## CHAPTER - I <br> INTRODUCTION

### 1.1 Background of the Study

As we know Nepal is one of the least developed countries in the list of the world. Nepal is a small south Asian country lying between two giant nation India and China. It has to depend upon its neighbors for various things like foods, raw materials, automobiles, electronic goods, medicines etc. Different up and downs in their economy has always created disturbance in our economy. Nepal is poor in mineral resources but very rich in huge potential for hydroelectric power. It is famous in the world for its high Himalayan range, diversity in natural beauty, caste, religion culture, language, archaeology etc.
Agriculture is the backbone of the Nepalese economy, means of livelihood for the majority of the population and main sources of grass domestic product, income and employment generation. But non-agricultural sector has also significant contribution in the economy.

For the efficient mobilization of financial resources, the financial sector has an intermediary role to bridge funds from surplus units to deficit units. Financial sectors provide a forum in which suppliers and demanders of funds can transact business fund directly. Financial sector constitute money market and capital market. The money market is created by a financial relationship between supplier and demanders of the short-term funds which have maturities of one year or less. Most of the money market transactions are made in marketable securities which are short term debt instrument such as Treasury bill, commercial papers and negotiable certificates of deposit issued by government, business and financial institutions. On the other hand capital market is the place where financial claims and obligations are brought and sold that have maturity period of more than one year.

The source of finance is the most essential elements for the establishment and operation of any profit and non-profit institution. Profit oriented institutions usually obtain these
sources through ownership capital, public capital, through the issue of shares and through financial institutions such as bank, in the form of credits, overdrafts etc. It is during these stages for the establishment and operation of any organization, the role of banks comes into effect in providing these sources, in the form of credit, overdraft and other related services.

The economy of the country largely depends upon the utilization of its resources and mobilization of capital. The lack of its proper utilization results the country to be backward over as Nepal is facing now. The mobilization of the capital is an important tool to utilize the resources and hence it affects the overall economy directly, indirectly. The financial institutions contribute the national economy by accumulating the capital funds to meet the financial needs of different productive sectors. They actively participate in the development of the country and mobilization of financial resources.

Financial institution is concerned with the process, institutions, markets and instructions involved in the transfer of money among and between individuals, business and Government. Commercial Banks play a vital role for such development by carrying out financial activities. Generally an institution established by law, which deals with money and credit, in common sense involved in monetary transaction is called bank. The history of financial and monetary development in Nepal is not very old. "It was in the year 15, September, 1937 that First Commercial Bank (Nepal Bank Ltd.) was established in Nepal with $51 \%$ Government equity. Nepal bank Limited was only one commercial bank and it was not sufficient to provide adequate banking facility. Therefore need was felt for another bank that content Rastriya Banijya Bank was established in January 24, 1966 as the second commercial Bank of the country.

Now there are established all together 271 licensed bank and non-bank financial institutions, out of them 29 are commercial banks, 83 development banks, 79 finance companies, 19 micro-credit development banks, 16 saving \& credit co-operatives and 45 NGOs. 6 Joint venture commercial banks are currently in operation in Nepal. Nepal Arab Bank (Nabil) is the first joint Venture Bank from the private sector. Accordingly,

Standard Chartered Bank Nepal Limited is the second Joint Venture Bank in Nepal from Private sector in 1987 AD. Even though, we can find similarity in objectives and purposes of all these commercial banks.

Commercial Banks are the heart of the financial sector. The major role of the commercial bank are deposit collections, lending to commercial as well as productive sectors, foreign exchanges business, remittance, merchant banking and corresponded banking. Commercial bank plays an important role in directing the affairs of the economy in various ways. They make funds available through their lending and investing activities to borrow individuals, business firms, and government establishment. In doing so, they assist both the flow of goods and services from procedures to consumers and financial activities of Government, they provide a large proportion of the medium of exchange and they are the media through which monetary policy is affected. These facts show that the commercial banking system of the nation is important to the functioning of the economy. There are all together 29 licensed commercial bank in Nepal and out of them 6 Joint venture commercial banks are currently operating in Nepal. For the purposed of study 3 commercial banks are taken as the sample for the study.

Nepal Bank Limited (NBL)
Standard Chartered Bank Nepal Limited (SCBNL)
Bank of Kathmandu (BOK)

### 1.2 Overview of the under study Banks

## Nepal Bank Limited (NBL)

Commercial Banks refers to the bank which accepts deposits of the public and organizations, grants loan to them against securities, providing financial agency services to the clients/customers as requested. Nepal Bank Ltd is the first Commercial Bank in Nepal, which was established under Nepal Bank act on Kartik 30, 1994 BS (1937 AD) with $51 \%$ Government equity. NBL is running now on 72 years successful operation, passing many ups and downs in the past. It is a matter of grate pleasure that it is now competing with several commercial banks with international technology and manpower.

Commercial Banks are those who pool together the saving and arrange for their productive use. NBL is pioneer financial Institution of Nepal. At present, NBL bank is operating under control of Nepal Rastra Bank. It seeks to provide an environment within which the bank can bring unique financial value and service to all customers.

NBL was established with an authorized capital of 10 million out of total authorized capital $51 \%$ (percent) was owned by government and $49 \%$ owned by general public in the past. Now this proportion is completely changed like this $40.49 \%$ share is owned by government , $49.94 \%$ by General public, $4.92 \%$ by "A" Class financial institution, $3.42 \%$ by NRB licensed financial institutions, $0.52 \%$ by other institutions, and remaining $0.71 \%$ by others.

Table 1.1
Share Proportion of Nepal Bank Limited

| S.No. | Ownership | Holding \%(percentage) |
| :--- | :--- | :--- |
| 1. | Government Share | 40.49 |
| 2. | General Public | 49.94 |
| 3. | 'A' Class Financial Institutions | 4.92 |
| 4. | NRB Licensed Institution | 3.42 |
| 5. | Other Institution | 0.52 |
| 6. | Others | 0.71 |

(Source: Corporate Planning and Marketing Department NBL)
"At the beginning, branch of NBL was only one that is Kathmandu office. But after the phase of time, its branches increased and reached to 234 till end of august 15, 2005. But now it in reverse decreased its branches to 99 till period due to week security situation and because of 12 years long internal conflict".
(Source: www.nepalbank.com.np)

After undertaking of NBL management by ICCMT, it cut-off the regional office and adopted the policy of centralization, central office now directly control, supervise and advice to other branches.

## Standard Chartered Bank Nepal Limited (SCBNL)

Nepal Grindlays Bank Limited, currently known as Standard Chartered Bank Nepal Limited was executed under the direction of Australian and New Zealand Banking Group (ANZ). Standard Chartered Bank Nepal Ltd. is the second joint Venture Bank established in 1987. The name of the bank was changed from Nepal Grindlays Bank Limited to Standard Chartered Bank Nepal Limited effective from July 16, 2001. Initially, $50 \%$ of its share was owned by Standard Chartered Grindlays Ltd. (Australia), 25\% share by Standard Chartered Bank (UK) and rest $25 \%$ share by the general public.

The Bank is being managed under joint venture and technical services agreement (T.S.A.) signed between SCB and Nepalese promoters. The Bank has been providing various banking services to its customers through its branches nation wide. There are all together 13 branches including its main branch/ corporate office in Kathmandu valley. Standard Chartered Bank Ltd. offers a full range of banking products and services in wholesale and consumer banking catering to a wide range of customers from individual to mid-market local corporate to multinationals and large public sector companies as well as embassies, aid agencies, airlines, hotels and government corporations.

The Bank has been the pioneer in introducing "Customer Focused" products and services in the country and aspires to continue to be a leader in introducing new products and highest level of service delivery. It is the first Bank in Nepal that has implemented the Anti-Money laundering policy and applied the 'Know Your Customer' procedure on all the customer account.

Table 1.2
Share Proportion of Standard Chartered Bank Nepal Limited

| S.No. | Ownership | Holding <br> $\%($ percentage) |
| :--- | :--- | :--- |
| 1. | Standard Chartered Bank Ltd. <br> Standard Chartered Grindlay's Ltd. (Australia) - 50\% <br> (ii) Standard Chartered Bank (United Nation) $-25 \%$ | $75 \%$ |
| 2. | Nepalese Public Share Holder | $25 \%$ |

(source: www.standardchartered.com.np)
SCBNL is pioneer financial institution of Nepal. At present the bank is operating through 13 Branches Vision statement of SCBNL is to remain the Lending financial institution of the country. SCBNL seek to provide an environment within which the bank can bring unique financial values and services to all customers.

SCBNL has opened its all branches at the heart of the city with view to provide better service and reach to its all customers in the region. SCBNL is in a unique position to provide truly international banking services to its customers through an extensive domestic and Global Network. SCBNL is the only international bank in the country, offers a full range of products and services under consumer and Wholesale Banking divisions catering to a wide range of customers.

## Bank of Kathmandu (BOK)

Bank of Kathmandu Ltd is also one of the important commercial Bank with $43.37 \%$ share to Nepalese Promoters and $56.63 \%$ of its share to General Public. It was established under the company Act in 1993. The major objective of the bank is to operate commercial banking activities through out the country with the approval of NRB. The Bank of Kathmandu came into operation in March 1995 with following predominant objectives.

Introduce modern banking technology facilitating bank and business operation and transactions.

Identify business prospects not yet catered by then existing commercial banks and offer new banking products and services.

Bring healthy market oriented technology.
Mobilize domestic savings and investment in productive areas promoting the country's overall development.
(Source: $\frac{\text { www.bokltd.com }}{}$ )

Bank of Kathmandu's activities globe around deposit mobilization, advancement of various credits, international banking including trade financing, inward and outward remittances and funds and portfolio management. At the beginning, SIAM commercial Bank of Thailand was the joint venture partner of BOK but later on 1998, the SIAM company diluted its holdings to the Nepalese citizens. After this, Nepalese public hold $97.72 \%$ of its share, $0.9 \%$ by financial institutions and remaining $1.38 \%$ by organized institutions.

Table 1.3
Share proportion of Bank of Kathmandu

| S.No. | Ownership | Holding \%(percentage) |
| :--- | :--- | :--- |
| 1. | Nepalese Public | 97.72 |
| 2. | Financial Institutions | 0.9 |
| 3. | Organized Institutions | 1.38 |

(source: www.bokltd.com)
Bank of Kathmandu is accepting deposits and providing loan to industries, commerce, agriculture as well as home loan and hire purchase loan through its various branches. At present the bank is operating through 28 Branches. The bank is able to earn significant profit and being one of the leading banks in Nepal.

Today BOK Ltd. has become a landmark in the Nepalese banking sector by being among the several commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

### 1.3 Focus of the Study

The focus of the whole Study is on loan portfolio, investment, recovery and outstanding. Each and every topic related to loan are fully tried to compare. But due to the nature of data and lack of updating, they are presented differently. Loan is very essential for serving and development of any sector. So as recovery is also an essential function related to loan as investment for granting additional loan and for smooth running business economy and whole nation. Loan that is committed to pay back is known as outstanding. NBL, SCBNL and BOK are three large banks of our country. So this study tries to focus only upon loan portfolio, investment, recovery and outstanding of these banks and they has managed accordingly or not.

### 1.4 Statement of the Problems

Nepal is an economically back pushed country. More than $80 \%$ population lives in rural area. Nepal is a country which is made up of villages and where there is predominant of agriculture sector. So, commercial banks alone are not sufficient to solve the credit problem of the country which are reluctant to enter rural and agriculture sector. But now to overcome these challenges, the globalization and economic liberalization has opened various opportunities in front of the banking business in Nepal.

Financial institutions are becoming main source of mobilizing the financial resources. It is playing important role in the development of the country. Financial institutions are apex entities of economy in any nation for promoting different business activities such as trade, industry and commerce. As such activities get momentum, excess dependency on agriculture sector about livelihood will automatically be reduced. While concentrating on commercial bank, large amount of total deposits collected is disbursed as loan. It shows the large amounts of the banks funds are concentrated on total loan portfolio. Therefore,
the success and failure of the commercial bank largely depends on the credit management.

In 1990s, the development of banking both in quality and quantity were satisfactory. However subsequent development of commercial bank in quality has not been satisfactory. The present study will try to analyze and examine the lending opportunities and investment portfolio of respected Banks. Each and every commercial bank should not run successfully without its conceptual framework of lending procedures.

Commercial Banks in Nepal have been facing several challenges, some of them are arising from lack of smooth functioning of economy, some of them are arising due to confused policy and many of them are arising due to default of the borrower.

The main problems of the study are noted as follows.
a) Government owned banks are in critical conditions, they are not able to recover the credit.
b) Analytical inefficiency regarding the borrower needs and their capacity to multiply banks fund. (The bank has to consider at least five criteria while lending loan such as capacity, character, capital, condition and collateral of the borrower.)
c) Increasing non-performing assets and decreasing trend of lending in productive sector.
d) Good lending opportunities are being lost due to under-liquidity.
e) Risk arising from the mismanagement of lending and investment portfolio.

### 1.5 Objectives of the Study

The objectives of this study are to analyze, examine, study and interpret the loan, investment and recovery of the sampled commercial bank. This study is important for the evaluation of strength and weakness in credit management of sampled commercial banks. The main objectives of this study are
a) To examine the liquidity position and the portfolio behavior of Commercial banks
b) To evaluate the status of the loan portfolio management of commercial bank,
c) To analyze the trend of loan investment and recover procedure.

### 1.6 Significance of the Study

Loan is the core area of the commercial banking. It plays the significance impact on the commercial bank's liquidity and profitability. Lending is one of the essential and main functions where the whole banking business is affected. So, this study emphasis to analyze about loan recovery and outstanding. This study may be useful to utilize the loan taken for specific purpose. Similarity it will be helpful to mobilize the loan into productive areas. This study would be of immense assistance they should manage the different composition of loan. This study would be important as it provides theoretical as well as conceptual framework of different aspect of credit management.

### 1.7 Limitations of the Study

This study has been limited by following factors.
a) This study has been made to make the study on the basis of primary data, yet secondary data covers major portion of study, received form the concerned institutions.
b) This study has been limited to the view point of the credit management.
c) This study is based only the period of seven fiscal year's data and the study concerns only of limited period, hence the conclusion drawn confirm to the above period only.
d) In this study only selected financial and statistical tools and techniques are used.
e) All data are assumed correct and accurate. So, if the data are reliable my study is also reliable.

### 1.8 Organization of the Study

The study will be organized into five chapters. The details of consisting in each chapter have been listed as below.

## Chapter I: Introduction

This Chapter includes Background of the Study, Introduction to Subject Matter, Statement of the Problems, Objectives, Significance, and Limitation of the Study and Organization of the Study.

## Chapter II: Review of Literature

This Chapter is brief review of the different literature related to this study field. Therefore it includes conceptual framework along with the review of major book, reports, journals, articles, research works and thesis etc.

## Chapter III: Research Methodology

This Chapter describes the different methodologies employed in this study. Source of data are mentioned and described in this chapter.

## Chapter IV: Data Presentation and Analysis

This Chapter will be data Presentation and analysis of them accompanied with presenting Chart, figures and other statistical and financial tools.

## Chapter V: Summary, Conclusion and Recommendations

Finally, this Chapter contains summary, conclusions and recommendations for the concern parties.

## CHAPTER - II

## REVIEW OF LITERATURE

This chapter is basically concerned with review of literature relevant to the Lending Operation and Practices of Commercial Banks in Nepal. Every study is very much based on past knowledge and present collected data. Many researchers have been conducted their research on the field of commercial banks especially on their financial performance and fund mobilization policy, compliance with NRB directives etc. Generally, past study about the topic is presented as well as researcher has tried to present new facts by finding out the weakness and conclusion of previous studies. Various sources had been studied during the research process in review of literature. They are as follows:

- Conceptual Framework
- Review of NRB Directives
- Review of Thesis


### 2.1 Conceptual Framework

### 2.1.1 Introduction of loan

The word Lending means Trusting. In the credit transactions the lender (or Banks) must have confidence in the borrower that she/he will be able to repay the money. In lending (credit) transactions, the creditor's responsibility to the debtor is to repay an equivalent amount in future plus added sum called interest. In other words the commercial bank earns profit by lending the amount in terms loan or credit and in return it gets interest. "Bank offers credit facilities to the borrower; it is always subject to the terms and conditions stipulated in the conditions which can be lenient or stringent depending upon the bargaining capacity of the bank and the borrower, but no way detrimental to the interest of the bank." (Dahal \& Dahal; 2002:140)

In generally, we can say that lending is a thing that is lent, especially a sum of money. Like-wise debt means a sum of money owed to somebody. However in financial terms a loan of debt means principal or interest availed to he/she borrow against the security.

Debt means that bank owes or will lend to individual or person. Likewise the term loan is defined as a lending delivered by one party and received by another party, a sum of money upon agreement expressed or implied, to repay it with or without interest. Any thing furnished for temporary use to a person at his request, on that condition it shall be returned or its equivalent in kind, with or without compensation for its use. Loan is the essence of commercial banking. Loan is the amount given by the bank to customer with certain guarantee and with a proper way of recovery for various purposes. Consequently the formulation and implementation of sound lending are among the next important responsibilities of bank directors and management. Well-conceived lending policies and careful lending practices are essential, if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit. "Dynamic credit management requires: addition to expertness in all technical phases of credit, the ability to analyze, plan and develop objectives, policies and program, build an organization, to delegate responsibility and maintain accountability for results, review and appraise operations for conformity with objectives, policies and practices and effect remedial action wherever and whenever required." (National Association Of Credit Management; 1965:33)

Granting loan to customer is one of the major functions of the bank same as interest is essential fact related to loan which is charged in loan by bank. "Two essential functions of commercial banks may be best summarized as the borrowing and lending of money. They borrow money by taking all kinds of deposits. Then it provides this money to those who are in need of it by granting overdrafts to fixed loan or by discounting bills of exchange or promissory notes. Thus the primary function of commercial banker is that of a broker and a dealer in money. By discharging this function efficiently, a commercial banker renders a valuable service to the community by increasing the productive capacity of the country and thereby accelerating the pace of economic development" (Lekshiny; 2000:4) likewise "Bank credit serves two functions. It helps to bridge the resource gap of customers and acts as a catalyst to stimulate increase mental production/sales and income. The banker's judgment of his customer's integrity plays a crucial role in his decision to lend or not to lend." He further states, "successful lending, thus depends upon
careful selection of the customers, proper appraisal of his credit needs and adequate control to ensure that his dealings with the bank are above-board and that he is complying with the terms and conditions on which credit has been sanctioned to him." (Munjal;, 1997:301)

Commercial banks fulfill various needs of all sectors of the economy by providing lending and investing activities to the people. It provides loan to various sectors like business, agriculture, infrastructures, projects, government or non-government organizations, individual persons etc. to fulfill their credit needs. "The commercial banks fulfill the credit needs of various sectors of the economy as well as the investment on securities, whether it is government or non government. The lending policies of commercial banks are based on the profit maximizing of the institution as well as the economic enhancement of the country." (Shrestha; 2007:177)

### 2.1.2 Types, Nature and Feature of Loan

This report mainly focuses on the Lending Operation and Practices of NBL, SCBNL and BOK. So it is rational to present the type, nature and feature of loan provided by these banks, as I consulted from the books, information provided by related banks.

## (a) Project Loan

Project loan is granted to customers on the basis of viability of the project. The financial institution asks the borrower to invest certain proportion to the project from their equity and rest will be financed as project loan. The debt equity ratio in case of project loan is generally $60: 40$. The project loan includes the term loan and working capital loan required by the project.

## (b) Term loan

Term loan is money lent to the borrowers in a lump sum. Generally, subsequent debt in the loan account in not allowed except by way of interest, incidental charges, insurance premiums, expenses incurred for the protection of the security. Term loans are generally
granted for loan period to finance fixed assets and are repayable on installments over the period of loan.

## (c)Working Capital Loan

Working capital is the difference between assets and current liabilities. This type of loan is granted to the customer to meet their working capital gap. Working capital can be divided into fixed working capital and variable working capital. Fixed working capital is financed by way of short-term loan while variable working capital is financed by overdraft.

## (d) Loan against Fixed Deposit Receipt

Fixed deposits are kept for a specified period by depositor. If a depositor needs money before its maturity, he/she can obtain loan against the security of such deposits. Generally financial institutions allow up $90 \%$ of the fixed deposits as loan.

## (e) Overdraft

Overdraft facility is a kind of working capital loan. This facility is allowed in current account holders only. Overdraft is an agreement by which the banker allows the customers to draw over and above the current account balance. The borrower can not exceed the limit sanctioned to him. In this account, the balance will be fluctuating because of withdrawal and repayment of money by the borrower. Interest on overdraft is charged on debit balance on daily basis. Overdraft is generally granted to the businessmen for the fulfillment of their short term needs. Its period is usually of 90 days.

## (f) Hire - Purchase Financing

Hire purchase includes lease or private use of automobiles either for personnel use or business use. Hire purchase is a type of installment credit under which the hire purchaser, called the hire agrees to take the goods on hire at a stated rental which is inclusive or repayment of principal as well as interest, with an option to purchase. Goods for purchase of hire purchase may be bus, truck, car, jeep, machinery etc. Hire purchase facility can be
granted to the person having fixed source of income. The facility can also be granted to the institutions.

## (g) Priority /Deprived Sector Loan

Thus "with the objective of mitigating the unemployment, poverty, economic inequality etc. and thus upgrading the deprived and low income people, the project of national development and priority sector lending such sector has been categorized as priority sector loan".
"With a view to make credit available to small agricultural, industrial and services sector and promote income at employment opportunities, the NRB has directed the commercial bank to extent at least $12 \%$ of their total outstanding loans to the priority sector." (Pandey; 2058: 80-90)

## (h) Housing Loan

Financial Institutions also extend housing loan to their customers. Housing loans may be of different nature, for e.g. Residential building, Commercial complex, Construction of warehouse etc. Housing loans are granted to the customer if they have regular source of income or if they earn revenue from the housing project itself.

## (i) Off - Balance Sheet Transaction

The bank provides the facilities to the client being the guarantor in some transaction. This facility provided to the client mainly two ways: (a) Bank Guarantee (b) Letter of Credit. This transaction is also called Off - Balance Sheet transaction. Such type of liability called contingent liability. Contingent liability is such type of liability which may or may not arise during the transaction. It is possible liability but on happening of a certain event it may become actual liability. It is not usual to record contingent liabilities in the books of account but the reference is made to them by way of foot note in the balance sheet. Because of that it is also known as Off - Balance Sheet Transaction.

## (i) Bank Guarantee

No loan is disbursed in this transaction of Bank Guarantee. Hence I would like to introduce it in a single sentence. Bank guarantee expresses a commitment of the bank to make good any financial loss and beneficiary of the guarantee sustain when the party named in guarantee on whose behalf the guarantee is issued falls to perform the contract and or discharge his/ her obligation.

## (ii) Letter of Credit

Letter of credit is commitment undertaking by a bank on behalf of its customer (known as buyer/ importer) to pay the counter value of goods/ services within a given date of its supplier (known as seller/ exporter) according to agreed stipulated and against presentation of specified documents. A letter of credit is normally opened by the bank of importer not the exporter, hence it is known as importer letter of credit.

It can be also defined that letter of credit(L/C) is a written instrument issued by a bank undertaking to pay a certain sum of money to a certain party upon presentation of certain documents complying certain terms and conditions as specified in the letter of credit.

## (j) Bridge-Gap Loan

If a term loan is approved to some customers and the approving institution cannot disburse the facility because of incompletion of legal and other formalities. In this situation customer may ask as bridge gap loan.

## (k) Consortium Loan

While a single financial institution cannot grant credit to a project because of single borrower limit or other reasons, two or more such institutions may agree to grant credit facility to the project. Such kind of loan is called consortium loan. Financial institutions may also go on consortium financing to share the risk of project between them.

## (1) Real Estate Loan

It is the credit extended to purchase or improves real property, such as land and building. Real property- land building and other structure secure such loans. Real estate loans include longer-term loan to finance the purchase of farmland.

## (m) Commercial and Industrial Loan

Commercial and industrial loan are extended to business firms to support the production and distribution of their products and services. It is granted business to cover such expenses as purchasing inventories, paying tax, meeting payrolls too.

### 2.1.3 Criteria for Lending Loan

"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 loan with interest. Therefore, there should be well-managed regulations lending aspect of bank. Such regulation should be strictly followed while evaluating the loan proposal and providing loans." (Khadka and Singh; 2004:196)

To put in simple words when a loan is made the following 5 C's of credit needs to be evaluated:

## (a) Character

Before providing loan, a bank should make an inquiry and examination of a person who come to the bank with proposal of loan. Though it is very difficult to find out true character of person, it must be checked out. The bank should study whether the person has good character with intention to pay the loan or not, whether he is person of criminal nature of not, whether a creditor has filed a petition against him in the court for recovery of debt or not. If the person is doubtful in nature, character and the bank has uneasiness to trust him, if so, it should not accept the proposal of loan. If he possesses good character and other criteria are satisfactory to the bank, it should accept the proposal.

## (b) Capacity

Capacity refers to the borrower's ability to generate sufficient cash flow from normal operations to meet future obligations. It needs to be analyzed whether the business has the resources (funds, income and revenue) to repay the loan. The business should be sound enough to generate profit, which is sufficient for not only repayment of bank loans but also provides reasonable return for the promoters.

## (c) Capital

If any person or businessman comes to make a proposal for a loan in a bank, his /her equity position and economic condition should be examined. His demand for money should be matched with the status of his household condition, how much the sum of money he wants to invest in his business. If the economic condition of the proponent is poor or less, or inferior to the amount for loan, the bank should reject his proposal. In brief, the quantity of amount of proponent financial condition should be stronger than the quantity of amount demanded.

## (d) Collateral

A bank is legal person. It doesn't provide the loan without securities or collaterals. It always studies and analysis whether the securities or collateral recovers the banks principal and interest of the loan acceptable to the bank. But the Nepalese banking law has not defined collateral. But the collateral falls under the security, itself. If a bank is satisfied on primary security, it does not require collateral, if the bank is not satisfied with the primary security, the bank may ask collateral, if the borrower can't give collateral the bank does not provide loan to him.

## (e) Condition

The credit analyst must be aware of trends in the borrower's line of work or industry. It must be clear that how the changing economics conditions might affect the loan. A loan can look very good on paper, only to have its value wear down by declining sales or income in a recession or by the high interest rate occasioned by inflation.

### 2.1.4 Credit Policy of Bank

Traditionally, bankers have been security oriented. Loan granted by bank may be secured and unsecured. Bank may provide loan on the basis of financial status, goodwill, believe etc. Such loan is called unsecured loan, which has not sufficient security or collateral. It must be ensured that the security when accepted must be adequate, readily marketable, easy to handle and free from encumbrances.

The loan which is provided by bank on the basis of securities or collateral like stock, bonds, bill etc. is called secured loan.

Bank has to follow sound credit policy and conduct the business of lending on the basis of certain sound principles in providing loans to its customer. Without effective and proper lending or credit policy on banks can accomplish its predetermined goals and objectives. The established credit policy normally speaks about the following components.

## (a) Safety of Funds

A Banker deals with others money and its own common sense. It has to use that common sense to safeguard the money of others. Its first duty is to see that money, which it tends some back to him. The recovery of a bank's money will not only be safe at the time of lending but will remain so throughout.

## (b) Security

Security is the main basis of providing loan by bank to its different types of customers. The credit policy should say what types of securities the bank wants to take and does not want to take. Traditionally, bankers have been security oriented. It must be ensured that the security when accepted must be adequate, readily marketable, easy to handle and free from encumbrances.

## (c) Liquidity

A banker has to ensure that it comes by on demand or in accordance with agreed terms of payment. Liquidity means short term solvency of borrower. A bank is essentially the lender of short term funds because he knows that the bulks on his deposit are repayable on demand or at short notice. So, a bank should maintain his liquidity position.

## (d) National Interest

A banker should follow the national interest of that country while making a disbursement policy. Purpose of advance, priority given by government and national interest is assumed greater importance than security, especially in priority sector lending.

## (e) Purpose of Loan

Nowadays the purpose for which loans are granted has acquired procedure over the principle of security. If a loan as required for a non-productive or speculative purpose, a banker will be reluctant to entertain the proposal. Loans for social functions ceremonies pleasure types favored by a banker, as they are unproductive nature.

## (f) Loan Mix or Spread

A successful banker is one who can manage his risks. One of the tools of management risk is to spread his advances portfolio not only among many borrowers but also to diversity lending to types of industries and against different types of securities. A banker who puts all his eggs in one basket is not a prudent banker.

## (g) Profitability

Any advance given has to be profitable otherwise banks can't run properly. In order words a bank should maintain its profitability while making a sound credit policy. Sometimes the considered may not appear profitable in it but may bring substantial deposits or to exchange business, which may be remunerative to a bank. Lending rates
are affected by banks interest policy like creating the borrower, the rate of central bank, inter bank competition and the central directives on level rates.

### 2.1.5 Punishment Stage for Recovery

There are two stages for punishment. First is general and second is critical. General punishment stage is primary stage applied for the purpose of security recovery. Bank issued first memorandum letter before the one month from the due date and second letter is issued after one month from the loan installment period. If the borrowers are not ready to pay their loan, bank publishes their name and title of collateral in the publication.

Critical or legal punishment stage is that stage when the borrowers are failed to repay loan amount. Bank publishes the name of the borrower in the public newspaper to pay their loan within 35 days, otherwise collateral will be sold or it will auction to collect the loan amount through the legal process.

### 2.1.6 Doubtful Loan

- The bank announces the sinking loan, if the loan amount will not be possible to recover, sinking loan amount may be decided under the following condition. (Ghimire;2005: 47)
- If the project is failure, when the loan provided under the security of project and the project is valueless or the borrowers may not be found.
- If the loan amount may not be possible to recover when lending is made from the security and insurance of the loan amount.
- If the collateral is valueless by the cause of natural calamities and other accident.
- Collateral may not be determined and borrowers are not found by the bank.
- If the borrowers succeed to recover loan from the bank by the way of cheating and by duplicate document, the bank fails to find out the borrower or may not be get success to recover the loan by the legal process.
- To recover loan amount is not possible selling or auction of collateral and there is no other property of the borrowers in the Government of Nepal.


### 2.1.7 Remission of Loan

The board of bank has a right to grant remission of principle and interest of loan. It has to be done accordingly. The GM has a right to grant remission of capitalized interest of capitalized amount. (Ghimire; 2005: 48)
The following loan committees have authority for providing the remission of loan amount.

Table 2.1
Remission of Loan

| S.No. | Offices | Remission of Loan <br> for one Purpose |
| :--- | :--- | :--- |
| 1. | Depot Loan Committee | Up to Rs.800 |
| 2. | Sub- branch Loan Committee | Up to Rs.1200 |
| 3. | Branch Loan Committee | Up to Rs.2000 |
| 4. | Main Branch Loan Committee | Up to Rs.3000 |
| 5. | Supervision Office, First Grant Loan Committee | Up to Rs.4000 |
| 6. | Supervision Office, Special Grad Loan Committee | Up to Rs.5000 |
| 7. | Collection Division Recovery Committee | Up to Rs.8000 |
| 8. | Chairmanship of DGM Committee | Up to Rs.10000 |
| 9. | As per Authority of the Board remission is given | More than Rs.10000 |
|  | through the GM |  |
| (Soure: Ghimire; 2005: 47) |  |  |

(Source: Ghimire; 2005: 47)

### 2.1.8 Loan Repayment

Loan is considered very important. Loan is defined as the amount expected to be repaid with interest. If bank has a good loan management system, can disburse necessary amount to their borrowers and collect the entire amount in time. Repayment of loan is an essential task related to loan. If persons taking loan from banks like BNL, SCBNL and

BOK must follow the repayment rules and regulation of these banks. Usually additional loan is necessitated for the expansion of business and project. Bank may help them granting additional loan in such a case persons that pay loan before due rate are considered as respectable bodies in the eyes of bank. There are also a provision of rebating half interest, if the borrower taking loan are supposed to pay loan amount before due date. But on the contrary, if a person is unable to repay the amount of loan on due date, they are charged more additional interest as punishment. So all this processes help to make the loan management more effective and efficient.

### 2.1.9 Documentation Requirement while Receiving Loan from Bank

An effective and efficient documentation system will promote uniformity lending to lower loan loss. A loan documentation checklist is designed by all credit departments of bank. The lost of documents are required in Nepal in the loan administration can be summarized as follows (Bhandari; 2003: 50)

- Loan application
- Copy of citizenship (mandatory for Nepalese) or passport (for foreigners) Applicable for all,
- Two copies passport size photo (Applicable for all),
- Copies of ownership certificate of land or building receipt of land revenue,
- Blueprint of land or building,
- Firm registration certificate,
- Cost estimate to the project,
- Acceptance of owners while taking the collateral of other persons,
- Credit information from other related financial institutions,
- Copy of quotations of the machinery while procuring it for the project,
- Registration document at the concerned Nepal Government Office and Tax Office ( for Firms/ Companies)
- Memorandum of articles and association (if Private Limited)
- Partnership deed (for Partnership Firm)
- Board resolution (if Private Limited and Institutions).


### 2.1.10 Ability to Take Loan

To take loan from bank, borrowers must be

- Socially and financially character full,
- Experienced and interested with the project,
- Able to do good financially position of the project,
- Able to give acceptable collateral to the bank and incest some equity capital,
- Able to receive necessary documents form related office,
- Able to maintain good relationship with financial institution,
- Financially and technically viable project,
- Nepalese citizenship and ability to take loan from any institution legally.


### 2.2 Review of NRB Directives

The central bank (NRB) has established legal framework by formulating various rules and regulation (prudential norms) to mobilize the funds in term of investment, lending etc to different parts of the nation. While making strategic plan in terms of investment and lending decision, these directives should be considered vital as they have direct impact with the banks. NRB has issued these directives in order to maintain healthy competition between these banks and also for the development of the nation in the financial sector. NRB has formulated various rules and regulation related to the banking. Some of them are about investment, credit limit, priority and deprived sector loan, single borrower limit; cash reserve ratio(CRR), loan loss provision, capital adequacy ratios, interest spread, productive sector fund, paid up capital etc. commercial Bank act 2031, Nepal Rastra foreign exchange regulation act 2019 along with the prevailing Nepalese law, guides the activities of these banks.

## Directive-1(b): Capital Fund

For a new commercial bank, minimum paid up capital is Rs. 250 million for operating all over Nepal except Kathmandu valley. The paid up capital for establishing a national level new commercial bank shall be Rs. 1 billion by mid July 2009 (Ashad 2066), all existing
banks must raise capital fund to Rs. 1000 million through minimum $10 \%$ paid up capital increment each year.

## Directive-1(c): Classification of capital fund

Capital fund is classified into two parts. They are as follows:

## Core Capital

The total capital fund is the sum of core capital and supplementary capital. The core capital comprises of paid up capital, share premium, irredeemable preference shares, general reserve fund, and accumulated profit and loss account, capital redemption reserve, capital adjustment fund and other free funds. However the amount of goodwill, fictitious assets should be deducted while calculating the core capital.

## Supplementary capital

Supplementary capital comprises of general loan loss provision, redeemable preference share capital, asset revaluation fund, hybrid capital instruments, subordinated term debt, investment adjustment fund, exchange fund and any other unspecified reserves. For the purpose of calculation of capital fund, the amount under the following heads, subject up to one hundred percent of the core capital should be included under the supplementary capital.

## Cash Reserve Ratio:

Commercial banks are required to maintain minimum cash reserve as per NRB's regulation 22 July 2002. It requires maintaining the cash at 2 percent of total deposits, balance at 7 percent of current and saving deposit and 5.5 percent of fixed deposit. Cash reserve ratio is not mandatory for foreign currency deposit and for margin deposits.

## General loan loss provision:

Under this heading, provision made against the pass loan should only be included. The amount should not exceed 1.25 percent of the risk weighted assets. However, loan loss
provisioning on sub standard and doubtful loans should be available to be included under the supplementary capital during the following time period:

## Directive-2(a): Loan classification

The classification criteria as follows:

Pass category: All loans and advances the principal of which are not past due or past due for a period up to 3 months. Only loans falling under pass category are termed as "Performing loan"

Substandard category: All loans and advances the principal of which are past due for a period of more than 3 months and up to 6 months.

Doubtful Category: All Loans and advances the principal of which are past due for a period of more than 6 month and up to a year.

Loss Category: All loans and advances the principal of which are past due for a period of more than a year.

The respective overdue periods of Pass, Sub-standard and Doubtful loans shall be considered for higher classification from the next day of the date of expiry of the overdue period provided for each category.

Lending institutions are not restricted from classifying the loan and advances from low risk category to high-risk category. For instance, loans falling under sub-standard may be classified into Doubtful or loss, and falling under Doubtful may be classified into Loss category. Commercial Banks are required to classify their loan on the basis of overdue aging schedule.

## Directive-2(b): Additional Arrangement in respect of "Pass Loan"

All loans and advances extended against gold and silver fixed deposited receipts, Credit Card and against security of HMG securities and NRB Bonds shall be included under "Pass" category. In other words, loan against these collateral shall be eligible for placing under Pass category irrespective of the past due period. However, where collateral of fixed deposit receipt or HMG securities or NRB bonds is placed as additional security against loan for other purposes, such loans have to be classified as required for other loans. As per the clarification issued by Nepal Rastra Bank earlier, loans against fixed deposit receipt of other banks shall also quality for inclusion under PASS loan. However, this is not clarified in the Unified Directives.

Renewal of working capital loan having one year maturity period only may be classified as Pass Loan. Loans of working capital nature on which the service of interest is not regular shall be classified on the basis of amount due period, means where the interest on working capital loan in not serviced regularly. Such loans will be considered as "overdue" and qualify for classification on the basis of the overdue period. Accordingly, working capital loan will simply become PASS loan on renewal of the facility provided interest is serviced regularly. The directives has not prohibited renewal of working capital facility with extended amount and outstanding interest amount is amount is assumed collected by accommodating the same within that "extended" facility.

## Directive-2(c): Additional arrangement in respect of "Loss" Loan

Irrespective of whether the loan is past due or not, loan having any of the following discrepancies shall be classified as "Loss" Loan.
a) Loans with inadequate securities: This is very subjective and may lead to a difference in opinion between the lending institutions and auditors/NRB inspectors.
b) The borrower has been declared bankrupt: The bankruptcy law is yet to be enacted. In the absence of the same, definition of bankrupt person may be imported from the "Civil code".
c) The borrower is absconding or cannot be found.
d) Purchased or discounted bills not realized within 90 days from the date and non-fund base facilities like letter of credit and guarantee converted into fund base credit not realized within 90 days from the conversion date, be classified in to LOSS loan where they are not realized within 90 days from due date. This is departure from the normal classification rules applicable to other loans. According bills will have only two classifications, PASS and LOSS. The directive is not clear as to treatment of bills the amount of which is transferred to a separate loan account before expiry of 90 days and remain unpaid for more than 90 days. e) Misuse of credit: For this purpose, the term "Misuse" means the credit has not been used for the purpose originally intended, on-operation of project, income earned from the project/business are not used in repaying loan and advances but used for a other purposes certified misuse of credit and facilities by the supervisors and auditors in course of the supervision of audit. As per the classification provided by NRB earlier, even partial diversification of the credit is not allowed.
f) Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.
g) Loans provided to the borrowers included in the blacklist of credit information center No loans can be provided to a black listed person, firm, company. Such an act shall be punishable under NRB Act with imposition of equivalent amount in fine. However where a borrower is black listed through other banks or financial institutions, the lending institution may provide loan loss provision according to its own classification of the loan or facility provided (earlier) to such borrower.
h) Project/Business is not in condition to operate or not in operation: The requisite condition is "not in operation or not in condition to operate". Accordingly, loan to entities no in operation but condition exists as to their operation may not qualify for LOSS categorization under this clause. Once restructuring process is considered, classification into LOSS category may not be necessary for temporarily closed down business.
i) Credit card is not written-off within the 90days from the due date

## Directive-2(d): Additional Arrangement in Respect of Term Loan

In respect of term loans (having the maturity period of more than one year period), the classification shall be made against the entire outstanding loan on the basis of the past due period of overdue installation of principal and interest.

As a matter of fact, this provision is seen as the most discouraged factor on the part of banks and financial institution to lend to the projects. Even in the event of non-payment of a small installment within the stipulated period, the entire project loan, this may have huge negative effect in the profitability of the financial institution. Accordingly with a view to facilitate project lending, particularly in this hour of insecurity feeling, some relent in the rule suggested.

## Directive-2(f): Prohibition to Recover Principal and Interest by Exceeding the Overdraft Limit

Principal and interest on loans and advances shall not be recovered by overdrawing the borrower's current account exceeding the limit of overdraft facility.

However, this arrangement shall not be construed as prohibitive for recovering the principal and interest by debiting the customer's account. Where a system of recovery of principal and interest by debiting the customer 's account exists and recovery is made as such resulting in overdraft, which is not settled within one month, then such overdrawn principal amount shall also be liable to be included under the outstanding loan. Such loans shall be downgraded by one step from its current classification. In respect of recognition of interest, the same shall be as per the clause relating to income recognition mentioned in Directives No. 4.

Income Recognition directives require that all interest accruals on loans shall be recognized on cash collection basis only. The above directive allowing the settlement of "Overdrawn" account within one month period has led to believe that such accrued interest may be recognized if paid within a month's time.

Under this clause, Bank and financial institution may debit the borrower's current account, irrespective of the balance available, of recovery of interest and principal. By doing so, it may buy a month's time for collecting the same. This may save the lending institution from requiring classifying the loan to a higher category. However, in respect of the interest, the cushion is not available since the directive has expressively mentioned that the recognition of interest shall be on cash basis only

## Directive-2(h): Loan Rescheduling and Restructuring

1. Loans may be rescheduled or restructured only upon submission of a written plan of action by the borrower, which is resurrecting on the following grounds.
A. Evidence of existence of adequate loan documentation and securities.
B. The lending institution is assured as to the possibility of recovery of restructured
or rescheduled loan. The term "reschedule" means process of extending repayment period/time of credit taken by the borrower. And, "restructuring", means process of changing the nature or conditions of loan/facility, adding or deleting of conditions and change in time limits.
2. In addition to submission of the written plan of action for rescheduling or restructuring of loan as above, at least $25 \%$ of accrued interest outstanding on date of restructuring or rescheduling should have been collected. Renewal of loan by collecting all interest can be classified as PASS loan.
3. In case of restructuring or rescheduling of loan of an industry which is recommended by the sick industry preliminary enquiry and recommendation committee formed under the His Majesty's government, Ministry of industry, Commerce and supply after recovery of $12 \%$ accrued interest and completion of all necessary procedure, provision for loan loss at a minimum of $25 \%$ will be required. However, where the loan restructured or rescheduled by collecting less than $12 \%$ interest, such loan shall require loan loss provisioning on past due period basis as is applicable to all.
The terms of rescheduling or restructuring may be as per the understanding between the BFI and the borrower. This is true even in the case of recommended sick industries.

At least 25 percent of total accrued interest up to the date of rescheduled or restructuring ( $12 \%$ for sick industries) should have been collected. In such a case the classification of loan will remain in the current position. However, where rescheduling or restructuring is done against collection of ALL INTEREST- meaning all outstanding interest-, the loan (principal) will be eligible for classification under PASS category. However, it is not clear as to the requisite treatment where portion of interest is waived and balance is collected in full. Where the lending institutions agree to waive interest accruals, the same has to be accounted, first to facilitate calculation of $25 \%$ (or $12 \%$ ) interest on reduced outstanding balance.

In the case of sick industries recommended by the Committee, rescheduling or restructuring is allowed will collection of less than $12 \%$ interest with the condition that loan shall be classified and normal provision is made. In other cases, collection of at least $25 \%$ is mandatory for restructuring/rescheduling.

## Directive-2(i): Loan Loss Provisioning

1. The loan loss provisioning on the outstanding loans and advances and bills purchase shall be done on the basis of classification, as follows:

Table 2.2
Loan Classification \& Loan Loss Provision

| Classification of loan | Loan loss provision |
| :--- | :--- |
| Pass | 1 percent |
| substandard | 25 percent |
| doubtful | 50 percent |
| loss | 100 percent |

Pass loans are also defined as performing loans. Loans and advances falling in the category of sub-standard, doubtful and loss are classified and defined as nonperforming loan.
2. Provisions on restructured or rescheduled loans shall be made as follows
a) A minimum of $12.5 \%$ provision shall be made on restructured or rescheduled loans.
b) In respect of restructuring or rescheduling of deprived sector loan and guaranteed or insured priority sector loan, the requisite provisioning shall be only $25 \%$ of the rates stated above.
c) Where the installment of principal and interest of restructured or rescheduled loan is serviced regularly for two consecutive years, such loan can be converted into pass loan.

Rescheduling/restructuring of loan resulting in improvement in classification to lowest risk category "(PASS) is not prohibited. However, such rescheduled loan shall require provisioning of at least $12.5 \%$. The upper limit of such provisioning requirement is not specific even if a LOSS loan is reclassified and categorized as PASS loan. However, adjustment to loan loss provisioning is allowed only on satisfactory service of the loan up to 2 consecutive years.

Loan loss provisioning on rescheduled/restructured sick industries recommended by sick industry preliminary enquiry and recommendation committee, upon recovery of minimum $12 \%$ outstanding interest is fixed at minimum $25 \%$. Meaning, restructured loss loan can be provided provisioning at $25 \%$ (Upper limit is not prohibited though).
The only concession provided in this case is rescheduled is made possible against collection of $12 \%$ interest (in other case, it is $25 \%$ ). At the same time, the provisioning is required at minimum $25 \%$ (in other case it is $12.5 \%$ ).
3. Full provisioning shall be made against the uninsured priority, deprived sector loans and small and medium scale industrial loans. However, in case of insured loans, the provisioning requirement will be only $25 \%$ of the prescribed normal rates.

Concession provisioning is not limited to priority/deprived sector and small/medium industries only as was the case earlier. The condition is purchase of insurance cover.

Accordingly, all loans, including priority sector/deprived sector, not covered by the insurance ("presumably with deposit insurance and credit guarantee corporation) fall under normal category. The norms of classification remain same for these loans and advances also.

In the case of rescheduling, restructuring of insured credit, the proportion of loan loss provisioning would be $3.125 \%$ (being $25 \%$ of $12.5 \%$ ). However, in the case of recommended sick industries, the minimum provisioning requirement is $25 \%$, and accordingly in the case of rescheduling, restructuring of insured credit of recommended sick industries, the minimum provisioning requirement will be $6.25 \%$ ( $25 \%$ of $25 \%$ )
4. Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other, shall be obtained. Such loans shall be classified as per above and where the loans fall under the category of pass , substandard and doubtful, in addition to the normal loan loss provision applicable for the category, an additional provision by 20-percentage point shall also be provided. Additional loan loss provision as above shall also be provided for the loan which is partly covered by collateral of physical assets and personal/institutional guarantee is obtained to cover the shortfall. Classification of such loan and advances shall be prepared separately.

By virtue of above, the loan loss provision required against a personal guarantee loan will be $21 \%, 45 \%$ and $70 \%$ for Pass, Substandard and Doubtful category respectively.
Such an additional loan loss provisioning will be required where loan is extended against the personal guarantee only without having obtained other form of collateral.
The directive also requires additional provisioning where the value of partial collateral falls short of the loan amount and partially covered by personal guarantee.

## Directive-2(j): Adjustment in Provisioning

(1) Except under the following cases adjustment of loan loss provision is prohibited.
(a) The loan has been completely written off. This may be on account of part recovery and part written off. The requirement is complete wipe out of loan portfolio.
(b) In the event of repayment of installment or partial payment of loan, the loan loss provision has to be provided as per loan classification and write back the provisions related to the amount of repaid loans. By virtue of this, adjustments in loan loss provision amount are permitted where the entire loans and advances have been classified and adequate provision is made against the same.
(c) Where the installment of principal and interest of restructured or rescheduled loan is serviced regularly for two consecutive years, the loan loss provisioning may be adjusted. However, the amount adjusted by writing back the loan loss provision cannot be used for distribution of dividend or issue bonus shares by showing in the profit.

By virtue of this, though rescheduling/restructuring of loan is possible, the advantage in terms of writing back previously provided loan loss provisioning would not be available unless service is regular consecutively for 2 years.

The written back provisioning amount against rescheduled or restructured loans cannot be used for distribution of dividend or even issue of bonus shares. It is not time bound, simply a non-permitted activity. How long this has to go is also not specified. The accounting treatment of this needs clarification from Nepal Rastra Bank Even if the"Profit" arising on account of provisions written bank is not distributed; it will have to be capitalized into Retained Earning. This will require maintenance of records so that the bonus issue at a later stage, if any, does not "consume" the provision written back

### 2.3 Review of Thesis

Several thesis works has been done under the topic "Lending Operation and Practices of Commercial Banks in Nepal" the relevant works for this study are presented below.

Poudel (2004) in his thesis, "A Study on Lending Practices of Joint Venture Commercial Banks," has studied two joint venture banks. His main objective was to know the volume of contribution made by both sample banks in lending, to determine the impact of deposit in liquidity and its effect of lending practices.

He found that; NBBL has more consistency than HBL. Current ratio of NBBL was higher than that of HBL. Liquidity position of NBBL was better. Profitability ratio like return on equity, earning per share of HBL was higher that that of NBBL. There was positive correlation between total deposits and loan and advances of both banks. The growth ratio of NBBL was higher than HBL but there was in consistency among ratios of NBBL.

He has suggested that HBL should increase its current ratio. NBBL has to increase its profitability. He has make an attempt to show that lending practices of two joint venture banks but the time limit has made the research to be compressed and only to tell the situation of 5 year period only.

Sharma (2005) in her thesis, "Loan Disbursement and Collection of Nepal Bangladesh Bank Limited," has studied joint venture of Nepal Bangladesh Bank Limited. Her main objective was to know the total amount of loan disbursed out of total deposit, types of loan disbursed and measure the statues of loan recovery out of total loan disbursed.

She found that; the deposit collected by the bank during six years period is in increasing trend but the percentage increase in deposit is fluctuating. The loan disbursed by NBBL is also affected by factors other than the amount of deposit collected like the poor economic state of the country with loss investment opportunities and the Government regulation or the increment of loan loss provision. NBBL has followed NRB directives and lent almost $12 \%$ each year in priority and deprived sector, loan loss provision single borrower credit limit and interest spread of the bank is as per NRB regulations. The average interest spread during the six years period of study is $4.71 \%$. The loans, which are easier to recover, include specific loans like hire purchase, housing, education loan etc. because of the selected group of customers. According to the credit department of NBBL, defaulters are more in case of overdraft loans as all types of people are the borrowers of this loan and personal defaults are more that the business firms in age of overdraft loan.

Khadgi (2006) in her thesis, "A Study of Investment Policy Analysis of NABIL Bank Ltd", has studied only the bank NABIL. Her objective was to study the resource mobilization and investment policy of NABIL Bank, to find out the current and future investing strategy of NABIL bank.

She found that, the sample bank has been able to meet its short-term obligation and satisfactory liquidity position. The bank has taken moderate risk towards the mobilization of its risky assets. NABIL has invested very nominal percentage of total working fund into shares and debentures. There is satisfaction in the level of profitability which indicates the good earning capacity. She found that the growth rate of deposits is in increasing trend. The net profit of the banks has increased too. There was positive correlation between total deposits and loan advances during the study period.

She has suggested NABIL to increase investment in government securities. To increase the risk free investment is also suggested. The more fund have to be mobilized into shares and debentures of other companies.

Pokhrel (2007) on his thesis, "Interest Rate Structure and Its Relation with Deposit, Lending and Inflation in Nepal" concludes: The interest rate on both deposit and lending of all sample banks are in decreasing trend. The saving deposit amount and saving interest rate have negative relationship. Fixed deposit amount and fixed interest rate shows negative relationship. The relationship between interest rate on deposit and inflation rate is positive. The interest rate on lending and inflation rate has low degree of positive correlation coefficient.

Shrestha (2008) in his thesis,"Interest Rate Structure and Its Influence on Deposit and Lending of Joint Venture Commercial Banks in Nepal," has studied six joint venture banks. His main objective was to know the relationship of interest rate on deposit amount and lending amount and analyze the position of interest rate and loan and advance ratio.
He found that; the interest rate on both deposit and lending of all sample banks are found to be in decreasing trend. But on the contrary to this deposit amount and lending amount is increasing every year except NBBL. The saving deposit amount and saving interest rate have negative correlation. The $t$-statistic between fixed deposit interest rate and fixed deposit amount is insignificant. He found that lending interest rate of the productive sector loan was decreased lesser in magnitude in comparison to the non-productive sector loan. The study show weak on mobilization of collected deposit.

Finally he suggested that interest rate on deposit is too less so increase the interest rate on deposit, central banks should pay special attention towards decreasing trend of interest rate on deposit and government to improve the political situation of the country.

Shrestha (2008) in his thesis, "Lending Policy of Commercial Banks in Nepal," has studied three joint venture bans. His main objective was to know the status of non-performing loans, analyze the portfolio behavior of lending and identify major weakness of lending policy of these commercial banks.

He found that; EBL and LBL are able to mobilize their deposit in right way but NABIL was unable to utilize its deposits. Compare to other banks NABIL bank has lower covariance. EBL and NABIL banks have lowest credit risk but LBL is in better position among these three banks. LBL was able to utilize its assets in the form of Loan and Advances. NABIL and EBL banks are able to manage their loan loss provision but LBL is unable to manage its loan and advances and makes effort for timely recover loan. EBL and LBL were earned more then $83 \%$ interest from loan and advance, but NABIL bank was unable to get more income form their lending. EBL and NABIL bank higher capital ratio but LBL has lowest capital risk ratios. The volume amount of deposit of all three commercial banks is in increasing trend. Total deposit position of EBL is comparatively lower than NABIL and is better in comparison to LBL. The trend of LBL net profit is negative. NABIL and EBL net profit in positive trend in every year. Each and every year growth rate of net profit is decreasing trend. NABIL bank is in better position among the three banks. LBL is in worst position. Regression equation of non-performing loan on loan and advances of NABIL and EBL banks is negative which reveals the negative relationship between these two variables. But the LBL regression is positive. It indicates the LBL was suffering from non-performing loan.
At last he suggested that all banks should be find out the new area for lending and investing to utilize their deposit. Some proportion of lending in commercial banks made agriculture and domestics industries sector.

Rokka (2009) in his thesis, "A Comparative Study on Deposit Mobilization of Joint Venture Commercial Banks," has studied two joint venture banks. His main objective was to know the relationship between deposit collection and distribution, analyze the financial position and analyze the trend of deposit mobilization towards investment, loan and advances.

He found that; the contribution of the deposit to the net profit is higher in the banks Only increment of deposit does not give any return to the bank. So the banks must make sound investment policy for the mobilization of the available funds. He found deposit through various schemes and granting those amounts as loan to the clients
by providing various facilities. They analyze to liquidity ratio of the EBL is stronger than other bank HBL. He found that activity ratio of EBL has mobilized its collected deposits on investment better than HBL. Capital adequacy ratio of EBL is good enough to row its capital than HBL.

He has suggested finally, if Everest Bank Ltd is successful banker they must utilize depositors' money as loan and advance. Loan and advances is the largest item of the bank in the assets side. And Himalayan bank Ltd is interested only in investing private sector. It is better for the bank to increase its profit by lending in highly profitable projects.

Acharya (2009) in his thesis paper, "Investment Practices of Commercial Banks," has studied two joint venture banks. His main objective was to know the fund utilization and mobilization, various ratios and study risk and profitability positions of concerned banks.

He found that; Liquidity ratio of BOK is higher than NABIL and ratio of loan and advances to current assets ratio of BOK is less than NABIL. The ratio of total investment to total deposit ratio of BOK is lower than NABIL. But both banks have fluctuating trend. The mean credit risk of BOK is high than NABIL. The fluctuation of ratios of BOK are consistent the NABIL. BOK has higher growth ratio in term of total deposit. NABIL's ratios are little weak. The coefficient of correlation between outside assets and net profit of BOK is higher than its price earning ratio. So there is significant relationship between outside assets and net profit. But NABIL have insignificant relationship between outside assets and net profit. Trend value of total deposit and loan and advance of both banks has followed an increasing trend. The capital risk of NABIL is higher than BOK. This shows there is high risk for NABIL but there is chance to high profit too.

He suggested both banks liquidity position is not satisfactory so manage the liquidity position; they invest more funds in share and debenture of other financial institutions. He suggested that commercial bank adopted modern method to investment and fund mobilization.

Bhattarai (2010) in his thesis, "Lending Management of Nepalese Commercial Banks" has studied Nepal Bank Limited and Nabil Bank Limited. His main objective was to analyze the portfolio of lending of selected banks, to examine position of the priority sector lending of
selected banks, to examine the impact of loan and deposit on profit of the selected banks, to explore the relationship of total loan with deposit and non-performing loan and profitability.

He found that; Banks \& financial institutions in Nepal will have to benchmark themselves against some of the best in the world, for a strong and resilient banking and financial system. Banks earn their highest gross profits from loans; the administration of loan portfolios seriously affects the profitability of banks. The large number of non-performing loans is the main cause of bank failure. Non-performing loan is seems to be major problems for Nepalese commercial banks. Banks are learning to review their risk portfolios. Lending is the most income-generating sources for Nepalese commercial bank but there is risk inherent in banks lending portfolio. In order to cover the risk inherent in the lending portfolio, banks have to make loan loss provision by categorizing the loans into different category as per the NRB directives. It has been found that NBL has high portion of non-performing loan, results lower profit. Out of total NPL, NBL has more volume of loss loan. Analysis of variance indicated that all indicators are not found significant difference at 0.1 levels of significance of NBL. From these indicators it can be said that to preserve its position as a successful and dominant commercial bank, NBL has to give attention on its lending and recovery device. Government owned bank NBL is not able to manage lending efficiently but private sector bank Nabil perform better in managing lending.

## Chapter - III <br> RESEARCH METHODOLOGY

Research methodology refers to the various sequential steps that are adopted by a researcher during the course of studying a problem with certain objectives. Research methodology describes the methods and process of applied in entire study. It tends to solve the search problem in systematic way. Hence, overall research method adopted by the researcher is mentioned. It is the overall framework for when to conduct process analyze and presents data on tables and figures to find the answer of the research problem. It covers quantitative methodologies in a greater extent and uses the descriptive part based on both technical aspects and logical aspect. This research tries to perform a well-designed quantitative and qualitative research in a very clear and direct way using both financial and statistical tools. The purpose, hypothesis or research questions and formats are covered in this research.

The topic of the problem has been selected as "Lending Operation and Practice of Commercial Bank in Nepal", A case study of Nepal Bank Ltd, Standard Chartered Bank Nepal Ltd. and Bank of Kathmandu with tentative objectives of pointing the problem in lending operation and practice.

### 3.1 Research Design

Research Design is the plan, strategy and structure to obtain answer to research question through investigation and analysis. Research design refers to the definite procedure and techniques, which guide to study and provide ways for research viability. It is arrangements for collection and analysis of data. It is the framework of overall operational pattern of the plan that stipulates what information is to be collected, from which source by which procedures.

To achieve the objective of this study, descriptive and analytical research design has been used. The main objective of this study is to examine the interrelation of Commercial Bank in Nepal on the basis of case study of NBL, SCBNL and BOK. To achieve this objective, both the analytical and descriptive research designs have been adopted. Some financial and statistical tools have been applied to examine facts.

### 3.2 Population and Sample

There are all together 29 licensed Commercial Bank in Nepal and out of them 6 Joint Venture Commercial Banks are currently in operation in Nepal. All the commercial Banks are considered as population of the study and among them NBL, SCBNL and BOK are taken as the sample for the study. NBL is fully a commercial bank since its activities are only related to commercial sector as well this is a first commercial bank in Nepal. SCBNL is the best performing joint venture bank in Nepal. Its profit per share, percentage of dividend paid per equity capital, net profits are among the highest in commercial banks. It has also access to global financial market. Even though, we know there are various sampling methods when taking sample from population, BOK is taken as sample for this study.

### 3.3 Nature and Sources of Data

There are two kind of data have been used in this research, Primary data and Secondary data.

### 3.3.1 Primary Data

Primary data are basically based on questionnaire as well as oral information from executives and departmental employees.

### 3.3.2 Secondary Data

Secondary data have been collected from journals, financial statements, previous unpublished dissertation, brochures and research paper of NBL, SCBNL and BOK. The Secondary data have been collected from journals, financial statements, previous unpublished dissertation, brochures and research paper of NBL, SCBNL and BOK. The major sources of secondary data are as follows.
(a) Economic Survey, HMG, Ministry of Finance.
(b) Central Bureau of statistics.
(c) Auditor's general reports.
(d) News of Central Bank.
(e) Annual General Reports of the Bank.
(f) News paper, research report, journal internet and other sources

### 3.4 Data Collection Procedure

For the purpose of collection of primary data and information, frequent visit made to NRB office, NBL office, SCBNL office, BOK office and respective banks etc. and oral information have been gathered from executives and departmental employees. Questionnaires were distributed to the borrowers of NBL, SCBNL and BOK, who have received loan from NBL, SCBNL and BOK.

For the collection of Secondary Data, the official website of Nepal Bank Ltd, www.nepalbank.com.np and Bank of Kathmandu, www.bokltd.com were visited from where the financial reports of the concerned Banks and other relevant information were taken. Likewise, the website of Standard Chartered Bank Nepal Limited was also visited and required data were downloaded. For the purpose of collection relevant data, frequent visit made to Nepal Commerce Campus Library and Central Library, TU to review different books and previous studies.

### 3.5 Data Processing and Analysis Procedure

In other to get the reliable conclusion, various observations have been taken for the study. In the first visit the researcher have been consulted the concerned authority of bank and explained about the stated problems and objectives of the study. The researcher also explained, why she is interested in these three banks and what she wishes to analyze. After keeping the forth the view of researcher, the authorities got convinced and appraised the effort. They assured that they would help as far as possible. Firstly, data gathered form the various sources have been verified and simplified for the purpose of analysis. Then it has been arranged and presented in a systematic way. Moreover, it has been checked, edited and tabulated in such a way that provides convenience for further computation and interpretation.

The researcher approached share department and asked for the profit and loss account and balance sheet of the banks of the last seven years in next visit. After explaining the need of such information, the related staff provided the necessary statement. Researcher made some other visit in the concerned banks to acquire the primary data. These relevant data have been inserted in meaningful tables. Only the data that are relevant to the study have been presented in the tabular from in the understandable way and unnecessary data have been excluded. Where the data suits different types of charts and diagrams have been made to clarify the tabulated data in systematic way. An attempt has been made to find out the conclusion from the available data, with the help of various financial as well as statistical tools.

### 3.6 Data Analysis Tools

In this study various financial and statistical tools have been used with a view of making the study reliable concise and clear.

The following financial as well as statistical tools have been used to analyze the data:

### 3.6.1 Statistical Tools

Statistical tools measure the data and give the result in numeric form which helps to analyze the data in logical way. The following statistical tools have been used in this study.

### 3.6.1.1 Average/ Mean

Average, in general, is calculated by adding all the numbers of all observations and dividing by the total number of observations. It is in fact, a value which is represented to stand for whole group of which it is a part, as typical of all the values in the group. Generally the average value lies somewhere in between the extremes i.e. the largest and the smallest items.

### 3.6.1.2 Standard Deviation

The standard deviation ( $\delta$ ) is another measure of investment risk. It is absolute measure of dispersion. The smaller the standard deviation the lower will be the degree of risk of the stock. In other words, a small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series and vice versa. The formula for calculating the standard deviation is:

Standard Deviation $(\delta)=\sqrt{\frac{\sum(X-\bar{X})^{2}}{N}}$

### 3.6.1.3 Coefficient of variance

The coefficient of Variation (CV) is the other useful measure of risk. It is the standard deviation divided by the expected return, which measure risk per unit of return. It provides a more meaningful basis for comparison when the expected returns on two alternatives are not the same. If investors believe that the rate of return should increase as the risk increase, then the coefficient of variation provides a quick summary of the relative trade-off between expected return and risk. It is hence used to compare the variability between two or more series.

Coefficient of Variation (CV) $=\frac{\delta}{\bar{X}} \times 100$
Where,

$$
\begin{aligned}
& \delta=\text { Standard Deviation } \\
& \bar{X}=\text { Mean }
\end{aligned}
$$

### 3.6.1.4 Karl Pearson's Coefficient of Correlation

The correlation analysis is the technique used to measure the closeness of the relationship between two variables. It helps in determining the degree of relationship between two or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number which indicates to what extend two variables are related with each other and to what extend variation in one leads to the variation in the other. Karl Pearson's measure, known as Pearsonian Correlation Coefficient between two Variables (series) X and Y , usually denoted by " $\mathrm{r}(\mathrm{X}, \mathrm{Y})$ " or " ${ }_{\mathrm{xY}}$ " or simply ' r ' can be obtained as;

$$
r_{\mathrm{XY}}=\frac{N \sum X Y-\sum X \sum Y}{\sqrt{N \sum X^{2}-\left(\sum X\right)^{2}} \sqrt{N \sum Y^{2}-\left(\sum Y\right)^{2}}}
$$

Where,
$r_{\mathrm{XY}} \quad=$ Coefficient of Correlation between x and y
$\mathrm{N} \quad=$ Number of Observations in Series x and y
$\sum \mathrm{X}=$ Sum of Observations of Series x
$\sum \mathrm{Y}=$ Sum of Observation of Series y
$\Sigma X^{2} \quad=$ Sum of Squared Observations in Series $x$
$\Sigma \mathrm{Y}^{2} \quad=$ Sum of Squared Observations in Series y
$\sum X Y=$ Sum Product of Observations in Series x and y

The value of correlation coefficient ' $r$ ' lies between -1 to 1
If $\mathrm{r}=1$, there is perfect positive relationship.
If $r=-1$, there is perfect negatives relationship.
If $\mathrm{r}=0$, there is no correlation at all.

### 3.6.1.5 Trend Analysis

Trend Analysis can also do by the help of least square equation:
i.e. $Y=a+b X$

Where,
$\mathrm{X}=$ Independent Variable
$\mathrm{Y}=$ Dependent Variable
Trend analysis is very useful and commonly applied tool to see in which direction, the observed data is going on in quantitative term on the basis of the tendencies in the dependent variable in the past period.

### 3.6.2 Financial Tools

### 3.6.2.1 Ratio Analysis

Ratio analysis is a powerful and most widely used tool of financial analysis. A ratio is defined as "the indicated quotient of two mathematical expression" and as the relationship between two or more things. (Webster's New Collection Dictionary, 1975)

A large number of ratios can be generated from the components of profit and loss account and balance sheet. They are sound reasons for selecting different kinds of ratios for different types of situation. For this study, ratios are categorized into the following major headings.

## (A) Analyzing the Lending Strength in Relative Term

The relationship between various assets and liabilities of the balance sheet will be established to show the active strength of lending of each bank comparatively. So these ratios are also called Assets/Liabilities management ratio. Since, the sample banks are
comparable in volume of deposit, loans and advances and other variables also; an attempt is made to determine the lending strength in relative figure between banks.

## (i) Total Assets to Total Liability Ratio

The ratio of total assets to total liabilities measures the volume of total liability in total assets of the firm. The banks create credit by the way of lending activities and multiply their assets many times, and then their liability permits. Thus, this ratio measures the bank's ability to multiply its liability into assets.

It is always recommended to have higher ratio of total assets to total liabilities ratio since it signifies overall increase of credit and overall development of banks performance. The higher the ratio, higher the productivity and higher the assets conversion and vice versa. This ratio is calculated by dividing total assets by total liabilities. This can be stated as below:
Total Assets
Total Assets to Total Liabilities Ratio =

## Total Liabilities

## (ii) Loan and Advances to Total Assets Ratio

Loan and advances of any commercial banks represent the major portion in the volume of total assets. The ratio of loan and advances to total assets ratio measures the volume of loans and advances in the structure of total assets. The high degree of this ratio indicates the good performance of banks in mobilizing its funds by the way of lending function. However, in its reverse side, the high degree of this ratio is representative of low liquidity ratio. Granting the loans and advances always carries a certain degree of risk. Thus, this asset of banking business is regarded as risky asset. The low ratio shows low productivity and high degree of safety in liquidity and vice versa. The interaction of risk and return determine this ratio. This ratio is calculated by dividing loan and advances by total assets. This can be stated as below:

Loan and Advances to Total Assets Ratio =
Total Assets

## (iii) Investment to Loan and Advance Ratio

This ratio measure the contribution made by investment in total amount of loans and advances. The proportion between investment and loan and advances measures the management attitudes towards risky assets and safety assets. Here, the total mobilized fund i.e. investment and loan and advances in whole does not provide the quality of assets that a bank has created. Thus, it measures the risk of banking business too. The high ratio indicates the mobilization of funds in safe area and vice versa. However safety does not provide with satisfactory return. So a compromising ratio between risk and profit should be maintained. This ratio is calculated by dividing investment by loan and advances. This can be shown as below:

## Investment

Investment to Loan and Advances Ratio =

## Loan and Advances

## (iv) Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the banks are utilizing their total deposits on loan and advances for profit generating purpose. A ratio helps us showing the relationship between loans and advances which are granted and the total deposit collected by the bank. A high ratio indicates better mobilization of collected deposit and vice versa. It should be noted that too high ratio may not be better from liquidity point of view. This ratio is calculated by dividing loan and advances by total deposits. This can be stated as below:

Loan and Advances to Total Deposit Ratio =

## Total Deposit

## (v) Loan and Advances to Shareholders Equity Ratio

Shareholders equity consists of share capital, share premium, reserve fund and retained earning. The ratio between loan and advances to shareholders equity provides the measures regarding how far shareholders equity has been able to generate assets to multiply its wealth. The shareholders equity refers to the net shareholders intake in the business. This ratio measures the size of business and their success in converting liabilities into assets. This ratio is calculated by dividing loan and advances by shareholders equity. This can be shown as below:

Loan and Advances
Loan and Advances to Shareholders Equity Ratio =

> Shareholders' Equity
(Net worth)

## (B) Analyzing the Portfolio Behavior of Loan and Advances

Portfolios are composition of investments in various sectors which in turn are composed to expected risk and return of their component investments. Commercial banks' lending portfolio covers auto loan. Bills purchase, hire purchase, constructions, productions, consumer loan, deprived sector loan, priority sector loan, margin lending, industrial overdraft, term loan etc. Portfolio of lending means different types of loan granted by commercial banks.

## (i) Private Sector Loan to Total Loans and Advances Ratio

The ratio of private sector loan to total loan and advances measures the volume of private sector activity in total economy with compare to government sector activity. This solely
measures the loan and advances received by the government from commercial banks with loan and advance received by private sector while calculating this ratio from both private sector loan and total loan and advances excluding the amount of bills purchased and discounted. This ratio is calculated by dividing private sector loan by loan and advances. This can be stated as below.

Private Sector Loan
Private Sector Loan to Total Loan and Advances Ratio =
Loan and Advances

## (C) Analyzing Lending Efficiency and Its Contribution towards Profitability

## (i) Total Interest Income to Interest Expenses Ratio

The ratio of interest income to interest expenses ratio measures the gap between interest rates offered and interest rates charged. Since NRB has restricted the gap between the interest rate offered and interest charged, in average, should not more than $5 \%$. The difference in this ratio is mainly caused by the ratio of fund mobilized and fund collected. The credit creation power of commercial banks has highly impact on this ratio. This ratio is calculated by dividing total interest income by interest expenses. This can be stated as below:

Total Interest Income
Total Interest Income to Interest Expenses Ratio =
Interest Expenses

## (ii) Total Income to total Expenses Ratio

The comparison between the total income and total expenses measures the productivity of expenses in generating income. The amount of income that a unit of expenses generates is measured by the ratio of total income to total expenses. The higher ratio is indicated to higher productivity of expenses and vice - versa.

Total Income

Total Income to Total Expenses Ratio $=工$

## (iii) Total Interest Income to Total Income Ratio

Income is one of the most important parts of any business organization. Interest income occupies a greater portion of the total income in the banking business. This ratio measures the volume of interest income in total income. It helps to measure the banks performance of other fee- based activities also. The high ratio indicates the high contribution made by lending and investment whereas low ratio indicates the low contribution made by lending and investment and high contribution by other fee-based activities in total income. The ratio measures the banks performance on how well they are mobilizing their fund for the purpose of income generation. This ratio also helps to measure the banks performance on other fee-based activities, since after investing functions fee-based activities are the major source of banks income to total income. This ratio is calculated by dividing total interest income by total income. This can be shown as below:

## Total Interest Income

Total Interest Income to Total Income Ratio =
Total Income

## (iv) Total Income to Total Assets Ratio

This ratio measures, the assets of business is utilized efficiently to generate income or not. It also measures the quality of assets in income generation. This ratio is calculated by dividing total income by total assets. This can be shown as below:

Total Income
Total Income to Total Assets Ratio =

## (v) Interest Expenses to total Deposit ratio

This ratio measures the cost of total deposits in a relative term. The performance of a commercial bank is dependent upon its ability to generate cheaper fund. Cheaper the fund, more the probability of generating loan and advances and vice versa. The high ratio is indication of costly fund and this adversely affects the lending activities of a bank. This ratio is calculated by dividing interest paid by total deposit. This can be shown as below:

Interest Paid
Interest Expenses to Total Deposit Ratio =
Total Deposit

## (vi) Interest Suspense to Interest Income from Loan and Advances Ratio

Interest suspense refers to that portion of interest, which is due but not collected. NRB circular does not allow the commercial banks to book due but unpaid interest into income. The increase in the interest suspense decreases the profit of the banks. Such interest is shown in liability side of balance sheet under heading "other assets". This ratio measures the uncollected but due interest in the volume of total interest income form loan and advances. The high degree of this ratio refers to the poor interest turnover and vice versa. This ratio also helps to analyze the capacity of the bank in collecting the repayment of the loan advanced. This ratio is calculated by dividing accrued interest on loan by loan and advances and overdraft. This can be shown as below:

Accrued Interest on Loan
Interest Suspense to Interest Income from = Loan and Advances Ratio

Loan and Advances and Overdraft

## (vii) Interest form Investment to Total Interest Ratio

This ratio measure the contribution made by interest investment in total interest income. The major portion of interest income is generated by the lending function and investment regarded as the cushion against liquidity risk. Hence, this ratio measures how efficiently
the banks have employed their trend in investment. This ratio is calculated by dividing interest from investment by total interest income. This can be stated as below:

Interest from Investment
Interest from Investment to Total interest Ratio $=$
Total Interest Income
Where,
Interest from investment is the difference between total interest income and interest form loan and advances.

## (viii) Net Profit to Shareholder's Equity Ratio

This ratio measures the amount of profit that shareholders fund has received. The higher ratio indicates higher return to shareholders and vice versa. This ratio is calculated by dividing net profit by shareholder's equity. This can be stated as below:

Net Profit
Net Profit to Shareholder's Equity Ratio =

> Shareholder's Equity

## (ix) Earning per Share (EPS)

Earning per share is the net profit divided by the total number of shares outstanding. The amount of EPS measures the efficiency of a firm in relative terms. How far an organization is able to use its resource to generate profit is due to EPS determines that market of a share. However, high amount of EPS increase the competition in the market by entry of new organization. This ratio is calculated by dividing net profit by no. of shares outstanding. This can be shown as below:

Net Profit
Earning per Share (EPS) =

> No. of Share Outstanding

## (D) Analyzing the Liquidity Position

Liquidity is known as lifeblood of the each and every large business organization because the whole operation is related to this factor. Both excess amount of liquidity as well as inadequate amount hampers the entire business. Inadequate liquidity can lead to unexpected cash short falls that must be covered at inordinate costs, thus reducing profitability. In the worst case, inadequate liquidity can lead to the liquidity insolvency of the institution. On the other hand, excessive liquidity can lead to low asset yields and contribute to poor earning performance. (Scott, 1992) NRB has maintained certain rules and regulations in this matter.

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

## (i) Liquid Fund to Total Deposit Ratio

The total deposit constitutes the major part of the banks liquidity. Flow of this liquidity is always uncertain in the banks fund management. Hence the ratio of liquid fund to total deposit indicates the banks strength to meet uncertain outflow of deposit.

## Liquid Fund

## Liquid Fund to Total Deposit Ratio =

## Total Deposit

## (ii) Cash and Bank Balance to Interest Sensitive Deposit ratio

Interest sensitive deposit means saving deposit. This deposit is deposited by public in the bank with an explicit objective of increasing their wealth. Their interest plays a vital role in interest sensitive deposit. The ratio of cash and bank balance to interest sensitive deposits measures the ability of banks immediate funds to meet/ cover their deposit, margin and call due to change in interest rates. Higher the ratio, higher the liquidity
position and ability to cover the deposits and vice- versa. This ratio is calculated by dividing cash and bank balance by saving deposit. This can be stated as below:

Cash and Bank Balance
Cash and Bank Balance to Interest Sensitive Deposit Ratio =
Saving Deposit

## CHAPTER - IV <br> DATA PRESENTATION AND ANALYSIS

In this section, all the collected data are presented in the filtered form and are analyzed thoroughly. This is the one of the major chapter of this study because it includes detail analysis and interpretation of the data from which concrete result of Nepalese market can be obtained. In this chapter the relevant data and information necessary for the study are presented and analyzed keeping the objectives set in mind. This chapter consists of various calculations made for the analysis of lending operation and practices of sample banks. This chapter consists of detail analysis and interpretation of data relating to loan investment, recovery and outstanding. Here, it is attempted to study the collection situation of loan amount invested by NBL, SCBNL and BOK. It is also tried to study some possible causes of none and delayed repayment of loan by the help of primary data. To make our study effective and precise as well as easy and understandable, this chapter is categorized in three parts, presentation, analysis and interpretation. This analysis is based on secondary and primary data available. In presentation section, data are presented in terms of table, graph chart of figures, according to need. The presented data are then analyzed and hence interpreted with the help of various financial and statistical tools which are mentioned in chapter three.

### 4.1 Presentation and Analysis of Secondary Data

Secondary type of data is used to analyze about lending strength, lending efficiency and its contribution towards profitability, portfolio behavior of loan and advances and liquidity position.

### 4.1.1 Analyzing the Lending Strength in Absolute Term

In this topic, the variable in their absolute value and its variability is measured. The value of individual variables enables to measure the gross contribution of respective banks in those aspects.

The ratio analysis solely describes the ratio between the two variables but does not tell about the absolute value of those variables. Therefore, in this chapter, some of the important individual standard deviation is examined. At the same time, to measure the uniformity, coefficient of variation is also measured. The absolute value of individual bank is compared to judge the contribution of respective banks and their practices.

### 4.1.1.1 Investment

As interest income is major source of income, higher loan yields greater returns. But to get more return from investment, effective recovery is also important. The nature of investment is more liquid than loan and advances. Investment thus provides a cushion against liquidity risk.

Investment $=$ Investment in Government Securities + Other Investment
Table 4.1

## Investment

> Rs. In Million.

| Years <br> Banks | 2004- <br> $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 5}-$ <br> $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 6}-$ <br> $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 7 -}$ <br> $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 8}$ <br> $\mathbf{2 0 0 9}$ | Mean | S.D. | C.V. |
| :--- | :---: | :---: | :---: | :---: | :---: | :--- | :--- | :--- |
| NBL | 13838.6 | 11776.9 | 13226.3 | 12918.4 | 10597.9 | 12471.62 | 1151.63 | $9.23 \%$ |
| SCBNL | 7204.6 | 8644.9 | 7115.7 | 8146.1 | 10007.3 | 8223.72 | 700.22 | $8.51 \%$ |
| BOK | 2216.5 | 2654.8 | 2332.0 | 2113.2 | 1745.0 | 2212.26 | 296.09 | $13.38 \%$ |

(Source: Appendix I and III)
The above Table 4.1 shows that the mean value and S.D of NBL is higher among three banks and C.V. of BOK is higher among three banks. NBL is better than SCBNL and BOK in Mean investment. The S.D. and C.V. of SCBNL is lower than the other two banks, so it is less riskier bank among the three banks.

Figure 4.1

## Investment



The above Figure -4.1 shows that the trend of investment of all these banks does not have fixed direction. There is no consistency in investment of NBL, SCBNL and BOK, it is in a fluctuating trend. NBL has invested Rs.13838.6 Million in the year 2005 and Rs10597.9 Million in the year 2009, which is decreased by $23.41 \%$, similarly Investment of SCBNL in the year 2005 amount to Rs.7204.6 Million and in the year 2009 amount to Rs.10007.3 million, which is an increment of $38.90 \%$.BOK has invested Rs.2216.5 million in the year 2005 and Rs. 1745.0 million in the year 2009, which is decreased by 21.27\%.

### 4.1.1.2 Loans and Advances

The commercial banks function is to create credit from its borrowed fund. The bank doing so, converts its liability into active assets. Loans and advances are the assets coming from such activities. The high volume of loan and advances is the indication of good performance in credit sector. Since the survival of banking business is dependent on good performance of lending function. The volume of well performing loans and advances in economy is a symbol of healthy business.

Table 4.2

## Loans and Advances

Rs. In Million

| Years <br> Banks | 20042005 | $\begin{aligned} & \hline 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \hline 2006- \\ & 2007 \end{aligned}$ | 2007- | $\begin{gathered} \hline 2008- \\ 2009 \end{gathered}$ | Mean | S.D. | C.V. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 17456.0 | 12180.4 | 13377.5 | 15480.6 | 19261.0 | 15551.1 | 2587.78 | 16.64\% |
| SCBNL | 8213.5 | 8905.1 | 10538.1 | 13355.0 | 13118.6 | 10826.06 | 2109.49 | 19.49\% |
| BOK | 6166.9 | 7525.2 | 9663.6 | 12692.9 | 14894.7 | 10188.66 | 3223.73 | 31.64\% |

(Source: Appendix II)
The above Table 4.2 shows that the mean volume of NBL is highest. SCBNL is in the second position with low degree of S.D and C.V. BOK has lowest mean with highest degree of S.D. and C.V.

Figure 4.2
Loan and Advances


The Figure 4.2 presented above explains that the volume of NBL's loan and advances in the year 2009 is highest. NBL's performance is lower in the year 2006 as compared to other years. So its trend of loan and advances is fluctuating. Likewise SCBNL's trend of loan and advances is also fluctuating. BOK's performance is in increasing trend.

### 4.1.1.3 Total Deposit

It consists of all type of demand and fixed deposit. Deposit is the main source of bank's fund, its volume in total liability plays a vital role in administrating the lending and investing function of a bank.

Table 4.3

## Total Deposit

Rs. In Million

| Years <br> Banks | $\mathbf{2 0 0 4}-$ <br> $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 5}-$ <br> $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 6 -}$ <br> $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 7}-$ <br> $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 8}-$ <br> $\mathbf{2 0 0 9}$ | Mean | S.D. | C.V. |
| :--- | :---: | :---: | :---: | :---: | :---: | :--- | :--- | :--- |
| NBL | 34744.2 | 35444.9 | 38715.2 | 41451.7 | 44346.1 | 38940.42 | 3616.78 | $9.29 \%$ |
| SCBNL | 19344.0 | 23050.5 | 24640.3 | 29743.9 | 35871.8 | 26530.1 | 5743.08 | $21.65 \%$ |
| BOK | 8942.8 | 10429.3 | 12358.6 | 15832.7 | 18083.9 | 13129.46 | 3384.29 | $25.78 \%$ |

(Source: Appendix II)
The above Table 4.3 shows that the mean volume of total deposit of NBL is highest but standard deviation of SCBNL is highest and coefficient of variation of BOK is highest. The high degree of variation of all three banks is caused by the increasing trend of deposit.

Figure 4.3

## Total Deposit



The above Figure 4.3 explains that the total deposits of three banks are in increasing trend. NBL has deposit amount of Rs.34744.2 Million in the year 2005 and 44346.1 Million in the year 2009, which is an increment of $27.64 \%$. SCBNL has deposit amount of Rs. 19344 Million in the year 2005 and Rs.35871.8 Million in the year 2009, which is an increment of $85.44 \%$. Similarly total deposit amount of BOK in year 2005 is Rs. 8942.8 Million and in year 2009 is Rs.18083.9 Million, which is an increment of $102.22 \%$ in the entire period of the study.

### 4.1.1.4 Total Interest Income

The volume of Interest Income measures the bank's ability to generate income from lending and investing activities. The high volume is indication of favorable contribution of lending and investing activities in income generation.

Table 4.4
Total Interest Income
Rs. In Million

| Years <br> Banks | 2004- $2005$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{gathered} 2006- \\ 2007 \end{gathered}$ | $\begin{gathered} 2007- \\ 2008 \end{gathered}$ | 2008- <br> 2009 | Mean | S.D. | C.V. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 1980.5 | 2045.6 | 1841.6 | 1958.1 | 2393.6 | 2043.88 | 186.87 | 9.14\% |
| SCBNL | 1058.6 | 1189.1 | 1410.6 | 1591.2 | 1887.2 | 1427.34 | 293.71 | 20.58\% |
| BOK | 451.5 | 722.1 | 821.4 | 1034.0 | 1348.7 | 875.54 | 301.75 | 34.46\% |

(Source: Appendix IV)
The above Table 4.4 shows that the coefficient of variation and standard deviation of total interest income of BOK is highest. The mean total interest income of NBL is highest with least S.D and C.V. SCBNL has moderate mean S.D. and C.V.

Figure 4.4

## Total Interest Income



The above Figure 4.4 shows that BOK and SCBNL are able to generate interest income rapidly from lending and investing activities. NBL's performance has lower as compared to other two banks. Total interest income of NBL has of Rs.1980.5 Million in the year 2005 and Rs.2393.6 Million in the year 2009, which is an increase of $20.86 \%$, and SCBNL has an increment of $78.27 \%$, similarly BOK has been increased as $198.71 \%$.

### 4.1.1.5 Total Expenses

The total expenses include all types of expenses those are charged against profit and loss account.

## Table 4.5

## Total Expenses

| Rs. In Million |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Years <br> Banks | $\begin{aligned} & \hline 2004- \\ & 2005 \end{aligned}$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | 2006- <br> 2007 | $\begin{aligned} & 2007- \\ & 2008 \end{aligned}$ | $\begin{aligned} & 2008- \\ & 2009 \end{aligned}$ | Mean | S.D. | C.V. |
| NBL | 2761.1 | 1254.4 | 2292.3 | 2282.5 | 2878.1 | 2293.68 | 572.76 | 24.97\% |
| SCBNL | 1028.8 | 1100.3 | 1322.2 | 1507.8 | 1754.6 | 1342.74 | 266.32 | 19.83\% |
| BOK | 401.8 | 557.6 | 759.0 | 926.6 | 978.6 | 724.72 | 218.45 | 30.14\% |

(Source: Appendix IV)

The above Table 4.5 shows that the mean value of total expenses, S.D of NBL is highest among three banks. BOK has lowest mean value of total expenses and S.D. with highest value of C.V. Actually there is no vast difference in C.V between NBL and BOK. SCBNL has moderate mean value of total expenses and S.D with lowest degree of coefficient of variation.

Figure 4.5
Total Expenses


The above Figure 4.5 Shows that the total expenses of NBL is fluctuating and its total expenses are highest in the year 2009. SCBNL is always successful to run the business in lowest possible cost. Total expenses of SCBNL is ranged from Rs.1028.8 Million in the year 2005 to Rs.2782.9 Million in the year 2009, this constitutes an increasing of $170.50 \%$, but BOK is different from the rest two banks. BOK's trend has been increasing rapidly since 2005, total expenses of BOK in the year 2005 is Rs. 401.8 Million and Rs.1704.4 Million in the year 2009, which shows the increase of $324.19 \%$.

### 4.1.1.6 Loan Loss Provision

Provision for doubtful debts in balance sheet shows the figure that is the summation of provision made against pass and substandard loans as per NRB directives.

Table 4.6

## Loan Loss Provision

Rs. In Million

| Years <br> Banks | 2004- <br> 2005 | $\begin{aligned} & \hline 2005- \\ & 2006 \end{aligned}$ | $\begin{gathered} 2006- \\ 2007 \end{gathered}$ | $\begin{gathered} \hline 2007- \\ 2008 \end{gathered}$ | $\begin{aligned} & \hline 2008- \\ & 2009 \end{aligned}$ | Mean | S.D. | C.V. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 9249.9 | 3269.6 | 2376.3 | 2141.8 | 2188.6 | 3845.24 | 2732.97 | 71.07\% |
| SCBNL | 277.7 | 270.4 | 287.5 | 245.4 | 200.9 | 256.38 | 31.04 | 12.11\% |
| BOK | 269.7 | 236.2 | 286.5 | 279.0 | 297.5 | 273.78 | 20.88 | 7.63\% |

(Source: Appendix II)
The above Table 4.6 shows that the mean value, S.D as well as C.V of NBL is highest among three banks. BOK stands in second position with moderate value of mean, with lowest value of standard deviation and coefficient of variation. SCBNL has lowest mean with moderate value of S.D and C.V. The C.V and S.D of loan loss provision between NBL and BOK are vast different. NBL is highest with C.V of $71.07 \%$ where as that of BOK is the lowest with C.V of $7.63 \%$. Which shows its risk per unit of return is also highest.

Figure 4.6
Loan Loss Provision


The above Figure 4.6 shows that the loan loss provision of NBL has dramatically decreasing since 2006 to 2008 and then it has been increased in 2009. BOK has
fluctuating character. SCBNL has also fluctuating trend. However, the loan loss provision of SCBNL is decreasing for the first three years but then after 2006 it has fluctuating trend. Loan loss provision of NBL is highest. This is not good sign for the better future of bank.

### 4.1.1.7 Net Profit

The volume of net profit measures the success of bank in every aspect of its operation and strategy.

Table 4.7
Net Profit

| Rs. In Million |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Years <br> Banks | 2004- <br> 2005 | 20052006 | 2006- <br> 2007 | 2007- <br> 2008 | 20082009 | Mean | S.D. | C.V. |
| NBL | 1399.5 | 2329.7 | 417.7 | 845.2 | 1047.0 | 1207.78 | 644.51 | 53.36\% |
| SCBNL | 757.9 | 662.2 | 692.1 | 814.4 | 1028.3 | 791.04 | 129.81 | 16.41\% |
| BOK | 158.0 | 330.7 | 278.5 | 367.6 | 725.8 | 386.28 | 176.14 | 45.60\% |

(Source: Appendix IV)
The above Table 4.7 shows that the mean value, S.D as well as C.V of NBL is highest among three banks. SCBNL has moderate mean value with lowest S.D. The net profit of SCBNL is highest with least degree of coefficient of variation. The C.V and S.D. of BOK has moderate with least value of mean.

## Figure 4.7

## Net Profit



The above Figure 4.7 shows that the volume of net profit of NBL is rapidly increasing from the year 2005 to 2006 and then it is decreased in the year 2007 but again in increasing trend since 2008. NBL has net loss Rs.(371) Million in the year 2004 and net profit Rs.845.2 Million in the year 2008.These changes caused an increment of $327.76 \%$.. SCBNL has net profit of Rs.757.9 Million in the year 2005 and Rs.1028.3 Million in the year 2009. Which is an increase of $35.68 \%$. Similarly, BOK has Rs.228.8 Million in the year 2005 and Rs.725.8 Million in the year 2009. This causes an increment of $217.22 \%$.

### 4.1.2 Analyzing the Lending Strength in Relative Term

The lending strength of these banks is measured in relative measures in this section. The relationship between various assets and liabilities of the balance sheet has been established to show the relative strength of lending of each bank comparatively. An attempt is made to determine the lending strength in absolute figure of each bank.

### 4.1.2.1 Total Assets to Total Liabilities Ratio

Total assets to total liabilities ratio measures the volume of liability in total assets ratio of the bank. It is always recommended to have higher ratio of total assets to total liabilities ratio since it signifies overall increase of credit and overall development of banks performance. The higher the ratio, higher the productivity and higher the assets conversion and vice versa.

Total Liabilities

## Table 4.8

Total Assets to Total Liabilities Ratio

| Years <br> Banks | $\begin{aligned} & \hline 2004- \\ & 2005 \end{aligned}$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \hline 2006- \\ & 2007 \end{aligned}$ | $\begin{aligned} & \hline 2007- \\ & 2008 \end{aligned}$ | $\begin{aligned} & \hline 2008- \\ & 2009 \end{aligned}$ | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.7489 | 0.8788 | 0.9109 | 0.8880 | 0.9414 | 0.8736 |
| SCBNL | 1.0979 | 1.0911 | 1.0891 | 1.0934 | 1.0913 | 1.0926 |
| BOK | 1.0913 | 1.0901 | 1.0803 | 1.0788 | 1.1092 | 1.0899 |
| Combined Mean |  |  |  |  |  | 1.0187 |

(Source: Appendix II and III)
The above Table 4.8 shows that, among the three banks, SCBNL has the highest mean total assets to total liabilities ratio, which is 1.0926 and BOK comes to the second position with mean ratio of 1.0899 , then NBL comes in the third positions. Though the highest ratio of total assets to total liabilities is considered best so here, the total assets to total liabilities ratio of SCBNL is highest throughout the year. The mean value of total assets to total liabilities between SCBNL and BOK is not vast difference. The overall combined mean of these three banks is 1.0187 .

### 4.1.2.2 Loans and Advances to Total Assets Ratio

Loan and advance is the major component of the total assets, which indicate the ability of banks to utilize its deposits in the form of loans and advances to earn high return. It is an appropriate level to generate profit. The high degree of this ratio indicates the good performance of the commercial banks in mobilizing its funds by the way of lending function.

However, its reverse side, the high degree of this ratio is representative of low liquidity ratio either.

Granting the loan and advances always carries a certain degree of risk. Thus, this asset of banking business is towards risk assets. The low ratio is indicative of low productivity and high degree of safety in liquidity and vice versa. The interaction between risk and return determines this ratio.

Loan and Advances
Loans and Advances to Total Assets Ratio =
Total Assets
Table 4.9
Loans and Advances to Total Assets Ratio

| Years | $\begin{gathered} 2004- \\ 2005 \end{gathered}$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{gathered} 2006- \\ 2007 \end{gathered}$ | $\begin{gathered} 2007- \\ 2008 \end{gathered}$ | $\begin{aligned} & 2008- \\ & 2009 \end{aligned}$ | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.3218 | 0.2279 | 0.2898 | 0.3287 | 0.3617 | 0.3060 |
| SCBNL | 0.3610 | 0.3323 | 0.3520 | 0.3892 | 0.3150 | 0.3499 |
| BOK | 0.6033 | 0.5947 | 0.6445 | 0.6999 | 0.7090 | 0.6503 |
| Combined Mean |  |  |  |  |  | 0.4354 |

(Source: Appendix II and III)
While observing these ratios, in the case of loan and advance, the performance of BOK comes at first position. Its means BOK has maximum risk in loan and advance but in other side BOK was successful to mobilize its total assets and get more profit. SCBNL comes to the second position with mean ratio of 0.3499 . The ratio of NBL comes to the third position with mean ratio of 0.3060 . Lowest ratio indicates the bad performance. It is unable to utilize its asset as loan and advances. This regarding that BOK has higher ratio than other two banks which indicate the BOK is in better position among these three banks. The overall combined mean of these banks is 0.4354 .

### 4.1.2.3 Investment to Loan and Advances Ratio

This proportion between investment and loan and advances measures the management attitudes towards risky assets and safety assets. This ratio measures the risk of banking business too. The high ratio indicates the mobilization of fund in safe area and vice versa. However safety does not provide with satisfactory return. So a compromising ratio between risk and profit should be maintained.

Investment
Investment to Loan and Advances Ratio $=\square$
Loan and Advances
Table 4.10
Investment to Loan and Advances Ratio

| Years <br> Banks | $\begin{aligned} & 2004- \\ & 2005 \end{aligned}$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{gathered} 2006- \\ 2007 \end{gathered}$ | $\begin{aligned} & 2007- \\ & 2008 \end{aligned}$ | 2008 2009 | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.7928 | 0.9669 | 0.9887 | 0.8345 | 0.5502 | 0.8266 |
| SCBNL | 0.8772 | 0.9708 | 0.6752 | 0.6100 | 0.7628 | 0.7792 |
| BOK | 0.3494 | 0.3528 | 0.2413 | 0.1681 | 0.1172 | 0.2458 |
| Combined Mean |  |  |  |  |  | 0.6172 |

(Source: Appendix III)
The above Table 4.10 shows the ratio of investment to loan and advances ratio. Since, this ratio measures the contribution made by investment. NBL's ratio is highest and comes at first position with mean ratio of 0.8266 . SCBNL comes to the second position with mean ratio of 0.7792 . Similarly BOK comes at third position with mean ratio of 0.2458 . The overall combined mean of these banks is 0.6172 .

### 4.1.2.4 Loan and Advances to Total Deposit Ratio

Commercial banks can collect deposit only ten times more than their authorized capital. Commercial bank cannot provide all deposit for loan and advance and investment and so on. According to NBR directives, commercial bank can provide only up to $88 \%$ of loan
from fixed deposit, $50 \%$ from saving deposit and call deposit. However, they can not provide loan from current deposit. Commercial bank must deposit two or five percentage of their total deposit in Nepal Rastra Bank account. This percent is fixed by their types of deposit.

The main source of bank's lending are its deposit. Thus, loan and advances to total deposits ratio actually measures how successfully the commercial banks are able to mobilize their total deposits on loan and advances for the purpose of profit generation and fund mobilization power. Higher the ratio indicates the better mobilization of total deposits. But too high ratio is not being better from its liquidity point of view. Lower ratio indicates the idle amount of deposit. So that higher ratio is favorable.

Loan and Advances
Loan and Advances to Total Deposit Ratio =
Total Deposit
Table 4.11
Loan and Advances to Total Deposit Ratio

| ```Years Banks``` | $\begin{aligned} & 2004 \\ & 2005 \end{aligned}$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \hline 2006- \\ & 2007 \end{aligned}$ | $\begin{aligned} & 2007- \\ & 2008 \end{aligned}$ | 20082009 | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.5024 | 0.3436 | 0.3455 | 0.3735 | 0.4343 | 0.3999 |
| SCBNL | 0.4246 | 0.3863 | 0.4277 | 0.4490 | 0.3657 | 0.4107 |
| BOK | 0.6896 | 0.7215 | 0.7819 | 0.8017 | 0.8236 | 0.7636 |
| Combined Mean |  |  |  |  |  | 0.5247 |

(Source: Appendix III and II)
The loan and advances to total deposit ratio of NBL and SCBNL are fluctuating and BOK is in increasing trend. Among these three banks BOK is able to mobilize its deposit in right way. The ratio of NBL, SCBNL and BOK are $0.3999,0.4107$ and 0.7636 respectively. The overall combined mean ratio of these banks is 0.5247 . BOK is able to get more profit from its loan and advances. SCBNL is in the second position. And NBL is
unable to utilize its deposit for the profit generating purpose in effective way. It has so many idle amount of deposit which increases its deposit expenses. Deposit expenses cause the NBL to get less profit.

### 4.1.2.5 Loan and Advances to Shareholders Equity Ratio

Shareholders equity consists of share capital, share premium, reserve fund and retained earning. The ratio between loan and advances to shareholders equity provides the measures regarding how far shareholders equity has been able to generate assets to multiply its wealth. The shareholders equity refers to the net shareholders in take in the business. Thus, the ratio measures size of the business and their success in covering liabilities into assets.

Loan and Advances
Loan and Advances to Shareholders Equity Ratio =
Shareholders Equity
(Net Worth)

## Table 4.12

## Loan and Advances to Shareholders Equity Ratio

| Yanks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(Source: Appendix III and II)
This ratio of loan and advances to shareholders equity of these banks are not consistency in the entire period of the study. Among these three banks the ratio of BOK is highest as compared to the others but it is in a increasing trend except in the year 2009. The performance of NBL is highest in the year 2005, which is 14.4611 . Similarly the
performance of SCBNL is highest in the year 2005 which is 6.4258 . The performance of BOK is highest in the year 2008 which is 12.9256 .

The mean ratio of NBL, SCBNL and BOK are 9.4328, 5.9296 and 11.0558 respectively, and its combined mean of all of these banks 8.8061.

### 4.1.3 Analyzing the Portfolio Behavior of Loan and Advances

In this chapter, the ratio of loan and advances granted to various sector of economy and for various purposes to total volume of loan and advances are measured. In this topic, we examine the portfolio management of loan and advances.

### 4.1.3.1 Private Sector Loan to Total Loan and Advances Ratio

This ratio measures the contribution of banks lending in private sector.
Private Sector Loan
Private Sector Loan to Total Loan and Advance Ratio $=$ $\qquad$
Loan and Advance
Table 4.13
Private Sector Loan to Total Loan and Advance Ratio

| Years <br> Banks | $2004-$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{gathered} 2006- \\ 2007 \end{gathered}$ | $\begin{aligned} & 2007 \\ & 2008 \end{aligned}$ | $\begin{aligned} & 2008- \\ & 2009 \end{aligned}$ | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.9672 | 0.9372 | 0.9287 | 0.9567 | 0.9454 | 0.9470 |
| SCBNL | 0.9616 | 0.9907 | 0.9106 | 0.9434 | 0.9698 | 0.9552 |
| BOK | 1 | 0.9891 | 0.9697 | 1 | 1 | 0.9918 |
| Combined Mean |  |  |  |  |  | 0.9647 |

(Source: Appendix III )
The above Table 4.13 shows that the proportion of loan and advances granted to private sector is significant in case of all three banks. The above table explains about the fluctuating trend in all banks. The mean ratio ranges from 0.9470 and it has increasing
trend. It means that the dependency of lending in government is decreasing in the commercial banks. Lending in government sector is safe to the commercial banks than lending in the private sector. But the return from government sector is less than that of private sector. Therefore the lending activities of these banks are highly depended upon the private economy and its development. In the area of privatization, this ratio is good in the case of all banks, but this should increase in the coming future.

The mean ratio of NBL, SCBNL and BOK are $0.9470,0.9552$ and 0.9918 respectively. The mean ratio of BOK is highest among the three banks. The performances of all banks are good. Their continuous effort has increased the private sector participant in development activities and the trend toward the globalization of economy may cause this ratio to increase in future.

### 4.1.4 Analyzing Lending Efficiency and Its Contribution towards Profitability

In this section, lending efficiency is measured in terms of quality and its turnover. A relationship between different variables related to lending efficiency is taken from Balance Sheet and Profit and Loss account.

### 4.1.4.1 Total Interest Income to Interest Expenses ratio

Total Interest Income to Interest Expenses ratio measures the gap between interest rates offered and interest rates charged. Since NRB has restricted the gap between the interest rate offered and interest rates charged in average, should not be more than $5 \%$. The difference in this ratio is mainly caused by the ratio of fund mobilized and fund collected. The credit creation power of commercial banks is highly impact on this ratio.

## Total Interest Income

Total Interest Income to Interest Expenses Ratio $=\square$
Interest Expenses

Table 4.14
Total Interest Income to Interest Expenses Ratio

| Years | 2004- <br> 2005 | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \text { 2006- } \\ & 2007 \end{aligned}$ | 2007- <br> 2008 | 20082009 | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 2.6453 | 2.6618 | 2.3747 | 2.6025 | 3.0668 | 2.6702 |
| SCBNL | 4.1644 | 3.9348 | 3.4293 | 3.3733 | 3.4704 | 3.6744 |
| BOK | 2.5055 | 2.3452 | 2.4202 | 2.4772 | 2.3956 | 2.4287 |
| Combined Mean |  |  |  |  |  | 2.9244 |

(Source: Appendix IV)
The above Table 4.14 shows that the mean ratio of SCBNL has a high degree of gap between the interest offered and interest charged. The increase ratio implies that the SCBNL is charging high interest to the borrowers and offering low interest rate to the depositors.

The mean ratio of SCBNL is 3.6744 whereas the mean ratio of NBL and BOK is 2.6702 and 2.4287 respectively. The combined mean ratio of these banks is 2.9244 . This indicates a rupee of expenses in deposits has generated 2.8346 rupees of interest income from these banks.

### 4.1.4.2 Total Income to Total Expenses Ratio

The comparison between the total income and total expenses measures the productivity of expenses in generating income. The high ratio is indicative of higher productivity of expenses and vice - versa.

Total Income
Total Income to Total Expenses Ratio =

## Total Expenses

Table 4.15
Total Income to Total Expenses Ratio

| Yanks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(Source: Appendix IV)
The above Table 4.15 exhibits that the Mean ratio of BOK is least among the three banks. The ratio of NBL has been in fluctuating trend. The trend of SCBNL is also fluctuating. The combined Mean ratio is 1.5697 and the mean ratio of NBL, SCBNL and BOK are $1.6561,1.5548$ and 1.4983 respectively. However the performance of all these banks can be considerable.

### 4.1.4.3 Total Interest Income to Total Income ratio

The high ratio of total interest income to total income ratio indicates the high contribution made by lending and investing activities. This ratio measures the volume of interest income in total income.

Total Interest Income
Total Interest Income to Total Income Ratio $=\square$
Total Income
Where,
Total Income $=$ Operating income + Income from other sources

Table 4.16
Total Interest Income to Total Income Ratio

| Years | 2004- <br> 2005 | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \text { 2006- } \\ & 2007 \end{aligned}$ | $\begin{aligned} & 2007- \\ & 2008 \end{aligned}$ | 20082009 | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.4760 | 0.5707 | 0.6796 | 0.6261 | 0.6098 | 0.5924 |
| SCBNL | 0.6757 | 0.6747 | 0.7004 | 0.8521 | 0.6781 | 0.7162 |
| BOK | 0.8065 | 0.8129 | 0.7917 | 0.7989 | 0.7913 | 0.8003 |
| Combined Mean |  |  |  |  |  | 0.7030 |

(Source: Appendix IV)
The above Table 4.16 explains that the total interest income to total income ratio of BOK is highest among the three banks. NBL has lowest ratio and SCBNL is in moderate position. The overall mean ratio of these three banks is 0.7030 . The highest ratio of BOK indicates its greater degree of dependency on fund basis activities than other two banks. NBL's lowest ratio indicates its low dependency in fund-based activities.

### 4.1.4.4 Interest Expenses to Total Deposit Ratio

The performance of commercial banks is dependent upon its ability to generate cheaper fund. Cheaper the fund, more the profitability of generating loans and advances and viceversa. The high ratio is indication of costly fund and this adversely affects the lending activities of a bank.

Interest Paid
Interest Expenses to Total Deposit Ratio =

Total Deposit

Table 4.17
Interest Expenses to Total Deposit Ratio

| Yanks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(Source: Appendix II and IV)
The above Table 4.17 shows that SCBNL is always successful in collecting cheaper fund by its modern and personalized services to the customers. The ratio of BOK is greatest throughout the period of 5 years. Where as the ratio of NBL is in moderate position.

The combined mean ratio of interest expenses of total deposit ratio 0.0205 indicates that the cost of deposit in these three banks is $2.05 \%$ grossly. Due to the lack of lending opportunities, the supply of fund is exceeding the demand of fund.

### 4.1.4.5 Interest Suspense to Interest Income from Loan and Advances Ratio

Interest suspense refers to that portion of interest, which due but not collected. This ratio measures the uncollected but due interest in the volume of total interest income from loan and advances. The high degree of this ratio refers to the poor interest turnover and viceversa.

Interest Suspense to Interest Income from Loan and Advances Ratio =

Accrued Interest on Loan
Loan and Advance and Overdraft

Table 4.18

## Interest Suspense to Interest Income from Loan and Advances Ratio

| Yanks | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 4 -}$ | $\mathbf{2 0 0 5}-$ | $\mathbf{2 0 0 6 -}$ | $\mathbf{2 0 0 7}-$ <br> $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}-$ <br> $\mathbf{2 0 0 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NBL | 0.7808 | 0.5301 | 0.3805 | 0.2914 | 0.2101 | 0.4386 |
| SCBNL | 0.0163 | 0.0180 | 0.0228 | 0.0086 | 0.0090 | 0.0149 |
| BOK | 0.0045 | 0.0032 | 0.0015 | 0.0012 | 0.0008 | 0.0022 |
| Combined Mean |  |  |  |  |  |  |

(Source: Appendix II and IV)
The above Table 4.18 explains that the portion of interest suspense to interest income from loan and advance for BOK is lowest throughout the years. The ratio of NBL is significantly higher than SCBNL and BOK. The combined mean ratio of these three banks is 0.1519 . This ratio indicates that the interest turnover of BOK is best among these three banks. NBL should improve its interest turnover to decrease its ratio.

### 4.1.4.6 Interest from Investment to Total Interest Ratio

This ratio measures the contribution made by interest from investment in total interest income. This ratio measures how efficiently the banks have employed their trend in investment.

> Interest from Investment

Interest from Investment to Total Interest Ratio $=$

## Total Interest Income

Where,
Interest from investment is the difference between total interest income and interest from loan and advances.

Table 4.19
Interest from Investment to Total Interest Ratio

| Years <br> Banks | $\begin{aligned} & \hline 2004- \\ & 2005 \end{aligned}$ | $\begin{aligned} & 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \hline 2006- \\ & 2007 \end{aligned}$ | $\begin{gathered} \hline 2007- \\ 2008 \end{gathered}$ | $\begin{aligned} & \hline 2008- \\ & 2009 \end{aligned}$ | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 0.2232 | 0.2396 | 0.2548 | 0.2995 | 0.2816 | 0.2597 |
| SCBNL | 0.3132 | 0.2976 | 0.2295 | 0.2011 | 0.2157 | 0.2514 |
| BOK | 0.1493 | 0.1583 | 0.1322 | 0.0826 | 0.0875 | 0.1220 |
| Combined Mean |  |  |  |  |  | 0.2110 |

(Source: Appendix IV)
The above Table 4.19 explains that the mean ratio of NBL is highest as compared to another two banks. The mean ratio of SCBNL and NBL is 0.2514 and 0.2597 respectively, whereas the mean ratio of BOK is only 0.1220 . The combined mean ratio of these banks is 0.2110 . The combined mean is divided significantly among the banks. The highest mean of NBL is caused by its high investing activities.

### 4.1.4.7 Net Profit to Shareholder's Equity Ratio

Net profit to shareholder's equity ratio measures the amount of profit that a rupee of shareholders fund has received. The high ratio is indicative of high return to shareholders and vice - versa.

Net profit to Shareholder's Equity Ratio =

$$
\begin{gathered}
\text { Net Profit } \\
\text { Shareholder's Equity }
\end{gathered}
$$

Where,
Shareholders Equity $=$ Share Capital and Share Premium + Retained Earning + Reserves.

Table 4.20
Net Profit to Shareholder's Equity Ratio

| Banks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(Source: Appendix II and IV)
The above Table 4.20 explains that the net profit to shareholder's equity ratio of NBL is highest among three banks. NBL's ratio is increasing trend in the year 2005 and 2006 and it has decreased in the year 2007 but again it has going to increase in the year 2008 and 2009. The ratio of SCBNL is in fluctuating trend in the entire period of study. Similarly the ratio of BOK is also in fluctuating trend.

The mean ratio of NBL, SCBNL and BOK is $0.7609,0.4409$ and 0.4115 respectively. The combined mean ratio of these three banks is 0.5378 , which shows that $53.78 \%$ of net profit is made by shareholders fund. NBL comes at the first position then SCBNL comes to the second and BOK is in the third position.

### 4.1.4.8 Earning Per Share (EPS)

The amount of EPS measures the efficiency of a firm in relative terms. High amount of EPS increase the competition in the market by entry of new organization.

Net Profit
Earning Per Share (EPS) =
No. of Shares outstanding

## Table 4.21

Earning Per Share (EPS)

| Years <br> Banks | $\begin{aligned} & \hline 2004- \\ & 2005 \end{aligned}$ | $\begin{aligned} & \hline 2005- \\ & 2006 \end{aligned}$ | $\begin{aligned} & \hline 2006- \\ & 2007 \end{aligned}$ | $\begin{gathered} \hline 2007- \\ 2008 \end{gathered}$ | $\begin{aligned} & \hline 2008- \\ & 2009 \end{aligned}$ | Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 367.9022 | 612.4343 | 109.8055 | 222.1872 | 275.2366 | 317.5132 |
| SCBNL | 202.3225 | 176.8553 | 167.4571 | 131.1856 | 110.3326 | 157.6306 |
| BOK | 49.3529 | 71.3330 | 46.1781 | 60.9517 | 85.9545 | 62.7540 |
| Combined Mean |  |  |  |  |  | 179.2993 |

(Source: Appendix IV)
The above Figure 4.21 shows that the EPS of NBL, SCBNL and BOK have fluctuating trend. NBL comes to the first position, SCBNL has acquired the second position, BOK comes to the third position. As compared to the earning per share of BOK from 2005 to 2009, we can see the increase in EPS is of $74 \%$. However there is a decreasing trend of EPS in the case of NBL and SCBNL. The percentage decreased in EPS of NBL and SCBNL are $25 \%$ and $45 \%$ respectively.

The combined mean EPS of these banks is 179.2993 , which is significantly deviated form the mean EPS of these three banks. The mean EPS of NBL, SCBNL and BOK are $317.5132,157.6306$ and 62.7540 respectively.

### 4.1.5 Analyzing the Liquidity Position

Liquidity is known as lifeblood of the each and every large business organization because the whole operation is related to this factor. Both excess amount of liquidity as well as inadequate amount hampers the entire business.

The high degree of liquidity cause unnecessary amount of interest paid, which is not a good sign, where as the lack of liquidity shows the signal of poor credit. However NRB has maintained certain rules and regulations in this matter.

### 4.1.5.1 Liquid Fund to Total Deposit Ratio

The total deposit constitutes the major part of the banks liquidity. Flow of this liquidity is always uncertain in the banks fund management. Hence the ratio of liquid fund to total deposit indicates the banks strength to meet uncertain outflow of deposit.

## Liquid Fund

Liquid Fund to Total Deposit Ratio =

## Total Deposit

Table 4.22
Liquid Fund to Total Deposit Ratio

| Yanks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(Source: Appendix II)
The above Table 4.22 shows that throughout the study period of five year the combined mean ratio of liquid fund to total deposit was 0.1568 , which shows $15.68 \%$ of liquid fund is maintained against total deposit. NBL maintained highest level of liquid fund in respective to its deposit. The ratio is 0.1619 for SCBNL during study period. BOK has maintained 0.1404 fraction of total deposit as liquid fund. The liquidity position of BOK is better while as compare with other two banks.

### 4.1.5.2 Cash and Bank Balance to Interest Sensitive Deposit Ratio

Interest sensitive deposit means saving deposit. This deposit is deposited by public in a bank with an explicit objective of increasing their wealth. The interest plays a vital role in interest sensitive deposit. Unlike this deposit, other deposit like fixed and current deposit is not interest sensitive. Fixed deposit has a fixed term of maturity and fluctuation in
interest rates does not allow its investment in short run. So it is not sensitive towards interest rates. The cash and bank balance to interest sensitive deposit ratio measures the ability of banks immediate funds to meet/ cover their deposit, margin and call due to change in interest rates. Higher the ratio, higher the liquidity position and ability to cover the deposits and vice-versa.

Cash and Bank Balance
Cash and Bank Balance to =
Interest Sensitive Deposit Ratio
Saving Deposit
Table 4.23
Cash and Bank Balance to Interest Sensitive Deposit Ratio

| Yanks | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 4 -}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}-$ | $\mathbf{2 0 0 7}-$ <br> $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}-$ <br> $\mathbf{2 0 0 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NBL | 0.2354 | 0.2343 | 0.2650 | 0.1771 | 0.2913 | 0.2406 |
| SCBNL | 0.0853 | 0.0874 | 0.1466 | 0.1148 | 0.1635 | 0.1195 |
| BOK | 0.2148 | 0.1590 | 0.2355 | 0.2184 | 0.2987 | 0.2253 |
| Combined Mean |  |  |  |  |  |  |

(Source: Appendix III)
The above table 4.23 shows that the mean ratio of cash and bank balance to interest sensitive ratio of NBL is highest. The BOK comes in second position whose mean ratio is 0.2253 . The SCBNL comes at third position with mean ratio of 0.1195 . The overall combined mean ratio of these three banks is 0.1951 . According to this ratio NBL has good liquidity position and able to cover the deposits.

### 4.1.6 Analyzing Correlation Coefficient between Different Variables.

Correlation coefficient is the measure of correlation between two variables that summarized correlation in one figure. Analysis of correlation coefficient explains to what extent two variables are correlated. In this analysis Karl Pearson's Correlation Coefficient has been used to find out the relationship between variables.

### 4.1.6.1 Correlation between Investment and Loan and Advances

This correlation measures the degree of relationship between investment and loan and advances. This measure of correlation explains whether the banks have a rigid policy to maintain a consistent relationship between assets and other factors such as seasonal opportunity, economic demand, NRB directives etc has impact on the volume of these two variables.

Table 4.24

## Correlation Coefficient (r) between Investment and Loan and Advances

| Banks | Correlation (r) |
| :---: | :---: |
| NBL | -0.2468 |
| SCBNL | 0.5419 |
| BOK | -0.7764 |

(Source: Appendix V)
The above Table 4.24 shows that there is negative correlation between investment and loan and advance of NBL and BOK. It shows that if there is an increase of loan and advances by $1 \%$ there will be decreases in investment by $0.2468 \%$ and $0.7764 \%$. But there is positive correlation between investment and loan and advances of SCBNL. Though there is positive relationship between investment and loan and advances. This is not only a fact that increases in loan and advances in this bank necessarily increase the volume of investments. However, the increase in investment has increased because of good opportunity of lending, over liquidity in banking industry and increase in risk element in lending.

### 4.1.6.2 Correlation between Total Income and Loan and Advances

The correlation between total income and loan and advances measures the degree of relationship between these two variables. The volume of (r) explains whether a percentage change in loan and advances contribute to increase the same percentage of income. Loan and advance is an independent variable and total income is dependent variable.

## Correlation Coefficient between Total Income and Loan and Advances

| Banks | Correlation (r) |
| :---: | :---: |
| NBL | 0.6303 |
| SCBNL | 0.9265 |
| BOK | 0.9814 |

(Source: Appendix V)
There is a high degree of positive correlation in SCBNL and BOK, where value of (r) is highest in BOK. This explains that a percentage change in loan and advances in BOK is most likely to have the same percentage of income.

According to the value of (r), it signifies that the degree of relationship between these variables in NBL is least and BOK is in moderate, but there is no vast difference in (r) between SCBNL and BOK.

### 4.1.6.3 Correlation between Total Deposit and Loan and Advances

The correlation between total deposit and loans and advances describes, how a unit increases in deposit impact the volume of loan and advances. Here, deposit is the independent variable and loan and advance is the dependent variable. The main objective of computing between two variables are to find out whether deposits are significantly used as loan and advances in a proper manner or not.

Table 4.26
Correlation Coefficient between Deposits and Loan and Advances

| Banks | Correlation (r) |
| :---: | :---: |
| NBL | 0.5162 |
| SCBNL | 0.9170 |
| BOK | 0.9994 |

(Source: Appendix V)

The above Table 4.26 shows that there is high degree of positive correlation between total deposit and loan and advances in NBL, SCBNL and BOK. It shows that if there is an increase of deposit by $1 \%$ there will be increase in loan and Advances by $0.5162 \%$, $0.9170 \%$, and $0.9994 \%$ respectively. The correlation of total deposit and loan and advance of BOK is highest among the three banks.

### 4.1.6.4 Correlation between Provision for Loan Loss and Loan and Advances

The correlation between provision for loan loss and loan and advances measures the degree of relationship between two variables. Loan and Advances is an independent variable and provision for loan loss is a dependent variables.

Table 4.27

## Correlation Coefficient (r) between Provision for Loan Loss and

 Loan and Advances| Banks | Correlation (r) |
| :---: | :---: |
| NBL | 0.2659 |
| SCBNL | -0.7530 |
| BOK | 0.6967 |

(Source: Appendix V)
The above Table 4.27 explains that there is negative correlation coefficient between provision for loan loss and loan and advance of SCBNL. It shows that if there is an increase in volume of loan and advances in SCBNL is likely to decrease in volume of loan loss provision. But there is positive relationship between loan loss provision and loan and advances in NBL and BOK.

### 4.1.6.5 Correlation Coefficient between Interest Suspense and Total Interest Income

Interest suspense is an earned but uncollected interest. The correlation between interest suspense and total interest measures the relationship between these two variables. Where, interest income is independent variable and interest suspense is the dependent variable.

Table 4.28

## Correlation Coefficient (r) between Interest Suspense and interest Income

| Banks | Correlation (r) |
| :---: | :---: |
| NBL | -0.2566 |
| SCBNL | -0.2665 |
| BOK | -1.5339 |

(Source: Appendix V)
The above Table 4.28 explains that there is a negative correlation coefficient between interest suspense and total interest income of NBL, SCBNL and BOK, where negative value of (r) is highest in BOK. The reason for negative correlation is the trend of loan and advances, which is increasing and the bank is being able to decrease the due interest which is uncollected. In case of NBL, if there is increase in interest income by $1 \%$, there will be decrease in interest suspense by 0.2566 .

### 4.1.6.6 Correlation between Loan and Advances and Shareholders' Equity

Correlation between loan and advances and shareholders equity describe the degree of impact of the increase in loan and advances to shareholders equity. The loan and advances are the independent variable and the shareholders equity is a dependent variable.

Table 4.29

## Correlation Coefficient (r) between Loan and Advances and Shareholders'

Equity

| Banks | Correlation (r) |
| :---: | :---: |
| NBL | 0.0910 |
| SCBNL | 0.9401 |
| BOK | 0.0963 |

(Source: Appendix V)
The above table 4.29 shows that, there is positive correlation between loan and advances and shareholders equity. It shows that, if there is an increase in volume of loan and advances, there will be increase in shareholders equity. There is a high degree of positive correlation in SCBNL and the degree of relationship in NBL is lowest. This correlation refers the increment in the loan and advances in NBL, increase the shareholders equity in lesser degree than that of BOK.

### 4.1.6.7 Correlation between Interest Income and Net Profit

The interest income contributes the major portion of total volume of commercial banks income. The correlation measures the degree of relationship between income and net profit. Here, interest income is an independent variable and net profit is a dependent variable.

Table 4.30
Correlation Coefficient (r) between Interest Income and Net Profit

| Banks | Correlation (r) |
| :---: | :---: |
| NBL | 0.2067 |
| SCBNL | 0.8233 |
| BOK | 0.8987 |

(Source: Appendix V)

The above Table 4.30 explains that there is positive correlation coefficient between interest income and net profit in all banks. The volume of (r) is highest in BOK, this explains that, if there is increase in net income by $1 \%$, there will be increase in net profit by $0.8987 \%$. From this table we can conclude that the percentage change in volume of interest income is more likely to generate the same percentage of net profit in SCBNL and BOK.

### 4.2 Analysis of Primary Data

In this section primary data is analyzed. The primary data collected through the questionnaire distributed to the executives and other personals officers of sample banks. Those people related to the field of banking were familiar about the lending. Please see the annex for questionnaire

## Question No 1. Do you think the lending policy of the bank is satisfactory?

The first question is related to the lending policy of commercial banks. The respondents are asked whether they are satisfied or not from the lending policy of banks. The view points of the different respondents are presented in figure below.

Figure 4.8
Lending Policy of Banks


The figure 4.8 shows $71 \%$ of the respondents are satisfied with the lending policy of commercial banks $23 \%$ of the respondents aren't satisfied with the lending policy of commercial banks but $6 \%$ of the respondents don't know about the policy. This means majority of the people are satisfied from the lending policy of banks.

## Question No 2. Does the interest rate on lending of bank is effective in Nepalese Financial Market?

This question tries to know effectiveness of interest rate on lending of the banks in Nepalese Financial Market. The result obtained from different respondents is presented below.

Figure 4.9
Effectiveness of Interest Rate on Lending


Regarding above figure most of the respondents feel that interest rate on lending is satisfactory, $15 \%$ of the customers feel that the interest rate on lending is effective but $29 \%$ of the respondents think that the interest rate is not effective.

Question No 3. Do you think most of the people know about loan payment schedule? This question tries to get the opinion of the people about the loan payment schedule. The result obtained from different respondents is presented below.

Figure 4.10
Loan Payment Schedule of Banks


Among the respondents $56 \%$ of the respondents know about loan payment schedule, $41 \%$ of the respondents don't know about loan payment schedule but $3 \%$ of the respondents don't know the term loan payment schedule

## Question No 4. Are you satisfied with loan recovery process of the bank?

This question tries to know that whether people are satisfied with loan recovery process of the bank or not. The result obtained from different respondents is presented below.

Figure 4.11
Loan Recovery Process of Banks


Loan and Investment are two important fact related with each other. Concerning these fact I had asked to the respondents that they are satisfied with recovery process of banks or not and the banks have proper recovery policies or not. $74 \%$ of respondents replied that banks have better recovery procedure and $26 \%$ of the respondents are not satisfied with loan recovery process of the bank.

## Question No 5. Is there any problem while taking loan or paying it in the bank?

This question is related to the problems to be faced while taking loan or paying it in the bank. The view points of the different respondents are presented in figure below.

Figure 4.12
Problems While Taking Loan or Paying it in the Bank


The above table 4.12 shows that $35 \%$ of the respondents feel that there is no problem while taking loan and paying it in the bank. They replied that all loan officers are well behaved and coordinate properly and this easiness is also due to proper rules of bank. But the same percentage of the respondents replied that they have to face some problem while taking loan and paying it in the bank. All loan officers are well behaved and coordinate properly and this easiness is also due to proper rules of bank. And 30\% of the respondents said that may be happened.

## Question No 6. Is the bank following modern technology?

This question is related to the technology followed by the banks. The result obtained from different respondents is presented below.

Figure 4.13

## Modern Technology of Banks


$88 \%$ of the respondents think that now modern technology is arrived in these banks. The banks are functioning by applying modern technology for their daily transactions to facilitate customer but $12 \%$ of the respondents don't know whether the banks are following modern technology or not.

Question No 7. Is the commitment charge and service charge of the bank is satisfactory?
This question tries to know about the satisfaction of the people in case of commitment charge and service charge of the banks. The result obtained from different respondents is presented below.

Figure 4.14
Commitment Charge and Service Charge of Banks


The above figure shows that $53 \%$ of the respondents replied that the commitment and service charge charged by the banks are reasonable. $41 \%$ of the respondents replied that the charges are not satisfactory. They think that such type of charge must be decreased. $6 \%$ of the respondents don't know whether the charges are satisfied or not.

Question No 8. Is it true that "the loan officers of the bank are biased while declaring the loan"?

This question is related to the biasness of the loan officers while declaring the loan. The view points of the different respondents are presented in figure below.

## Figure 4.15

Biasness While Declaring the Loan


The biasness of the loan officers while declaring the loan is one of the major questions which may affect the future of bank. $26 \%$ of the respondents agree that the loan officers of the bank are biased while declaring the loan. But $44 \%$ do not agree and remaining $30 \%$ are unknown about the biasness of the loan officers while declaring the loan.

## Question No 9. Do you know the interest rebate and other discount process of the

 bank?This question is related to the interest rebate and other discount process of the bank. The result obtained from different respondents is presented below.

## Figure 4.16

## Interest Rebate and Other Discount Process of the Banks



There are 34 respondents related to banks where $68 \%$ of the respondents know about interest rebate and other discount process of the bank, $12 \%$ of them answered no but $20 \%$ of them don't know about the term interest rebate and discount process

Question No 10. What do you think about Nepal Rastra Bank's regulation regarding lending?

This question tries to know how Nepal Rastra Bank is functioning to regulate Nepalese Commercial Bank. The result obtained from different Respondents is presented below.

Figure 4.17
Nepal Rastra Bank's Regulation Regarding Lending


The figure 4.17 shows that only $24 \%$ of the respondents agree that Nepal Rastra bank is functioning well. About $56 \%$ finds the role to be satisfactory. But NRB should think about $20 \%$ hoping banks function to be inadequate.

## Question No 11. Do you agree that lending amount decreases with in increment in lending interest rate?

This question is related about the lending amount and lending rate. The viewpoints of different respondents are presented in figure below.

Figure 4.18
Lending Amount Decreases with in Increment in Lending Interest Rate


The figure 4.18 shows that $53 \%$ agree that lending amount decreases with the decrease in lending rate but $29 \%$ do not agree with the statement and remaining $18 \%$ of the respondents do not know about this.

Question No 12. Do you think that lending rate should be reduced to attract investors?

This question tries to know whether lending rate should be reduced to attract investors. The figure shows what the respondents have said.

Figure 4.19

## Lending Rate should be Reduced to Attract Investors



The Figure 4.19 shows that about $74 \%$ of the respondents agree that lending rate should be reduced to attract the investors. But $12 \%$ of the respondents do not agree with the statement and remaining $14 \%$ are unknown about it.

### 4.3 Major Findings of the Study

### 4.3.1 Finding from Secondary Data

- The investment of NBL and SCBNL goes on increasing. This shows that there is an increase demand of commercial credit. The mean volume of investment of NBL is highest. The volume of loan and advances contribution by NBL is highest throughout the years. The mean volume of total deposit of NBL is also highest.
- The high volume of total expenses allotted the highest income of NBL. NBL has the highest mean loan loss provision and that of SCBNL has the lowest. Regarding C.V the risk of variability per unit of return of NBL is highest whereas that of BOK is the lowest. The volume of net profit of NBL is highest with high degree of risk per unit of return but SCBNL has moderate volume of net profit with least degree of risk per unit of return.
- The C.V of NBL is the highest in almost all of the case and this has significantly differed from the C.V of other two banks. This indicates that there is high degree of variation in the performance of NBL. Since this variation has caused due to the
increasing trend of every component the performance of NBL is rapidly developing in most of the cases.
- The measurement of lending strength in relative term has revealed that the total asset to total liabilities of SCBNL has the highest ratio. However the performance of BOK has not deviated far from the mean ratio of SCBNL and combined mean. The high ratio is the result of high volume of shareholders equity in the liability mix.
- The ratio of loan and advances to total assets ratio of BOK has highest. However the performance of all these NBL, SCBNL and BOK has significantly deviated from the combined mean.
- The ratio of investment to loan and advances had measured the total portion of investment in loan and advances. The ratio of NBL is highest among the three banks. The amount of money at call has occupied the big volume in the asset of NBL. The ratio of BOK has indicated the low level of depending in investment activities.
- The ratio of loan and advances to total deposit ratio has measured the portion of total deposit that is used to increase the income of banks irrespective of the portfolios of its application. BOK has deployed (used) the highest portion of its total deposits in its earning activities and this ratio is significantly above than the ratio of other two banks. This is the indication that the fund mobilizing activities of BOK is significantly better than NBL and SCBNL. Performance in loan and advance has not increase proportionately as compare to the deposit increments and it has further failed to utilize the excess fund in investing activities rather it has kept the high volume of fund at money at call and short notice. Result of this banks to be the poorest in the ratio of loans and advances and investment to total deposit ratio.
- The ratio of loan and advances to shareholders equity is significantly important in measuring the capital fund and corresponding contribution in loans and advances. The combined ratio has significantly deviated from the mean ratio of NBL, SCBNL and BOK. The mean ratio of NBL and BOK has 9.4328 and 11.0558, which is significantly deviated from the combined mean. The low number of
equity shares, retained earnings and the reserve of NBL as compared to other two banks. SCBNL has generated the low volume of loan and advances as compared to its volume of shareholders equity.
- The portfolio analysis has revealed that the flow of loan and advances in private sector is highest. More than $90 \%$ of loan and advance is distributed in private sector. In case of BOK $100 \%$ of loan and advance is distributed in private sector in three years.
- The measurement of efficiency in lending has revealed that the total interest income to interest expenses of SCBNL has the highest ratio; it means one rupee of interest expenses has been able to earned Rs.3.6744 in SCBNL.
- The mean ratio of interest income to total income ratio has concluded that the contribution of interest income in total income of BOK is the greatest. The performance of SCBNL is moderate and NBL comes in third position. The interest expenses to total deposit ratio indicate the cost of fund in BOK is highest than NBL and SCBNL, being modern technology of banking has succeeded in collecting the fund in cheapest possible price. Like interest income to total income ratio is also highest in BOK.
- The ratio of interest suspense to interest from loan and advances among these banks is of varying nature. Since the high ratio is always unfavorable, the ratio of BOK can be concluded as the best among these three banks. Since NRB has restricted the commercial banks to collect the earned interest by overdrawing the borrower's account or by exceeding the limit of borrower, the commercial banks has started to book such uncollected interest in suspense account. This represents the borrower's default in paying the interest or lack of strict and effective device of interest collecting in the banks. The ratio of interest from investment to interest income measures the dependency in investing activities. The ratio of total investment and loan and advances has direct impact on this ratio and this has results the NBL and SCBNL's ratio to be the highest among three banks.
- Among the various measures of profitability ratios, the EPS reflects the relative measure of profitability. The performance of NBL is significantly better than other two banks. The ratio of net profit to shareholders' equity ratio of NBL is also highest than other two banks. Lowest profit and highest amount of shareholders' equity in BOK have resulted low net profit to shareholder's equity ratio.
- The measurement of the liquidity has revealed that liquid fund to total deposit ratio of three banks are not widely varied. All the three banks are capable to allocate liquid fund in total deposit. The performance of all these banks has not deviated far from the mean ratio and combined mean. The liquidity positions of all banks are satisfactory.
- Cash and bank balance to interest sensitive liability in deposit has measured the liquidity risk arising from fluctuation of interest ratio in market. The mean ratio has ranged from 0.1195 to 0.2406 . The mean of NBL is highest among them which show that high volume to interest sensitive liability in deposit of NBL. Due to the high deviation of ratio among the banks the combined mean has also deviated far from NBL and SCBNL.

The correlation chapter has shown generally significant correlation between the entire variables measured. There is higher degree of positive correlation between interest income and net profit, total income and loan and advances, total deposit and loan and advance, loan and advances and shareholders' equity. This indicates, there is good performance of BOK and SCBNL in generating loan and advance. This also concludes that a unit of increment in deposit is more likely in SCBNL and BOK to increase the volume of loan and advance. But in case of NBL there is low degree of positive correlation in above cases. In case of NBL and BOK there is high degree of negative correlation between most of all variable that were taken for the study, which might be more continuous for the institution.

### 4.3.2 Finding from Primary Data

- The majority of the respondents are satisfied from the lending policy of bank.
- The majority of the respondents are satisfied by the interest rate on lending.
- Most of the persons know about loan payment schedule as less nos. of persons don't know about loan payment schedule.
- Most of the persons replied that banks have satisfactory recovery policies and procedures.
- Some of the respondents said that there is no problem while taking loan or paying it in the bank but same no of respondents responded negatively.
- Most of the respondents think that now banks are functioning by applying modern technology.
- Most of the respondents replied that the commitment and service charges of the banks are satisfactory but some of them think that the charges are not reasonable.
- Majority of the respondents said that they did not get biasness while declaring loans.
- Majority of the respondents know about the interest rebate and discount facilities provided by the banks.
- Most of the respondents agree that Nepal Rastra Bank's regulations regarding lending are not good but satisfactory.
- Most of the respondents agree that lending amount decreases with in increment in lending interest rate.
- Majority of respondents think that lending rate should be reduced to attract investors.


## CHAPTER - V

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is the last part of the research study which includes all the briefing of the whole study and extracts of all the previously discussed chapters. This chapter mainly consists of three parts summary, conclusion and recommendation. In summary portion revision of all four chapters are made viz. Introduction, Review Of Literature, Research Methodology and Data Presentation and Analysis and shows the active facts of the present situation under the topic of the study, conclusion are based on the consequences of the analysis of relevant data by using various financial and statistical tools, based on conclusion necessary suggestions are presented in recommendation part i.e. various measures are recommended to concerned organization for the improvement of the current condition of lending operation.

### 5.1 Summary

The commercial bank plays a vital role in accelerating the tempo of growth in developing country like Nepal. It mobilizes the savings of the people and then diverts them into productive channels. It is through this function that it seems as an index of commercial, industrial and financial stability and growth of the nation. The investment policy of the bank has to be considered in this respect otherwise, the bank may not be able to accelerate the economic growth rate of the country. But the investment policy of the commercial bank is affected by central bank. So the investment policy should be laid down and make more liberal for mobilize the idle money to the productive sector.

Commercial bank plays a significant role to develop the industry in the country. The study has been undertaken to analyze as well as compare the lending operation and portfolio behavior of these commercial banks, namely NBL, SCBNL and BOK in terms
of their liquidity position, lending strength portfolio behavior and other various indicative ratios along with their mean, standard deviation and coefficient of variation.

The main objective of this study is to analyze the critical status of lending performance of the NBL, SCBNL and BOK and to give some remedial measures there too. For the details analysis of the commercial banks in Nepal in this study three commercial bank's data are collected. The financial statement of the last five year i.e. from the year 2005 to 2009 had been examined for the analysis of the subject lending operation and practices of commercial banks in Nepal. Financial statements are shorted, tabulated and interpreted by using appropriate ratios.

The study has been divided into five chapters consisting of Introduction, Review of Literature, Research Methodology, Data Presentation \& analysis and Summary Conclusion \& Recommendation.

For the analysis of data, mainly this study has focused on lending operation and portfolio behavior of the commercial banks. The measurement of the mean volume of investment of NBL is highest. The C.V of loan and advances of NBL is highest. The mean volume of total deposit of NBL is also highest. The high volume of total expenses has allotted the highest income of NBL.

The measurement of lending strength in relative term has revealed that the total asset to liabilities of BOK has the highest ratio. The ratio of loan and advances to total assets ratio of BOK has highest. The ratio of investment to loan and advances has measured the total portion of investment in loan and advances. NBL is highest among the three banks. The ratio of loan and advances to total deposit ratio, BOK has deployed the highest portion of its total deposits in its earning activities and this ratio is significantly above than the other two banks. The ratio of loan and advances to shareholders equity had gain the significant importance in measuring the capital fund, and this ratio of BOK is the highest. The portfolio analysis has revealed the flow of loan and advances in private sector are highest. The measurement of efficiency in lending has revealed that the interest income to interest
expenses of SCBNL has the highest. The interest expenses to total deposit ratio of BOK is highest. The ratio of interest suspense to interest from loan and advances among these banks is of varying nature. The ratio of interest suspense to interest from loan and advances ratio of BOK can be concluded as the best among three banks. Among the various measures of profitability ratios, the EPS reflects the relative measure of profitability, performance of NBL is significantly better than other two banks. The measurement of the liquidity has revealed that liquid fund to total deposit ratio of three banks are not widely varied. Cash and bank balance to interest sensitive liability has measured the liquidity risk rising from fluctuation of interest rate in market. There is higher degree of positive correlation between interest income \& net profit, total income \&loan and advances and total deposit \& loan and advances.

### 5.2 Conclusion

Present study is successful to explore the findings of the results designed for the study. Various financial as well as statistical tools were used as per requirement of nature of data. Based on the data analysis and findings of the result, the following conclusion can be drawn.

The overall performance of all the commercial banks is satisfactory. The volume amount of deposit of all three banks is in increasing trend. The increasing trend of deposit makes more profit in coming future. The volume amount of loan and advances of all three commercial banks is in increasing trend. Increasing trend of loan and advances indicates that in the future commercial banks will be able to generate more profit from their lending activity.

The analysis of lending strength of BOK in loan and advances to total assets ratio and loan and advances to total deposit ratio indicate the superior performance of BOK in its lending activities as compared to other two banks. If BOK succeeded in collecting the less cheap sources of fund in future the lending strength of BOK would be better in coming future.

By modern and personalized services to the customer, some banks are being able to collect large proportion of non-interest bearing deposits and low interest rate offering deposit, like SCBNL in our study. This bank is collecting cheaper fund than other banks. Particularly, SCBNL has high degree of gap between interest offered and interest charged i.e. spread rate, which can be concluded from the highest interest income to interest expenses ratio. Interest income of NBL, SCBNL and BOK are in increasing trend which indicates that in the future, commercial banks are able to generate more profit from their lending activities. The trend of net profit of SCBNL is in increasing. According to the net profit SCBNL is in better position among the three banks. The analysis of lending efficiency of SCBNL in interest income to interest expenses ratio indicate the superior performance of SCBNL in lending efficiency activities than NBL and BOK. The interest expenses to total deposit ratio indicates that BOK is always successful in collecting cheaper fund by its modern and personalized services to the customers.

The banks are maintaining sufficient liquidity to discharge its current liability in an adverse condition without undergoing its liquidity risk. From the analysis, it can be concluded that NBL is the bank with greater liquidity. But BOK has greater variability and less consistent in liquid fund ratios. But interest suspense, interest due but not collected, is problem for NBL which shows the ineffectiveness of recovery mechanism. BOK significantly has been decreasing interest suspense ratio. This indicates that BOK is able to collect more interest income from its lending

NBL, SCBNL and BOK have positive favorable relationship between total deposit and loan and advances, which shows that they are successful to grant loan and advances to mobilize the collected deposits in a proper way. It shows the high degree of positive coefficient of correlation(r) between two variables. SCBNL and BOK have high degree of positive relationship between two variables loan \& advances and total income and total interest income and net profit. This indicates that loan and advances highly contribute to increase total income. Interest income is more likely to generate net profit.

### 5.3 Recommendations

To full fill the objectives of this study, related data and ideas are collected from different sources. These data are presented; analyzed and interpreted then conclusions are made. Based on the analysis, interpretation and conclusions of this study certain recommendation can be made here. So that the concerned authorities, further researcher, academicians and bankers can get insights on the present conditions of above topics. It is considered that this research will truthful for them to improve the present condition as well as for further research. The major recommendations after this study are as follows:

- Government owned bank is in critical condition. Risk is rising from the mismanagement of lending and investment portfolio. So each and every bank should develop its specific goal for the coming fiscal year. Such goals may be net profit on investment, investment revenue etc. Without such goals the operation of the banks may not be effective.
- Loan investment is the major source of interest income. Interest income covers the major part of the total income. So banks must seek to increase their loan investment with considering of C5 such as character, capacity, capital, condition and collateral of the borrowers. Loan investment is largely effected by interest rate charge by bank in loan, so purpose wise loan investment must follow the principle of nation interest rate.
- Banks are recommended to develop an innovative approach of bank marketing for its well-being and sustainability in the market. They are also suggested to carry out competitors' analysis to retain old customers and gain new customers, which increase deposit and eventually can earn profit from lending loan and other investments.
- In case of borrowers who are not paying loans on time, bank must examine about borrowers and corrective action must be taken or repayment schedule
must be rearranged recognizing the extra cause. Supervision and inspection system must be strict, unbiased, effective and efficient. It helps them to understand the use of loan.
- Government should formulate and implement rigid rules and regulation for further development of commercial banks.
- While reducing the lending rate, it is suggested to reduce more on productive sectors than non-productive sectors. If not possible then bankers can reduce the rate of all sectors proportionately.
- In order to promote more lending and to promote more borrowing lending, institutions should introduce new customer oriented schemes of lending and borrowing. So that more lending can be promoted and over liquidity may be solved.
- Banks are not able to mobilize its deposits in terms of loan due to lack of sufficient safe investment opportunities. Thus it is suggested to the government to improve the political situation of the country.
- The banks are suggested to adopt sound recovery policy. Specifically, BOK should adopt the sound credit collection policy, which helps to decrease its loan loss provision of the bank.
- It is also suggested to the commercial banks to reduce the interest suspense account by its efficient recovery. The interest suspense to interest income from loan \& advances is high in case of NBL. The increase in interest suspense account will increase risk and the profitability of the bank will decrease. Therefore, these banks have to improve its interest turnover rate to decrease the ratio of interest suspense to interest income from loan \& advances. This bank
has to concentrate on recovery of interest and loans \& advances, plan and act accordingly for proper collection of interest repayment schedules.
- The banks are suggested to strictly follow the NRB directives. Following of NRB directives will help to reduce to credit risk arising from borrower's defaulter, leak of proper credit appraisal, defaulter by black listed borrowers and professional defaulter. Government has established credit inebriation bureau, which will guide commercial banks.
- The banks are suggested to avoid risky ventures and invest in safe areas of lending since the present economic condition of the world is not very feasible and going through the recession.


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## APPENDIXS

Note:

- The entire figure present here are Rs. In Million
- The data presented herein are pertained to Mid July of each year, if not otherwise mentioned.
- The data presented herein are based on the amount mentioned in annual report of respective years of concerned banks and journal of NRB, if not otherwise mentioned.


## APPENDIX (I)

## Calculation of Average Mean, Standard Deviation (S.D) and Coefficient of Variation (C.V)

Calculation of Average Mean of Investment.

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 | Mean |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NBL | 13838.6 | 11776.9 | 13226.3 | 12914.8 | 10597.9 | 12471.62 |
| SCBNL | 7204.6 | 8644.9 | 7115.7 | 8146.1 | 10007.3 | 8223.72 |
| BOK | 2216.5 | 2654.8 | 2332.0 | 2113.2 | 17450.0 | 2212.26 |

## Calculation of Standard Deviation (S.D)

## (i) Calculation of S.D of NBL Bank

| No. of Year (N) | Value (X) | $\mathrm{X}-\overline{\mathrm{X}}$ | $\sum(\mathrm{X}-\overline{\mathrm{X}})^{2}$ |
| :---: | :---: | :---: | :---: |
| 2005 | 13838.6 | 1366.98 | 1868634.32 |
| 2006 | 11776.9 | -694.72 | 482635.88 |
| 2007 | 13226.3 | 754.68 | 569541.90 |
| 2008 | 12918.4 | 446.78 | 199612.37 |
| 2009 | 10597.9 | -1873.72 | 3510826.64 |
| $\sum \mathrm{~N}=$ | $\sum \mathrm{X}=$ |  | $\sum(\mathrm{X}-\overline{\mathrm{X}})^{2}=$ |
| 5 | 62358.1 |  | 6631251.11 |
| Arithmetic Mean |  |  |  |
| $(\overline{\mathrm{X}})=$ | 12471.62 |  |  |

Symbolically,
Where,

$$
\begin{array}{ll}
(\delta) & =\text { Standard Deviation } \\
\bar{X} & =\text { Values } \\
\overline{\mathrm{X}} & =\text { Arithmetic Mean Return } \\
\mathrm{N} & =\text { Time Period (No. of Observation) }
\end{array}
$$

$$
\begin{aligned}
\text { Standard Deviation }(\delta) & =\sqrt{\frac{\sum(X-\bar{X})^{2}}{N}} \\
& =\sqrt{\frac{6631251.11}{5}} \quad=1151.63
\end{aligned}
$$

(ii) Calculation of S.D of SCBNL

| No. of Year (N) | Value (X) | $\mathrm{X}-\overline{\mathrm{X}}$ | $\overline{\mathrm{N}} \mathrm{X}-\overline{\mathrm{X}})^{2}$ |
| :---: | :---: | :---: | :---: |
| 2005 | 7204.6 | -1019.12 | 1038605.57 |
| 2006 | 8644.9 | 421.18 | 177392.59 |
| 2007 | 7115.7 | -1108.02 | 1227708.32 |
| 2008 | 8146.1 | -77.62 | 6024.86 |
| 2009 | 10007.3 | 1783.58 | 3181157.62 |
| $\sum \mathrm{~N}=$ | $\sum \mathrm{X}=$ |  | $\sum(\mathrm{X}-\overline{\mathrm{X}})^{2}=$ |
| 5 | 41118.6 |  | 2451514.92 |
| Arithmetic Mean |  |  |  |
| $(\overline{\mathrm{X}})=$ | 8223.72 |  |  |

Now,
Standard Deviation $(\delta)=\sqrt{\frac{\sum(X-\bar{X})^{2}}{N}}$

$$
=\sqrt{2451514.92} \quad=700.22
$$

(iii) Calculation of S.D of BOK

| No. of Year (N) | Value (X) | $\mathrm{X}-\overline{\mathrm{X}}$ | $\sum(\mathrm{X}-\overline{\mathrm{X}})^{2}$ |
| :---: | :---: | :---: | :---: |
| 2005 | 2216.5 | 4.24 | 17.98 |
| 2006 | 2654.8 | 442.54 | 19581.65 |
| 2007 | 2332.0 | 119.74 | 14337.67 |
| 2008 | 2113.2 | -99.06 | 9812.88 |
| 2009 | 1745.0 | -467.26 | 218331.91 |
| $\sum \mathrm{~N}=$ |  |  |  |
| 5 | $\sum \mathrm{X}=$ |  | $\sum(\mathrm{X}-\overline{\mathrm{X}})^{2}=$ |
| Arithmetic Mean <br> $(\overline{\mathrm{X}})=$ | 2212.26 |  | 438342.09 |

Now,
Standard Deviation $(\delta)=\sqrt{\frac{\sum(X-\bar{X})^{2}}{N}}$

$$
=\sqrt{\frac{438342.09}{5}} \quad=296.09
$$

## Calculation of Coefficient of Variation (C.V)

Symbolically,
Coefficient of S.D $=\frac{\text { S.D }}{\text { Mean }}=\frac{(\delta)}{\overline{\mathrm{X}}}$
(i) Calculation of C.V of NBL

$$
\text { C.V }=\frac{1151.63}{}=9.23 \%
$$

(ii) Calculation of C.V of SCBNL

$$
\text { C.V } \quad=\frac{700.22}{}=8.51 \%
$$

8223.72

## (iv)Calculation of C.V of BOK

$$
\text { C.V }=\frac{296.09}{2212.26} \quad=13.38 \%
$$

## APPENDIX (II)

## From Capital and Liabilities Side of Balance Sheet

Paid Up Capital

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 380.4 | 380.4 | 380.4 | 380.4 | 380.4 |
| SCBNL | 374.6 | 374.6 | 413.3 | 620.8 | 932.0 |
| BOK | 463.6 | 463.6 | 603.1 | 603.1 | 844.4 |

## Reserve

| Y Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 826.7 | 1225.8 | 1414.5 | 1526.1 | 1586.2 |
| SCBNL | 786.8 | 824.3 | 824.2 | 991.7 | 990.3 |
| BOK | 169.8 | 244.0 | 214.2 | 372.2 | 475.5 |

## Retained Earning

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | $(11672.7)$ | $(11672.7)$ | 0 | 0 | 0 |
| SCBNL | 251.3 | 245.2 | 370.6 | 504.7 | 383.3 |
| BOK | 6.5 | 1.0 | 8.3 | 6.7 | 22.2 |

## Shareholders' Equity

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 1207.1 | 1606.2 | 1794.9 | 1906.5 | 2017.6 |
| SCBNL | 1278.2 | 1576.3 | 1755.3 | 2117.2 | 2493.4 |


| BOK | 650.8 | 720.7 | 840.2 | 982.0 | 1342.1 |
| :--- | :--- | :--- | :--- | :--- | :--- |

## Current Deposit

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 5714.4 | 6030.5 | 6761.5 | 7799.1 | 9572.1 |
| SCBNL | 4356.3 | 4681.8 | 4794.5 | 6174.6 | 6202.8 |
| BOK | 1302.6 | 1409.2 | 1661.8 | 2092.3 | 2294.4 |

Saving Deposit

| Banks ${ }^{\text {Years }}$ | 2005 | 2006 | 2007 | 2008 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 22671.8 | 23547.9 | 26425.4 | 28545.1 | 31079.7 |
| SCBNL | 13027.7 | 14597.5 | 15244.2 | 17856.0 | 19187.7 |
| BOK | 3447.5 | 4582.0 | 5526.8 | 6595.2 | 7260.3 |

Fixed Deposit

| Banks ${ }^{\text {Years }}$ | 2005 | 2006 | 2007 | 2008 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 6269.3 | 5790.9 | 5393.5 | 4757.9 | 3579.4 |
| SCBNL | 1416.4 | 2136.3 | 3196.5 | 3301.1 | 7101.7 |
| BOK | 2878.9 | 2709.8 | 3037.2 | 3703.1 | 4474.6 |

Total Deposit

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 34744.2 | 35444.9 | 38715.2 | 41451.7 | 44346.1 |
| SCBNL | 19344.0 | 23050.5 | 24640.3 | 29743.9 | 35871.8 |
| BOK | 8942.8 | 10429.3 | 12358.6 | 15832.7 | 18083.9 |

## Total Liabilities

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 72439.3 | 60813.8 | 50678.0 | 53026.4 | 56565.3 |
| SCBNL | 20722.7 | 24559 | 27490 | 31381.3 | 38157.1 |
| BOK | 9366.4 | 11609.4 | 13878.8 | 16809.5 | 18941.1 |

## Total Assets

| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :--- | :--- | :--- | :--- | :--- |


| Banks |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 54247.0 | 53445.4 | 46161.1 | 47089.7 | 53251.2 |
| SCBNL | 22750.5 | 26796.5 | 29935.8 | 34311.3 | 41642.4 |
| BOK | 10222 | 12653.5 | 14993.9 | 18134.2 | 21009.3 |

## Loan Loss Provision

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 9249.9 | 3269.6 | 2376.3 | 2141.8 | 2188.6 |
| SCBNL | 277.7 | 270.4 | 287.5 | 245.4 | 200.9 |
| BOK | 269.7 | 236.2 | 286.5 | 279.0 | 297.5 |

## Interest Suspense

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 13629.7 | 6456.8 | 5090.4 | 4510.5 | 4046 |
| SCBNL | 133.5 | 160.1 | 240.6 | 115.5 | 117.6 |
| BOK | 27.8 | 24.0 | 14.7 | 14.8 | 11.9 |

## APPENDIX (III)

From Assets side of Balance Sheet

Cash and Bank Balance

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 5336.2 | 5517.4 | 7003.6 | 5055.2 | 9054.7 |
| SCBNL | 1111.1 | 1276.2 | 2234.9 | 2050.2 | 3137.3 |
| BOK | 740.5 | 728.7 | 1301.6 | 1440.4 | 2169.0 |

Liquid Fund

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 5886.2 | 5517.4 | 7003.6 | 5055.2 | 9454.8 |
| SCBNL | 3370.8 | 3253.5 | 3996.1 | 4247.7 | 6788.5 |
| BOK | 1428.3 | 1945.6 | 1560.9 | 1513.1 | 2421.5 |

## Investment

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 13838.6 | 11776.9 | 13226.3 | 12918.4 | 10597.9 |
| SCBNL | 7204.6 | 8644.9 | 7115.7 | 8146.1 | 10007.3 |
| BOK | 2216.5 | 2654.8 | 2332.0 | 2113.2 | 1745.0 |

Loan and Advance

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 17456.0 | 12180.4 | 13377.5 | 15480.6 | 19261.0 |
| SCBNL | 8213.5 | 8901.5 | 10538.1 | 13355.0 | 13118.6 |
| BOK | 6166.9 | 7525.2 | 9663.6 | 12692.9 | 14894.7 |

## APPENDIX (IV)

## From Profit and Loss Account

Total Expenses

| Years Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NBL | 2761.1 | 1254.4 | 2292.3 | 2282.5 | 2878.1 |
| SCBNL | 1028.8 | 1100.3 | 1322.2 | 1507.8 | 1754.6 |
| BOK | 401.8 | 557.6 | 759.0 | 926.6 | 978.6 |

Interest Expenses

| $r\|r\|$ <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 748.7 | 768.5 | 775.5 | 752.4 | 780.5 |
| SCBNL | 254.2 | 302.2 | 411.4 | 471.7 | 543.8 |
| BOK | 180.2 | 307.9 | 339.4 | 417.4 | 563.0 |

Total Income

| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Banks |  |  |  |  |  |
| NBL | 4160.5 | 3584.1 | 2710.0 | 3127.7 | 3925.1 |
| SCBNL | 1566.7 | 1762.5 | 2014.3 | 2322.2 | 2782.9 |


| BOK | 559.8 | 888.3 | 1037.5 | 1294.2 | 1704.4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Total Interest Income

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 1980.5 | 2045.6 | 1841.6 | 1958.1 | 2393.6 |
| SCBNL | 1058.6 | 1189.1 | 1410.8 | 1591.2 | 1887.2 |
| BOK | 451.5 | 722.1 | 821.4 | 1034.0 | 1348.7 |

Interest from Loan and Advances

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 1512.9 | 1406.1 | 1237.9 | 1120.6 | 1538.9 |
| SCBNL | 582.2 | 598.3 | 729.7 | 872.7 | 1104.0 |
| BOK | 374.0 | 554.1 | 648.0 | 887.5 | 1200.0 |

Interest from Investment

| Years | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Banks |  |  |  |  |  |
| NBL | 442.0 | 490.2 | 469.3 | 586.4 | 674.0 |
| SCBNL | 331.6 | 353.9 | 323.8 | 319.8 | 407.0 |
| BOK | 67.4 | 114.3 | 108.6 | 85.4 | 118.0 |

Profit after Tax Provision and Bonus (Net Profit)

| Years <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 1399.5 | 2329.7 | 417.7 | 845.2 | 1047.0 |
| SCBNL | 537.9 | 662.2 | 692.1 | 814.4 | 1028.3 |
| BOK | 158.0 | 330.7 | 278.5 | 367.6 | 725.8 |

## Earnings per Share

| $r\|r\|$ <br> Banks | 2005 | 2006 | 2007 | 2008 | 2009 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NBL | 367.9022 | 612.4343 | 109.8055 | 222.1872 | 275.2366 |
| SCBNL | 202.3225 | 176.8553 | 167.4571 | 131.1856 | 110.3326 |
| BOK | 49.3529 | 71.3330 | 46.1781 | 60.9517 | 85.9545 |

## APPENDIX (V) <br> Calculation of Correlation Coefficient

## Correlation between Investment and Loan and Advances of NBL

(Rs. In Million)

| Years | Investment <br> $(\mathrm{x})$ | Loan and <br> Advances (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :---: |
| 2005 | 13838.6 | 17456.0 | 191506850 | 304711936.0 | 241566601.6 |
| 2006 | 11776.9 | 12180.4 | 138695373.6 | 148362144.2 | 143447352.8 |
| 2007 | 13226.3 | 13377.5 | 174935011.7 | 178957506.3 | 176934828.3 |
| 2008 | 12918.4 | 15480.6 | 166885058.6 | 239648976.4 | 199984583.0 |
| 2009 | 10597.9 | 19261.0 | 112315484.4 | 370986121.0 | 204126151.9 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 62358.1 | $\sum \mathrm{x}^{2}=$ <br> 784337778.3 | $\sum \mathrm{y}^{2}=$ <br> 1242666684.0 | $\sum \mathrm{xy}=$ <br> 966059517.6 |

$$
\begin{aligned}
& \text { Correlation Coefficient }(r)=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
= & \frac{5 \times 966059517.6-(62358.1 \times 77755.5)}{\sqrt{5 \times 784337778.3-(62358.1)^{2}}} \sqrt{5 \times 1242666684-(77755.5)^{2}} \\
= & -0.2468
\end{aligned}
$$

Correlation between Investment and Loan and Advances of SCBNL
(Rs. In Million)

| Years | Investment <br> $(x)$ | Loan and <br> Advances (y) | $x^{2}$ | $y^{2}$ | $x y$ |
| :--- | :--- | :--- | :---: | :---: | :---: |
| 2005 | 7204.6 | 8213.5 | 51906261.16 | 67461582.25 | 59174982.1 |


| 2006 | 8644.9 | 8905.1 | 74734296.01 | 79300806.01 | 76983698.99 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2007 | 7115.7 | 10538.0 | 50633186.49 | 111051551.6 | 74985958.17 |
| 2008 | 8146.1 | 13355 | 66358945.21 | 178356025.0 | 108791165.5 |
| 2009 | 10007.3 | 13118.6 | 100146053.3 | 172097666.0 | 131281765.8 |
| $\mathrm{N}=$ <br> 5 | $\mathrm{x}=$ <br> 41118.6 | $\mathrm{y}=$ <br> 54130.3 | $\mathrm{x} \mathrm{x}^{2}=$ <br> 343778742.2 | $\mathrm{y} \mathrm{y}^{2}=$ <br> 608267630.9 | $\sum \mathrm{xy}=$ |

$N \Sigma x y-\sum x \sum y$

$$
\begin{aligned}
& \text { Correlation Coefficient }(r)=\frac{\sqrt{N \sum x^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{y}^{2}-\left(\sum \mathrm{y}\right)^{2}}}{} \\
= & \frac{5 \times 451217570.5-(41118.6 \times 54130.3)}{\sqrt{5 \times 343778742.2-(41118.6)^{2}}} \sqrt{5 \times 608267630.9-(54130.3)^{2}} \\
= & 0.5419
\end{aligned}
$$

## Correlation between Investment and Loan and Advances of BOK

(Rs. In Million)

| Years | Investment <br> $(x)$ | Loan and <br> Advances $(\mathrm{y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 2216.5 | 6166.9 | 4912872.25 | 38030655.61 | 13668933.85 |
| 2006 | 2654.8 | 7525.2 | 7047963.04 | 56628635.04 | 19977900.96 |
| 2007 | 2332.0 | 9663.6 | 5438224.00 | 93385164.96 | 22535515.2 |
| 2008 | 2113.2 | 12692.9 | 4465614.24 | 161109710.4 | 26822636.28 |
| 2009 | 1745.0 | 14894.7 | 3045025.0 | 221852088.1 | 25991251.5 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 50943.3 | $\sum \mathrm{x}^{2}=$ <br> 24909698.53 | $\sum \mathrm{y}^{2}=$ <br> 571006254.1 | $\sum \mathrm{xy}=$ <br> 108996237.8 |

$$
\text { Correlation Coefficient }(r) \quad=\quad \begin{aligned}
& \mathrm{N} \sum \mathrm{xy}-\sum \mathrm{x} \sum \mathrm{y} \\
& \hline
\end{aligned}
$$

$$
\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{ } N \sum y^{2}-\left(\sum y\right)^{2}
$$

$=\quad \frac{5 \times 108996237.8-(11061.5 \times 50943.3)}{\sqrt{5 \times 24909698.53-(11061.5)^{2}} \quad \sqrt{5 \times 571006254.1-(50943.3)^{2}}}$
$=-0.7764$

## Correlation between Total Income and Loan and Advances of NBL

(Rs. In Million)

| Years | Total <br> Income (x) | Loan and <br> Advances (y) | $x^{2}$ | $y^{2}$ | $x y$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 4160.5 | 17456.0 | 17309760.25 | 304711936.0 | 72625688.0 |
| 2006 | 3584.1 | 12180.4 | 12845772.81 | 148362144.2 | 43655771.64 |
| 2007 | 2710.0 | 13377.5 | 7344100.00 | 178957506.3 | 36253025.0 |
| 2008 | 3127.7 | 15480.6 | 9782507.29 | 239648976.4 | 48418672.62 |
| 2009 | 3925.1 | 19261.0 | 15406410.01 | 370986121.0 | 75601351.1 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 17507.4 | $\sum \mathrm{x}^{2}=$ <br> 62688550.36 | $\sum \mathrm{y}^{2}=$ <br> 1242666684.0 | $\sum \mathrm{xy}=$ <br> 276554508.4 l |

$N \Sigma x y-\sum x \Sigma y$

$$
\begin{aligned}
& \text { Correlation Coefficient }(r)= \\
= & \frac{5 \times 276554508.4-(17507.4 \times 77755.5)}{\sqrt{\mathrm{N} \sum \mathrm{x}^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{y}^{2}-\left(\sum \mathrm{y}\right)^{2}}} \\
= & \sqrt{\sqrt{5 \times 62688550.36-(17507.4)^{2}}} \quad \sqrt{5 \times 1242666684.0-(77755.5)^{2}} \\
= & 0.6303
\end{aligned}
$$

## Correlation between Total Income and Loan and Advances of SCBNL

(Rs. In Million)

| Years | Total | Loan and | $x^{2}$ | $y^{2}$ | $x y$ |
| :---: | :---: | :---: | :---: | :---: | :---: |


|  | Income (x) | Advances (y) |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 1566.7 | 8213.5 | 2454548.89 | 67461582.25 | 12868090.45 |
| 2006 | 1762.5 | 8905.1 | 3106406.25 | 79300806.01 | 15695238.75 |
| 2007 | 2014.3 | 10538.0 | 4057404.49 | 111051551.6 | 21226894.83 |
| 2008 | 2322.2 | 13355 | 5392612.84 | 178356025.0 | 31012981.0 |
| 2009 | 2782.9 | 13118.6 | 7744532.41 | 172097666.0 | 36507751.94 |
| $\mathrm{N}=$ <br> 5 | $\sum \mathrm{x}=$ <br> 10448.6 | $\sum \mathrm{y}=$ <br> 54130.3 | $\sum \mathrm{x}^{2}=$ <br> 22755504.88 | $\sum \mathrm{y}^{2}=$ <br> 608267630.9 | $\sum \mathrm{xy}=$ <br> 117310957.0 |

$$
\begin{array}{ll} 
& \text { Correlation Coefficient }(r)= \\
=\quad \frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
= & \begin{array}{l}
\sqrt{5 \times 22755504.88-(10448.6)^{2}} \\
\sqrt{5 \times 608267630.9-(54130.3)}
\end{array} \\
= & 0.9265
\end{array}
$$

## Correlation between Total Income and Loan and Advances of BOK

(Rs. In Million)

| Years | Total <br> Income (x) | Loan and <br> Advances (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 559.8 | 6166.9 | 313376.04 | 38030655.61 | 3452230.62 |
| 2006 | 888.3 | 7525.2 | 789076.89 | 56628635.04 | 6684635.16 |
| 2007 | 1037.5 | 9663.6 | 1076406.25 | 93385164.96 | 10025985.0 |
| 2008 | 1294.2 | 12692.9 | 1674953.64 | 161109710.4 | 16427151.18 |
| 2009 | 1704.4 | 14894.7 | 2904979.36 | 221852088.1 | 25386526.68 |
| $\mathrm{N}=$ <br> 5 | $\sum \mathrm{x}=$ <br> 5484.2 | $\sum \mathrm{y}=$ <br> 50943.3 | $\sum \mathrm{x}^{2}=$ <br> 6758792.18 | $\sum \mathrm{y}^{2}=$ <br> 571006254.1 | $\sum \mathrm{xy}=$ <br> 61976528.64 |

$$
\begin{aligned}
& N \sum x y-\sum x \sum y \\
& \text { Correlation Coefficient }(\boldsymbol{r})= \\
& \sqrt{N \sum x^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{y}^{2}-\left(\sum \mathrm{y}\right)^{2}} \\
& 5 \times 61976528.64-(5484.2 \times 50943.3) \\
& =\quad \begin{array}{l}
\sqrt{5 \times 6758792.18-(5484.2)^{2}} \quad \sqrt{5 \times 57100625.4-(50943.3)^{2}}
\end{array} \\
& =0.9814
\end{aligned}
$$

## Correlation between Total Deposit and Loan and Advances of NBL

|  |  |  |  |  | Rs. In Million) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Years | Total Deposit (x) | Loan and Advances (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| 2005 | 34744.2 | 17456.0 | 1207159434 | 304711936.0 | 606494755.2 |
| 2006 | 35444.9 | 12180.4 | 1256340936 | 148362144.2 | 431733060.0 |
| 2007 | 38715.2 | 13377.5 | 1498866711 | 178957506.3 | 517912588.0 |
| 2008 | 41451.7 | 15480.6 | 1718243433 | 239648976.4 | 641697187.0 |
| 2009 | 44346.1 | 19261.0 | 1966576585 | 370986121.0 | 854150232.1 |
| $\begin{aligned} & \hline \mathrm{N}= \\ & 5 \end{aligned}$ | $\begin{aligned} & \hline \sum \mathrm{x}= \\ & 194702.1 \end{aligned}$ | $\begin{aligned} & \hline \mathrm{y}= \\ & 77755.5 \end{aligned}$ | $\begin{aligned} & \mid \mathrm{x}^{2}= \\ & 7647187099.0 \end{aligned}$ | $\begin{aligned} & \hline \sum y^{2}= \\ & 1242666684.0 \end{aligned}$ | $\begin{array}{\|l} \hline \sum x y= \\ 3051987822 \end{array}$ |
|  | Correlation Coe | fficient $(r)$ $5 \times 305198$ | 822- (194702. | $\begin{aligned} & \frac{N \sum x y-\sum x \sum}{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum} \\ & \times 77755.5) \end{aligned}$ | $\sum y^{2}-\left(\sum y\right)$ |
| $\left.\sqrt{5 \times 7647187099.0-(194702.1})^{2} \quad \sqrt{5 \times 1242666684.0-(77755.5}\right)^{2}$ |  |  |  |  |  |
| 0.5162 |  |  |  |  |  |

## Correlation between Total Deposit and Loan and Advances of SCBNL

(Rs. In Million)

| Years | Total <br> Deposit (x) | Loan and <br> Advances <br> $(\mathrm{y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 19344.0 | 8213.5 | 374190336 | 67461582.25 | 158881944.0 |
| 2006 | 23050.5 | 8905.1 | 531325550.3 | 79300806.01 | 205267007.6 |
| 2007 | 24640.3 | 10538.0 | 607144384.1 | 111051551.6 | 259661945.4 |
| 2008 | 29743.9 | 13355 | 884699587.2 | 178356025.0 | 397229784.5 |
| 2009 | 35871.8 | 13118.6 | 1286786035.0 | 172097666.0 | 470587795.5 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 54130.3 | $\sum \mathrm{x}^{2}=$ <br> 3684145893.0 | $\sum \mathrm{y}^{2}=$ <br> 608267630.9 | $\sum \mathrm{xy}=$ |

$$
\begin{array}{ll} 
& \text { Correlation Coefficient }(r)= \\
=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
= & \frac{5 \times 1491628477.0-(132650.5 \times 54130.3)}{\sqrt{5 \times 3684145893.0-(132650.5)^{2}}} \sqrt{\sqrt{5 \times 608267630.9-(54130.3)^{2}}} \\
= & 0.9170
\end{array}
$$

## Correlation between Total Deposit and Loan and Advances of BOK

(Rs. In Million)

| Years | Total <br> Deposit (x) | Loan and <br> Advances (y) | $x^{2}$ | $y^{2}$ | $x y$ |
| :--- | :--- | :--- | :---: | :---: | :---: |
| 2005 | 8942.8 | 6166.9 | 79973671.84 | 38030655.61 | 55149353.32 |
| 2006 | 10429.3 | 7525.2 | 108770298.5 | 56628635.04 | 78482568.36 |
| 2007 | 12358.6 | 9663.6 | 152734994.0 | 93385164.96 | 119428567.0 |
| 2008 | 15832.7 | 12692.9 | 250674389.3 | 161109710.4 | 200962877.8 |


| 2009 | 18083.9 | 14894.7 | 327027439.2 | 221852088.1 | 269354265.3 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ | $\sum \mathrm{y}=$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ | $\sum \mathrm{xy}=$ |
| 5 | 65647.3 | 50943.3 | 919180792.8 | 571006254.1 | 723377631.8 |


$\quad$ Correlation Coefficient $(r)=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}}}$| $=\quad \frac{5 \times 723377631.8-(65647.3 \times 50943.3)}{\sqrt{5 \times 919180792.8-(65647.3)^{2}}} \sqrt{5 \times 571006254.1-(50943.3)^{2}}$ |
| :--- |

$=\quad 0.9994$

## Correlation between Provision for Loan Loss and Loan and Advances of NBL

(Rs. In Million)

| Years | Loan Loss <br> Provision (x) | Loan and <br> Advances (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :---: |
| 2005 | 9249.9 | 17456.0 | 85560650.01 | 304711936.0 | 161466254.4 |
| 2006 | 3269.6 | 12180.4 | 10690284.16 | 148362144.2 | 39825035.84 |
| 2007 | 2376.3 | 13377.5 | 5646801.69 | 178957506.3 | 31788953.25 |
| 2008 | 2141.8 | 15480.6 | 4587307.24 | 239648976.4 | 33156349.08 |
| 2009 | 2188.6 | 19261.0 | 4789969.96 | 370986121.0 | 42154624.6 |
| $\mathrm{N}=$ <br> 5 | $\sum \mathrm{x}=$ <br> 19226.2 | $\sum \mathrm{y}=$ <br> 77755.5 | $\sum \mathrm{x}^{2}=$ <br> 111275013.1 | $\sum \mathrm{y}^{2}=$ <br> 1242666684.0 | $\sum \mathrm{xy}=$ <br> 308391217.2 |

$$
5 \times 308391217.2-(19226.2 \times 77755.5)
$$

$$
=\quad \begin{aligned}
& \sqrt{5 \times 111275013.1-(19226.2)^{2}} \quad \sqrt{5 \times 1242666684.0-(77755.5)^{2}}
\end{aligned}
$$

$$
=0.2659
$$

Correlation between Provision for Loan Loss and Loan and Advances of SCBNL
(Rs. In Million)

| Years | Loan Loss <br> Provision (x) | Loan and <br> Advances (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 277.7 | 8213.5 | 77117.29 | 67461582.25 | 2280888.95 |
| 2006 | 270.4 | 8905.1 | 73116.16 | 79300806.01 | 2407939.04 |
| 2007 | 287.5 | 10538.0 | 82656.25 | 111051551.6 | 3029703.75 |
| 2008 | 245.4 | 13355 | 60221.16 | 178356025.0 | 3277317.0 |
| 2009 | 200.9 | 13118.6 | 40360.81 | 172097666.0 | 2635526.74 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ | $\sum \mathrm{y}=$ <br> 5 | 1281.9 | 54130.3 | $\sum \mathrm{x}^{2}=$ <br> 333471.67 |

$$
\begin{array}{ll} 
& \text { Correlation Coefficient }(r)=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
= & \frac{5 \times 13631375.48-(1281.9 \times 54130.3)}{\sqrt{5 \times 333471.67-(1281.9)^{2}}} \\
= & \sqrt{5 \times 608267630.9-(54130.3)^{2}}
\end{array}
$$

Correlation between Provision for Loan Loss and Loan and Advances of BOK
(Rs. In Million)

| Years | Loan Loss <br> Provision (x) | Loan and <br> Advances (y) | $x^{2}$ | $y^{2}$ | $x y$ |
| :--- | :--- | :--- | :---: | :---: | :---: |
| 2005 | 269.7 | 6166.9 | 72739.09 | 38030655.61 | 1663212.93 |


| 2006 | 236.2 | 7525.2 | 55790.44 | 56628635.04 | 1777452.24 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2007 | 286.5 | 9663.6 | 82082.25 | 93385164.96 | 2768621.4 |
| 2008 | 279.0 | 12692.9 | 77841.00 | 161109710.4 | 3541319.1 |
| 2009 | 297.5 | 14894.7 | 88506.25 | 221852088.1 | 4431173.25 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ |  |  |  |  |
| 5 | 1368.9 | $\sum \mathrm{y}=$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ | $\sum \mathrm{xy}=$ |
| 50943.3 | 376958.03 | 571006254.1 | 14181778.92 |  |  |

$$
\begin{aligned}
& \quad \text { Correlation Coefficient }(r)=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
& =\quad \frac{5 \times 14181778.92-(1368.9 \times 50943.3)}{\sqrt{5 \times 376958.03-(1368.9)^{2}}} \sqrt{5 \times 571006254.1-(50943.3)^{2}} \\
& =0.6967
\end{aligned}
$$

## Correlation between Interest Suspense and Total Interest Income of NBL

(Rs. In Million)

| Years | Interest <br> Suspense <br> $(x)$ | Interest <br> Income (y) | $x^{2}$ | $y^{2}$ | $x y$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 13629.7 | 1980.5 | 185768722.10 | 3922380.25 | 26993620.85 |
| 2006 | 6456.8 | 2045.6 | 42690266.24 | 4184479.36 | 13208030.08 |
| 2007 | 5090.4 | 1841.6 | 25912172.16 | 3391490.56 | 9374480.64 |
| 2008 | 4510.5 | 1958.1 | 20344610.25 | 3834155.61 | 8832010.05 |
| 2009 | 4046.0 | 2393.6 | 16370116.0 | 5729320.96 | 9684505.6 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 33733.4 | $\sum \mathrm{x}^{2}=$ <br> 291085886.8 | $\sum \mathrm{y}^{2}=$ <br> 21061826.74 | $\sum \mathrm{xy}=$ |
| 68092647.22 |  |  |  |  |  |

Correlation Coefficient $(\boldsymbol{r})=$

$$
\sqrt{N \sum x^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{y}^{2}-\left(\sum \mathrm{y}\right)^{2}}
$$

$$
\begin{aligned}
& =\frac{5 \times 68092647.22-(33733.4 \times 10219.4)}{\sqrt{5 \times 291085886.8-(33733.4)^{2}} \quad \sqrt{5 \times 21061826.74-(10219.4)^{2}}} \\
& =\quad-0.2566
\end{aligned}
$$

## Correlation between Interest Suspense and Total Interest Income of SCBNL

(Rs. In Million)

| Years | Interest <br> Suspense (x) | Interest <br> Income (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :---: |
| 2005 | 133.5 | 1058.6 | 17822.25 | 1120633.96 | 141323.10 |
| 2006 | 160.1 | 1189.1 | 25632.01 | 1413958.81 | 190374.91 |
| 2007 | 240.6 | 1410.8 | 57888.36 | 1990356.64 | 339438.48 |
| 2008 | 115.5 | 1591.2 | 13340.25 | 2531917.44 | 183783.60 |
| 2009 | 117.6 | 1887.2 | 13829.76 | 3561523.84 |  |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ |  |  |  |  |
| 5 | 767.3 | $\sum \mathrm{y}=$ <br> 7136.9 | $\sum \mathrm{x}^{2}=$ <br> 128702.87 | $\sum \mathrm{y}^{2}=$ <br> 10618390.69 | $\sum \mathrm{xy}=$ <br> 1076854.81 |

$$
\left.\begin{array}{ll} 
& \text { Correlation Coefficient }(r)=\frac{\mathrm{N} \sum \mathrm{xy}-\sum \mathrm{x} \sum \mathrm{y}}{\sqrt{\mathrm{~N} \sum \mathrm{x}^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{y}^{2}-\left(\sum \mathrm{y}\right)^{2}}} \\
= & \frac{5 \times 1076854.81-(767.3 \times 7136.9)}{\sqrt{5 \times 128702.87-(767.3)^{2}}} \sqrt{5 \times 10618390.69-(7136.9)^{2}}
\end{array}\right]=0.266510
$$

Correlation between Interest Suspense and Total Interest Income of BOK
(Rs. In Million)

| Years | Interest <br> Suspense (x) | Interest <br> Income (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 27.8 | 451.5 | 772.84 | 203852.25 | 12551.70 |
| 2006 | 24.0 | 722.1 | 576.00 | 521428.41 | 17330.40 |
| 2007 | 14.7 | 821.4 | 216.09 | 674697.96 | 12074.58 |
| 2008 | 14.8 | 1034.0 | 219.04 | 1069156.00 | 15303.20 |
| 2009 | 11.9 | 1348.7 | 141.61 | 1818991.69 | 16049.53 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ | $\sum \mathrm{y}=$ <br> 5 | 93.2 | 4377.7 | $\sum \mathrm{x}^{2}=$ <br> 1925.58 |


|  | Correlation Coefficient $(r) \quad=\quad \frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}}$ |
| :--- | :--- |
| $=$ | $\frac{5 \times 73309.41-(93.2 \times 4377.7)}{\sqrt{5 \times 1925.58-(93.2)^{2}}}$ |
| $=$ | $\sqrt{5 \times 4288126.31-(4377.7)^{2}}$ |

## Correlation between Loan and Advances and Shareholders Equity of NBL

(Rs. In Million)

| Years | Loan and <br> Advance (x) | Shareholders' <br> Equity (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :---: |
| 2005 | 17456.0 | 1064.2 | 304711936.0 | 1132521.64 | 20370597.14 |
| 2006 | 12180.4 | 1207.1 | 148362144.2 | 1457090.41 | 22366718.03 |
| 2007 | 13377.5 | 1606.2 | 178957506.3 | 2579878.44 | 20545064.82 |
| 2008 | 15480.6 | 1794.9 | 239648976.4 | 3221666.01 | 24680951.94 |
| 2009 | 19261.0 | 1906.5 | 370986121.0 | 3634742.25 | 30066839.55 |
| $\mathrm{~N}=$ | $\sum \mathrm{y}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 77755.5 | $\sum \mathrm{y}^{2}=$ <br> 1242666684.0 | $\sum \mathrm{y}^{2}=$ <br> 12025898.75 | $\sum \mathrm{xy}=$ <br> 118030171.5 |

$$
\begin{aligned}
& N \Sigma x y-\sum x \sum y \\
& \text { Correlation Coefficient }(\boldsymbol{r})= \\
& \sqrt{N \sum x^{2}-\left(\sum \mathrm{x}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{y}^{2}-\left(\sum \mathrm{y}\right)^{2}} \\
& 5 \times 118030171.5-(79983.4 \times 7578.9) \\
& = \\
& =\quad-0.7769
\end{aligned}
$$

## Correlation between Loan and Advances and Shareholders Equity of SCBNL

(Rs. In Million)

| Years | Loan and <br> Advance (x) | Shareholders' <br> Equity (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :---: |
| 2005 | 8213.5 | 1278.2 | 67461582.25 | 1633795.24 | 10498495.7 |
| 2006 | 8905.1 | 1576.3 | 79300806.01 | 2484721.69 | 14037109.13 |
| 2007 | 10538.0 | 1755.3 | 111051551.6 | 3081078.09 | 18497526.93 |
| 2008 | 13355 | 2117.2 | 178356025.0 | 4482535.84 | 28275206.00 |
| 2009 | 13118.6 | 2493.4 | 172097666.0 | 6217043.56 | 32709917.24 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 5 | $\sum \mathrm{y}=$ <br> 54130.3 | $\sum \mathrm{x}^{2}=$ <br> 9220.4 | $\sum \mathrm{y}^{2}=$ <br> 608267630.9 | $\sum \mathrm{xy}=$ <br> 17899174.42 |

$N \sum x y-\sum x \sum y$
Correlation Coefficient $(\boldsymbol{r})=$

$$
\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}
$$

$$
\begin{aligned}
& =\frac{5 \times 104018255-(54130.3 \times 9220.4)}{\sqrt{5 \times 608267630.9-(54130.3)^{2}}} \sqrt{5 \times 17899174.42-(9220.4)^{2}} \\
& =\quad 0.9401
\end{aligned}
$$

## Correlation between Loan and Advances and Shareholders Equity of BOK

(Rs. In Million)

| Years | Loan and <br> Advance <br> $(\mathrm{x})$ | Shareholders' <br> Equity (y) | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :---: |
| 2005 | 6166.9 | 650.8 | 38030655.61 | 423540.64 | 4013418.52 |
| 2006 | 7525.2 | 720.7 | 56628635.04 | 519408.49 | 5423411.64 |
| 2007 | 9663.6 | 840.2 | 93385164.96 | 705936.04 | 8119356.72 |
| 2008 | 12692.9 | 982.0 | 161109710.4 | 964324.00 | 12464427.80 |
| 2009 | 14894.7 | 1342.1 | 221852088.1 | 1801232.41 | 19990176.87 |
| $\mathrm{~N}=$ | $\sum \mathrm{x}=$ <br> 50943.3 | $\sum \mathrm{y}=$ <br> 5 | $\sum \mathrm{x}^{2}=$ <br> 571006254.1 | $\sum \mathrm{y}^{2}=$ <br> 4414441.58 | $\sum \mathrm{xy}=$ <br> 50010791.55 |

$$
\left.\begin{array}{ll} 
& \text { Correlation Coefficient }(r)=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
= & \frac{5 \times 50010791.55-(50943.3 \times 4535.8)}{\sqrt{5 \times 5710062541-(50943.3)^{2}}} \sqrt{5 \times 4414441.58-(4535.8)^{2}}
\end{array}\right]=0.0963
$$

## Correlation between Total Interest Income and Net Profit of NBL

(Rs. In Million)

| Years | Interest <br> Income (x) | Net Profit <br> $(y)$ | $x^{2}$ | $y^{2}$ | $x y$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 1980.5 | 1399.5 | 3922380.25 | 1958600.25 | 2771709.75 |
| 2006 | 2045.6 | 2329.5 | 4184479.36 | 5426570.25 | 4765225.2 |
| 2007 | 1841.6 | 417.7 | 3391490.56 | 174473.29 | 769236.32 |
| 2008 | 1958.1 | 845.2 | 3834155.61 | 714363.04 | 1654986.12 |



## Correlation between Total Interest Income and Net Profit of SCBNL

(Rs. In Million)

| Years | Interest <br> Income (x) | Net Profit <br> $(\mathrm{y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 1058.6 | 757.9 | 1120633.96 | 574412.41 | 802312.94 |
| 2006 | 1189.1 | 662.2 | 1413958.81 | 438508.84 | 787422.02 |
| 2007 | 1410.8 | 692.1 | 1990356.64 | 479002.41 | 976414.68 |
| 2008 | 1591.2 | 814.4 | 2531917.44 | 663247.36 | 1295873.28 |
| 2009 | 1887.2 | 1028.3 | 3561523.84 | 1057400.89 | 1940607.76 |
| $\mathrm{N}=$ <br> 5 | $\sum \mathrm{x}=$ <br> 7136.9 | $\sum \mathrm{y}=$ <br> 3954.9 | $\sum \mathrm{x}^{2}=$ <br> 10618390.69 | $\sum \mathrm{y}^{2}=$ <br> 3212571.91 | $\sum \mathrm{xy}=$ <br> 5802630.68 |

$$
\begin{gathered}
\text { Correlation Coefficient }(r)=\frac{N \sum x y-\sum x \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
=\quad \frac{5 \times 5802630.68-(7136.9 \times 3954.9)}{\sqrt{5 \times 10618390.69-(7136.9)^{2}} \sqrt{5 \times 3212571.91-(3954.9)^{2}}}
\end{gathered}
$$

```
= 0.8233
```


## Correlation between Total Interest Income and Net Profit of BOK

(Rs. In Million)

| Years | Interest <br> Income (x) | Net Profit <br> $(\mathrm{y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2005 | 451.5 | 228.8 | 203852.25 | 52349.44 | 103303.2 |
| 2006 | 722.1 | 330.7 | 521428.41 | 109362.49 | 238798.47 |
| 2007 | 821.4 | 278.5 | 674697.96 | 77562.25 | 228759.90 |
| 2008 | 1034.0 | 367.6 | 1069156.00 | 135129.76 | 380098.4 |
| 2009 | 1348.7 | 725.8 | 1818991.69 | 526785.64 | 978886.46 |
| $\mathrm{N}=$ <br> 5 | $\sum \mathrm{x}=$ <br> 4377.7 | $\sum \mathrm{y}=$ <br> 1931.4 | $\sum \mathrm{x}^{2}=$ <br> 4288126.31 | $\sum \mathrm{y}^{2}=$ <br> 901189.58 | $\sum \mathrm{xy}=$ <br> 1929846.43 |

$$
\begin{aligned}
& N \sum x y-\sum x \sum y \\
& \text { Correlation Coefficient }(\boldsymbol{r})= \\
& \sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}} \\
& 5 \times 1929846.43-(4377.7 \times 1931.4) \\
& =\sqrt{\sqrt{5 \times 4288126.31-(4377.7)^{2}}} \sqrt{ } \overline{\times 901189.58-(1931.4)^{2}} \\
& =0.8987
\end{aligned}
$$

## APPENDIX (VI)

## Questionnaire

## Name of the customer: <br> Institution: <br> Address:

Please answer the following questions putting a tick mark at the appropriate answer:
Q.No.1) Do you think the lending policy of the bank is satisfactory?
i) Yes
ii) No
iii) Don't know
Q.No.2) Does the interest rate on lending of bank is effective in Nepalese Financial Market?
i) Effective
ii) Satisfactory
iii) Not-Effective
Q.No.3) Do you think most of the people know about loan payment schedule?
i) Yes
ii) No
iii) Don't know
Q.No.4) Are you satisfied with loan recovery process of the bank?
i) Yes
ii) No
iii) Don't know
Q.No.5) Is there any problem while taking loan or paying it in the bank?
i) Yes
ii) No
iii) May be
Q.No.6) Is the bank following modern technology?
i) Yes
ii) No
iii) Don't know
Q.No.7) Is the commitment charge and service charge of the bank is satisfactory?
i) Yes
ii) No
iii) Don't know
Q.No.8) Is it true that "the loan officers of the bank are biased while declaring the loan"?
i) Yes
ii) No
iii) Don't know
Q.No.9) Do you know the interest rebate and other discount process of the bank?
i) Yes
ii) No
iii) Don't know
Q.No.10) What do you think about Nepal Rastra Bank's regulation regarding lending?
i) Good
ii) Satisfactory
iii) Inadequate
Q.No.11) Do you agree that lending amount decreases with in increment in lending interest rate?
i) Agree
ii) Disagree
iii) Don't know
Q.No.12) Do you think that lending rate should be reduced to attract investors?
i) Yes ii) No iii) Don't know

## APPENDIX (VII)

| Questions | Options | Respondents | Tot. Respondents | Percent |
| :---: | :---: | :---: | :---: | :---: |
| 1 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{array}{\|l\|} \hline 24 \\ 8 \\ 2 \\ \hline \end{array}$ | 34 | $\begin{array}{\|l\|} \hline 71 \\ 23 \\ 6 \\ \hline \end{array}$ |
| 2 | i) Effective <br> ii) Satisfactory <br> iii) Not effective | $\begin{array}{\|l\|} \hline 5 \\ 19 \\ 10 \\ \hline \end{array}$ | 34 | $\begin{aligned} & 15 \\ & 56 \\ & 29 \end{aligned}$ |
| 3 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{aligned} & 19 \\ & 14 \\ & 1 \end{aligned}$ | 34 | $\begin{aligned} & \hline 56 \\ & 41 \\ & 3 \\ & \hline \end{aligned}$ |
| 4 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{array}{\|l\|} \hline 25 \\ 9 \\ 0 \\ \hline \end{array}$ | 34 | $\begin{array}{\|l\|} \hline 74 \\ 26 \\ 0 \\ \hline \end{array}$ |
| 5 | i) Yes <br> ii) No <br> iii) May be | $\begin{aligned} & 12 \\ & 12 \\ & 10 \end{aligned}$ | 34 | $\begin{aligned} & 35 \\ & 35 \\ & 30 \end{aligned}$ |
| 6 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{array}{\|l\|} \hline 30 \\ 0 \\ 4 \\ \hline \end{array}$ | 34 | $\begin{array}{\|l\|} \hline 88 \\ 0 \\ 12 \end{array}$ |
| 7 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{aligned} & 18 \\ & 14 \\ & 2 \end{aligned}$ | 34 | $\begin{array}{\|l\|} \hline 53 \\ 41 \\ 6 \\ \hline \end{array}$ |
| 8 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{array}{\|l\|} \hline 9 \\ 15 \\ 10 \end{array}$ | 34 | $\begin{array}{\|l\|} \hline 26 \\ 44 \\ 30 \end{array}$ |
| 9 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{aligned} & \hline 23 \\ & 4 \\ & 7 \end{aligned}$ | 34 | $\begin{aligned} & \hline 68 \\ & 12 \\ & 20 \end{aligned}$ |
| 10 | i) Good <br> ii) Satisfactory <br> iii) Inadequate | $\begin{array}{\|l\|} \hline 8 \\ 19 \\ 7 \\ \hline \end{array}$ | 34 | $\begin{array}{\|l\|} \hline 24 \\ 56 \\ 20 \\ \hline \end{array}$ |
| 11 | i) Agree <br> ii) Disagree <br> iii) Don't know | $\begin{array}{\|l\|} \hline 18 \\ 10 \\ 6 \\ \hline \end{array}$ | 34 | $\begin{array}{\|l\|} \hline 53 \\ 29 \\ 18 \\ \hline \end{array}$ |
| 12 | i) Yes <br> ii) No <br> iii) Don't know | $\begin{aligned} & 25 \\ & 4 \\ & 5 \end{aligned}$ | 34 | $\begin{aligned} & \hline 74 \\ & 12 \\ & 14 \end{aligned}$ |

