

## **CHAPTER-ONE**

### **INTRODUCTION**

#### **1.1. GENERAL BACKGROUND**

Nepal is a small agro-based landlocked country. It is situated in between two large countries India and China. More than 90 per cent people depend upon agriculture. Almost half Nepalese population of 2508 million live below the poverty line as it is ranked as one of the world's poorest. But Nepal is online developing country in the world and slowly has also increasing the trend of economic condition. The developing of a country is always measured by its economic indices. Therefore every country has given emphasis on uplift of its economy. Now a day the financial institutions are viewed as catalyst in the process of the economic growth. The mobilization of domestic resources is one of the key factors in economic development of the country. Every well organized financial institution including financial intermediaries play vital role in development and advancement of the financial sector of the country they collect scattered financial resources from the mass and invest them among those who are social activities of the country. This will provide fuel to the development process. It is the fact that the unorganized financial institutions. They are actually indispensable part of the development process. It is the fact that the unorganized financial system leads the country nowhere Therefore the central bank (Nepal Rastra Bank) continuous to play major role in development and advancement of the financial sector of the country.

As financial institution, commercial bank is one of the major media in the framework of every economic because they collect saving as a deposit and invest for industry. Thus they contribute to the economic growth of the nation as whole. The mobilization of domestic resources and the investment for production use to various sectors are important factors. Commercial banks formulated sound investment policy which eventually contributed to the economic growth of the country. The banking sectors need to play an important role to boost of the economy by adopting the growth oriented investment policy and building up the financial structure for the future economic development. Therefore integrated and speedy development of any country is only possible when competitive, reliable and sound banking services are reached and carried to every nook and corner of the country. The sole objective of establishing the commercial banks is to earn optimal profit by mobilization its resources properly. But now a day there is tough competition in banking sectors but less opportunity to make investment.

## 1.2. Focus of the study

Investment is concerned with management of an investor wealth, which are the sum of current income and the present value of all future income fund to be invested come from assets already owned borrowed money and saving or forgone consumption. By forgoing today and investing the saving, investors expect to enhance their future consumption possibilities i.e. they are invested to increase wealth. Investors also seek to manage their wealth effectively obtaining the most form it while- protection it from inflation taxes and factors.

Bhalla, says that the word investment brings fourth vision of profit, risk. Speculation and wealth for the uninformed investing may result in disaster for the knowledgeable, the investment process for the knowledgeable; the investment process can be financially rewarding and exciting

He has given the basic concept of investment in three points they are as follows.

- i) Economic investment that is an economist definition of investment.
- ii) Investment in a more general or extended sense which is used by "the man of the street" Cheney and Mosses, (1992; - 6)
- iii) The sense in which we are going to be very much interested normal financial investment.

(1983;-2)

According to layman, there is always a return if there is investment. This return may be favorable as well as unfavorable to the investor's standpoint. But in the study, the word investment conceptualized the investment of income saving or the collected fund. The term investment covers a wide range of activities; it is commonly known fact that an investment is only possible where there is adequate saving. If all the incomes and savings are consumed to solve the problem of hand to mouth and to the other our basic needs, then there is no existence of investment. That is why both saving and investment are interrelated each other.

The term, investment means the sacrifice of money today for the prospective money tomorrow. But investment in its broadest sense means the sacrifice of current dollars for further dollar. Two different attributes are generally involved time and risk. The sacrifice takes place in the present and certain the reward comes later. If at all and the magnitude is generally uncertain, in some cases, the element of time predominates e. g .government bond. In other cases, risk and the dominant attribute e. g. call option on common stock. Yet both time & risk are important.

(William and Alexander,1998 ; -9) "The problem of investment of investors is to select the funds whose objectives and degree of risk taking must closely match is own situated the one that will accomplish for him what he would wish to do for himself if he could diversify and manage his own holdings."

Investment is a very well known and prestigious word in financial term. It is always true that all people want to invest their money in the best firm for good return but the return may be both favorable and unfavorable. It is conceptually the investment of the collected fund or wealth like income.

### **1.3 Development of commercial banks in Nepal**

The evolution of banking industry had started a long time back during ancient times. Traditional forms of banking were traced the civilization of Greek, Rome and Mesopotamia. But modern banking originated in banking made its first beginning around the middle of the 12<sup>th</sup> century in Italy and the Bank of Venice founded in 1157A.D.was the first pubic banking institution following the bank of Barcelona and the Bank of Geneva were established in 1401 A.D. and 1407 A.D. respectively. Similarly, Bank of Amsterdam (1609 A D.), Bank of England (1694 A.D.) were other milestones in the development of the banking systems. Northern Europe there sprang up number of private banking houses is all Europe and slowly it spread through-out the world.

In Nepal, modern banking starts from the establishment of Nepal Bank Limited. In the country, the development of banking is relatively recent. The record of banking systems in Nepal given detail account of mixture of slow and steady evolution in financial and global economy of Nepalese life. Involvement of landlord, rice merchant, shopkeeper and other individual money lender has acted as fence to institutional credit in presence of unorganized money market. In the year, 1934 A.D., Nepal Bank Ltd. was established under "Nepal Bank Act, 1937" as the first commercial bank of Nepal. Rastriya Banijiya Bank (RBB) is the second commercial bank of Nepal was established in the year 1965 A.D. RBB being the largest commercial bank has played major role in the economy.

On the long run, commercial bank act was felt accordingly it was established in 1974 A.D. According to "Section 2 (a) of Commercial Bank Act 1974", commercial banks are the heart of the economy systems. They hold the deposit of millions of person, government and business units. It exchanges money, accepts deposits, grant loan and operates commercial

transaction. In modern time, commercial banks which are facilitated, regulated and supervised by the central bank (NRB), confined them and concentrated in their activities of fulfilling the financial needs of their customer.

With the opening of NABIL Bank in 1984 A.D., the door of the opening commercial banks was opened to private sector. Then whole lot of commercial banks opened in Nepal. Today, all the banks except Nepal Bank Limited and Rastriya Banijiya Bank are making profit. The inefficiency of these two public sector banks has lead to the success of other private banks.

#### **1.4 Statement of the problem**

The present situation of Nepal is economically unstable and unsteady. There is no security, peace and harmony in our country. Therefore the investors are discouraged to invest. In context of Nepal, banking sector is facing many problems such as political legal, economical as well as social. The unstable politics is the main cause to hamper for the development of banking sectors. Not only these, there is throat cut competition among mushrooming commercial banks. Most of the Nepalese people are illiterate and they are not aware about banking systems. So the lack of sound knowledge about the financial risk, business risk and other risk may lead the banks towards the liquidation and bankrupt. Due to the lack of effective human resources and trained manpower, growing brain drain is the serious problem for the existing healthy complication.

The lending policies have become a major problem for developing economic condition of the country. Commercial banks give much loan and advances, overdraft and many other kinds of facilities to encourage deposit in bank. But the bank has utilized insufficient deposit to their customers and spent large amount of deposit as office operation expression and staff's welfare. They only depend upon the directions and guidelines of Nepal Rastra Bank (NRB) but they do not have clear view and have provided loan only on short term basis but they do not invest on long term project because of safety and not considering the profit potentiality of the project. Due to this, they may have sufficient return and most of joint venture banks may have to be collapsed due to poor and wrong investment policy.

In the study Standard Chartered Bank Nepal Ltd. (SCBNL) investment policy is analyzed comparing it with another commercial bank i.e. NABIL Bank.

Therefore, the study especially surrounds and leads with the following aspects of commercial banks:

What is the liquidity position of the related banks? - What is the assets management condition of the related banks? - What is the profitability position? - What is the risk position in the companies? - What are the trends of deposits, loan and advances, total investment and net profit? - What are the relation of deposits with investment, loan and advances? - What is the effect of investment decision on profitability position of the bank? - Is there a proper utilization of available fund?

### **1.5. Purpose of the study**

Investment decision is one of the major decision functions of financial management. The main objective of the study is to evaluate and assess the investment policy and strategies followed by the bank. The specific objectives of this study are as follow:

1. To analyze the performance in terms of liquidity, asset management, profitability and risk.
2. To evaluate the trends of total deposits, total investments, loans and advances and to compare their position in the companies.
3. To study the relationship of deposit with investment, loans and advances
4. To assess the effects of investment decision on profitability position of the banks.

### **1.6. Need/Importance of the study**

The need of this study lines mainly infilling a research gap on the study of investment policy of concerned banks. The study is basically confined to reviewing the investment policy of banks in five years periods It is being well-known fact that the commercial banks can effect the economic condition of the whole country. The effort is made to highlight the investment policy of those banks expecting that the study can be sound bridge to the deposits and investments. This study is expected to definitely provide a useful feedback to the policy makers of these banks.

### **1.7. Limitation of the study**

This study attempts to evaluate the investment policy of Standard Chartered Bank Ltd. (SCBNL) and NABIL Bank Ltd. In this changing world, it is so difficult to cope with the space of the change. Due to these difficulties, every study or research is always accompanied by some limitations. The following facts are the basic limitation of the study:

- a. The analysis will be mainly based on secondary data.
- b. The study will be carried out only the period of five years trend of commercial banks

- c. Out of the numerous affecting factors, only those factors related with investment policy to financial aspect will be considered.
- d. The study deals with only selected commercial banks to compare each other.
- e. This study deals with limited financial and statistical tools.

### **1.8. Research design**

Research design is an essential part of each research work. It is the plan, structure and strategy investigations conceived so as to obtain answer to research questions and to control variances. This study depends upon the secondary data. It includes all the process of collecting verifying and evaluating of past evidence systematically and objectively to achieve final conclusion. Some statistical and accounting tools have been adopted to analyze factors in this research study and descriptive and analytical research design also has been used.

### **1.9. Population and sample**

There are different commercial banks, which are functioning all over the country. Most of their stocks are traded actively in the stock market. In this study, investment policy of Standard Chartered Bank Nepal Ltd is compared with NABIL Bank Ltd., which is selected from population. The selected commercial banks are selected on the basis of assets, share pricing and time when they were established.

Samples are taken from the total population which is as follows:

Nepal Bank Ltd. (NBL)

Rastriya Banijya Bank Ltd. (RBB)

NABIL Bank Ltd. (NABIL)

Standard Chartered Bank Nepal Ltd. (SCBNL)

Nepal Investment Bank Ltd. (NIBL)

Himalayan Bank Ltd. (HBL)

Nepal State Bank of India Ltd. (NSBIL)

Nepal Bangladesh Bank Ltd. (NBBL)

Bank of Kathmandu Ltd. (BOKL)

Everest Bank Ltd. (EBL)

Nepal Credit and Commercial Bank Ltd. (NCCBL)

Nepal Industrial and Commercial Bank Ltd. (NICBL)

Machhapuchhre Bank Ltd. (MBL)

Kumari Bank Ltd. (KBL)  
 Lumbini Bank Ltd. (LBL)  
 Laxmi Bank Ltd. (LBL)  
 Siddhartha Bank Ltd. (SBL)  
 Citizens Bank Ltd. (CBL)  
 Global Bank Ltd. (GBL)  
 Bank of Asia Ltd. (BAL)  
 Prime Bank Ltd.

From these populations, Standard Chartered Bank Nepal Ltd. and NABIL Bank Ltd. have been selected in sample for the study.

### **1.10 Standard Chartered Bank Nepal Limited**

Standard Chartered Bank Nepal Limited (SCBNL) is the new name of Nepal Grind lays Bank which was established in 1985 as a second foreign joint venture bank under the company act of 1964. Nepal Grind lays bank was established in Nepal among other JVBs to contribute in commercial sector of Nepalese economy. Among share this bank, 50% of the share capital was originally owned by ANZ Grind lays Bank U.K. which managed and controlled the overall activities of the Bank. SCBNL holds 50% of total equity capital investment, general public investor holds 35% of total equity share capital by Nepal bank Ltd & remaining 15% share capital. The bank is being managed under joint ventures and technical services. Agreement that was signed between SCB & Nepalese promoters. The standard chartered banking network of 570 offices spanning more than 55 countries means more of what you have always enjoyed.

Capital structure of standard chartered bank Nepal limited is as follows:

Capital	(Rs in million)
Authorized equity capital	1000.00
Issued equity capital	491.654
Paid up equity capital	491.654

### **1.11 NABIL Bank Limited**

NABIL Bank Ltd is the new name of Nepal Arab Bank Ltd. from January 2002 which commenced its operation on 12 July, 1984 as the first joint venture bank in Nepal under Company Act, 1964 and Commercial Bank Act, 1974. Dubai Bank Ltd Dubai was the first

joint venture partner of NABIL Bank. Currently NB (international) Limited, Ireland is the foreign partner. NABIL is the pioneer in introducing many innovative products and marketing concept in the banking sector of Nepal. Firstly, Dubai Bank was initial commercial partner with 50%equity investment then Dubai bank Ltd. Dubai after Emirates Bank International limited Dubai sold its entire 50%equity holding to National Bank Limited Bangladesh. National Bank Ltd Bangladesh is analyzing the bank in accordance with the technical services agreement signed between it (NBL) the bank on June 1995.

Capital structure of NABIL Bank Ltd. is as follows:

Capital	(Rs in million)
Authorized equity capital	1000.00
Issued equity capital	491.65
Paid up equity capital	491.65

## 1.12 Organization of the study

This study has been organized into five chapters in order to make the study easy to understand. Each chapter covers some facets pertaining to the investment policy of commercial banks. The following are the titles of the chapters:

Chapter One	: Introduction
Chapter Two	: Review of Literature
Chapter Three	: Research Methodology
Chapter Four	: Data Presentation and Analysis
Chapter Five	: Summary, Conclusions and Recommendation

The report is organized in this fashion to make this study in line with simple research methodology approach.

**Chapter One** contains the introductory part of the study. This chapter gives an account of the objectives and scope of the study, and also looks over the major issues to be investigated and explained. It includes background, focus of the study, development of commercial banks in Nepal, brief introduction of commercial banks, statement of problem, purpose of the study, importance of the study, limitation of the study and organization of the study.

**Chapter Two** is devoted to theoretical framework that bounds the study, and brief review of relevant literatures. It includes the review of previous writings and studies relevant to the problem being explored, and within the framework of the theory structure. It consists of review of available literature which includes conceptual review, review of related studies, review of articles, and review of thesis.

**Chapter Three** covers the research methodology employed in the study. This chapter further attempts to explain the nature and sources of data, list of the selected companies, the method of data analysis and utilization of statistical tools. It includes the interpret parts research design, population and sample, data analysis tools.

**Chapter Four** elaborates with the presentation and analysis and finding of relevant data through the definite coerces of research methodology with financial and statistical analysis of SCBNL and NABIL. Basically, the descriptive analysis is done for this research work.

**Chapter Fifth** is the last chapter of the study which deals with summary, conclusion, and recommendation for improving the future, performance of sample banks. Finally bibliography and appendices are also presented at the end of the thesis work.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

The investment decision has played an important role in banking sectors as well as other organizations. Effective investment decision encourages to each and every investor to invest their funds on profitable field in order to achieve high return. Actually, this unit of the study tries to describe the conceptual NRB rules regarding funds mobilization of commercial banks. Besides these, this chapter highlights the literature that is available in concerned subject as to my knowledge, research work, relevant study on this topic and review of thesis work, which was performed previously.

#### **2.1 Conceptual Review**

##### **2.1.1 Investment**

Investment is concerned with the management of an investor's wealth which are the sum of current income and the present value of all future income funds to be invested come from assets already owned borrowed money and saving or foregone consumption by forgoing today and investing the saving, investors expects to enhance their future consumption possibilities i.e. they are invested to increase wealth. Some scholars have given the actual meaning of investment in their words, which are as follows:

“An investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk, it requires a present certain sacrifice for a future uncertain benefits.”(Fancies, 1991;-1)

“The investment objective is to increase systematically the individual's wealth, defined as assets minus liabilities. The higher the level of desired wealth the higher the return must be received. As investor seeking higher return must be willing to take higher level of risk”. (Cheney and Moses, 1992;-13)

"Investment policy stables responsibilities for the investment disposition of the bank assets in terms of allocation funds for investment and loan and establishing responsibility for day to day management of those assets."(Bexely, 1987;-124)

"Investment by individual, business and government involves a present sacrifice of income to get on expected future benefit; as a result investment raises a nation's standard of living." (The world Book Encyclopedia, 1976; -232)

"The term investing can cover a wide range of activities. It often refers to invest money in certificates of deposits, bond, common stock or mutual funds. More knowledge investor would include other financial assets such as warrants, puts and calls future contracts and convertible securities. Investing encompasses very conservative position and aggressive speculation."(Jones, 1998;-11)

"Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive return." (Gitman and Jochnk, 1990;-115)

The above review clearly indicates that investment means use of rupee of amount today by exception more income in future. The value of rupee in future is increased than current value, so the expected change in price during the period and for the uncertainty involved icon cash flow. So, it is cleared that investment is the utilization of funds today with expected additional return in future but the return sometimes may be negative also, if wrongly invested without sound knowledge of investment and their related factor.

### **2.1.2 NRB Rules Regarding Fund Mobilization of Commercial Banks**

To mobilize bank's deposit in different sectors of the different parts of the nation, to prevent them form the financial problems, central bank may establish a legal framework by formulating various rules and regulations (prudential norms). These directives must have direct or indirect impact while making decision to discuss those rules and regulations which are formulated by NRB in terms of investment and credit to priority sector, deprived sector, other institution, single borrower limit, CRR loan loss provision, capital adequacy ratio, interest spread, productive sector investment, etc. The main provisions established by NRB Directives 2059/60, -2 in the form of prudential norms in above relevant are briefly discussed here:

### **A. Directives Relating to Single Borrower Credit Limit**

With the objective of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size borrowers to the bank loans, NRB has directed commercial banks to set an upper limit for single borrower limit. According to the directive, commercial banks may extend credit to single borrower or group of related borrowers in such a way that the amount of Fund Based loans and advances is up to 25 % of the Core Capital and Non Fund Based Off-Balance Sheet facilities like letters of credit, guarantees, acceptances, commitments is up to 50 % of its Core capital Fund.

### **B. Directives Relating to Loan Classification and Loan Loss Provisioning**

Effective from FY 2060/61 (2003/04), outstanding loans and advances on the basis of aging of principle amount, loans and advances should be classified into the following four categories:

- a. Pass: Loans and advances whose principle amount are not past due and past due for a period up to 3 (three) months will be included in this category. These are classified and defined as Performing Loans.
- b. Substandard: All loan and advances that are past due for a period of 3 months to 6 months will be included in this category.
- c. Doubtful: All loans and advances, which are past due for a period of 6 months to 1 year, will be included in this category.
- d. Loss: All loans and advances which are past due for a period of more than 1 year as well as advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future shall be included in this category.

### **Loans Loss Provisioning**

The loan loss provisioning, on the basis of the outstanding loans and advances and bills purchased classified as above should be provided as follows:

Classification of loan    Loan loss provision

Pass	1%
Substandard	25%
Doubtful	50%
Loss	100%

Loan loss provision set aside for performing loans is defined as General Loan Loss Provision and loan loss provision set aside for non-performing loan is defined as Specific Loan Loss Provision.

### **C. Directives Relating to Interest Rates**

According to previous directives, the differences between the interest provided and interest charged (spread rate) should not be more than 5%. This difference is calculated on the basis of the weighted interest provided and the weighted interest charged. But, according to the directives of circular issued on 16<sup>th</sup> - July 2003, the requirement to maintain average interest spread at 5 percent has been withdrawn for the time being.

### **D. Directives Relating to Cash Reserve Ratio Requirements (CRR)**

To ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at any time to inject the confidence in depositors regarding the safety of their deposited funds, commercial banks are required to have maximum CRR. In this regard, Nepal Rastra Bank has directed commercial banks to deposit minimum 7% of current and saving deposits and 4.5 percent of fixed deposits in the Nepal Rastra Bank. The commercial banks are further required to have 3 % cash of total deposits in their own bank's value. Cash reserve ratio has been reduced by one percentage point effective beginning of new FY 2060/61.

### **E. Directives to Raise Minimum Capital Fund**

Nepal Rastra Bank has directed all the commercial banks under operation and established to operate in national level and having low capital base have been directed to raise their capital fund at a minimum level of Rs.1000 million by the end of the fiscal year 2002/03. The amount under the headings of the Paid-up capital, general reserve, share premium, non-redeemable preference share and retained earnings would be considered for calculating minimum capital fund. It has further directed all the commercial banks to increase their paid up capital (not the total capital fund) to Rs.1000 million by 2009 by increasing paid up capital at minimum of 10 percent annually.

### **F. Directives Regarding Investments in Shares and Securities by Commercial Banks**

- a. Arrangement for implementation of investment policy under approval of the board of directors: Banks should prepare written policy relating to investments in the shares and securities of the other organized institution. Such policies should be implemented only under the approval of the Board of Directors. There should be no restrictions as to

investment by the banks in the securities of organized HMG and securities issued by Nepal Rastra Bank.

- b. Arrangement relating to investment in shares and securities of organized institutions:
  - i. Banks may invest in shares and securities of any one organized institution not exceeding 10% of the paid up capital of such organized institution.
  - ii. The total amount of investment should be restricted to 30% of the paid up capital of the bank.
  - iii. Banks should invest in the shares and securities of organized institutions, which are already listed in the stock exchange or where arrangement exists for listing within one year. Banks should not invest in any shares, securities and hybrid capital instruments issued by any banks and financial institutions licensed by Nepal Rastra Bank.

## 2.2 Review of Related Studies

### 2.2.1 Feature of Sound Lending and Investment Policy:

The income and profit of the bank depends upon its leading procedure, lending policy and investment of its fund in different securities. The greater credit created by the bank the higher will be profitability. A sound lending and investment policy is not only prerequisite for bank's profitability but also crucially significant for the promotion of commercial savings of a backward country like Nepal.

Some of the main necessities for sound lending and investment policies are explained below:

**a) Safety Aid Security:** Every bank must be aware while investing funds. It should never invest its fund in those securities, which are too much depreciation and flections (volatile) because a little difference may cause a great loss. The bank should accept that type of securities, which are commercial durable and high marked prices. In this case, "MAST" should be applied for the investment.

M=Marketability

A= Ascertainability

S= Stability

T=Transferability,

**b) Profitability:** The commercial bank can maximize its volume of wealth through maximization of return on their investment and lending. Therefore, they must invest their funds where they gain maximum profit. The profit of commercial bank mainly depends on the

interest rate, volume of loan, its time period and quarter of investment on different securities. The ambition of profit to commercial bank seem reasonable as the bank has to overhaul the expenses and making payment in the form of capital and interest to the depositors. For that, the bank calculates the cost of fund and likely return, if the spread is enough irrespective of the risk involved and absorbs its liquidity obligation; it will go ahead for investment. A good bank is one who invests maximum funds in different earning assets stoning safely from day to day requirement of the depositors.

**c) Liquidity:** The word liquidity means the position of the firm to meet current or short-term obligations. General people deposit money at the bank in different accounts with the confidence that the bank will repay their money or amount when they need. To maintain the confidence and show a good of current position of customers, the bank must keep this point in mind while investing its excess fund in different securities or at that time of lending so that it can meet current or short-term obligations when they become due for payment.

**d) Purpose of loan:** Why is a customer-requiring loan? This is very important question to the banks and financial institutions. So, they must examine it. If the customers do not use their borrowings & property, they can never repay and the banks will posses heavy bad debts. That is why the detailed information about the scheme of project or activities should be examined before lending.

**e) Legality:** Illegal securities will bring many problems for the investor. So, every commercial bank must follow the rules and regulations as well as different kinds of directions issued by Nepal Rastra Bank (NRB), Ministry of financial and others while mobilizing its funds. Due to illegal securities, the reputation and goodwill of the bank may be lost.

**f) Diversification:** "Don't put the eggs on the same basket" the saying is very an important to the bank. A bank should not lay all its eggs in the same basket it means, it should be always careful not to granting loan in only one sector. To minimize the risk, a bank must diversify its investment on different sectors.

**g) Tangibility:** Though it may be considered that tangible property doesn't veil on income apart from direct satisfaction of possessions of property, many times, intangible securities have lost their value due to price level inflation. A commercial bank should prefer tangible security to intangible one.

### 2.2.2 Some Important Terms

**Deposit:** The word deposit means the amount in a current, saving or fixed account of a bank or financial institution, which are collected by the customers. The efficiency of the banks depends on its ability to attract deposits. Deposits are collected from the depositors or customers of general public. Therefore, the main source of funds that a bank usually uses for the generation of profit is deposit.

**Loan and advances:** A bank is always willing to lend as much as possible since they constitute the large part of the revenue. But the banks have to be careful while providing loans and advances since they may turn into bad debts. The commercial bank hardly lends money for a long period of time that can be collected at a short period of time. Banks provide the loan in the various forms, overdraft, cash credit, direct loans and discounting bills of exchange. This is the primary source of income and most profitable asset to a bank.

**Assets:** Assets are the important properties of the firm and represent economic resources. All the assets should be measured in monetary terms, which help to earn future benefits for organization such as: debtors, marketable securities, bills receivable, good will, patents etc. in the firms. There may be tangible and intangible assets as well as fixed and current assets to run the activities properly and smoothly.

**Liabilities:** Liabilities are the amount of debt payable in future by the firms or the banks to their creditors. Liabilities represent the obligations to make payments through cash or bank or provide goods and services in future; e.g. creditors, bills payable, loan outstanding expenses.

**Balance Sheet:** Balance sheet is a financial statement which is prepared at the end of each accounting year which contains assets, liabilities, share capital. Generally it shows the actual financial position of the firm or organization. In other words we can say that it shows especially 3 things;

- a) Nature and value of assets
- b) Nature and value of liabilities and
- c) The position of capital.

**Investment on government securities share and debentures:** This is the secondary source of income to the bank. The commercial banks make investment on government securities shares and debentures and earn some interest and dividend.

**Investment on the other company's share and debentures:** The commercial bank invests their excess fund to the shares and debenture of the other companies. This situation comes when there is excess of funds than required and there is no any alternative opportunity to invest in the profitable sectors.

**Off-Balance sheet transaction:** Off - balance -sheet transaction covers the contingent liabilities, these activities are not recognized as assets and liabilities in balance sheet. They are letter of credit (LC), bills purchase, guarantee, commission, bills for collection etc. These activities are very important, as they are good sources of profit to the bank though they have risk.

**Other uses of funds:** Commercial banks should maintain the bank balance with Nepal Rastra Bank (NRB) as prescribed by the bank in Nepal. Similarly, they have to maintain the each balance in local currency y in the vault of the banks.

### 2.2.3 Review of Articles/Journals

Under this subheading, the effort has been made to review of the related articles and journal which are published in different economic journal, bulletin of the World Bank, magazines, newspapers, dissertation papers as well as other related books.

**Chopra**, had conducted that the joint venture banks playing an increasingly dynamic and vital role in the economic development of the country that will undoubtedly increase with time. (1989 -42)

**Bajaracharya**, concludes that the mobilization of domestic saving is one of the prime objectives of the monetary policy in Nepal. These purpose commercial banks are the active financial intermediary for generating resources in the form of deposit of the private sector and providing credit to the investors in different sectors of the economy. (1990 -93-97)

**Pyakurayal**, concludes that the present changing context of the economy calls for a substantial revitalization of the resources. How much they have gained over the years depends chiefly on how far they have been able to utilize their resources in an efficient manner. Therefore, the task utilization of resources is as much crucial as the mobilization. The under utilization of resources not only result in loss of income but also goes further to discourage the collection of deposits. (1987 -47)

**Shrestha**, He has given emphasis in the following issues, in case of investors having lower income, portfolio management may be limited to small saving incomes. But on the other hand, portfolio management means to invest funds in various schemes of mutual funds like deposits, shares and debenture for the investors with surplus income. Therefore, portfolio management becomes very important both for an individuals as well as institutional investors. (1995; -13)

**Pradhan**, has conducted as, the survey mainly death with financial functions, sum and types of financing, financing decisions involving debt, effect of change in takes on capital structure financial distress, dealing with banks and divided policy. (1994; -24)

The major finding of the study connected with financial management is given as follows:

- The enterprises have a definite performance for bank loans at a lower level of debt.
- Banks and retained earning are the two most widely used financing sources.
- Most of enterprises find that banks are flexible in interest rates and convenience.
- Most of enterprises do not borrow from one bank only and they do switch between banks which ever offer best interest rates.
- In general, there is no definite time to borrow the issues stocks that is majorities of respondents are unable to predict when interest rate will lower or go up or unable to predict when the stock will down or up.

**Shrestha**, has explained on her research, have made remarkable efforts to examine the investment planning of commercial bank in Nepal. On the basis of the study she concluded that the bank portfolio (land and investment) of commercial banks have been influenced by the variable securities rates. Investment planning of commercial banks in Nepal is directly traced to fiscal policy of government and heavy regulatory procedure of the central bank (NRB). Therefore the investments are not made in professional manners. Investment planning and operation of commercial banks in Nepal has not been found satisfactory in term of profitability. To overcome this problem she has suggested, "Commercial banks should take their investment function with proper business attitude and should perform lending and investment operation efficiently with the proper analyze of the project." (1993; -16)

#### 2.2.4 Review of Thesis

During the study, the previous students have carried out several thesis works. Among them some of thesis is found to be relevant for this study which is presented as below:

**Khadka, (1999)** has conducted a thesis work:-

**The main objectives of the thesis were as follows:**

- a) To evaluate the liquidity and profitability position in related fund mobilization of Nabil in comparison to other JVBs.
- b) To evaluate the growth ratios of loan and advances and total investment with respective growth rate of total deposits and net profit of Nabil in comparison to other JVBs.
- c) To discuss fund mobilization and investment policy of Nabil in respect to its fee based off-balance sheet transaction and fund based on-balance sheet transactions in comparison to other JVBs.
- d) To find out the relationship between deposit and total investment, deposit and loan advances and net profit and outside assets of Nabil in comparison to other JVBs
- e) To evaluate the trends of deposit utilization and its projection for next five years incase of Nabil in comparison to other JVBs.

**The major or findings of the thesis were as follows:**

- a) The liquidity position of Nabil is comparatively worse than other JVBs; Nabil has utilized more portions of current assets as loan and advances and less portion as investment on government securities.
- b) Nabil is comparatively less successful in on-balance sheet utilization as well as off-balance sheet operation than that of JVBs, which predicted that Nabil could not mobilize as efficiently as other JVBs.
- c) The profitability position of Nabil is comparatively better than other JVBs.
- d) There is significant relationship between deposit and loan and advances as well as outside assets and net profit whereas there is no significant relationship between deposit and total investment increase of Nabil and other JVBs too.
- e) The trend values of loan and advances to total deposit of Nabil and other JVBs are in increasing trend whereas, the trend value of total investment to total deposit of both Nabil and other JVBs are in increasing trend.
- f) There is no significant different between mean ratio of loan and advances to total deposit, total investment to total deposit, government securities to current assets, loan and

advances to current assets, return on loan and - advances, total interest earned to total outside assets of Nabil and other JVBs whereas, there is significant difference between total OBS operation to loan and advances of Nabil and other JVBs.

**Shahi** (1999) has conducted a thesis work:-

A research study conducted by Prem Bahadur Shahi on the following main objectives:

- a) To evaluate the liquidity, asset management efficiency and profitability and risk position.' of NBL in comparison to the JVBs s
- b) To discuss fund mobilization and investment policy of NBL in respect to its off-balance sheet transaction and fund based on-balance sheet transaction in comparison to the JVBs.
- c) To find out the empirical relationship between various important variables. i.e. deposits loan and advances, investment, net profit etc. and compare them with the JVBs.
- d) To analyze the deposit utilization trend and its projection for the next five years of NBL and compare it with that of the JVBs
- e) To conduct hypothetical test to find whether there is significant difference between the various important ratios of NBL and the JVBs.
- f) To provide a package of workable suggestions and possible Guidelines to improve investment policy of NBL and the JVBs based on the findings of the analysis, for the improvement of financial performance of NBL in future.

**His major findings of the thesis study were as follows:**

- a) The liquidity position of NBL is comparatively better than that of JVBs highly fluctuating liquidity position shows that the bank has not formulated any stable policy,
- b) It can also be conducted that NBL has more positions of current asset has more positions of current asset as loan and advance but less as investment on govt. securities.
- c) NBL is comparatively less successful in on.-balance sheet as well as off-balance sheet operation than that of the JVBs. It has not followed policy with regard to the management its assets.
- d) Profitability position of NBL is comparatively not better than that of the JVBs. It indicates that NBL must maintain its high profit margin in future.
- e) There is comparatively higher risk in NBL than that of the JVB's regarding various aspects of the banking function.
- f) Growth ratio of deposit, loan and advances of NBL is lower than that of JVBs.

- g) There is significant relationship in mean ratios of loan and advances to total deposit, mean ratios of total investment to total deposit mean ratios of total interest earned to total outside assets of NBL and the JVBS
- h) There is significant difference in mean ratios at total CBS operation to loan and advances, mean ratios of return on loan & advance of NBL and the JVB's.

**Thapa, (2001)** has conducted a thesis work:-

**The major objectives of the thesis study were as follows:**

- a) To evaluate the liquidity, Assets management efficiency, profitability and risk position of NB Bank in comparison to Nabil and NGBL.
- b) To analyze the relationship between loan and advances and total investment with other financial variables of NB Bank and compare with Nabil and NGBL
- c) To examine the, fund mobilization and investment policy on NB Bank through off-balance sheet and on-balance sheet activities in comparison to the other two banks.
- d) To study the various risks in investment of NB Bank in comparison to Nabil and NGBL.
- e) To analyze the deposit utilization trend and its projection for ext five years of NB Bank and compare it with Nabil and NGBL.
- f) To provide suggestions for improving the investment policy of NB Bank.

**The major findings of the thesis study were given below:**

- a) NB Bank has good deposit collections, it has better liquidity position, it has made enough loan and advances but it has made the negligible amount of investment in government securities.
- b) The profitability position of NB bank is comparatively worse than that of NABIL and NGBL.
- c) The credit risk ratio, interest risk ratio and capital risk ratio are worse than NABIL and NGBL.
- d) The growth ratio of total deposit, loan and advances and net profit of NB bank is higher than NABIL and NGBL while growth ratio of total investment of NB bank is comparatively worse than NABIL and NGBL.
- e) There is significant relationship between deposit and loan and advance, outside assets and net profit on NB bank but there is no significant relationship between deposit and investment of NB Bank.

- f) The position of NB banking regard to utilization of fund to earn profit is not better in comparison to NABIL and NGBL.
- g) There is significant difference in mean ratios of loan and advances to total deposit ratio, mean ratio of total off-balance sheet operation to loan and advances, mean ratio of return on loan and advances and mean ratio of total interest earned to total outside of NB Bank.

**Dhungana**, (2002) has conducted a thesis work:-

**The basic objectives of this thesis study were highlighted as follows:**

- a) To study the fund mobilization and investment policy with respect to fee based off-balance sheet transaction and fund based on balance sheet transaction.
- b) To evaluate the liquidity, efficiency of assets management of profitability position.
- c) To evaluate the trends of deposit utilization towards total investment and loan and advance and its projection for next five years.
- d) To evaluate the growth ratios of loan and advances and total investment with respective growth rate of total deposit and net profit.
- e) To study the various risks in Investment.
- f) To provide suggestions -and recommendation on the basis of study.

**The major findings of this thesis study are summarized below:**

- a) The liquidity ratio of NABBL is lower than HBL and NSBI. It means the NBBL has maintained lower liquidity and higher risk in compare to other banks. The ratio of NBBL is highly variable than BBL and SBI. It indicates the unstable liquidity policy.
- b) The mean ratio of loan and advance to total deposit of NBBL is higher than HBL and NSBI. But the ratios are less consistent than HBL and more consistent than NSBI.
- c) The mean ratio of total investment to deposit of NBBL is less than FIBL and NSBI, which indicates lower investment in comparison.
- d) The mean ratio of return on total assets of NBBL is higher than HBL and NSBI. It states that the position of NBBL is better in this regard. The ratio of NBBL is more stable and consistent than others.
- e) The Interest rate risk ratio of NBBL is higher than ML but lower than NSBI. It indicates the interest structure of NBBL is less variable than HBL but highly variable than NSBL
- f) The growth ratio of NBBL's deposit and loan and advances are higher than that of HBL and NSBI.
- g) The deposits and loan and advances of all three banks, have the increasing trend.

- h) There is significant difference in the mean ratios of loan and advances to the total deposit, mean ratios of total OBS operation to loan and advances, mean ratios of return on loan and advances of NBBL, FIBL and NSBI.
- i) There is significant relationship between the mean ratios of total interest earned to total outside assets of NBBL, HBL and NSBI.

**Joshi, (2003)** had conducted a thesis work:-

**The main objectives of the thesis were as follows:**

- a) To compare investment policy of concern banks and discusses the find mobilization of the sample bank.
- b) To find out empirical relationship between total investment, deposit and loan and advances, the net profit and outside assets and compare them.
- c) To analyze the deposit utilization and its projection for next five years of SCBNL and EBL.
- d) To evaluate comparatively the profitability and risk position, liquidity asset management efficiency of SCBNL and EBL.
- e) To provide a package of possible guidelines to improve investment policy, its problems and way to solve some problems and provide suggestions and recommendation on the basis of the study.

**Major or findings of the thesis study were given as below:**

- a) EBL has the highest cash and bank balance to total deposit, cash and bank to current ratio, this make the bank to be in good position to meet the daily cash requirement. EBL has fluctuating liquidity ratios; it shows that the bank has not properly formulated any stable policy. EBL has greater current ratio than SCBNL it means EBL is greater success to meet its current obligation.
- b) SCBNL has been successfully maintained and managed its assets towards different income generation activities. SCBNL has made high portion of total working fund in investment on government on share and debentures of other comparatively.
- c) The profitability ratio of SCBNL is comparatively better than EBL. It indicates that SCBNL has maintained its high profit margin regarding profitability lower than EBL does not have a better position in comparison.

- d) The risk of SCBNL is comparatively lower than EBL regarding various aspects of banking function.
- e) The growth ratio of deposit, loan and advances and total investment is comparatively lower than EBL.
- f) Coefficient of correlation between deposit and loan and advances of the both banks has significantly positive value.

**Pandit, (2008)** has conducted a thesis works:-

**The Basis objectives of this thesis study were highlighted as follows:**

- a) To study the fund mobilization and investment policy with respect to off-balance sheet transaction and on-balance sheet transaction.
- b) To evaluate the liquidity efficiency of assets managed and profitability position.
- c) To evaluate the growth ratios of loan and advances and total investment with respective growth rate of total deposit and net profit.
- d) To evaluate the trends of deposit utilization towards total investment and loan and advances and its projection for next five years.
- e) To review the policy and procedure of collection.
- f) To provide suggestion and recommendation on the basis of the study.

**The major findings of the thesis were as follows:**

- a) The analysis of liquidity ratio from SCBNL has maintained successful liquidity than Nabil and NB. Consequently the consistency is also sound than the other two banks.
- b) From the analysis of asset management ratio of all three commercial banks, SCBNIL had maintained comparatively average successful in its on-balance sheet operation. But in case off balance sheet operation, SCBNL is advanced than Nabil and NB.
- c) From the findings of profitability ratio, the profitability position of SCBNL is higher than Nabil and NB.
- d) The growth of total deposits of SCBNL is found very lower than NTB Bank and slightly higher than Nabil Bank.
- e) The growth ratio of loan and advances of SCBNL is found slightly lower than Nabil and lower than NB Bank.
- f) Coefficient correlation between deposits, loan and advances and total Investment of SCBNL, Nabil and NB Bank are positive.

- g) In the case of Loan and advances to total deposits ratios, decreasing trends are found but in the case of total investments to total deposit ratios, all three banks have increasing trend.

**Dhital, (2004)** has conducted a thesis work:-

**. The basic objectives of the thesis study were as follows:**

- a) To find out relationship between total investment, deposit, loan and advances, net profit and outside asset and compare them.
- b) To compare investment policy of concerned banks and discusses the fund mobilization of sample bank.
- c) To evaluate the liquidity, asset management efficiency, profitability and risk portion of SCBNL and BOK.
- d) To analyze the deposit utilization trend and its projection for five years of SCBNL and BOK.
- e) To provide package of a workable suggestion and possible guidelines to improve investment policy, its problem and provide suggestion and recommendation on the basis of the study.

**The major findings of the thesis were as follows:**

- a) From the analysis of liquidity ratio, the mean ratios of cash and banks balance of total deposit ratio, mean ratio of cash and bank balance to current asset means ratio of loan and advances to current asset of SCBNL are lower than that of BOK. But ratio of investment on government securities to current asset of SCBNL is higher than BOK.
- b) From the analysis of asset management ratio, the mean ratio of loan and advances to total deposit, loan and advances to working fund ratio of SCBNL are lower than BOK. But the mean ratio of total investment to total deposit and investment on Government securities to total working fund of SCBNL are higher than that of BOK.
- c) From the analysis of profitability ratio, the mean ratios of return on loan and advances, ratio of return on total working fund ratio of total interest earned to total outside asset of SCBNL are higher than BOK. But the mean ratio of total interest earned to total working fund ratio of total interest paid to total working of und of SCBNL are lower than BOK.
- d) The liquidity risk ratio and credit risk ratio of SCBNL are lower than BOK.

- e) The mean growth rate of total deposit and growth rate of loan and advances of SCBNL are less than BOK. But the average growth of total investment and growth rate of net profit of SCBNL is rate 0 higher than BOK.
- f) The trend values of total deposit, loan and advances, total investment, net profit of both banks is in increasing trend.
- g) There is significant difference between mean ratio of loan and advances to total deposit of SCBNL and BOK. But significant relationship is between mean ratio of total investment to total deposit of SCBNL and BOK.

**Conclusion:-**

Previous researchers have done their thesis in this topic of different commercial banks and joint venture banks. But they have not taken some of these banks (i.e. Standard Chartered and NABIL Bank) for comparative study under the topic of 'Investment Policy' in their thesis. Therefore, I have taken these commercial banks (i.e. SCBNL and NABIL Bank) in my thesis work to analyze the investment policy which are well established joint venture banks of Nepal. During the recent year they are earning profit rapidly.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

Research Methodology is a way to solve systematically about the research problems, which includes many techniques and tools, if it necessary in every steps of this study.

#### **3.1 Research Design**

Research design is an essential part for each research work. It is the plan, structure and strategy investigations conceived so as to obtain answer to research questions and to control variances. This study depends on the secondary data. It includes all the process of collecting verifying and evaluating of past evidence systematically and objectively to reach final conclusion. Some statistical and accounting tools have been adopted to analyze factors in this research study and descriptive and analytical research design also has been used.

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

There are different commercial banks, which are functioning all over the nation. Most of their stocks are traded actively in the stock market. In this study investment policy of Standard Chartered Bank Nepal Ltd is compared with another commercial bank i.e. Nabil Bank Ltd. which is selected from population? The selected commercial banks are selected on the basis of their assets, share pricing and the time when it was established.

**Samples are taken from the total population, which are as follows:**

1. Nepal Bank Ltd (NBL)
2. Rastriya Banijaya Bank Ltd. (RBB)
3. Nabil Bank Ltd (NABIL)
4. Standard Chartered Bank Nepal Ltd. (SCBNL)
5. Nepal Investment Bank Ltd. (NIBL)
6. Himalayan Bank Ltd. (HBL)
7. Nepal State Bank India Bank Ltd. (NSBIBL)
8. Nepal Bangladesh Bank Ltd. (NBBL)
9. Bank of Kathmandu Ltd. (BOKL)
10. Everest Bank Ltd. (EBL)
11. Nepal Credit and Commerce Bank Ltd. (NCCBL)
12. Nepal Industrial and Commerce Bank Ltd. (NICBL)
13. Machhapuchhre Bank Ltd. (MBL)

14. Kumari Bank Ltd. (KBL)
15. Lumbini Bank Ltd. (LBL)
16. Laxmi Bank Ltd. (LBL)
17. Siddhartha Bank Ltd. (SBL)
18. Global Bank Ltd.
19. Citizen Bank Ltd.
20. Bank of Asia Ltd.
21. Prime Bank Ltd.
22. Sunrise Bank Ltd

From these populations, Standard Chartered Bank Nepal Ltd has been selected and its data related investment policy is comparatively studied with NABIL Bank Ltd.

### **3.3 Data Analysis Tools**

There should be used various financial, statistical and accounting tools to achieve the objectives of the study. The analysis of data will be done according to pattern of data available due to limited time and resources. Simple analytical statistical tools such as graph, percentage, Karl Pearson's coefficient of correlation and the method of least square are adopted in this study. Some strong accounting tools such as ratio analysis and trend analysis have also been used for financial analysis.

The various result obtained with the help of financial, accounting and statistical tools, which are tabulated under different heading. Then they are compared with each other to interpret the results. Generally two kinds of tools have been used to achieve the purpose:

=> Financial Tools

=>Statistical Tools.

#### **3.3.1 Financial Tools**

A financial tool basically helps to examine the financial strength and weakness of the banks. There are various financial tools; some of them are as follows:

##### ***Ratio Analysis***

Ratio analysis is one of the strongest financial tools, has been used in the study. This tool helps to show the mathematical relationship between two accounting items or figure. It is the only tools that can collect the financial performance and status of the firm. There are

various types of ratio to analyze and interpret the financial statement but only main ratios have been taken in this study, they are as follows:

### **A. Liquidity Ratios**

Liquidity ratios help to measure the firm's ability of funds, the solvency of the firm and the firm's ability to pay its obligation when balances are due. Short-term liquidity involves the relationship between current assets and current liabilities. The following ratios are calculated under liquidity ratio.

#### **i) Current Ratio**

Current ratio shows the short-term solvency and the relationship between current assets and current liabilities. Generally current assets include cash and bank balance, loan and advances, money at call of short notice, investment on government securities and other interest, overdraft, bill purchase and discount, receivable and miscellaneous current assets. Similarly current liabilities include deposit and other account, bills payable, short terms loan, tax provision, staff bonus, dividend payable and miscellaneous current liabilities. Current ratio can be computed as:

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

There widely accepted standard of current ratio is 2: 1.

#### **ii) Cash and bank balance to total deposit ratio**

Cash and bank balance to total deposit ratio measures the percentage of the most liquid assets to pay depositors immediately. Cash and bank balances are the most liquid current assets of a firm. This ratio can be computed by dividing the amount of cash and balance by the total deposits. Mathematically it is computed as:

$$\frac{\text{Cash and Bank Balance}}{\text{Total Deposits}}$$

Cash and bank balance includes cash on hands, foreign cash on hand; cheques and other cash items balance with domestic banks and foreign banks. Similarly, total deposit consists of current deposits, fixed deposits, saving deposits, money at calls and short-term notice and other deposits.

### **iii) Cash and Bank Balance to Current Assets Ratio**

This ratio measures the percentage of liquid assets i.e. cash and bank balance among the current assets of firm. This ratio is computed by dividing cash and bank balance by current assets higher ratio shows the bank's ability to meet its demand for cash mathematically it can be computed as:

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

### **iv) Investment on Government Securities to Current Assets Ratio**

This ratio helps to find out the percentage of current assets invested on the government securities, treasury bills and development bonds. This ratio can be computed by dividing investment on government securities by current assets. Mathematically it can be computed as:

$$\frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

### **v) Loan and Advances to Current Assets Ratio**

Loan and advances are the current assets, which is the general income to bank. This ratio shows the percentage of loan and advances in the total assets. It is computed by dividing loan and advances by current assets. Mathematically it can be computed as:

$$\frac{\text{Loan and Advances}}{\text{Current Assets}}$$

Where, the loan and advances include loan and advances, cash credit, loan and foreign bills purchased and discounted.

## **B. Assets Management Ratios (Activity Ratio)**

Assets management activity or turnover ratios are used to measure how effectively the firm in managing its assets. These ratios are designed to answer the questions, such as does the total amount of each type of asset as reported on the balance sheet seem reasonable, too high or too low in view of current and projected operating level? These are used measure the banks ability to utilize their available limited resources. The following ratios are used under this assets management ratio:

### **i) Loan and Advances to Total Deposit Ratio**

This ratio is computed to find out, how successfully the banks are utilizing their total deposit on loan and advances for profit generation purpose. Higher ratio indicates the better

utilization of loan and advances out of total deposit. This ratio can be calculated by dividing loan and advances by total deposits. Mathematically, it can be stated as:

$$\frac{\text{Loan and Advances}}{\text{Total Deposits}}$$

#### **ii) Loan and advances to total working**

Loan and advances are the major component of the total working fund, which indicates the ability of banks and finance companies in terms of high earning profit from loan and advances. This ratio can be calculated by dividing loan and advances by total working fund. Mathematically, it can be stated as:

$$\frac{\text{Loan and Advances}}{\text{Total Working Fund}}$$

Where, total working fund includes all assets of on-balance sheet item, i.e. current assets, net fixed assets, loan for development banks and other miscellaneous assets but excludes off-balance sheet item i.e. Letter of Credit (LC), Letter of Guarantee, etc.

#### **iii) Total Investment to Total Deposit Ratio**

This ratio shows how properly firm's deposits have been invested on government securities and share and debenture of other companies and banks. It can be computed by dividing total investment by total deposit. Mathematically, it can be formulated as:

$$\frac{\text{Total Investment}}{\text{Total Deposit}}$$

Where, the total investment includes investment on government securities, investment on debenture, shares in other investment and other companies.

#### **iv) Investment on Government Securities to Total Working Fund Ratio**

This ratio shows investment on government securities of the banks in the companies of the total working fund. This ratio can be calculated by dividing investment on government securities by total working fund. Mathematically, it can be formulated as,

$$\frac{\text{Investment on Government Securities}}{\text{Total Working Fund}}$$

#### **v) Investment on Shares and Debenture to Total Working Fund Ratio**

This ratio indicates the bank investment in share and debenture of the subsidiary and other companies. This can be computed by dividing investment on shares and debenture by total working fund. Mathematically it is stated as,

$$\frac{\text{Investment on Share and Debenture}}{\text{Total Working, Fund}}$$

Where, the numerator includes investment and debenture, bonds and shares of other companies.

#### **C. Profitability Ratios**

Profitability ratios are used to measure the overall efficiency of the banks in terms of profit and financial position and Performance of any institutions. For the better financial performance, generally profitability ratios of the firms should be higher. The following ratios can be takes under this heading.

##### **i) Return on Loan and Advances Ratio**

This ratio indicates how efficiently the bank has utilized its resources to earn good return from provided loan and advances. It is calculated by dividing net profit (loss) by total loan and advances. Mathematically, it can be stated as:

$$\frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

##### **ii) Return on Total Working Fund Ratio**

This ratio shows the overall profitability of total working fund. It is also known as return on assets (ROA). Higher ratio indicates the better performance of financial institutions in the form of interest earning on its working fund. This ratio is calculated by dividing net profit (loss) by total working fund. Mathematically it can be stated as:

$$\frac{\text{Net Profit (Loss)}}{\text{Total Working Fund}}$$

### **iii) Total Interest Earned to Total Outside Assets**

This ratio measures the capacity of the firm for earning interest through proper utilization of outside assets. Higher ratios show the efficiency of using outside assets to earn interest. This is calculated by dividing total interest earned by total outside assets. Mathematically, it can be expressed as:

$$\frac{\text{Total Interest Earned}}{\text{Total Outside Assets}}$$

### **iv) Total Interest Earned to Total Working Fund Ratio**

This ratio reflects the extent to which the banks are successful in mobilizing their total assets to acquire income as interest. This ratio mainly reveals the earning capacity of a commercial bank by mobilizing its working fund. Higher the ratio higher will be the income as interest. It can be calculated by dividing total interest earned by total working fund. Mathematically, it can be, calculated as:

$$\frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

### **v) Total Interest Paid to Total Working Fund Ratio**

This ratio indicates the percentage of interest paid on liabilities with respect to total working fund. This ratio is calculated by dividing total interest paid by total working fund. Mathematically it can be expressed as:

$$\frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

Where, total interest paid includes total expenses on deposits liabilities, loan and advances (borrowing), other deposits etc

### **vi) Total Interest Earned to Operating Income Ratio**

This ratio is computed to find out the ratio of interest income to find out the ratio of interest income with operating income of the banks or the financial institutions. Generally it indicates how efficiently is the bank in the mobilization of its resources is bearing assets i.e. loan and investment, investment etc. it is calculated by dividing the total interest earned by total operating income. Mathematically, it can be stated as:

$$\frac{\text{Total Interest Earned}}{\text{Total Operating Income}}$$

## **D. Risk Ratios**

Risk is uncertainty, which lies in the bank transaction of investment management. It increases effectiveness and profitability of the banks. This ratio indicates the amount of risk associated with the various harming operations, which ultimately influence the banks investment policy. Generally the following two ratios are used in this risk ratio:

### **i) Liquidity Risk Ratio**

This ratio measures the level of risk associated with the liquid assets (i.e. cash, bank balance) that are kept in the bank for the purpose of satisfying the deposits demand for cash. Higher ratio indicates lower liquidity risk. This ratio is computed by dividing total cash and bank balance by total deposits. Mathematically, it can be expressed as:

$$\frac{\text{Total Cash and Bank Balance}}{\text{Total Deposits}}$$

### **ii) Credit Risk Ratio**

This ratio helps to measure the probability of loan non-repayment or the possibility of loan to go into default. According to definition, credit risk ratio is also expressed as the percentage of non-performing loan to total loan and advances. This ratio is computed by dividing total loan and advances by total assets. Mathematically, it can be stated as:

$$\frac{\text{Total Loan and Advances}}{\text{Total Loan}}$$

## **3.3.2 Statistical Tools**

Some important statistical tools are used to analyze the data to achieve the objective of this study. The basis statistical tools related to this study are discussed below:

### **(A) Coefficient of correlation analysis**

This statistical tool has been used to analyze and interpret the relationship between two or more variables. "Correlation is the statistical tool that we use to describe the degree to which one variable is linearly related to another" Levin and Rubin "Static for Management" 1994 p-505 among the various method of finding at coefficient of correlation, Karl Pearson's method is applied in the study. This study tries to find out relationship between the following variables.

- i) Coefficient of correlation between deposit and loan and advances

- ii) Coefficient of correlation between total deposit and total investment.
- iii) Coefficient of correlation between total outside assets and net profit
- iv) Coefficient of correlation between deposit and net profit.
- v) Coefficient of correlation between deposit and interest earned.
- vi) Coefficient of correlation between loan and advances and interest paid.
- vii) Coefficient of correlation between total working fund and net profit.

**The Karl Pearson's formula is,**

$$r = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2} \sqrt{\sum (Y - \bar{Y})^2}} = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

Where r = Karl Pearson's coefficient of correlation.

$$\bar{X} = \frac{\sum X}{N} \text{ (Median of X Variable)}$$

$$\bar{Y} = \frac{\sum Y}{N} \text{ (Median of Y Variable)}$$

$$X = X - \bar{X}$$

$$Y = Y - \bar{Y}$$

The result of coefficient of correlation is always between +1 or -1 when r = +1, it means there is significant relationship between two variables and when r = -1, it means there is no significant relationship between two variables.

### **(B) Trend Analysis**

These analyses interpret or analyze the trend of deposits, loan and advances, investment and net profit of Standard Chartered Bank Ltd, Nabil Bank Ltd from 2001/02 to 2005/06. And it helps to make forecasting for next five years up to 2010/11.

The following trend analysis has been used in this study. They are as follows:

- (i) Trend analysis of total deposits
- (ii) Trend analysis of loan and advances
- (iii) Trend analysis of total investment
- (iv) Trend analysis of net profit

The trends of related various variables could be calculated. as,

$$Y_c = a + bx$$

Where,  $Y_c$  = Dependent Variable

$x$  = Independent Variable

$a$  = y Intercept Variable

$b$  = Slope of the Trend Line.

### **(C) Test of Hypothesis**

The objective of this test is to test the significant difference regarding the parameters of the populations on the basis of samples drawn from the population. This test has been conducted on the various relations related with the banking business. The following steps have been followed for the test of hypothesis:

- => Formulating Hypothesis  
(Null hypothesis and Alternative hypothesis)
- => Computing the test static
- => Fixing the level of significance
- => Making decision

### **The following test of significance can be shown in this study:**

- i) There is significant difference on loan and advances to total deposit ratios between SCBNL and NABIL.
- ii) There is significant difference on total investment to total deposits ratios between SCBNL and NABIL.
- iii) There is significant difference between investment on government securities to current assets ratios between SCBNL and NABIL.
- iv) There is significant difference on loan and advances to current assets ratios between SCBNL and NABIL.
- v) There is significant difference on return on loan and advance ratios between SCBNL and NABIL.
- vi) There is significant difference on total interest earned to total outside assets ratios between SCBNL and NABIL.

Test of significance for difference between two independent means can be calculated as follows

$$r = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{S^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}}$$

$$\text{Where } S^2 = \frac{1}{n_1 + n_2 - 2} \left[ \sum (x_1 - \overline{X}_1)^2 + \sum (X_2 - \overline{X}_2)^2 \right]$$

**(D) Standard Deviation (S.D.)**

The measurement of the scattered ness of the mass of figure in series about an average is known as dispersion. The standard deviation measures the absolute dispersion. The greater the amount of dispersion will be greater the standard deviation. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series and vice-versa. The standard deviation of different ratios can be calculated as,

Where, x= variable

n = no. of observation

**(E) Coefficient of Variation (C.V.)**

The coefficient of variation (C.V.) is the; relative measure of dispersion. Comparable across distribution, which is defined as the ratio of the standard deviation to the mean expressed in percent. It can be computed as,

$$CV = \frac{SD}{Mean} \times 100\%$$

**CHAPTER-IV**

## **DATA PRESENTATION AND ANALYSIS**

The main purpose of this chapter is to analyze and evaluate the major financial and statistical items which directly related to the investment management and fund mobilization of SCBNL in companion to NABIL. There are many kinds of financial ratios but those ratios are calculated and analyzed which are very important to evaluate the fund mobilization of commercial banks.

### **4.1 Financial Analysis**

Financial analysis is the act of identifying the financial strength and weakness of the organization presenting the relationship between the items of the balance sheet. Under this topic, some financial tools such as liquidity ratio, asset management ratio, profitability ratio, asset management ratio, profitability ratio, risk ratio and growth ratio are used to achieve the objectives of the study. These tools are more important to evaluate fund mobilization of the commercial banks.

#### **4.1.1 Liquidity Ratios**

Commercial bank should maintain its satisfactory liquidity position to satisfy the credit needs of the community, to meet demands for deposits, withdraws, pay maturity obligation on time and concert non-cash to satisfy immediate needs without loss to bank and consequent impact in long run profit. The liquidity position of the commercial banks is comparatively studied through the following ratios:

##### **i. Current Ratio**

Current ratio indicates the ability of the banks to meet to its current obligation. This ratio measures the liquidity position of the financial institutions. It is calculated by dividing current assets by current liabilities. The widely accepted standard of current ratio is 2:1 but accurate standard depends on circumstances in case to banking and seasonal business ratio such as 1:1 etc. The current ratio of SCBNL, NABIL and BBL is given in the following table

**Table No. I  
Current Ratios**

Fiscal year	SCBNL	NABIL
2003/04	1.056	0.764
2004/05	1.069	0.813
2005/06	1.063	0.916
2006/07	1.244	0.278
2007/08	1.148	0.483
Total	<b>5.58</b>	<b>3.254</b>
Mean	<b>1.116</b>	<b>0.6508</b>
S.D.	<b>0.075</b>	<b>0.2430</b>
C.V.	<b>6.722</b>	<b>37.33</b>

Source: Annual Report of SCBNL and NABIL

In the above table, current ratios of commercial banks are computed as per 'Appendix-A and B. Similarly, mean, standard deviation and Coefficient of variation of current ratios are calculated as per 'Appendix-K.

The current ratio of SCBNL over the study period has range between 1.056 (2003/04) to 1.148 (in 2007/08). Where as ratio of NABIL has range between 0.764 (in 2003/04) to 0.483 (in 2007/08). The above table clearly indicates that the current ratios of the banks are always below the standard i.e. 2:1. But in the case of NABIL in '2003/04 the ratios is 0.764. It is mainly due to decrease money at call and short notice and increase deposits and other A/C.

If the mean ratio is observed it is found that the SCBNL is higher of than NABIL. The S.D. of SCBNL has less than NABIL. Similarly the C.V. is less than NABIL i.e. SCBNL (6.722), NABIL (37.33). It indicates that the current ratio of SCBNL is more consistence than NABIL. And we can say that the SCBNL has sound ability to meet its short term obligation.

#### **ii. Cash and Bank Balance to Total Deposit Ratio**

This ratio measures the availability of banks highly liquid or immediate funds to meet its unanticipated calls on all types of deposits, money at calls and short term notice and other deposits. It can be calculated by dividing the amount of cash and balance by the total deposits.

Higher ratio indicates the greater ability to meet their deposits and vice-versa. Following table shows the cash and banks balance to total deposit ratios of SCBNL and NABIL:

**Table No. 2**  
**Cash and Bank Balance to Total Deposit Ratios**

Fiscal year	SCBNL	NABIL
2003/04	6.228	5.132
2004/05	5.211	6.783
2005/06	8.063	8.513
2006/07	4.948	5.993
2007/08	9.085	8.369
Total	<b>33.535</b>	<b>34.79</b>
Mean	<b>6.707</b>	<b>6.958</b>
S.D.	<b>1.8066</b>	<b>1.4752</b>
C.V	<b>26.9360</b>	<b>21.2018</b>

Source: Annual Report of SCBNL and NABIL

The above table shows the mean, standard deviation and coefficient of variance of cash and bank balance to total deposit ratio. In the table mentioned ratio are calculated as per "Appendix-A, B" And mean S.D. and C.V. are calculated as per "Appendix-K".

Above figure in the table, indicates the percentage of cash and bank balance to total deposits position of SCBNL and NABIL. It also shows that the ratio (CRR) of SCBNL trend is decreasing scale for the period 2003/04 to 2007/08. It has range form 6.228 (in 2003/04) to 9.085 (in 2007/08) NABIL has fluctuating trend. It has increasing trend in 2003/04, decreasing trend in -2007/08, then increasing trend from 2004/05 to 2005/06.

The mean of ratios of SCBNL is less than that of NABIL. The standard deviation of SCBNL and NABIL are 1.8066, 1.4572 respectively. Similarly, CV of SCBNL, NABIL are 26.93 and 21.201 respectively. From the above analysis, it can be concluded that SCBNL has better maintenance of its liquidity than NABIL.

### iii. Cash and Bank Balance to Current Assets Ratio.

This ratio reflects the portion of cash and bank balance in total current assets. Cash and bank balance are highly liquid assets than other in current assets portion. So this ratio visualizes higher liquidity position than current ratio. It is computed by dividing cash and bank balance by current assets. Higher ratio shows the bank's ability to meet its demand for cash.

**Table No. 3**  
**Cash and Bank Balance to Current Assets Ratios**

Fiscal Year	SCBNL	NABIL
2003/04	4.999	6.176
2004/05	4.502	7.9
2005/06	7.272	8.255
2006/07	9.266	5.181
2007/08	5.003	5.227
Total	<b>31.042</b>	<b>32.739</b>
Mean	<b>6.2084</b>	<b>6.5478</b>
S.D.	<b>2.0191</b>	<b>1.4572</b>
C.V	<b>32.5226</b>	<b>22.2550</b>

Source: Annual Report of SCBNL and NABIL

The above table shows mean, S.D. and C.V cash and bank balance to current assets ratio. In the table mentioned ratios are calculated as 'Appendix-A, B' and mean, S.D. and C.V are calculated as per "Appendix-K'.

The figure of the table shows the ratios in percentage of cash and bank balance to current assets position of SCBNL and NABIL. It shows that cash and bank balance to current assets ratios of SCBN and NABIL has fluctuating trend.

The mean values of ratios of SCBNL and NABIL are 6.2084 and 6.5478 respectively. Standard deviation of SCBNL is less than that of other NABIL. And C.V. of SCNBL and NABIL are 32.522 and 22.255 respectively.

NABIL has comparatively C.V. lower than SCBNL. It shows that NABIL is stable and consistent than SCBNL.

From the analysis of the above table we can say that the cash and bank balance to current assets ratio of NABIL is better during the study period as the bank shows the ability to manage the deposit withdrawal for the customers although it has fluctuating trend. The better position of the bank does not mean that the bank has mobilized its fund in the profitable sectors.

#### **iv. Investment on Government Securities to Current Assets Ratio**

This ratio examines that the position of commercial banks current assets, which is invested on different government securities, treasury bills and development bonds. This ratio can be calculated by dividing investment on government securities by current assets.

**Table No. 4**  
**Investment on Government Securities to Current Assets Ratio**

Fiscal Year	SCBNL	NABIL
2003/04	25.026	20.765
2004/05	31.557	30.948
2005/06	32.325	25.877
2006/07	23.732	30.637
2007/08	29.773	19.452
Total	<b>110.088</b>	<b>127.677</b>
Mean	<b>28.4826</b>	<b>25.5354</b>
S.D.	<b>3.7391</b>	<b>5.3672</b>
CV.	<b>13.5858</b>	<b>21.0187</b>

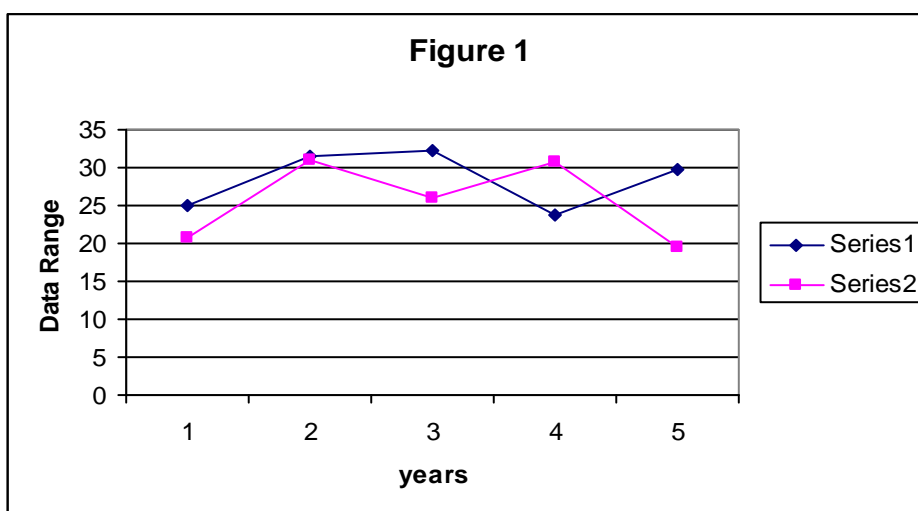
Source: Annual Report of SCBNL and NABIL

The above table shows the mean, S.D. and C.V. of investment on government securities to current assets ratios. In the table, mentioned ratios are calculated as per 'Appendix-A, B,' and mean, S.D. and C.V are calculated as per 'Appendix-K'.

Investment on government securities to current assets ratios of SCBNL and NABIL are fluctuating trend. SCBNL has range from 29.773 (in 2007/08) to 25.026 (in 2003/04). Similarly NABIL has range form 19.452 (in 2007/08) to 20.765 (in 2003/04).

Mean values of these ratios of SCBNL and NABIL are 28.4826 and 25.535 respectively. Similarly C.V. of the banks is 13.585 and 21.0187 respectively. This analysis reflects that SCBNL used to invest in government securities more than NABIL and the investment is also quite stable than that of NABIL.

### Investment on Government Securities to Current Assets Ratio of SCBNL and NABIL



### v. Loan and Advances to Current Assets Ratio

Loan and advances are the current assets of commercial banks, which includes loan and advances, cash, credit, loan and foreign bills purchased, overdraft and discount. A commercial bank should not keep its all connected funds as cash and bank balance but they should be invested as loan and advances to the customers. Because they should earn high profit by mobilization and investing funds for long life banking, they must pay interest on these deposit funds even they don't generate loan and advances may lose some earning. But high loan and advances may be harmful because they need sufficient liquidity. This ratio can be computed by dividing loan and advanced to current assets.

**Table No. 5**

**Loan and Advances to Current Assets Ratios**

Fiscal Year	SCBNL	NABIL
2003/04	29.979	63.248
2004/05	29.262	55.868
2005/06	27.387	55.926
2006/07	29.754	57.574
2007/08	34.787	41.810
Total	<b>151.169</b>	<b>274.426</b>
Mean	<b>30.2338</b>	<b>54.8852</b>
S.D.	<b>2.7421</b>	<b>7.9085</b>
C.V.	<b>9.0695</b>	<b>14.4091</b>

Source: Annual Report of SCBNL and NABIL

The above table shows the mean, S.D and C.V of loan and advances to current assets ratios. In the table mentioned, ratios are calculated as per 'Appendix-A, B' and mean. S.D and C.V are calculated as per 'Appendix-K'

The above table shows that loan and advances to current assets ratios of SCBNL and NABIL are fluctuating trend. SCBNL has range form 29.979(in 2003/04) to 34.787 (in 2007/08). NABIL has range form 63.248 (in 2003/04) to 41.810 (in 2007/08).

The mean value of ratios of SCBNL is 30.233 which is less than that of NABIL.

This analysis indicates that SCBNL use to provide less loan and advances in comparison of NABIL and its trend of approving loan and advances is also less consistency than that of NABIL.

**Figure 2**  
**Loan and Advances to Current Assets Ratio of SCBNL and NABIL**

#### **4.1.2 Assets Management Ratios**

Assets management or activity ratios are employed to evaluate the efficiency with which the firms' managers utilize their assets. These ratios generally indicate the speed with which assets are converted into cash or turnover. That is why these ratios are used to measure or indicate the bank's ability to utilize their available limited resources. The following ratios are used under the assets management ratios:

##### **i. Loan and Advances to Total Deposit Ratio**

This ratio is used to find out how successfully the banks are utilizing their total deposits on loan and advances for profit generation purposes. The higher the ratio indicates the better utilization of loans and advances out of total deposits. It can be computed by dividing loans and advances by total deposits.

**Table No. 6**  
**Loan and Advances to Total Deposit Ratio**

Fiscal Year	SCBNL	NABIL
2003/04	37.352	52.557
2004/05	33.873	47.967
2005/06	30.369	57.675
2006/07	34.254	66.596
2007/08	35.214	66.943

Total	<b>171.06</b>	<b>291.738</b>
Mean	<b>34.212</b>	<b>58.3476</b>
S.D.	<b>2.5366</b>	<b>8.4211</b>
C.V.	<b>7.4142</b>	<b>14.4326</b>

Source: Annual Report of SCBNL and NABIL

From the above table, given ratios are calculated as per 'Appendix- A, B,' and mean S.D. and C.V. of these ratios are calculated as per 'Appendix-K'.

The above table shows that loan and advances to total deposit ratios of SCBNL are fluctuating trend. It has range form 37.352 (in 2003/04) to 35.214 (in 2007/08). Similarly ratios of NABIL are decreasing, trend up to 2004/05. It has range form 52.557 (in 2003/04) to 66.943 (in 2007/08).

Here the value of mean ratios of SCBNL is the lower than NABIL. NABIL has got success to maintain the highest ratios than SCBNL. Mean value of the ratios of SCBNL and NABIL are 34.212 and 58.347 respectively. But the C.V. of ratios of SCBNL is 7.414 which are comparatively lower than NABIL. It clears that loan and advances to total deposit ratios of the SCBNL is inconsistent in comparison to NABIL.

In conclusion, it is cleared that SCBNL is failure to mobilize their total deposits on loan and advances in comparison to NABIL. NABIL is success to mobilize their total deposits in loan and advances.

### **Loan and Advances to Total Deposit Ratio**

## ii. Loan and Advances to Total Working Fund Ratio

Loan and advances are the main components of the total working fund which reflect the ability of banks and finance companies in terms of high earning profit from loan and advances. Higher ratio indicates better mobilization of fund as loan and advances and vice versa. This ratio can be calculated by dividing loan and advances by total working fund.

**Table No. 7**  
**Loan and Advances to Total working Fund Ratios**

Fiscal Year	SCBNL	NABIL
2003/04	29.773	45.322
2004/05	29.084	42.191
2005/06	27.122	46.828
2006/07	25.124	45.254
2007/08	28.355	47.155
Total	<b>139.458</b>	<b>226.75</b>
Mean	<b>27.8916</b>	<b>45.35</b>
S.D.	<b>1.8322</b>	<b>1.9642</b>
C.V.	<b>6.5691</b>	<b>4.3311</b>

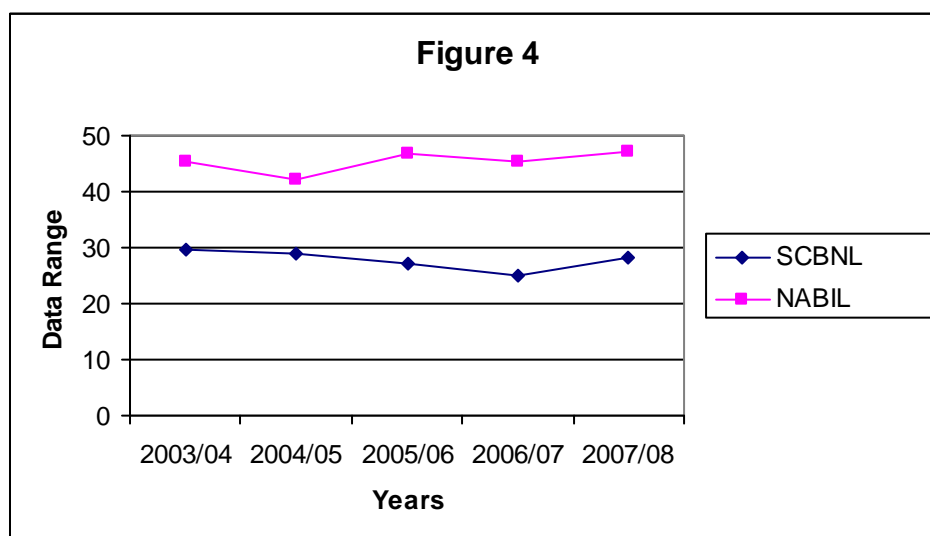
Source: Annual Report of SCBNL and NABIL

From the above table, given ratios are calculated as per 'Appendix A, B'. And Mean S.D. and C.V for these ratios are-calculated as per 'Appendixes – K '.

The above table indicates that loan and advances to total working fund ratios of SCBNL and NABIL are fluctuating trend. SCBNL has range form 29.773 (in 2003/04) to 28.355 (in 2007/08). Mean values of SCBNL and NABIL are 27.891 and 45.35 respectively. Similarly, C.V. of these banks is 6.569, and 4.331 and respectively.

From the above analysis, we can conclude that NABIL is better to mobilize the funds as loan and advances for the purpose of income generation. SCBNL mobilized the fewer funds than NABIL. But it has higher consistency to mobilize the funds.

### Loan and Advances to Total working Fund Ratios



### iii. Total Investment to Total Deposit Ratio

This ratio shows how properly firms deposit has been invested on government securities and shares and debentures of other companies and banks. Generally, it reflects which the banks are successful in mobilizing the total deposit on investment. The higher ratio indicates the higher success to mobilize the banking funds as investment and vice-versa. This ratio can be computed by dividing total investment by total deposit.

**Table No. 8**  
**Total Investment to Total Deposit Ratios**

Fiscal Year	SCBNL	NABIL
2003/04	61.952	17.38
2004/05	58.576	26.728
2005/06	35.224	26.852
2006/07	26.879	38.321
2007/08	26.076	31.142
<b>Total</b>	<b>208.707</b>	<b>140.423</b>
<b>Mean</b>	<b>41.7414</b>	<b>28.0846</b>
<b>S.D.</b>	<b>17.3252</b>	<b>7.6171</b>
<b>C.V.</b>	<b>41.5059</b>	<b>27.1219</b>

Source: Annual Report of SCBNL and NABIL

From the above table, mentioned ratios are calculated as per 'Appendix-A, B' and mean, S.D. and C.V. of these ratios are calculated as per 'Appendix-K'.

The above table shows that total investment to total deposit ratio of SCBNL is increasing from 51.952 (in 2003/04) to 26.076 (in 2007/08) But the ratios of NABIL has fluctuating trend. NABIL has range form 17.38 (in 2003/04) to 31.142 (in 2007/08). Mean values of SCBNL and NABIL are 41.741 and 28.084 respectively. Similarly C.V. of SCBNL and NABIL are 41.505 and 27.121 respectively.

From the above figure, it can be concluded that SCBNL has become success to better utilization of deposit to investment than NABIL. But it has not higher consistency to investment in securities or it has least investment in securities of different institution.

### **Total Investment to Total Deposit Ratios**

#### **iv. Investment on Government Securities to Total Working Fund Ratio**

This ratio used to show investment on government securities of the bank in the comparison of the total working fund. This ratio is so important to know the extent to which the banks are successful in mobilizing their total fund on different sectors of government securities to maximize its income. The higher ratio shows that better mobilization of fund as

investment on government securities and vice-versa. It can be calculated by dividing investment on government securities by total working fund.

**Table No. 9**  
**Investment on Government Securities to Total Working Fund Ratio**

Fiscal Year	SCBNL	NABIL
2003/04	24.854	14.88
2004/05	31.365	23.372
2005/06	32.013	21.668
2006/07	16.765	24.874
2007/08	15.937	18.668
<b>Total</b>	<b>88.921</b>	<b>103.462</b>
<b>Mean</b>	<b>22.23025</b>	<b>20.6924</b>
<b>S.D.</b>	<b>7.2984</b>	<b>3.9843</b>
<b>C.V.</b>	<b>32.8311</b>	<b>19.2551</b>

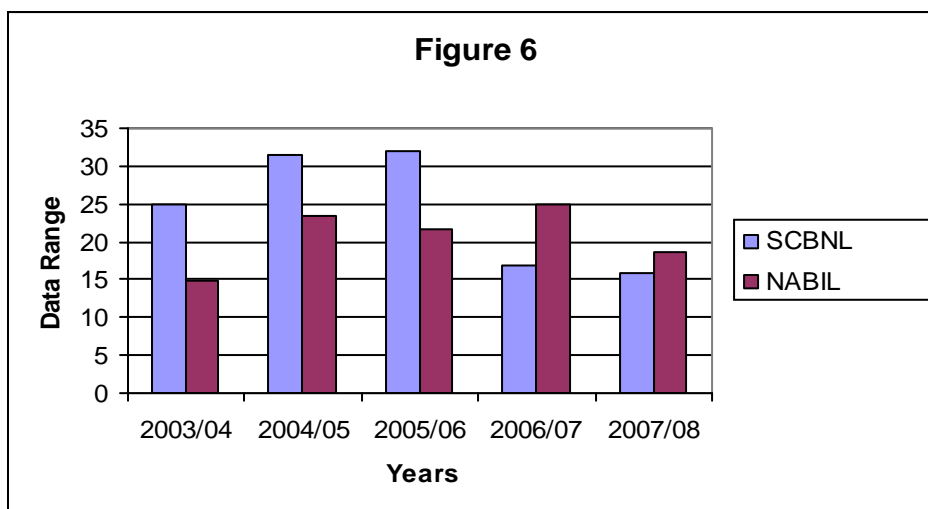
Source: Annual Report of SCBNL and NABIL

From the above table, the mentioned ratios are calculated as per 'Appendix-A, B' and mean, S.D., and C.V. of these ratios are calculated as per 'Appendix-K'.

The above table shows that investment on government securities to total working fund ratios of SCBNL and NABIL banks are fluctuating trend. SCBNL has range from 24.854 (in 2003/04) to 15.937 (in 2007/08). Similarly NABIL has range from 14.88 (in 2003/04) to 18.688 (in 2007/08). Mean values of SCBNL and NABIL are 22.23 and 20.69 respectively. Similarly C.V. of SCBNL and NABIL are 32.831 and 19.255 respectively.

From the above figure, it is cleared that SCBNL has higher mean ratios than NABIL. It shows that SCBNL has succeeded to mobilize the funds as investment on government securities. Its investment policy is also consistent than NABIL.

### Investment on Government Securities to Total Working Fund Ratio Of SCBNL and NABIL



#### v. Investment on Shares and Debentures to Total Working Fund Ratio

Commercial banks are investing into shares and debentures of other companies. Though the investment on government securities is relatively suffer than investment in debentures and shares of other banks, this ratio reflects to what extent the bank has successfully invested its assets on other company's or banks' debentures and shares. It can be computed by dividing investment on shares and debentures by total working fund.

**Table No. 9**

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

Fiscal year	SCBNL	NABIL
2003/04	0.058	0.101
2004/05	0.061	0.126
2005/06	0.053	0.134
2006/07	0.051	0.122
2007/08	0.048	0.133
Total	<b>0.271</b>	<b>0.616</b>
Mean	<b>0.0542</b>	<b>0.1232</b>
S.D.	<b>0.0053</b>	<b>0.0134</b>
C.V.	<b>9.7105</b>	<b>10.8505</b>

Source: Annual Report of SCBNL and NABIL

From the above table, the mentioned ratios are calculated as per 'Appendix-A, B,' And mean, S.D. and C.V. of these ratios are calculated as per 'Appendix-K'.

The above table clears that investment on shares and debentures to total working fund ratios of SCBNL is fluctuating trend. It has range from 0.058 (in 2003/04) to 0.048 (in 2007/08). NABIL has slightly decreasing 'Up to 2003/04 then increasing trend. It has range form .101 (in 2003/04) to 0.133 (in 2007/08). Mean ratio of SCBNL and NABIL are 0.0542 and 0.1232 respectively. Similarly, C.V. of SCBNL and NABIL are 9.710, and 10.850 respectively.

### 4.1.3 Profitability Ratios

Profitability ratios play vital role to measure the overall efficiency of operation of firms or banks. It is actually a true indicator of the financial position and performance of each and every business organizations and institutions. Generally, profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. For the better financial performance, profitability ratios should be higher.

The following ratios can be taken to clear this heading.

#### i. Return on Loan and Advances Ratio

This ratio is used to measure the earning capacity of the commercial banks through its fund mobilization as loan and advances. Higher ratio indicates greater success to mobilize fund as loan and advances and vice versa. This ratio can be calculated by dividing net profit by total loan and advances.

**Table No. 10**  
**Return on Loan and Advances Ratio**

Fiscal year	SCBNL	NABIL
2003/04	7.476	3.535
2004/05	8.934	3.652
2005/06	8.954	5.367
2006/07	8.451	4.329
2007/08	7.537	3.491
<b>Total</b>	<b>41.3521</b>	<b>20.374</b>
<b>Mean</b>	<b>8.27042</b>	<b>4.0748</b>
<b>S.D.</b>	<b>0.7261</b>	<b>0.7977</b>
<b>C.V.</b>	<b>8.7799</b>	<b>19.5767</b>

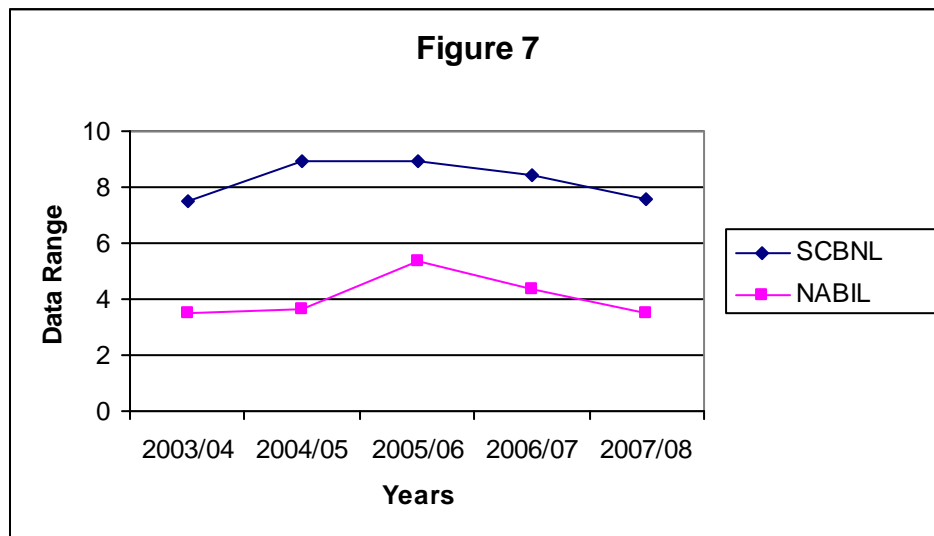
Source: Annual Report of SCBNL and NABIL

From the above table, the ratios are calculated as per 'Appendix A, B'- and mean, S.D. and C.V. are calculated as per 'Appendix-K'.

The above comparative table shows that the ratios of SCBNL and NABIL are seen to be in fluctuating trend. SCBNL has 8.954 highest ratios in 2005/06 and 7.476 lowest ratio in 2003/04. NABIL has 5.367 highest ratios in 2005/06 and 3.49 lowest ratio in 2007/08. Comparing the mean ratio, SCBNL has higher ratio than NABIL and the coefficient of variation of SCBNL is lower than that of NABIL.

Form the above analysis, it can be concluded that SCBNL has higher return on loan and advances in comparison to NABIL. And SCBNL has also higher consistency than that of NABIL. It is also clear that NABIL has to invest its fund in productive sector to increase return ratios.

### Return on Loan and Advances Ratio



### ii. Return on Total Working Fund Ratio

This ratio is used to measure as profitability indicator with respect to each financial resources investment of banks assets. It shows the overall profitability of total working fund. It is also known as Return on Assets (ROA). The higher ratio indicates the better performance of banks.

To make higher ratio, the banks' total working fund should be managed and utilized effectively. This ratio can be calculated by dividing net profit by total working fund.

**Table No. 11**  
**Return on Total Working Fund Ratio**

Fiscal year	SCBNL	NABIL
2003/04	2.226	1.586
2004/05	2.598	1.541
2005/06	2.414	2.513
2006/07	2.224	2.551
2007/08	2.157	2.245
Total	<b>11.619</b>	<b>10.436</b>
Mean	<b>2.3238</b>	<b>2.0872</b>
S.D.	<b>0.1807</b>	<b>0.4927</b>
C.V.	<b>7.7778</b>	<b>23.6038</b>

Source: Annual Report of SCBNL and NABIL

From the above table, the ratio is calculated as per 'Appendix-A, B' and mean S.D. and C.V. are calculated as per 'Appendix-K'.

From the above comparative table, it reflects that the ratios of both banks are seen to be in fluctuating trend. SCBNL has 2.598 highest ratio in 2004/05 and 2.157 lowest ratio in 2007/08 where as NABIL has 2.551 highest ratio in 2006/07 and 1.541 lowest ratio in 2004/05. Mean ratios of SCBNL and NABIL are-2.3238 and 2.087 respectively. And C.V. of these banks are 7.777 & 23.603.

In conclusion, it can be said that SCBNL has higher mean ratio than NABIL. It indicates SCBNL is able to earn high profit on total working fund assets in comparison to NABIL. Coefficient of variation of NABIL is higher than SCBNL and has more consistent than that of SCBNL. Therefore, it is clear that NABIL seems to be weak to earn high return on its working fund. NABIL has to make efforts to earn high profit by mobilizing its working assets more efficiently.

### iii. Total Interest Earned to Total outside Assets Ratio

This ratio is used to measure the capacity of the firm of earning interest through proper utilization of outside assets. Higher the ratio higher will be the earning power of total outside assets and vice-versa. This ratio plays vital role in commercial banks as main assets. It can be calculated by dividing total interest earned by total outside assets.

**Table No. 12**  
**Total Interest Earned to Total Outside Assets Ratio**

Fiscal year	SCBNL	NABIL
2003/04	11.742	11.436
2004/05	9.083	9.673
2005/06	8.056	8.455
2006/07	7.547	7.587
2007/08	7.054	7.254
Total	<b>43.482</b>	<b>44.405</b>
Mean	<b>8.6964</b>	<b>8.881</b>
S.D.	<b>1.8610</b>	<b>1.7072</b>
C.V.	<b>21.4001</b>	<b>19.2232</b>

Source: Annual Report of SCBNL and NABIL

From the above table, the ratios are calculated as per 'Appendix A, B' and mean, S.D and C.V are calculated as per 'Appendix-K'.

This comparative table states that the ratios of SCBNL and NABIL are decreasing trend during the study period. SCBNL has maintained 11.742 highest ratios in 2003/04 and 7.054 lowest ratio in 2007/08. NABIL has 11.436 highest ratios in 2003/04 and 7.254 lowest ratio in 2007/08. Mean ratios of SCBNL and NABIL are 8.696 and 8.881 respectively. C.V. of these banks is 21.400 and 19.223 respectively.

From above comparison table, it can be concluded that the mean ratio of SCBNL is higher NABIL. It means SCBNL has earned higher amount of interest on its outside assets in comparison to NABIL. The coefficient of variation of SCBNL is quite lower than NABIL. It indicates that the ratio of SCBNL is more consistent than NABIL. It can be said that if NABIL bank want to increase its amount of earning, it should increase its fund on total outside assets.

#### iv. Total Interest Earned to Total Working Fund Ratio:

This ratio reflects the extent to which the banks are successful in mobilizing their total assets to acquire income as interest. This ratio reveals the earning capacity of commercial banks by mobilizing its working funds. Higher ratio indicates higher earning power of the bank on its total working fund and vice-versa. It can be calculated by dividing total interest earned by total working fund.

**Table No. 13**  
**Total Interest Earned to Total Working Fund Ratio**

Fiscal year	SCBNL	NABIL
2003/04	6.421	6.897
2004/05	5.496	6.654
2005/06	4.768	6.146
2006/07	3.589	6.254
2007/08	4.968	6.014
Total	<b>25.242</b>	<b>31.965</b>
Mean	<b>5.0484</b>	<b>6.393</b>
S.D.	<b>1.0367</b>	<b>0.3695</b>
C.V.	<b>20.5360</b>	<b>5.7797</b>

Source: Annual Report of SCBNL and NABIL

From the above table, the ratios are calculated as per 'Appendix-A, B,' and mean, S.D. and C.V. are calculated as per 'Appendix-K'.

The above table shows that the total interest earned to total working fund ratios of SCBNL are in fluctuating trend. It has the range 6.421 (in 2003/04) in 4.968 (in 2007/08). The ratios of NABIL are in decreasing trend. It has range from 6.897 (in 2003/04) to 6.017 (in 2007/08). The mean ratios of SCBNL and NABI are 5.048 and 6.393 respectively. Similarly, C.V. of SCBNL and NABIL are 20.536 and 5.779 respectively.

In the case of mean ratios, NABIL has highest mean ratio than SCBNL. It clears that NABIL's interest earning power with respect to total working fund seems to be effective than that of SCBNL. In case of coefficient of variation, NABIL has lower (i.e. 5.779) than SCBNL. It

indicates that the earning ratio with respect to total working fund of NABIL is more stable (consistent) than SCBNL.

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

This ratio measures the percentage of interest paid on liabilities with respect to total working fund. Higher ratio indicates higher -interest expenses on total working fund and vice-versa. This ratio can be calculated by dividing total interest paid by total working fund.

**Table No. 14  
Total Interest Paid to Total Working Fund Ratio**

Fiscal year	SCBNL	NABIL
2003/04	2.44	3.149
2004/05	1.618	2.621
2005/06	1.215	1.916
2006/07	1.698	1.857
2007/08	1.247	1.358
<b>Total</b>	<b>8.218</b>	<b>10.901</b>
<b>Mean</b>	<b>1.6436</b>	<b>2.1802</b>
<b>S.D.</b>	<b>0.4947</b>	<b>0.7041</b>
<b>C.V.</b>	<b>30.0977</b>	<b>32.2962</b>

Source: Annual Report of SCBNL and NABIL

From the above table, the ratios are calculated as per 'Appendix A, B'. And mean, S.D. and C.V. are calculated as per 'Appendix-K'.

The above comparative table shows that the total interest paid to total working fund ratios of SCBNL are in decreasing trend. It has 2.44 highest ratios in F/Y 2003/04 and 1.215 lowest ratios in F/Y 2005/06. The ratios of NABIL are in fluctuating trend. NABIL has 3.149 highest ratio in F/Y 2001/02 and 1.358 lowest ratio- in F/Y 2007/08. Mean ratios of SCBNL and NABIL are 1.643 and 2.1802 respectively. And coefficient of variation of SCBN and NABIL are 30.097 and 32.296 respectively.

The mean ratio of NABIL is has higher than SCBNL. It indicates that the interest paying capacity of NABIL on its working fund is higher than that of SCBNL. NABIL has higher coefficient of variation of ratios in comparison to SCNBL which indicates that NABIL has

more consistency than SCBNL. In this way, it can be concluded that SCBNL is in better position from interest payment point of view.

#### 4.1.4 Risk Ratios

This ratio is used to measure the amount of risk associated with the various harming operations which ultimately influence the banks' investment policy. Generally risk is uncertainty which lies in the bank transaction of investment management. It increases effectiveness and profitability of the banks. Two ratios are used in this risk ratio which is as follows:

##### i. Liquidity Risk Ratio

Liquidity risk ratio is used to measure the level of risk associated with the liquid assets (i.e. cash, bank balance) that are kept in the bank for the purpose of satisfying, the deposits demand for cash. The higher ratio indicates lower liquidity risk and vice-versa. This ratio can be calculated by dividing cash and bank balance by total deposits.

**Total No. 15**  
**Liquidity Risk Ratio**

Fiscal year	SCBNL	NABIL
2003/04	6.228	5.132
2004/05	5.211	6.783
2005/06	8.063	8.513
2006/07	3.826	5.993
2007/08	11.692	8.369
Total	<b>35.02</b>	<b>34.79</b>
Mean	<b>7.004</b>	<b>6.958</b>
S.D.	<b>3.0420</b>	<b>1.4752</b>
C.V.	<b>43.4326</b>	<b>21.2018</b>

Source: Annual Report of SCBNL and NABIL

From the above table, the ratios of banks are calculated as per 'Appendix-A, B'. And mean, S.D. and C.V. are computed as per 'Appendix-K'.

According to the above table, the liquidity risk ratios of all banks have fluctuating trend. SCBNL has recorded 11.692 highest ratios in F/Y 2007/08 and 3.826 lowest ratios in F/Y 2004/07. NABIL has the highest ratio of 8.513 in F/Y 2005/06 and 5.132 lowest ratios in F/Y 2003/04. Mean ratios of SCBNL and NABIL are 7.004 and 6.958 respectively. Similarly, C.V. of these banks is 43.432 and 21.201 respectively.

The mean ratio of SCBNL is higher than NABIL. It indicates that NABIL has maintained more consistency in comparison to SCBNL. Here, it can be said that NABIL has maintained lower liquidity, which means it is operating with higher risk, which increases profitability. But SCBNL has maintained higher liquidity which operates lower risk and decreases profitability. It has also maintained, stable liquidity policy because of lower coefficient of variation.

### **Liquidity Risk Ratio**

#### **ii. Credit Risk Ratio**

Credit risk ratio is used to measure the probability of loan non-repayment or the possibility of loan to go into default. This ratio is also expressed as the percentage of non-performing loan to total loan advances. It can be calculated by dividing total loan and advances by total assets.

**Table No. 16**  
**Credit Risk Ratio**

Fiscal year	SCBNL	NABIL
2003/04	27.122	46.828
2004/05	31.279	47.512
2005/06	48.365	48.82
2006/07	57.486	57.038
2007/08	50.739	57.538
<b>Total</b>	<b>214.991</b>	<b>257.736</b>
<b>Mean</b>	<b>42.9982</b>	<b>51.5472</b>
<b>S.D.</b>	<b>13.1150</b>	<b>5.2922</b>
<b>C.V.</b>	<b>30.5013</b>	<b>10.2667</b>

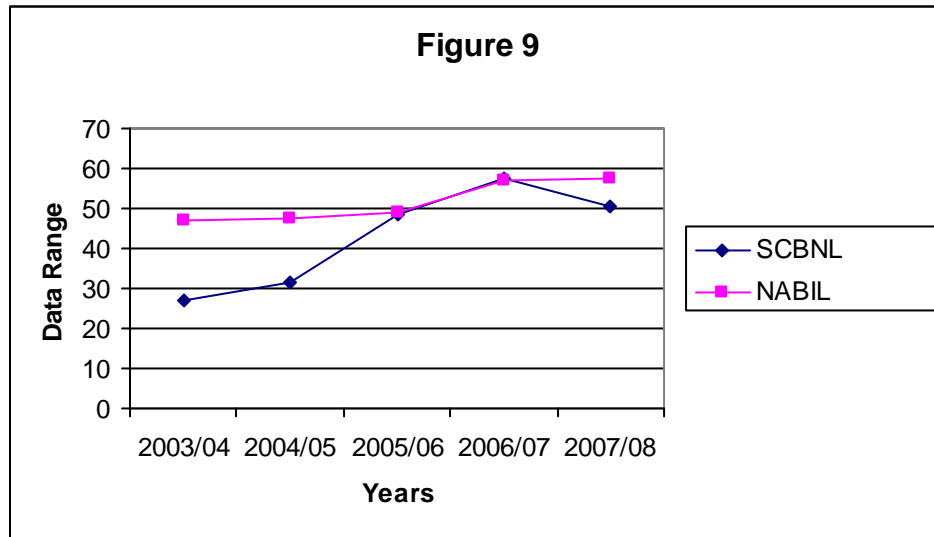
Source: Annual Report of SCBNL and NABIL

From the above table, the ratios of the banks are calculated as per 'Appendix-A, B, And the mean, S.D. and C.V. are calculated as per 'Appendix-K'.

The above comparative table show that the ratios of both banks are in fluctuating trend. SCBNL has recorded 57.486 in F/Y 2006/07, which are the highest ratio and 27.122 lowest ratios in F/Y 2003/04. NABIL has 57.538 highest ratios in F/Y 2007/08 and 46.828 lowest ratios in F/Y 2003/0. The mean ratios of SCBNL and NABIL are 42.998 amd 51.547 respectively. Similarly, C.V. of these banks is 30.501 and 10.266 respectively.

From the above analysis, it can be reflected that the mean ratio of SCBNL is lower than NABIL. It indicates that SCBNL has not bore more risk on its total assets of loan and advances in comparison to NABIL. But the C.V. of NABIL is lower than SCBNL which indicates that NABIL's risk ratio is less variable than that of SCBNL. Lastly, it can be concluded that SCBNL has comparatively higher degree of credit risk than NABIL.

## Credit Risk Ratio



### 4.2 Statistical Analysis

Some important statistical tools are used to analyze the data to achieve the objective of this study. The basic statistical tools related to this study are stated below:

#### 4.2.1 Coefficient of Correlation Analysis

This statistical tool has been used to interpret and analyze the relationship between two or more variables. Under this topic, Karl Pearson's Co-efficient of correlation is used to find out the relationship between deposit and loan and advance, total deposits and total investment total outside assets and net profit, deposit and net profit, deposit and interest earned, loan and advances and interest paid as well as total working fund and net profit.

##### i. Coefficient of Correlation between Deposit and Loan and Advances

The coefficient of correlation between total deposit and loan and advances used to measure the degree of relationship between these two variables. The main purpose of calculating coefficient of correlation between deposit and loan and advances is to justify whether deposits are significantly used as loan and advances or not. In this analysis, deposit is an independent variable (X) and loan and advances are dependent variable (Y).

**Table No. 17**  
**Correlation between Deposit and Loan and Advances**  
**Evaluation Criteria**

Banks	r	r <sup>2</sup>	P.E.(r)	6.P.E.(r)
SCBNL	0.897	0.804	0.059	.0353
NABIL	0.997	0.994	0.002	0.011

Source: Annual Report of SCBNL and NABIL

The above table shows that r, r<sup>2</sup>, P. E. (r), 6 P.E. (r) between deposit and loan and advances of SCBNL and NABIL for the period of 2003/04 to 2007/08. In the table, mention values are calculated as per 'Appendix-C'.

From the above table, it is clear that the coefficient of correlation between deposit and loan and advances of SCBNL is 0.897. It means positive relationship between these two variables. In the case of SCBNL, values of coefficient determination (r<sup>2</sup>) is .804, it indicates 77.50% of variation of the dependent variable (loan and advances) has been explained by the independent variable (deposits). Similarly, considering the value of 'r' i.e. 0.897 and comparing it with six times of probable error (P.E. (r) i.e. 0.353, than 6. P.E.(r) (r>6 P.E. (r)) which means that the value of r is highly significant.

When we observe correlation between total deposit and loan and advances of NABIL, the coefficient of correlation between these two variables is 0.997 which indicates highly positive correlation between them. Whereas, the value of coefficient of determination (r<sup>2</sup>) is 0.994, which means 81.70% in the dependent variable (Loan and advances) has been explained by the independent variable (Deposit). Moreover, considering the times of probable error (P.E. (r) i.e. 0.002 which means that the value of 'r' is highly significant.

From the above analysis, we can conclude that there is significant relationship between deposit and loan and advances. It means both banks are successful in mobilizing their deposit as loan and advances. NABIL has higher value of 'r' which indicates the better position to mobilize the deposit as loan and advances in comparison NABIL.

## ii. Coefficient of Correlation between Total Deposit and Total Investment

Coefficient of correlation between deposit and total investment measures the degree of relationship between two these variables. Here, deposit is an independent variable (X) and total investment is dependent variable (Y). The main purpose of this correlation is to find out whether the deposit is significantly used in proper way or not.

**Table No. 18**

### **Correlation between Total Deposit and Total Investment Evaluation Criteria**

Banks	r	r <sup>2</sup>	P.E.(r)	6.P.E.(r)
SCBNL	0.915	0.838	0.049	0.294
NABIL	0.915	0.838	0.049	0.294

Source: Annual Report of SCBNL and NABIL

From the above table, r, r<sup>2</sup> P.E. (r) and 6. P.E. (r) between, total deposit and total investment of SCBNL and NABIL are calculated respectively for the period of 2003/04 to 2007/07. The mentioned values are calculated as per 'Appendix-C'.

The above table shows that the coefficient of correlation between total deposit and total investment of SCBNL and NABIL are 0.915 and 0.915 respectively. It shows the highly positive relationship between these two variables. In the case SCBNL, considering coefficient of determination, the value of (r<sup>2</sup>) is 0.838, which indicates that 87.10% of the variation in the dependent variable (total investment) has been explained by the independent variable (deposit). In the case of NABIL, r<sup>2</sup> is 7.40% which indicates the variation in the dependent variable has been explained by the independent variable. In the case of SCBNL, the value of 'r' is higher than 6 P.E. (r) i.e. 0.915 > 0.294. So, it is significant relationship. In the case of NABIL, it is also higher than 6 P.E. (r) i.e. 0.915 < 0.294. Therefore, there is significant relationship between these variables.

From the above analysis, it can be concluded that in the case of SCBNL, there is significant relationship between deposit and total investment. But in the case of NABIL, there is no significant relationship between deposit and total investment. Now it can be said that SCBNL has variable policy in mobilizing its deposit as investment.

### iii. Coefficient of Correlation between Outside Assets and Net Profit

Coefficient of correlation between outside assets and net profit measures the degree of relationship between these two variables. Its main purpose is to find out whether the net profit is significantly correlated with respective total assets or not. Here outside asset is independent variable (X) and net profit is dependent variable (Y).

**Table No. 19**  
**Correlation between Outside Assets and Net Profit**  
**Evaluation Criteria**

Banks	r	r <sup>2</sup>	P.E.(r)	6.P.E. (r)
SCBNL	0.968	0.937	0.019	0.114
NABIL	0.779	0.606	0.118	0.711

Source: Annual Report of SCBNL and NABIL

Form the above table, r, r<sup>2</sup>, P.E. (r) and 6 P.E. (r) between outside assets and net profit of SCBNL and NABIL are calculated respectively for the period of 2003/04 to 2007/08, are calculated as per 'Appendix-C'.

The above table shows that the coefficient of correlation between outside asset and net profit (r) of SCBNL and NABIL are 0.968 and 0.779 respectively. It means that there is highly positive relationship between these two variables in case of SCBNL. But in case of NABIL, there is positive relationship between these two variables. In the case of SCBNL, considering coefficient of determination, the value of r<sup>2</sup> is 0.937 which indicates that 95.30% of the variation in the dependent variable (net profit) has been explained by the independent variable (outside asset). In the case of NABIL, is 10.90% of the dependent variable has been explained by the independent variable. In the case of SCBNL, the value of 'r' is higher than 6 P.E. (r) i.e. 0.968 > 0.114. So it is significant relationship. But in the case of NABIL, the value of r is higher than 6 P.E. (r) i.e. 0.779 < 0.711. Therefore, there is significant relationship between these two variables.

From the above analysis it can be predicted that SCBNL is successful in mobilizing of fund and earn return (net profit) from such mobilized funds. SCBNL has higher value of Y which

shows that the position of SCBNL is better regarding the mobilization of outside asset in profitable way.

#### iv. Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit is used to measure the degree of relationship between these two variables. The purpose of computing 'r' between two variables is to find out whether deposits are significantly used to obtain return in a proper way or not. Here deposit is independent variable (X) and net profit is dependent variable le (Y).

**Table No. 20**  
**Correlation between Deposit and Net Profit**  
**Evaluation Criteria**

Banks	r	r <sup>2</sup>	I P.E.(r)	6.P.E. (r)
SCBNL	0.991	0.983	0.005	0.032
NABIL	0.963	0.928	0.022	0.131

Source: Annual Report of SCBNL and NABIL

From the above table, r, r<sup>2</sup> P.E. (r) and 6P.E.(r) between deposit and net profit of SCBNL and NABIL are mentioned for the period of 2003/04 to 2007/08. The mentioned values are calculated as per 'Appendix-C'.

The above table reflects that the coefficient of correlation between deposit and net profit of SCBNL and NABIL are 0.991 and 0.963 respectively. It means there is highly positive relationship between these two variables in case of SCBNL. But there is positive relationship between these two variables in the case of NABIL. In the case of SCBNL, considering coefficient of determination, the value of r<sup>2</sup> is 0.983, which indicates that 93.90% of the variation in the dependent variable (net profit) has been explained by the independent variable (deposit). In the case of NABIL, it is 0.4% whose dependent variable has been explained by the independent variable. The value of 'r' of SCBNL is higher than 6 P.E. (r) i.e. 0.991>0.032. So it is significant relationship. But the value of 'r' of NABIL and is also higher than 6 P.E. (r) i.e. 0.963<0.131. Therefore, it is also significant relationship between these two variables.

#### v. Coefficient of Correlation between Deposit and Interest Earned:

The correlation of coefficient between deposit and interest earned measures the degree of relationship between these two variables. Here, deposit is independent variable (X) and interest earned is dependent variable (Y). The objective of calculating Y between two variables is to find out whether deposit is significantly used to earned interest in a proper way or not.

**Table No. 21**  
**Correlation between Deposit and Interest Earned**  
**Evaluation Criteria**

Banks	r	r <sup>2</sup>	P.E.(r)	6.P.E. (r)
SCBNL	0.961	0.924	0.023	0.138
NABIL	0.983	0.966	0.010	0.061

Source: Annual Report of SCBNL and NABIL

The above table shows the values r, r<sup>2</sup> P.E. (r) and 6 P.E.(r) between deposit and interest earned of SCBNL and NABIL are mentioned for the period of 2003/04 to 2007/08. The above mentioned values are calculated as per 'Appendix-C'.

The above listed table shows that the coefficient of correlation between deposit and interest earned of SCBNL and NABIL are 0.961 and 0.983 respectively. These indicate that there is positive relationship in the case of SCBNL. And is highly positive relationship between these two variables in the case of NABIL. In the case of SCBNL, considering the coefficient of determination the value of r<sup>2</sup> is 0.924 which indicates that 8.0% of the variation in the dependent variable (interest earned) has been explained the independent variable (deposit). In the case of NABIL, 82.80% of the dependent variable has been explained by the independent variable.

The value of 'r' of SCBNL is higher than 6P.E. (r) i.e.  $0.961 < 0.138$ . So it is significant relationship between deposit and interest earned. But the values of r of NABIL is higher than 6P.E. (r) i.e.  $0.983 > 0.061$ . There is significant relationship between these two variables.

Form the above analysis, it can be said that there is better position of NABIL in comparison to SCBNL because it has higher Y than SCBNL.

**vi. Coefficient of Correlation between Loan and Advances and Interest Paid**

The coefficient of correlation between loan and advances and interest paid is used to measure the degree of relationship between these two variables. Here loan and advances is independent variable (X) and interest paid is dependent variable (Y). The main objective of computing Y between these variables is whether increases in loan and advances or decrease in the interest paid of the banks.

**Table No. 22**  
**Correlation between Loan and Advances and Interest Paid**  
**Evaluation Criteria**

Bank	r	r <sup>2</sup>	P.E. (r)	6.P.E (r)
SCBNL	-0.472	0.223	0.234	1.405
NABIL	-0.006	0.000	0.301	1.808

Source: Annual Report of SCBNL and NABIL

From the above table, r, r<sup>2</sup> PE(r) and 6 P.E, (r) between loan and advances interest paid of SCBNL and NABIL are mentioned for the period of (2003/04 to 2007/08). The above mentioned values are calculated as per 'Appendix-C'.

The above table shows that the coefficient of correlation between these two variables of SCBNL and NABIL are -0.472 and -0.006 respectively. These indicate that there is negative relationship in the case of SCBNL. And there is positive relationship in the case of NABIL. The value of coefficient of determination (r<sup>2</sup>) of SCBNL is 0.223. It means 19.80% of variation in dependent variable has been explained the independent variable. In case of NABIL, 15.90% of the dependent variable has been explained by independent variable. The value of 'r;' of SCBNL is less than 6 P.E.(r) i.e. -0.472 < 1.405. So, there is no significant relationship between loan and advances and interest paid. The values of r of NABIL IS also less than 6P.E. (r) i.e. -0.006 < 1.808. Therefore, there is no significant relationship between these variables.

**vii. Coefficient of Correlation between Total Working Fund and Net Profit**

The coefficient of correlation between total working fund and net profit measures the degree of relationship between these two variables. Here the working fund is independent(X) variables and net profit is dependent variable (Y). The main purpose of computing 'r' between

these two variables is to find out whether total working fund is significantly used as to earn net profit in a proper way or not.

**Table No. 23**  
**Correlation between Total Working Fund and Net Profit**  
**Evaluation Criteria**

Bank	r	r <sup>2</sup>	P.E. (r)	6.P.E (r)
SCBNL	0.157	0.025	0.294	1.764
NABIL	0.856	0.732	0.081	0.483

Source: Annual Report of SCBNL and NABIL

Form the above table, r, r<sup>2</sup>, P.E. (r) and 6.P.E (r) between total working found and net profit of SCBNL and NABIL are mentioned for the period of 2001/02 to 2005/06. The above mentioned values are calculated as per ‘Appendix-C’.

The above table shows that the coefficient of correlation between these two variables of SCBNL and NABIL 0.157 and 0.856 respectively. These indicate that there is highly positive relationship in the case of SCBNL and positive relationship in the case of NABIL. In case of SCBNL, considering the coefficient of determination the value of r<sup>2</sup> is 0.025 which indicates that 79.20% of the variation in the dependent variable (net profit) has been explained the dependent variable (total working fund). In the case of NABIL, 2.70% of the dependent variable has been explained by the independent variable. The value of 'r' of SCBNL is LESS than 6 P.E. (r) i.e. 0.157>1.764 so there is no significant relationship. But the values of 'r' of NABIL is less than 6 P.E. (r) i.e. 0.856<0.483. Therefore there is no significant relationship between these two variables.

#### **4.2.2 Trend Analysis**

The main objective of this analysis is to analyze or interpret the trend of deposits, loan and advances, investment and net profit of SCBNL and NABIL for the period of 2001/02 to 2005/06. And, it also helps to make forecasting for next five years up to 2007/08. The forecasts are based on the following assumption:

- The main assumption is that other thing will remain unchanged.
- The banks will run in present position

- The forecast will be true when the limitation of least square method is carried out.
- The economy will remain in the present condition.
- Central Bank (NRB) will not change its guidelines to commercial banks.

The following trend analyses have been used in this study:

#### **i. Trend Analysis of Total Deposit**

This analysis has been made to calculate the trend values of deposit of SCBNL and NABIL for five years form 2003/04 to 2007/08 and forecast for five years till 2012/13.

**Table No. 24**  
**Trend Values of Total Deposit of SCBNL and NABIL**

(Rs. in Million)

Fiscal Year	SCBNL	NABIL
2003/04	14751.02	13340.73
2004/05	16595.84	14476.75
2005/06	18440.66	15546.12
2006/07	26880.48	23342.28
2007/08	31909.33	31915.04
2008/09	33975.12	32754.23
2009/10	34819.94	32823.60
2010/11	35664.76	32892.97
2011/12	35335.61	31254.01
2012/13	35321.21	30147.98

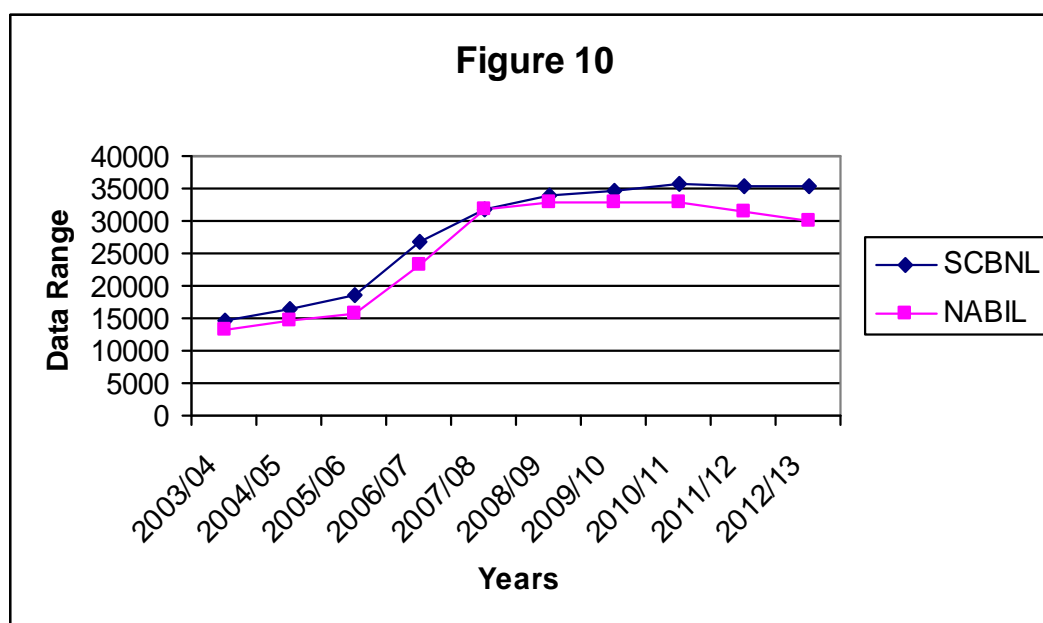
Source: Annual Report of SCBNL and NABIL

From the above table, the trend values of total deposit of SCBNL and NABIL are calculated as per 'Appendix-D'

The above table shows that total deposit of both banks (i.e. SCBNL and NABIL) is in increasing trend. Other things remaining the same, the total deposit of SCBNL and NABIL in year 2012/13 will be Rs.35321.21 and 30147.98 million respectively. It means that trend value of SCBNL is higher than NABIL.

From the above analysis, it can be said that SCBNL's total deposit trend will be satisfactory. The above calculated trends values of total deposit of SCBNL and NABIL are fitted in the trend lines given as follows:

### Trend Values of Total Deposit of SCBNL and NABIL



#### ii. Trend Analysis of Loan and Advances

This analysis has been made to calculate the trend values of loan and advances of SCBNL, NABIL and HBL for five years from 2003/04 to 2007/08 and forecast for next five years till 2012/13.

**Table No. 25**  
**Trend Values of Loan and Advances of SCBNL and NABIL**  
(Rs. in Million)

Fiscal Year	SCBNL	NABIL
2003/04	5150.35	7328.39
2004/05	9901.30	7732.11
2005/06	16652.25	8135.83
2006/07	18963.10	15545.54
2007/08	22076.54	21365.21
2008/09	23057.22	22635.24
2009/10	23891.35	20547.36
2010/11	23998.26	20355.25
2011/12	24025.21	21547.36
2012/13	24578.66	22154.36

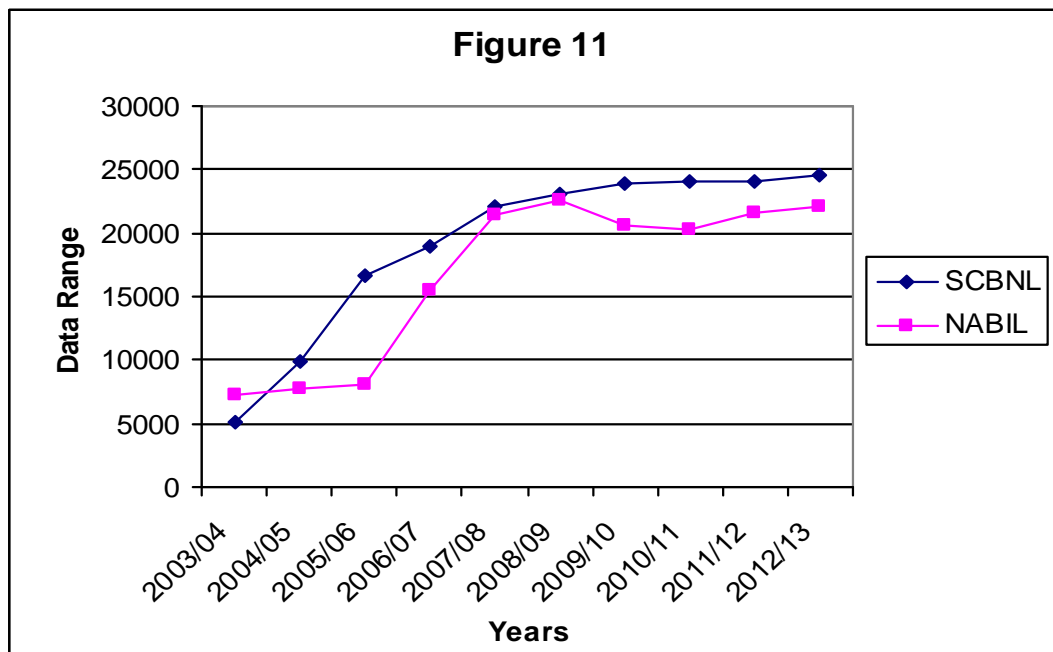
Source: Annual Report of SCBNL and NABIL

From the above table, the trend values of loan and advances of SCBNL and NABIL are calculated as per 'Appendix-D'.

The above table reflects that the trend values of loan and advances are in increasing trend. If other things remain the same, the loan and advances of SCBNL and NABIL will be Rs.24578.66 and 22154.36 million in years 2012/13 respectively. It shows that the trend value of NABIL is higher than SCBNL during this study period.

In conclusion, it is cleared that SCBNL's utilization of deposit in terms of loan and advances is comparatively lower than NABIL. The above calculated trend values of loan and advances of SCBNL and NABIL are fitted in the trend lines given as follows:

**Trend Values of Loan and Advances of SCBNL and NABIL**



### iii. Trend Analysis of Total Investment

This analysis has been made to calculate the trend values of total investment of SCBNL and NABIL for five years from 2003/04 to 2007/08 and forecast for next five years till 2012/13.

**Table No. 26**  
**Trend Values of Total Investment of SCBNL and NABIL**  
(Rs in Million)

Fiscal Year	SCBNL	NABIL
2003/04	4044.72	2635.91
2004/05	5172.641	3363.39
2005/06	4526.68	6090.87
2006/07	5527.40	8945.36
2007/08	6934.21	9939.84
2008/09	7857.99	10254.32
2009/10	9325.25	11547.81
2010/11	11254.36	11889.29
2011/12	12547.36	12054.23
2012/13	12854.26	12998.24

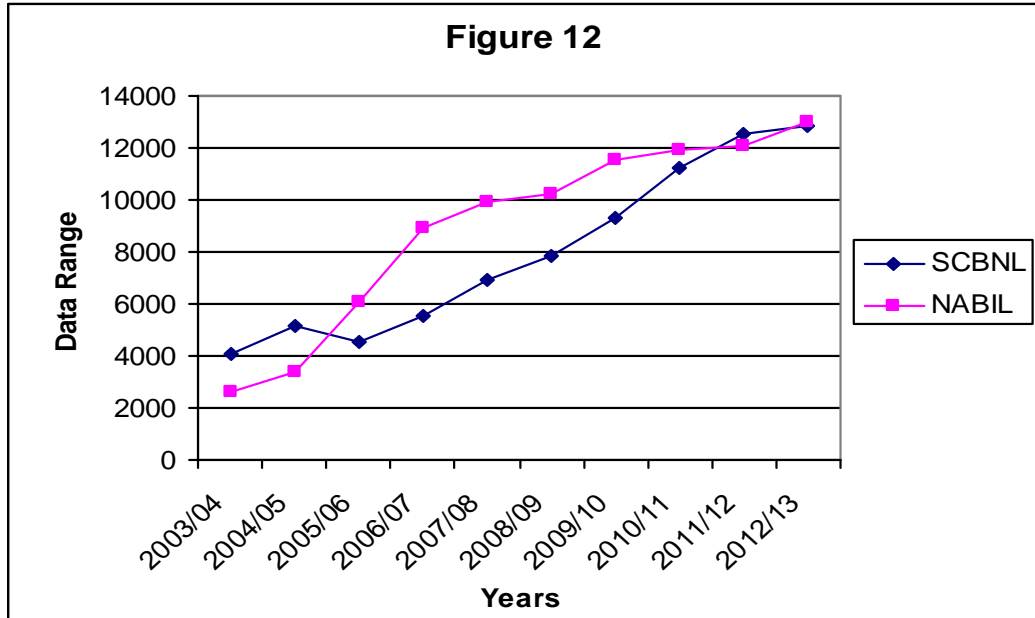
Source: Annual Report of SCBNL and NABIL

From the above table, the trend values of total investment of SCBNL and NABIL are calculated as per 'Appendix-D'.

The above comparative table shows that the trend values of total investment are in increasing trend. If other things remain same, the total deposit of SCBNL and NABIL will be Rs.12854.26 and 12998.24 million in the year 2012/13 respectively. It reflects that the trend values of SCBNL are higher than NABIL during this study period.

In conclusion, it can be concluded that SCBNL's total investment trend is more satisfactory whereas NABIL has not maintained well investment trend during this study period. The above trend values of total of these banks are fitted in the trend lines given as follows:

### Trend Values of Total Investment of SCBNL and NABIL



#### iv. Trend Analysis of Net Profit

This analysis has also been made to compute the trend values of net profit of SCBNL and NABIL for five years from 2003/04 to 2007/08 and forecast for the same for next five fiscal years till 2012/13.

**Table No. 27**  
**Trend Values of Net Profit of SCBNL and NABIL**  
(Rs. in million)

Fiscal Year	SCBNL	NABIL
2003/04	433.62	314.97
2004/05	471.78	339.17
2005/06	509.94	363.38
2006/07	680.58	673.95
2007/08	866.25	746.46
2008/09	1028.27	1031.05
2009/10	1030.58	1060.59

2010/11	1042.74	1077.69
2011/12	1098.35	1102.65
2012/13	1150.6	1214.22

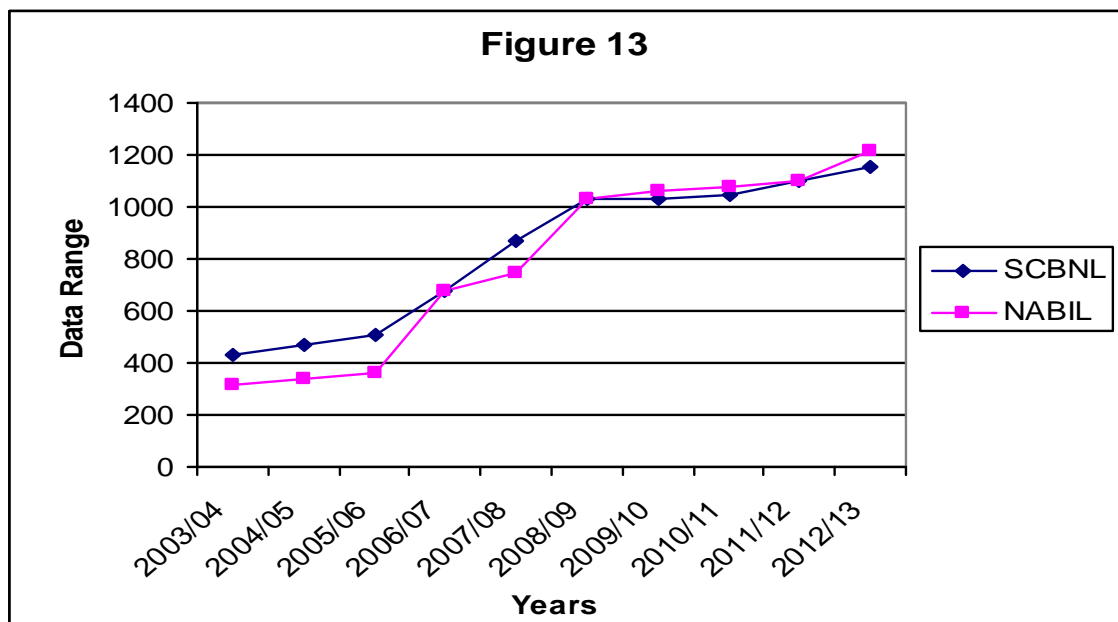
Source: Annual Report of SCBNL and NABIL

From the above table, the trend values of net profit of SCBNTL and NABIL are calculated as per 'Appendix-D'.

The above table reveals that the trend value of net profit of both banks (i.e. SCBNL and NABIL) is in creasing trend. Other things remaining the same, the net profit of SCBNL in F/Y 2012/13 will be Rs.1150.6 million, which it is higher than NABIL. Net profit of NABIL in F/Y 2012/13 will be Rs1214.22 million.

From above analysis, it can be concluded that SCBNL seems to have utilize its funds to earn handsome amount of profit in comparison to NABIL. The above given trend values of table have been fitted in trend lines which are as follows:

**Trend Values of Net Profit of SCBNL and NABIL**



### 4.2.3 Test of Hypothesis

The main objective of this test is to test the significant difference regarding the parameters of the population on the basis of sample drawn from the population. This test actually has been conducted on the various relations related with the banking business. The following steps have been followed in the test of hypothesis.

- Formulating hypothesis:
  - Null hypothesis
  - Alternative hypothesis
- Computing the test statistics
- Fixing the level of significance
- Finding criteria region
- Deciding two-tailed test or one-tailed test.
- Making decision.

#### **t-test**

If there is a large number of smaller sample i.e. ( $n < 30$ ) and compute the mean for each sample and then plot the frequency distribution of these means, the resulting, and sampling distribution would be t-test.

#### **Assumptions**

- i. The population's form which the sample are drawn are normally distributed.
- ii. The population standard deviation is not known.
- iii. The given samples are drawn by random and independent to each other.

#### **(i) t-test of significant difference on loan and advances to total deposit ratio between SCBNL and NABIL**

Let, loan and advances to total deposit ratio of SCBNL and NABIL can be represented by  $X_1$  and  $X_2$  respectively.

#### **a. Test of significance of difference between SCBNL and NABIL Null Hypothesis $H_0$ :**

$$\sim X_1 = \sim X_2$$

(I.e. there is no significance difference between mean ratios of loan and advances to total deposit of SCBNL and NABIL). Alternative Hypothesis  $H_1$ :  $\sim X_1 = \sim X_2$  (Two tailed test) (i.e., there is significant difference between mean ratios of loan and advances to total deposit of SCBNL and NABIL).

The test statistic under  $H_0$  is:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}} \text{ with } \dots\dots\dots \text{ d.f.} = n_1 + n_2 - 2$$

$$S^2 = 38.674 \quad (\text{for details see Appendix-E})$$

$$\therefore t = \frac{34.12 - 58.34}{\sqrt{38.674 \left[ \frac{1}{5} + \frac{1}{5} \right]}} = -6.1413$$

Hence  $|t| = 6.1413$

Tabulated value of t at 5% level of significance for  $(n_1 + n_2 - 2) = 8$  d.f. is 2.306.

**Decision:** Since the calculated value of  $|t| = 6.1413$  is greater than the tabulated value i.e. 2.306, Null hypothesis ( $H_0$ ) is rejected. Hence  $H_1$  is accepted which means there is significant difference between mean ratio of loan and advances to total deposits of SCBNL and NABIL.

**(ii) t-test of significant difference on total investment to total deposit ratio between SCBNL, and NABIL**

Let, total investment to total deposit ratio of SCBNL, NABIL and HBL can be represented by  $X_1$ ,  $X_2$  and  $X_3$  respectively.

**(a) Test of significance of difference between SCBNL and NABIL Null Hypothesis  $H_0$ :**

$$\sim X_1 = \sim X_2$$

(i.e. there is no significant difference between mean ratios of total investment to total deposit of SCBNL and NABIL)

Alternative Hypothesis  **$H_1$ :**  $\sim X_1 = \sim X_2$  (two-tailed)

(i.e., there is significant difference between mean ratios of total investment to total deposit of SCBNL and NABIL)

The test static under  $H_0$  is:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}} \quad \text{With ..... d.f.} = n_1 + n_2 - 2$$

$$S^2 = 179.90 \quad (\text{for detail see Appendix-F})$$

$$\therefore t = \frac{41.74 - 28.08}{\sqrt{179.09 \left[ \frac{1}{5} + \frac{1}{5} \right]}} = 1.616$$

Tabulated value of t at 5% level of significance for  $5+5-2=8$  d.f is 2.306.

**Decision:** Since the calculated value of  $t = 1.616$  is less than tabulated value (i.e. 2.306). Null hypothesis ( $H_0$ ) is accepted. It means that there is no significant difference between mean ratios of total investment to total deposit SCBNL and NABIL).

**(iii) t-test of significant difference on investment on government securities to current assets ratios between SCBNL, and NABIL**

Let investment on government securities to current assets ratios of SCBNL and NABIL can be represented by  $X_1$  and  $X_2$  respectively.

**(a) Test of significance of difference between SCBNL and NABIL Null Hypothesis  $H_0$ :**

$$\sim X_1 = \sim X_2$$

(i.e. there is no significant difference between mean ratios of investment on government securities to current assets of SCBNL and NABIL)

Alternative Hypothesis  $H_1$ :  $\sim X_1 = \sim X_2$  (two tailed)

(That is there is significant difference between mean ratios of investment on government securities to current assets of SCBNL and NABIL)

The test statistic under  $H_0$  is -

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}} \text{ with } \dots\dots\dots \text{ d.f.} = n_1 + n_2 - 2$$

$$S^2 = 21.953 \quad (\text{for detail see Appendix-G})$$

$$\therefore t = \frac{27.52 - 25.53}{\sqrt{21.953 \left[ \frac{1}{5} + \frac{1}{5} \right]}} = 0.6862$$

Hence,  $t = 1.292$

Tabulated value of  $t$  at 5 % level of significance for  $5+5-2 = 8$  d.f is 2.306.

Decision: Since the calculated value of  $t = 1.292$  is less than the tabulated value (i.e. 2.306). Null hypothesis ( $H_0$ ) is accepted. It means there is no significant difference between mean ratios of investment on government securities to current assets of SCBNL and NABIL.

**(iv) t-test of significant difference on loan and advances to current assets ratios between SCBNL and NABIL**

Let loan and advances to current assets ratios of SCBNL and NABIL can be represented by  $X_1$  and  $X_2$  respectively.

**(a) Test of significance difference between SCBNL and NABIL Null Hypothesis  $H_0$ :  $\sim X_1 = \sim X_2$**

(i.e. there is no significant difference between mean ratios of loan and advances to current assets of SCBNL and NABIL)

Alternative Hypothesis  **$H_1$ :  $\sim X_1 = \sim X_2$**  (two-tailed test)

(i.e. there is significant difference between mean ratios of loan and advances to current assets of SCBNL and NABIL)

The test static under  $H_0$  is-

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}} \text{ with } \dots\dots\dots \text{ d.f.} = n_1 + n_2 - 2$$

$$S^2 = 35.031 \quad (\text{for details see Appendix-H})$$

$$\therefore t = \frac{30.23 - 54.88}{\sqrt{35.031 \left[ \frac{1}{5} + \frac{1}{5} \right]}} = -6.538$$

Hence,  $t = 6.538$

Tabulated value of  $t$  at 5% level of significance for  $5+5-2i=8$  d.f. is 2.306.

**Decision:** Since the calculated value of  $|t| = 6.538$  is greater than the tabulated value (i.e. 2.306). Null hypothesis is rejected and alternative hypothesis (H<sub>1</sub>) is accepted i.e. there is significant difference between mean ratios of loan and advances to current assets of SCBNL and NABIL.

**(v) t-test of significant difference on return on loan and advances ratio between SCBNL and NABIL**

Let, return on loan and advances ratios of SCBNL and NABIL can be represented by  $X_1$  and  $X_2$  respectively.

**a. Test of significance difference between SCBNL and NABIL Null Hypothesis  $H_0$ :  $\bar{X}_1 = \bar{X}_2$**

(i.e. there is no significance difference between mean ratios of return on loan and advances of SCBNL and NABIL)

**Alternative Hypothesis  $H_1$ :  $\bar{X}_1 \neq \bar{X}_2$  (Two-tailed test)**

(i.e. there is significant difference between mean ratio of return on loan and advances of SCBNL and NABIL)

The test statistic under  $H_0$  is-

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}} \text{ with } \dots\dots\dots \text{ d.f.} = n_1 + n_2 - 2$$

$S^2 = 0.498$  (for detail see Appendix-I)

$$\therefore t = \frac{8.444 - 4.322}{\sqrt{0.498 \left[ \frac{1}{5} + \frac{1}{5} \right]}} = 9.242$$

Hence,  $t = 9.242$

Tabulated value of t at 5% level of significance for 5+5-2 =8 d-f is 2.306

**Decision:** Since the calculated value of  $|t|=9.242$  is greater than the tabulated value (i.e. - 2.306), Null hypothesis is rejected i.e. there is significant difference between mean ratio of return on loan and advances of SCBNL and NABIL.

**(vi) t-test of significance difference on total interest earned to total outside assets ratios between SCBNL and NABIL**

Let, total interest earned to total outside assets of SCBNL and NABIL can be represented by  $X_1$  and  $X_2$  respectively.

**a. Test of significance difference between SCBNL and NABIL. Null Hypothesis  $H_0: \bar{X}_1 = \bar{X}_2$**

(i.e. There is no significant difference between mean ratios of total interest earned to total outside assets of SCBNL and NABIL).

**Alternative Hypothesis  $H_1: \bar{X}_1 \neq \bar{X}_2$  (Two-tailed Test)**

(i.e. there is significant difference between mean ratios of total interest earned to total outside assets of SCBN-L and NABIL).

The test statistic under  $H_0$  is:-

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s^2 \left[ \frac{1}{n_1} + \frac{1}{n_2} \right]}} \text{ with } \dots\dots\dots \text{ d.f.} = n_1 + n_2 - 2$$

$S^2 = 3.189$  (for detail see Appendix-J)

$$\therefore t = \frac{8.69 - 8.88}{\sqrt{3.189 \left[ \frac{1}{5} + \frac{1}{5} \right]}} = -0.1696$$

Hence,  $t = 0.1694$

Tabulated value of t at 5% level of significance for 5+5-2=8 d.f. is 2.306

**Decision:** Since the calculated value of  $|t|=0.1694$  is less than the tabulated value (i.e. 2.306), Null hypothesis is accepted. It means there is no significant difference between mean ratio of total interest earned to total outside assets of SCBNL and NABIL

### **4.3 Major Findings**

From the data presentation and analysis, some main findings are summarized, which are below:

#### **4.3.1 Liquidity Ratio**

- The mean current ratio of SCBNL is viewed slightly higher than that of NABIL. In the view point of working capital consistency of maintain liquidity position of SCBNL is less than the NABIL. In the view of point of liquidity condition, SCBNL is better than NABIL.
- The mean ratio of cash and bank balance to total deposit of SCBNL is slightly less than NABIL. It means that SCBNL has better maintenance of its liquidity than NABIL because higher liquidity indicates the inability of the bank.
- The mean ratio of cash and banks balance to current assets of SCBNL is lower in comparison to NABIL. The variability of the ratio during the study period is more consistent than NABIL.
- The mean ratio of investment on government securities to current assets ratio of SCBNL is higher NABIL. But we found that SCBNL's ratios are variable than that of NABIL.
- The mean ratio of loan and advances to current assets ratio of SCBNL is lower than NABIL and its ratio is also less consistent in compassion to other two banks.

#### **4.3.2. Asset Management Ratio**

- The mean ratio of loan and advances to total deposit of SCBNL is lower than NABIL. And its consistency is also less than NABIL. In this condition it can be concluded that SCBNL used to provide less loan and advances in comparison to its total deposits than NABIL.
- The mean ratio of loan and advances to total working fund of SCBNL ratio are less variable than that of NABIL.
- The mean ratio of total investment to total deposit of SCBNL is higher in comparison to NABIL. And it has also higher consistency to invest in securities.
- The mean ratio of investment on government securities to total working fund of SCNBL is higher than NABIL. And its investment policy is also higher consistent than NABIL.
- The mean ratio of investment on shares and debentures to total working fund of SCBNL is less than NABIL. And the variability of the ratio is lower than NABIL.

### **4.3.3 Profitability Ratio**

- The mean ratio of return on loan and advances of SCBNL is higher than NABIL and SCBNL has also higher consistency than NABIL. It is also cleared that NABIL has to invest its fund in productivity sector to increase return ratios.
- The mean ratio of return on total working fund of SCBNL is slightly higher than NABIL. It has also more consistency than NABIL.
- The mean ratio of total interest earned to total outside assets of SCBNL is lower than NABIL. But SCBNL's ratio is more consistent than NABIL.
- The mean ratio of total interest earned to total working fund of SCBNL is slightly less than NABIL. But NABIL is more consistent than SCBNL.
- The mean ratio of total interest paid to total working fund ratio of SCBNL is less than NABIL. And it has also less consistency than other two NABIL.

### **4.3.4 Risk Ratio**

- The mean ratio of liquidity risk of SCBNL is slightly high than NABIL. It indicates that SCBNL has maintained more consistency in comparison to NABIL.
- The mean ratio of credit risk of SCBNL is less than NABIL. And it can be said that SCBNL has comparatively lower degree of credit risk than NABIL.

### **4.3.5 Coefficient of Correlation Analysis**

- Coefficient of correlation between deposit and loan and advances of SCBNL and NABIL are positive. In this way, it has been found that there is significant relationship between deposit loan and advances.
- Coefficient of correlation between total deposit and total investment of SCBNL and NABIL are highly positive and there is significant relationship in the case of SCBNL and no significant relationship in the case of NABIL.
- Coefficient correlation between outside assets and net profit of all banks have positive. In the case of SCBNL, there is significant relationship but in the case the case of NABIL, there is no significant relationship.
- Coefficient of correlation between deposit and interest earned of both banks are positive. In case of SCBNL, there is no significant relationship between these variables.
- Coefficient of correlation between loan and advances and interest paid of SCBNL is negative and there is positive relationship in case of NABIL. There is no significant relationship between these variables.

- Coefficient of correlation between total working fund and net profit of SCBNL and NABIL has positive relationship. There is significant relationship in the case of SCBNL. But there is no significant relationship in case of NABIL.

#### **4.3.6 Trend Analysis**

Trend values of deposit, loan and advances total investment and net profit and projection for next five years of SCBNL and NABIL exhibit that:

- Trend values of total deposit of both banks are found to be in increasing trend. The increasing ratios on deposit of SCBNL will be higher in comparison to NABIL.
- The trend values of loan and advances of both banks have been found in increasing trend. Comparing both banks, SCBNL will be higher than NABIL.
- The trend values of total investment of both banks are in increasing trend. SCBNL's trend values will be higher than NABIL.
- The trend values of net profit of both banks are in increasing trend. In comparison, the trend values of SCBNL will be higher under this study.

#### **4.3.7 Test of Hypothesis**

From the test of significance difference regarding the parameter of the population, has been found that:

- There is significant difference between mean ratios of loan and advances to total deposit of SCBNL with NABIL.
- There is no significant difference between mean ratios of total investment to total deposit of SCBNL with NABIL.
- There is no significant difference between mean ratios of investment on government securities to current assets of SCBNL and NABIL.
- There is significant difference between mean ratios of loan and advances to current assets of SCBNL with NABIL.
- There is significant difference between mean ratios of return on loan and advances of SCBNL with NABIL.
- There is no significant difference between mean ratios of total interest earned to total outside assets of SCBNL with NABIL

## CHAPTER V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary:-

A commercial bank means the bank, which deals with exchange currency, accepting deposit, providing loan or investing in various sectors to do other commercial transactions. Therefore, it is cleared that one of the major function of commercial bank is investment policy. There is not so long history of commercial bank in Nepal. Nepal Bank Ltd. is the first commercial bank of the country which was established in 1994 B.S. Then after, many joint venture banks and commercial banks have been established. In the research work, there has been taken two main commercial banks (i.e. Standard Chartered Bank Nepal Ltd. and NABIL Bank Ltd.). The main objectives of the study were:

To analyze the performance in terms of liquidity, assets management, profitability and risk.

To evaluate the trends of total deposit, total investments, loans and advances and to compare their position in the companies.

To study the relation of deposits with investments, loans and advances.

To assess the effect of investment decision on profitability position of the banks.

The investment decision has played vital role in the banking sectors as well as other organizations. Effective investment decision encouraged to each and every investor to invest their funds on profitable sectors in order to get high return. The study tries to describe the conceptual reviews, investment, NRB rules regarding fund mobilization of commercial banks, relevant unpublished thesis work. Besides these, personal contact with the banks and with respected teachers has also been made.

The analysis has been divided into two categories i.e. financial and statistical tools. Both tools have been made for comparative analysis and their interpretation. Under financial tools, liquidity ratio, assets management ratio, profitability ratio, risk ratio and growth ratios have been analyzed and interpreted comparatively. Under statistical tools, coefficient of correlation analysis, trend analysis, test of hypothesis, S.D. and C.V. have been used.

## 5.2 Conclusion:-

The mean of current ratio of those SCBNL and NABIL banks over the five years period is 1.116 and 0.6508 respectively and it is not consistent over the years. The current ratio of SCBNL over the study period has range between 1.056 (2003/04) to 1.148 (in 2007/08). Where as ratio of NABIL has range between 0.764 (in 2003/04) to 0.483 (in 2007/08). It concludes that the current ratios of the banks are always below the standard i.e. 2:1. But in the case of NABIL in '2003/04 the ratios is 0.764. It is mainly due to decrease money at call and short notice and increase deposits and other A/C.

The mean of ratios of SCBNL is less than that of NABIL. The standard deviation of SCBNL and NABIL are 1.8066, 1.4572 respectively. Similarly, CV of SCBNL, NABIL are 26.93 and 21.201 respectively. it can be concluded that SCBNL has better maintenance of its liquidity than NABIL.

The cash and bank balance to current assets ratio of NABIL is better during the study period as the bank shows the ability to manage the deposit withdrawal for the customers although it has fluctuating trend. The better position of the bank does not mean that the bank has mobilized its fund in the profitable sectors.

Loan and advances to current assets ratios of SCBNL and NABIL are fluctuating trend. SCBNL has range form 29.979(in 2003/04) to 34.787 (in 2007/08). NABIL has range form 63.248 (in 2003/04) to 41.810 (in 2007/08). It indicates that SCBNL use to provide less loan and advances in comparison of NABIL and its trend of approving loan and advances is also less consistency than that of NABIL. Loan and advances to total deposit ratios of the SCBNL is inconsistent in comparison to NABIL. NABIL is better to mobilize the funds as loan and advances for the purpose of income generation. SCBNL mobilized the fewer funds than NABIL. It can be concluded that SCBNL is failure to mobilize their total deposits on loan and advances in comparison to NABIL. NABIL is success to mobilize their total deposits in loan and advances.

SCBNL has become success to better utilization of deposit to investment than NABIL. Investment on government securities to current assets ratios of SCBNL and NABIL are

fluctuating trend. SCBNL has range from 29.773 (in 2007/08) to 25.026 (in 2003/04). Similarly NABIL has range from 19.452 (in 2007/08) to 20.765 (in 2003/04).

SCBNL has succeeded to mobilize the funds as investment on government securities. Its investment policy is also consistent than NABIL. In case of return on loan and advance it can be concluded that SCBNL has higher return on loan and advances in comparison to NABIL. and also SCBNL has earned higher amount of interest on its outside assets in comparison to NABIL but in case of total earning interest to total working fund NABIL is more stable (consistent) than SCBNL. It can be said that NABIL has maintained lower liquidity, which means it is operating with higher risk, which increases profitability. But SCBNL has maintained higher liquidity which operates lower risk and decreases profitability.

The correlation analysis shows that there is significant relationship between deposit and loan and advances. It means both banks are successful in mobilizing their deposit as loan and advances. NABIL has higher value of 'r' which indicates the better position to mobilize the deposit as loan and advances in comparison NABIL. In case of trend analysis of total investment, it can be concluded that SCBNL's total investment trend is more satisfactory whereas NABIL has not maintained well investment trend during this study period and SCBNL seems to have utilize its funds to earn handsome amount of profit in comparison to NABIL in case of trend analysis of net profit.

### **5.3 Recommendations:-**

This recommendation is the final output of the whole study. Generally, it helps to convey correct and good information of the improvement of concerned banks in future. Several analyses have been accrued to reach in this topic. The following recommendation and suggestions have been mentioned to overcome the weakness, inefficiency and improvement of present fund mobilization and investment policy of SCBNL and NABIL.

- To achieve success in this competitive banking environment, every bank must utilize their loan and advances. The loan and advances is the main item of the bank in assets side. If it is medicated, it could be the main reason of liquidity crisis and bankrupt. From the analysis, it has been found that loan and advances to total deposit ratio of SCBNL is lower than NABIL. So, SCBNL is strongly recommended to follow liberal

landing policy, invest more total deposit in loan and advances and maintain more stability on investment policy.

- From the analysis, it has been found that NABIL is not investing its amounts on government securities in comparison to SCBNL. Investment on those securities issued by government (i.e. treasury bills, development bonds, saving certificates, etc) are free of risk and highly liquid such as securities yields the low interest rate of particular maturity lowest risk in future and it is more better in regard to safety that other means investment. So NABIL is strongly recommended to give more emphasis to invest on government securities.
- A commercial bank should utilize its fund in different sectors like to purchase share and debenture of other financial and non financial companies. From analysis, it has been found that SCBNL's investment on share and debenture to total working fund ratios are lower than other NABIL. So SCBNL is strongly recommended to invest its more funds on share and debentures of different companies.
- As we know that most of commercial banks have provided their services only in Kathmandu valley. They should extend their services towards rural areas and preserve the banking and saving habits of the lower level people of nation. So both banks are suggested not to be surrounded and limited with the interest and staff of big clients (i.e. multinational cos. large industry, NGOs, INGOs, etc.) but extend their product and services in every nook and corner of the country.
- Portfolio management is very much important for every investor. The term investment has included many parts of risk. So the effective portfolio management plays important role to divide total investment in different sectors so that risk is also divided into different sectors. It has been found that both banks have been increasing total investment every year. So both banks are strongly recommended to invest in different sectors and to follow a saying "don't keep all the eggs in the same basket".

- In these competitive banking sectors, a well marketing system plays tremendous role in development of banks. Every commercial bank should be customer oriented. Marketing is the one of the best and effective tool to attract the customers. So it has to be sound and effective. Different marketing methods can be applied like advertisement through newspapers, magazine, audio-visual, websites, documentary, etc. Not only these but to draw the attentions of customers through new technology like E- banking , internet banking service, SMS banking, ATM, Debit Card, Visa and Master cards, etc. SCBNL and NABIL have provided such modem and advance service.
- Economic growth of a country depends upon the high growth of the commercial banks. If the product and services of commercial banks expands all over the nation, the idle money from different areas can be collected and utilized for income generation purpose. So commercial banks should expand their branches not only in urban area but also rural area of the nation. But here commercial banks are centralized in the capital. NABIL has succeeded to expand more branch office in comparison to SCBNL. So both banks are recommended to expand their branches and provide effective banking product and services.
- Here, the researcher has used 5 fiscal years of secondary data, so further researcher are suggested to use more than 5 fiscal year and to use not only secondary data but also primary data. The researcher has used only selected commercial banks (i.e. SCBNL and NABIL) and limited financial and statistical tools in this study. But the further researchers are recommended to study more than two banks and apply more useful financial and statistical tools.

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- **Appendix**

## Appendix-A

### Standard Chartered Bank Nepal Ltd.

(Rs. in Million)

S. N.	F/Y	2003/04	2004/05	2005/06	2006/07	2007/08
1	Current Assets	19224.18	18330.82	20797.60	21587.25	21222.78
2	Current Liabilities	18196.01	17150.05	19569.38	18664.45	17845.25
3	Cash and Bank Balance	961.05	825.26	1512.30	1618.45	1845.25
4	Total Investment	4044.72	5172.641	4526.68	5527.40	6934.21
5	Total Deposit	14751.02	16595.84	18440.66	26880.48	31909.33
6	Loan and Advance	5150.35	9901.30	16652.25	18963.10	22076.54
7	Investment on Govt Securities	4611.01	5784.72	6722.93	6884.25	7214.54
8	Invest on Share & Debenture	11.19	11.19	11.19	11.19	11.19
9	Total Working Fund	19357.18	18443.07	21000.50	20554.36	22547.21
10	Total Interest Earned	1242.92	1013.64	1001.36	1155.65	1266.87
11	Total Interest Paid	472.37	298.36	255.13	225.36	205.65
12	Net Profit	433.62	471.78	509.94	680.58	866.25
13	Operating Income	1640.26	1441.72	1499.21	1536.25	1655.45
14	Total Outside Assets	10585.33	11159.91	12429.84	13547.23	13954.52

## Appendix-B

### NABIL Bank Ltd.

(Rs. in Million)

S. N.	F/Y	2003/04	2004/05	2005/06	2006/07	2007/08
1	Current Assets	13161.68	13313.40	13868.30	13998.24	26711.36
2	Current Liabilities	17226.21	16384.73	15135.42	14389.54	13745.87
3	Cash and Bank Balance	812.90	1051.82	1144.77	1245.54	1325.45
4	Total Investment	2635.91	3363.39	6090.87	4945.36	9939.84
5	Total Deposit	33340.73	14476.75	15546.12	23342.28	31915.04
6	Loan and Advance	7328.39	7231.11	8135.83	15545.54	21365.21
7	Investment on Govt. Securities	2732.96	4120.29	3588.77	4808.34	4646.87
8	Invest on Share & Debenture	18.82	22.22	22.22	57.85	80.51
9	Total Working Fund	18367.15	17629.25	16562.61	17549.39	18247.55
10	Total Interest Earned	1266.70	1120.18	1017.87	1587.75	1978.69
11	Total Interest Paid	578.36	462.08	317.35	555.75	758.43
12	Net Profit	314.97	339.17	363.38	673.95	746.46
13	Operating Income	1573.31	1639.11	1340.51	1037.6	1122.71
14	Total Outside Assets	11076.22	11580.41	11366.94	11544.87	11945.2

## Appendix-C

### Calculation of Correlation Coefficient between Deposit and Loan and Advances of SCBNL

(Rs. in Million)

Fiscal Year	Deposit (X)	Loan and advance (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$X^2$	$Y^2$	xy
2003/04	14751.02	5150.35	-6964446	-9398.358	48503508.09	88329133.1	65454356.78
2004/05	16595.84	9901.30	-5119.626	-4647.408	26210570.38	21598401.12	23792990.83
2005/06	18440.66	16652.25	-3274.874	-2103.542	10724354.34	4424888.946	-6888691.96
2006/07	26880.48	18963.10	5165.014	4414.392	26677369.62	19486856.73	22800396.48
2007/08	31909.33	22076.54	10193.864	7527.832	103914863.3	56668254.62	7675769.62
	108577.3	72743.54			216030666	190507534.5	181896747.8

We have,

$$n = 5, \bar{X} = \frac{\sum x}{n} = \frac{108577.3}{5} = 21715.47$$

$$\bar{Y} = \frac{\sum y}{n} = \frac{72746.54}{5} = 14548.71$$

Coefficient of correlation can be calculated by using by the following formula:

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}} = \frac{181896747.8}{\sqrt{216030666} \times \sqrt{190507534.5}} = 0.897$$

$$r^2 = 0.804$$

Calculation of probable error (P. E.) of correlation coefficient

Here,  $n = 5, r^2 = 0.804$

P. E. of coefficient of correlation can be calculated by the following formula:

$$P. E. (r) = 0.6745 \times \frac{1 - r^2}{\sqrt{5}} = 0.6745 \times \frac{1 - 0.804}{\sqrt{5}} = 0.059$$

Now,  $6 \times P. E. (r) = 6 \times 0.059 = 0.353$

$\therefore 6 P. E. (r) = 0.353$

Other coefficient of correlation of SCBNL and NABIL are calculated according.

## Appendix-D

### Calculation of Trend Values of Total Deposit

(Rs. in Million)

Fiscal Year (X)	Total Deposit (Y)	x = X-2000/01	x <sup>2</sup>	x.y	y <sub>c</sub> =a+bx y <sub>c</sub> =21715.466+4460.126x
2003/04	14751.02	-2	4	-29502.04	14751.02
2004/05	16595.84	-1	1	-16595.84	16595.84
2005/06	18440.66	0	0	0	18440.66
2006/07	26880.48	1	1	26880.48	26880.48
2007/08	31909.33	2	4	63818.66	31909.33
	∑ y = 108577.33	0	∑ x <sup>2</sup> = 10	∑ xy = 44601.26	

$$a = \frac{\sum y}{N} = \frac{108577.33}{5} = 21715.466$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{44601.26}{10} = 4460.126$$

Trend value of total deposit of SCBNL (2005/06 – 2010/11)

Fiscal Year	x = X – 2000/01	Trend value y <sub>c</sub> = 21715.466 + 4460.126x
2008/09	3	33975.12
2009/10	4	34819.94
2010/11	5	35664.76
2011/12	6	35335.61
2012/13	7	35321.21

Calculation of other trend values of NABIL is calculated accordingly.

## Appendix-E

### Calculation of Test of Significance of Difference on Loan and advance to Total Deposit Ration between SCBNL and NABIL

(Rs. in Million)

F/y	SCBNL		NABIL	
	X <sub>1</sub>	(X <sub>1</sub> - X <sub>1</sub> ) <sup>2</sup>	X <sub>2</sub>	(X <sub>2</sub> - X <sub>2</sub> ) <sup>2</sup>
2003/04	37.352	9.857	52.557	33.53
2004/05	33.873	0.115	47.967	107.75
2005/06	30.369	14.771	57.675	0.452
2006/07	34.254	0.0017	66.596	68.036
2007/08	35.214	1.003	66.943	73.880
	171.062	25.748	276.76	283.657

$$\begin{aligned}
 \bar{X}_1 &= \frac{\sum x_1}{n_1} \\
 &= \frac{171.062}{5}
 \end{aligned}$$

$$= 34.212$$

$$\begin{aligned}
 \bar{X}_2 &= \frac{\sum x_2}{n_2} \\
 &= \frac{276.76}{5}
 \end{aligned}$$

$$= 55.352$$

$$S^2 = \frac{1}{n_1 + n_2 - 2} \left[ \sum (X_1 - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2 \right]$$

$$= \frac{1}{5 + 5 - 2} [25.748 + 283.657]$$

$$= 38.674$$

## Appendix-F

### Calculation of test of Significance of Difference on Total Investment to Total Deposit Ratio Between SCBNL and NABIL

(Rs. in Million)

F/y	SCBNL		NABIL	
	X <sub>1</sub>	(X <sub>1</sub> - X <sub>1</sub> ) <sup>2</sup>	X <sub>2</sub>	(X <sub>2</sub> - X <sub>2</sub> ) <sup>2</sup>
2003/04	61.952	408.46	17.38	114.58
2004/05	58.576	283.40	26.728	1.840
2005/06	35.224	42.476	26.852	1.519
2006/07	26.879	220.89	38.321	104.78
2007/08	26.076	245.40	31.142	9.347
	208.707	1200.64	140.423	232.07

$$X_1 = \frac{\sum x_1}{n_1}$$

$$= \frac{208.707}{5}$$

$$= 41.74$$

$$X_2 = \frac{\sum x_2}{n_2}$$

$$= \frac{140.423}{5}$$

$$= 28.08$$

$$S^2 = \frac{1}{n_1 + n_2 - 2} \left[ \sum (X_1 - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2 \right]$$

$$= \frac{1}{5 + 5 - 2} [1200.64 + 232.07] = 179.90$$

## Appendix-G

### Calculation of test of Significance of Difference on Investment on Govt. Sec. to Current Assets Ratio between SCBNL and NABIL

(Rs. in Million)

F/y	SCBNL		NABIL	
	X1	(X <sub>1</sub> - X <sub>1</sub> ) <sup>2</sup>	X <sub>2</sub>	(X <sub>2</sub> - X <sub>2</sub> ) <sup>2</sup>
2003/04	25.026	11.948	20.765	22.760
2004/05	31.557	9.451	30.948	29.291
2005/06	32.325	14.764	25.877	0.1164
2006/07	23.732	22.568	30.637	26.022
2007/08	29.773	1.665	19.452	37.012
	142.413	60.397	127.679	115.203

$$\begin{aligned} X_1 &= \frac{\sum x_1}{n_1} \\ &= \frac{142.413}{5} \\ &= 28.4826 \end{aligned}$$

$$\begin{aligned} X_2 &= \frac{\sum x_2}{n_2} \\ &= \frac{127.679}{5} \\ &= 25.53 \end{aligned}$$

$$\begin{aligned} S^2 &= \frac{1}{n_1 + n_2 - 2} \left[ \sum (X_1 - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2 \right] \\ &= \frac{1}{5 + 5 - 2} [60.397 + 115.203] \end{aligned}$$

$$= 21.953$$

## Appendix-H

### Calculation of test of Significance of Difference on Loan and Advances To Current Assets Ratio between SCBNL and NABIL

(Rs. in Million)

F/y	SCBNL		NABIL	
	X <sub>1</sub>	(X <sub>1</sub> - X <sub>1</sub> ) <sup>2</sup>	X <sub>2</sub>	(X <sub>2</sub> - X <sub>2</sub> ) <sup>2</sup>
2003/04	29.979	0.064	63.248	69.936
2004/05	29.262	0.944	55.868	0.965
2005/06	27.387	8.104	55.926	1.083
2006/07	29.754	0.230	57.574	7.229
2007/08	34.787	20.731	41.810	170.96
Total	151.169	30.074	274.426	250.176

$$\begin{aligned} \bar{X}_1 &= \frac{\sum x_1}{n_1} \\ &= \frac{151.169}{5} \end{aligned}$$

$$\begin{aligned} \bar{X}_2 &= \frac{\sum x_2}{n_2} \\ &= \frac{274.426}{5} \end{aligned}$$

$$\begin{aligned} &= 30.234 \qquad \qquad \qquad = 54.885 \\ S^2 &= \frac{1}{n_1 + n_2 - 2} \left[ \sum (X_1 - \bar{X}_1)^2 + (X_2 - \bar{X}_2)^2 \right] \\ &= \frac{1}{5 + 5 - 2} [30.074 + 250.176] \qquad \qquad \qquad = 35.031 \end{aligned}$$

## Appendix-I

### Calculation of test of Significance of Difference on Return Loan and Advances Ratio between SCBNL and NABIL

(Rs. in Million)

F/y	SCBNL		NABIL	
	X <sub>1</sub>	(X <sub>1</sub> - X <sub>1</sub> ) <sup>2</sup>	X <sub>2</sub>	(X <sub>2</sub> - X <sub>2</sub> ) <sup>2</sup>
2003/04	7.476	0.631	3.535	0.291
2004/05	8.934	0.440	3.652	0.178
2005/06	8.954	0.467	5.367	1.669
2006/07	8.451	0.032	4.329	0.064
2007/08	7.537	0.537	3.491	0.340
	41.35	2.109	20.374	2.545

$$X_1 = \frac{\sum x_1}{n_1}$$

$$= \frac{41.35}{5}$$

$$X_2 = \frac{\sum x_2}{n_2}$$

$$= \frac{20.374}{5}$$

$$= 8.270$$

$$= 4.074$$

$$S^2 = \frac{1}{n_1 + n_2 - 2} \left[ \sum (X_1 - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2 \right]$$

$$= \frac{1}{5 + 5 - 2} [2.109 + 2.545] = 0.498$$

## Appendix-J

### Calculation of test of Significance of Difference on Total Interest Earned to Total outside Assets Ratio between SCBNL and NABIL

Rs. in Million)

F/y	SCBNL		NABIL	
	X1	(X1 - X1) <sup>2</sup>	X2	(X2 - X2) <sup>2</sup>
2003/04	11.742	9.275	11.436	6.528
2004/05	9.083	0.149	9.673	0.627
2005/06	8.056	0.410	8.455	0.181
2006/07	7.547	1.321	7.587	1.674
2007/08	7.054	2.697	7.254	2.647
	43.482	13.853	44.405	11.658

$$\begin{aligned} \bar{X}_1 &= \frac{\sum x_1}{n_1} \\ &= \frac{43.482}{5} \end{aligned}$$

$$\begin{aligned} \bar{X}_2 &= \frac{\sum x_2}{n_2} \\ &= \frac{44.405}{5} \end{aligned}$$

$$\begin{aligned} S^2 &= \frac{1}{n_1 + n_2 - 2} \left[ \sum (X_1 - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2 \right] \\ &= \frac{1}{5 + 5 - 2} [13.853 + 11.658] \end{aligned}$$

$$= 3.189$$

## Appendix-K

### Calculation of Mean, S. D. and C. V. of Current Ratio of

### SCBNL and NABIL

(Rs. in Million)

F/y	SCBNL		NABIL	
	$X_1$	$X_1^2$	$X_2$	$X_2^2$
2003/04	1.056	1.115	0.764	0.583
2004/05	1.069	1.142	0.813	0.660
2005/06	1.063	1.129	0.916	0.839
2006/07	1.244	1.547	0.278	0.077
2007/08	1.148	1.317	0.483	0.233
	5.58	6.253	3.254	2.394

Where,  $X_1$  = Current ratio of SCBNL

$X_2$  = Current ratio of NABIL

For SCBNL

Calculation of mean ratio of SCBNL of Current Ratio:

$$\text{Mean} = \frac{\sum X_1}{n} = \frac{5.58}{5} = 1.116$$

Calculation of S. D. of Current Ratio

$$\text{S. D.} = \sqrt{\frac{\sum X_1^2}{n} - \left(\frac{\sum X_1}{n}\right)^2} = \sqrt{\frac{6.253}{5} - \left(\frac{5.58}{5}\right)^2} = 0.075$$

Calculation of C. V.

$$\text{C. V.} = \frac{u}{X} \times 100 = \frac{0.075}{1.116} \times 100 = 6.722\%$$

**For NABIL**

Calculation of mean of NABIL of Current Ratio:

$$\text{Mean} = \frac{\sum X_1^2}{n} = \frac{3.254}{5} = 0.650$$

Calculation of S.D. of Current Ratio.

$$\text{S. D.} = \sqrt{\frac{\sum X_1^2}{n} - \left(\frac{\sum X_1}{n}\right)^2} = \sqrt{\frac{2.394}{5} - \left(\frac{3.254}{5}\right)^2} = 0.2430$$

Calculation of C. V.

$$\text{C. V.} = \frac{u}{X} \times 100 = \frac{0.0243}{0.650} \times 100 = 37.33\%$$