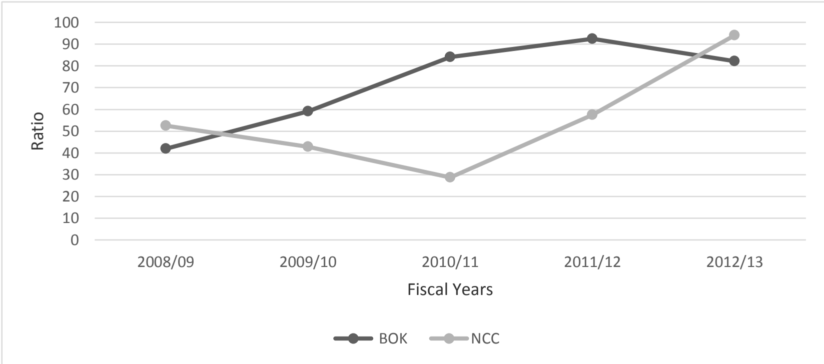
Cash and Bank Balance to Current Assets Ratio

Year	Ratio (%)	
	BOK	**NCC**
2008/09	42.01	52.56
2009/10	59.18	42.80
2010/11	84.14	28.74
2011/12	92.44	57.48
2012/13	82.17	94.09
Mean	71.99	55.14

(Source: Appendix -2)

Figure No. 4.11

Cash and Bank Balance to Current Assets Ratio



Above table and figure No 4.11, shows that the cash and bank balance to current assets ratio of BOK is in increasing trend except in 2012/13 and ratio of NCC is in fluctuating trend. The highest ratio of BOK is 92.44% in year 2011/12 and lowest ratio 42.01% in year 2008/09. The mean ratio is 71.99%. Similarly, the highest ratio of NCC is 94.09% in 2012/13 and lowest ratio is 28.74% in 2010/11. The mean ratio of NCC is 55.14%. While observing the data, we notice that BOK has higher mean ratio, it means BOK has slightly sound liquid assets than that of NCC.

(c) Investment on Government Securities to Current Assets Ratio

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

Table: 4.12

Investment on Government Securities to Current Assets Ratio

Year	Ratio (%)	
	BOK	**NCC**
2008/09	4.50	61.98
2009/10	3.23	42.26
2010/11	0	33.50
2011/12	0	22.37
2012/13	0	23.38
Mean	1.55	36.70

(Source: Appendix-3)

Figure: 4.12

Investment on Government Securities to Current Assets Ratio

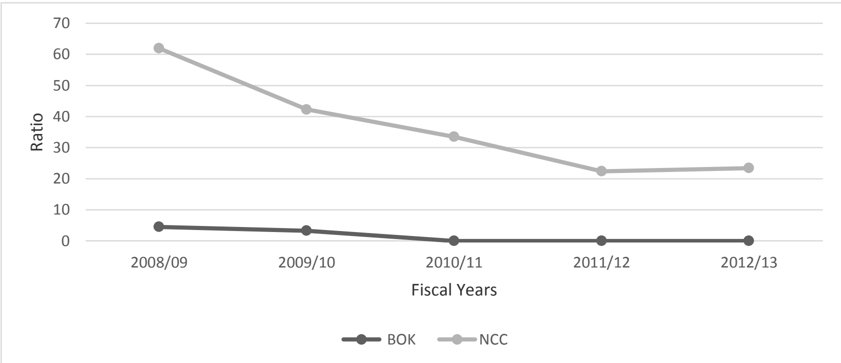


Table and figure No 4.12 shows that the investment on government treasury bills to current assets of BOK is in decreasing trend in 2nd year and in all subsequent year these are zero whereas these ratio are in decreasing trend in all year except 2012/13 of NCC. The highest ratio of BOK is 4.5% and NCC is 61.98% in 2008/09. And the lowest ratio of BOK and NCC are 0% and 22.37% in 2011/12 respectively.

From the table we notice that mean ratio of BOK and NCC are 1.55% and 36.70% respectively. NCC has higher ratio in every year and mean also. It means NCC has invested more money in risk free assets than that of BOK . In another word, BOK has emphases on more loans and advances and other short term investment than investment in government securities.

4.1.1.4 Measurement of Risk

For this study, following risk ratios are used to analyze and interpret the financial data and investment policy.

(a) Loan Risk Ratio

In general, loan risk ratio shows the proportion of non-performing assets in the total investment plus loan and advances of a bank.

Table: 4.13

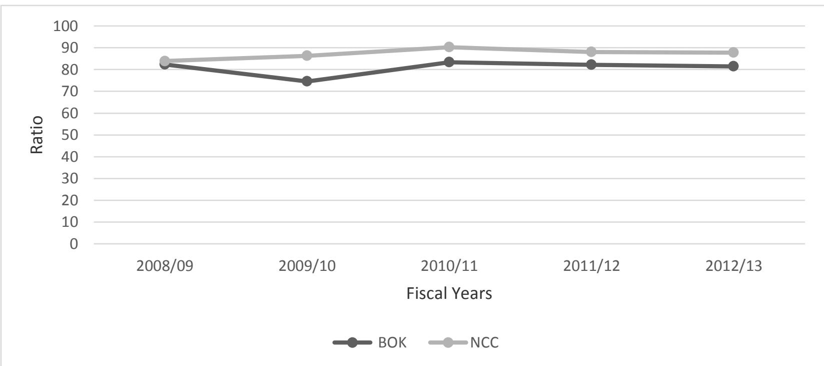
Loan Risk Ratio

Year	Ratio (%)	
	BOK	NCC
2008/09	82.37	83.87
2009/10	74.58	86.26
2010/11	83.32	90.19
2011/12	82.24	88.12
2012/13	81.43	87.76
Mean	80.79	87.24

(Source: Appendix-13)

Figure: 4.13

Loan Risk Ratio



Above table No.4.13 shows that BOK and NCC have the loan risk ratio in fluctuating trend. BOK has highest and lowest ratio of 83.32% and 74.58% in the year 2010/11 and 2009/10 respectively. And NCC has the highest and lowest ratio of 90.19% and 83.85% in the year 2010/11 and 2008/09 respectively. The mean ratio of BOK is lower than that of NCC (i.e.80.79 % < 87.24%).

4.1.1.5 Growth Ratio

Growth ratio denotes that how well the banks are preserving their economic or financial position. To calculate, check and analyze the expansion and growth of the selected bank the following ratios are calculated:

(a) Growth Ratio of Total Deposits

To measure such growth percentage and analysis the following formula are used:

$$\text{Growth Percentage} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

Table: 4.14

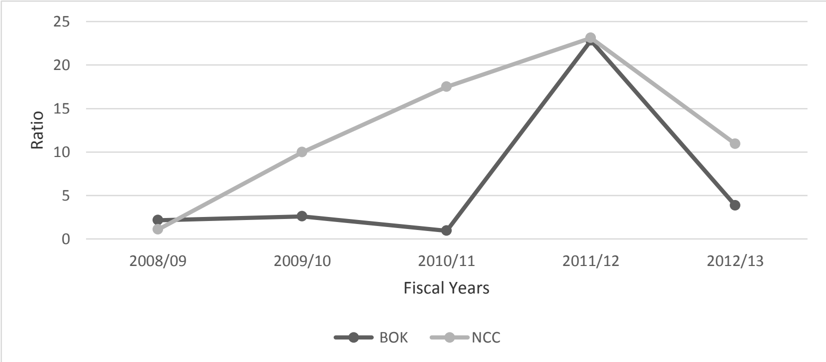
Growth Ratio of Total Deposits (in %)

Banks	**Year and Growth Ratio**					**Average Growth Rate(%)**
	2008/09	**2009/10**	**2010/11**	**2011/12**	**2012/13**	
BOK	2.15	2.59	0.95	22.83	3.84	**6.47**
NCC	1.08	9.97	17.49	23.13	10.90	**12.51**

(Source: Appendix-14)

Figure: 4.14

Growth Ratio of Total Deposits (in %)



Above table No 4.14 shows that BOK has fluctuating trend and NCC has increasing trend of total deposits except in 2012/13. The growth ratio of BOK and NCC are 6.47% and 12.51% respectively. The growth ratio of NCC seems to be higher than that of BOK .

(b) Growth Ratio of Loan and Advances

To measure such growth percentage and analysis the following formula are used:

$$\text{Growth Percentage} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

Table: 4.15

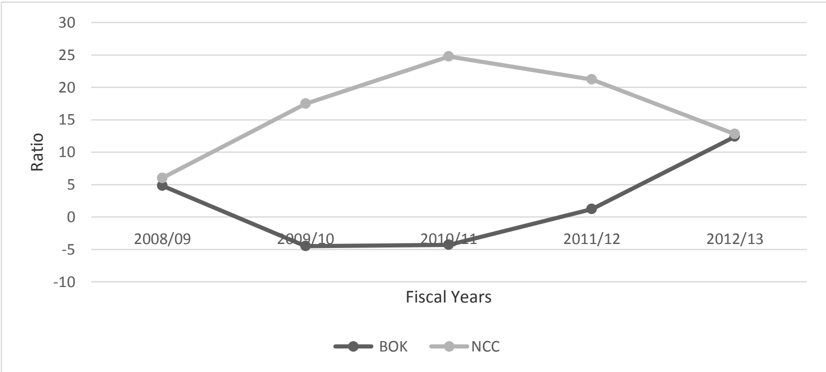
Growth Ratio of Loan and Advances (in %)

Banks	Year and Growth Ratio					Average Growth Rate (%)
	2008/09	2009/10	2010/11	2011/12	2012/13	
BOK	4.82	-4.51	-4.30	1.20	12.38	**1.92**
NCC	6.02	17.47	24.77	21.20	12.81	**14.04**

(Source: Appendix-15)

Figure: 4.15

Growth Ratio of Loan and Advances (in %)



The above analysis shows that NCC has higher growth rate than that of BOK (i.e. 14.04% > 1.92%). BOK has decreasing trend and NCC has increasing trend in first three years and in decreasing trend in last two years growth rate of loans and advances.

(c) Growth Ratio of Total Investment

To measure such growth percentage and analysis the following formula are used:

$$\text{Growth Percentage} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

Table: 16

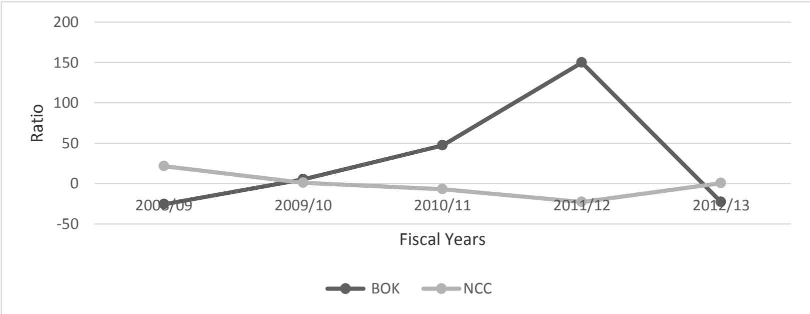
Growth Ratio of Total Investment

Banks	Year and Growth Ratio					Average Growth Rate(%)
	2008/09	**2009/10**	**2010/11**	**2011/12**	**2012/13**	
BOK	-25.82	5.15	47.10	149.97	-22.76	**30.73**
NCC	21.37745	1.087853	-6.82788	-22.8039	0.36046	**-1.36**

(Source: Appendix -16)

Figure: 4.16

Growth Ratio of Total Investment



The growth rate of total investment of BOK seems to be higher than that of NCC i.e. 30.73% > -1.36%. BOK has negative trend in 1st & last period and in increasing trend in remaining years but NCC has decreasing and negative trend of growth ratio of investment.

(d) Growth Ratio of Net Profit

To measure such growth percentage and analysis the following formula are used:

$$\text{Growth Percentage} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

Table: 4.17

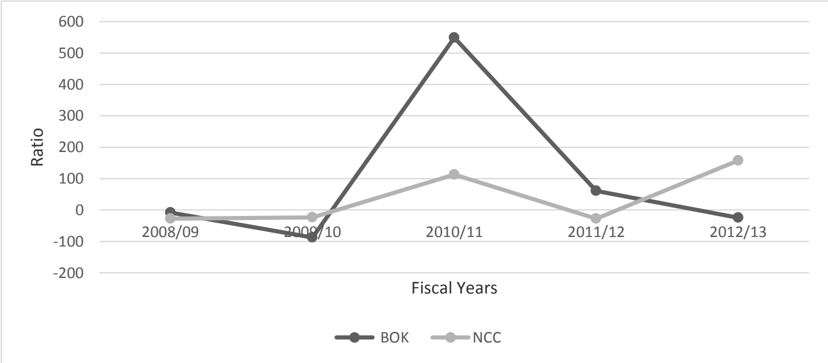
Growth Ratio of Net Profit

Banks	**Year and Growth Ratio**					**Average Growth Rate (%)**
	2008/09	**2009/10**	**2010/11**	**2011/12**	**2012/13**	
BOK	-8.64931	-87.7253	548.7365	60.7123	-23.6727	**97.8**
NCC	-27.4558	-23.503	113.1471	-27.9109	157.1611	**38.29**

(Source: Appendix-17)

Figure: 4.17

Growth Ratio of Net Profit



From table no 4.17 we can conclude that BOK has growth rate of 97.8% and NCC has the growth rate of 38.288%. It seems that BOK has higher growth rate than that of NCC. Both banks followed a fluctuating trend on the growth ratio of net profit.

4.2 Statistical Analysis

4.2.1. Coefficient of Correlation

a) Correlation between Total Deposits and Total Investment

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

Table: 4.18

Correlation between Total Deposits and Total Investment

Name of Bank	Base of Evaluation			
	r	R^2	P.E.	6 x P.E.
BOK	0.929	0.863	0.0413	0.248
NCC	-0.962	0.925	0.023	0.136

(Source: Appendix-21)

The Table No 4.18 shows that coefficient of correlation between deposits and investment of BOK is 0.929 i.e. high degree of positive correlation between these two variables. And the value of coefficient of determination (R^2) is also 0.863 which means 86.3% of investment decision depend upon deposit and only 13.7% investment is depend upon other variables. Similarly probable error is 0.0413 and 6 x P. E. is 0.248 which shows that R^2 is highly greater than 6 x P. E. Therefore it reveals that relationship between deposits and investment is significant i.e. correlation is certain.

Likewise, in case of NCC, coefficient of correlation between investment and deposit (r) is -0.962 that means there is a high degree of Negative correlation between two variables. The value of coefficient of determination (R^2) is also 0.023 which means only 2.3% of investment decision depend upon deposit and rest 97.7% investment is depend upon other variables. Similarly probable error is 0.023 and 6 x P. E. is 0.136 which shows that R^2 is just greater than 6 x P. E. Therefore it reveals that relationship between deposit and investment is significant i.e. correlation is certain.

b) Correlation between Total Deposits and Loans and Advances

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

Table: 4.19

Correlation between Total Deposits and Loans and Advances

Name of Bank	Base of Evaluation			
	r	**R^2**	**P.E.**	**6 x P.E.**
BOK	0.305	0.093	0.274	1.64
NCC	0.996	0.992	0.0024	0.015

(Source: Appendix-22)

From the Table 4.19 we can find that the coefficient of correlation between deposits and loan and advances of BOK and NCC are 0.305 and 0.996 respectively. This shows the positive relationship between these two variables i.e. loan and advances and deposits of both banks. By considering coefficient of determination (R^2), the value of R^2 is 0.093 incase of BOK and 0.992 incase of NCC.

The value of R^2 of BOK is 0.093, which means only 9.3% of loan and advances decision is determined by deposit and rest 90.7% loan and advances depend upon other variables. The value of R^2 of NCC is 0.992, which means that 99.2% of loan and advances is determined by deposit and only 0.8% loan and advances depend upon other variables.

In view of the probable error of BOK and NCC, the value of R^2 of BOK is less than the 6 times of P.E. (i.e. 1.64>0.093) which indicates there is significant relationship between deposits and loan and advances. Similarly value of R^2 of NCC greater then the 6 times of P.E.(i.e. 0.992>0.015) insignificant relationship between deposit and loan and advances.

4.2.2. Trend Analysis

Here, trend analyses of various Ratios are projected for the five years. The measure of trend analysis shows the behavior of given variables in series of time. This trend analysis is carried out to see average performance of the Finance companies for next five years. Sample of trend analysis are as follows

- Loan and advance to Total Deposit
- Total Investment to Total Deposit Ratio
- Return on Loan and Advance Ratio

a) Trend Analysis of Loan and advance to Total Deposit Ratio:

In this topic an effort has been made to analyze the trend of loan and advances to total deposits ratio of BOK and NCC with comparatively of five years study period and projection of next five years. The following table describes the trend values of loan and advances to total deposits ratio of BOK and NCC.

$Y= a + b x$

Where,

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

X = deviation from some convenient time periods.

The following graph helps to show the trend lines of total deposit for the projected five years. The equations are

$Y_c = 89.54 - 6.522x$ of BOK

$Y_c = 90.177 + 2.643x$ of NCC

Table No 4.20

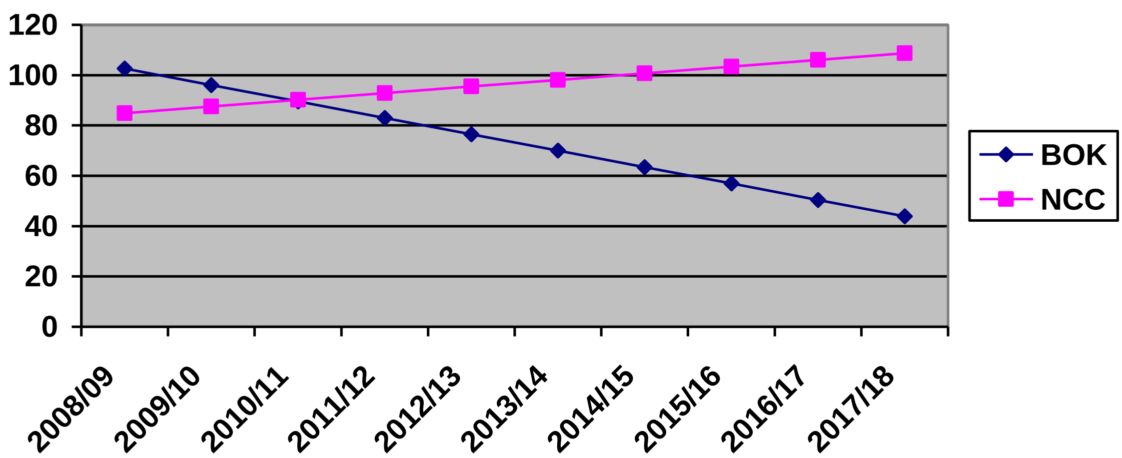
Trend Analysis of Loan and advance to Total Deposit (in %)

Year	BOK	NCC
2008/09	102.584	84.884
2009/10	96.062	87.527
2010/11	89.54	90.17
2011/12	83.018	92.813
2012/13	76.496	95.456
2013/14	69.974	98.099
2014/15	63.452	100.742
2015/16	56.93	103.385
2016/17	50.408	106.028
2017/18	43.886	108.671

(Source: Appendix -18)

Figure No 4.18

Trend Analysis of Loan and advances to Total Deposit of BOK and NCC



Above Figure No 4.18 show that Trend of Loan and advance to Total Deposit of BOK is decreasing. Its means total deposits are not utilize efficiently. The Trend of Loan and advance to Total Deposit of NCC are slightly increasing up warding. It mean total deposit utilizing in loan and advance so trend of NCC has smooth and regular up warding position.

b) Total Investment to Total Deposit Ratio

The heading analyze the trend of total investment to total deposits ratio of BOK and NCC with comparatively under five years study period and projects the trend of coming five years. The following table describes the trend values of total investment to total deposits ratio of BOK in comparison to NCC for ten years. The following graph helps to show the trend lines of total deposit for the projected five years. The equations are

Yc = 14.848 + 3.818x of BOK

Yc = 13.54 - 3.147 X of NCC

Table No 4.21

Trend Analysis of Total Investment to Total Deposit Ratio (in %)

Year	BOK	NCC
2008/09	7.212	19.84
2009/10	11.03	16.693
2012/11	14.848	13.546
2011/12	18.666	10.399
2012/13	22.484	7.252
2013/14	26.302	4.105
2014/15	30.12	0.958
2015/16	33.938	-2.189
2016/17	37.756	-5.336
2017/18	41.574	-8.483

(Source: Appendix -19)

Figure No 4.19

Trend Analysis of Total Investment to Total Deposit Ratio (in %)

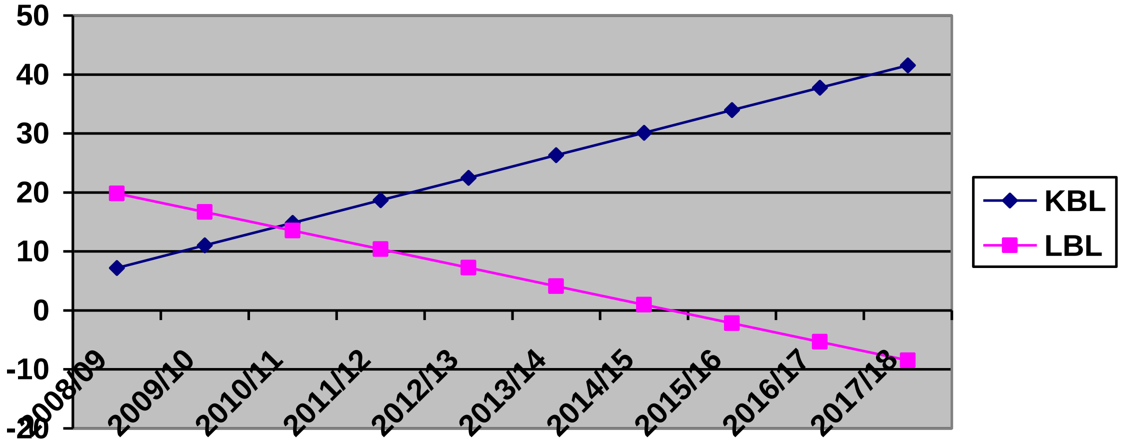


Figure No 4.19 shows that the trend of total investment to total deposit of BOK is slightly increasing trend. Its mean total deposit utilized on total investment. The trend of total investment to total deposit ratio of NCC is decreasing trend it indicate that the income from total investment to total deposit is decreasing trends.

c) Trend Analysis of Return on loan and advance ratio:

The headings analyze the trend Return on loan and advance ratio of BOK and NCC with comparatively under five years study period and projects the trend of coming five years. The following table describes the trend values of the trend Return on loan and advance ratio of BOK in comparison to NCC for ten years.

The following graph helps to show the trend lines of total deposit for the projected five years. The equations are

Yc = Yc = 2.36+2142.8x of BOK

Yc = 1.908 + 0.2 X of NCC

Table No 4.22

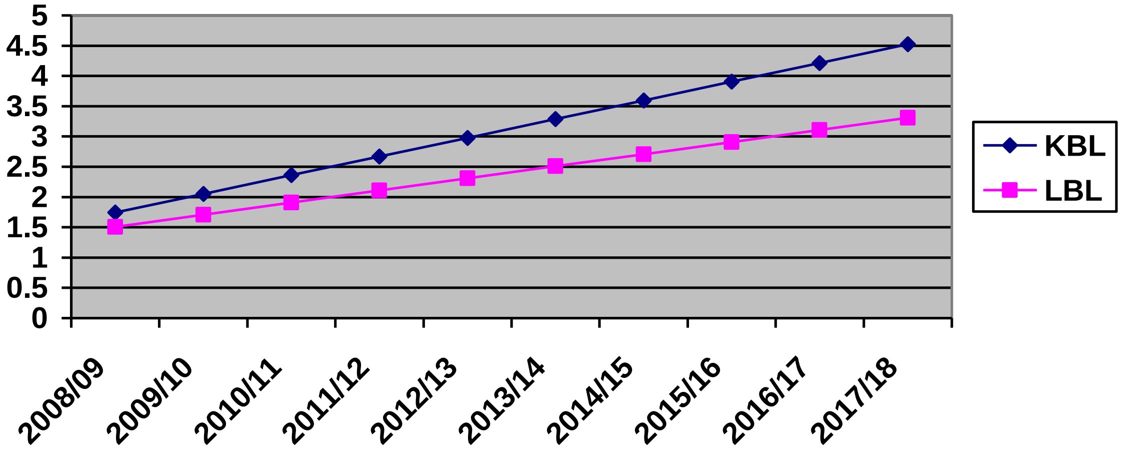
Trend Analysis of return on loan and advance ratio (in %)

Year	BOK	NCC
2008/09	1.742	1.508
2009/10	2.051	1.708
2012/11	2.36	1.908
2011/12	2.669	2.108
2012/13	2.978	2.308
2013/14	3.287	2.508
2014/15	3.596	2.708
2015/16	3.905	2.908
2016/17	4.214	3.108
2017/18	4.523	3.308

(Source: Appendix -20)

Figure No 4.20

Trend Analysis of return on loan and advance ratio (in %)



The Table and figure No 4.20 shows that the trend of return on loan and advance ratio of BOK is highly increasing trend. It means return from loan and advance is little higher than the NCC. The trend of return on loan and advance ratio of NCC has smooth and regular up ward increasing trend. Hence return from loan and advance of both finance companies is positive and increasing trend.

4.3 Major Findings of the Study

- The mean ratio of the total investment to total deposit BOK and NCC are 14.85% and 13.55% respectively so BOK has higher ratio. It signifies BOK has successfully allocated its deposit in investment portfolio in comparison with NCC.

- Mean ratio of investment on government securities to total working fund of BOK and NCC are 0.21% and 3.25%. Respectively. NCC has higher ratio in every year and mean too. It means NCC has invested more money in risk free assets out of its total assets than that of BOK . In another word BOK has emphases on more loans and advances and other short term investment than investment in govt. securities.

- ROA of both companies are in fluctuating trend how ever BOK seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of NCC(i.e. 1.61%>1.46%)of total assets in an average.

- BOK seems more conscious about managing its assets in order to earn more interest ratio because it has higher ratio in each year and average ratio is also higher. BOK has 11.94% average ratio whereas NCC shows 10.46% average ratio. The mean ratio of BOK is more than that of NCC. In comparison, BOK seems effective in earning interest to some extent although it has lower earning of interest income but it must break the decreasing trend in coming year.

- Mean ratio of investment on share and debenture on working fund of BOK and NCC are 0.86% and 0.33%. Respectively. BOK has higher ratio in every year and mean too. It means BOK has invested more money in risky assets out of its total assets than that of NCC. In another word NCC has emphases on more govt securities rather than investment on share and debenture.

- NCC seems weak in increasing total investment in comparison to BOK . The growth rate of NCC is -1.36% but BOK is 30.73%.

- The yearly growth rate of net profit of BOK is better in comparison to NCC. NCC has the growth rate of 38.29% and BOK has 97.80%.

- BOK has fluctuating trend of interest paid to working fund ratio whereas NCC has decreasing trend of ratio except in 2012/13. Due to the higher ratio in each year and average too of BOK , it seems less conscious about borrowing cheaper fund

- In case of loan risk ratio, BOK has the lower risk than NCC.

- loan and advances to total assets ratio of BOK is in fluctuating trend whereas ratio of NCC is in increasing trend While observing their ratios; NCC is better mobilizing of fund as loan and advances and it seems quite successful in generating higher ratio in each year.

- BOK has higher mean ratio of return on loan and advances. So it seems successful by generating higher ratio. It can be concluded that BOK has better utilized the loan and advance for the profit generation in comparison with NCC.

- The mean ratio of cash and bank balance to total deposits of BOK is higher than NCC. It means the liquidity position of BOK is higher than NCC. It shows the higher position regarding the meeting of demand of its customer on their deposit at any time than NCC.

- NCC has invested more portions of current assets on government securities than BOK according to average study. It means NCC is more sensitive in investment in productive sector than BOK . It means NCC has invested more money in risk free assets than that of BOK . In another word BOK has emphases on more loans and advances and other short term investment than investment in govt. securities.

- The average study of cash and bank balance to current assets ratio of BOK is higher than NCC. It shows that NCC has taken more risk to meet the daily requirement of its customer's deposit than BOK .

- In average BOK has mobilized 89.54% of its collected deposit in loan and advances that is slightly less than that of NCC. According to NRB directives above 70% to 90% of loan and advances to total deposit ratio is able to better mobilization of collected deposit. So all of the year both BOK and NCC has met the NRB requirement or it has properly utilized its deposit to provide loan.

- The growth ratio on deposit of NCC seems to be higher than that of BOK . The growth ratio of BOK and NCC are 6.47% and 12.51% respectively.

- The above analysis shows that NCC has higher growth rate of loan and advances than that of BOK (i.e. 14.04%>1.92%).

- BOK has the higher degree of correlation coefficient between deposit and investment than NCC. It states that BOK is in better position in the mobilization of deposits as investment in comparison to NCC. There is significant relationship between correlation of coefficient of deposit and investment of BOK and but insignificant relationship between correlation of coefficient of deposit and investment of NCC.

- Correlation coefficient between deposit and loan and advances of BOK is lower than NCC. It indicates that NCC is successfully mobilizing its deposits as loan and advances. There is significant relationship between correlation coefficient of deposits and loan and advances BOK and NCC.

- The trend of total investment to total deposit of BOK is slightly increasing trend. Its mean total deposit utilized on total investment. The trend of total investment to total deposit ratio of NCC is decreasing trend it indicate that the income from total investment to total deposit is decreasing trends.

- The trend of return on loan and advance ratio of BOK is highly increasing trend. It means return from loan and advance is little higher than the NCC. The trend of return on loan and advance ratio of NCC has smooth and regular up ward increasing trend. Hence return from loan and advance of both finance companies is positive and increasing trend.

- The Trend of Loan and advance to Total Deposit of BOK is decreasing. Its means total deposits are not utilize efficiently. The Trend of Loan and advance to Total Deposit of NCC are slightly increasing up warding. It mean total deposit utilizing in loan and advance so trend of NCC has smooth and regular up warding position.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is a complete conclusive and suggestive package which contains summary, conclusion of the findings and actionable plans i.e. suggestion for further improvement. This would be meaningful to the commercial bank in credit management. Summary gives the brief introduction to all the chapters of the study and shows the actual facts of the present situation under the topic of the study. Conclusion of the findings is based on the consequences of the analysis of the relevant data by using financial as well as statistical tools. The recommendations are presented in term of suggestion, which are prepared on the basis of findings and conclusion.

5.1 Summary

The development and expansion of financial institution is essential for economic growth of the country. The bank are such financial institutions which collect funds from depositors and mobilize its fund as loan and advances according to the need of client .A term loan plays a vital role in the economy. Better management of the loan is essential to make high return for every commercial bank. Bank wants to maximize return and minimize loan risk. loan management strongly recommends analyzing and managing the loan risk. When borrower will fail to meet its obligation in accordance with the agreed terms and conditions, then loan t risk problem is arises. So, to minimize such risk, all commercial bank should have to establish and use standards in making loan decisions. Loans are risky assets though a bank invests most of its resources in granting loan and advances. The loan provided by commercial bank in different sector contributes to the society and whole economy, because loan function is the demand of economy but sometimes loan becomes dangerous tool if it is not properly managed and controlled. Too much and too little loan is harmful. Too much loan leads to inflation which causes direct and immediate damage to creditors and customers and too little loan lead to deflation which brings down the level of output, employment and income. So, the directives stipulated by NRB for commercial banks become essential to manage loan in proper way and playing great role of the comparative analysis of loan management of commercial bank.

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

Every financial institution collects funds from different sources and mobilizes it into the different sectors, which is always surrounded with risk. Loan risk is one part of that risk. loan risk is the potential financial loss resulting from the failure of customer to pay their debt in time. As in order from, loan risk is crucial part of risk arises among in the banking industry. The study had been carried based on finance institution i.e. BOK and NCC for loan risk management. To achieve the objectives of the study, descriptive an analytical research design has been used. Some statistical and financial tools have also been applied to examine facts and descriptive techniques have been adopted to evaluate loan risk of BOK and compare it with NCC. The study is based on secondary data. So the descriptive and analytical research designs have been used. In this study only two finances companies have been taken as sample. All the finance companies in Nepal are the population of the study. The samples taken are Bank of Kathmandu and Nepal Credit and Commerce Bank.

The research is based on secondary source of data. The data relating to the investment, deposit, loan and advances, assets and profit are directly obtained from the balance sheet and Profit and Loss A/C of the concerned company's annual reports. Supplementary data and information are collected from number of institution and authoritative sources like Nepal Rastra Bank, Security Exchange Board, Nepal Stock Exchange Ltd., Ministry of Finance, Budget speech of different fiscal years, economic survey and National Planning Commission etc. To achieve the objectives of the study various financial and statistical tools have been used. After collecting the data from the different sources, it is analyzed by using financial tools and statistical tools. Findings are drawn by applying various financial tools namely liquidity ratio, assets management ratio, profitability ratio, growth ratio and risk ratio. In the same way, statistical tools have been used namely mean, coefficient of correlation and least square method trend.

5.2 Conclusion

- In view of assets management side of two companies, it can be concluded that BOK is in slightly weak position in mobilizing the collected deposits as loan and advances. However in all year both companies have met the NRB requirement in regarding utilization of deposit to provide loan. BOK has successfully allocated its deposit in investment portfolio in comparison with NCC. NCC has invested more money in risk free assets out of its total assets than that of BOK has invested more money in risky assets out of its total assets than that of NCC. In another word NCC has emphases on more govt. securities rather than investment on share and debenture.
- From the analysis of the liquidity position of BOK and NCC, liquidity position of BOK is higher than NCC. It shows the higher position regarding the meeting of demand of its customer on their deposit at any time than NCC but BOK has excess liquidity rather than that of NCC because of poor investment opportunities. NCC has taken more risk to meet the daily requirement of its customer's deposit than BOK as it has lower cash and bank balance to current ratio. NCC has made enough investment in government securities than BOK. In another word BOK has emphases on more loans and advances and other short term investment than investment in govt. securities.

- By considering the trend values, Trend of Loan and advance to Total Deposit of BOK is decreasing. Its means total deposits are not utilize efficiently. The Trend of Loan and advance to Total Deposit of NCC are slightly increasing up warding. It means total deposit utilizing as loan and advance of NCC has smooth and regular up warding position. Trend of total investment to total deposit of BOK is slightly increasing trend. The trend of total investment to total deposit ratio of NCC is decreasing trend. Trend of return on loan and advance ratio of BOK is highly increasing trend. It means return from loan and advance is little higher than the NCC. The trend of return on loan and advance ratio of NCC has smooth and regular up ward increasing trend. Hence return from loan and advance of both finance companies is positive and increasing trend.

- From the viewpoint of profitability, BOK has higher mean ratio of return on loan and advances. So it seems successful by generating higher ratio. It can be concluded that BOK has better utilized the loan and advance for the profit generation in comparison with NCC. BOK seems successful in managing and utilizing the available assets in order to generate revenue since its ROA ratio is higher than that of NCC. BOK seems effective in earning interest to some extent although it has lower earning of interest Due to the higher ratio in each year and average too of BOK, it seems less conscious about borrowing cheaper fund. In case of loan risk ratio, BOK has the lower risk than NCC.
- From the growth ratio of total deposits, it can be concluded that NCC has more collection capacity than BOK . Growth rate of NCC on loan and advances is better in comparison to BOK . Growth rate of total investment of BOK seems good than NCC has better position than that of NCC with respect to growth rate of net profit. Correlation coefficient between deposits and total investment and deposits and loan and advances of BOK and NCC indicates the positive relationship or there is high degree of positive correlation. In most of the cases it has been found that loan and advances and investment decision depends upon other variables. From the calculation of probable error it can be concluded that the relationship between deposits and investment and loan and advances and deposits of both companies is significant.

5.3 Recommendations

- From the analysis, BOK has not invested more funds in government securities in comparison to NCC. The bank has higher cash and bank balance than NCC. Therefore, it is recommended to invest in government securities instead of keeping idle and is not considered good from profitability point of view. Investment on those securities issued by government is free of risk, highly liquid and highly saleable in the marketplace.
- The recovery of the loan is most challenging job for banks. Increasing in non-performing assets leads to failure of commercial bank in recovery of loan.

Therefore it has been recommended that BOK and NCC should follow liberal lending policy when sanction of loan and advances have been done with adequate guarantee and should implement sound collection policy with proper identification of loan worthiness of customers, continual follow up and legal procedure if required.

- Both banks should be careful in increasing profit of the bank to maintain the confidence of shareholders, depositors and all its customers. NCC profitability position is not better than that of BOK. So, NCC is strongly recommended to utilize risky assets and shareholders fund to gain high amount of profit.
- BOK has successfully allocated its deposit in investment portfolio in comparison with NCC. So NCC should successfully allocate its deposit in invest portfolio.
- NRB has given directives to financial institution to invest their certain percentage of investment in deprive and priority sector. Both companies have earned profit from profitable and private sector. So, they are recommended to strictly follow up the directives issued by NRB and should make investment on public utilities sector like health, sanitation, education, drinking water, agriculture etc.
- The ratio of cash and bank balance to total deposits and current assets of BOK is higher than NCC. It means NCC should increase its liquidity position on the other hand BOK has higher idle cash and bank balance. It may decrease over all profit of bank. So BOK is recommended to activate its idle cash and bank balance in productive sector.
- Finance companies are suggested not to be surrounded and limited within the interest and status of big clients like multinational companies, manufacturer and exporter. The finance companies have to preserve the banking and saving habits of the low-income people of the kingdom. Because the main source of the collecting deposits of commercial banks are from public sector. It is also recommended to collect more funds as deposits through different schemes from different level of public, through assortment of deposit schemes and facilities like housing schemes, education loan, vehicle loan, and deposit for housewife etc.

- NCC is recommended to increase their investment on shares and debentures on different sectors to earn more interest and dividend income to increase its net profit. BOK seems less conscious about borrowing cheaper fund. So it should give more priority on this matter.

- Both companies have earned more income from interest income which is not good for long term view. So both have to increase their revenue through other banking activity for long-term survival and to avoid bad debt risk.

Appendix - 1

(A). Liquidity Ratio:

(1) Cash and bank balance to total deposit ratio.

$$\textit{Cash and Bank Balance to Total Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

(Rs. In thousand)

Year	Cash and bank balance of BOK	Total deposit of BOK	Cash and bank balance of NCC	Total deposit of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	16337	239779	24216	459920	6.81	5.27
2009/10	32066	245981	27856	505766	13.04	5.51
2010/11	34036	248324	23598	594204	13.71	3.97
2011/12	48398	305008	32120	731670	15.87	4.39
2012/13	54832	316730	50296	811421	17.31	6.20
Mean					**13.35**	**5.07**

Appendix – 2

(2) Cash and bank balance to current assets ratio

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

(Rs. In thousand)

Year	Cash and bank balance of BOK	Current assets of BOK	Cash and bank balance of NCC	Current assets of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	16337	38884	24216	46076	42.01	52.56
2009/10	32066	54186	27856	65078	59.18	42.80
2010/11	34036	40452	23598	82098	84.14	28.74
2011/12	48398	52357	32120	55876	92.44	57.48
2012/13	54832	66734	50296	53456	82.17	94.09
Mean					**71.99**	**55.14**

Appendix – 3

(3) Investment on Govt. securities to current assets ratio:

$$Investment\ on\ Govt.\ Securities\ to\ Current\ Assets = \frac{Investment\ on\ Gov.\ Securities}{Current\ Assets}$$

(Rs. In thousand)

Year	Invest. on Govt. securities of BOK	Current assets of BOK	Invest. on Govt. securities of NCC	Current assets of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	1750	38884	28556	46076	4.50	61.98
2009/10	1750	54186	27500	65078	3.23	42.26
2010/11	0	40452	27500	82098	0	33.50
2011/12	0	52357	12500	55876	0	22.37
2012/13	0	66734	12500	53456	0	23.38
Mean					**1.55**	**36.70**

Appendix - 4

(B). Assets Management Ratio:

(1)Loan and Advance to total deposit:

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

(Rs. In thousand)

Year	Loan and advances of BOK	Total deposit of BOK	Loan and advances of NCC	Total deposit of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	248104	239779	380104	459920	103.47	82.65
2009/10	236917	245981	446521	505766	96.32	88.29
2010/11	226720	248324	557109	594204	91.30	93.76
2011/12	229436	305008	675197	731670	75.22	92.28
2012/13	257846	316730	761720	811421	81.41	93.87
Mean					**89.54**	**90.17**

Appendix - 5

(2) Total investment to total deposit:

$$Total\ Investments\ to\ Total\ Deposits\ Ratio = \frac{Total\ Investment}{Total\ Deposit}$$

(Rs. In thousand)

Year	Total investment of BOK	Total deposit of BOK	Total investment of NCC	Total deposit of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	20186	239779	88523	459920	8.42	19.25
2009/10	21226	245981	89486	505766	8.63	17.69
2010/11	31223	248324	83376	594204	12.57	14.03
2011/12	78049	305008	64363	731670	25.59	8.80
2012/13	60284	316730	64595	811421	19.03	7.96
Mean					**14.85**	**13.55**

Appendix – 6

(3) Loan and advance to total working fund:

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

(Rs. In thousand)

Year	Loan and advances of BOK	Total working fund of BOK	Loan and advances of NCC	Total working fund of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	248104	325718	380104	558747	76.17	68.03
2009/10	236917	346138	446521	621397	68.45	71.86
2010/11	226720	309578	557109	710128	73.24	78.45
2011/12	229436	373885	675197	839301	61.36	80.45
2012/13	257846	390663	761720	941514	66.00	80.90
Mean					**69.04**	**75.94**

Appendix – 7

(4) Investment to govt. securities to total working fund:

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

(Rs. In thousand)

Year	Investment to govt. securities of BOK	total working fund of BOK	Investment to govt. securities of NCC	total working fund of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	1750	325718	28556	558747	0.54	5.11
2009/10	1750	346138	27500	621397	0.51	4.43
2010/11	0	309578	27500	710128	0	3.87
2011/12	0	373885	12500	839301	0	1.49
2012/13	0	390663	12500	941514	0	1.33
Mean					**0.21**	**3.25**

Appendix – 8

(5) Investment on share and debenture to total working fund:

$$\textit{Invt. on Shares and Debenture to TWF Ratio} = \frac{Inv.on\ Shares\ and\ Debentures}{Total\ Working\ Fund}$$

(Rs. In thousand)

Year	Invt. on share and debenture of BOK	Total working fund of BOK	Invt. on share and debenture of NCC	Total working fund of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	4936	325718	3590	558747	1.52	0.64
2009/10	4936	346138	2208	621397	1.43	0.36
2010/11	1723	309578	1025	710128	0.56	0.14
2011/12	1549	373885	1067	839301	0.41	0.13
2012/13	1549	390663	3787	941514	0.40	0.40
Mean					**0.86**	**0.33**

Appendix - 9

(C). Profitability Ratio:

1) Return on loan and advance:

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

(Rs. In thousand)

Year	Net profit of BOK	Loan and advances of BOK	Net profit of NCC	Loan and advances of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	6770	248104	7348	380104	2.73	1.93
2009/10	831	236917	5621	446521	0.35	1.26
2010/11	5391	226720	11981	557109	2.38	2.15
2011/12	8664	229436	8637	675197	3.78	1.28
2012/13	6613	257846	22211	761720	2.56	2.92
Mean					**2.36**	**1.91**

Appendix – 10

(2) Return on total working fund ratio:

$$Return\ on\ Total\ Working\ Funds\ Ratio = \frac{Net\ Profit\ /\ Loss}{Total\ Working\ Fund}$$

(Rs. In thousand)

Year	Net profit of BOK	Total working fund of BOK	Net profit of NCC	Total working fund of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	6770	325718	7348	558747	2.08	1.32
2009/10	831	346138	5621	621397	0.24	0.90
2010/11	5391	309578	11981	710128	1.74	1.69
2011/12	8664	373885	8637	839301	2.32	1.03
2012/13	6613	390663	22211	941514	1.69	2.36
Mean					**1.61**	**1.46**

Appendix – 11

3) Total interest income to total working fund ratio:

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

(Rs. In thousand)

Year	Interest income of BOK	Total working fund of BOK	Interest income of NCC	Total working fund of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	40315	325718	66958	558747	12.38	11.98
2009/10	38548	346138	62380	621397	11.14	10.04
2010/11	40257	309578	68593	710128	13.00	9.66
2011/12	41267	373885	87380	839301	11.04	10.41
2012/13	47459	390663	96376	941514	12.15	10.24
Mean					**11.94**	**10.46**

Appendix – 12

(4) Total interest paid to Total working fund ratio:

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

(Rs. In thousand)

Year	Interest paid of BOK	Total working fund of BOK	Interest paid of NCC	Total working fund of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	23142	325718	40873	558747	7.10	7.32
2009/10	22448	346138	38568	621397	6.49	6.21
2010/11	20840	309578	40772	710128	6.73	5.74
2011/12	22533	373885	46978	839301	6.03	5.60
2012/13	26619	390663	55049	941514	6.81	5.85
Mean					**6.63**	**6.14**

Appendix - 13

Credit Risk Ratio:

$$Credit\ Risk\ Ratio = \frac{Total\ Investment + Total\ loan\ and\ Advances}{Total\ Assets}$$

(Rs. In thousand)

Year	Total investment of BOK	Loan and advance of BOK	Total assets of BOK	Total investment of NCC	Loan and advance of NCC	Total assets of NCC	Ratio of BOK (in %)	Ratio of NCC (in %)
2008/09	20186	248104	325718	88523	380104	558747	82.37	83.87
2009/10	21226	236917	346138	89486	446521	621397	74.58	86.26
2010/11	31223	226720	309578	83376	557109	710128	83.32	90.19
2011/12	78049	229436	373885	64363	675197	839301	82.24	88.12
2012/13	60284	257846	390663	64595	761720	941514	81.43	87.76
Mean							**80.79**	**87.24**

Appendix - 14

(D). Growth Ratio

1) Growth Ratio of Total Deposit

$$\text{Growth Ratio} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

(Rs. In thousand)

Year	Total Deposit of BOK	Total deposit of NCC	Growth Ratio of BOK (in %)	Growth Ratio of NCC (in %)
2006/07	234732	455006	-	-
2008/09	239779	459920	2.15	1.08
2009/10	245981	505766	2.59	9.97
2010/11	248324	594204	0.95	17.49
2011/12	305008	731670	22.83	23.13
2012/13	316730	811421	3.84	10.90
Mean			**6.47**	**12.51**

Appendix - 15

2) Growth Ratio of Loan and Advances

$$\text{Growth Ratio} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

(Rs. In thousand)

Year	Loan and Advances of BOK	Loan and Advances of NCC	Growth Ratio of BOK (in %)	Growth Ratio of NCC (in %)
2006/07	236695	358521	-	-
2008/09	248104	380104	4.82	6.02
2009/10	236917	446521	-4.51	17.47
2010/11	226720	557109	-4.30	24.77
2011/12	229436	675197	1.20	21.20
2012/13	257846	761720	12.38	12.81
Mean			**1.92**	**14.04**

Appendix - 16

3) Growth Ratio of Total Investment

$$\text{Growth Ratio} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

(Rs. In thousand)

Year	Total Investment of BOK	Total Investment of NCC	Growth Ratio of BOK (in %)	Growth Ratio of NCC (in %)
2006/07	27212	17487	-	-
2008/09	20186	21226	-25.82	21.38
2009/10	31223	78049	5.15	1.09
2010/11	60284	88523	47.10	-6.83
2011/12	89486	83376	149.97	-22.80
2012/13	64363	64595	-22.76	0.36
Mean			**30.73**	**-1.36**

Appendix - 17

4) Growth Ratio of Net Profit

$$\text{Growth Ratio} = \frac{\text{Ending Value - Beginning Values}}{\text{Beginning Value}} \times 100$$

(Rs. In thousand)

Year	Net Profit of BOK	Net Profit of NCC	Growth Ratio of BOK (in %)	Growth Ratio of NCC (in %)
2059/60	7411	10130	-	-
2008/09	6770	7348	-8.65	-27.46
2009/10	831	5621	-87.72	-23.50
2010/11	5391	11981	548.74	113.15
2011/12	8664	8637	60.71	-27.91
2012/13	6613	22211	-23.67	157.16
Mean			**97.88**	**38.29**

Appendix - 20

(E). Trend Analysis

1) Trend Analysis of Loan and Advances to Total Deposit Ratio.

Calculation of BOK

Year	loan and advance to total deposit(Y)	X=x-2010/11	X^2	XY
2008/09	103.47	-2	4	-206.9
2009/10	96.32	-1	1	-96.32
2010/11	91.3	0	0	0
2011/12	75.22	1	1	75.22
2012/13	81.41	2	4	162.82
N=5	$\sum Y = 447.72$	$\sum$**X =** 0	$\sum X^2$ =10	$\sum$**XY** - 65.22

(Source: Annul report of BOK)

Let trend line be

Y = a + b x……………………. (I)

Where x = X - Middle year

Here,

a = ∑y / N

$= \frac{447.72}{5} = 89.54$

b = ∑xy / N

$= \frac{-65.22}{10} = -6.522$

Substituting these values of a and b in eq (I) we get the required trend line

Yc = 89.54 - 6.522x

Calculation of NCC

Year	Loan and Advance to Total Deposit(Y)	X=x-2010/11	X^2	XY
2008/09	82.65	-2	4	-165.3
2009/10	88.29	-1	1	-88.29
2010/11	93.76	0	0	0
2011/12	92.28	1	1	92.28
2012/13	93.87	2	4	187.74
N = 5	$\sum$**Y =** 450.85	$\sum$**X** = 0	$\sum X^2 =$ 10	$\sum XY =$ 26.43

(Source: Annul report of NCC)

Let trend line be

Y = a + b x……………………. (I)

Where x = X - Middle year

Here,

a = $\sum$y / N

$= \frac{450.85}{5}$

= 90.177

b = $\sum$xy / N

$= \frac{26.43}{10}$

= 2.643

Substituting these values of a and b in eq^{n} (I) we get the required trend line

Yc = 90.177 + 2.643x

2) Trend Analysis of Total Investment to Total Deposit Ratio.

Appendix - 21

Calculation of BOK

Year	total investment to total deposit(Y)	X=x-2010/11	X^2	XY
2008/09	8.42	-2	4	-16.84
2009/10	8.63	-1	1	-8.63
2010/11	12.57	0	0	0
2011/12	25.59	1	1	25.59
2012/13	19.03	2	4	38.06
N = 5	74.24	0	10	38.18

Let trend line be

Y = a + b x……………………. (I)

Where x = X - Middle year

Here,

$a = \sum y / N$

$= \frac{74.24}{5} = 14.848$

$b = \sum xy / N$

$= \frac{38.18}{10} = 3.818$

Substituting these values of a and b in eq. (I) we get the required trend line

Yc = 14.848 + 3.818x

Calculation of NCC

Year	Total Investment to Total Deposit(Y)	X=x-2010/11	X^2	XY
2008/09	19.25	-2	4	-38.5
2009/10	17.69	-1	1	-17.69
2010/11	14.03	0	0	0
2011/12	8.8	1	1	8.8
2012/13	7.96	2	4	15.92
N = 5	67.73	0	10	-31.47

Let trend line be

Y = a + b x……………………. (I)

Where x = X - Middle year

Here,

a = ∑y / N

$= \frac{67.73}{5}$

= 13.546

b = ∑xy / N

$= \frac{-31.47}{10}$

= -3.147

Yc = 13.54 - 3.147 X

<u>Appendix - 22</u>

3) **Trend Analysis of Return on loan and advance Ratio.**

Calculation of BOK

Year	Return on loan and advance ratio	X=x-2010/11	X^2	XY
2008/09	2.73	-2	4	-5.46
2009/10	0.35	-1	1	-0.35
2010/11	2.38	0	0	0
2011/12	3.78	1	1	3.78
2012/13	2.56	2	4	5.12
N = 5	11.8	0	10	3.09

(Source: Annul report of BOK)

Let trend line be

Y = a + b x……………………. (I)

Where x = X - Middle year

Here,

a = ∑y / N

$= \frac{11.5}{5}$

= 2.36

b = ∑xy / N

$= \frac{3.09}{10}$

= 0.309

Substituting these values of a and b in eq. (I) we get the required trend line

Yc = 2.36+0.309x

Calculation of NCC

Year	Return on Loan and Advance Ratio	X=x-2010/11	X^2	XY
2008/09	1.93	-2	4	-3.86
2009/10	1.26	-1	1	-1.26
2010/11	2.15	0	0	0
2011/12	1.28	1	1	1.28
2012/13	2.92	2	4	5.84
N = 5	9.54	0	10	2

Source: Annul report of NCC

Let trend line be

Y = a + b x……………………. (I)

Where x = X - Middle year

Here,

a = ∑y / N

$= \frac{9.54}{5}$

= 1.908

b = ∑xy / N

$= \frac{2}{10}$

= 0.2

Substituting these values of a and b in eq. (I) we get the required trend line

Yc = 1.908 + 0.2 X

Appendix - 18

(i) Calculation of Correlation Coefficient Between Total Deposit and Total Investment of BOK.

FY	Total Deposit (X)	Total Investment (Y)	XY	X^2	Y^2
2008/09	239.779	20.186	4840.179	57493.969	407.475
2009/10	245.981	21.226	5221.193	60506.652	450.543
2010/11	248.324	31.223	7753.420	61664.809	974.876
2011/12	305.008	78.049	23805.569	93029.880	6091.646
2012/13	316.730	60.284	19093.751	100317.893	3634.161
Total	**1355.822**	**210.968**	**60714.113**	**373013.203**	**11558.701**

N = 5

$\sum X = 1355.822$, $\sum Y = 210.968$, $\sum XY = 60714.113$, $\sum X^2 = 373013.203$,
$\sum Y^2 = 11558.701$

Where,

N = No. of observation of X and Y
$\sum X$ = Sum of the observations in series X
$\sum Y$ = Sum of the observations in series Y
$\sum XY$ = Sum of the square of observations in series X
$\sum X^2$ = Sum of the square of observations in series Y
$\sum Y^2$ = Sum of the product of the observations in series X and Y

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

or, $$r = \frac{5 \times 60714.113 - 1355.822 \times 210.968}{\sqrt{5 \times 373013.203 - (1355.822)^2} \times \sqrt{5 \times 11558.701 - (210.968)^2}}$$

or, $$r = \frac{303570.565 - 286035.056}{\sqrt{1865066.015 - 1838253.296} \times \sqrt{57793.505 - 44507.497}}$$

or, $$r = \frac{17535.510}{163.746 \times 115.265}$$

or,

or, $r = 0.929$

and,

$r^2 = (0.929)^2$

or, $r^2 = 0.863$

and,

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

or, $$P.E. = 0.6745 \times \frac{1-(0.929)^2}{\sqrt{5}}$$

or, $P.E. = 0.0413$

(ii) Calculation of Correlation Coefficient Between Total Deposit and Total Investment of NCC.

FY	Total Deposit (X)	Total Investment (Y)	XY	X^2	Y^2
2008/09	459.920	88.523	40713.498	211526.406	7836.321
2009/10	505.766	89.486	45258.976	255799.247	8007.744
2010/11	594.204	83.376	49542.353	353078.394	6951.557
2011/12	731.670	64.363	47092.476	535340.989	4142.596
2012/13	811.421	64.595	52413.739	658404.039	4172.514
Total	**3102..981**	**390.343**	**235021.042**	**2014149.615**	**31110.712**

N = 5

$\sum X = 3102.981$, $\sum Y = 390.343$, $\sum XY = 235021.042$, $\sum X^2 = 2014149.615$, $\sum Y^2 = 31110.712$

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

or, $$r = \frac{5 \times 235021.042 - 3102.981 \times 390.343}{\sqrt{5 \times 2014149.615 - (3102.981)^2} \times \sqrt{5 \times 31110.712 - (390.343)^2}}$$

or, $$r = \frac{1175105.21 - 1211226.912}{\sqrt{10070748.08 - 9628491.086} \times \sqrt{155553.56 - 152367.657}}$$

or, $r = \frac{-36121.702}{665.024 \times 56.444}$

or, r = -0.962

and,

$r^2 = (-0.962)^2$

or, $r^2 = 0.925$

and,

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

or, $P.E. = 0.6745 \times \frac{1-(-0.962)^2}{\sqrt{5}}$

or, P.E. = 0.023

Appendix - 19

(i) Calculation of Correlation Coefficient Between Total Deposit and Loan & Advances of BOK.

FY	Total Deposit (X)	Loan and advances of (Y)	XY	X^2	Y^2
2008/09	239.779	248.104	59490.129	57493.969	61555.595
2009/10	245.981	236.917	58277.081	60506.652	56129.665
2010/11	248.324	226.720	56300.017	61664.809	51401.958
2011/12	305.008	229.436	69979.815	93029.880	52640.878
2012/13	316.730	257.846	81667.564	100317.893	66484.560
Total	**1355.822**	**1199.023**	**325714.606**	**373013.203**	**288212.559**

N = 5

$\sum X = 1355.822$, $\sum Y = 1199.023$, $\sum XY = 325714.606$, $\sum X^2 = 373013.203$, $\sum Y^2 = 288212.559$

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

or, $r = \dfrac{5 \times 325714.606 - 1355.822 \times 1199.023}{\sqrt{5 \times 373013.203 - (1355.822)^2} \times \sqrt{5 \times 288212.559 - (1199.023)^2}}$

or, $r = \dfrac{1628573.03 - 1625661.762}{\sqrt{1865066.015 - 1838253.296} \times \sqrt{1441062.795 - 1437656.155}}$

or, $r = \dfrac{2911.268}{163.746 \times 58.366}$

or,

or, r = 0.305

and,

$r^2 = (0.305)^2$

or, $r^2 = 0.093$

and,

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

or, $P.E. = 0.6745 \times \dfrac{1-(0.305)^2}{\sqrt{5}}$

or, P.E. = 0.274

(ii) Calculation of Correlation Coefficient Between Total Deposit and Total Loan & Advances of NCC.

FY	Total Deposit (X)	Loan and advances of (Y)	XY	X^2	Y^2
2008/09	459.920	380.104	174817.432	211526.406	144479.051
2009/10	505.766	446.521	225835.140	255799.247	199381.003
2010/11	594.204	557.109	331036.396	353078.394	310370.438
2011/12	731.670	675.197	494021.389	535340.989	455890.989
2012/13	811.421	761.720	618075.604	658404.039	580217.358
Total	**3102..981**	**2820.651**	**1843785.961**	**2014149.615**	**1690338.839**

N = 5

$\sum X = 3102.981$, $\sum Y = 2820.651$, $\sum XY = 1843785.961$, $\sum X^2 = 2014149.615$,

$\sum Y^2 = 1690338.839$

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \times \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

or, $$r = \frac{5 \times 1843785.961 - 3102.981 \times 2820.651}{\sqrt{5 \times 2014149.615 - (3102.981)^2} \times \sqrt{5 \times 1690338.839 - (2820.651)^2}}$$

or, $$r = \frac{9218929.805 - 8752426.461}{\sqrt{10070748.08 - 9628491.086} \times \sqrt{8451694.195 - 7956072.064}}$$

or, $$r = \frac{466503.344}{665.024 \times 704.004}$$

or, $r = -0.996$

and,

$r^2 = (0.996)^2$

or, $r^2 = 0.992$

and,

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

or, $$\text{P.E.} = 0.6745 \times \frac{1-(0.996)^2}{\sqrt{5}}$$

or, P.E. = 0.0024