CHAPTER I

INTRODUCTION

1.1 General Background

In today's modern world, banking sector plays an important role in the economic development of the country. This considered as economic backbone of developing countries. The developments of economic sector like agriculture, trade, industry, tourism etc. are interrelated with these financial sectors. Most of the developing countries like Nepal always face the shortage of capital to be invested in the developing activities. There is no possibility to invest in all sectors by government as well as by the private sectors, because this requires huge investment. Basically, banking is considering as the reservoir for the deposits whether small or large scaled. Further the banks play a vital role in channelizing these deposits to productive areas. Commercial Banks and Finance Companies (in Nepalese context) are the example of depository financial institutions whereas Employee Provident Fund, Development Banks, Insurance Companies are the example of non-depository financial institutions. All the economic activities are directly or indirectly channeled through these banks. People keep their surplus money as deposits in the banks and hence banks provide such funds to finance the industrial activities in the form of loans and advances. "The annual population growth rate of about is 2.24%, which is considered quite high. Only 20% of the people have the habit of savings. Thus, due to low saving there is lower investment. About 38% of people are living below poverty line and according to World Bank, with the help of Central Bureau of Statistics, has stated that the poverty has declined by 11% during the last eight years, which means that the people living below poverty line currently are 31%". (NPS: 2001)

"Poverty has become a major challenge for the least developed countries especially like ours. It is a matter of pride and development for a nation to eliminate it. For this reason, the entire resources of the nation have been deployed in it. In 2054 B.S., at the very outset of Ninth Plan, the people living below poverty line were 42%. During the same period, 44% were from rural sector and 23% from urban sector. Further classifying the urban sector, except Kathmandu Valley, 34% poverty was found in other urban sectors. If

the per capital income is less than Rs.4404 a year, then such people are considered as people living below poverty line. Later, in 2001 A.D., this amount was increased to Rs.6100. However, at the mid of the Ninth Plan, poverty has been decreased to 38% and in 2004 A.D. to 30%."(Kantipur: 2005; 8)

"Similarly, the country faced many vicissitudes in foreign trade. The growth rates in agriculture and non-agriculture sectors have been estimated at 3.7% and 3.3% respectively. There has been a growth of 5.6% in exports in 2003/04 A D. compared to the previous year and the amount being Rs.52, 724 million. The credit for this is an improvement in exports to India, which increased by 18.2% in contrast to the decrease by 5.5% last year. Contrary to this, exports to third countries have gone down by 8.6%, which recorded a growth of 23.8% last year. On the other hand, the imports have increased by 11.9%, which totaled Rs.139, 142 million. Imports growth trend from India reduced to 15.1% from 25.3% in 2003/04 A.D. While, imports from other countries has increased by 7.6% compared to 5.2% in 2003/04 A.D. As a result, trade deficit increased by 16.1% to reach Rs.86, 419 million in 2003/04 A.D. The average inflation during 2003/04 A.D. was estimated at 4% as compared to 4.8% during the previous year. The IMF has forecasted the world economic growth rate of 4.6% and 4.4% for 2004 A.D. and 2005 A.D. respectively and growth rate of South Asian countries are expected to be approximately 6.5% in 2004 A.D. compared to the actual growth rate of 7% in 2003 A.D."(Economic Survey: 2003/04)

Financial institutions play an important role in the proper functioning of an economy. These institutions act as an intermediary between the individuals who lend and those who borrow. These institutions accept deposits and provide loans and advances to those who are in need. They make the flow of investment easier. Therefore, we cannot deny the role a bank plays in developing an economy. It pools the funds scattered in the economy and mobilizes them to the productive sectors. Their main objective is collecting the idle funds, mobilizing them into productive sectors and causing an overall economic development. Thus, the bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society as a whole.

Development of a nation depends upon various sectors viz: trade, industry, agriculture etc. Hence, to develop these sectors a continuous and adequate supply of resources is required. In developing countries, especially like ours, there is always a dearth of capital. The government cannot contribute to the economic development all alone. Nevertheless, the private sector also cannot reinforce due to low per capita income and higher propensity to consume of the people. Hence, due to low income, saving is low which on the other hand results in low capital formation. Thus, investment is one of the vital aspects in the improvement of the economic condition of a country.

Commercial bank is that aspect of banking which functions as all other banks with all banking features (except some functions of Central Bank) classifying and fulfilling customer satisfaction. Commercial banks are backbones to vertebrae of Economic Development and any nation's development might be indicated by the performance of the Commercial Banks in the country. Further some definitions are as follows;

The Commercial Bank Act, 2031 B.S. of Nepal has stated, "a commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions".

The article published in the journal UNCIMD/ GATT, "joint venture means joining of forces between two or more enterprises for the purpose of carrying out a specific operation".

"A business contract of management effort between two person, companies or organization involving risk and benefit sharing" is a joint venture. (Ahuja; 1994:20)

In this sense a bank may be defined as a financial institution, which accept the deposit for the purpose of lending or investment from the public, repayable on demand through cheques, draft or otherwise and also performs a number of agency services to its clients, on instruction.

JVB's are those financial institutions established to achieve mutual exchange of goods and services for sharing competitive advantage by performing joint investment scheme between Nepalese investors; financial and non-financial institutions along with private investors and their parent banks each providing 50% of total investment. The primary motive of JVBs is to earn profit by investing and granting loans and advances.

All the Nepalese JVBs are established and operated under the rules, regulations and guidance of NRB. NRB has issued certain directives to these banks e.g. regarding the mandatory credit collection to the priority sectors, NRB has directed to the government owned banks to invest 3% and the JVBs to invest 0.5% of their total outstanding credit to the priority stricken community.

Today, there is a keen competition in business world and banking is not an exception. The ever-increasing political problems and terrorism in the country has affected the investment opportunities of banks; in fact, they are compelled to search for new investment avenue. However, investment is a critical job, if done correctly increases the affluence of the country and contrary to this will lead the country to the abyss of poverty. Therefore, banks must follow a sound investment policy for a profitable, safe and purposeful investment. Investment policy should ensure minimum risks and maximum return. A good investment policy ensures a right balance of investments on all sectors with efficient and effective utilization. It attracts both borrowers and lenders who help to increase the quality and quantity of deposits, loans and advances. The reason for the downfall of most of the banks in the world is due to the shrinkage in the value of loans and advances. Since, loan is a risky asset investment should be done wisely.

In present scenario, the interest rates on deposits provided is very low and interest charged on loans and advances is very high and apart from this, there are no profitable sectors for investments. Due to this very fact, Nepalese JVBs are required to explore new horizons of investments in order to sustain in the long run. The profit of a bank largely depends upon the lending practices and policies and investments opportunities in different sectors. The greater the credit created by the bank the higher will be its

profitability. Bank receives funds from various sources like share capital, reserve funds, retained earnings, bank borrowing, deposits and other liabilities. These funds cannot be kept idle, they have to be invested in assets like cash and bank balance, money at call or short notice, investments, bills purchased and discount, loans and advances, fixed assets and deferred expenses. It is because the bank has to repay some liabilities on demand, it also has to give interest on deposits made by its customers and even the shareholders seek maximum return. Therefore, the funds received by the bank should be invested in such a way that they will be readily available to repay and distribute the returns. Hence, the bank should have enough liquidity and profitability with all the safety measures.

1.2 STATEMENT OF THE PROBLEM

In the dawn of new millennium, till 2006/07 there was 20 CBs in operation, towards the end of 2009, there are 25 CBs. All these banks have created a cutthroat competition in the financial sector. Fluctuating and low interest rates on deposits, poor deposit mobilization etc. has affected on the return of funds, total assets, total deposits and shareholder's wealth position.

Since the liberalization policy of the government, various banks and financial institutions have been established with a view to reinforce the economic growth of the country. They have played a pivotal role by accepting deposits and granting loans. Investment of the collected funds is the most important factor for both shareholders and the bank as they are the source of earning. Credit extended by these banks is directly related to the national interest. Therefore, the banks should have a sound investment policy.

Diana Mc Naughton said, "Investment policy should incorporate several elements such as regulatory environment, availability of the funds, selection of risks, and loan portfolio balance and term structure of liabilities".

Commercial banks are more interested in providing loans on short-term basis against movable collaterals. They are reluctant to invest in huge and long term projects due to

safety and security of their loans. Thus, they are following conservative loan policy based on strong security. Similarly, these banks do not have a well-organized investment policy. They rely much on the instructions and guidelines of Nepal Rastra Bank. Even if they have formulated some guidelines, they fail to implement it due to poor supervision and lack of professionalism.

Joint Venture Banks (JVBs) are of utmost importance as they have contributed significantly to the overall economic development of the country. Yet, after so long since their establishment and successful operations for almost two decades, they are not free from problems and hindrances in their avenue. Since, we are concerned with the sample (NABIL & SCBNL) we will be discussing about it. This bank has been operating pretty well from its inception. It has been awarded prestigious titles on account of its experience in the field of international banking, hi-tech computerized services, professional attitude, qualified and experienced work force, quality and reliable services that served as the key factor for its rapid progress. It has been able to control and capture a remarkable leadership of Nepalese banking sector in a relatively short period in terms of both market share and market price.

Project appraisal method followed by commercial banks is not scientific and appropriate. Granting loan against insufficient deposits, overvaluation of goods pledged, land and building mortgaged, risk-averting decision regarding loan recovery and negligence in recovery of overdue loans are some of the drawbacks of unsound investment policy. Similarly, loan supervision and follow-up mechanism is lacking in many commercial banks. Due to this, the portion of non-performing assets on total loans and advances has been increasing rapidly.

Nepal being an agricultural country needs more investment in this sector. Nevertheless, commercial banks are rather concerned in industrial and foreign projects. As a result, the credit extended to this sector is unsatisfactory. Besides, they are not even fulfilling the NRB’s regulation of 12% investment of their total loans to the priority sectors like agriculture, cottage and small industries and services.

Similarly, the banks are not following the diversification principle i.e. they are not considering the investment portfolio position. A good portfolio theory indicates diversification of investable funds to reduce risks. Hence, the principle "do not put all the eggs in one basket" really does not apply in context of Nepalese commercial banks. As a result, many banks today could not recover their loan because, in the past, a major portion of their investment were made in garment, carpets and hotel sectors that has now come to the brink of extinction.

Thus, the study mainly focuses on analyzing the different aspects of the bank and finding the answers to questions such as;

- Is the bank able to utilize the available funds effectively?
- How aggressively is the bank lending?
- What is the proportion of the bank's investment on priority sectors?
- What is the proportion on risk free and risky investment on total investment made by the bank?
- What is the proportion of Non-performing assets on total loans and advances of the bank?
- What is the relationship of total deposit on total investment and total investment on total net profit of the bank?
- What steps should be taken to improve the investment policy of the bank?
- Is the bank maintaining sufficient liquidity position?

1.3 OBJECTIVES OF THE STUDY

The main objective of this study is to evaluate the investment policy of NABIL & SCBNL and to recommend corrective measures, if any, in order to improve its performance. Besides, the specific are:

Analyze deposit utilization and its relationship with total investment and net profit of the bank.

- To determine the growth rate of bank in terms of deposits, loans and advances, investment and profitability of the bank.
- To determine the proportion of loan loss provision to total loans and advances and to evaluate the non-performing assets position of the bank.
- To evaluate the liquidity, assets management, profitability position, loans and advances portfolio management of the bank.
- To determine the proportion of investments in risky and risk free assets and to evaluate the off-balance sheet operation of the bank.
- To suggest measures to improve the investment policy of the bank.

1.4 LIMITATIONS OF THE STUDY

It is to fulfill the partial requirement of Masters of Business studies (MBS) and hence may lack proper application of research methodology.

- As mentioned earlier, this thesis is based on secondary data (published annual reports of commercial banks), websites, journals, newspapers, magazines etc and unpublished thesis.
- It only examines the investment policy of the bank and ignores other aspects for comparison.
- The study covers only 5 years data, beginning from 2002/03 to 2006/07.
- Among 20 commercial banks, only two (NABIL & SCBNL) is studied due to time and resources constraints. Thus, we cannot have a true picture of the overall conditions of commercial banks in Nepalese banking sector and the average performances of this bank is not the average of all the commercial banks in Nepal. Thus, the findings of the study cannot be generalized.
- To some extent, the data published on the websites may vary sometimes, with that of the annual reports of commercial banks. So, the data from the websites are considered as authentic one.
- The study is meant for academic purpose i.e. partial fulfillment of the requirement of the Masters of Business Studies (MBS).

- It has taken into account only certain factors affecting the investment decision.

1.5 FOCUS OF THE STUDY

Banking in this era has a new meaning and dimension which is now offering many extra services rather then just accepting deposits and granting loans. People invest their earnings with a hope of getting good return on their investment. Nevertheless, due to certain circumstances they loose their hard earnings. Therefore, in order to make the right decision we have to have a sound investment policy. Hence, this thesis mainly focuses on the investment policy JVB's in Nepal with special reference to NABIL and SCBNL. The study focuses on evaluating the deposit utilization of the bank in terms of loans, advances, investments and its contribution in the profitability of the bank. It also focuses on the contribution of off-balance sheet activities in the earnings of the bank and on non-performing assets position of the bank.

1.6 SIGNIFICANCE OF THE STUDY

In the light, if the very fact that commercial banking sector is the backbone of the economy, the study has been done in reference to the periodical performance of NABIL Bank Ltd and Standard Chartered Bank Ltd. This study fills a research gap on the study of investment policy of those banks, The study will provide a useful feedback to the policy makers of the bank and could be beneficial to various sectors such as general public, bank personals, management committee, investors, promoters, shareholders, stock-brokers and other stake holders because whether they can analyze the banks performance and can get adequate information whether their investments in banks is giving them good outcome or not. Apart from this, it is also useful for other commercial banks and central bank for formulation of appropriate investment polices and strategies and help to find the drawbacks and provide corrective measures for the proper implementation of it.

1.7 RESEARCH METHODOLOGY

The research uses a descriptive analytical method. In order to analyze the investment policy of NABIL & SCBNL, different ratios such as liquidity, profitability, assets management etc. are used. Thus, the research methodology that has been adopted with a view to attain the desired objectives is as follows;

1. Research Design

In order to find out the investment policy of the bank analytical as well as descriptive method has been adopted for the study.

2. Sources of Data

This study is mainly based on secondary data. These data are especially collected from sources like annual reports, profit and loss a/c, balance sheet of the respective banks, plan documents, periodicals, newspapers, magazines etc.

3. Population and Sample

At present there are seventeen commercial banks operating in Nepal. Among these, we have selected only two banks for the purpose of the study as a sample. It is the most prominent JVB in Nepal that occupy 5.88 percent of the total no. of commercial banks.

Sample:

NABIL Bank Limited (NABIL)

Standard Chartered Bank Nepal Limited (SCBNL)

The study of the research covers the period of 5 years, from Fiscal Year 2002/2003 to 2006/2007.

4. Method of Analysis

The study primarily focuses on the analysis of liquidity, profitability, assets management and others that can be obtained from the financial statement of the banks.

1.8 ORGANIZATION OF THE STUDY

The entire study is divided into 5 chapters. Brief information of what each chapter contains is given below.

Chapter 1.It is an introductory chapter, which includes general background of bank. It also discusses about focus and significance of study, statement of problem, objective and limitation of the study and research methodology.

Chapter 2.This chapter deals with the review of literature. It includes reexamination or appraisal of the existing works in relevant areas and includes the concept of commercial banks, its roles, and a review of previous thesis too.

Chapter 3.It is concerned with research methodology. It includes research design, sources of data, population and sample and method of analysis.

Chapter 4.It is concerned with presentation and analysis of relevant data and information. In order to find out the true picture of the investment policy of NABIL & SCBNL's various financial and statistical tools and techniques are used. Thus, this chapter is concerned with the findings of the bank.

Chapter 5.This chapter is concerned with the interpretation of the results and findings of chapter 4. It summarizes the overall picture of the study, draws conclusions, and offers suggestions and recommendations for improvement in the future.

CHAPTER II

REVIEW OF LITERATURE

The word literature refers to writings on specific subject or printed information with an analytical expression on the concerned topic. Review of Literature refers to the analyzing, assessing, reevaluating and reexamining the previously written works and such review adds to the dimension of the study. It is a stocktaking of available literature in the field of research. Thus, in the preparation of this thesis various books, articles, thesis etc. has been consulted and reviewed which are discussed below. This chapter is further divided into conceptual framework and review of related studies.

2.1. CONCEPTUAL REVIEW

The banks and the finance companies including those involved in money market are such types of institutions that deal in money and substitute for money or say they deal with credit and credit instruments. There should be proper circulation of credit because it is the essence of the existence if the bank. The unsteady and uneven flow of credit with ad-hoc decisions harms the financial institution and overall the economy as well. As a result, banks should properly utilize its funds in various investment avenues with a view to sustain and earn profit.

Cheney and Moses, defines "Investment objective is to increase systematically the individual's wealth, defined as asset mines liabilities. An investor seeking higher return must be willing to face higher level of risk." (Cheney; 13)

James B. Baxley is of the view that, "Investment policy fixes responsibilities for the investment disposition of the banks assets in terms of allocating funds for investment and loan and establishing responsibility for day to day to management of those assets." (Baxley; 1987: 47)

Frank K. Reilly has defined investment as, "An investment may be defined as the current commitment of funds for a period of time to derive a future flow of funds that will

compensate the investing unit for the time the funds are committed, for the expected rate of inflation and also the uncertainty involved in the future flow of the funds." (Reilly)

"The term investing can cover a wide range of activities. It often refers to investing money in certificates of deposits, bonds, common stocks or mutual funds. More investors that are knowledgeable would include other financial assets such as warrants, puts and calls future contracts and convertible securities. Investing encompasses very conservative positions and aggressive speculation." (Jones; 1988: 56)

Dr. Mrs. Preeti Singh has defined investment as, "Investment is the employment of funds with the aim of achieving additional income or growth in value. The essential quality of an investment is that it involves 'waiting' for a reward."

Emphasizing the importance of investment policy, H. D. Crosse puts his view in this way, "Lending is the essence of commercial banking and consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management. Well conceived lending polities and careful lending practices are essential if a bank is to perform its credit function effectively and minimize the risk inherent in any extension of credit." (Crosse; 1963: 85)

"Investments, in its broadest sense, means the sacrifice of certain present value for (possible uncertain) future value." (Sharpe; 1999: 61)

In the words of Gitman and Jochnk, "Investment is any vehicle into which funds can be placed with the expectations that will preserve or increase in value and generate positive returns." (Gitman; 1990: 92)

It is said that a bank must strike a right balance between liquidity, profitability and safety. "The secret of successful banking is to distribute resources between the various forms of assets in such a way as to get a sound balance between liquidity and profitability so that there is cash (in hand quickly releasable) to meet every claim and at the same time,

enough income for the bank to pay its way and earn profits for its shareholders." (Radhaswami; 1979: 34)

Ibid defines investment as, "The rate of return on assets is a valuable measure when comparing the profitability of one bank with another or with the commercial banking system. A low rate might be the result of conservative lending and investment policies or excessive operating expenses. Banks could, of course, attempt to offset this by adopting more aggressive lending and investment policies to generate more income."
(Ibid; 195)

According to L.V.Chandler, "A banker seeks optimum combination of earning, liquidity and safety while formulating investment policy." (Chandler; 1973: 102)

"Default risk arises because firms may eventually be bankrupt. Some default risk is undiversifiable because it is systematically related to the business cycle, which affects almost all investments. However, some default risk may be diversified away in a portfolio of independent investments." (Francis; 1983: 87)

S.P. Singh and S. Singh holds that, "The investment (credit) policies of banks are conditional, to great extent, by the national policy framework, every banker has to apply his own judgment for arriving at a credit decision, keeping of course, his banks credit policy also in mind." (Singh; 1983: 99)

Reed ET. Al (1980: p-242) has stated that, "More and more banks have developed formal, written lending policies in recent years. They provide guidance for lending officers and thereby establish a greater degree of uniformity in lending practices." Since, lending is important both to the bank and to the community it serves, loan policies must be worked out carefully after considering various factors like:

- Economic condition
- Stability of deposits
- Capital portion
- Credit need of the areas served
- Risk and profitability of various types of loans
- Ability and experience of bank personnel
- Influence of monetary and fiscal policy

2.1.1. FEATURES OF SOUND LENDING POLICY

The income and profit of the commercial banks depends upon its lending policy, procedure and investment of its fund in different securities. When they make greater credit, they will earn higher profitability. A sound lending and investment policy is not only prerequisite for banks profitability, but also crucially significant for the promotion of commercial of commercial savings of a backward country like ours. Some of the main characteristics for sound lending and investment policies that must be considered by commercial banks are as follows:

A. Safety and Security

A bank should always be cautious about the safety and security of its investments. It should not invest their funds in those securities which are too volatile i.e., which are subject to too much depreciated and fluctuated as even a little difference may cause a great loss. Similarly, it should not invest its funds into speculative businessperson who may earn millions or be bankrupt in a split if seconds. Securities means adequate collateral having good value, which can be easily sold off if, required at any point of time. The bank should invest their deposit in secured and profitable sectors and accept those securities that are commercial, marketable, durable and high market value. For this purpose, the bank should apply “MAST” in order to reach to a proper investment decision, where MAST stands for

M= Marketability

A= Ascertainability

S= Stability

T= Transferability

B. Profitability

Profit is an income from an investment or transaction. It is the excess of income over expenditure during a period of time. Commercial banks must invest their collection in proper sectors in order to maximize its volume of wealth through maximization of return on their investments and lending. They must invest their funds rationally to those areas, where they gain maximum profit. Their return depends upon the volume of loan, interest rate, its time period and nature of investment in different securities.

C. Liquidity

Liquidity is the ability of a firm to satisfy its short- term obligations when they become due for payment. People deposit money in bank on different accounts with the confidence that it will be able to repay their money when they need. In order to maintain this confidence and loyalty of the depositors, the bank must keep this point in mind while investing its excess funds in different securities, so that it can meet current or short- term obligations when they become due for payment.

D. Diversification

A bank should always bear in mind not to invest only in a particular sector. “A bank should not lay all its eggs in the same basket”, in fact, it should diversify its investments. Diversification helps to earn a good return and minimize risks and uncertainty. Diversification of loans helps to sustain loss according to the law of average.

E. Purpose of Loan

Loans are taken for various purposes by the customer hence, it is very important for the bank to know why this is taken or for what purpose for security reasons. If loan is not used for the purpose that had been meant for, then the customer can never repay their borrowings and will having bad debts and may suffer heavy loss. Therefore, in order to avoid such circumstances, it is essential that a bank examine all the essential documents and information about the scheme of the project and credit worthiness of the borrower before approving the loan.

F. Legality

Banks should invest only in legal activities of a business not in illegal activities by maintaining its reputation as well as, if loss occurs, will solely be responsible for the loss of its investment. Cause illegal securities will bring out lots of problems for the investor. Therefore, commercial banks must abide by the rules and regulations along with different sorts of directives issued by the Nepal Rastra Bank, Ministry of Finance, Ministry of Law and other relevant authorities while mobilizing its funds for its own interest.

2.2 REVIEW OF RELATED STUDIES

In this part of the study we deals with the reviewing and examination of some related articles, journals and research papers published in different newspapers, magazines, economic journals, publications and other related books. However, there is not much articles published related to investment management due to the changing current scenario of the country, the study and application of investment management is still in infant stage except for some joint venture commercial banks.

2.2.1. REVIEW OF ARTICLES

Dr.Sunity Shrestha (1993) in her research, "Investment planning of commercial banks in Nepal", has made remarkable efforts to examine the investment planning of commercial banks in Nepal. From the study, what she concluded is that bank portfolio (loans and investment) of commercial banks had 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. As a result, investments are not made in a professional manner. Similarly, investment planning and operation of commercial banks in Nepal have been found unsatisfactory in terms of safety, profitability, liquidity, productivity and social responsibility. 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 effectively and efficiently with proper analysis of the projects."

Dr. Radhe S. Pradhan (1994), "Financial Management and Practices in Nepal" in 1992, dealt mainly with financial function, sources and types of financing, financing decision involving debt effect of change in taxes on capital structure, financial distress, dealing with banks and dividend policy. The main findings of the study connected with financial management are as follows:

- Banks and retained earnings are the two most widely used financing sources.
- The enterprises have a definite performance for bank loans at a lower level of debts.
- Generally, there is no definite time to borrow the issue stocks. That is majorities of respondents are unable to predict when interest rate will lower or go up or are unable to predict when the stock will increase or decrease.
- Most enterprise does not borrow from one bank only and they do switch between banks whichever offer best interest rates.
- Most enterprises find that banks are flexible in interest rates and convenient.

Thus, to sum up it can be said that out of numerous studies in the capital market of Nepal, this study has established itself as a milestone.

Dr.Govind Bahadur Thapa(1994: 29-37) is of the opinion that commercial banks including foreign joint venture banks seems to be doing pretty well in mobilizing deposits. Similarly, loans and advances of these banks are also in an increasing trend. Nevertheless, compared to the high credit needs, particularly by the newly emerging industries, the bank still seems to lack adequate funds for investments. The banks are increasing their lending to non-traditional sectors along with the traditional sectors.

Among several commercial banks, Nepal Bank Ltd. and Rastriya Banijya Bank are the only two that are operating with a nominal profit and sometimes incurring losses. Due to non-recovery of accrued interest, the margin between interest income and interest expenses is declining. These banks have not been able to increase their income from commission and discount through traditional off-balance sheet operations. On the other hand, they have heavy burden of personnel and administrative overheads. Similarly, profit position of these banks has been seriously affected due to excessive accumulation of overdue and defaulting loans. Contrary to this, the foreign joint venture banks have been operating efficiently. They are making tremendous amount of profits and are distributing a large portion of it to its shareholders and employees as dividends and bonus. Because of their effective persuasion for loan recovery and management, overdue and defaulting loans have been limited resulting in high margins between interest income and interest expenses. Similarly, concentration of these banks in modern off-balance sheet activities and efficient personnel management has added to the maximization of their profits.

Mr. Pradhan mentioned that deposit mobilization carried out effectively is in the interest of the depositors, society, financial sector and the nation. Lower level of deposit rising allows squeezed level of loan delivery leaving more room to informal sector. That is why higher priority to deposit mobilization has all the relevance.

F. Morris (1990) in his discussion paper' "Latin America's Banking System in the 1980^{s}" has concluded that most of the banks concentrated on compliance with central bank's rules on reserve requirements, credit allocation and interest rates. While analyzing loan portfolio, operating efficiency and soundness of bank investment management has largely been overlooked. The huge losses now found in the bank's portfolio in many developing countries are testimony to the poor quality of this oversight investment function.

He further adds that mismanagement in financial institutions has involved inadequate and overoptimistic loan appraisal, lower loan recovery, high-risk diversification of lending and investments, high-risk concentration, connected and insider lending, loan mismatching etc. This has led many banks of developing countries to the failure in 1980^{s}.

2.2.2. REVIEW OF JOURNALS

Dr. Bijay K.C (2005) has presented an article about the "Strategies for reducing Non-Performing loan in Nepal". According to him, rising amount of non-performing loan is generally considered a sign of inefficiently in the financial system. It shows that the financial system has failed to divert funds to productive areas. While it may not be possible to completely eliminate non-performing loans from financial system they should be controlled and put within an acceptable range. Of late, many countries have faced the problem of non-performing loans and some of them have taken drastic steps to control them.

The above journals focus in the various aspects of the banks to reduce non-performing loan and such strategy may include the following:

- Debt recovery tribunals
- Asset management company
- Bankruptcy act
- Black listing and classification of defaulter
- Enforcement of rules and regulation

In conclusion, he said that non-performing loan is a big problem not only to the financial institution but also the borrowers. While on one hand borrowers must understand that loans obtained from financial institution are saving of some one else and need to be repaid. Financial institution should also realize on the other hand that performance of business depends on many vagaries of business climate which are beyond the control of borrower and but all defaulters are willful. It is necessary to build up a climate to trust ad a climate for sound financial discipline where wrong doers are severally penalized needs to be established. Maintaining financial discipline should go beyond loan defaulters and penalize any one who commits financial crime.

Krishna D. Bhattarai (2003) has presented an article about the "Non- Performing Assets (NPA) Management". According to him, a loan is a very easy term for a borrower when he has already taken and for a lender not availed. It is equally difficult for a borrower to avail and for lender to recover. From a banker's view, it is just like a stone to roll down from the top of the hill while sanctioning, but too difficult to roll back the same stone to the top of the hill while recovering. A loan not recovered within the given timeframe either in the form of interest servicing or principal repayment is called non-performing loan. There are other parameters as well to quantify a NPL. Security not to the extent of loan amount with specified safety margin, value of security not realizable, possession not as per the requirement of bank, conflict of charges are some of the reasons which causes difficulties while recovering the loan.

According to him, NPL of a bank is like a cancer in a human body, which will collapse the entire bank if not taken care in time. This is an important discipline in banking to prevent the entire NPL or avoid situation for a loan to turn into NPL. Loan for banks is very essential to generate revenue for operational expenses as well as to provide return to the shareholders.

When a loan advanced from good money turns into a bad loan, the chances of shareholders return as well as the survival of the bank is at stake. Ailing banks cannot portray a better image in public. When a public looses the confidence on a bank and does

not deposit, the bank will be in the verge of extinction. Therefore, deposits are the essence for a bank. A loan disbursed as good loan does not turn into bad overnight. It has certain course to turn into bad. An efficient bank management can recover the loan before turning it into bad and can save itself from the unwanted catastrophe. A general survey reveals following reasons why a good loan turns into a bad one:

Situational Problems:

- Poor analysis of project and its capital requirement leading to a situation of over/under capitalized.
- Problem in managing the unit.
- Faulty evaluation of loan and security.
- Mismatch in demand and supply leading over inventory or under inventory.
- Actual modus operandi is very different from the projection and unit unable to cope with the situation.
- Sudden change in internal and external environment and project not being able to run according to its plan.
- Collection of receivables unnecessarily delayed resulting delay in re-order and chances of business penetration by other competitors.

Intentional Problems:

- Intention to flee without settling the loan.
- Intention to cheat the bank.
- Intention to auction the property.
- To relieve from other debts.
- Malicious acts of both the bank staffs and the borrower.
- To show other creditors of his bankruptcy, this is unmanageable.
- To waive interest/ penal interest or avail discount on loan if paid in later stage when bank offers such facilities.

In conclusion, a borrowing may reflect one or all the above signals that may cause harm to the bank. There are few ways to protect bank from intentional defaulter but for those default caused by situations we can reschedule or restructure their facilities and help them

to meet their debt obligation as per the cash flow they are having. Even an authentic loan that has been sanctioned with a good intention may turn into bad due to lack of proper management and carelessness. The bank will have to face heavy consequences in such a case. When a good loan, with all effort to protect it, turns into bad and the borrower's ability is not sufficient to repay it, he then tries to hide it from the bank and wants to be relieved temporarily. Such situations give some signals to the bank and these signals are called danger signals.

A bank must be one-step further than its customers must. It must collect all the relevant information that are required by the borrower for the establishment of a business and be rigid to give loan than to give his own money without any security. When a borrowing unit is not able to serve the debt from the source explored, the documentations are merely a decree to enforce legal action against him. Nevertheless, what gets realized when everything is lost. A jail and punishment does not satisfy the interest of bank. Therefore, he is of the view that the bank should always keep in mind the formula Know Your Customers (KYC) before giving loans.

The security given by a borrower may be ample for the exposure. However, the borrower from other source of business may not be able to generate substantial earning to service the debt. Bank has the right to auction the property and liquidate the loan but in doing so realization from the auction of the property is always less than the value of the assets. This will serve neither the purpose of bank nor the borrower instead cause loss to both.

M.K. Pradhan in his article," Nepalma Banijya Bank: Upalabdhi Tatha Chunauti" has highlighted some major issue in local commercial banks in comparison of recently established JVBs. The whole Nepalese commercial banking system in terms of their performance and profitability has been pointed out by him and the following points are summarized as:

- Deposit collection rate of JVBs is very string and efficient in comparison with local commercial banks.

The patterns of deposit collection are or similar among the banks and current deposit ratio in local bank is 9.34% but 52.5% in commercial banks where as fixed deposit ratio of local banks is very high in comparison with commercial banks.

The main function of financial institution is to collect deposits regularly and investment in different sectors. So, deposit is considered as the life blood of any financial institution.

Dependra B.Kshetry, according to him, "Banking industry: Magnet for investors", the commercial banks in operation, Nepal Bank Limited, the pioneer bank and Rastriya Banijya Bank, the fully government owned bank dominate at least from the point of view of branch expansion, deposit mobilization and lending. Over 60% of the deposit with the banking system goes to two giant commercial banks and that the commercial banks are becoming urban bias, which is manifested from the trend of withdrawing rural branches of government and semi-government banks on the plea of unsuitable security situations while the commercial banks limit their branches at the most to the periphery of urban areas, Up till January 2000, the bank branches numbered 513 units catering for 36000 people a branch. Concentration of banking units into urban areas is growing over time. Of the 27 commercial bank branches closed after the political change, 15 were from rural areas. The momentum of downing their shutter of commercial bank in the remote area is gaining over time due to twin factors, first the unviable conditions emanated from the lack of investment opportunities as opposed to deposit mobilization. Second, the tendency of commercial banks to limit their activities at the most to bazaar areas has encouraged the two big commercial banks of Nepal culminating into closing down or ration in rural areas on varied pre-texts.

According to the article, only 5.3% of branches are working in rural areas being to Agriculture Development Bank of Nepal (ADBN) and commercial banks and the rest 91.7% comprises of Nepal Bank Limited and Rastriya Banijya Bank branches. This reveals bleak future prospects of operating commercial banks into rural areas. Again he has quoted that banks are complaining the absence of economically viable projects for

investments and claim that the sector is saturated. Further opening of new banks means sharing whatever is available but not pumping new capital and technology.

Sekhar Bahadur Pradhan (1996:9) has presented a glimpse on investment in different sectors, its problems and prospects through his article, "Deposit mobilization, its problem and prospects." On his article, he has expressed that, "Deposit is the lifeblood of any financial institution, and be it commercial bank, finance company, co-operative or non-government organization." He also added, in consideration of 10 commercial banks and nearly three dozens of finance companies, the latest figure does produce a strong feeling that a serious review must be made of problems and prospects of deposit sector. Except few joint venture banks, other organization rely heavily on the business deposit receiving and credit disbursement.

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

- Due to the lesser office hours of banking system, people prefers for holding the cash in the personal possession.
- Unavailability of the institutional services in the rural areas.
- No more mobilization and improvement of the employment of deposits in the loan sectors.
- Due to the lack of education, most Nepalese people do not go for saving in institutional manner. However, they are very much used of saving, be it in the form of cash, ornaments or kind. Their reluctance to deal with institutional system are governed by their low level of understanding about financial organization, process requirements, office hours withdrawal system, availability of depositing facilities and so on.

2.2.3 REVIEW OF THESIS

While preparing this thesis, many other theses by previous students regarding various aspects of commercial banks has been studied. Some were relevant for this study while others were not. So, among those relevant these some are presented henceforth.

Kedar Prasad Poudyal in his research, "Investment in priority sector with special reference to Nepal Bank Ltd." Has put forward following objectives:

a) To analyze the repayment position of the priority sectors.
b) To find trends of priority sectors loan.
c) To analyze how far Nepal Bank Ltd. has been able to grant credit to priority sectors.
d) To examine the impact of loan on priority sectors.
e) To analyze the impact of probable cause of misuse of the loan by the borrowers.

Similarly, the major findings of the study were as follows:

a) The procedure of loan sanctioning is rather slow and clumsy.
b) Bank was not able to fulfill the purposed target of corresponding loan to the priority sector.
c) Banking procedures are so complicated that a layman is not able to understand it completely.
d) Loan repayment was more satisfactory from agriculture sector than the cottage industries and service sector.
e) Short-term credit was important for rural people.
f) Loan repayment was mainly due to the miss utilization of loan, other important causes are linked with social expenses like expenses in marriage ceremony, medical treatment, cremation etc.
g) Loan in priority sector has significantly generated the employment opportunity.
h) Loan in priority sector has increased the rural banking system in the rural areas and bank branch expansion.
i) The investment amount and percentage of priority sector investment on total deposits have up-going trend.

j) A sort of pressure groups like local people, politicians, administrators etc affect in loan granting process.

Prabina Bajracharya in her research, "Investment of commercial banks in priority sector." The objectives of conducted studies were as follows:

a) To analyze the trend of investment in private sectors for 10 years from 2047 B.S. to 2056 B.S.
b) To analyze the trend of repayment in private sectors from 2047 B.S. to 2056 B.S.
c) To measure the effectiveness of the program in terms of the investment and repayment in rural and urban sector.
d) To evaluate the banking procedures and services in disbursing loan in this sector.
e) To provide package of suggestion based on the study.

The research was conducted through primary and secondary data. For the primary data, pre-structured questionnaire was distributed to entrepreneur. Secondary data from different sources like reports, books, bulletins, journals, magazine, and other publications of RBB, NRB, etc. are also collected.

The research findings of the study are as follows:

a) The target of 12% investment of total outstanding liabilities in priority sector and 3% out of which has been invested in deprived sector has been met by RBB.
b) Trend analysis for 10 years shows the increasing trend of investment in priority sector's which shows that the commercial banks are giving due consideration to increase investment in priority sector.
c) Trend analysis of repayment for 10 years shows that the repayment has also increased in the following years.
d) Interest charged on the loan disbursed in this sector is fairly less that the interest charge on loans for other purposes. In addition to this, there is high overhead cost incurred for supervision, administration and others in this program.
e) Regression analysis shows positive relation between investment and repayment.

f) The chi-square test of effectiveness of program shows that the program is more effective in rural and semi-rural areas as compared to the urban areas.
g) Investment on agriculture is higher than investment on industry and service sector.
h) The study revealed that the procedure of loan disbursing itself is complicated for the borrowers to understand it.
i) In fact, it the supervisors make the scheduled supervision and inspection and the frequent contact with the borrowers, the chance of misuse of loan can be minimized.

Raja Ram Khadka has conducted a thesis research on, "A study on the investment policy of Nepal Arab Bank Ltd. in comparison to other joint venture banks of Nepal."

The objectives of the research were as follows:

a) To find out the relationship between deposit and total investment, deposit and loans and advances, and net profit and outside assets of NABIL in comparison to other JVBs.
b) To evaluate the liquidity, assets management efficiency and profitability position in related fund mobilization of NABIL in comparison to other JVBs.
c) To evaluate the growth ratios of loans and advances and total investment with respective growth rate of total deposits and net profit of NABIL in comparison to other JVBs.
d) To evaluate the trends of deposit utilization and its projection for the next five years of NABIL in comparison to other JVBs.
e) To discuss fund mobilization and investment policy of NABIL in respect to it's fee-based off balance sheet transaction and fund based on-balance sheet transactions in comparison to other JVBs.
f) To suggest and recommend some measures on the banks of comparative fund mobilization and investment policy of NABIL and other JVBs for the improvement of financial performance of NABIL in future.

The findings of the research were as follows:

a) The profitability position of NABIL is comparatively better than that of other JVBs.
b) The trend values of loans 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.
c) The liquidity position of NABIL is comparatively worse than that of other JVBs; NABIL has utilized more portions of current assets as loans and advances and less portion as investment in government securities.
d) There is significant relationship between deposit and loans and advances as well as outside assets and net profit whereas there is no significant relationship between deposit and total investment incase of NABIL and other JVBs too.
e) NABIL is comparatively less successful in on-balance sheet utilization as well as off-balance sheet operation than that of other JVBs, which predicted that NABIL could not mobilize as efficiently as other JVBs and may lag behind in the comparative market of banking in the days to come.
f) NABIL seems to be more successful to increase sources of funds and its mobilization i.e. deposits, loans and advances and total investment but it seems to be a failure to maintain its high growth rate of profit compared to other JVBs.
g) There is no significant difference between mean ratio of loans and advances to total deposit, total investment to total deposit, government securities to current assets, loans and advances to current assets, return on loans and advances, total interest earned to total outside assets of NABIL and other JVBs whereas, there is significant difference between total OBS operation to loans and advances of NABIL and other JVBs.

T.K.Raya with thesis on, “Investment policy and analysis of commercial banks in Nepal” made a comparative study of SCBNL with NIBL and NBBL. His main objectives were as follows:

a) To discuss fund mobilization and investment policy of SCBNL in respect its fee based off-balance sheet transaction and fund based on balance sheet transaction.
b) To evaluate the liquidity, efficiency and profitability and risk position.

c) To evaluate trend of deposit, investment, loan and advances and project for next 5 years.

His main findings were as follows:

a) Mean current ratio of SCBNL is slightly higher than that of NIBL and NBBL.
b) Mean ratio of cash and bank balance to total deposits of SCBNL is lower than NIBL and NBBL.
c) Liquidity position of SCBNL is comparatively better than NIBL and NBBL. It has the lowest cash bank balance to total deposit and cash bank balance to current ratio. SCBNL has a good deposit collection. It has made enough investment on government securities but it has maintained low investment policy on loan and advances.
d) SCBNL is comparatively average successful in it's on balance sheet operation. But off balance sheet operation activities in compared to NIBL and NBBL has maintained the strong position.
e) SCBNL is comparatively higher position than that of other banks as well as it uses to provide interest to the customers for different activities.
f) There is significant relationship between of loan and advances and between asset and net profit of SCBNL.

He recommended the SCBNL for effective portfolio management and for project oriented approach. He also suggested enhancing the off balance sheet operation.

Ganga Ram Manandhar has conducted a thesis research on, "A comparative study in investment policies of finance companies in the context of Nepal."

He has pointed out the following objectives:

a) To evaluate the trends of deposit utilization and its projection for the next five years in case of these companies.
b) To evaluate the liquidity, assets management efficiency and profitability position in relation to fund mobilization of above listed companies.

c) To evaluate the growth ratio of loans and advances and total investment with respective growth rate of total deposits and net profits of the companies.
d) To find out relationship between deposits and total investment, deposit and loans and advances and net profit and outside assets of the listed companies.
e) To discuss the fund mobilization and investment policy of these companies in respect to its fee based off-balance sheet transactions and fund based on-balance sheet transactions.
f) To suggest and recommend some measures on the banks of comparative fund mobilization and investment policy of these companies for the improvement of financial performance in future.

The findings of the research were as follows:

a) The liquidity position of National Finance and NEFINSCO are comparatively better than that of other companies. Nevertheless, that of Goodwill finance and Union finance seems to be quite weaker.
b) Most of the finance companies are successful in on-balance sheet utilization as well as off-balance sheet operation. Among them, NEFINSCO and Goodwill comes ahead of all.
c) Profitability position of most of the companies is comparatively not better.
d) Most of the finance companies are able to maintain the growth ratios among them. Nepal share markets seem to be more successful to increase their source of funds and mobilization as well as net profit.

There is significant relationship between deposits and loans and advances of all finance companies. Similarly, there is no significant relationship between deposits and total investment of all companies except NEFINSCO and Goodwill Finance Co. Ltd. There is also no significant relationship between outside assets and net profit of all companies except Union Finance Co. and National Finance Co. Ltd. The trend value of total investment to total deposit ratio and loans and advances to total deposit ratio are in increasing trend.

Rajesh Dhital, in his thesis work "A comparative study of investment policy of SCBNL and BOKL", tried to evaluate the liquidity, asset management, profitability and risk portion of SCBNL and BOKL as well as analyzing the deposit utilization trend.

The findings of his study are:

a) The liquidity position of BOKL is far better than SCBNL although they both are doing quite satisfactory.
b) Most of the portion of deposit of SCBNL is in investment where as BOKL has in loan and advances.
c) BOKL has high degree if liquidity and credit risk than SCBNL.
d) Profitability position of SCBNL is better than BOKL.

He has presented the following suggestions:

a) The banks should increase cash and bank balance to meet the need of demand of loan and advance and investment.
b) They should follow the liberal lending policy.
c) They extend their branches in the rural areas and priority sectors.
d) Adopt project oriented approach.

Dharma Raj Khanal in his thesis entitled, "Investment in priority sector by commercial banks (a study of commercial banks of Kathmandu valley)" has put forward following objectives:

a) To analyze the trend of investment in priority sector.
b) To find out the extent of profitability affected in this sector.
c) To measure the efficiency of the program in the rural and urban sectors.
d) To evaluate the banking procedures and services in disbursing loans.
e) To explore the reasons for low investment.

The main findings of the research were as follows:

a) The investment in priority sector has an increasing trend.
b) Banks are giving due consideration to increase investment in the priority sector.

c) Due to low interest rate, overhead cost increased in administration and showed low profitability.
d) The regression analysis had shown a negative relationship between profit and investment.
e) The chi-square test has shown that the investment program in rural and semi-urban areas is more effective than in urban areas.
f) Banking procedure regarding loan disbursement in priority sector is much more complicated.
g) There is wide gap between demand and supply of loan.

Due to security and lack of proper legal documents most loan requesters have been rejected and even cancelled some of the projects in different sectors.

Lila Prasad Ojha conducted a study on, "Lending practices: A study on NABIL, SCBNL and Himalayan Bank Ltd." With the objective of:

a) To determine the liquidity position, the impact of deposit in liquidity and its effect on lending practices.
b) To measure the banks' lending strength.
c) To analyze the portfolio behavior of lending and measuring the ratio and volume of loans and advances made in agriculture priority and productive sector.
d) To measure the lending performances in quality, efficiency and its contribution in total income.

The findings of research are as follows:

a) The measurement of liquidity has revealed that the mean current ratio of all the three banks does not vary widely. All of them are capable in discharging their current liability by current assets.
b) The measurement of lending strength in relative terms has revealed that the total liability to total assets of SCBNL has the highest ratio. The high ratio is the result of high volume of shareholder equity in the liability mix. Himalayan bank has high volume of saving and fixed deposits as compared to current deposits resulting into

low ratio of non-interest bearing deposits to total deposits ratio compared to the combined mean.

c) SCBNL's tendency to invest in government securities has resulted with the lowest ratio of loans and advances to total assets ratio whereas NABIL has highest due to steady and high volume of loans and advances throughout the year.

d) The ratio of investment to investment and loans and advances has measured the total portion of investment in total of investment and loans and advances. The mean ratio among the banks does not have deviated significantly.

e) The loans and advances and investment to deposits ratio has shown that NABIL has deployed the highest proportion of its total deposits in earning activities. This indicates that NABIL is better in fund mobilizing activities.

f) The lending in commercial purpose is highest in case of NABIL and least in case of SCBNL. SCBNL has highest contribution in service sector lending. It has contributed 25.47% of its total credit in general use and social purpose.

g) The absolute measures of lending strength have revealed that the mean volume of net assets and deposits is highest in SCBNL with moderate variation. The volume of net assets of Himalayan Bank Ltd. is the least due to the share capital, reserves and surplus in its capital mix. However, the volume contributed by Himalayan Bank Ltd. in case of loans and advances is highly appreciable as compared to its net assets. The volume of loans and advances contributed by NABIL is the greatest in five years of study period. The mean investment of NABIL is the highest but the investment on government securities of SCBNL is the highest.

h) The portfolio analysis has revealed that the flow of loans and advances in agriculture sector is the lowest priority sector among these commercial banks. The contribution of all the banks in industrial sector is appreciable. The contribution made by Himalayan Bank Ltd. in industrial sector is greatest and that of SCBNL is the least.

i) The total income to total assets ratio measures the earning power of each rupee employed by the bank. NABIL's ratio in this case is the best. The ratio of total income to total expenses reflects the earning capacity of a rupee of expenses. The productivity of expenses in SCBNL is the best.

j) The measurement of efficiency in lending has revealed that the loan loss provision to loans and advances analysis shows that NABIL has the highest mean ratio. According to NRB's directive, the loan loss provision indicates the provision made against the performing loan (pass loan and sub-standard loan) only. It indicates that the volume of sub-standard loan in the loan mix of NABIL is higher and the volume of non-performing loan in the mix of NABIL is likely to increase in coming future.

k) The performance of SCBNL is significantly better than other two banks in case of profitability. Similarly, EPS is the highest in case of SCBNL.

l) The mean ratio of interest income to total income has concluded that the contribution of interest income in total income is higher in case of Himalayan Bank Ltd. and lower in case of SCBNL. The interest expenses to total deposits ratio indicates that the cost of fund in Himalayan Bank Ltd. is the highest and that of SCBNL is the least.

2.3 RESEARCH GAP

In the past different studies have made with the statistical and financial tools. But this research shows various trends and values of both banks with new and analyzed data with interpreted results. With the change in people for investing their funds in various sectors, CBs also have got new challenge with different opportunities and more competition. The new researches with different trend affecting with new opportunities that analyzed in this thesis with different views, reviews and recommendations.

For the fulfillments of the objectives of the study many analyses have been done. Both financial as well as statistical tools have been used to analyze and interpret the facts and information. Under financial tools, various financial ratios related to the investment function of commercial banks i.e. liquidity ratio, assets management ratio, profitability ratio, risk ratio, and growth ratio have been studied and interpreted. Under statistical analysis, some relevant statistical tools, i.e. correlation co-efficient, trend analysis and hypothesis test have been studied and tested. This analysis gives clear picture of the performance of the bank with regard to its investment practices. Financial & statistical

tools are used to reckoning and secondary data were compiled, processed, tabulated and graphed for better presentation.

Nowadays there are 25 CBs operating in Nepal financial market which is increasing. Due to the country economic liberalization, financial scenario has changed, and foreign banks were invited to operate in Nepal. For better performance of CBs, successful formulation & effective implementation of investment policy is the prime requisite. Nowadays there is a very high competition in the banking industries but very less opportunity to make investment. The opportunities are hidden. Thus these CBs should take initiative action in search of the new opportunities.

CHAPTER III

RESEARCH METHODOLOGY

"Research methodology refers to the various sequential steps (along with a rationale, of each such step) to be adopted by a researcher in studying a problem with certain objects in view." (Kothari; 1989: 151)

Research as the name implies means to search or study about a phenomenon. It is a repeated action to find or investigate something in scientific manner. It seeks to find out facts and relationships by defining and redefining problems, formulating hypothesis, collecting, organizing and evaluating data, making deductions and conclusions to determine whether they fit the formulated hypothesis. Thus, research refers to a critical, careful and exhaustive investigation, inquiry and experimentation with the aim of the revision of accepted conclusions in the light of newly discovered facts.

Similarly the Advanced Learner's Dictionary of current English defines research as, "A careful investigation or inquiry especially through search for new facts in any branch of knowledge."

In the words of John W. Best, "Research may be defined as the systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations of principles or theories, resulting in prediction and possibly ultimate controls of events."

The research methodology adopted in this chapter is a set of various instrumental approaches used in achieving the predetermined objective's as stated in the earlier chapters. It counts on the resources and techniques available and to the extent of their reliability and validity in this research. The research methodology has, primarily sought the evaluation of the Investment policies of the targeted commercial banks i.e. NABIL

and SCBNL. The research methodology adopted in this chapter follows some limited but crucial steps aimed to achieve the objectives of the research.

"Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done significantly. It is necessary for the researcher to know not only the research method or techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests, how to calculate the mean, mode, the research techniques, but they also know which of these methods or techniques, are relevant and which are not and what would they mean and indicate and why." (Kothari; 2000: 19)

3.1 RESEARCH DESIGN

"A research design is the arrangement of conditions for collection and analysis of data that aims for combine relevance to the research purpose. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variances." (Kerlinger; 1986)

This study is analytical in nature and a true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion. The research study examines the facts and postulates in certain frameworks or details and supplies the important information on subject matter. Summary of the study, major findings, recommendations, conclusions etc are the most significant information among them. They are derived with the help of some financial statistical tools. Which were adopted to evaluate the investment policies of commercial banks, they are NABIL and SCBNL.

3.2 SOURCES OF DATA

After the purpose of research investigation and designed has been defined, the next step is to collect the necessary data and information relevant for the analysis of the study. Generally, there are two sources of data: primary and secondary. Primary data are those data that are collected by the researcher for the first time from related fields and possess originality and authenticity. They are also called field source. While secondary data are

those collected by someone else or used already and made available to others in the form of published statistics. Once a primary data is used, it looses its originality and becomes secondary. The difference between primary and secondary data is a matter of relativity. The study is mainly concerned with the use of secondary data i.e. the annual reports of the concerned banks. The necessary data and information at micro level have been collected from relevant institutions and authorities for the purpose of the study such as plan documents, newspapers, magazines, economic journals as well as the NRB reports, NEPSE and SEBO and their respective publications.

3.3 POPULATION AND SAMPLE

Among the commercial banks listed in the Nepal Stock Exchange, only two commercial banks viz: NABIL, SCBNL has been taken into account for the research purposes as sample. These two commercial banks have been considered as samples in this research study to compare their investment policy. They are selected to examine the investment policy of those companies that are established in different year's gap. Profile of sample of commercial banks is mentioned in appendix.

3.4 METHOD OF ANALYSIS

The study primarily focuses on the analysis of liquidity, profitability, assets management and others that can be obtained from the financial statement of the bank.

3.5 DATA ANALYSIS TOOLS

It is the study of tabulated material in order to determine the inherent facts or meanings. Data analysis involves breaking down the existing complex factors into simpler parts and putting them together in new arrangements for interpretation. Presentation and analysis of data is the core of the research work. Data that has been collected are first presented in systematic manner in tabular forms and are then analyzed by applying different financial and statistical tools to achieve the objectives of the study. The various tools applied are:

3.5.1 FINANCIAL TOOLS

It helps to analyze the financial strength and weakness of a firm. One of the most important and commonly used financial tools that have been used in the study is ratio analysis. A ratio is simply a number expressed in terms of another and as such, it expresses the quantitative relationship between any two numbers. It may be expressed in terms of proportion, rates, and times or in percentage. Ratio analysis is a technique of analysis and interpretation of financial statement. It is used to compare a firm's financial performance and status with other firms. The qualitative judgment has been done regarding financial performance of the firm with the help of ratio analysis. Ratio analysis evaluates the performance of an organization by creating the ratios from the figure of different accounts consisting in balance sheet and income statement. It is the process of determining and interpreting numerical relationship between the items of financial statements.

"Ratio Analysis is such a powerful tool of financial analysis that through it, economic and financial position of a business can be fully x-rayed." (Kothari; 1990)

"Ratio Analysis is used to compare firm's financial performance and status to the other firms or to it self overtime." (Lawrence; 1988)

Webster's New Collegiate Dictionary defines a ratio as, "The indicated quotient of two mathematical expressions" and as "the relationship between two or more things." (Webster's Dictionary; 1975)

Thus, ratio analysis is a part of the whole process of analysis of financial statements of any business to take output and credit decisions. Among various ratios, those that are relevant for the study are discussed below:

A. RISK RATIOS

Risk taking is the prime business of bank's investment management. It increases effectiveness and profitability of the bank. These ratios indicate the amount of risks associated with the various banking operations, which ultimately influences the bank's investment policy. Following ratios are evaluated under this topic.

I) Credit Risk Ratio

It measures the possibility whether the loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. Credit risk ratio is expressed as the percentage of non-performing loan to total loans and advances. Here, dividing total loans and advances by total assets derives this ratio.

$$\frac{\text{Total Loans and Advances}}{\text{Total Assets}}$$

ii) Capital Risk Ratio

It indicates how much assets value may decline before the position of depositors and other creditors jeopardize. It is directly related to the return on equity (ROE). Higher the ratio, lower is the capital risk and vice versa. This ratio is computed by dividing capital (paid up + reserves) by risk-weighted assets as computed under BASLE committee's formula, which is given as.

$$\frac{\text{Capital (paid up+ reserves)}}{\text{Risk Weighted Assets}}$$

B. **PROFITABILITY RATIOS**

Profitability Ratio is a group of ratios showing the effect of liquidity, asset management and debt management on operating results. It is used to indicate and measure the overall efficiency of a firm in terms of profit and financial performance. Higher the profitability ratio better is the performance of the banks. The various types of profitability ratios used in study are as follows:

I) Interest Income to Total Income Ratio

This ratio measures the volume of interest income in total income of the bank. Higher the ratio higher is the contribution made by the lending and investing activities and vice versa. It is calculated by dividing interest income by total income.

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

ii) Total Interest Earned to Total outside Assets Ratio

It measures the interest earning capacity of the bank through the efficient utilization of outside assets. Higher ratio implies efficient use of outside assets to earn interest. It is calculated by dividing total interest earned by total outside assets.

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

Total interest earned includes total interest income from loans and advances and investments, while total outside assets includes loans and advances, bills purchased and discounted and all types of investments.

iii) Interest Expenses to Total Expenses Ratio

It measures the portion of total interest expenses in the volume of total expenses. The high ratio indicates the low operational expenses and vice versa. It is calculated by dividing interest expenses by total expenses.

$$\frac{\text{Interest Expenses}}{\text{Total Expenses}}$$

iv) Total Interest Earned to Total Working Fund Ratio

It is calculated to find out the percentage of interest earned to total assets (working fund). Higher the ratio the better is the performance of the banks in terms of interest earning on its total working fund. It is calculated by dividing total interest earned by total working fund.

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

v) Total Interest Paid to Total Working Fund Ratio

It is calculated to find out the percentage of interest paid on liabilities with respect to total working fund. It is calculated by dividing total interest paid by total working fund.

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

vi) Total Income to Total Expenses Ratio

The comparison between total expenses and total income measures the productivity of expenses in generating income. The amount of income that a unit of expenses generates is measured by the ratio of total income to total expenses. The high ratio is the indicator of higher productivity of expenses and vice versa. It is calculated by dividing total income by total expenses.

$$\frac{\text{Total Income}}{}$$

Total Expenses

vii) Total Income to Total Working Fund Ratio

It measures how efficiently the assets of a business are utilized to generate income. It also measures the quality of assets in income generation. It is calculated by dividing total income by total working fund.

$$\frac{\text{Total Income}}{\text{Total Working Fund}}$$

viii) Return on Loans and Advances Ratio

This ratio indicates how efficiently the bank has employed its resources in the form of loans and advances. It also measures the earning capacity of its loans and advances. The ratio is calculated by dividing net profit (loss) by loans and advances.

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

The numerator indicates the portion of income left to the internal equities after deducting all costs, charges and expenses.

ix) Return on Total Working Fund Ratio (ROA)

The ratio of net profit to total working fund provides an idea of the overall return on investment earned by the firm. It measures the overall profitability of all working funds i.e. total assets. It is also known as return on assets (ROA). It is calculated by dividing net profit (loss) by total working fund.

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

x) Return on Equity Ratio

The excess amount of total assets over total liabilities is called as net worth. It also refers to the owner's claim of the bank. This ratio measures how efficiently the banks have used

the funds of the owners. It is calculated by dividing net profit (loss) by total equity capital (net worth).

$$\frac{\text{Net Profit (Loss)}}{\text{Total Equity Capital}}$$

Total equity capital includes shareholder's reserves including profit and loss account, general loan loss provision and share capital i.e. ordinary share and preference share capital.

xi) Earning per Share (EPS)

EPS refers to net profit divided by the total numbers of common shares outstanding. The amount of EPS measures the efficiency of a firm in relative terms. It is calculated by dividing total net profit (loss) by total number of common shares.

$$\frac{\text{Net Profit (Loss)}}{\text{Total No. of Common Shares}}$$

xii) Net Interest Margin

Net interest margin is the difference between the interest received from investment on loans and advances and interest paid on deposits collected by the banks. It shows the bank's efficiency to earn high profit in order to meet various costs. Higher ratio shows higher profitability and vice versa. It is calculated by dividing the difference between interest revenues from earning assets less interest costs on borrowed funds by total earning assets.

$$\frac{\text{Interest Revenues from Earning Assets- Interest Costs on Borrowed Funds}}{\text{Total Earning Assets}}$$

Interest revenues from earning assets is the total interest income of the bank and interest costs on borrowed funds is the total interest expenses of the bank. Total loans and advances comprise the total earning assets of the bank.

C. ASSETS MANAGEMENT RATIOS

Assets Management Ratio is also known as Activity or Turnover Ratio. It is employed to evaluate the efficiency with which the firm manages and utilizes its assets. It measures the proportion of various assets and liabilities in balance sheet. The proper management of assets and liabilities ensures its effective utilization. It indicates the speed with which assets are being converted or turned over. The banking business converts the liability into assets by way of its lending and investing functions. Assets and liability management ratio measures its efficiency by multiplying various liabilities into performing assets. Thus, this ratio is used to measure how effectively a firm is managing its assets and the firm's ability to utilize its available resources. The ratios related to assets management are presented as:

I) Loans and Advances to Total Deposit Ratio

This ratio is also called as credit deposit ratio (CD Ratio). It is calculated to find out how successfully the banks are utilizing their total deposits on loans and advances for profit generating purpose. Higher the ratio, the better is the utilization of total deposits. It is calculated by dividing loans and advances by total deposit.

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

ii) Total Investment to Total Deposit Ratio

Investment is the use of money for future profit. It is the outlay of money, for example, by depositing it in a bank or by buying stock in a company, to make a profit. Thus, investment is one of the major forms of credit created by the bank to earn income. It is the utilization of firm's deposit on government securities, shares and debentures or bonds of other companies and banks. This ratio is calculated by dividing total investment by total deposit.

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

Total investment includes investment on government securities, debentures and bonds, shares in subsidiary companies, shares in other companies and other investments.

iii) Loans and Advances to Total Working Fund Ratio

Loans and advances are the major component in the total working fund (total assets) that indicates the ability of banks to channelize their deposits in the form of loans and advances to earn higher return. It is computed by dividing loans and advances by total working fund.

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

Total working fund includes all the assets of on balance sheet items while it excludes off balance sheet items like letter of credit, letter of guarantee etc.

iv) Investment on Government Securities to Total Working Fund Ratio

This ratio shows the bank's investment on government securities compared to that of the total working fund. It is calculated by dividing investment on government securities by total working fund.

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

v) Investment on Shares and Debentures to Total Working Fund Ratio

It shows the bank's investment in shares and debentures of the subsidiary and other companies. It is obtained by dividing investment on shares and debentures by total working fund.

$$\frac{\text{Investment on Shares and Debentures}}{\text{Total Working Fund}}$$

The numerator includes investments on shares, debentures and bonds of other companies.

vi) Total outside Assets to Total Deposit Ratio

Total outside assets includes loans and advances and investments of banks. It measures how well the banks are mobilizing their deposits liabilities in income generating activities. The ratio is obtained by dividing total outside assets by total deposits.

$$\frac{\text{Total outside Assets}}{\text{Total Deposits}}$$

vii) Loans and Advances to Total outside Assets Ratio

This ratio measures the contribution made by loans and advances in total amount of loans and advances and investments. The proportion between investments and loans and advances measures the management's attitude towards more risky assets and lower risky assets. Loans and advances are more risky and generate more returns compared to investments. It is calculated by dividing loans and advances by total outside assets.

$$\frac{\text{Loans and Advances}}{\text{Total outside Assets}}$$

viii) Investment on Government Securities to Total outside Assets Ratio

It measures the proportion of banks investment in risky area and risky free areas. This ratio is computed by dividing investment on government securities by total outside assets.

$$\frac{\text{Investment on Government Securities}}{\text{Total outside Assets}}$$

ix) Total outside Assets to Total Assets Ratio

Total outside assets of a bank includes loans and advances and investments. It is the proportion of assets employed by the bank for the purpose of income generation. The ratio shows the ability of the banks to utilize its funds into income generating assets. It is calculated by dividing total outside assets by total assets.

$$\frac{\text{Total outside Assets}}{\text{Total Assets}}$$

x) Total Off-Balance Sheet Operation to Loans and Advances Ratio

The OBS operation shows the bank's efficiency in conducting modern off-balance sheet transactions compared to loans and advances i.e. issue of letter of credit, letter of guarantee etc. This ratio shows the proportion of fee-based off-balance sheet activities to fund based loans and advances of the bank. This ratio is calculated by dividing total OBS operations by loans and advances.

$$\frac{\text{Total Off-Balance Sheet Operation}}{\text{Loans and Advances}}$$

D. LIQUIDITY RATIOS

Liquidity Ratio measures the firm's availability of funds, the solvency of the firm and the firm's ability to pay its obligation when balance is due. In fact, it measures the liquidity position of the firm. Similarly, it also measures the speed with which a bank's assets can be converted into cash to meet the deposit withdrawal and other current obligations. "The ratio flashes out picture of the capacity of an enterprise to meet its short term obligation out of its short term resources (Pradhan; 1986)". In order to ensure short-term solvency the company must maintain adequate liquidity. Liquidity should be neither too low nor too high. If the liquidity ratio of a company is too high it will unnecessarily be tied up in current assets and if it is to low it will result bad credit ratings and less creditor's confidence. Thus, the company should endeavor to maintain proper balance between inadequate liquidity and unnecessary liquidity for the survival and to avoid the risk of insolvency. Here are some of the liquidity ratios that have been used in the study.

i) Current Ratio

It shows the bank's short-term solvency. It indicates the extent to which current liabilities are covered by assets expected to be converted to cash in near future. Thus, it shows the relationship between current assets and current liabilities.

Current assets normally includes cash, marketable securities, accounts receivable, inventories, balance with banks, balance held abroad, inter-banking lending, bills purchased/discounted, 40% of loans and advances (assumption), interest receivable and staff loans and advances. Current liabilities includes current deposits, 60% of saving deposits, 40% of fixed deposits (assumption), other deposits (margin), Forex deposits, expense payable, short-term notes payable, bonus payable, current maturities of long term debt, accrued income taxes, proposed dividend and other accrued expenses (principally wages). It is calculated by dividing current assets by current liabilities.

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

The most accepted standard of current ratio is 2: 1

ii) Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are the liquid current assets. This ratio measures the percentage of liquid fund with the bank to make immediate payment to the depositor. The ratio is calculated by dividing cash and bank balance by total deposit.

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

Cash and Bank balance includes cash in hand, cheques and other cash items, balance with domestic and foreign banks. Total deposits include current deposits, saving deposits, fixed deposits, call deposits and other deposits.

iii) Cash and Bank Balance to Current Assets Ratio

It measures the proportion of liquid assets i.e. cash and bank balance among the total current assets of the bank. Higher the ratio higher is the bank's ability to meet its demand for cash. The ratio is computed by dividing cash and bank balance by current assets.

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

iv) Investment on Government Securities to Total Current Assets Ratio

This ratio is calculated to find out the percentage of current assets invested in government securities i.e. treasury bills, development bonds etc. The ratio is calculated by dividing investment on government securities by total current assets.

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

v) Loans and Advances to Current Assets Ratio

This ratio can be computed by dividing loans and advances by current assets, which can be expressed as

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

3.5.2 STATISTICAL TOOLS

Statistical tools are the mathematical techniques used to facilitate the analysis and interpretation of numerical data. With the use of statistical tools, it becomes easy to convert abstract problems into figures and complex data in the form of tables. Some of the statistical tools used in the study are as follows:

A. ARITHMETIC MEAN

An arithmetic mean is also called as 'the mean', 'average' or the 'arithmetic average'. A mean is the average value or the sum of all observations divided by the number of observations. An arithmetic mean is used in a situation of studying practical problems relating to production, price, income, expenditure, temperatures etc. but it is not useful for qualitative characteristic open-ended classes etc. It is denoted and given by the formula:

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

Where,

$\bar{X}$ = Mean of the values.
n = Number of observations.
$\sum x$ = Sum of observations.

B. STANDARD DEVIATION

A standard deviation is the positive square root of average sum of squares of deviations of given observations from the arithmetic mean of the distribution. It measures the absolute dispersion and gives uniform, correct and stable results. Higher the value of standard deviation higher will be the variability and vice versa. A standard deviation is always a positive number and is superior to mean deviation, quartile deviation and the range as it is used for further mathematical treatment. It is used in order to reduce the unit of measurement. Karl Pearson was the first to introduce this concept in 1823 A.D. and it is denoted by a small Greek letter σ (sigma). Standard deviation is calculated by using the formula:

$$\sigma = \sqrt{\frac{\sum\left(X - \overline{X}\right)^2}{n}}$$

C. COEFFICIENT OF VARIATION

The percentage measure of co-efficient of standard deviation is called co-efficient of variation (c.v.). It is used for comparing the homogeneity, uniformity and variability of two or more distribution. It is the most commonly used measure of relative variation. It is used in such problems where the researchers want to compare the variability of more than two years. Greater the C.V. more variable or conversely less consistent, less uniform or less homogeneous from others. Lower the C.V., the less variable or more consistent, more uniform or more homogeneous. C.V. measures the relative measures of dispersion, hence capable to compare two variables independently in terms of their variability. The co-efficient of variation (C.V.) is given by the following formula.

$$\text{Coefficient of Variation (C.V.)} = \frac{\sigma}{\overline{X}} \times 100$$

D. CORRELATION

Correlation refers to measure of relationship between two or more characteristics of a population or a sample. It measures the changes between the phenomenons. If two quantities vary in a related manner so that a movement: an increase or decrease in one accompanied by a movement in the same or opposite direction in the other, they are called correlated. If the relationship is direct, they are called positively correlated and if it is inverse, they are called negatively correlated. Similarly, if any change in one does not affect the other variable it is called uncorrelated. Correlation may be perfect, imperfect or zero. The relationship between two or more variables is computed by multiple and partial correlation. The reliability of the value of coefficient of correlation is measured by probable error. The limits of correlation vary from -1 to +1. Karl Pearson's coefficient of correlation (r) is given by the formula:

Coefficient of Correlation (r) = $$\frac{\sum XY}{\sqrt{\sum X^2 \times \sum Y^2}}$$

Where,

$X = x - \overline{X}$
$Y = y - \overline{Y}$

Interpretation of Correlation:

When r= +1, perfectly positive correlation

r= -1, perfectly negative correlation

r= 0, no correlation

r is between 0.7 to 0.999, there is moderate degree of correlation

r is less than 0.5, there is low degree of correlation

In this section of the study, Karl Pearson's coefficient of correlation has been used to find out the relationship between the following variables:

i) Correlation between Deposits and Loans and Advances

ii) Correlation between Deposits and Investments

iii) Correlation between Loans and Advances and Net Profit

iv) Correlation between Investments and Net Profit

E. COEFFICIENT OF DETERMINATION

It gives the percentage variation in the dependent variable that is explained by the independent variables. By the computed value of coefficient of determination, we can conclude that the percentage variation in the dependent variable is due to the variation in the independent variable and the remaining portion of the variation is due to the other factors. Coefficient of determination is the square of coefficient correlation and is given by ($r^{2)}$.

F. PROBABLE ERROR

It is used for testing the reliability of an observed value of correlation coefficient. After the computation of correlation of coefficient, probable error is computed to find the extent to which it is dependable. If the value of correlation of coefficient is greater than 6 times the value of probable error, the observed value of correlation of coefficient is said to be significant and reliable, otherwise nothing can be concluded with certainty. Nevertheless, if the value of correlation of coefficient is less than probable error then it is said to be insignificant and there is no evidence of correlation. The formula for probable error is given by:

$$\text{Probable Error (P.Er.)} = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

G. TREND ANALYSIS

One of the most popular and mathematical method of determining the trend of time series is the least square method. By using this method, we can estimate the future trend values of different variables. Hence, for the estimation of linear trend line following formula is used.

$$Yc = a + bx$$

Where,

Yc = Dependent variable

x = Independent variable

a = y intercept

b = slope of the trend line

Thus, using this method, trend analysis of following variables is conducted.

I) Trend analysis of Total Deposit

ii) Trend analysis of Loans and Advances

iii) Trend analysis of Investment

iv) Trend analysis of Net Profit

CHAPTER - IV

DATA ANALYSIS AND PRESENTATION

The purpose of this chapter is to study, evaluate and analyze those major financial performances, which are mainly related to investment management and fund. Mobilization of NABIL Bank Ltd in comparison with Standard Chartered Bank Ltd. There are many types of financial ratios but only those ratios are calculated and analyzed, which are very important to evaluate fund mobilization of commercial bank. Necessary figures and tables are also presented in this part to describe about the investment mechanism of the banks.

4.1 INTERPRETATION & ANALYSIS OF DATA

4.1.1 Financial Tools

Financial analysis is the act of identifying the financial strength and weakness of the organization presenting the relationship between the items of balance sheet. For the purpose of this study, ratio analysis has been mainly used and with the help of it data have been analyzed. Various financial ratios related to the investment management and the fund mobilization are presented and discussed to evaluate and analyze the performance of NABIL in comparison to SCBNL. The ratios are designed and calculated to highlight the relationship between financial items and figures. All these calculations are based on financial statements of concerned banks. The important and needed financial ratios, which are to be calculated for the purpose of this study, are mentioned below:

a) Liquidity Ratio

b) Assets management Ratio

c) Profitability Ratio

d) Risk Ratio

e) Growth Ratio

4.1.1.1 Liquidity Ratio

Liquidity ratio measures the ability of the firm to meet its current obligations. A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community. Demand for the deposits, with drawls pay maturity in time and convert non-cash assets into cash to satisfy immediate need without loss to bank and consequent impact or long run profit.

The following ratios are evaluated and interpreted under liquidity ratios.

(i) Current Ratio

Current ratio is derived by dividing current assets by current liabilities.

Table 4.1

Current Ratio (Times)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	1.067	1.099	1.113	1.0732	1.155	1.1016	.035	3.21%
SCBNL	0.971	0.9698	1.0226	0.981	0.946	0.978	0.028	2.86%

Source: Appendix 1(i)

The above table shows that current assets of NABIL is higher than current liabilities and ratios are in increasing trend from 2002/03 to 2004/05 and again increases in 2006/07. SCBNL has lower current assets than current liabilities in FY 2002/03, 2003/04, 2005/06, 2006/07 and higher C.A in 2004/05; it means SCBNL does not have sound ability to pay short term obligations due to more liabilities.

In average liquidity position of NABIL is greater than SCNBL i.e. 1.106 > 0.978. So, NABIL has sound liquidity position than other banks.

Likewise the co-efficient of variation (C.V) of NABIL is higher than SCBNL i.e. 3.2% > 2.86 %. It can be said that current ratio of NABIL is less consistent than SCBNL.

Thus, it can be concluded that NABIL is capable to pay current obligations in comparison to SCBNL.

(ii) Cash and Bank Balance to Total Deposit Ratio (Cash Reserve Ratio)

The ratio between the cash and bank balance and total deposit measures the ability of the bank to meet the unanticipated cash and all types of deposits. Higher the ratio, the greater will be the ability to meet sudden demand of deposit and vice versa. But every high ratio is not desirable since bank has to pay interest on deposits. This will also maximize the cost of fund to the bank.

Where,
Cash and bank balance is composed of cash on hand including foreign cheques, other cash items; balance with domestic banks and abroad. Deposit includes current deposits, saving, deposits, fixed deposits, money at call or short notice and other types of deposits.

Table 4.2
Cash and Bank Balance to Total Deposit (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	8.51	6.87	3.83	2.87	5.93	5.60	2.27	40%
SCBNL	8.06	9.56	5.75	5.53	8.21	7.42	1.73	24%

Source: Appendix 1(ii)

Table 4.2 shows that the cash and bank balance to total deposit ratio of NABIL has followed decreasing trend from FY 2002/03 to 2005/06 & it has increased in 2006/07. Similarly, SCBNL has increases from 2002/03 to 2003/04 ad decreases form FY 2004/05 to 2005/06 and again increases in 2006/07.

In average, NABIL has maintained lower cash & bank balance to total deposit ratio than SCBNL i.e. 5.60<7.42. It states that cash and bank balance in liquidity position of NABIL is lower than SCNBL. The C.V of NABIL is 40%, which is comparatively higher than that of SCBNL so NABIL has the less consistency than that of SCBNL.

Comparatively NABIL has maintained low ratios, it shows some difficulties to meet the demand of its customers on their deposit to pay at any time but it may be earning more by investing cash to different sectors. But it should ensure to have enough liquid funds to serve its customer.

(iii) Cash and Bank Balance to Current Assets Ratio

Higher ratio indicates the bank ability to meet the daily cash requirement of their customer deposit and vice versa. But higher ratio is not preferred, as the bank has to pay more interest on deposit ad will increase the cost of fund. Lower ratio is also very dangerous, as the bank may not be able to make the payment against the cheques presented by the customers. Therefore, bank has to balance the cash and bank balance to current assets ratio in such a manner that it should have the adequate cash for the customers demand against deposit when required and less interest is required to be paid against the cash deposit. (Details in Annexure - A3)

Table 4.3
Cash and Bank Balance to Current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V
	2002/03	2003/04	2004/05	2005/06	2006/07			(%)
NABIL	8.25	6.81	3.74	3.07	6.06	5.59	2.21	38%
SCBNL	8.85	10.76	5.53	5.94	9.18	7.91	2.04	26%

Source: Appendix 1(iii)

Above table exhibits that cash and bank balance to current assets ratio of NABIL has followed decreasing trend from FY 2002/03 to 2005/06 and increased in FY 2005/06. SCBNL has followed fluctuating trend from FY 2002/03 to 2005/06 & it followed as increasing trend.

While examining the mean ratio, NABIL had maintained 5.59 which is less than SCBNL i.e. 7.91. It states that liquidity position of NABIL is lower than SCNBL. In this regard, the co-efficient of variation between the above ratios of NABIL is 38% which is comparatively higher than that of SCBNL i.e., 38%>26% it shows less consistent of NABIL than that of SCBNL. It shows the current ratios are less heterogeneous than that of SCNBL.

Thus, it can be concluded that NABIL is low capable to maintain cash & bank balance is comparison to other two banks.

(iv) Investment on Government Securities to Current Assets Ratio

The commercial banks are interested to invest their collected funds in various government securities issued by government. Though government securities are not so much liquid as cash & bank balance, they can be easily sold in the market or they can be converted into cash in other ways. The main purpose of this ratio is

to examine the portion of commercial banks current assets that is invested on different government securities.

Investment on government securities to current assets ratio

Table 4.4
Investment on Government Securities to Current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	25.87	25.78	16.12	12.69	21.06	21.36	5.85	28.83%
SCBNL	38.52	39.56	37.28	40.22	32.27	36.97	3.23	8.75%

Sources: Appendix 1(iv)

The above table 4.4 shows that the ratio of NABIL is in decreasing trend from FY 2002/03 to 2005/06 and increased is FY 2006/07. In case of SCBNL its ratio is in fluctuating trend.

In overall, the mean ratio of investment on Govt. securities to current assets ratio of NABIL is lower than that of SCBNL i.e. 21.36<36.97. It means NABIL had invested its fewer portions of current assets on government securities, than SCNBL On the other had C.V in ratios of NABIL is greater than that of SCBNL i.e. 28.83%>8.75%. Which shows the variability's of ratios of NABIL is less consistency than that of SCBNL.

It can be concluded that NABIL has invested its less portion of current assets as government securities than that of SCBNL. NABIL’s liquidity portion from the point of view of investment on government securities is poorer than that of other two banks.

(v) Loan and Advances to Current Assets Ratio

Loan and advances are also included is the current assets of commercial banks because generally it provides short-term loan, advances/overdraft/ cash-credit, local and foreign bill purchased and discounted.

To make a high profit by mobilizing its fund in the best way, a commercial bank should not keep its all collected funds as cash and bank balance but they should be invested as loan and advances to the customers. If sufficient loan and advances cannot be granted, it should pay interest on those unutilized deposit funds and may lose some earnings, but high loan and advances may also be harmful to keep the bank is most liquid position because they can only be collected at the time of maturity only. Thus, the bank must maintain its loan and advances in appropriate level to find out portion of current asset, which is granted as loan and advances.

Table 4.5
Loan & Advances to Current Assets Ratio (%)

Banks	**Fiscal Year**					**Mean**	**S.D**	**C.V (%)**
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**			
NABIL	55.93	57.50	70.71	71.26	68.11	64.70	7.40	11.45%
SCBNL	33.34	31.40	42.14	41.61	47.68	39.33	6.58	16.74%

Source: Appendix 1(v)

Above table exhibits that loan and advances to current assets ratio of NABIL is in increasing trend from FY 2002/03 to 2005/06 and then in decreasing trend from 2005/06 to 2006/07. In case of SCBNL ratio both are in fluctuating trend during the study period.

While examining the mean ratio, NABIL has maintained 64.70 which is higher than SCBNL i.e. 39.33. On the other side co-efficient of variation of NABIL 11.45% is lower than SCBNL i.e. 16.74>11.64.

From the above table it can be concluded that NABIL has succeeded to invest its fund is loan and advances in comparison to SCBNL in point of view of mean & C.V.

4.1.1.2 Assets Management Ratio (Activity Ratio)

Assets management ratio measures the efficiency of the bank to manage its assets in profitable and satisfactory manner.

A commercial bank must manage is assets property to earn high profit. Under this chapter following ratios are studied.

(I) Loan and Advances to Total Deposit Ratio.

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

Table 4.6
Loan & Advances to Total Deposit Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	57.67	5.8	72.57	66.79	66.61	34.33	5.72	8.89%
SCBNL	30.36	30.30	42.12	38.75	42.61	36.86	5.47	14.85%

Source: Appendix 1(vi)

In the table 4.6, both banks have fluctuating trend in the ratios. During the study period, NABIL has highest ratio of 72.57 is FY 2004/05 ad lowest ratio 57.67 is FY 2002/03, SCBNL has highest ad lowest ratios 42.61 and 30.30 is FY 2006/07 and 2003/04 respectively.

In over all mean ratio of loan & advances to total deposit of NABIL is higher than that of SCBNL. In side co-efficient of variation of above banks. NABIL has 8.89%, which is less than 14.85% of SCBNL.

In conclusion, NABIL has strong position regarding the mobilization of total deposit on loan and advances and acquiring higher profit with compare to SCBNL. It states that NABIL is better is this regard.

(ii) Total Investment to Total Deposit Ratio

In the process of portfolio management of bank assets, various factors such as availability of fund, liquidity requirement Central banks norms etc are to be considered in general. A high ratio is the indicator of high success to mobilize the baking fund as investment and vice versa.

Table 4.7
Total Investment to Total Deposit Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	44.85	41.33	29.27	31.93	38.32	37.14	5.79	1.6%
SCBNL	54.47	53.68	50.18	55.71	55.10	53.83	1.94	3.6%

Source: Appendix 1(vii)

The above table exhibits that the ratio of NABIL is in decreasing trend from 2002/03 to 2004/05 and is increasing trend from 2005/06 to 2006/07. In the case of SCBNL it's also in decreasing trend from 2002/03 to 2004/05 and increases is FY 2005/06 & 2006/07.

In average NABIL has maintained lower, mean value i.e. 37.14< 53.83 than SCNBL. SCBNL has maintained the highest mean value of 53.83.

The CV ratio of NABIL is 1.6% which is lower than 3.6% of SCBNL is more stable than that of SCBNL.

In conclusion, NABIL is in weak condition to mobilize its deposits by investing is different sectors is comparison of SCBNL.

(iii) Loan & Advances to Total Working Fund Ratio

As loan and advances in appropriate level to generate profit this ratio reflects the extent to which the commercial banks are success is mobilizing their assets, loan & advances for the purpose of income generation. A high ratio indicates better is mobilization of funds as loan and advances and vice versa.

Where, total working fund is the total assets. It is composed up of current assets, fixed assets, miscellaneous assets and investment: loans for development bank etc.

Table 4.8
Loan & Advances to Total Working Fund Ratio %

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	46.82	48.91	61.60	57.87	57.04	54.45	6.29	11.56%
SCBNL	27.24	27.11	37.19	34.67	36.73	32.59	5.03	15.44

Source: Appendix 1(vii)

The above table exhibits that the ratio of NABIL & SCBNL is in decreasing trend from 2003/04 to 2004/05 and increasing trend from 2005/06 to 2006/07.

On the basis of mean ratios, NABIL has maintained the higher ratio than that of SCBNL i.e. 54.45>32.59. So, NABIL is in good condition to mobilize its total working fund as loan and advances. Co-efficient of variation of NABIL is less

than SCBNL i.e. 11.56%>15.44%. It indicates more uniform of NABIL is comparison to SCBNL.

Lastly, we can say that NABIL' s fund mobilization is terms of loan & advances with respect of total working fund is more satisfactory than that of SCNBL.

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

A bank mobilize its fund is various ways but not only used as loan and advances. To some extent commercial bank seems to utilize its fund by purchasing government securities. A government security is a safe medium of investment though it is not liquid as cash and bank balance. This ratio is very important to know the extent to which the banks are successful in mobilizing their total fund or different types of government securities to maximize its income. A high ratio indicates better mobilization of funds as investment on government securities is a current asset which is invested by external parties. These types of securities can be sold in the market.

Investment on government securities to total working fund ratio

Table 4.9
Investment on Government Securities to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	21.67	21.93	14.04	10.31	17.64	17.12	4.99	29%
SCBNL	31.47	33.62	31.90	33.54	24.85	31.28	30.70	11.8%

Source: Appendix 1(ix)

From the above table it is clearly seen that investment on government securities to working fund ratio of NABIL and SCBNL is in fluctuating trend. On the basis of mean, NABIL has maintained lower ratio than SCBNL i.e. 17.12<31.28. The co-efficient of variation of NABIL is higher than that of SCBNL i.e. 29% >11.28%.

From the above analysis, it can be concluded that NABIL's fund mobilization in terms of government securities with respect of total working fund is not more satisfactory than that SCNBL.

(iv) Investment on shares and Debentures to Total Working Fund Ratio

To study the investment management of NABIL and SCBNL bank, total investment has been separated into two parts i.e. Investment on government securities and investment on shares and debentures. Now a day a commercial bank is interested to invest its funds not only on government securities but also in shares & debentures of other different companies and regional development banks.

Investment on shares and debentures to total assets ratio reflects the extent to which the banks are successful to mobilize their assets on purchase of shares and debentures of other companies to generate incomes and utilize their excess fund. A high ratio indicates more portion of investment on share and debentures out of total working fund and vice versa.

Investment on shares and debentures to total working fund ratio

Table 4.10
Investment on Shares & Debenture to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	0.13	0.13	2.56	0.47	1.053	0.87	1.02	11.7%
SCBNL	0.05	0.05	0.06	0.06	0.16	0.076	0.047	62.13%

Sources: Appendix 1(x)

The above table exhibits that the ratio of NABIL & SCBNL is in increasing trend.

On the basis of mean ratios, NABIL has higher investment than SCNBL i.e. 0.87%>0.076. Moreover, CV of NABIL is less than SCNBL i.e. 11.7 %%< 62.13%, which states that the position of NABIL is better in this regard.

It can be concluded that NABIL has invested more portion of its total working fund on shares & debentures than SCNBL. And also NABIL is more consistent and homogeneous than SCBNL.

4.1.1.3 Profitability Ratio

The main objective of a commercial bank is to earn profit providing different types of banking services to its customers. To meet various objectives like to have a good liquidity position, meet fixed internal obligation, overcome the future contingencies, grab hidden investment opportunities, expand banking transitions in different places and finance government in need of development funds.

Profitability ratios are the best indicators of overall efficiency. Here mainly those ratios are presented and analyzed which are related with profit as well as investments. An effort has been made to measure the profit earning capacity of NABIL & SCBNL through the following ratios.

(I) Return on Total Working Fund Ratio

It measures the profit earning capacity by utilizing available resources i.e., total assets. Return will be higher if the banks working fund is well managed and are efficiently utilized, maximizing taxes with in legal options available will also improve the return.
Where,

Net profit includes the profit that is left to the internal equities after all costs, chares & expenses.

Table 4.11
Return on Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	2.51	2.72	3.02	2.84	2.47	2.71	0.23	8.47%
SCBNL	2.42	2.27	2.46	2.55	2.42	2.42	0.10	4.18%

Source: Appendix 1(xi)

The above table exhibits that the ratio of NABIL is in increasing trend from 2002/03 to 2004/05 and decreasing from 2005/06 to 2006/07. In case of SCBNL it's in fluctuating trend.

In the mean ratios, it is observed that NABIL has highest mean value i.e. 2.71>2.42. So, NABIL is highly efficient to earn net profit and return as well. On the other hand C.V of NABIL is higher than SCBNL i.e. 8.47%>4.18%.

From the above analysis it can be concluded that NABIL is in strong position is the earning capacity by utilizing available resources than SCNBL. It shows less consistency and homogeneous than SCBNL.

(ii) Total Interest Earned to Total outside Assets Ratio

It reflects that the extent to which the bank is successful to earn interests as major income on all the outside Assets. Higher the ratio higher will be the earning power of total outside assets. This is very important ratio, as the main asset is the outside Assets of a commercial bank.

The total outside assets includes loan & advances investment in government securities, share and debentures and other all types of investment.

Table 4.12
Total Interest Earned to Total outside Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	7.38	7.14	7.20	6.86	6.50	7.02	0.34	4.89%
SCBNL	14.9	5.86	5.93	5.46	5.87	7.66	4.08	53.72%

Source: Appendix 1(xii)

The above comparative table reveals that NABIL has fluctuating trend from FY 2002/03 to 2005/06 and on FY 2006/07 it's increasing. SCBNL has fluctuating trend during the study period.

On the basis of mean ratios NABIL is less than SCBNL 7.02<7.60 in respect to total interest earned to total outside assets. On the other hand, C.V of NABIL is less than that of SCBNL.

From the above analysis, it can be concluded the NABIL is in strong position is earning high interest income from its total outside assets is comparison to SCBNL in view point of mean & C.V ratio. Moreover, SCBNL is comparatively efficient to earn high interest income from outside assets than NABIL.

(iii) Return on Loan & Advances Ratio

Return on loan & advances ratio measures the earning capacity of a commercial bank on its mobilized fund based loan and advances. A high ratio indicates a greater success to mobilize fund and vice versa.

Table 4.13
Return on Loan & Advances Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	5.37	5.56	4.90	4.92	4.33	5.02	.48	9.5%
SCBNL	8.9	8.41	6.62	7.37	6.6	7.58	1.64	13.77%

Source: Appendix 1(xiii)

The above table exhibits that the ratio of NABIL has fluctuating trend. SCBNL has decreasing trend at first i.e. from FY 2002/03 to 2004/05 and then followed fluctuating trend from 2005/06 to 2006/07.

The mean of the NABIL is lower than SCBNL i.e. 5.02<7.58 is respect to return on loan & advances ratio. On the other hand C.V of NABIL is less than that of SCBNL. So NABIL has maintained high return with variability ratios.

From the above analysis, it can be concluded that NABIL is significantly able to earn high return on its loan and advances is comparison of SCBNL in point of view of average mean & low C.V ratio.

(iv) Total Interest Earned to Total Working Fund Ratio

This ratio reflects the extent to which the banks are successful is mobilizing their total assets to generate high income as interest. A high ratio is indicator of high earning power of the bank on its total working fund and vice versa.

Table 4.14
Total Interest Earned to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	6.15	5.98	6.22	5.87	5.88	6.01	0.17	2.84%
SCBNL	4.81	4.41	4.83	4.61	5.94	4.72	021	4.45%

Source: Appendix 1(xiv)

The above comparative table reveals that NABIL & SCBNL have followed fluctuating trend during the study period.

The mean of NABIL is greater than that of SCNBL i.e. 6.01>4.72. So, we can say that NABIL is in strong position to generate interest income from the total working fund than SCBNL. On the other hand, C.V of NABIL is lower than that of SCBNL i.e. 2.84 %< 4.45%. It means more consistent than SCNBL.

Thus, it can be concluded that the ratio of total interest earned to total working fund ratio of NABIL is satisfactory is compared to SCBNL. Wich means the total interest earned to total working fund ratio of NABIL is stable in comparison to SCBNL.

(v) Total Interest Paid to Total Working Fund Ratio

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

Table 4.15
Total Interest Paid to Total Working Fund Ratio

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	1.91	1.70	1.42	1.55	2.04	1.72	0.25	14.76%
SCBNL	1.22	1.20	1.16	1.20	1.44	1.24	0.11	9.02%

Source: Appendix 1(xv)

The above comparative table reveals that total interest paid to total working fund ratio of NABIL and SCBNL is in decreasing trend in first 3 years i.e. FY 2002/03 to 2004/05 and then it is in increasing trend from 2005/06 to 2006/ 07

The mean ratio of NABIL i.e. 1.72 is higher than SCBNL i.e. 1.24. It means NABIL pays higher interest than SCBNL during the study period. On the other hand NABIL'S coefficient of variable is higher i.e. 14.76% in comparison to SCBNL i.e. 9.02%. It indicates that NABIL's ratio is less consistent than SCBNL.

In conclusion we can say that NABIL is in better position from payment of interest point of view (less expenses generate the high income generate theory). It seems to be successful to collect its working fund from more expensive sources in comparison to SCBNL.

(vi) Return on Equity

Equity capital of any banks is its owned capital. The prime objective of any banks is wealth maximization or in other words to earn high profit and maximizing return to its shareholders. ROE is the measuring rod of the profitability of banks. It reflects the extent to which the bank has been successful to mobilize its equity capital. A high ratio indicates higher success to mobilize its owned capital and vice versa.

Table 4.16
Return on Equity Ratio (%)

Banks	Fiscal Year					Mean	SD	CV (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	35.12	30.77	31.30	33.91	32.79	32.88	1.42	4.32%
SCBNL	37.03	35.96	33.89	37.55	32.68	35.42	2.08	5.86%

Source: Appendix 1(xvi)

The above table exhibits that ratios of NABIL followed decreasing trend from FY 2002/03 to FY 2003/04 and then increased from FY 2004/05 to 2005/06 and again decreased is FY 2006/07. In case of SCBNL ratio, it followed decreasing trend from FY 2002/03 to 2004/05 then increasing trend from 2005/06 to 2006/07.

In the mean ratios, it is observed that NABIL has the average mean value (refer table) which is less than SCBNL. The co-efficient of variation of NABIL is less than SCBNL i.e., 4.32 %< 5.86%.

In the point of view of average mean and lower C.V it can be concluded that comparatively NABIL has mobilized its equity capital more efficiently than SCBNL. So, NABIL has sound investment policy on equity capital more over its lower C.V shows its more homogenous during the study period.

4.1.1.4 Growth Ratio

Growth ratios are directly related to the fund mobilization and investment management of a commercial bank. It represents how well the commercial banks are maintaining the economic and financial position. Under this topic, four of growth ratios are studies which are as follows:

(I) Growth Ratio of Total Deposit.

(ii) Growth of Total Loan and Advances.

(iii) Growth of Total Investment.

(iv) Growth ratio of Total Net Profit.

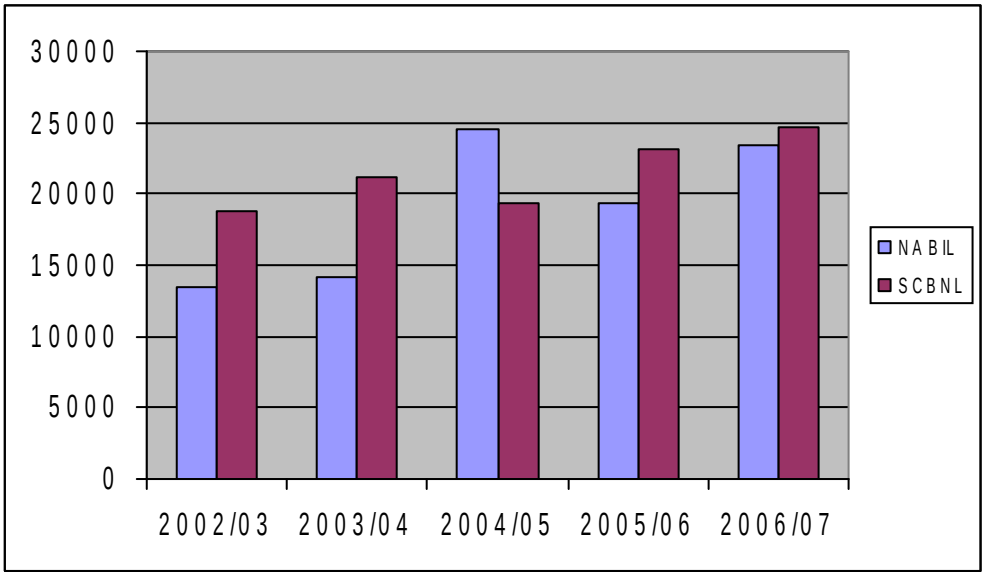
Table 4.17
Growth Ratio of Total Deposit (%)

Banks	**Fiscal Year**					**Growth Ratio (%)**
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	
NABIL	13448	14119	24587	19347	23342	14.74%
SCBNL	18756	21161	19335	23061	24647	7.06%

Source: Appendix 1(xvii)

Figure 4.1

Growth ratio of Total Deposit



The above comparative table shows that the growth ratio of NABIL deposit is higher than SCBNL deposit i.e., 14.74% > 7.06%. It means that the performance of NABIL to collect greater deposit compared to SCBNL is better year-by-year.

Table 4.18
Growth Ratio of Loan and Advances (%)

Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	7756	8190	10586	12923	15546	18.98%
SCBNL	5696	3410	8143	8935	10502	16.53%

Source: Appendix 1(xviii)

The above individual table no. 18 shows that the growth ratio of NABIL is of 18.98% where as SCBNL has maintained 16.53%. It means the performance of NABIL to grant loan and advances in comparison to SCBNL is better year-by-year.

Figure 4.2

Growth Ratio of Loan and Advances

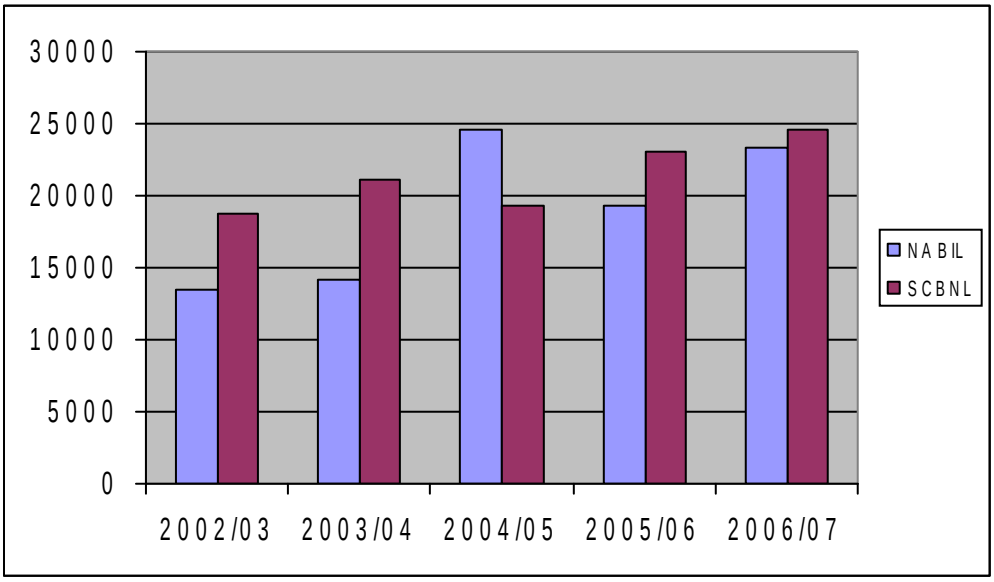


Table 4.19
Growth Ratio of Total Investment

Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	6031	5836	4270	6179	8945	10.35%
SCBNL	10216	11360	9703	12848	13553	7.32%

Source: Appendix 1(xix)

The above comparative table shows that growth ratio of total investment of NABIL is higher than SCBNL i.e. 10.35%>7.32%. So we can say that NABIL has better growth level for investment sector even FY 2003/04 to 2004/05 has decreasing growth amount and then increasing growth amount there after.

Figure 4.3

Growth Ratio of Total Investment

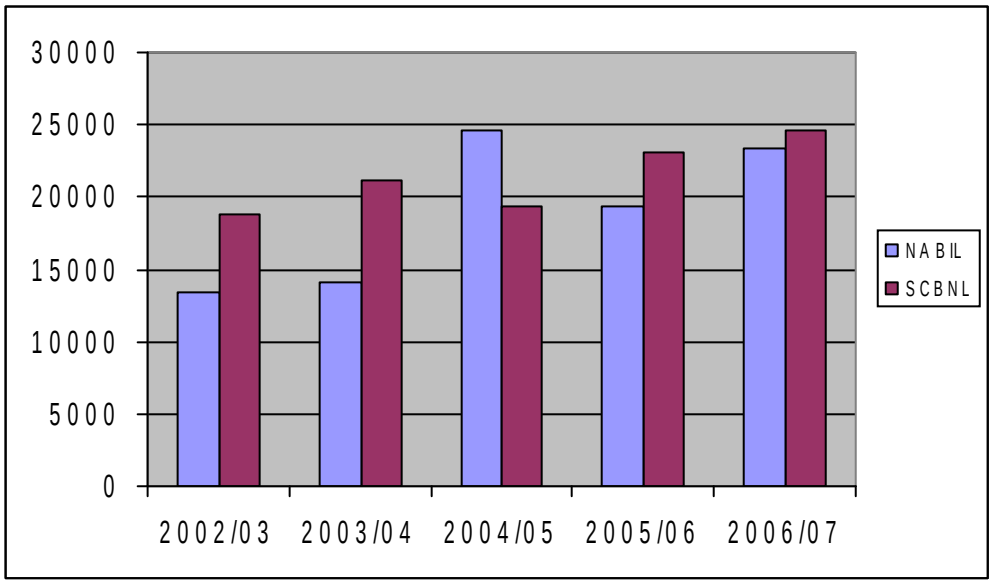


Table 4.20
Growth Ratio of Total Net Profit

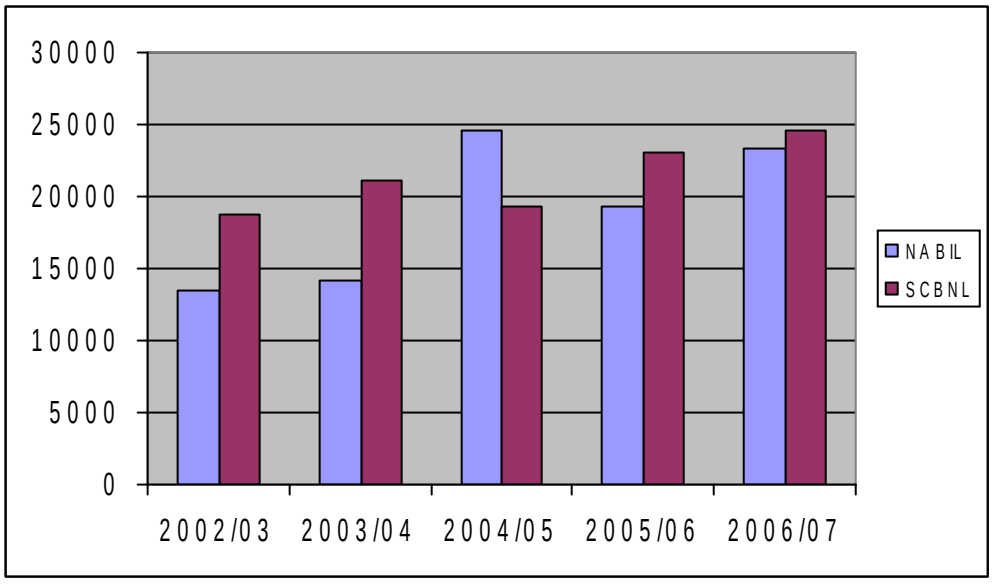
Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	416	455	518	635	674	12.82%
SCBNL	507	538	540	659	692	8.08%

Source: Appendix 1(xx)

The above comparative shows that the growth ratio of NABIL's net profit i.e. 12.82% is higher than SCBNL i.e. 8.08%. In the view of net profit NABIL has better position in comparison to SCBNL.

Figure 4.4

Growth Ratio of Total Net Profit



4.1.2 Statistical Tools

Under this heading some statistical tools such as co-efficient of correlation analysis between different various, trend analysis of deposits, loan and advances, investment and net profit as well as hypothesis test are used to achieve the objectives of the study.

4.1.2.1 Coefficient of Correlation Analysis

Correlation analysis is the relationship between dependent variables so it is called constant variable also. Correlation is denoted by 'r' and ranges from +1.0 indicating perfect positive correlation to -1.0, indicating perfect negative perfect correlation. If the correlation coefficient is zero, then the factors are independent or un-correlated.

In this chapter, correlation between deposit & total investment, deposit and loan & advances and outside assets & net profit have been calculated. Then results have analyzed and interpreted and then significance of correlation has been tested using Karl Pearson's correlation of co-efficient.

(I) Co-Efficient of Correlation between Deposit and Loan & Advances

It is already mentioned that investment is dependent upon saving i.e. deposit. Longer the duration of deposit, higher the banker's ability to acquire long term asset. In the other words banker can't invest more. On long term assets if the duration of deposit is short. In this sense it can be said that investment is the function of deposit.

Theoretically it is assumed that long-term asset yield higher return. It means longer the duration of deposit, higher would be the profitability of the bank. But investment may no be the function of deposit only. Sometimes investment is made from the funds raised from other sources. In such situation investment is not dependent upon deposit only. Co-efficient of correlation between deposit and loan and advances measures the degree of relationship between these two variables. In this analysis deposits is independent variable (y) and loan and advances is dependent variable (x).

Table 4.21
Correlation between Total Deposits and Loan and Advances

Evaluation Criterions				
Banks	**r**	**r^2**	**P.E.**	**6 P.E.r**
NABIL	0.97	0.9409	0.0178	0.1068
SCBNL	0.83	0.6889	0.0938	0.5628

Source: Appendix 2(i, iv, vii)

From the above table, two sample banks co-efficient of correlation between total deposit and loan and advances shows high degree of positive relationship. In case of NABIL, it is fund that co-efficient of correlation between total deposit and loan and advances is 0.97, which is high degree of positive correlated. When consider, the value of coefficient of determination (r^2), it is 94.09% of the variation is the dependent variable (loan and advances) has been explained by the independent variable (total deposit).

Similarly, considering the valued of (r) i.e. 0.97 and comparing it with 6PE i.e. 0.1068 we ca find that (r) is greater than the value of 6PE. This reveals that the value of r is significant. In other words there is significant relationship between total deposit and loan and advances in case of NABIL.

Likewise, in the case of SCBNL, it has high degree of positive correlation between deposit and loan & advances, However by application of coefficient of determination (r^2) it indicates that SCBNL has 68.89% of the variation in the dependent variable i.e. loan and advances has been explained by the independent variable i.e. deposits. Moreover considering the probable error, in case of SCBNL, (r) is greater then 6 P.E is can be said that the value of (r) is significant i.e., there is significant relationship between total deposit and loan & advances.

Lastly, we can draw the conclusion from the above analysis that in NABIL and SCBNL, there is positive relationship between total deposits and loan & advances. The relationship is significant and the value of (r^2) shows high percent in the dependent variable which has been explained by the independent variable. This indicates that three banks are successful to mobilize their deposits in-proper way as loan & advances. Moreover, we can further conclude that NABIL has higher correlation between deposit and loan & advances as well as higher value of (r^2)

than of SCBNL. Which indicates that it is in strong condition to grant loan & advances for mobilizing the collected deposits in comparison to SCNBL?

(ii) Co-Efficient Of Correlation between Deposit and Total Investment

Co-efficient of correlation (r) between deposit and investment measures the degree of relationships between these two variables. Here, deposit is independent variable (x) and total investment is dependent variable (x). The purpose of computing co-efficient of correlation between deposit and total investment is to find out whether deposit is significantly used as investment or not.

The table 4.24 shows the value of r, r^2, P.E and 6P.E between deposit and total investment of NABIL and SCBNL for the study period of 2002/03 to 2006/07.

Table 4.22
Correlation between Deposit and Total Investment

Evaluation Criterions				
Banks	**r**	**r^2**	**P.E.**	**6 P.E.**
NABIL	0.82	0.6724	0.0988	0.5928
SCBNL	0.98	0.9604	0.0119	0.0714

Source: Appendix 2(ii, v, viii)

From the above table 4.22, we find that co-efficient of correlation between deposits (independent) and total investment (dependent) value of 'r' is 0.82 in case of NABIL. It shows highest degree of positive relationship between two variables. However, by application of coefficient of determination the value of (r^2) is 0.6724 which indicates 67.24% of the variation of the dependent variable (total investment) has been explained by the independent variable (deposits). Moreover, by considering the probable error, since the value of r i.e. 0.82 is greater than 6P.E. i.e. 0.5928. So, we can say that there is significant relationship between total deposits and total investments.

On the other hand in case of SCBNL have high degree of correlation between deposit and total investment? However, by the application of coefficient of determination i.e. r^2 it indicates SCBNL to be 96.04% of the variation in the dependent variable i.e. total investment has been explained by the independent variables i.e. deposit more over considering the probable error since the value of r i.e. 0.98 of SCBNL is more than 6 P.E. So we can say that there is significant relationship between total deposit and total investment of SCBNL.

Lastly, we can draw the conclusion from the above analysis that NABIL and SCBNL as high degree of positive relationship between deposit & investment. The relationship is significant and the value of (r^2) shows high percent in the dependent variable which has been explained by the independent variable. This indicates that three banks are successful to invest their deposit in proper way. More over, we can further conclude that NABIL has slightly lower correlation between investment & deposit as well as lower value of r^2 in comparison to SCBNL.

(iii) Coefficient of Correlation between Outside Assets and Net Profit

Coefficient of correlation 'r' between outside assets and net profit measures the degree of relationship between these two variables. Here, outside assets are independent variable (x) and net profit is dependent variable (y). The purpose of computing co-efficient of correlation between outside assets and net profit is to find out whether the net profit is significantly correlated with respective total assets or not.

Table 4.23
Co-efficient of Correlation between Outside Assets and Net Profit

	Evaluation Criterions			
Banks	**r**	**r^2**	**P.E.**	**6 P.E.**
NABIL	0.93	0.8649	0.0408	0.2448
SCBNL	0.83	0.6889	0.0938	0.5628

Source: Appendix 2(iii, vi, ix)

From the above listed table it has been found that the coefficient of correlation between total outside assets (independent) and net profit (dependent) of NABIL is 0.93 high degree of positive correlation between these two variables. On the other hand, considering the value of co-efficient of determination r^2 i.e. 0.8649 indicates that 86.49% of the variation in the dependent variables (net profit) has been explained by the independent variables (total outside assets) moreover by considering the probable error. We can further say that there is significant relationship between total outside assets and net profit because the value of r i.e. 0.93 is greater that 6 P.E. i.e. 0.2448. It indicates that NABIL is capable to earn net profit by mobilizing total outside assets.

Similarly, co-efficient of correlation between outside assets and net profit in case of SCBNL is found to be 0.83, which indicates high degree of correlation between these two variables. On the other hand, considering the value of co-efficient of determination r^2 i.e. it indicates SCBNL to be 68.89% of the variation in the dependent variable i.e. net profit has been explained by the independent variables i.e. outside assets moreover, considering the probable error since the value of r i.e. 0.83 of SCBNL is more than 6 P.E. So we can say that there is significant relationship between net profit and total outside assets of SCBNL.

Lastly, we can draw the conclusion from the above analysis that NABIL and SCBNL has high degree of positive relationship between deposit & investment. The relationship is significant and value of r^2 shows the high percent in the dependent variable which has been explained by the independent variable. This indicates that three sample banks are successful to mobilize fund and get return i.e. net profit from such mobilized assets. Moreover, we can further conclude that NABIL has higher correlation between net profit & outside assets as well as lower value of r^2 in comparison to SCBNL.

4.1.2.2 Trend Analysis and Projection for Next Five Years

Under this topic, analysis trend of deposit collection, its utilization and net profit of NABIL and SCBNL are studied. To utilize deposits a commercial bank may grant loan and advances and invest government securities and share & debentures of other companies. Under this topic an attempt is made to analyze trend of deposit. Investment and income of NABIL and SCBNL also forecast their trend for next five years. The projections are based on the following assumptions:

a. The main assumption is that other things will remain unchanged.
b. The forecast will be true only when the limitation of least square method is carries out.
c. The bank will run in present position.
d. The economy will remain in the present stage.
e. Nepal Rastra Bank will not change its guidelines to commercial bank.

(I) Trend Analysis of Total Deposit

Under this topic and effort has been made to calculate the trend values of deposit of NABIL and SCBNL for 5 years from 2002/03 to 2006/07 and forecast for next 5 years till 2012.

Table 4.24
Trend Value of Total Deposit (Rs. in million)

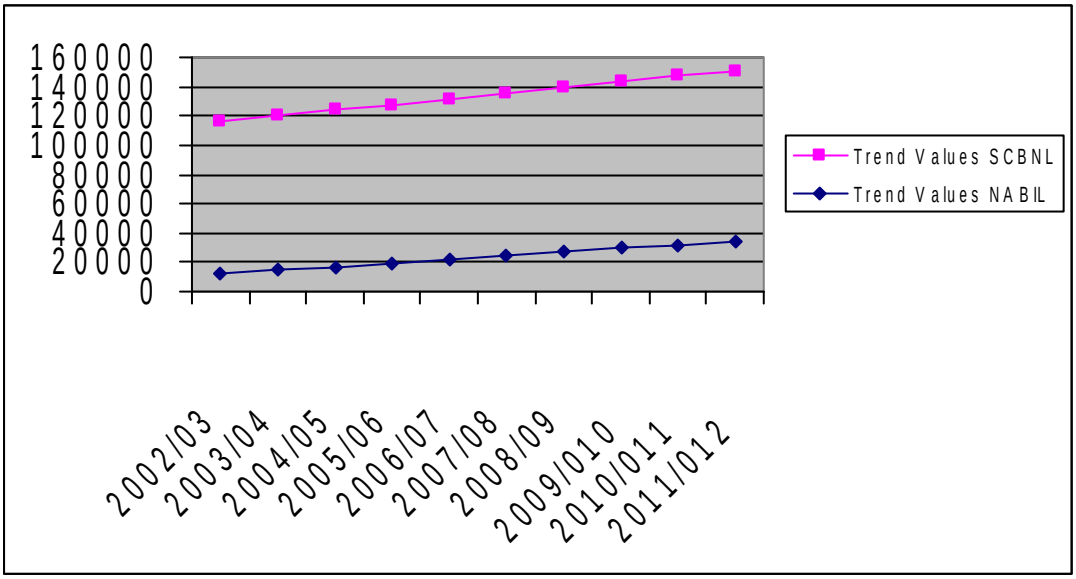
Year	Trend Values NABIL	Trend Values SCBNL
2002/03	11965	104223.75
2003/04	14466.80	105591.99
2004/05	16968.60	106960.23
2005/06	19470.40	108328.47
2006/07	21972.20	109696.71
2007/08	24474	111064.95
2008/09	26975.80	112433.19
2009/010	29477.60	113801.43
2010/011	31979.40	115169.67
2011/012	34481.20	116537.91

Source: Appendix 3(i, iv, vii)

The above table shows that the deposits of both banks have the increasing trend. If other thing remains the same, the total deposit of NABIL will be 34481.20 million in FY 2011/012 which is less than that of SCBNL. Similarly deposit of SCBNL will be 116537.91 million in the FY 2011/012.

From the above trend analysis, it is found that the deposit collection position of NABIL is weak in comparison to SCBNL. The calculated trend values of total deposit of NABIL and SCBNL are fitted in trend line.

Figure 4.5
Trend Value of Total Deposit



(ii) Trend Analysis of Investment

Under this topic, the trend values of total investment for five years from 2002/03 to 2006/07 have been calculated ad forecasted for next five years from 2007/08 to 2011/012.

The following table 4.25 shows the trend values of total investment for trend values of total investment for ten years from 2007/08 to 2011/012 of NABIL and SCBNL.

Table 4.25
Trend Value of Total Investment (Rs in million)

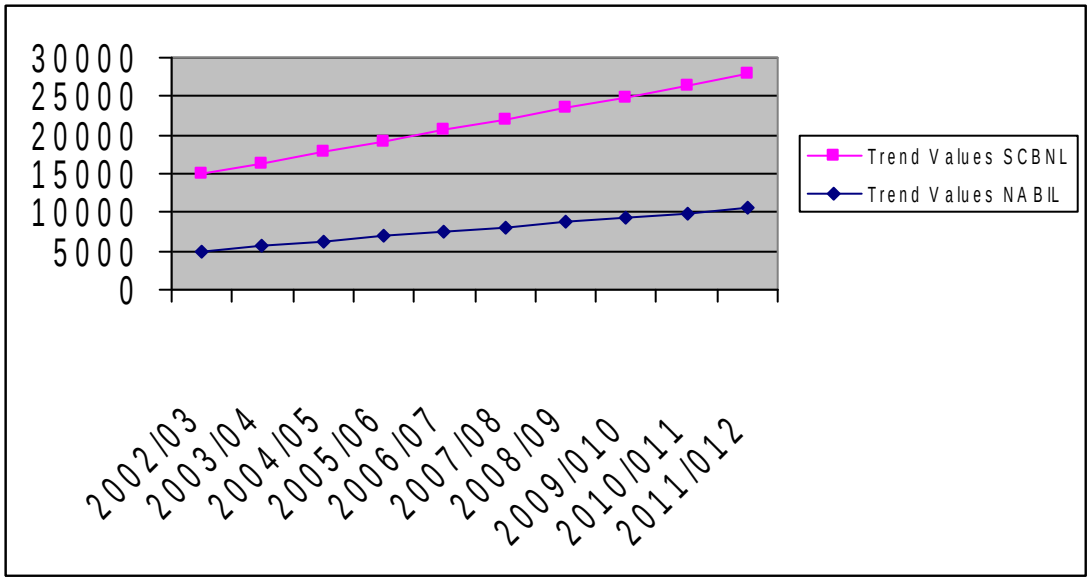
Year	Trend Values NABIL	Trend Values SCBNL
2002/03	5017.95	9903.71
2003/04	5635.04	10719.84
2004/05	6252.13	11535.97
2005/06	6869.22	12352.10
2006/07	7486.31	13168.23
2007/08	8103.40	13984.36
2008/09	8720.49	14800.49
2009/010	9337.58	15616.62
2010/011	9954.67	16432.75
2011/012	10571.76	17248.88

Source: Appendix 3(ii, iv, viii)

The above table shows the total investment of NABIL and SCBNL has the increasing trend value. Other things remaining the same the total investment of NABIL will be 10571.76 million in the mid July 2012 that is lower than investment of SCBNL. Similarly, the deposit of SCBNL will be 17248.88 million.

From the above trend analysis, it is found that the total investment of NABIL is lower in comparison to SCBNL. The calculated trend values of total investment of NABIL and SCBNL are fitted in the trend line.

Figure 4.6
Trend Value of Total Investment



(iii) Trend Analysis of Net Profit

Under this topic, the trend values of net profit for five years from mid July 2002/03 to 2006/07 have been calculated and forecasted from next five years from mid July 2006/07 to 2011/012.

Table 4.26
Trend Value of Net Profit (Rs in million)

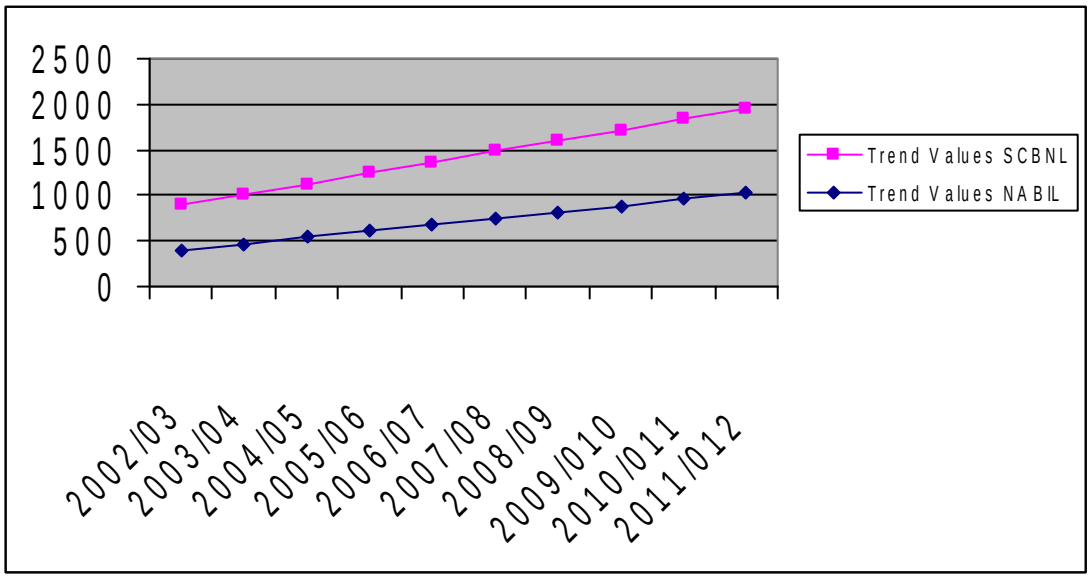
Year	Trend Values NABIL	Trend Values SCBNL
2002/03	400.74	488.79
2003/04	470.28	537.83
2004/05	539.82	586.87
2005/06	609.36	635.91
2006/07	678.90	684.95
2007/08	748.44	733.99
2008/09	817.98	783.03
2009/010	887.52	832.07
2010/011	957.06	881.11
2011/012	1026.60	930.15

Source: Appendix 3(iii, vi, ix)

The above table shows that the net profit of NABIL and SCBNL is in increasing trend value. Other things remaining the same, the net profit of NABIL will be 1026.60 million in the mid July 2012. That is higher than SCBNL. Similarly, the net profit of SCBNL will be 930.15 million in mid 2012 respectively.

From the above trend analysis, it is fund that the net profit of NABIL is higher than SCBNL. The calculated trend values of net profit of NABIL and SCBNL are fitted in the trend line.

Figure 4.7
Trend Value of Net Profit



4.1.2.3 Test of Hypothesis

Under this topic, an effort has been made to test the significance level regarding the parameter of the population on the basis of sample drawn from the population. The following stops have been followed in the test of hypothesis.

i) Formulating of hypothesis

- Null Hypothesis
- Alternative Hypothesis

ii) Computing the test statistic

iii) Fixing the level of significance

iv) Deciding two tailed or one tailed test

v) Having decision

T-test

In this research study the sample is small i.e., n =5. Hence, to deal with small sample "t" test is used. Suppose we want to test if two independent samples have been drawn from two normal populations having the same means, the population variances being equal.

We set up the Null hypothesis (H_0)**:** $\mu_1 = \mu_2$ i.e., the samples have been drawn from the normal population, or the sample means $\overline{X_1}$ and $\overline{X_2}$ do not differ significantly. Under the assumption that $a^2 = 6a^2$ i.e., population variances are equal but unknown, the test statistic under (H_0).

It is an unbiased estimate the common population variance σ^2 based on both the samples. By comparing the tabulated value of "t" for $n_1 + n_2 - 2$ d.f. at the desired level of significance. Usually 5% we reject or retain the null hypothesis (H_0).

Sources: Appendix 3(vii)

I. Test of Hypothesis on Loan ad Advances to Total Deposit of NABIL and SCBNL are Taken and Carried Out Under t-test of Significance Difference

Fiscal Year	NABIL			SCBNL		
	X_1	x_1	x_1^2	X_2	x_2	x_2^2
2002/03	57.67	-6.66	44.36	30.36	-6.47	41.86
2003/04	58.00	-6.33	40.07	30.30	-6.53	42.65
2004/05	72.57	8.24	67.89	42.12	5.29	27.98
2005/06	66.79	2.46	6.05	38.75	1.92	3.69
2006/07	66.61	2.28	5.21	42.61	5.78	33.41
	321.64		**163.57**	**184.14**		**149.59**

Source: Appendix (viii)

a. Test of Significance of Difference Between NABIL and SCBNL

Null Hypothesis (H_0)**:** $\mu_1 = \mu_2$ i.e., there is no significant difference between mean ratios of loan ad advances to total deposit of NABIL & SCBNL.

Sources: Appendix (viii)

Alternative Hypothesis (H_1)**:** $\mu_1 \neq \mu_2$ i.e., (two tailed) i.e. there is significant difference between mean ratios of loan and advances to total deposit of NABIL and SCBNL (where $\overline{x_1}$ is mean ratio of NABIL and $\overline{x_2}$ is mean ratio is SCBNL)

Decision

Since the calculated value of t = 6.95 is greater than tabulated value i.e. 2.306 therefore the null. Hypothesis is rejected and hence alternative hypothesis (H_1) is accepted i.e. there is significant difference between mean ratio of loan and advances to total deposit of NABIL and SCBNL.

(ii) Hypothesis Test of Investment on Government

Securities to current assets ratios between NABIL and SCBNL.

Here ratios of investment on government securities to current asset ratios of NABIL and SCBNL are taken and carried out under (t-test) of significance difference.

Fiscal year	NABIL			SCBNL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2
2002/03	25.87	5.57	31.02	38.52	0.95	0.9025
2003/04	25.78	5.476	29.98	39.56	1.99	3.9601
2004/05	16.12	-4.184	17.506	37.28	-0.29	0.0841
2005/06	12.69	-7.614	57.973	40.22	2.65	7.0225
2006/07	21.06	0.756	0.572	32.27	-5.3	28.09
	$\sum X_1$ 101.52		$\sum x_1^2$ =137.02	$\sum X_2^2$ =187 .85		$\sum X_2^2$ =40 .059

Source: Appendix 3(x)

a) Test of Significance of Difference Between NABIL and SCBNL

Null Hypothesis (Ho): $\overline{x_1} = \overline{x_2}$ i.e. there is no significant difference between mean ratios of investment on government securities to current asset ratios of NABIL and SCBNL

Alternative Hypothesis (H_1): $\overline{x_1} \neq \overline{x_2}$ (two tailed test) i.e., there is significant difference between mean ratios of invest on government securities to current assets ratios of NABIL and SCBNL.

Sources: Appendix 3(x)

Decision

Since the calculated value of (t) = 5.803 is greater the tabulated value i.e. 2.306 therefore alternative hypothesis (H_1) is accepted i.e. there is significant difference between mean ratios of investment in government securities to current assets of NABIL and SCBNL.

(iii) Hypothesis Test of Return on Loan and Advances Ratio between NABIL and SCBNL

Here ratios of return on loan and advances of NABIL and SCBNL are taken and carried out under t-test of significance difference

Fiscal year	NABIL			SCBL		
	$\mathbf{x_1}$	$\mathbf{x_1}$	x_1^2	$\mathbf{x_2}$	$\mathbf{x_2}$	x_2^2
2002/03	5.37	0.345	0.1253	8.9	1.32	1.7424
2003/04	5.56	0.544	0.2959	8.41	0.83	0.6889
2004/05	4.90	-0.116	0.01346	6.62	-0.96	0.9216
2005/06	4.92	-0.096	0.009216	7.37	-0.21	0.6441
2006/07	4.33	0.686	0.470596	6.6	-0.98	0.9604
	$\sum X_1$ 2 5.08		$\sum x^2$ =91447	$\sum X_2$ =37.9		$\sum X^2$ =4. 3574

Source: Appendix 3(xi)

a) Test of Significance Difference Between NABIL and SCBNL

Null Hypothesis H_o: $\overline{x_1} = \overline{x_2}$ i.e. there is no significance difference between mean ratios of return on loan and advances of NABIL and SCBNL

Alternative Hypothesis (H_1): $\overline{x_1} \neq \overline{x_2}$ (two tailed test) i.e. there is significant difference between mean ratios on loan and advances of NABIL and SCBNL.

Test of statistics under H_o is

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{S^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$= \frac{5.016 - 7.58}{\sqrt{.6589\left(\frac{1}{5} + \frac{1}{5}\right)}}$$

$$= \frac{-2.564}{0.26356}$$

$$= -9.728$$

Decision

Since the calculated value of $|t| = 9.728$ is greater then tabulated value of t = 2.306 therefore the Null hypothesis (H_o) is rejected and hence alternative hypothesis (H_1) is accepted i.e., there is significant difference between mean ratios of return on loan and advances of NABIL and SCBNL.

(iv) Hypothesis Test of Total Interest Earned to Total outside Assets Ratio of NABIL, SCBNL

Ratios of total interest earned to total outside assets of NABIL and SCBNL are taken and carried out under (t-test) of significance difference.

Fiscal year	NABIL			SCBNL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2
2002/03	7.38	0.364	0.1325	14.9	7.294	53.2316
2003/04	7.14	0.124	0.01538	5.86	-1.744	3.0415
2004/05	7.20	0.184	0.0338	5.93	-1.674	2.8022
2005/06	6.86	-0.156	0.0243	5.46	-2.144	4.5967
2006/07	6.50	-0.516	0.2662	5.87	-1.734	3.0067
	35.08		0.47232	38.02		66.6789

Source: Appendix 3(xii)

a) Test of Significance Difference Between NABIL and SCBNL

Null Hypothesis (H_O): $\overline{x_1} = \overline{x_2}$ i.e. there is no significant difference between mean ratios of total interest earned to total outside assets of NABIL and SCBNL

Alternative Hypothesis (H_1): $\overline{x_1} \neq \overline{x_2}$ (two tailed test) i.e., there is significant difference between mean ratios of total interest earned to total outside assets ratios of NABIL and SCBNL.

Test statistics under Ho is,

$$t = \frac{64.33-36.83}{\sqrt{39.145(\frac{1}{5}+\frac{1}{5})}}$$

$$= \frac{27.5}{\sqrt{15.66}} \quad = \frac{27.5}{3.96} \quad = 6.95$$

The calculated value of t = (two tailed test) at 5% level of (n_1+n_2-2) 8 d.f. is 2.306

Decision

Since the calculated value of (t) = 0.262 is lower than tabulated value of (t) = 2.326 therefore the Null Hypothesis (H_O) is accepted and alternative Hypothesis is rejected i.e., there is no significant difference earned to total outside assets of NABIL and SCBNL

4.2 Major Findings of the Study

The main findings of the study are derived on the analysis of financial data of NABIL and SCBNL is given below.

Liquidity Ratio

The liquidity position of NABIL and SCBNL reveals that:

- From the analysis of current ratio it is found that the mean of ratio of NABIL is higher than that of SCBNL. It means NABIL has maintained the higher liquidity. And lower risk in compare to SCBNL. The ratio of NABIL is less consistent than SCBNL.
- The mean ratio of cash and bank balance to total deposits of NABIL is lower than SCBNL, It states that cash and bank balance in liquidity position of NABIL lower than SCNBL. And the ratio of NABIL is less consistent than that of SCBNL.
- The mean ratio of cash and bank balance to current assets of NABIL is lower than SCBNL. It states that the liquidity position of NABIL is poorer than that of SCBNL.
- The mean ratio of investment on government securities to current assets of NABIL is lower in compared to SCBNL. It reveals that investment on government securities of NABIL is poorer than SCBNL The ratio of NABIL is less consistent than that of SCBNL.
- The mean ratio of loan and advances to current assets of NABIL is slightly lower than SCBNL. The ratio of NABIL is more consistent than SCBNL.

Assets Management Ratio (Activity Ratio)

The assets management ratio of NABIL and SCBNL reveals that.

- The mean ratio of loan and advances to total deposit of NABIL is higher than that of SCBNL. The ratio of NABIL is more stable than SCBNL.
- The mean ratio of total investment to total deposit of NABIL is lower than SCBNL. The variability of ratios is lower than that of SCBNL.
- The mean ratio of loan and Advances to total working fund of NABIL is higher than SCBNL. The variability of ratios is lower than SCBNL.
- The mean of investment on government securities to total working fund ratio of NABIL is lower than SCBNL. However NABIL seams to have more variable and uniform ratios than that of two compared banks.
- The mean ratio of Investment on share and debentures to total working fund of NABIL is higher than SCBNL and also NABIL is more consistent and homogeneous than SCBNL.
- From the above findings it helps to conclude that NABIL, is comparatively successful in its on balance sheet operation is compared to SCBNL. It predicts that NABIL has successfully maintained and managed its assets towards different income generating activities.

Profitability Ratio

The profitability ratio of NABIL and SCBNL reveal that:

- The mean ratio of return on total working fund is higher than SCBNL. On the other hand NABIL is less consistent and homogeneous than SCBNL.
- The mean ratio of return on total working fund is higher than SCBNL. On the other hand NABIL is less consistent and homogeneous than SCBNL.
- The mean ratio of total interest earned to total outside Assets of NABIL is slightly lower than SCBNL.
- The mean ratio of return on loan and advances of NABIL is higher than of SCBNL and is more consistent than SCBNL.

- The mean ratio of total Interest earned to total working fund of NABIL is higher than that of SCBNL. The ratio of NABIL is more consistent than that of SCBNL.
- The mean ratio of total interest pays to total working fund is higher than SCBNL. NABIL'S ratio is less consistent than SCBNL.
- From the above findings of profitability ratios, it can be concluded that the NABIL is comparatively in higher position than that of SCBNL. So, the profit earning capacity of NABIL is high in comparison to other two banks.

Growth Ratios

From the analysis of growth ratios of NABIL and SCBNL it reveals that:

- The growth ratio of NABIL deposit is higher than that of SCBNL. It means the performance of NABIL to collect deposit is greater than SCBNL.
- The growth ratio of NABIL loan and advances is higher than that of SCBNL. It means the performance of NABIL to grant loan and advances in compared to SCBNL.
- The growth ratio of total investment is higher than that of SCBNL, it indicates that NABIL has succeeded on the investment than SCBNL.
- The growth ratio of NABIL net profit is higher than SCBNL. It means the performance of NABIL to earn profit is in better position in comparison to SCBNL.
- From the above analysis, it can be concluded that NABIL has maintained high growth ratios on total deposit, loan advances and total Investment and on net profit. We must say that the bank is successful in increasing its sources and its mobilization.

Co-efficient of Correlation Analysis

Co-efficient of correlation analysis between different variables of NABIL and SCBNL, it reveals that:

- NABIL has highest value of Co-efficient of correlation between deposit and loan and advances in compared to SCBNL
- NABIL has lower value of Co-efficient of correlation between total deposit and total investment in comparison to SCBNL. It means NABIL is in average position to follow the policy of maximizing the investment of their deposits in comparison to SCBNL.
- NABIL has higher value of co-efficient of correlation between net profit and outside assets in comparison to SCBNL. NABIL is in average position in it efficiency to get return i.e. net profit from outside assets. From the above analysis, it can be concluded that there is high degree of significant relationship between deposit and loan and advance, deposit and total investment and outside assets and net profit of SCBNL.

Trend Analysis and Projection for Next Five Years

The trend analysis of total deposit loan and advances, total investment and net profit and projection for next five years of NABIL and SCBNL reveals that:

- Total deposits of both banks have increasing trend. The total deposit of NABIL will be 34481.20 million in the mid July of 2012, which is the lower deposit than SCBNL. Similarly the total deposit of SCBNL will be 116537.91 million in the mid July of 2012. The deposit collection of NABIL is lower than SCBNL.
- The total investment of both banks is in increasing trend. The total investment of NABIL will be 10571.76 million in the mid of July 2012 similarly, the total investment of SCBNL will be 17248.88 million in the mid July 2002. The total investment of NABIL is not better in comparison to SCBNL.
- The net profit of both banks is in increasing trend. The net profit of NABIL will be 1026.60 million in the mid of July 2012 that is the higher

net profit than SCBNL. Similarly the net profit of SCBNL will be 930.15 in the mid July 2012.

Test of Hypothesis

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

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

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is an accomplished specific and indicative enclose which contains summary and conclusion of finding and recommendations. Brief introduction to all chapters of the study and genuine information of the present situation under the topic of the study is defined on summary. Conclusions are analysis of applicable data by using various financial and statistical tools, which presents strengths, weakness, opportunities and threats of the CBs. And suggestions are obtainable in recommendation, which is arranged on the based from finding and conclusions.

5.1 Summary

The development of any country depends upon its economic development. Economic development demands transformation of savings or invertible resources into the actual investment formation is the prerequisite in setting the overall pace of the development of a country. It is the financial institutions that transfer funds from surplus spending units to deficit units.

The evolution of the organized financial system in Nepal has a more recent history than in other countries of the world. In Nepalese content, the history of development of modern banks started from the establishment of Nepal bank limited in 1937 A.D. nowadays there are 24 CBs operating in Nepal financial market which is in increasing due to the country moved towards economic liberalization, financial scenario has changed, and foreign banks were invited to operate in Nepal. For the better performance of CBs, successful formulation & effective implementation of investment policy is the prime requisite. Nowadays there is a very high competition in the banking industries but very less opportunity to make investment. The opportunities are hidden. Thus these CBs should take initiative action in search of the new opportunities. So that, they can easily survive in this competitive banking business world & earn profit. A bank manager its investment has a lot to do with the economic health of the country because the bank loans

support the growth of new business & trade empowering the economic activities of the country.

Banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector which deals in the process of channeling the available resources in the needed sector. It plays the role of agent between the deficit and surplus of financial resources. Financial institutions like banks are a necessity to collect scattered saving and put them into productive channels. In the absence of such institution it is possible that the saving will not be safely and profitable utilized within the economy. It will be diverted aboard into unproductive sectors.

Development of trade, industry and business is the main ground of banks to conduct its activities and fulfill its profit making objectives. The sound investment policy helps all the banks to make profitable investment and which in turns also helps to develop the economic condition of the nation. Investment policy of commercial banks is very risky one. It is the most important factor from the view point of shareholders and bank management. For this, commercial banks have to pay due consideration while formulating investment policy. A good investment policy attracts both borrowers and lenders, which helps to increase the volume and quality of deposits, loans and investment.

Commercial banks are not able to utilize its deposits properly i.e. providing loan and advances or lending for a profitable project, the reason behind it is lack of sound investment policy, increasing trend of this type of situation certainly lead closure of the banking institutions.

Hence, the sufficient return is not earned due to the lack of stable, strong and appropriate investment policy. They have not been able to utilize their funds more efficiently and productively. Though the directions and guidance are being provided by the NRB but the long term and published policy about their operation does not sound good in the JVB's. Therefore, the banks investment policy must be such that it is sound and prudent in order to protect public funds.

The main focus of the study is to comparative study of investment practices of commercial banks of NABIL Bank Limited and Standard Chartered Bank Nepal Limited and to suggest for its improvement in the investment policy. The study has been constrained by various common limitations.

The study is based on secondary data from the fiscal year 2002/03 to 2006/07. The data are collected from annual reports, financial statement, official records, periodicals, journals and bulletins, various published reports and relevant unpublished master's thesis. Besides this, personal contacts with the bank have also been made.

For the fulfillments of the objectives of the study many analyses have been done. Both financial as well as statistical tools have been used to analyze and interpret the facts and information. Under financial tools, various financial ratios related to the investment function of commercial banks i.e. liquidity ratio, assets management ratio, profitability ratio, risk ratio, and growth ratio have been studied and interpreted. Under statistical analysis, some relevant statistical tools, i.e. correlation co-efficient, trend analysis and hypothesis test have been studied and tested. This analysis gives clear picture of the performance of the bank with regard to its investment practices. Financial & statistical tools are used to reckoning and secondary data were compiled, processed, tabulated and graphed for better presentation. From which various finding have shown in above chapter from that finding conclusion have been drawn which are presented as below:

5.2 Conclusion

The liquidity position of NABIL is comparatively better than SCBNL. NABIL has maintained highest current assets ratio but it has lower mean ratio of cash and bank balance to total deposit and cash and bank balance to current assets ratio. NABIL has minimum deposit collection. It has made average investment on loan & advances and it has maintained low investment policy on government securities.

From the analysis of assets management ratio it can be concluded that NABIL has successfully maintained and managed its assets towards different income generating activities. The ratio of loan and advances to total deposit is higher but the mean ratio of total investment to total deposit is lower than SCBNL but Investment on government securities to total working fund is in moderate position in compare to other two banks. The mean ratio of Investment on share and debenture to total working fund of NABIL is higher than SCBNL. NABIL is more consistent and homogeneous than SCBNL.

In profitability ratio, the mean of return on total working fund and total interest earned to total working fund of NABIL is higher than SCBNL. The mean ratio of total interest earned to total outside Assets return on loan and advances and total interest paid to total working fund of NABIL is in higher in comparison to SCBNL. So, the profit earning capacity of NABIL is high is comparison to SCBNL. The growth ratio NABIL is successful in increasing its sources and its mobilization.

There is high degree of significant relationship between deposit and loan and advances, deposit and total investment and outside assets and net profit of NABIL is compare to SCBNL.

Total deposit, total investment and net profit of both banks are in increasing trend. Other things remaining the total deposit of NABIL will be on lower position in compare to SCBNL and total investment trend of NABIL is not better in comparison to SCBNL. The net profit of NABIL will be higher than SCBNL.

From the above analysis, it can be concluded that all two banks have significant difference between loan and advances, return on loan and advances. There is no significance difference between ratios of total interest earned to total outside assets of NABIL and SCBNL. But there is significant difference between investment on government securities to current assets of NABIL and SCBNL.

5.3 Recommendations

On the basis of analysis, findings, following recommendations are made. The banks can make use of these recommendations to overcome their weakness, inefficiency and improve their present fund mobilization and their overall investment policy.

- Current ratio of two sample banks are not sufficient to achieve standard ratio i.e. 2:1, so it is recommended to both banks to maintain required current ratio. They need to maintain the present mean current ratio for the proper management of their liquidity position.
- The liquidity position of a bank may be affected by external as well as internal factors. The affecting factors may be interest rates, supply as demand position of loan and advances as well as savings, investment situations, central banks directives, the lending policies, capability of management, strategic planning and funds flow situation. As NABIL has maintained lower cash and bank to total deposit and current assets ratio, NABIL is recommended to increase cash and bank balance to meet current obligations and loan demand.
- To get success is competitive banking environment, depositors money must be utilized as loan and advances. Negligence in administering these assets could be the main cause of liquidity crisis in the bank and one of the main reasons of a bank failure. It has been found from the study that NABIL has greater ratios at all, because its large portion of fund invested as loan and advances and negligence to invest on other sector. SCBNL have not properly used their existing fund as loan and advances to over come this situation, NABIL and SCBNL are strongly recommended to follow liberal lending policy.
- As bank of private sector commercial banks cannot keep this eyes closed from the profit motive. They should be careful is increasing profit is a real sense to maintain the confidence of shareholders, depositors and its all customers. NABIL has high profit earning capacity.
- Out of working fund, NABIL has not invested its more funds as total investment in comparison to SCBNL. Though, the percentage of invested by both banks have

very nominal. So, it is recommended that both banks to invest their more funds in different types of companies' indifferent areas.

- In terms of recovery of loan of NABIL is worse in comparison to SCBNL. The loan loss ratio is comparatively high that makes negative impact on profit. It may be facing a lot of problems on recovering loans. It has large no-performing asset as loan un-recovered. Therefore it is recommended to apply recovery act that would help to realize overdue loan in time.
- Most of the joint venture banks have focused their banking services especially to big clients such as multinational companies, large-scale industries, manufactures and exporters of garments and carpets. The minimum level bank balance and the amount needed to open an account in there banks are very high amount. So, small depositors are very far from enjoying the banking facilities provided by such joint venture banks. So, all three banks should open its doors to the small depositors and entrepreneurs for promoting and mobilizing small investors' funds and to attract depositors through variety of deposit schemes and facilities like cumulative deposit scheme, prize bonds scheme, gift cheques scheme, recurring deposit scheme (life insurance), monthly interest scheme etc.
- In the light of growing competition in the banking sector, the business of the bank should be customer oriented. It should strengthen and activate its marketing function, as it is an effective tool of attracting and retaining customers. For this purpose, the banks should develop an "Innovative approach to Bank Marketing" and formulate new strategies of serving customers in a more convenient and satisfactory way.
- Although NABIL has recently expanded it's Nine braches all over the country but NABIL do not have branches in the rural areas of the country. Its branches are limited to the urban areas only. Therefore, NABIL Bank is recommended to open branches in rural areas too to help in economic development of the country. HMG/N has also encouraged the joint venture banks to expand banking service in rural areas and communities without making unfavorable impact in their profit.

BIBLIOGRAPHY

Books:

B. N Ahuja. (1994) "**Academic's Dictionary of Management**" Academic India Publisher, 2nd Edition.

Charles Parker Jones, "**Investments: Analysis & Management**", 2nd Edition copyright 1988 by John Wiley & Sons, Inc.

Cheney, John. M and Moses, Edward. A, "**Fundamentals of Investment**", (St.Paul: West Publishing Company).

Frank K. Reilly, "**Investment**", the Dryden Press, CBS Publishing Japan Ltd.

H.D Crosse. (1963), "**Management Policies for Commercial Banks**", Englewood Cliffs, Prentice Hall Inc. New Jersey, 2nd Edition.

James B. Baxley. (1987) "**Banking Management**" Subject Publication, New Delhi.

Jack Clark Francis. (1983) "**Management of Investments**", 1st Printing.

L. J Gitman & Jochnk. (1990) "**Fundamental of Investment**", 4th Edition Harper & Row Publishers, New York.

L. V Chandler. (1973) "**The Economics of Money & Banking**" 6th Edition.

M. Radhaswami & S. V. Vasudevan. (1979), "**A Test Book of Banking**".

Preeti Singh, "**Investment Management**", Himalayan Publishing House, Bombay.

S. P. Singh & S. Singh. (1983) "**Financial Analysis for Credit Management in Banks**", Vikas Publishing House Ltd. New Delhi.

William F. Sharpe & Gordon J. Alexander. (1999) "**Investments**", Prentice Hall of India Pvt. Ltd, 5th Edition, New Delhi.

Thesis:

Dharma Raj Khanal, **"Investment in priority sector by commercial banks (a study of commercial banks of Katmandu valley)**" An Unpublished Master Degree Thesis.

Ganga Ram Manandhar, "**A comparative study in investment policies of finance companies in the context of Nepal**." An Unpublished Master Degree Thesis.

Kedar Prasad Poudyal, "**Investment in priority sector with special reference to Nepal Bank Ltd.**" An Unpublished Master Degree Thesis.

Lila Prasad Ojha, "**Lending practices: A study on NABIL, SCBNL and Himalayan Bank Ltd**." An Unpublished Master Degree Thesis.

Prabina Bajracharya in her research, "**Investment of commercial banks in priority sector.**" An Unpublished Master Degree Thesis.

Raja Ram Khadka, "**A study on the investment policy of Nepal Arab Bank Ltd. in comparison to other joint venture banks of Nepal**." An Unpublished Master Degree Thesis.

Rajesh Dhital, "**A comparative study of investment policy of SCBNL and BOKL**" An Unpublished Master Degree Thesis.

T.K. Raya with thesis on, "**Investment policy and analysis of commercial banks in Nepal**" An Unpublished Master Degree Thesis.

Articles:

Annual Reports. (2002/03 to 2006/07). Kathmandu: NABIL Bank Ltd.

Annual Reports. (2002/03 to 2006/07). Kathmandu: Standard Chartered Bank Ltd.

Bank and Financial Institution's Act. (2063). Kathmandu: Nepal Government.

Bank and Financial Institution's Ordinance. (2062). Katmandu: Nepal Government.

Economic Survey. (2003/04), Ministry of Finance, Nepal Government.

Kantipur. Nepali daily Newspaper, (13th July, 2005).

National Population Census (2001).

Nepal Rastra Bank. (2006) "**Current Macroeconomic Situation of Nepal**".

Web Sites:

www.bkpromotion.com.np

www.kantipuronline.com

www.nepalnews.com

www.nabilbank.com

www.nepalstock.com

www.nrb.org.np

www.scbl.com

ANNEXURE - 1

I. Current Ratio Times

NABIL

Fiscal year	2002/03	2003/04	2004/05	2005/06	2006/07
Current Assets	13868307	14244337	14971801	18133814	22829535
Current Liabilities	12997476	12961180	13451753	16896957	19765831
Ratio	**1.067**	**1.099**	**1.113**	**1.0732**	**1.155**

SCBNL

Fiscal year	2002/03	2003/04	2004/05	2005/06	2006/07
Current Assets	17084409	20093715	19322679	21472350	22025802
Current Liabilities	17594654	20740829	18895638	21888227	23283089
Ratios	**0.971**	**0.9688**	**1.0226**	**0.981**	**0.946**

ii. Cash and Bank balance to Total Deposit Ratio (%)

NABIL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Cash and Bank Balance	1144767	970486	559380	556176	1383821
Total Deposit	13447661	14119032	14586608	19347399	23342850
Ratio	8.51	6.87	3.83	2.87	5.93

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Cash and Bank Balance	1512304	2023164	1111117	1276241	2021021
Total Deposit	18755635	21161442	19335095	23061032	24647021
Ratio	8.06	9.56	5.75	5.53	8.21

iii. Cash and Bank Balance to Current Assets Ratio (%)

NABIL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Cash and Bank Balance	1144767	970486	559380	556176	1383821
Current Assets	13868307	14244337	14971801	18133814	22829535
Ratio	8.25	6.81	3.74	3.07	6.06

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Cash and Bank Balance	1512304	2023164	1111117	1276241	2021021
Current Assets	17084409	20093715	19322679	21472350	22025802
Ratio	8.85	10.07	5.529	5.94	9.18

iv. Investment on Government Securities to Current Assets Ratio (%)

NABIL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Investment Got. Securities	3588772	3672626	2413939	2301462	4808348
Current Assets	13868307	14244337	14971801	18133814	22829535
Ratio	25.87	25,78	16.12	12.69	21,06

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07

Investment Got. Securities	6581348	7948217	7203066	8635875	7107937
Current Assets	1708440	20093715	19322679	21472350	22025802
Ratio	38.52	39.56	37.28	40.22	32.27

v. Loan and Advances to Current Assets Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Loan and Advances	7755951	818992	10586170	12922543	15545778
Current Assets	13868307	14244337	14971801	18133814	22829535
Ratio	55.93	57.50	70.71	71.26	68.11

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Loan and Advances	5695823	6410242	8143208	8935418	10502637
Current Assets	17084409	20093715	1932679	21472350	22025802
Ratio	33.34	31.90	42.14	41.61	47.68

vi. Loan and Advances to Total Deposit Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Loan and Advances	7755952	8189993	10586170	12922543	15545779
Total Deposit	13447661	14119032	14586608	19347399	23342285
Ratio	57.67	58.00	72.57	66.76	66.61

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**

Loan and Advances	5695823	6410242	8143208	8935418	10502637
Current Assets	18755635	21161442	19335095	23061032	24647021
Ratio	30.36	30.30	42.12	38.75	42.61

vii. Total Investment to Total Deposit Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Total Investment	6031175	5835948	4269657	6178533	8945310
Total Deposit	13447661	14119032	14586608	19347399	23342285
Ratio	44.85	41.33	29.27	31.93	38.32

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Total Investment	10216199	11360328	9702553	12847536	13553233
Total Deposit	18755635	21161442	19335095	23061032	24647021
Ratio	54.47	53.68	50.18	55.71	55.10

viii. Loan and Advances to Total Working Fund Ratio (Rs. in 000)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Loan and Advances	7755952	8189993	10586170	12922543	15545779
Total Working Fund	16562624	16745486	17186331	22329971	27253393
Ratio	46.82	48.91	61.60	57.87	57.04

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**

Loan and Advances	5695823	6410242	8143208	8935418	10502637
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	27.24	21.11	37.19	34.67	36.73

ix. Investment on Government securities to Total Working Fund Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Investment Govt. Securities	3588772	3672626	2413939	2301462	4808348
Total Working Fund	16562624	16745486	17186331	22329971	27253393
Ratio	21.67	21.93	14.04	10.31	17.64

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Investment Govt. Securities	6581348	7948218	7203066	8644855	7107937
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	31.47	33.62	32.90	33.54	24.85

x. Investment on Share and Debenture to Total Working Fund Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Investment on S& D	22220	22220	440282	104192	286957
Total Working Fund	16562624	16745486	17186331	22329971	27253393
Ratio	0.13	0.13	2.56	0.47	1.053

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**

Investment on S& D	11195	11195	13348	15348	44943
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	0.05	0.05	0.06	0.06	0.06

xi. Return Total Working Fund Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Net Profit	416236	455311	518336	635263	673959
Total Working Fund	16562624	16745486	17186331	22329971	27253393
Ratio	2051	2.72	3.01	2.84	2.47

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Net Profit	506932	537800	539204	658756	691668
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	2.424	2.27	2.46	2.55	2.42

xii. Total Interest Earned to Total outside Assets Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Total Interest Earned	1017872	1001616	1068746	1309998	1587749
Total Outside Assets	13787127	14025942	14853403	19101076	24491089
Ratio	7.38	7.14	7.20	6.86	6.50

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Total Interest Earned	1001359	1042175	1058677	1189603	1411942

Total Outside Assets	6722023	17770570	17845761	21782954	24055870
Ratio	14.90	5.86	5.93	5.46	5.87

xiii. Return on Loan and Advances (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Net Profit	416236	455311	518336	635263	673959
Loan and Advances	7755951	8189992	10586170	12922543	15545778
Ratio	5.37	5.56	4.90	4.92	4.33

SCBNL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Net Profit	506932	537800	539204	658756	691668
Loan and Advances	5695823	6410242	8143208	8935418	10502637
Ratio	8.9	8.41	6.62	7.37	6.6

xiv. Total Interest Earned to Total working fund Ratio (%)

NABIL

Fiscal Year	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Total Interest Earned	1017872	1001616	1068746	1309998	1587749
Total Working Fund	16562624	16745486	17186331	22329971	2723393
Ratio	6.15	5.98	6.22	5.87	5.83

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Earned	1001359	1042175	1058677	1189603	1411982
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	4.81	4.41	4.83	4.61	4.94

xv. Total Interest Paid to Total Working Fund Ratio (%)

NABIL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Paid	317348	282948	243545	347161	555710
Total Working Fund	16562624	16745486	17186331	22329971	27253393
Ratio	1.91	1.10	1.42	1.55	2.04

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Paid	255154	275809	254127	303198	413055
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	1.22	1.2	1.16	1.20	1.44

xvi. Return on Equity Ratio (ROE) (%)

NABIL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Net Profit	416236	455311	518336	635263	273959
Equity Capital	1165221	1479880	1656875	1873203	2055115
Ratio	35.72	30.77	31.30	33.91	32.79

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Net Profit	506932	537800	539204	658756	691668
Equity Capital	13689	1495739	1582415	1754139	2116353
Ratio	37.03	35.96	33.89	37.55	32.68

xvii. Sample Calculation of Growth Rate of Total Deposit of NABIL and SCBNL

Growth rate is calculated from

$D_n = D_o(1+g)^{n-1}$

D_n = Total deposit of n^{th} year.

D_o = Total deposit of initial year.

G = Growth rate.

N = Number of year.

$D_{2006/07} = 23342$

$D_{2002/03} = 13448$

$N = 5$

$D_{2006/07} = D_{2002/03}(1+g)^{n-1}$

Or, $23342 = 13448(1+g)^{5-1}$

Or, $1.735 = (1+g)^4$ Or, $1+g = (1.735)^{1/4}$ $g = 0.1477$ or 14.77%

Growth rate of other banks are calculated and fed in the corresponding tables according to the above formula.

ANNEXURE - 2

i. Calculation of Correlation between Total Deposit and Loan & Advances of NABIL

(Rs. in Million)

Year	Total Deposit (X)	X^2	Loan & Advances (Y)	Y^2	XY
00/01	13447.66	180839559.48	7755.95	60154760.40	104299378.58
01/02	14119.03	199347008.14	8189.99	67075936.20	115634714.51
02/03	14586.61	212769191.29	10586.17	112066995.27	154416333.18
03/04	19347.40	374321886.76	12922.54	166992040.05	250017550.40
04/05	23342.29	544862502.44	15545.78	241671275.81	362874105.04
N =5	**84842.99**	**1512140148.11**	**55000.43**	**647961007.73**	**987242081.71**

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

$$= \frac{5 \times 987242081.71 - 84842.99 \times 55000.43}{\sqrt{5 \times 1512140148.11 - \left(84842.99\right)^2} \times \sqrt{5 \times 647961007.73 - \left(55000.43\right)^2}}$$

$$= \frac{4936210408.55 - 4666400932.49}{19035.96 \times 14654.61} = \frac{269809476.06}{278964569.78} = 0.97$$

$r^2 = 0.9409$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{\left(1 - 0.9409\right)}{\sqrt{5}} = 0.6745 \times 0.0264 = 0.0178$$

$6P.E. = 6 \times 0.0178 = 0.1068$

ii. Calculation of Correlation between Total Deposit and Total Investment of NABIL

(Rs. in Million)

Year	Total Deposit (X)	X^2	Total Investment (Y)	Y^2	XY
00/01	13447.66	180839559.48	6031.16	36374890.95	104299378.58
01/02	14119.03	199347008.14	5835.95	34058312.40	115634714.51
02/03	14586.61	212769191.29	4269.66	18229996.52	154416333.18
03/04	19347.40	374321886.76	6178.53	38174232.96	250017550.40
04/05	23342.29	544862502.44	8945.31	80018571.00	208804020.16
N =5	**84842.99**	**1512140148.11**	**31260.63**	**206856003.82**	**833171996.83**

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

$$= \frac{5 \times 554125318.95 - 84842.99 \times 31260.63}{\sqrt{5 \times 1512140148.11 - \left(84842.99\right)^2} \times \sqrt{5 \times 206856003.82 - \left(31260.63\right)^2}}$$

$$= \frac{2770626594.74 - 2652245318.48}{19035.96 \times 7553.35} = \frac{118381276.26}{143785268347} = 0.82$$

$r^2 = 0.6724$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{\left(1 - 0.6724\right)}{\sqrt{5}} = 0.6745 \times 0.1465 = 0.0988$$

$6P.E. = 6 \times 0.0988 = 0.5928$

iii. Calculation of Correlation between Outside Assets and Net Profit of NABIL

(Rs. in Million)

Year	Outside Assets (X)	X^2	Net Profit (Y)	Y^2	XY
00/01	13787.13	190084953.64	416.24	173255.74	5738754.99
01/02	14025.94	196726992.88	455.31	207307.20	6386150.74
02/03	14853.40	220623491.56	518.34	268676.36	7699111.36
03/04	19101.08	364851257.17	635.26	403555.27	12134152.08
04/05	24491.09	599813489.39	673.96	454222.08	16506015.02
N =5	**86258.64**	**1572100184.64**	**2699.11**	**1507016.64**	**48464184.19**

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

$$= \frac{5 \times 48464184.19 - 86258.64 \times 2699.11}{\sqrt{5 \times 1572100184.64 - \left(86258.64\right)^2} \times \sqrt{5 \times 1507016.64 - \left(2699.11\right)^2}}$$

$$= \frac{242320920.95 - 232821557.81}{20492.63 \times 499.89} = \frac{9499363.14}{10244060.81} = 0.93$$

$r^2 = 0.8649$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{\left(1 - 0.8649\right)}{\sqrt{5}} = 0.6745 \times 0.06042 = 0.0408$$

$6P.E. = 6 \times 0.0408 = 0.2448$

iv. Calculation of Correlation between Total Deposit and Loan & Advances of SCBNL

(Rs. in Million)

Year	Total Deposit (X)	X^2	Loan & Advances (Y)	Y^2	XY
00/01	18755.6	351774031.81	5695.82	32442365.47	106828749.42
01/02	21161.4	447806542.87	6410.24	41091176.86	135649909.15
02/03	19335.1	373846092.01	8143.21	66311869.10	157449779.67
03/04	23061	531811104.66	8935.42	79841730.58	206059988.68
04/05	24647	607475594.88	10502.6	110305446.97	258858778.13
N =5	**106960**	**2312713366.23**	**39687.33**	**329992588.98**	**864847205.06**

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

$$= \frac{5 \times 864847205.06 - 106960 \times 39687.33}{\sqrt{5 \times 2312713366.23 - \left(106960\right)^2} \times \sqrt{5 \times 329992588.98 - \left(39687.33\right)^2}}$$

$$= \frac{4324236025.30 - 4244956816.80}{11096.18 \times 8653.25} = \frac{79279208.50}{96018019.59} = 0.83$$

$r^2 = 0.6889$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{\left(1 - 0.6889\right)}{\sqrt{5}} = 0.6745 \times 0.1391 = 0.0938$$

$6P.E. = 6 \times 0.0938 = 0.5628$

v. Calculation of Correlation between Total Deposit and Total Investment of SCBNL

(Rs. in Million)

Year	Total Deposit (X)	X^2	Total Investment (Y)	Y^2	XY
00/01	18755.64	351774031.81	10216.20	104370742.44	191611369.37
01/02	21161.44	447806542.87	11360.33	129057097.71	240400941.68
02/03	19335.10	373846092.01	9702.55	94139476.50	187599774.51
03/04	23061.03	531811104.66	12847.54	165059284.05	296277505.37
04/05	24647.02	607475594.88	13553.23	183690043.43	334046730.87
N =5	**106960.23**	**2312713366.23**	**57679.85**	**676316644.14**	**1249936321.79**

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

$$= \frac{5 \times 1249936321.79 - 106960.23 \times 57579.85}{\sqrt{5 \times 2312713366.23 - \left(106960.23\right)^2} \times \sqrt{5 \times 676316644.14 - \left(57579.85\right)^2}}$$

$$= \frac{6249681608.95 - 6169450022.37}{11096.18 \times 7390.41} = \frac{80231586.58}{82005319.63} = 0.98$$

$r^2 = 0.9604$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{\left(1 - 0.9604\right)}{\sqrt{5}} = 0.6745 \times 0.0177 = 0.0119$$

$6P.E. = 6 \times 0.0119 = 0.0714$

vi. Calculation of Correlation between Outside Assets and Net Profit of SCBNL

(Rs. in Million)

Year	Outside Assets (X)	X^2	Net Profit (Y)	Y^2	XY
00/01	6722.02	45185552.88	506.93	256978.02	3407593.60
01/02	17770.57	315793158.12	537.80	289228.84	9557012.55
02/03	17845.76	318471149.98	539.20	290736.64	9622433.79
03/04	21782.95	474496910.70	658.76	433964.74	14349736.14
04/05	24055.87	578684881.46	691.67	478407.39	16638723.60
N =5	**88177.17**	**1732631653.14**	**2934.36**	**1749315.63**	**53575499.68**

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

$$= \frac{5 \times 53575499.68 - 88177.17 \times 2934.36}{\sqrt{5 \times 1732631653.14 - \left(88177.17\right)^2} \times \sqrt{5 \times 1749315.63 - \left(2934.36\right)^2}}$$

$$= \frac{267877498.40 - 258743560.56}{29798.41 \times 368.93} = \frac{9133937.84}{10993527.4} = 0.83$$

$r^2 = 0.6889$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{\left(1 - 0.6889\right)}{\sqrt{5}} = 0.6745 \times 0.1391 = 0.0938$$

$6P.E. = 6 \times 0.0938 = 0.5628$

ANNEXURE – 3

i. Trend Value of Total Deposit of NABIL

(Rs. In Million)

Fiscal Year (t)	Total Deposit (y)	x = (t-2005)	X^2	xy
2002/03	13447.66	-2	4	-26895.32
2003/04	14119.03	-1	1	-14119.03
2004/05	14586.61	0	0	0.00
2005/06	19347.40	1	1	19347.40
2006/07	23342.29	2	4	46684.58
N = 5	**84842.99**	**0**	**10**	**25017.63**

$$a = \frac{\sum y}{N} = \frac{84842.99}{5} = 16968.60$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{25017.63}{10} = 2501.76$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 16968.60 + 2501.76x$$

Year	x = (t-2003)	Trend Value $Y_c = 16968.60 + 2501.76x$
2002/03	-2	11965
2003/04	-1	14466.80
2004/05	0	16968.60
2005/06	1	19470.40
2006/07	2	21972.20
2007/08	3	24474
2008/09	4	26975.80
2009/10	5	29477.60
2010/11	6	31979.40
2011/12	7	34481.20

ii. Trend Value of Total Investment of NABIL

(Rs. In Million)

Fiscal Year (t)	**Total Investment (y)**	**x = (t-2005)**	**X^2**	**xy**
2002/03	6031.18	-2	4	**-12062.36**
2003/04	5835.95	-1	1	**-5835.95**
2004/05	4269.66	0	0	**0**
2005/06	6178.53	1	1	**6178.53**
2006/07	8945.31	2	4	**17890.62**
N = 5	**31260.63**	**0**	**10**	**6170.84**

$$a = \frac{\sum y}{N} = \frac{31260.63}{5} = 6252.13$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{6170.85}{10} = 617.09$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 6252.13 + 617.09x$$

Year	**x = (t-2003)**	**Trend Value** $Y_c = 6252.13 + 617.09x$
2002/03	-2	5017.95
2003/04	-1	5635.04
2004/05	0	6252.13
2005/06	1	6869.22
2006/07	2	7486.31
2007/08	3	8103.40
2008/09	4	8720.49
2009/10	5	9337.58
2010/11	6	9954.67
2011/12	7	10571.76

iii. Trend Value of Net Profit of NABIL

(Rs. In Million)

Fiscal Year (t)	**Net Profit (y)**	**x = (t-2005)**	**X^2**	**xy**
2002/03	416.24	-2	4	**-832.48**
2003/04	455.31	-1	1	**-455.31**
2004/05	518.34	0	0	**0**
2005/06	635.26	1	1	**635.26**
2006/07	673.96	2	4	**1347.92**
N = 5	**2699.11**	**0**	**10**	**695.39**

$$a = \frac{\sum y}{N} = \frac{2699.11}{5} = 539.82$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{695.39}{10} = 69.54$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 539.82 + 69.54x$$

Year	**x = (t-2003)**	**Trend Value** $Y_c = 539.82 + 69.54x$
2002/03	-2	400.74
2003/04	-1	470.28
2004/05	0	539.82
2005/06	1	609.36
2006/07	2	678.90
2007/08	3	748.44
2008/09	4	817.98
2009/10	5	887.52
2010/11	6	957.06
2011/12	7	1026.60

iv. Trend Value of Total Deposit of SCBNL

(Rs. In Million)

Fiscal Year (t)	Total Deposit (y)	x = (t-2005)	X^2	xy
2002/03	18755.64	-2	4	-37511.28
2003/04	21161.44	-1	1	-21161.44
2004/05	19335.10	0	0	0
2005/06	23061.03	1	1	23061.03
2006/07	24647.02	2	4	49294.04
N = 5	**106960.23**	**0**	**10**	**13682.35**

$$a = \frac{\sum y}{N} = \frac{106960.23}{5} = 21392.05$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{13682.35}{10} = 1368.24$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 106960.23 + 1368.24x$$

Year	x = (t-2003)	Trend Value $Y_c = 106960.23 + 1368.24x$
2002/03	-2	104223.75
2003/04	-1	105591.99
2004/05	0	106960.23
2005/06	1	108328.47
2006/07	2	109696.71
2007/08	3	111064.95
2008/09	4	112433.19
2009/10	5	113801.43
2010/11	6	115169.67
2011/12	7	116537.91

v. Trend Value of Total Investment of SCBNL

(Rs. In Million)

Fiscal Year (t)	Total Investment (y)	x = (t-2005)	X^2	xy
2002/03	10216.20	-2	4	-20432.4
2003/04	11360.33	-1	1	-11360.33
2004/05	9702.55	0	0	0
2005/06	12847.54	1	1	12847.54
2006/07	13553.23	2	4	27106.46
N = 5	**57679.85**	**0**	**10**	**8161.27**

$$a = \frac{\sum y}{N} = \frac{57679.85}{5} = 11535.97$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{8161.27}{10} = 816.13$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 11535.97 + 816.13x$$

Year	x = (t-2003)	Trend Value $Y_c = 11535.97 + 816.13x$
2002/03	-2	9903.71
2003/04	-1	10719.84
2004/05	0	11535.97
2005/06	1	12352.10
2006/07	2	13168.23
2007/08	3	13984.36
2008/09	4	14800.49
2009/10	5	15616.62
2010/11	6	16432.75
2011/12	7	17248.88

vi. Trend Value of Net Profit of SCBNL

(Rs. In Million)

Fiscal Year (t)	Net Profit (y)	x = (t-2005)	X^2	xy
2002/03	506.93	-2	4	-1013.86
2003/04	537.80	-1	1	-537.8
2004/05	539.20	0	0	0
2005/06	658.76	1	1	658.76
2006/07	691.67	2	4	1383.34
N = 5	**2934.36**	**0**	**10**	**490.44**

$$a = \frac{\sum y}{N} = \frac{2934.36}{5} = 586.87$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{490.44}{10} = 49.04$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 586.87 + 49.04x$$

Year	x = (t-2003)	Trend Value $Y_c = 586.87 + 49.04x$
2002/03	-2	488.79
2003/04	-1	537.83
2004/05	0	586.87
2005/06	1	635.91
2006/07	2	684.95
2007/08	3	733.99
2008/09	4	783.03
2009/10	5	832.07
2010/11	6	881.11
2011/12	7	930.15

vii. Formulating of Hypothesis

T-test

$$= \frac{\overline{X_1} - \overline{X_2}}{\sqrt{S^2 \times \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}} \qquad \text{with …….. d.f.} = n_1 + n_2 - 2$$

Where,

$$\overline{X_1} = \frac{\sum X_1}{n_1} \qquad \overline{X_2} = \frac{\sum X_2}{n_2}$$

$$S^2 = \frac{1}{n_1 + n_2 - 2}\left[\sum x_1^{\,2} + \sum x_2^{\,2}\right]$$

viii. Test of Hypothesis of Loan and Advances to Total Deposit

$$\overline{X}_1 = \frac{\sum X_1}{n} \qquad \overline{X}_2 = \frac{\sum X_2}{n} \qquad \overline{X}_3 = \frac{\sum x_3}{n}$$

$$\overline{X}_1 = \frac{321.64}{5} \qquad \overline{X}_2 = \frac{184.14}{5} \qquad \overline{X}_3 = \frac{280.6}{5}$$

$$\overline{X}_1 = 64.33 \qquad \overline{X}_2 = 36.38 \qquad \overline{X}_3 = 56.12$$

Again, $x_1 = (X_1 - \overline{X}_1)$ $x_2 = (X_2 - \overline{X}_2)$ $x_3 = (X_3 - \overline{X}_3)$

a) Test of Significance of Difference between NABIL and SCBNL

Alternative Hypothesis:

Under Ho the test statistics is given by $t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{S^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$ with.....d.f. $= n_1 + n_2 - 2$

Where $s^2 = \frac{1}{n_1+n_2-2}\left(\sum X_1^2+\sum X_2^2\right)$

$= \frac{1}{5+5-2}(163.57+149.59)$

$= \frac{1}{8}\times 313.16$

$= 39.145$

x. Test of Investment on Government

Here, $\overline{x_1} = \frac{\sum X_1}{n}$ $\overline{x_2} = \frac{\sum X_2}{n}$ $\overline{x_3} = \frac{\sum X_3}{n}$

$\overline{x_1} = 20.304$ $\overline{x_2} = 37.57$

Again,

$x_1 = (x_1 - \overline{x_1})$ $x_2 = (x_2 - \overline{x_2})$ $x_3 = (x_3 - \overline{x_3})$

a) Test of Significance of Difference between NABIL and SCBNL

Alternative Hypothesis:

Under Ho the test statistics is given by

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{S^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}}$$

With.....d.f.=n_1+n_2-2

Where, $S^2 = \frac{1}{n_1+n_2-2}(\sum X_1^2+\sum X_2^2)$

$\frac{1}{5+5-2}(137.02+40.059)$

$=\frac{1}{8}\times 177.079$

$=22.13$

xi. Hypothesis Test of Return on Loan and Advances Ratio between NABIL and SCBNL

$\overline{x_1}=\frac{\sum X_1}{n}$ $\overline{x_2}=\frac{\sum X_2}{n}$ $\overline{x_3}=\frac{\sum X_3}{n}$

$\overline{x_1}$ =5.016 $\overline{x_2}$ = 7.58

Again $x_1=(x_1-\overline{x_1})$ $x_2=(x_2-\overline{x_2})$ $x_3=(x_3-\overline{x_3})$

a) Test of Significance of Difference between NABIL and SCBNL

Alternative Hypothesis:

(Where $\overline{x_1}$ is the mean ratio of NABIL and $\overline{x_2}$ is ratio of SCBNL)

Under H_o the test statistics:

$$S^2 = \frac{1}{n_1+n_2-2}(\sum X_1^2+\sum X_2^2)$$

$$= \frac{1}{5+5-2}(.91447+4.3547)$$

$$=0.6589$$

Xii. Hypothesis Test of Total Interest Earned to Total outside Assets Ratio of NABIL, SCBNL

$$x_1 = \frac{\sum X_1}{n_2} \qquad x_2 = \frac{\sum X_2}{n_2} \qquad x_3 = \frac{\sum X_3}{n_3}$$

$\overline{x_1} = 7.016$ $\overline{x_2} = 7.604$

Again,

$x_1=(x_1-\overline{x_1})$ $x_2=(x_2-\overline{x_2})$ $x_3=(x_3-\overline{x_3})$

a) Test of Significance of Difference between NABIL and SCBNL

Alternative Hypothesis:

(Where $\overline{x_1}$ is mean ratio of NABIL and $\overline{x_2}$ is mean ratio of SCBNL)

Under H_O the test statistics is given by

$$t = \frac{\overline{x_1}-\overline{x_2}}{\sqrt{S^2(\frac{1}{n_1}+\frac{1}{n_2}}}$$ With.....d.f.=n_1+n_2-2

Where, $S^2 = \frac{1}{n_1+n_2-2}(\sum X_1^2+\sum X_2^2)$

$\frac{1}{5+5-2}(0.47232+66.6789)$

=8.394