A STUDY OF INVESTMENT POLICY OF JOINT VENTURE COMMERCIAL BANKS

(With reference to NABIL Bank Limited and Standard Chartered Bank Nepal Limited)

By:

Prabesh Shrestha

Shanker Dev Campus

Campus Roll No:-138/064

TU Regd. No.: 7-2-271-249-2004

Second Year Exam Symbol No: 390639

A Thesis Submitted to:

Office of the Dean

Faculty of Management

Tribhuvan University

In partial fulfillment of the course requirement for the Degree of Masters of Business Studies (MBS)

Kathmandu, Nepal

Feb 2014

Ref. :……. Date:…….

RECOMMENDATION

This is to certify that the Thesis

Submitted by:

Prabesh Shrestha

Entitled:

A STUDY OF INVESTMENT POLICY OF JOINT VENTURE COMMERCIAL BANKS

(With reference to NABIL Bank Limited and Standard Chartered Bank Nepal Limited)

has been prepared as approved by the department in the prescribed format of Faculty of Management. This Thesis is forwarded for evaluation.

……..……..	……..……..	……..……..……
Asso Prof. Rita Maskey Pradhan	**Prof. Dr. Kamal Deep Dhakal**	**Asso. Prof. Prakash Singh**
(Thesis Supervisor)	**(Head, Research Department)**	**(Campus Chief)**

Ref. :……. Date: …….

VIVA-VOCE SHEET

We have conducted the viva-voce examination of the Thesis

By:

Prabesh Shrestha

Entitled

A STUDY OF INVESTMENT POLICY OF JOINT VENTURE COMMERCIAL BANKS (With reference to NABIL Bank Limited and Standard Chartered Bank Nepal Limited)

And found the Thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the degree of

Masters of Business Studies (MBS).

VIVA-VOCE COMMITTEE

Head, Research Department ……...

Member (Thesis Supervisor) ……...

Member (External Expert) ……...

DECLARATION

I hereby, declare that the work reported in this thesis entitled **"A Study Of Investment Policy Of Joint Venture Commercial Banks (With Reference To Nabil Bank Limited And Standard Chartered Bank Nepal Limited)"** submitted to the Office of Dean, Faculty of Management, Tribhuvan University, is my original done in partial fulfillment of the requirements for the Degree of Masters of Business Studies (M.B.S), under the supervision of **Asso. Prof. Rita Maskey** of Shanker Dev Campus, T.U.

……..……..

Prabesh Shrestha
Shanker Dev Campus
Campus Roll No:-138/064
TU Regd. No.: 7-2-271-249-2004
Second Year Exam Roll No: 390639

ACKNOWLEDGEMENTS

As the partial fulfillment of the Masters of Business Studies (MBS) degree, I have prepared this thesis. During the course, I worked with sincerity, honesty and diligently, as far as possible. But beside my continual efforts, I also got unforgettable support from different people and parties. I am extremely grateful and overwhelmed by their support while completing my work.

I would like to express cordial gratitude to my thesis coordinator Asso. Prof. Rita Maskey. Despite her busy schedule, she has made significant contribution for preparing this thesis. Similarly, the support provided by Mr. Anish Maharjan and Ms. Sangita Shrestha during the preparation of this thesis is highly acknowledged.

Last but not the least, it will be an injustice to my wife Mrs. Sujita Shrestha and my daughter Suwasna Shrestha, if I miss out to extend my sincere thank to them who have supported in many ways to come up me with this thesis.

PRABESH SHRESTHA

Shanker Dev Campus

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATION

B.S.	:	Bikram Sambat
BOKL	:	Bank of Kathmandu
C.V	:	Coefficient of Variation
DPS	:	Dividend Per Share
EBL	:	Everest Bank Limited
EPS	:	Earning Per Share
F/Y	:	Fiscal Year
HBL	:	Himalayan Bank Ltd.
JVB	:	Joint Venture Bank
NABIL	:	Nabil Bank Ltd.
NBBL	:	Nepal Bangladesh Bank Ltd.
NBL	:	Nepal Bank Limited
NIBL	:	Nepal Investment Bank Ltd.
NIDC	:	Nepal Industrial Development Corporation
NRB	:	Nepal Rastra Bank
NSBI	:	Nepal SBI Bank Ltd.
PE.	:	Probable Error
r	:	Coefficient of Correlation
RBB	:	Rastriya Banijya Bank
Rs.	:	Rupees
S.D	:	Standard Deviation
SCBNL	:	Standard Chartered Bank Nepal Ltd.

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal is a land-locked country situated between two Asian giants China and India, both having well developed economic condition. The development of a country is measured by its economic indices. Nepal, like any other country has been laying emphasis on the uplifting of its economy. The process of economic development depends upon various factors. Financial institutions are viewed as catalyst in the process of economic growth. The mobilization of domestic resources, capital formation and its proper utilization plays an important role in the economic development of a country. Every financial institution, big or small, be it a commercial bank or a finance company or a cooperative bank, play an important role in the development of a country.

Commercial banks are major financial institutions, which occupy an important place in the economy because through the deposits they collect, they provide much needed capital for the development of industry, trade and business and other deficit sectors, thereby contributing to the economic growth of the nation.

Investment in the actual sense refers to the sacrifice of current dollars for future dollars (Sharpe, 1986). Investment involves two attributes, time and risk. The sacrifice takes place in the present and is certain. The reward comes later, and the magnitude of which is uncertain. In some cases the element of time predominates (for example, government bonds). In other case, risk is more dominant (for example call option on common stock). In yet others, both time and risk play a dominant role (for example share of common stock).

Investment is the use of money to earn profit. It can be said that investment is concerned with the proper management of the investor's wealth, which are the sum of the current income and the present value of all future income. Fund to be invested come from assets already owned, borrowed money and saving or foregone consumption. By foregoing today and investing the saving, investors expect to enhance their future consumption possibilities i.e. the fund is

invested to increase wealth. Investors also seek to manage their wealth effectively obtaining the most from it, while protecting it from inflation, taxes and other possible harms.

Investment policy involves determining the investor's objectives and the amount of his or her invest-able wealth. It is not appropriate for an investor to say that his objective is to make a lot of money (Clarke, 1989). What is appropriate for an investor in this situation is to state that the objective to earn a profit while recognizing that there exist some chances of incurring large losses. Investment objectives should be stated in terms of both risk and return.

Investment promotes economic growth and contributes to a nation's wealth. When people deposit money in the bank, the bank may invest by lending the funds to various businesses. These firms in return may invest in new factories and equipment to increase their production and efficiency. In addition to borrowing from banks, most companies issue stocks and bonds, which they sell to investors to raise capital needed for business expansion. Government also issues bonds to invest in various projects. Nepal Rastra Bank on behalf of Nepal Government issues bonds, treasury bills to finance the long term and short-term needs of the government. All such investment by individuals, business, government and government entities involve a present sacrifice of income to get an expected future benefit.

Since from past few years, the situation of country is deteriorating day by day. Uncertainty and fear have bounded every sectors of the economy. Every year the government is assigning fewer funds for development purpose. This has seriously hit not only the economic growth of the country but also the investment environment in the country. So being active members of the country, commercial banks of Nepal are also affected by this situation. On this ground, management of banks should have to think precisely before making any investment. Therefore, all these events have raised the necessity for formulating sound investment policy. With this connection, by this study having topic "Investment Policies of Joint Venture Banks in Nepal; A Case Study of Selected JVBS"**,** it is tried to find out the investment policies of the commercial joint venture banks. Further, this study tries to explore, whether the policies they have formulated are sufficient or not, whether they have managed their invest-able fund in proper place or not and so on. Since sound investment policy ensures minimum risk and maximum profit from lending, by this study it is tried to find out the policy and act regarding investment of JVBs.

1.2 Profile of the Sample Banks

A) NABIL Bank Ltd.

NABIL Bank Ltd. (previously Nepal Arab Bank Ltd.) was established on July 12th 1984 under a technical service agreement with Dubai Bank Ltd., Dubai, which was later, merged with Emirate Bank Ltd., Dubai. NABIL is the first and major joint venture bank in the country with key points of representation all over Nepal. The bank is managed by a team of qualified and highly experienced professionals.

The shareholdings are distributed as follows:

- 50% is owned by N.B. International Limited, Ireland.
- 20% is owned by local financial institutions and
- 30% by the Nepalese public.

NABIL is amongst the most successful joint venture organizations in Nepal registering strong growth in balance sheet footing as well as profits year after year. The initial capital of Rs. 30 million, invested in 1984, has grown to Rs. 2,436.841 million as at 2013 end.

The bank provides a complete range of personal, commercial and corporate banking and related financial services through its 48 branches, 78 ATMs and 2330 remittance agents the largest number of branches amongst any JVB's in Nepal. The bank was able to receive "Bank of Year 2004" award from Financial Times London.

The bank has been a pioneer in introducing modern banking and numerous innovative products into Nepal. It was the first to introduce consortium finance in Nepal. NABIL is the sole banker to a multitude of International Aid Agencies, NGO's, Embassies and consulates in the Kingdom, which is a compliment to its image and servicing capabilities. NABIL was the first bank to issue credit card in Nepal. NABIL has correspondent banking relationship with banks in 47 countries. NABIL is a member of SWIFT. It has also been providing ATM facilities to its account holders.

Some of the facilities are listed below.

- Tele-banking

- Credit Card facilities
- Automated Teller Machines
- Personalized & Corporate Financial services
- SWIFT, TELEX
- Western Union Money Transfer
- Deposit Locker
- International trade and bank guarantee

The present capital structure of NABIL is shown below.

(Rs. in millions)

Authorized equity share capital	2500
Issued Capital	2436.841
Paid up Capital	2436.841

Source: Annual Report of NABIL 2012/13.

B) Standard Chartered Bank Nepal Ltd.

Nepal Grindlays Bank Ltd. (recently named Standard Chartered Bank Nepal Ltd.) was established in 1987 A.D. as a joint venture bank with 50% of the equity share capital originally owned by ANZ Grindlays Bank, UK that managed and controlled overall activities of the bank. The bank has made significant contribution in the Nepalese banking sector since its inception.

In August 2000, the ownership of ANZ Grindlays Bank, U.K. was transferred to SCB, Australia. Since then, the bank is being managed and controlled by SCBL Australia, as Standard Chartered Bank Nepal Ltd. (SCBNL) in Nepal. SCBL holds 50% of total equity capital investment. Out of 35% of the total equity share capital that was held by NBL, Standard Chartered Bank, UK, now has bought 25%. The general public holds the remaining 25% shares.

The bank is being managed under joint venture & technical services agreement (T.S.A.) signed between SCB and Nepalese promoters. The bank has been providing various banking services to its customers through its branches nationwide. It has four branches including its

main branch /corporate office in the Kathmandu valley. The bank is well equipped with the latest technology in the banking sector. It leads the Nepalese list in the best 500 banks of Asia as voted by Fortune magazine. It has some of the best banking professionals in the banking industry in Nepal.

Some of the facilities are listed below.

- Tele-banking
- Credit Card facilities
- Foreign Currency Transaction
- Automated Teller Machines
- Personalized & Corporate Financial services
- SWIFT, TELEX
- Western Union Money Transfer
- Money Gram

The present capital structure of SCBNL is shown below.

(Rs. in million)

Authorized equity share capital	2000
Issued Capital	1853.90
Paid up Capital	1853.90

Source: Annual Report of SCBNL 2012/13

1.3 Focus of the Study

Commercial bank is an entity, which accepts deposits and makes short term loans to business enterprises, in spite of of the scope of its other services. Investment is an imperative ingredient of overall national economic development because it ensures efficient allocation of fund to attain the materials and economic well being of the society. Investment policy is a significant factor of the investment practice. Investment refers to the sacrifice of current money for future money, generally two attributes are involved in it, they are time and risk. In this study, the word investment conceptualized the investment of income, savings or other collected fund. The study of investment practices in banking sector provides required information to the management of the banks which helps them to take correct decision and timely action when plans, policies and strategies are being made

and liquidity or growth ratio etc. can be obtained. Similar information is required to the concerned banks for selecting the proper sectors for their investment and other benefit as well. Banks have to carry out their activities in this competitive world against risk and uncertainties. They however, are not the game of chance or fate but are the result of competence, skill and wisdom. Therefore, investment activities can create an image or goodwill if handled with sagacity or destroy them if mishandled.

The proper mobilization of fund always ensures good return and helps to sustain the institution. That also encourages the investors with financials rewards and the government will generate and increase the revenues. Investment policy, therefore, is the most important tool for the economic development of the country. A better investment policy yields more profitability or sustainability in the face of risks and uncertainties. It rewards directly or indirectly the people inside its sphere.

The study of investment policy has intermediate effects on all those involved in financial activities directly or indirectly. The government, depositors, shareholders, managers, general public and even the researcher feel the need of this study indiscriminately for the information and knowledge necessary to them. Depositors can choose the best or apparent banks or financial institutions of their convenience and interest. Moreover, the study helps the government to formulate rules and policy and implements them in the favor of nation interest. Proper investment practice assists the banks to make profitable investment which helps in the development of country as well as achieve the objective of making the profit. However, the study might be somewhat limited because it is concerned in only two banks i.e. Standard Chartered Bank Ltd. and Nabil Bank Ltd.

1.4 Statement of the Problem

Commercial banks have huge collection from depositors. Effective utilization of collected fund is possible only through sound investment policy. Most Nepalese commercial banks have not formulated their investment policies in organized manner. They mainly rely upon the instructions and guidelines issued by NRB. They are unable to estimate the future; they hardly have any clear view towards investment policy. Furthermore, the implementation of policy is not much effective way. The main reason attributed to unsound investment policy

are lack of proper analysis on financial risk, interest rate risk, liquidity risk, business risk etc. Joint Venture Banks have become a role model in the improvement of fund mobilization.

The problem that still persists for a bank even today is to find a proper and viable project to ensure healthy profit. They have always feared high degree of risk and uncertainty owing to lack of profitable sectors for their investment. Still, some emerging and existing commercial banks are tempted to invest, without proper credit analysis and on personal guarantee. Some have even sanctioned loan to customers beyond customer's real requirement. The high liquidity position of banks has resulted in a decrease in investment in productive sectors. Thus, the present study will make a modest attempt to analyze investment policy of two joint venture banks viz. NABIL and SCBNL.

However, subsequent development of commercial banks in quality has not been satisfying commercial banks in Nepal has been facing several problems.

- The joint venture banks are not keen to grant loan to the primary sector.
- Joint venture banks have concerned their operation only in urban areas.
- Due to lack of good lending opportunities banks are facing problems of over liquidity etc.

The research work intends to explore the following questions.

- Are the JVB's properly utilizing their available funds?
- How effective are the JVB's funds mobilization and investment policies?
- Is there any relationship between investment and total deposits as well as loans and advances with net profit of JVB's?

1.5 Objectives of the Study

Investment decision is one of the major decision functions of financial management. The main purpose of this study is to assess the investment policy and strategies followed by NABIL and SCBNL. The specific objectives of this study are given below:

1. To analyze the investment policies of sampled JVCB's.
2. To evaluate the different financial ratios regarding investment policies like liquidity, asset management, profitability, risk position, liquidity and growth ratios.

3. To identify the effectiveness of sample organization regarding formulation and implementation of investment policies.
4. To forecast the trend of deposits, investment, net profit and loan & advances, for next five years for SCBNL and NABIL.

1.6 Significance of the Study

Investment activity is the life-blood of any financial institution, since only accumulating deposits has no meaning. Better return can be ensured only when deposits are properly mobilized through sound investment policy.

This study "Comparative Analysis of Investment policy" of two major JVB's will provide a useful feedback to academic institutions, bank employees, trainees, investors, policy making bodies and those concerned with banks in the formulation of appropriate strategies for improving the performance of banks.

1.7 Limitations of the Study

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

- This study is limited to only a period of five years of the concerned banks and hence the conclusion drawn only confines to the above period (F.Y. 2008/09 to 2012/13).
- This study is based on secondary data collected from the banks, particularly based on data gathered from the published annual report of the two banks along with NRB directives issued from time to time.
- This study deals with only two JVB's i.e. NABIL and SCBNL. Other commercial banks have not been considered in this study.
- The samples have been drawn at random for convenience, so there may exist some sampling error. And the sample size may not be sufficient to generalize the findings.
- The study was carried out on the financial statement and records of official data. Therefore the decision methods of the bank are not analyzed.
- The study result cannot be generalized for further study in these areas.

- It is only for the academic purpose only.

1.8 Organization of the Study

This study includes five chapters and is organized as follows.

Chapter I: Introduction

The first chapter includes the introduction of the chapter, which consists of the background of the study, profile of concerned banks, focus of the problem, statement of the problem, objectives of the study, significance of the study, limitation of the study and organization of the study.

Chapter II: Review of Literature

The second chapter deals with the review of literature with concept of some terminologies of the lending. It also focuses on the related articles, journals, research paper, reports and review of unpublished thesis of various research students.

Chapter III: Research Methodology

The third chapter concentrates on research methodologies used. It contains introduction, research design, sources of data, population and sample, data gathering procedure and analysis of data.

Chapter IV: Presentation and Analysis of Data

The fourth chapter is Presentation and Analysis of Data, where financial tools and statistical tools are used in the analysis of data. Financial tool mainly consists of ratio analysis, which involves-liquidity ratio, asset management ratio, profitability ratio, risk ratio and growth ratio. Statistical tools used in the analysis of data involve co-relation analysis and trend analysis. This chapter also provides major findings of the study. This is the most important part of the study.

Chapter V: Summary, Conclusion and Recommendations

The fifth chapter presents with summary, conclusion and recommendation to formally close the thesis report.

The bibliography and appendices are also included in the chapter.

CHAPTER II
REVIEW OF LITERATURE

2.1 Introduction

This chapter deals with the theoretical aspect of the topic on investment policy in more detail and descriptive manner. It provides the foundation for developing a comprehensive theoretical framework and knowledge of the status relevant to the field of research in order to explore the relevant and true facts for the reporting purpose. Hence, in this chapter, the focus has been made on the review of literature relevant to the investment policy of commercial banks. For this study, different books, journals, articles, annual reports and some research paper related with this topic has been reviewed. For this purpose, chapter has been mainly two sections, viz. theoretical perspective and review of related studies

2.1.1 Conceptual Framework

Conceptual framework provides the fundamental theoretical framework and foundation to the present study. For this, various books, research paper, articles etc. dealing with theoretical aspects of investment policy analysis are taken into consideration.

Investment: Investment refers to deploying the savings in a manner that ensures safety of our money and provides a sustained return to supplement our regular income (Delhi Stock Exchange, January 2002). The term investment covers a wide range of activities. It is commonly known fact that an investment is only possible where there are adequate savings. If all the incomes and savings are consumed to solve the problem of hand to mouth and to the other basic needs, then there is no existence of investment. Therefore, both savings and investment are interrelated.

Investments are made in assets. Assets in all are of two types, real assets (land, buildings, factories etc) and financial assets (stocks, bond, T-bill etc.). These two investments are not competitive but complementary. Highly developed institutions for financial investment greatly facilitate real investment (Bhattarai, 2004).

Another contemporary scholar has defined investment in this way; investment is the employment of funds with the aim of achieving additional income or growth in value (Singh, 1992).

In the words of Gitman and Joehank (1990), investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns.

Charles (1991) has defined that, investment as the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor's wealth, which is the sum of current income and present value of all income.

2.1.2 Meaning of Some Terminologies

1. **Deposits:**

Commercial Banks Act 2031(1974) defines "Deposit as the amounts deposited in a current, saving of fixed accounts of a bank or financial institution." A bank takes various types of deposits from individual, business organization, general people and other different type of institutions. These deposits are the main source of capital for the commercial banks. Banks flow such amount as loan and invests in different sectors to earn profit. In Nepal, banks grant permission to their customers to open three types of accounts under various terms and condition, which are as follows:

- **Current Deposit / Demand Deposit:**

The deposit in which an amount is immediately paid at the time of any account holder's demand is called demand deposit or current deposit. The bank does not provide interest in this deposit.

- **Saving Deposit**

The bank can collect through the saving deposit. Accounting to Commercial Bank Act 2031 (1974), saving account means "an account of amount deposited in a bank for saving purposes." Generally in saving accounts there are certain restrictions like maximum amount that can be deposited and on withdrawal of the account also. In this type of deposit, customers get some interest on the deposit.

- **Fixed Deposit:**

According to the Commercial Bank Act 2031(1947), fixed account means "an account of amounts deposited in a bank for certain period of time." The customers opening account deposit their money in this account, for a fixed period. It is also called Time Deposit because this amount is deposited for a certain period of time. The rate of interest is higher than the saving or current account as the banks use this amount for making investments and granting loan and advances.

2. Loan and Advances:

Loan and advances is the main sources of income and most profitable assets to a bank. A bank is always willing to lend as possible since they constitute the larger part of revenue. A commercial bank hardly lends money for a long period. The commercial banks lend money for a short period of time that can be collected at a short period. The commercial banks never bounded to provide long-term loan because the banks have to synchronize the loans and advances with the nature of deposit they receive. The banks provide loan and advances against the personal security of the borrower or against the security of the immovable and movable properties. The banks provide loans in the various forms like overdraft, cash credit, direct, direct loan and discount bills of exchange.

3. **Investment on Government Securities, Shares and Debentures:**

A commercial bank invests on government securities, shares and debentures as they can earn interest and dividend from these types of investments. A good investment portfolio is maintained in terms of liquidity these investments as these securities are highly marketable and in term of investing the excess funds out of funding in the loans and advances. Banks can also ensure the inflow of cash to meet the large loan demands and withdraws of its customers.

4. **Bank invests on other company's shares and debentures:**

To invest its excess funds and also to meet the requirement of NRB directives of investment, the bank invests in development banks, NIDC's regional development banks as share capital.

5. **Off Balance Sheet Activities**

Off balance sheet activities involve contracts for future purchase or sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet. Some examples of these items are letter of credit, letter of guarantee, bills of collection etc. These activities are very important, as they are the good source of profit to bank though they have risk. Some economists and finance experts say that the bank highlights such activities to expand the modern transactions of a bank.

6. **Assets**

Every bank has its own assets. The resources or properties owned by the business are known as assets. Some examples of assets are cash, building, land, furniture, goodwill etc. such assets are owned by the banks to get current or future benefit.

7. **Liabilities**

The amount or money payable by the banks to the outsiders within a certain period of time is known is liabilities of the bank. Liabilities are the financial obligation for the banks which must be met within a stated time. Liabilities should not be taken negatively as they are the sources of assets.

2.1.3 Principles on Investment Policies of JVBs

Some of the main characteristics of sound lending and investment policies which most of the banks must consider have been given by many authors are as under:

1. **Safety and Security**: While selecting the sectors for investing the funds, a bank should be very much conscious. It should never invest its funds in those securities, which are too volatile because a little difference may cause a great loss. Similarly, the businessman who is bankrupt at once or earns a million in a minute should not be financed at all. The banks invest its funds in legal securities only. The bank should accept that type of securities, which have marketability; ascertainability, stability and transferability and it also accept those securities, which are commercial, durable and high market prices. For the safety and security in investing funds the bank can use the investment portfolio tools also.

2. **Liquidity:** Liquidity generally refers to the cash or any asset that can be converted into cash immediately. Generally, people deposit money at the bank in different account with confidence that the bank will repay their money whenever it is needed. In order to maintain the confidence to the depositors, the bank must always be ready to meet current or short-term obligations when they become due for repayment Liquidity is the capacity of bank to pay cash against deposits. Hence the liquidity position of a bank is such an important factor.

3. **Profitability:** Commercial banks invest on those sectors from where more and more return can flow because through maximizing the returns on its investment, bank can maximize its volume of wealth. Hence the investment or granting of loan and advances by them are highly influenced by the profit margin. Generally, the profit of commercial bank depends upon the interest rate of the bank, volume of loan provided, time period of loan and nature of investment on different securities. Profitability is only the term, which always motivates commercial banks to invest their money more and more.
4. **Suitability:** A banker should always know why a customer is in need of loan. If a borrower misuses the loan granted by the bank, he will never be able to repay the loan and bank will possess heavy bad debts. Therefore, in order to avoid such circumstances, advances should be allowed to select suitable borrowers and it should demand all the essential detailed information about the scheme of the project. Bank should also keep in mind the overall development plans of the nation and the credit policy guidelines of the central bank.

5. **Diversification:** The bank should be careful that while granting loan, it should not be always in one sector. To minimize risk and maximize the profit, a bank must diversify its

investment on different sectors. Diversification of loan helps to sustain loss according to the law of average because if securities of a company depreciated, there may be appreciation in the securities of other companies. In this way, the loss can be recovered.

6. **Purpose of loan:** It is very important to be reminded that most of the bank failures in the world are due to shrinkage in the value of loan and advances. The first substantive question a banker must examine is how loan proceeds will be used. If the loan purpose conflicts with commercial policy, such as loan for some speculative purpose not acceptable to the banker such loans should not be processed. If customers misuse their borrowings, there is risk involved in repayment and the bank will incur heavy bad debts. Detailed information about the plan and scheme of project should be collected and examined before borrowing.

7. **Legality:** A commercial bank must follow the rules and regulations and statuary directives issued by Nepal Rastra Bank, Ministry of Finance and others while issuing securities and mobilizing their funds. In Nepal, NRB restricts financial institution licensed by it to invest in securities of each other.

8. **Sources of funds for the investment:** Capital: Capital is the lifeblood of the trade and commerce. Therefore, capital is needed for the operation of the bank as in other business. The capital fund consists of two elements, viz. i. Issuing Shares, and ii. General Reserves.

   i. Issuing shares: Bank issues share for the collections of capital. So this is one of the sources of fund to invest. By increasing in the issue of share, the bank can increase its capital.

   ii. General reserves: The fund separated from the profit by the bank is General Reserves. This reserve is also invested at the time of contingency and to cover the loss in future.

9. **Accumulated profit**: If the capital is not sufficient and there is need for more money to invest, the bank uses the accumulated profit to invest. In the time of contingency also, the bank invests its accumulated profit for recovering its future loss.

10. **Deposits:** Deposits are the main source of funds. By providing certain rate of interest, commercial bank calls for the deposit from the customer. The bank accepts deposits from customers' mainly under three types, namely Saving, Current and Fixed. These different types of deposits are used for lending the money to different sectors like agriculture, production, trade, service sector and other industry. The deposits will lead to increase in the working capital of the bank.

11. **External and Internal borrowings**: In a developing country like Nepal, internal and external borrowings are very important. The commercial banks may not have sufficient fund to invest in different sector. In that case it has to borrow from other bank or other financial institutions. Generally the commercial bank borrows from two sources i.e. external and internal. Generally external borrowing means the borrowing from foreign banks, and foreign government. Internally, the commercial banks borrow mainly from inter bank and Nepal Rastra Bank. So the commercial bank cannot provide loan or investment without the funds. From the fund collected from above different source, the commercial bank grants loan.

2.1.4 Legislative Provisions

In this section review of legislative framework under which the commercial banks are operating has been discussed. This legislative environment has significant impact on the commercial banks' establishment, their mobilization and utilization of resources. All the commercial banks have to conform to the legislative provisions specified in the Bank and Financial Institutions Ordinance, Companies Ordinance, NRB Directives, and other rules and regulations are to be formulated from time to time to facilitate the smooth running of commercial banks.

1) **Investment management regulation:** "A commercial bank formulating a written policy may decide to invest in shares and securities of an organized institution. However, such investment is restricted to 10% of paid up capital of the organization. However, the cumulative amount of such investment in all the companies in which the bank has financial interest shall by limited to 20% of the paid up capital of the bank. But the total amount of investment in share and securities of organized institution is restricted to 30%

of the paid up capital of the bank" (Unified Directives No.8, NRB Banking Operation Department, pp. 81-82).

Likewise, commercial banks are not allowed to invest in any shares, securities, and hybrid capital instruments issued by any banks and financial institutions, licensed by NRB. Where such investment exists prior to issuance of this directive, such investment should be brought within the restrictive limitations by the fiscal year 2060/61. But investment on rural micro finance development banks' shares are not comes under such restriction. A commercial bank is directly related to the fact that how much fund must be collected as paid up capital while being established at a certain place of the nation, how much fund is needed to expand the branch and counters, how much flexible and helpful the NRB rules are also important. But we discuss only those, which are related to investment function of commercial banks. The main provisions, established by NRB in the form of prudential norms in above relevant area are briefly discussed here under.

2) **Provisions for investment in the deprived sector:** Some rules, which are formulated by NRB, affect the areas of credit and investment extension to the deprived sector by the commercial bank.

   According to the new provision, with effect from the 3rd quarter of FY 1995/96, investment in shares of the rural development bank by CBs, which used to be counted for the priority sector lending, only is now to be included under the deprived sector lending.

   According to the new provisions effective from FY 1997/98, NBL, RBB, NABIL, NGBL, NIBL are required to invest 3 percent, HBL, NSBI, NBBL, EBL, are required to invest 2 percent, Bank of Kathmandu is required to invest 1.75 percent, NBCL is required to invest 0.75 percent while new commercial banks are required to invest 0.25 percent of their total loans and advances to the deprived sector.

3) **Provision for credit to the priority sector**: NRB requires commercial banks to extend loan and advances, amounting at least to 12 p.c. of their total outstanding credit to the priority sector. Commercial banks credit to the deprived sector is also a part of priority sector. Under priority sector, credit to agriculture, credit to the cottage and small industries and credit to service are counted commercial bank's loan to the co-operatives

licensed by the NRB is also to be computed as the priority sector credit from the fiscal year 1995/96 onwards.

4) **Provision for the investment in productive sector:** Nepal, being a developing country needs to develop infrastructure and other primary productive sectors like agriculture, industry etc. For this, NRB has directed commercial banks to extend at least 40 p.c. of their total credit to the productive sectors. Loans to priority sector, agriculture sector, and industrial sector have to be included in productive sector investment.

5) **Provision for the single borrower credit limit:** With the objectives of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size borrower to the bank loans, NRB directed CBs to set an upper limit on the amount of loan financed to an individual, firm, company or group of companies. According to this, CBs are required not to exceed the single borrower limit of 35 percent in the case of fund- based credit and 50 percent, in the case of non- fund based credit such as the letter of credit, guarantee, acceptance letter, commitment has been fixed is a proportion of capital funds of bank.

   Similarly, NRB has graded six foreign joint venture banks now as the prestigious class "A" bank, which is NABIL, NGBL, NIBL, HBL, SBI, and NBBL. These banks have been kept outside the purview of the single borrower credit limit (NRB, 2005)

   Likewise, in the case of consortium financing, commercial banks are permitted to extend an additional 10 percent credit above the limit fixed by the NRB as before.

   In addition, Nepal Oil- Corporation, Agriculture-inputs Corporation and Nepal Food Corporation for their imports of petrol, diesel, kerosene, fertilizer and foodstuff respectively have been removed from the restrictions of single borrower credit limit.

6) **Provision to minimize liquidity risk:** Commercial banks are required monitor their liquidity risk. This is to minimize risk inherent in the activities and portfolio of the banks. According to the regulation a gap found between maturing assets and maturing liabilities is the liquidity risk. They are monitoring their assets and liabilities on the basis of

maturity period. Maturity periods such as 0-90, 91-180,181-270, 271-365 days and above 1 year are classified for the purpose of checking (NRB, 2005)

7) **Cash Reserve Requirements (CRR):** To ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at anytime and to inject the confidence in depositors regarding the safety of their deposited funds, commercial banks are required to have maximum CRR. In this regard, NRB has directed commercial banks to deposit minimum 5 percent of total deposit in the NRB (NRB, 2005)

8) **Loan classification and loss provision:** With a view to improving the quality of assets of commercial banks NRB has directed commercial banks to classify their out-standing loan and advances, investment and other assets into six categories. The classification is done in two ways. The loans of more than one lakh are to be classified as debt service charge ratio, repayment situation, financial condition of borrower, management efficiency, quality of collateral. The loans of less than one lakh have to be classified as per maturity period (NRB, 2005).

9) **Directives regarding interest rate spread:** The interest rate spread, the difference between interest charged on loan and advances, and the interest paid to the depositors, has widened significantly in the aftermath of deregulation in interest rates. This has caused lower financial intermediation. Therefore, NRB has required commercial banks to limit interest rate spread between deposit and lending rates to a maximum extent of 5 percent .NRB has also provided commercial banks with new calculation method of interest rate spread for a certain period recently (NRB, 2002).

2.2 Review of Related Studies

Every scientific research is based on past knowledge. The previous studies cannot be ignored because they provided the foundation to the preset study. Therefore, in the light of this dissertation in this section review of articles/research papers and review of thesis of previous study are taken into consideration.

2.2.1 Review of Journals/Articles

This section deals with the review of journal and article by different expert relating to investment policies in JVBs, which was published in various journals. To make more relevant and to add input in this study some Journals and Articles are also reviewed below follows:

Pradhan (2003) in his research paper, *"Role of Saving, Investment and Capital formation in Economic Development, A case of Nepal,"* has revealed the strong role and impact of saving, investment and capital formation on economic development of Nepal. This study is based on secondary data only. The necessary data on saving, investment, capital formation and gross domestic product has been collected for the period of 1974/75 to 2002/03. The role and impact of saving, investment and capital formation on economic development were analyzed by using various regression models. The regression equations used in this study have been estimated at current prices as well as in real terms with the entire study period divided into different sub periods.

The scholar has further revealed that in all cases, GDP was significantly associated with saving, investment and capital formation both at current prices and in real terms. The results of the empirical analysis led to three important conclusions: First, saving, investment and capital formation have positive impact on economic development. Second, the current values and past values of saving, investment and capital formation have positive impact on economic development but the current values have the largest impact. Third, there is a strong role played by saving and capital formation on economic development while weak role-played by investment.

The scholar has concluded that there was significant relationship between deposit and loan and advances as well as outside assets and net profit but not deposits and total investment in case of NABIL and other joint venture banks. Most of the joint venture banks have focused their banking services especially to big clients such as to purchase shares and debentures of other financial and non-financial companies.

Shrestha (2006) in an article, *"Lending operation of commercial Banks of Nepal and its impact on GDP"* has presented with the objectives to make an analysis of contribution of commercial banks' lending to the gross domestic product (GDP) of Nepal. The hypothesis set

by the author cites that there has been positive impact of lending of commercial banks to the GDP. In research methodology, the author has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial service and general multiple regression technique has been applied to analyze the contribution.

The author has emphasized that portfolio management was essential for individual and institutional investors. Though in the case of small investor as they are not left with much of an option it may be limited to small savings, but for large investors, diversification through investment in mutual funds, shares, debentures should be practiced as any rational investor would seek to derive the maximum return on investment although assuming some risk at the same time.

The scholar has also recommended that banks in order to succeed in portfolio management should have skilled manpower, research and analysis team, and proper management information system. He has suggested that the banks having international network can also offer access to global financial markets.

The author has also stressed that:

- The survival of every bank depends upon its own financial health and various activities.
- In order to develop and expand the portfolio management activities successfully the investment management methodology of a portfolio manager should reflect high standard and give their clients the benefits of global strength, local insights and prudent philosophy.
- The Nepalese banks having greater network and access to national and international capital market have to go for portfolio management activities for the increment of their fee based income as well as to enrich their fund based income and to contribute to the national economy. (pp 128 - 129)

Shrestha (2009) has conducted a research topic on "*Credit risk management of NABIL Bank Limited and Nepal Investment Bank Limited in Nepal*" The main objective of the study is to evaluate the credit risk management. In order to achieve this, the various objectives have been formulated.

- The main objectives of the research are as follows:
- To evaluate the status of the loan portfolio of the banks,
- To evaluate problems and weakness in credit risk management.
- To review the prevailing laws rules and regulation enforced by Nepal Rastra Bank and assess its impact on profitability and liquidity of bank.
- To offer suitable suggestions based on findings of this study.

The major finding and recommendation of the research are:
The liquidity position of NIB is comparatively better than NABIL. Commercial banks have to maintain more liquid assets but the current ratios of some banks are below the standard of 1:1. The average current ratio of NABIL is 1.89 and NIB is 1.99 the current ratio of NIB is little higher than NABIL. Cash and bank balance to total deposit ratio of NIB has higher than NABIL.

The loan & advances to total deposit ratio of NABIL is lower than NIB. The total investment to total deposit of NABIL is higher than NIB i.e. 34.40% > 27.45%. It shows the NABIL is mobilizing its funds on investment in various securities efficiently. The loan & advances to total assets ratio of NIB is greater than NABIL. Investment on government securities to total assets ratio of NABIL is higher than NIB. This indicates that NABIL has invested more portions of total assets on government securities. So an asset management aspect of NABIL is better than NIB. In the the profitability position of NABIL and NIB, return on loan & advances ratio of NABIL is higher than that of NIB. Return on total assets ratio of NABIL is slightly higher than NIB. However, NABIL seems successful in managing and utilizing the available assets in order to generate revenue.

The credit risk ratio shows the proportion of no-performing loan in total Loan & Advances. Average credit risk ratio of NIB is higher than NABIL. These Ratios indicate the more efficient operating of credit management of both banks according to NRB directives because according to NRB directives NPL ratio must be less than 5%. The liquidity risk of the bank defines its liquidity need for deposit. The average mean ratio of NIB is greater than that of NABIL. The analysis shows that both banks have the Asset Risk Ratio in fluctuating trend.

Thapa (2010) has expressed the views in research paper *"Financial System of Nepal"* that the commercial banks including foreign joint venture banks seemed to be doing pretty well in mobilizing deposits. Likewise, loans and advances of these banks are also increasing. But compared to high credit needs particularly by newly emerging industries, the bank still seemed lacking adequate funds. The banks were increasing their lending to non –traditional sectors along with the traditional sectors.

Out of all commercial banks (excluding two recently opened regional commercial banks), Nepal Bank Ltd. and Rastriya Banijya Bank are operating with a nominal profit, the later turning towards negative from time to time. Because of growing competition and limitation of investment sectors, the spread between interest income and interest expenses is declining. These banks have not been able to increase their income from commission and discount. On the contrary, they have got heavy burden of personal and administrative overheads. Similarly, due to accumulated overdue and defaulting loans, profit position of these banks has been seriously affected.

On the other hand, the foreign joint venture banks have been functioning in an efficient way. They are making profit year after year and have been distributing bonus to their employees and dividends to their shareholders.

At last scholar concluded that by its very nature of the public sector, these two domestic banks couldn't compete with the private sector banks, so only remedy to the problems of these banks, as the government decided, is to hand over the ownership as well as the management of these banks to the private hands.

2.2.2 Review of unpublished Dissertations

Before this study, various students regarding various aspects of commercial banks and joint venture commercial banks such as investment policy, lending policy financial performance, interest rate structure etc. have conducted several thesis works. Some of these unpublished dissertations, as supposed to relevant for the study are presented below.

Pathak (2010) had done research on *"A study on Investment Policy of joint Venture Commercial Banks with special reference to Himalayan Bank Limited and Nepal SBI Bank Limited"***.** This study has set out the following objectives:

- To determine the growth rate of bank in terms of deposits, loan and advances, investment and profitability of the bank
- To evaluate the liquidity, assets management, profitability and risk position of the selected commercial banks.
- To analyze the investment policy of the Himalayan Bank Limited and Nepal SBI Bank Limited
- To recommend the policies to be adopted by the sample organization based on the financial analysis for its future development.

Basically this study is conduct on the basis of secondary and analyzed data. Ranges of financial and statistical tools are used to analyze the collected data and to achieve the objectives of the study. The analysis of the data will be done according to pattern of data available. Because of limited time and resources, simple analytical statistical tools such as graph, percentage, coefficient of correlation, regression analysis and the technique of least square are adopted in this study. In the same way, some strong financial tools such as ratio analysis and trend analysis have also been used for financial analysis. The data extracted from annual report, financial statement and other available information are processed and tabulated in various tables and charts under different headings according to their nature.

The major findings drawn on this study were:

- The analyses of liquidity position of sample joint venture commercial banks, HBL and NSBI have been satisfactory. The investment activity of NSBI has lower liquidity position than that of HBL.
- The risk ratios have shown the risk position of the bank in terms of liquidity risk and credit risk ratio. For HBL liquidity risk ratio of both banks are around 10%. Credit risk ratios for the both banks are satisfactory.
- Loan loss provision to total loan and advances ratio has been decreasing because of decreased amount of Nonperforming loan. Nonperforming loan to loans and advances ratios of both banks shows that during study period were in decreasing trend. The decreased ratios of nonperforming loan to loans and advances are good sign for the bank.
- There is positive relationship between loan and advances and net profit for both banks. Both of them are successful to mobilize their deposit in proper way as loan and

advance. The coefficient of correlation of deposit and investment, investment and net profit, NSBI has better position than HBL.

- The trend analysis of total investment of HBL is in decreasing trend whereas the NSBI is in increasing trend. But the deposit, loan and advances and net profit of both banks are in increasing trend.
- The hypothesis test on loan and advances and net profit, deposits and loan and advances of both banks are correlated. Investment and net profit of both banks are not correlated. Deposits and total investment of HBL is not correlated but for NSBI is correlated.

The recommendations for the HBL and NSBI were

- Increase deposit ratio and loan and advances, investment in shares and debentures of the other company and investment in government securities
- Liberal lending policy and sound credit collection policy
- Finding new investment opportunities.
- Improve competency and increase profit
- Follow up the scientific project appraisal approach
- Extend branches over the country

Shrestha (2010) had conducted a study on the topic *"Investment Policy of Joint Venture Banks in Nepal, A comparative study of NABIL Bank Limited and Everest Bank Limited"***.** This study has set out the following objectives:

- To analyze the liquidity, asset management, risk, profitability of NABIL and EBL.
- To assess fund mobilization and investment policy of NABIL and EBL.
- To find out the relationship between deposit and total investment, deposit and loan and advances and net profit.
- To analyze the trends of deposit utilization towards total investment and loan and advances and its projection for the next five years.

Different tools and techniques were adopted while collecting the data for this study. Collected secondary information was analyzed during the course of the study. Ranges of financial and statistical tools are used to analyze the collected data and to achieve the objectives of the study. Different financial tools like liquidity ratio, assets management ratio, activity ratio, risk

ratio and growth ratios are used whereas statistical tools like arithmetic mean, standard deviation, coefficient of variance, correlation coefficient, and trend analysis are used to accomplish the research objectives. Besides these some graph charts and tables are presented to analyze and interpret the findings of the study. The data extracted from annual report, financial statement and other available information are processed and tabulated in various tables and charts under different headings according to their nature.

The major findings drawn on this study were:

- The overall aspect of liquidity position of EBL is comparatively better than NABIL. But the current ratio and investment on government securities to total assets of NABIL are slightly higher than EBL.
- An asset management aspect of NABIL is better than EBL which is justified by little higher loan & advances to total deposit ratio, loan & advances to total assets ratio for NABIL.
- Overall profitability ratios show that NABIL has earned higher profit in relation to every aspects of the bank than EBL.
- Both commercial banks NABIL and EBL have positive correlation between deposit and loan & advances, deposit and total investment, total assets and net profit total investment and net profit. It is also found that there is positive correlation between total deposit of NABIL and EBL, between loan & advances of both banks and between net profits of both banks.
- Both NABIL and EBL have high positive co-relation between total deposit and loan & advances, total deposit and total investment. Correlation between total assets and net profit, total investment and net profit shows both the banks have positive relationship but NABIL has greater correlation coefficient than Correlation coefficient of total deposit, total investment, loan & advances and net profit between NABIL and EBL shows positive correlation.
- NABIL and EBL have increasing trend in collecting deposit the rate of increment of total deposit for NABIL seems to be higher than that of EBL. NABIL has better position in collecting deposit than EBL.
- The trend line of Net profit for NABIL and EBL is upward slopping. The position of NABIL is better in order to generate profit than EBL. The trend analysis reveals that

both the banks have well their ratio. Trend of Both bank has increasing trend. In comparison to both bank every ratio of NABIL is higher than the EBL.

The recommendations for the NABIL and EBL were

- Maintaining sound liquidity position to pay short term obligations.
- Investing more funds in governmental securities instead of keeping them idle.
- Follow liberal lending policy and to invest more deposit in loan and advances.
- Evaluate the investment opportunities and alternatives using statistical, capital budgeting and other financial tools to avoid large amount of doubtful debt and risk.
- Formulate sound and effective investment policy to increase volume of investment and loan and advances that help to meet required level of profitability as well as social responsibility.
- Giving priority to economic sectors like hotel, tourism, manufacturing and trading sectors and creating new investment sectors to mobilize deposits.

Shrestha (2011) had done research on *"A study on Investment Policy of joint Venture Banks with special reference to NABIL Bank Limited and Nepal SBI Bank Limited"***.** This study has set out the following objectives:

- To measure the lending strength and lending efficiency of the banks.
- To analyze the lending contribution in total profitability.
- To study the loan and advances, profitability, deposits position of the joint venture under study.

Various tools and techniques were brought into play while collecting and analyzing the data for this study. Collected secondary information was analyzed during the course of the thesis preparation. Different financial tools like liquidity ratio, assets management ratio, activity ratio, risk ratio and growth ratio and statistical tools like arithmetic mean, standard deviation, coefficient of variance, correlation coefficient, probable error and trend analysis are used to accomplish the research objectives. Besides these some graph charts and tables are presented to analyze and interpret the findings of the study.

The major findings drawn on this study were:

- The total asset to total liability of ratio remained almost constant in the study period of both banks. SBI has slightly less than NABIL bank. Loan and advances to total assets has increasing in the first half year and decreasing trend in the second half year of NABIL bank.
- SBI has the highest loan and advances and investment to total deposit ratio which refers that it has maximum mobilization of deposits than the NABIL bank. The loans and advances of NABIL are higher than SBI bank. SBI has the highest loan loss provision and NABIL has lowest loan loss provision.
- Non-performing loans out of the total loan and advances is highest in case of SBI. NABIL has lowest non-performing loan than SBI.
- The growth ratio of total deposit by analysis of five years of study period found out that SBI has high growth ratio and it has improved exceptionally well in collecting deposits and NABIL has low growth ratio .
- The growth ratio of investment of NABIL is well. It has remarkably increased its investment. SBI has lower growth ratio in comparison with NABIL, and it has decreased its investment.
- Correlation co-efficient between total deposit and loan and advances of NABIL bank and SBI bank shows positive relationship between these two variables. Similarly, correlation of investment and loan and advances of NABIL bank shows positive relationship. NABIL has highest correlation in investments loans and advances and SBI has lowest correlation of investment
- Total loan and advances of NABIL and SBI are increasing trend. Total investments of both banks are also in increasing trend.

The recommendations for the NABIL and SBI bank were

- To reduce the interest rate for SBI bank.
- To launch new schemes for low interest bearing deposits as a result of which the consumer's focuses on the facilities rather than the interest provided on deposits.
- Improve its interest turnover rate to decrease the ratio of interest suspense to interest income from loan and advances and concentrate on recovery of interest and loans advances, plan and act accordingly for proper collection of interest repayment schedules.

- To revise the current policy and improve credit management techniques and take major steps in recovering of the non-performing loans.
- To focus on lending activities and realize that if the exchange income is reduced due to strength of Nepalese currency in future and the fee based activities decline due to the economic slackness the existence of the bank may be questioned in future.
- Develop a mechanism for interbank transparence, a committee which will help the better understanding of the various types of risk, disseminate information regarding bad debts and fraud cases, minimize customer misleads and practices fair competition.

Bhattarai (2011) had conducted a study on the topic *"Investment Policy of Joint Venture Commercial Bank with special reference to Himalayan Bank Limited and Nepal SBI Bank Limited"***.** This study has set out the following objectives:

- To determine the growth rate of bank in terms of deposits, loans and advances, investment and profitability of the bank.
- To evaluate the liquidity, assets management, profitability and risk position of the selected commercial banks.
- To analyze the investment policy of the Himalayan Bank Limited and Nepal SBI Bank Limited.
- To recommend the policies to be adopted by the sample organization based the financial analysis for its future development.

Ranges of financial and statistical tools are used to analyze the collected data and to achieve the objectives of the study. The analysis of the data is done according to pattern of data available. Because of limited time and resources, simple analytical statistical tools such as graph, percentage, coefficient of correlation, regression analysis, hypothesis test and the technique of least square are adopted in this study. In the same way, some strong financial tools such as ratio analysis and trend analysis have also been used for financial analysis. The data extracted from annual report, financial statement and other available information are processed and tabulated in various tables and charts under different headings according to their nature.

The major findings drawn on this study were:

- The investment activity of NSBI has lower position than that of HBL. The lending activity of HBL is lower position than that NSBI. The profitability position was satisfactory of the sample banks.

- The risk ratios have shown the risk position of the bank in terms of liquidity risk and credit risk ratio. For HBL liquidity risk ratio of both banks are around 10%. Credit risk ratios for the both banks are satisfactory.
- Nonperforming loan to loans and advances ratios of both banks shows that during study period were in decreasing trend.
- HBL and NSBI have positive relationship between loan and advances and net profit. The both banks are successful to mobilize their deposit in proper way as loan and advance.
- The coefficient of correlation of deposit and investment, investment and net profit NSBI has better position than HBL
- Trend analysis of total investment of HBL is in decreasing trend whereas the NSBI is in increasing trend. But the deposit, loan and advances and net profit of both banks are in increasing trend.
- The hypothesis test on loan and advances and net profit, deposits and loan and advances of both banks are correlated. Investment and net profit of both banks are not correlated. Deposits and total investment of HBL is not correlated but for NSBI is correlated.

The recommendations for the HBL and NSBI bank were

- Increase deposits ratio, loan & advances, investment in shares & debentures of the other company, investment in government securities, finding New Investment Opportunities and profit
- Liberal Lending policy and sound credit collection policy
- Improve Competency
- Follow up the Scientific Project Appraisal Approach
- Extend branches over the country
- Following the Prevailing Rules and Regulations of NRB

Pun (2013) had conducted a study on the topic *"Investment Policy of Commercial Bank in Nepal, A Comparative Study of HBL and NSBI"***.** This study has set out the following objectives:

- To examine the investment policy of HBL and SBI Bank Ltd.
- To examine the utilization of available fund of HBL and SBI Bank Ltd.
- To evaluate the liquidity, profitability and risk position of HBL and SBI Bank Ltd.
- To analyze relationship between deposits, loan and advances, investment, net profit and compare them between HBL and SBI Bank Ltd.

- To suggest and recommend on the investment policy of sample banks.

For the purpose of study, data analysis, various financial, accounting and statistical tools are used to make the analysis more effective, convenient, reliable and authentic. The analysis of data is done according to the pattern of data available because of limited time and resources. Simple analytical, statistical tools such as percentage, Karl Pearson's correlation coefficient, least square and t-test of hypothesis are used. Similarly some accounting tools such as ratio analysis and trend analysis have also been used for financial analysis. Some technical tools are used to present the data in more presentable and clear format.

The major findings drawn on this study were:

- Total deposit amount of SBI in each year during 5 years of the study period is higher than that of HBL. Similarly, SBI Bank's profitability ratio is higher than that of HBL.
- Total deposit, loan and advances and investment of the sample banks are in increasing trend if other things remain constant. Likewise, SBI Bank has higher interest rate risk than that of HBL and also has higher variability ratio.
- There is positive relationship between loan & advances and deposit & investment of the sample banks.
- Correlation coefficient between deposit and loan & advances of both banks show positive relationship. On the other hand, correlation coefficient between deposit and investment of HBL has negative correlation and SBI has positive correlation.
- The trend analysis of loan and advance to total deposit ratio of HBL is in increasing trend and SBI is in the decreasing trend.

The recommendations for the HBL and NSBI bank were

- Increase deposits ratio, loan & advances, investment in shares & debentures of the other company and giving priorities to investment in government securities and finding New investment opportunities and profit
- Maintaining liquidity position to meet the credit need
- Following the Prevailing Rules and Regulations of NRB
- Diversification of investment is highly suggested to the selected banks
- Follow liberal lending policy and to invest more deposit in loan and advances.

Thapa (2013) had done research on *"Comparative Study on Investment Policy of NABIL Bank Ltd and Himalayan Bank Ltd"***.** This study has set out the following objectives:

- To study on fund mobilization and investment policy of the selected banks.
- To evaluate the liquidity, asset management, profitability and risk portion of NABIL and HBL.
- To measure the relationship and trend between deposits, loan and advances, investment and profit of NABIL and HBL.
- To provide appropriate suggestions and recommendations based on findings of this study.

Different tools and techniques were adopted while collecting data of this study. Collected secondary information was analyzed during the course of the deskwork. However, during the desk study, an information gap was found. This gap was fulfilled by the discussion with the thesis advisor and finance experts of various sectors. Different financial and statistical tools are used to achieve the research objectives. Beside these, some graphs, charts and tables will be presented to analyze and interpret the findings of the study.

The major findings drawn on this study were:

- The liquidity position of NABIL is higher than HBL. The average cash and bank balance to total deposit ratio of NABIL is lower than HBL likewise cash and bank balance to current assets ratio of HBL is also little higher than NABIL.
- NABIL has high loan and advances to total deposit ratio than HBL whereas HBL has high total investment to total deposit ratio than NABIL.
- The return from loan and advances of NABIL is higher than HBL. NABIL has utilized the loan and advances for the profit generation in earnings capacity.
- HBL has invested more assets in risk free assets than NABIL do. Similarly NABIL has utilized the loan and advances for the profit generation in earning capacity. ROA and ROE of NABIL are higher than that of HBL.
- The correlation coefficient between deposit and loan and advances, total deposit and net profit of both banks show positive relationship. Similarly, the correlation coefficient between deposit and investment of NABIL is positive but HBL has negative correlation.

- The trend of loan and advances, total deposit, net profit between NABIL and HBL are in increasing trend whereas the trend of total investment of NABIL is in increasing trend and HBL is in decreasing trend.

The recommendations for the HBL and NSBI were

- Increase deposit ratio and loan and advances, investment in shares and debentures of the other company and investment in government securities
- Maintaining enough liquid assets to pay short term obligations and maintain sound liquidity position to NABIL and HBL.
- Investing more funds in government securities instead risky lending
- Follow liberal lending policy and to invest more deposits in loan and advances.
- Reduce its credit and assets risk and non performing loan especially for HBL
- Increase EPS and DPS for better financial position and to satisfy their stakeholders

2.3 Research Gap

Commercial banks have huge deposit collection. These deposits need to be properly utilized. Effective utilization of collected fund is possible only through implementation of sound investment policy. NABIL and SCBNL are the best examples of JVB's in Nepal that have been able to mobilize the funds in an effective manner and achieved phenomenal growth and profit year after year by formulating and implementing sound investment policy.

This study comprises of two of the most successful JVB's as sample viz NABIL and SCBNL. This study is also different from previous studies in view of the time period its covers. During this period the country has witnessed political uncertainty, deteriorating security situation that have rendered the economy further sluggish. There has been a restructuring in the banking business.

This study gives a new dimension to the research topic in the sense that it has adhered to most of the fresh guidelines and directives issued by NRB to commercial banks, which previous studies lack. This study aims at providing a more realistic picture to various financial aspects of the sample banks. In line with fresh guidelines and NRB directives and practices adopted

by banks, some items of the balance sheet that were previously booked under one heading has now been accounted under a different heading. For instance, leasehold improvements or deferred expenditure that were previously a part of current assets have been accounted for under fixed assets as they are amortized over the period of lease.

Similarly, staff loan and advances previously part of Loan Advances and Bills purchase have been booked under other assets, checks presented for clearing have been booked under other assets. Gratuity is expensed of on accrual basis and is now a part of personnel expense. Previously, it was the practice of banks to include it under current liabilities and appropriate it from profit and loss Account.

This study attempts to reveal the strength and weaknesses of the sample bank and serve as a valuable input in decision-making process of the concerned banks and other emerging banks in formulating appropriate investment policy. Similarly, this study is a little bit different than previous studies. It may be the first research study in the field of investment policy taking the comparative study of NABIL with SCB Bank. This study has tried to indicate the effectiveness of investment policy of concerned banks.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying the problem with certain objectives. This chapter refers to the overall research method from the theoretical aspects to the collection and analysis of data. This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspects and logical aspect.

Research methodology refers to the various steps that are generally adopted by a researcher in studying his research problem along with logic behind it. Thus, research methodology is a systematic and organizes effort to investigate a specific problem that needs a solution (Wolf & Plant; 1999). “Research methodology refers to the various sequential steps to be adopted by a researcher in studying problem with certain object in view. It would be appropriate to mention that research project are not susceptible to any one complete and inflexible Sequence of steps and the types of problem to be studied will determine the particular steps to be taken and their order to” (Kothari; 1994:19).

This research tries to perform a well-designed, quantitative, and qualitative research in a very clear and direct way by using both financial and statistical tools.

3.2 Research Design

Research design is planning for research. Research design is a conceptual framework within which a research is conducted. Research design is necessary for each research work. It is a plan for the collection and analysis of data. It presents a series of guide posts to enable the researcher to progress in the right direction in order to achieve the goal. “Research design is the plan, structure and strategy of investment conceived so as to obtain answer to research question and to control variance”, (Kerlinger, 1978:300). And in another words, “A research design is the agreement of condition for collection and analysis of data in a manner that aims

to combine relevance to the research purpose with economy in procedure". (Bhirtel; 2002:43) Kothari (2000), states that research design is a plan, structure and strategy of investigation concerned so as to obtain answer to researcher question and to control variance. This research is based on the analytical and descriptive design as well.

This study depends on the secondary data. It includes all the process of collecting, verifying and evaluating of past evidence systematically and objectively to reach final conclusion. Some statistical and accounting tools have been adopted to examine factors in this study. In this study descriptive and analytical research design has been done

3.3 Population and Samples

There are all together 31 commercial banks listed in Nepal Stock Exchange. For this research, those listed banks serve as population. Among them, only two joint venture banks, viz. NABIL, SCBNL have been taken into account for research proposes as samples in this research study to compare their investment policies. They are two of the best performing JVB's in Nepal. Their profit per share, percentage of dividend paid per equity capital, net profits are among the highest in commercial banks. They are equipped with research and analysis team, proper MIS, sufficient capital and skilled manpower. They also have access to Global financial markets. These factors put them in the best position, i.e. it gives them an edge over other banks. They are best suited to exploit the opportunities that are existent. They can easily redress problem faced by other and can also avoid risks by formulating and implementing sound investment policy.

3.4 Nature and Sources of Data

This study is mainly based on secondary data. The secondary sources of data collections are Balance Sheet, P&L Accounts of concerned banks, Nepal Stock Exchange's NEPSE report. Other relating data are obtained directly from authorized persons of concerned banks, regulating authorities i.e. Ministry of Finance, NRB budget speech, published books, banks bulletin, newspapers, previous studies, Central Library T.U., college libraries, Securities Exchange Board, internet etc. The data are prerequisites for any project study. The data

collection entails labor and time and it is the most necessary step in project study without which the study cannot be done.

3.5 Data Presentation and Analysis

Data presentation and analysis mechanism is the core of project study. This study heavily depends on selected financial and statistical tools to accomplish the objectives of the research project. The data extracted from financial, statistical, and accounting tools have been used. These results are then compared with each other to interpret the results. Two kind of tools have been used to achieve the purpose, namely: Financial tools and Statistical tools

3.5.1 Financial Tools

Financial tools basically help to analyze the strength and weakness of a firm. Ratio analysis being one of the important financial tools has been used in this study. In financial analysis a ratio is used as a benchmark for evaluating the financial position and performance of a firm. Ratios help to summarize the large quantities of financial data and to make qualitative judgment about the firm's performance. The point to note is that a ratio indicates a quantitative relationship, which can be used to make a qualitative judgment.

There are several ratios involved in analyzing and interpreting the financial statement. In this study, basically four types of ratios have been used which are related to Investment policy of banks. They are Liquidity Ratio, Asset Management Ratios (Activity Ratio), Profitability Ratio and Risk Ratio.

a) Liquidity Ratios

Liquidity Ratio measures the firm's ability to meet its current obligation. Commercial banks collect fund from the community with a commitment to return depositor's fund, facilitate withdrawal on demand. A firm should ensure that it does not suffer from lack of liquidity and also that it does not have excess liquidity. It is necessary to strike a proper balance between high liquidity and lack of liquidity. The following ratios are evaluated under liquidity ratio.

- **Cash and bank balance to total deposit ratio**: They are the most liquid of current assets to pay off depositors immediately. This ratio is calculated by dividing cash and bank balance by total deposits. In order to bring about consistency in this research, checks for clearing have been excluded from cash and bank balance and included in other assets. Mathematically,

$$\text{Cash \& Bank Balance to Total Deposit Ratio } X \frac{\text{Cash \& Bank Balance}}{\text{Total Deposit}}$$

Cash and bank balance includes cash in local currency & foreign currency on hand or with banks. The total deposits consists of deposits in current account, savings account, fixed deposit account, money at call deposits, margin deposits etc. A higher ratio indicates greater ability of banks to meet their deposits and vice-versa.

- **Cash and bank balance to current assets ratio**: This ratio measures the percentage of liquid assets i.e. cash and bank balance in the current assets of the firm. Higher ratio shows greater capacity of firms to meet cash demand. The ratio is calculated by dividing cash and bank balance by current assets. Mathematically,

$$\text{Cash \& Bank Balance to Current Assets Ratio } X \frac{\text{Cash \& Bank Balance}}{\text{Current Assets}}$$

- **Loan and advances to total deposit ratio**: This ratio is calculated to find out how successfully the selected banks are utilizing their total deposits on loan and advances to generate profits. A higher ratio is indicative of better utilization of total deposits, but the same might not hold true from liquidity point of view. It is computed by dividing total loan and advances by total deposits. Mathematically,

$$\text{Loan and Advance to Total Deposits Ratio } X \frac{\text{Loan and Advance}}{\text{Total Deposits}}$$

- **Total investment to total deposit ratio**: This ratio shows the utilization of firm's deposits on investment in government securities and purchasing shares and debentures of other companies. A high ratio is indicative of high success in mobilization of deposits in

investments and vice-versa. This ratio can be calculated by dividing total investment by total deposits. Mathematically,

$$\text{Total Investment to Total Deposit Ratio} \quad X\frac{\text{Total Investment}}{\text{Total Deposits}}$$

- **Investment on government securities to total working fund ratio**: This ratio shows the percentage of total working fund invested in government securities. In other words, this ratio measures the extent to which the banks have been successful in mobilizing their total working fund on different type of government securities. The logic behind investment in government securities by banks is to diversify the risk by not putting all the eggs in the same basket. This is also beneficial in the sense that banks are assured of adequate liquidity. A high ratio indicates better mobilization of funds as investment on government securities and vice-versa.

  This ratio can be calculated by dividing total amount of investment in government securities by the total working fund. Mathematically,

$$\text{Investment in Government Securities} \quad X \frac{\text{Investment in Govt. Securities}}{\text{Total Working Fund}}$$

- **Investment on shares and debentures to total working fund ratio**: This ratio shows the percentage of total working fund invested in purchasing shares and bonds & debentures of other companies. Investment on shares and debentures to total working fund measures the extent to which the banks have been successful in mobilizing their total assets on shares and debenture of other companies to generate income. A high ratio indicates portion of investment on shares and debentures out of total working fund and vice-versa. This ratio is calculated by dividing the total amount of Investment is shares & debenture of other companies by total working fund. Mathematically,

$$\text{Investment on Shares \& Debentures to Total Working Fund Ratio} \quad X \quad \frac{\textit{Investment in Shares \& Debentures}}{\textit{Total Working Fund}}$$

b) Profitability Ratio

The profitability ratios are calculated to measure the overall efficiency of a firm in terms of profit earning and performance. Profit is one of the major indicators of efficient performance of banks. One of the major objectives of banks is to earn profit, so profit is very crucial for the survival of banks. To meet various objectives like, maintaining good liquidity position, meet internal obligations, expansion of banking services, finance short- term government needs, commercial banks need to earn sufficient profit. A higher profit ratio shows higher efficiency of a bank.

The following ratios related to investment policy are calculated under profitability ratios:

- **Return on loan and advance ratio**: Return on loan and advances ratio indicates how efficiently the bank has utilized its resources in the form of loan and advances to generate good return. It measures the earning capacity of a commercial bank. This ratio is calculated by dividing net profit by loan and advances. Mathematically,

$$\text{Return on Loan \& Advances Ratio X} \frac{\text{Net Profit / Loss}}{\text{Total Loan and Advances}}$$

- **Return on total assets**: Return on total assets shows the overall profitability of working fund or total assets. Return on working fund ratio is a measuring rod of the profitability with respect to each financial resource investment of banks asset. If the banks total working fund is well managed and utilized efficiently, return on such assets will be higher and vice-versa. This ratio is calculated by dividing net profit by total working fund. It is calculated by dividing net profit by total assets. Mathematically,

$$\text{Return on Total Assets X} \frac{\text{Net Profit / Loss}}{\text{Total Working Fund}}$$

- **Total interest earned to operating income ratio**: This ratio is measured to find out the ratio of interest income with operating income of the bank. It shows how efficiently the banks have mobilized their resources in interest bearing assets i.e., loan and advances investment in government securities. Total operating income includes interest income, commission fees & discount, dividend income, foreign exchange income etc. This ratio

sh

ow Total Interest Earned to Total Operating Income Ratio = $\frac{\text{Total Interest Earned}}{\text{Total Operating Income}}$

s

the magnitude of interest income in total income. It is calculated by dividing total interest earned by net operating income. Mathematically,

c) Risk Ratios

Risk means uncertainty, variability of return, which is inherent in any investment portfolio of a business enterprise. Risk is an important element since investment with greater risk requires higher return than investments with lower risk. Risk ratios measures the degree of risk involved in various financial operations. The possibility of risk involved in bank's financial operations makes the bank investment a challenging task. As the notion goes," no risk no gain", therefore, if a bank expects high return on its investment it must be prepared to accept the risk and manage it efficiently.

The following risk ratios are used to analyze and interpret the financial data and investment policy.

- **Liquidity risk ratio**: Liquidity risk of the bank defines its liquidity needs for deposit. Cash and bank balance are the most liquid of all the assets and are considered bank's liquidity sources. Deposits on the other hand refer to the liquidity needs of banks.

This ratio measures the risk associated with the liquid assets i.e., cash and bank balance that are kept to satisfy the cash demand of customers. A higher ratio shows that the banks has sufficient cash to meet its current obligations i.e. lower liquidity risk, but that may have an adverse impact on the profitability position of the bank. A trade off between liquidity and profitability must be maintained. This ratio is calculated by dividing cash and bank balance by total deposit. Mathematically,

$$\text{Liquidity Risk Ratio } X \frac{\text{Total Cash \& Bank Balance}}{\text{Total Deposits}}$$

- **Credit risk ratio**: Normally, every credit is good at the time it is sanctioned. Most of the bank failures are due to shrinkage in the value of loan and advances. Loan is a risky asset and risk of non-repayment of loan in known as credit risk or default risk. Credit risk ratio measures the possibility of loan going into default. While sanctioning loans banks measure credit risk involved in the project. Credit risk is calculated by dividing total loan and advances by total assets. Mathematically,

$$\text{Credit Risk Ratio } X \frac{\text{Total Loan and Advances}}{\text{Total Assets}}$$

d) Growth Ratios

The growth ratios represent how the commercial banks are maintaining their economic and financial condition. As a conventional rule, a higher ratio is preferable. A high ratio indicates better performance of the banks and vice-versa. The growth ratios like Growth ratio of total deposit, Growth ratio of total investment, Growth ratio of loan and advances and Growth ratio of net profit are directly related to the fund-mobilization and investment of the banks are calculated. So on chapter four, the details of the above ratios are explained.

3.5.2 Statistical Tools

Some important statistical tools have been used to present and analyze the data for achieving the objectives of this study. Co-efficient of variance, Co-efficient of correlation, standard deviation, least square, linear tend analysis etc. have been used for the purpose of investment policy analysis.

a. **Karl Pearson's correlation co-efficient analysis**: This statistical tool interprets and identifies the relationship between two or more variables. It identifies whether two or more variables are positively correlated or negatively correlated Statistical tool helps to analyze the relationship between these variables and aids the selected banks to prepare appropriate investment policy relating to deposit collection, fund utilization (loan and advances and investment) and profit maximization.

   Karl Pearson's correlation coefficient (r) can be obtained by using the following formulae.

$$r = \frac{xy}{\sqrt{x^2 \quad y^2}}$$ Where x = (x - $\bar{x}$), y = (y - $\bar{y}$)

Here, ϕ x = Sum of observation in series x

ϕ y = Sum of observation in series y

ϕ x^2 = Sum of squared observation in series x

ϕ y^2 = Sum of squared observation in series y

ϕ xy = Sum of the product of observation in series x & y.

The co-efficient of correlation (r) lies between –1 to +1, If r = +1 there exists a significant relationship between the two variables. If r = -1, then the two variables are negatively correlated or there is no significant relationship between the two variables.

b. **Trend analysis**: Under this topic the trend of deposits, loan and advances, investments and net profit of NABIL and SCBNL from F/Y 2008/2009 to F/Y 2012/2013 are analyzed. It also aids in making forecasting for the next five years up to 2017/2018. The following trend value analysis has been used in this study.
   i) Trend Analysis of total deposits.
   ii) Trend Analysis of loan and advances.
   iii) Trend Analysis of total investment.
   iv) Trend analysis of net profit.

c. **Standard deviation (S.D):** The standard deviation measures the absolute dispersion. The lower the percentage of dispersion lowers the standard deviation. The lower percentage of dispersion also projects a high degree of uniformity of the observations as well as homogeneity of the series. A large value of standard deviation suggests exactly the opposite. In this study standard deviation of different ratios are calculated. Mathematically,

$$S.D = \sqrt{\frac{(x \, Z \bar{x})^2}{n}}$$

Co-efficient of Variation (C.V.): C.V. is the proportion of standard deviation with mean multiplied by 100. Mathematically,

$$\text{C.V.} = \frac{\text{S.D.} \mid 100\%}{\text{Mean}}$$

CHAPTER IV
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This is an analytical chapter, where an attempt has been made to analyze and evaluate major financial items, which have an impact on investment management and fund mobilization of NABIL and SCBNL. A number of financial ratios -- crucial in evaluating the funds mobilization system of commercial banks -- have been calculated and analyzed in this chapter.

4.1.1 Liquidity Ratios

Liquidity ratios measure the firm's ability to meet its current obligation. The following ratios which measure the liquidity position of banks are calculated.

- **Cash and bank balance to total deposit ratio**: This ratio is calculated by dividing cash and bank balance by total deposits.

  Table 4.1 presents with the cash and bank balance to total deposits ratio of NABIL and SCBNL.

Table 4.1:

Cash and Bank Balance to Total Deposit Ratio

F/Y	NABIL	SCBNL
2008/2009	1.81	1.31
2009/2010	1.37	1.45
2010/2011	1.50	1.61
2011/2012	1.91	1.42
2012/2013	1.79	1.74
Mean	1.68	1.51
S.D.	0.21	0.15
C.V.	12.24%	10.05%

Source: Appendix 3 and Appendix 4

The figures shown in table 4.1 reveal that the cash and bank balance to total deposit of both NABIL and SCBNL are in fluctuating trend. NABIL had a high ratio of 1.91% in F/Y 2011/12 and a low ratio of 1.37% in F/Y 2009/10. Similarly, SCBNL has a high of 1.74% in F/Y 2012/13 and a low of 1.31% in F/Y 2008/09. The average mean ratio of .0NABIL is slightly higher than SCBNL i.e., 1.68%>1.51%.

This shows, NABIL's readiness to meet customer requirement better than SCBNL. The C.V. of SCBNL is slightly lower than that of NABIL i.e. 10.05%<12.24%. On its basis, it can be concluded that SCBNL ratios are more consistent than that of NABIL's.

Although the above ratios implies a slightly better liquidity position of SCBNL, a high ratio of non-earning cash and bank balance indicates the banks inability to invest its fund in income generation areas that might have helped it to improve its profitability.

- **Cash and bank balance to current assets ratio**: This ratio is calculated by dividing cash and bank balance by current assets.

Table 4.2 deals with the cash and bank balance to current assets ratios on the basis of available data for this study.

Table 4.2:

Cash and Bank Balance to Current Asset Ratio

F/Y	NABIL	SCBNL
2008/2009	17.18	8.92
2009/2010	14.08	14.14
2010/2011	15.23	8.42
2011/2012	20.59	6
2012/2013	15.17	7.3
Mean	16.45	8.95
S.D.	2.29	2.78
C.V.	13.97%	31.04%

Source: Appendix 5 and Appendix 6

The figures calculated in table 4.2 shows that the cash and bank balance to current assets of both NABIL and SCBNL are in a fluctuating trend. NABIL has maintained a high ratio of 20.59% in F/Y 2011/12, and a low ratio of 14.08% in 2009/10. Similarly, SCBNL has had a high of 14.14% in F/Y 2009/10 anticipating higher cash requirement depositors in this F/Y. It has a low ratio of 6% in F/Y 2011/12. The average mean ratio of SCBNL is lower than NABIL. i.e. 8.95%<16.45%. The C.V. of SCBNL is greater than that of NABIL i.e., 31.04%>13.97%.

It shows that the SCBNL ratios are less consistent than that of NABIL. The above information does not show any significant difference between the JVB's with regards to meeting customer's daily cash requirement. Both have fared well in meeting their depositor's daily cash requirement and investing the surplus fund in other productive areas.

4.1.2 Assets Management Ratios

The following ratios measure the asset management ability of NABIL and SCBNL.

- **Loan and advances to total deposit ratio**: This ratio is calculated by dividing total loan and advances by total deposits.

The data tabulated in table 4.3 below show the loan and advances to total deposit ratio of NABIL and SCBNL.

Table 4.3:

Loan and Advances to Total Deposit Ratio

F/Y	NABIL	SCBNL
2008/2009	73.87	38.7
2009/2010	69.53	45.35
2010/2011	76.53	48.49
2011/2012	75.61	54.43
2012/2013	72.90	57.84
Mean	73.69	48.96
S.D.	2.43	6.74
C.V.	3.31%	13.77%

Source: Appendix 7 and Appendix 8

The figures calculated in table 4.3 shows that the loan and advances to total deposit of both the banks have a fluctuating trend. NABIL had a high ratio of 76.53% in F/Y 2010/11 and a low ratio of 69.53% in F/Y 2009/10. Accordingly, SCBNL had a high of 57.84% and a low of 38.7% in F/Y 2012/13 and F/Y 2008/09 respectively. SCBNL's loan and advances to total deposit has had an increasing trend till F/Y 2012/13. The mean ratio of NABIL is above 1.51 times that of SCBNL i.e. 73.69%>48.96%. NABIL seems stronger in terms of mobilization of its total deposits as loan and advances when compared to SCBNL. In terms of C.V., NABIL seem to be more consistent than SCBNL.

It can be concluded that, NABIL has been more successful in mobilizing its total deposits as loan and advances than SCBNL. On the contrary, a high ratio should not be perceived as a better state of affairs from the point of view of liquidity, as loan and advance are not as liquid as cash and bank balance and other investment.

- **Total investment to total deposit ratio**: This ratio is calculated by dividing total investments by total deposits.

The data presented in table 4.4 reveal the total investment to total deposit ratio of NABIL and SCBNL.

Table 4.4:

Total Investment to Total Deposit Ratios

F/Y	NABIL	SCBNL
2008/2009	28.99	57.24
2009/2010	29.53	56.41
2010/2011	26.32	45.42
2011/2012	25.55	35.97
2012/2013	25.68	32.31
Mean	27.21	45.47
S.D.	1.70	10.21
C.V.	6.24%	22.46%

Source: Appendix 9 and Appendix 10

The information shown by the figures calculated in table 4.4 proves a highly fluctuating trend in total investment to total deposit ratios of NABIL and SCBNL. NABIL has a high ratio of 29.53% and a low ratio of 25.55% in F/Y 2009/10 and 2011/12 respectively. SCBNL, on the other hand had a high ratio of 57.24% and a low ratio of 32.31% in F/Y 2008/09 and 2012/13 respectively. SCBNL has a high mean ratio than NABIL i.e., 45.47%>27.21.

From mean ratio perspective, SCBNL has been more successful in mobilization of deposits on various forms of investment but from C.V.'s viewpoint, NABIL is better in terms of consistency than SCBNL.

In conclusion, the above analysis reveals that NABIL has been more successful in mobilizing its resources on various forms of investment. What is worth mentioning is that interest on treasury bills, inter-bank lending and placements are at an all time low

level, so NABIL has not done itself justice by investing in low yield, less risky and risk free assets.

- **Investment in government securities to total working funds ratio**: This ratio is calculated by dividing investment on government securities by total working fund.

The facts presented in table 4.5 reveal the nature of ratios between the investment in government securities to total working funds of NABIL and SCBNL.

Table 4.5:

Investment in Government Securities to Total Working Fund Ratio

F/Y	NABIL	SCBNL
2008/2009	8.45	24.64
2009/2010	15.23	21.22
2010/2011	15.04	22.73
2011/2012	12.66	18.87
2012/2013	10.81	10.59
Mean	12.44	19.61
S.D.	2.58	4.89
C.V.	20.71%	24.93%

Source: Appendix 11 and Appendix 12

From the figures calculated in table 4.5, it is clearly seen that SCBNL has an increasing trend of investment of government securities to total working fund over the study period while NABIL has more of a fluctuating trend. NABIL has a higher ratio 15.23% in F/Y 2009/10 and a low ratio of 8.45% in F/Y 2008/09. Similarly, SCBNL has a high ratio of 24.64% in F/Y 2008/09 and low ratio of 10.59% in 2012/13. When mean ratio is considered, NABIL seems to be slightly weaker than SCBNL in mobilizing of total assets as Investment in Government securities i.e. (12.44%<19.61%). Also, when we compare C.V. of both, it reflects that ratios of SCBNL are less consistent than NABIL i.e., (24.93%>20.71%).

From the above information we can conclude that SCBNL has invested larger portion of working fund in government securities than NABIL. The ratios also indicates that both the banks have no concrete or certain investment policy with regards to what percentage of working fund to be invested in purchasing government securities.

- **Investment on share and debentures to total working fund ratio**: The investment on share and debentures to total working fund ratio of NABIL and SCBNL have been shown in table 4.6 below.

Table 4.6:

Investment on Share and Debentures to Total Working Fund Ratio

F/Y	NABIL	SCBNL
2008/2009	0.81	0.28
2009/2010	0.67	0.29
2010/2011	0.63	0.27
2011/2012	0.67	0.28
2012/2013	0.59	0.23
Mean	0.67	0.27
S.D.	0.07	0.02
C.V.	10.44%	7.77%

Source: Appendix 13 and Appendix 14

The figures calculated in table 4.6 clearly reveal that both the banks have invested miniscule percentage of total working fund in purchasing share and debentures of other companies. In either case the ratio is less than 0.8%.

NABIL has invested slightly higher amount of total working fund on shares and debenture than SCBNL. It also has a mean ratio higher than SCBNL. It indicates that NABIL has been more successful in mobilizing it funds as Investment in shares and debenture than SCBNL, though the fund invested is marginal in comparison to total investment portfolio in case of both. The table also shows NABIL's decreasing trend in investment on shares and debentures, where as SCBNL has a fluctuating trend through out the period of study. In terms of C.V. both the banks has remained fairly

consistent though SCBNL's variability is slightly less than that of NABIL i.e., (7.77 %< 10.44%).

4.1.3 Profitability Ratio

To study the profitability of the investment of these institutions, the following ratios are calculated under profitability ratios:

- **Return on loan and advances ratio**: This ratio is calculated by dividing net profit by loan and advances.

The information provided in table 4.7 reveals the level of profitability of the investments in relation to return on loan and advances for the study period.

Table 4.7:

Return on Loan and Advances Ratio

F/Y	NABIL	SCBNL
2008/2009	3.74	7.49
2009/2010	3.53	6.80
2010/2011	3.52	6.07
2011/2012	4.08	5.97
2012/2013	4.80	5.34
Mean	3.93	6.33
S.D.	0.48	0.55
C.V.	12.16%	11.70%

Source: Appendix 15 and Appendix 16

The figures calculated in table 4.7 shows that the ratio of return on loan and advances of SCBNL are better than NABIL in all F/Y, through they have a fluctuating trend. NABIL's ratios have witnessed a fluctuating trend. NABIL has recorded a high ratio of 4.80% in F/Y 2012/13, and a low ratio of 3.52% in F/Y 2010/11. Similarly, SCBNL recorded a high of 7.49% in F/Y 2008/09 and a low of 5.34% in F/Y 2012/13.

The comparison of mean ratio reveals that SCBNL has a higher ratio than NABIL i.e., 6.33%>3.93%. This shows that SCBNL has been more successful in maintaining its higher return on loan and advances than NABIL.

C.V. of SCBNL is significantly lower than NABIL i.e. 11.70%<12.16%. It proves that NABIL has higher variability of ratio than SCBNL.

In conclusion, it can be said that NABIL's profit earning capacity by utilizing available resources is weaker compared to SCBNL, and there is need for NABIL to make significant improvements in this regard.

- **Return on total working fund ratio**: This ratio is calculated by dividing net profit by total working fund.

Table 4.8 below reflects the profitability position with respect to total assets of NABIL and SCBNL.

Table 4.8:

Return on Total Working Fund Ratio

F/Y	NABIL	SCBNL
2008/2009	2.35	2.53
2009/2010	2.18	2.70
2010/2011	2.30	2.55
2011/2012	2.68	2.80
2012/2013	3.04	2.67
Mean	2.51	2.65
S.D.	0.31	0.10
C.V.	12.45%	3.77%

Source: Appendix 17 and Appendix 18

The table 4.8 reveals that the ratio of return on total working fund is in fluctuating trend in case of NABIL. NABIL has had a high ratio of 3.04% in F/Y 2012/13 and a low ratio of 2.18% in F/Y 2009/10. Similarly, SCBNL has had a high of 2.80% and a low of 2.53% in F/Y 2011/12 and 2008/09 respectively.

SCBNL has a slightly high mean ratio than NABIL i.e., 2.65%>2.51%. It reveals that SCBNL has been able to earn high profit on total working fund in comparison to NABIL. One point worth making here is that NABIL has managed and utilized it assets more efficiently than SCBNL from F/Y 2011/12 onwards and its return on assets have also been higher. SCBNL's return on total assets has also been lower in comparison to NABIL in F/Y 2012/13.

From the viewpoint of C.V., SCBNL's ratios are more consistent than NABIL i.e. 3.77% < 12.45%. Both banks need to exert more effort in mobilizing its working assets in an efficient manner.

- **Total interest earned to total operating income ratio**: This ratio is calculated by dividing total interest earning by net operating income.

The following table 4.9 shows interest earned to total operating income ratio of NABIL and SCBNL.

Table 4.9:

Interest Earned to Total Operating Income Ratio

F/Y	NABIL	SCBNL
2008/2009	126.00	90.21
2009/2010	146.44	88.88
2010/2011	172.48	110.46
2011/2012	153.71	108.81
2012/2013	124.16	91.31
Mean	144.56	97.93
S.D.	18.04	9.60
C.V.	12.48%	9.80%

Source: Appendix 19 and Appendix 20

The figures calculated in table 4.9 shows that both the banks have a fluctuating trend of interest earning ratio. SCBNL has a decreasing trend of interest earned to total operating income ratio except for F/Y 2010/11. The higher and lower ratios of NABIL

are 172.48% in F/Y 2010/11 and 124.16% in F/Y 2012/13 respectively. SCBNL has a high of 110.46% in F/Y 2010/11 and a low of 88.88% in F/Y 2009/10.

The mean ratio of NABIL is higher than SCBNL i.e., 144.56%>97.93%. On the basis of mean ratio, we can say that NABIL has been more successful in earning higher amount of interest income out of total operating income.

On the other hand, the variability in interest earned to total operating income of both the banks is fluctuating. Both have been equally consistent in their ratios.

From the above analysis, it can be concluded that NABIL has mobilized its funds in interest bearing assets better than SCBNL. It is also evident that SCBNL has given more priority to non-fund based income to earn higher profit than NABIL. NABIL needs to increase its income from off balance sheet operation as well.

4.1.4 Risk Ratio

The following risk ratios have been used to measure the risk involved in financial operation of NABIL and SCBNL:

- **Liquidity risk ratio**: Liquidity risk is calculated by dividing cash and bank balance by total deposits.

The information provided in table 4.10 shows the liquidity risk involved in NABIL and SCBNL.

Table 4.10:

Liquidity Risk Ratio

F/Y	NABIL	SCBNL
2008/2009	1.81	1.31
2009/2010	1.37	1.45
2010/2011	1.50	1.61
2011/2012	1.91	1.42
2012/2013	1.79	1.74

Mean	1.68	1.51
S.D.	0.21	0.15
C.V.	12.24%	10.05%

Source: Appendix 21 and Appendix 22

As per the information processed in table 4.10, it is seen that the liquidity risk ratios of both the banks have been remained in fluctuating trend. NABIL has recorded a high ratio of 1.91% and a low ratio of 1.37%. Similarly, SCBNL has recorded a high of 1.74% and a low of 1.31%.

When mean ratios are taken into consideration, it is found that SCBNL's liquidity risk is lower than that of NABIL i.e. 1.68%>1.51%. SCBNL has more cash & bank balance than NABIL to meet its current obligations. But we must not discount the fact that, too much idle cash has an adverse impact on profitability. A trade off between liquidity and profitability must be maintained at all times. On comparison of C.V.'s of both the banks, both seem inconsistent with NABIL securing high 12.24% and SCBNL securing low 10.05%.

- **Credit risk ratio**: This ratio is calculated by dividing total loan and advances by total assets.

The comparative figures calculated and presented in table 4.11 are instrumental to examine the level of worth of the performance of these institutions in terms of credit risk management.

Table 4.11:

Credit Risk Ratio

F/Y	NABIL	SCBNL
2008/2009	62.89	33.70
2009/2010	61.88	39.68
2010/2011	65.42	42.06
2011/2012	65.83	46.97
2012/2013	63.31	50.03
Mean	63.87	42.49

S.D.	2.30	5.70
C.V.	2.37%	13.41%

Source: Appendix 23 and Appendix 24

The figures calculated in table 4.11 shows that NABIL ratios are in an decreasing trend up to F/Y 200910 after which it gradually increase up to F/Y 2011/12 after which it again decreases in F/Y 2012/13 whereas the ratios of SCBNL have a increasing trend.

NABIL has a high ratio of 65.83% in F/Y 2011/12 and a low ratio of 61.88% in F/Y 2009/10. Similarly, SCBNL has had a high ratio of 50.13% in F/Y 2012/13 and a low ratio of 33.70% in F/Y 2008/09.

The mean ratio of SCBNL is lower than that of NABIL ie.,42.49%<63.87%.This indicates that NABIL has more exposure to credit risk than its counterpart. The increasing trend of SCBNL's ratios projects a picture that SCBNL is trying to increase its credit risk. From the point of view of C.V., both banks seem to have had inconsistent ratios during the study period with NABIL securing low 2.37% and SCBNL securing high 13.41%.

4.1.5 Growth Ratios

Under this topic the following ratios which directly related to fund mobilization and investment of the banks are calculated:

- **Growth rate of total deposits**: Table 4.12 presents with the comparative facts and figures related to the growth rates of total deposits.

Table 4.12:

Growth Rate of Total Deposits

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Total Deposits (Rs.)	%	Total Deposits (Rs.)	%
2008/2009	37348.26	0.00	35350.82	0.00
2009/2010	46410.7	24.26	35182.72	(0.48)
2010/2011	49696.11	7.08	37999.24	8.01
2011/2012	55023.7	10.72	35965.63	(5.35)
2012/2013	63609.81	15.60	39466.45	9.73
Mean		11.53		2.38
S.D.		8.15		5.64

Source: Appendix 35 and Appendix 36

Based on table 4.12, the growth rate of deposits of both the banks has been remained in a fluctuating trend. The average growth rates of deposits of SCBNL are significantly lower than NABIL i.e. 11.53%>2.38%. During the study period SCBNL has experienced a negative growth. It also reflects SCBNL dismal performance in collecting more deposits. SCBNL has experienced negative growth rate in F/Y 2009/10 and 2011/12 respectively. SCBNL has consciously decreased deposits by 0.48% in F/Y 2009/10 and 5.35% in F/Y 2011/12 as per its strategy of shedding high cost and unprofitable deposit.

On the contrary, NABIL has been successful in increasing its deposit year after year. This is a solid proof of its high quality service, image, and credibility in the mind of depositors.

- **Growth rate of total loan and advances**: Table 4.13 presents with the comparative display of the growth rate of total loan and advances of both the projects.

Table 4.13:

Growth Rate of Total Loan and Advances

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Total loan & advances (Rs.)	%	Total loan & advances (Rs.)	%
2008/2009	27589.9	0.00	13679.8	0.00
2009/2010	32268.9	16.96	15957	16.65
2010/2011	38034.1	17.87	18427.3	15.48
2011/2012	41605.7	9.39	19576	6.23
2012/2013	46369.8	11.45	22828.8	16.62
Mean		11.13		11
S.D.		6.42		6.74

Source: Appendix 37 and Appendix 38

Based on table 4.13, the growth rate of total loan and advances of both the banks are in a fluctuating trend. The average growth rate of total loan and advances of NABIL is slightly better than SCBNL i.e. 11.13%>11%. This indicates that NABIL has employed more funds in loan and advances each year. This ratio can be misleading in the sense that the ratio of loan and advance to current assets, total deposits and total working fund of NABIL is comparatively less than that of SCBNL.

Probably it was due to a cautious approach taken by the bank in consolidating its business instead of exploring high-risk new business.

- **Growth rate of total investment**: Table 4.14 shows the comparative display of growth rate of the total investment over the specified period of time.

Table 4.14:

Growth Rate of Total Investment

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Total Investment (Rs)	%	Total Investment (Rs)	%
2008/2009	10826.38	0.00	20236.1	0.00
2009/2010	13703.02	26.57	19847.5	(1.92)
2010/2011	13081.21	(4.54)	17258.7	(13.04)
2011/2012	14055.85	7.45	12938.2	(25.03)
2012/2013	16332.04	16.19	12753.5	(1.43)
Mean		9.14		(8.29)
S.D.		11.20		9.58

Source: Appendix 39 and Appendix 40

The growth rates of total investment of both the banks are in a fluctuating trend. NABIL has witnessed a high growth rate of 26.57% in F/Y 2009/10 and a negative growth rate of 4.54% in F/Y 2010/11.

On the other hand SCBNL has had a highest negative growth rate of 25.03% in F/Y 2011/12 and lowest negative growth rate of 1.92% in F/Y 2009/10. The average growth ratio of investment of SCBNL seems to be extremely lower than NABIL i.e., (8.29)%<9.14%.

- **Growth rate of net profit**: The comparative figures to reveal the growth rate of net profit for the undertaken time period have been presented in table 4.15 hereunder:

Table 4.15:

Growth Rate of Net Profit

(Rs. Millions)

F/Y	NABIL		SCBNL	
	Net Profit (Rs.)	%	Net Profit (Rs.)	%
2008/2009	1031.05	0.00	1025.11	0.00
2009/2010	1139.1	10.48	1085.87	5.93
2010/2011	1337.75	17.44	1119.17	3.07
2011/2012	1696.28	26.80	1168.97	4.45
2012/2013	2226.69	31.27	1217.94	4.19
Mean		17.20		3.53
S.D.		11.24		1.99

Source: Appendix 41 and Appendix 42

The growth rate of net profit of both the banks has a fluctuating trend. NABIL has recorded a high growth rate of 31.27% in F/Y 2012/13 and a low growth rate of 10.48% in F/Y 2009/10. Similarly, SCBNL has a high growth rate of 5.93% in F/Y 2009/10 and a low growth rate of 3.07% in F/Y 2010/11. Overall, NABIL has been successful in increasing its net profit year after year.

The mean growth rate of NABIL is higher than SCBNL i.e., 17.20%>3.53%. This is due to a surge in net profit of NABIL by 31.27% in F/Y 2012/13 over the previous F/Y. This sudden surge in net profit has made the growth ratios of NABIL unstable in comparison to SCBNL.

4.2 Statistical Analysis

Under this, some statistical tools such as coefficient of correlation analysis between different variables, trend analysis of deposits, loan and advances, investment and net profit as well as hypothesis test (t-statistic) are used to achieve the objectives of the study.

The following section deals with the various statistical analysis of the investment effectiveness of these two projects.

4.2.1 Coefficient of Correlation Analysis

Under this topic, Karl Pearson's coefficient of correlation is used to find out the relationship between deposit and loan and advances, deposit and total investment, outside assets and net profit, deposits and net profit, deposits and interest earned, loan and advances and interest paid, total working fund and net profit.

- **Coefficient of correlation between deposits and loans and advances**: The coefficient of correlation between deposits and loan and advances measures the degree of relationship between them. In this study, the present researcher has taken deposit as an independent variable denoted by (x) and loans and advances as dependent variable (y). The main objective of calculating 'r' between these two variables is to justify whether deposits are significantly used as loan and advances or not.

  Table 4.16 shows the value of 'r' r^2, PEr and 6PEr between total deposits and loans and advances of NABIL and SCBNL during the study period.

Table 4.16:

Correlation between Deposit and Loan and Advances

Bank	Evaluation Criteria			
	r	r^2	PEr	6PEr
NABIL	0.7212	0.5202	0.1447	0.8684
SCBNL	0.8293	0.6878	0.0942	0.5650

Source: Appendix 25 and Appendix 26

In table 4.16, the coefficient of correlation between deposits and loans and advances in case of NABIL is 0.7212. This indicates that there exists a high positive relationship between deposit and loan and advances. The calculated value of (r^2) or coefficient of determination is 0.5202. This means 52.02% of variation of the dependent variable (loan and advances) has been explained by the independent variable (deposit). When the value of 'r' i.e., 0.7212 is compared with six times the probable error or 6PEr. i.e., 0.8684, we can say that there exists insignificant relationship between deposits and loan advances because 'r' is lower than six times PEr i.e. 0.7212<0.8684.

The coefficient of correlation 'r' between deposits and loan and advances in case of SCBNL is 0.8293, which gives us an indication of very high positive correlation between them. Similarly, the value of coefficient of determination (r^2) is found to be 0.6878. This shows that 68.78% variation of dependent variable (loan and advances) has been explained by the independent variable (deposits). The value of 'r' is greater than six times PEr. i.e. 0.8293<0.5650. So we can say that there exists significant relationship between deposits and loan advances

From the above analysis, it can be concluded that though both the banks show positive relationship between deposits and loan and advance, the relationship is highly insignificant in case of NABIL and the value of (r^2) shows moderate percentage of dependency. In case of SCBNL the relationship is highly significant and (r^2) shows higher percentage of dependency. It indicates SCBNL has been more successful in utilizing its deposits in a proper manner than NABIL.

To sum up, the increase in loan and advance is not due to effective mobilization of deposits rather other factors have played a greater role in increase in loan and advances.

- **Coefficient of correlation between deposit and total investment**: Coefficient of correlation between deposit and total investment measures the degree of relationship between these two variables. Here, the deposit is taken as independent variable (x) and the variable dependent on deposits is total investment, which is denoted by (y). The purpose of calculating 'r' is to judge whether deposits are significantly mobilized as Investments or not.

Table 4.18 shows the value of 'r' (r^2) PEr and 6PEr of NABIL and SCBNL during the study period.

Table 4.17:

Correlation between Deposit and Total Investment

Bank	Evaluation Criteria			
	r	r^2	PEr	6PEr
NABIL	0.9610	0.9235	0.0231	0.1386
SCBNL	(0.6260)	0.3919	0.1834	1.1006

Source: Appendix 27 and Appendix 28

The coefficient of correlation 'r' between deposits and total investment in case of NABIL is 0.9610, which indicates a high positive correlation between deposits and total investment. Coefficient of determination (r^2) is 0.9235. This indicates almost 92% of variation of the dependent variable has been explained by independent variable. The value of 'r' i.e. 0.9610 is greater than six times PEr. This means that there is significant relationship between deposits and total investment.

The coefficient of correlation 'r' between deposits and total investment in case of SCBNL is -0.6260, which indicates a negative relationship between the two variables. The coefficient of determination (r^2) is 0.3919. This indicates that 39.19% of the variation of the dependent variable has been explained by independent variable. Moreover 'r' is lower than six times P.E.r, which further states that there is not any significant relationship between deposits and total investment.

In conclusion, it can be said that both the banks show relationship between total deposits and total investment. However, the relationship is more significant in case of NABIL and insignificant in case of SCBNL.

- **Coefficient of Correlation between Deposit and Net Profit**: The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here, deposit is independent variable (x) and net profit is dependent variable (y).

The main purpose of calculating between these two variables is to justify whether net profit is significantly correlated with deposits or not.

Table 4.18 shows the value of r, r^2, PEr and 6Er of NABIL and SCBNL during the study period.

Table 4.18:

Correlation between Deposit and Net Profit

Bank	Evaluation Criteria			
	r	r^2	PEr	6PEr
NABIL	0.9577	0.9171	0.0250	0.15
SCBNL	0.7420	0.5505	0.1356	0.8135

Source: Appendix 29 and Appendix 30

The coefficient of correlation between deposits and net profit in case of NABIL is 0.9577, which shows a high positive relationship between deposits and net profit. The coefficient of determination (r^2) is 0.9171, which indicates 91.71% of the variation of the dependent variable (net profit) has been explained by the independent variable (deposits). The value of 6PEr is lower than 'r' i.e. 0.15>0.9577. This states that there exists a significant relationship between deposits and net profit.

The coefficient of correlation between deposits and net profit in case of SCBNL is 0.7420, which indicates a positive relationship between these variables. The value of (r^2) is 0.5505 indicates that 55.05% of the variation of the dependent variable has been

explained by the independent variable. The value of 'r' is lower than 6PEr i.e. 0.7420<0.8135, which states that these exists no relationship between deposit and net profit.

From the above analysis, it can be concluded that NABIL shows positive relationship or significant relationship and SCBNL shows positive relationship between deposit and net profit with insignificant relationship. The value of (r^2) in case of NABIL shows higher percentage of dependency and the same in case of SCBNL shows lower percentage of dependency. The increase in net profit in case of NABIL is due to effective mobilization of deposits and other factors have a lesser role to play in increase in net profits. NABIL has been more successful in mobilizing its deposits to yield higher profits year after year.

- **Coefficient of correlation between deposits and interest earned**: The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. The main objective of calculating 'r' between these two variables is to justify whether deposit is significantly used to earn interest or not.

For the purpose of statistical analysis of the correlation between the deposits and interests earned the present researcher has developed comparative figures in table 4.19.

Table 4.19:

Correlation between Deposit and Interest Earned

Bank	Evaluation Criteria			
	r	r^2	PEr	6PEr
NABIL	0.8856	0.7843	0.0651	0.3904
SCBNL	0.5231	0.2737	0.2191	1.3145

Source: Appendix 31 and Appendix 32

The information in this table 4.19 reveals that the coefficient of correlation 'r' between deposit and interest earned in case of NABIL is 0.8856, which indicates a positive relationship between these variables. When deposits increased, the interest income subsequently increased but when it fell, the interest income also fell. The coefficient of determination (r^2) is 0.7843, which shows that 78.43% of effect on net profit is because of

Deposit. The value of six times PEr is less than 'r' i.e. 0.3904<0.8856. This states that there exists significant relationship between deposit and interest earned.

The coefficient of correlation 'r' between deposit and interest earned in case of SCBNL is 0.5231, which projects a positive relationship between these variables. Its interest income has increased with an increase in total deposits and vice versa. The coefficient of determination (r^2) is 0.2737, which shows that 27.37% of the variation of dependent variable has been explained by the independent variable. The value of 'r' i.e. 0.5231 is considerably less than six times PEr. This shows that there is no significant relationship between the interests earned and total deposits.

In conclusion, the relationship between deposit and interest earned in case of NABIL is highly significant with NABIL showing higher percentage of dependency and the relationship between the variables is not significant in case of SCBNL. In case of NABIL effective mobilization of deposits has had a major role to play in its earnings where as other factors are responsible in the earnings of SCBNL.

- **Coefficient of correlation between loan and advances and interest paid**: The coefficient of correlation between loan and advances and interest paid measures the relationship between these two variables. The purpose of calculating 'r' between these variables is to establish whether increase in loan advances has any role to play in decrease in Interest expenses and vice-versa.

Table 4.20 reveals the values of r, r^2, PEr and 6PEr of NABIL and SCBNL during the period of study.

Table 4.20:

Correlation between Loan and Advances and Interest Paid

Bank	Evaluation Criteria			
	r	r^2	PEr	6PEr
NABIL	0.6659	0.4434	0.1679	1.0074
SCBNL	0.3316	0.1099	0.2685	1.6110

Source: Appendix 33 and Appendix 34

The calculated values of 'r' of both the banks reflect a positive relationship between loan and advances and Interest paid.

The coefficient of determination (r^2) in case of NABIL is 0.4434 i.e. 44.34% and SCBNL is 0.1099 i.e. 10.99% which shows a lower degree of dependency.

The values of PEr is considerably higher than 'r' in both the cases, which states that there exists no significant relationship between loan and advances and interest paid during the study period for the above mentioned banks. In conclusion, significant relationship could not be established between the variables in case of both the banks.

4.2.2 Trend Analysis and Projection for Next Five Years

This is known as time series analysis. The objectives of this analysis are to analyze the trend of deposit collection, its utilization and net profit of NABIL and SCBNL. These topics analyzes the trend of deposits, loan and advances, total investment and net profit and its projection for the next five years the basis of past performance and records available.

The projections are based on the following assumptions:

- The bank will run in this present position i.e. trend will repeat itself.
- Other things will remain constant or unchanged.
- The economy will remain in the present stage.
- Nepal Rastra Bank will not change its guidelines relating to commercial banks.
- The forecast will hold true only when the limitation of least square method is carried out.

- **Analysis of trend value of total deposits**: Under this topic, based on the trend values of deposit from F/Y 2008/09 to 2012/13, an attempt has been made to forecast the projection for next five years, i.e. up to F/Y 2017/18.

The following table 4.21 shows the trend values of deposits from F/Y 2008/09 to F/Y 2017/18.

Table 4.21:

Trend Values of Total Deposit of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2008/2009	38190.5	34990.1
2009/2010	44304.1	35891.6
2010/2011	50417.7	36793
2011/2012	56531.3	37694.4
2012/2013	62644.9	38595.8
2013/2014	68758.5	39497.2
2014/2015	74872.2	40398.6
2015/2016	80985.8	41300.1
2016/2017	87099.4	42201.5
2017/2018	93213	43102.9

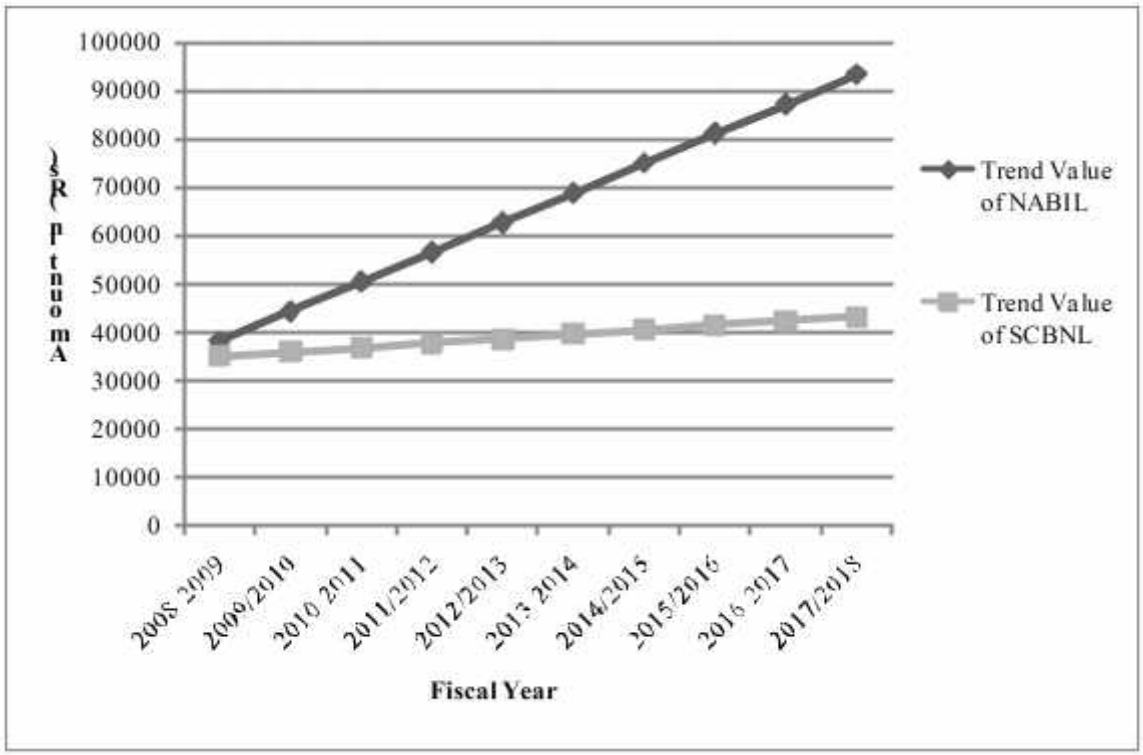
Source: Appendix 35 and Appendix 36

Based on table 4.21, it is clear that trend values of both banks NABIL and SCBNL are in an increasing trend. If other things remain unchanged the total deposit of NABIL is predicted to be Rs. 93213 million and that it will be more than double than that of the deposit of SCBNL by the end of F/Y 2017/18 i.e. Rs. 43102.9 million.

From the above trend analysis, it is quite obvious that NABIL's deposit collection is proportionately much better than SCBNL. The trend values of total deposit of both NABIL and SCBNL are fitted in the trend lines given in diagram 4.1 below.

Diagram 4.1:

Trend Values of Total Deposit of NABIL and SCBNL



Source: Table 4.21

The diagram illustrates that the deposit amount of NABIL and SCBN for coming five years. Based on past data, it is seen from diagram that deposit of NABIL will grow drastically in five years making steeper curve where as the deposit of SCBNL is in slight increasing trend.

- **Analysis of trend values of loan and advances**: Here, the trend values of loan and advances of NABIL and SCBNL have been calculated for five years from F/Y 2008/09 to 2012/13 and the forecast for next five years. i.e. from F/Y 2013/14 to F/Y 2017/18 has been made.

Table 4.22 illustrates the statistical information to reveal the trend values of loan and advances of NABIL and SCBNL.

Table 4.22:

Trend Values of Loan and Advances of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2008/2009	27794.4	13710.3
2009/2010	32484	15902
2010/2011	37173.7	18093.8
2011/2012	41863.3	20285.5
2012/2013	46553	22477.2
2013/2014	51242.7	24668.9
2014/2015	55932.3	26860.6
2015/2016	60622	29052.3
2016/2017	65311.7	31244.1
2017/2018	70001.3	33435.8

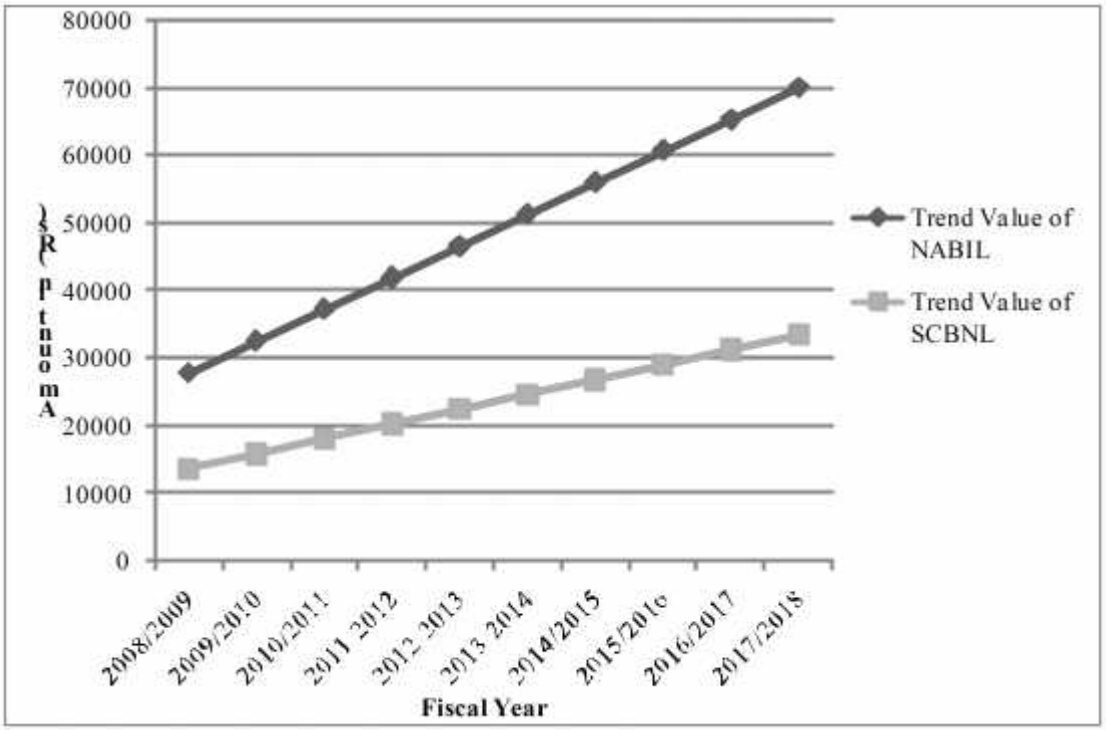
Source: Appendix 37 and Appendix 38

Table 4.22 clearly shows that the loan and advance of both the banks are in an increasing trend. Assuming that other things will remain constant, the loan and advances of NABIL at the end of F/Y 2017/18 is predicted to be Rs. 70001.3 million. Similarly, the projection for SCBNL at the end of F/Y 2017/18 is Rs 33435.8 million.

From the above trend analysis, it is quite clear that NABIL's loan and advances in relation to SCBNL is comparatively higher through out the trend projection period. The above trend values of loan and advances of NABIL and SCBNL are fitted in the trend line given in diagram 4.2.

Diagram 4.2:

Trend Values of Loan and Advances of NABIL and SCBNL



Source: Table 4.22

The figures reveal that loan and advances for both banks are in increasing trend. The magnitude of increment is more for NABIL and low magnitude of increment for SCBNL.

- **Analysis of trend values of total investment**: Under this topic, based on the trend values of Investment from F/Y 2008/2009 to 2012/2013, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 2017/2018.

Table 4.23 shows the trend value investment from F/Y 2008/2009 to F/Y 2017/2018.

Table 4.23:

Trend Values of Investment of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2008/2009	11326.9	20981.7
2009/2010	12463.3	18794.3
2010/2011	13599.7	16606.8
2011/2012	14736.1	14419.4
2012/2013	15872.5	12231.9
2013/2014	17008.9	10044.5
2014/2015	18145.4	7857.01
2015/2016	19281.8	5669.56
2016/2017	20418.2	3482.11
2017/2018	21554.6	1294.66

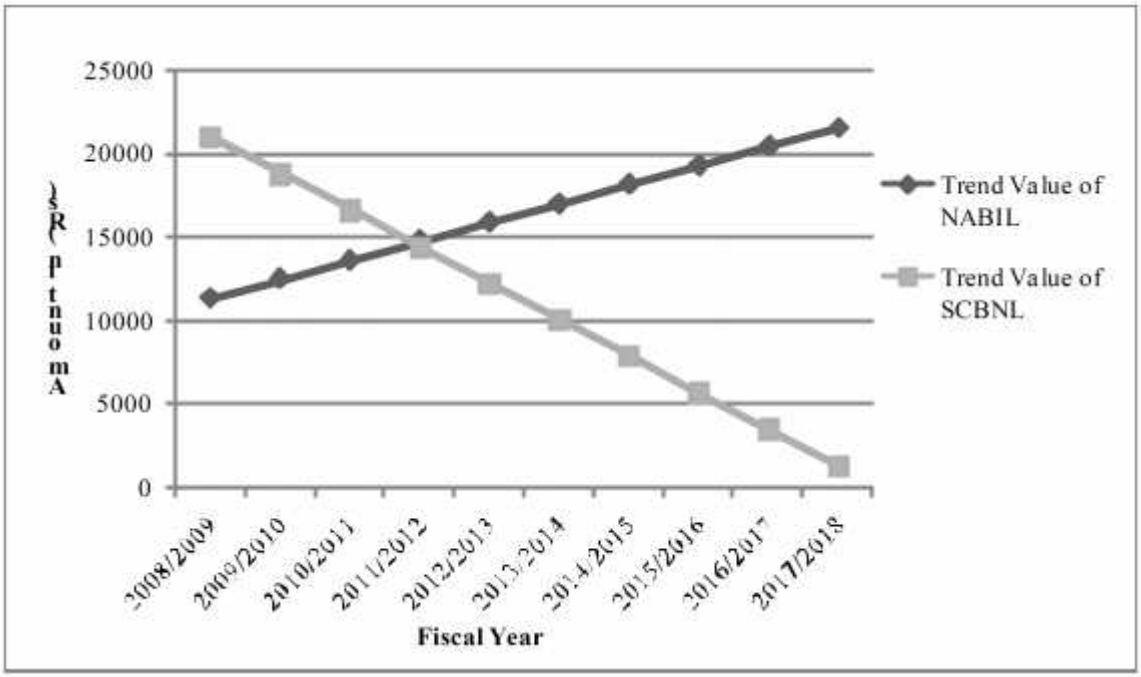
Source: Appendix 39 and Appendix 40

From the table 4.23, it is clear that the trend value of NABIL is in an increasing trend whereas the trend value of SCBNL is in a decreasing trend. If other things remain unchanged, total investment of SCBNL to be Rs. 1294.66 million in F/Y2017/18 whereas total investment of NABIL to be Rs. 21554.6 million in F/Y2017/18.

The above table reveals that SCBNL's total investment is decreasing than that of NABIL throughout the trend projection period. It can be said that SCBNL has followed the policy of minimizing its investment. The above calculated trend values of NABIL and SCBNL are fitted in the trend line given in diagram 4.3.

Diagram 4.3:

Trend values of Investment of NABIL and SCBNL



Source: Table 4.23

If trend line is drawn for Investment of NABIL and SCBNL, it is found that if present trends continuously occur, then the Investment of NABIL will increase drastically in coming future. This may be due to the high deposit collection by bank and increase in the interest of investing in the funds. On contrary, trend line predicts that investment of SCBNL will decrease rapidly within coming five years.

- **Analysis of trend values of net profit**: Under this topic, based on the trend values of net profit from F/Y 2008/09 to 2012/13, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 2017/18.

The information presented in table 4.24 communicates the trend value of net profit from F/Y 2008/09 to F/Y 2017/18.

Table 4.24:

Trend Value of Net Profit of NABIL and SCBNL

(Rs. Million)

F/Y	Trend Value of NABIL	Trend Value of SCBNL
2008/2009	896.482	1029.66
2009/2010	1191.33	1076.54
2010/2011	1486.17	1123.41
2011/2012	1781.02	1170.29
2012/2013	2075.87	1217.16
2013/2014	2370.71	1264.04
2014/2015	2665.56	1310.92
2015/2016	2960.4	1357.79
2016/2017	3255.25	1404.67
2017/2018	3550.1	1451.54

Source: Appendix 41 and Appendix 42

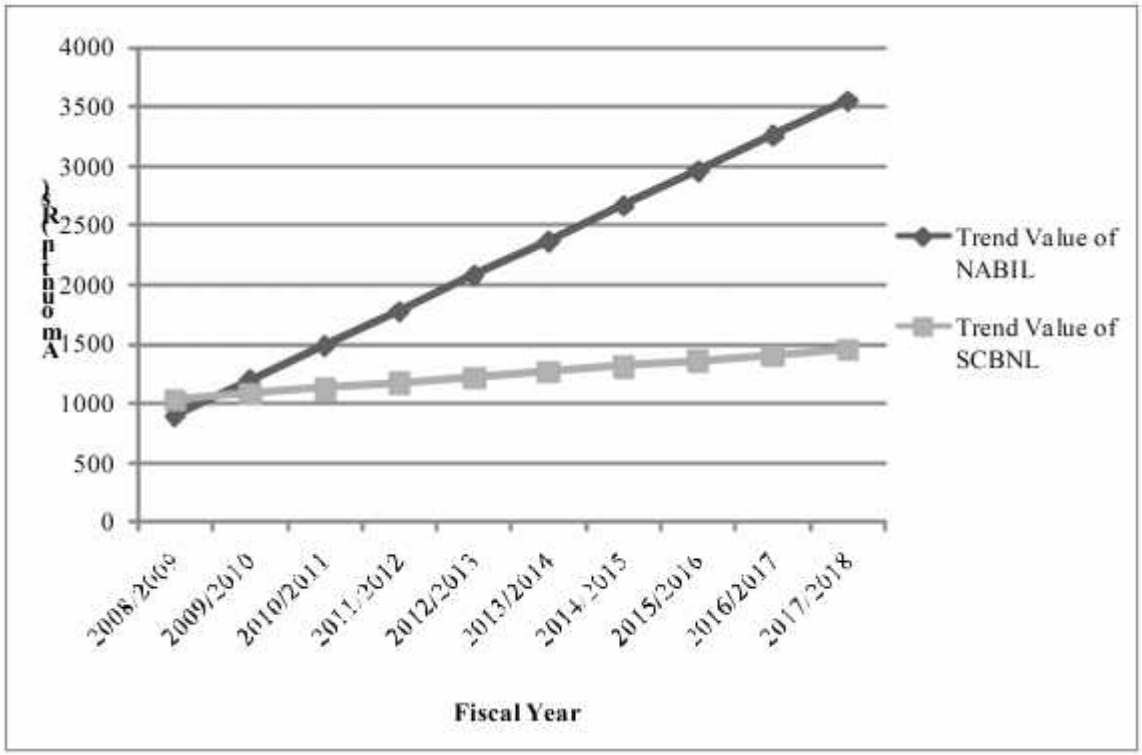
From the table 4.24, it is clear that the trend values of both the banks are in increasing trend. The trend values of NABIL will be highest in F/Y 2017/18 i.e. Rs.3550.1 million. In case of SCBNL net profit will be Rs.1451.54 million in F/Y 2017/18, which is the highest under the review period.

Looking at the trend values, it can be estimated that NABIL would surpass SCBNL in this fiscal itself. It can be said that both the banks have followed the policy of maximizing their net profit.

However, we can draw a conclusion that NABIL has utilized its fund better than SCBNL to earn higher amounts of profit. The above calculated trend values of net profit of NABIL and SCBNL are fitted in the trend live given in diagram 4.4 below.

Diagram 4.4:

Trend values of Net Profit of NABIL AND SCBNL



Source: Table 4.24

Trend line for net profit indicates that the net profit of NABIL bank will exceed the net profit of SCBNL in the days ahead. This is so because the profit of NABIL is growing at steeper rate than SCBNL. Thus it indicates that the profit exceeds Rs. 3500 million in FY 2017/18.

4.3 Major Findings of the Study

Having completed the basic analysis required for this study, the final and the most important task of the research is to enlist the findings. This will give meaning to the desired results.

On the basis of various categories of analysis adopted in this study, a comprehensive summary of the major findings of this study is presented below:

Liquidity ratio: The liquidity position of NABIL and SCBNL reveals that --

- The mean ratio of cash and bank balance to total deposits of NABIL is slightly higher than SCBNL. NABIL has better liquidity position than SCBNL because of high percentage of liquid assets. This shows NABIL readiness to meet its customer

requirement. On the contrary, a high liquidity also indicates the inability of the bank to mobilize its current assets. The ratios of SCBNL are more consistent than NABIL.

- The mean ratio of cash and bank balance to current assets of NABIL is higher than SCBNL. This shows NABIL's greater capacity to meet its customer's daily cash requirement than SCBNL. The ratios of NABIL are less variable and more consistent than SCBNL.
- From the above findings, it is concluded that the liquidity position of NABIL is comparatively better than SCBNL. It has the highest cash and bank balance to total deposit, cash and bank balance to current assets. NABIL is in a better position to meet its daily cash requirement. SCBNL has a higher current ratio, which justifies that it is also capable enough to meet its current obligations. SCBNL's mean investment in Government securities is better than NABIL.

Asset management ratio: On the basis of the study of asset management ratio of NABIL and SCBNL, the results reveal that --

- The mean ratio of loan and advances to total deposit ratio of NABIL is higher than SCBNL. In terms of consistency as well, NABIL has the stability in its ratio.
- The mean ratio of total investment to total deposits of SCBNL is higher than NABIL. The ratios of NABIL are more consistent and less variable than NABIL.
- The mean ratio of Investment in Government securities to total working fund ratio of SCBNL is higher than NABIL. The ratios of NABIL are less variable and more consistent than SCBNL.
- The mean ratio of Investment in shares and debentures to total working fund ratio of NABIL is slightly higher than SCBNL. NABIL ratios are more variable than that of SCBNL but have less consistency than SCBNL.

From the above findings it may be concluded that NABIL has been more successful in mobilization of its total deposits and working fund as loan and advances. On the other hand, SCBNL appears to be stronger in mobilization of total deposits and working fund as investment in risk free government securities. NABIL has fared better in purchasing shares and debentures of other companies, but both have invested marginal amount under this heading. Both the banks have successfully managed their assets towards different income generation activities.

Profitability ratios: Similarly, the various profitability ratios indicated that --

- The mean ratio of return on total loan and advances of SCBNL has been found to be significantly greater than NABIL. The ratios of SCBNL are less variable and more consistent than NABIL.
- The mean ratio of return on total working fund of SCBNL is slightly greater than NABIL. The ratios of NABIL are less consistent and more variable than SCBNL.
- The mean ratio of total interest earned to total operating income of NABIL is very higher than SCBNL. The ratios of SCBNL are less variable and more consistent than NABIL. Nonetheless, both the banks have been fairly consistent in their ratios.

On these grounds, it may be concluded that SCBNL has been more successful in maintaining its higher return on loan and advances and total working fund. NABIL has been more successful in mobilization of its funds in interest bearing assets to earn higher interest income than SCBNL. SCBNL is in a better position than NABIL from interest payment point of view. NABIL has paid higher interest than SCBNL, whereas the latter seems to have collected its funds from cheaper sources than NABIL.

Risk ratios: The Risk ratios of NABIL and SCBNL reveal that --

- The mean liquidity risk ratio of SCBNL is lower than NABIL but has more consistency and less variability than NABIL.
- The mean credit risk ratio of SCBNL is lower than NABIL and also SCBNL has more variability and less consistency. Nonetheless, both the banks have been fairly consistent in their ratios.

Based on above findings, it may be claimed that SCBNL has lower liquidity risk and credit risk than NABIL. NABIL has greater exposure to risk in its financial operations than SCBNL.

Growth ratio: The results related to growth ratios revealed that --

- The mean growth rate of deposits of SCBNL is significantly lower than NABIL.
- The mean growth rate of total loan and advances of SCBNL is slightly lower than NABIL.

- The mean growth rate of total investment of NABIL is significantly higher than SCBNL.
- The mean growth rate of net profit of NABIL is significantly higher than SCBNL.

Based on the above findings, NABIL has been more successful in increasing its deposits, loan and advances and investment during the study period, and similarly NABIL has been more efficient in terms of increasing its net profit as well. While other banks have initiated a host of measures and schemes to attract customer deposits, NABIL's strategy of shedding deposits seems to be off the tune. SCBNL needs to seriously rethink its strategy.

Co-efficient of correlation analysis: The coefficients of correlation analysis between different variables of NABIL and SCBNL reveal that --

- NABIL has a lower value of coefficient of correlation between deposits and loan and advances than SCBNL.
- The co-efficient of correlation between deposits and total investment of NABIL is much higher than SCBNL whereas SCBNL has negative coefficient correlation.
- The co-efficient of correlation between deposit and net profit in case of NABIL is slightly higher than SCBNL.
- The coefficient of correlation between deposits and interest earned of NABIL is much higher than that of SCBNL.
- The coefficient of correlation between loan and advances and interest paid of NABIL is higher than that of SCBNL.

In conclusion, there is significant relationship between deposit and loan and advances, deposits and total investment, outside assets and net profit, deposits and net profit in case of SCBNL, and the relationship is insignificant, deposit and interest earned, loan and advances and interest paid, total assets and net profit.

In case of NABIL, there exists significant relationship between deposits and total loan and advances, deposits and total investment, deposits and interest earned, as well as the relationship between deposit and net profit, deposit and interest earned, loan and advances and interest paid, total assets and net profit, outside assets and net profit.

Trend analysis and projection for next five years: The trends analysis of deposits, loan and advances, total investment and net profit and its projection for next five years of NABIL and SCBNL reveals that --

- The deposits of SCBNL have a slow increasing trend while NABIL'S trend values have a fast increasing trend. The total deposit of NABIL is predicted to be Rs.93213 million and that of SCBNL to be Rs.43102.9 million at the end of F/Y 2017/18. The deposit collection of NABIL is much better than SCBNL.
- The loan and advance of both the banks have an increasing trend. The total loan and advance of NABIL is predicted to be Rs.70001.3 million and that of SCBNL to be Rs.33435.8 million at the end of F/Y 2017/18. The trend of loan and advances of NABIL is much better compared to SCBNL.
- The total investments of SCBNL have formed a decreasing trend while it is exactly the opposite in case of NABIL. So it signifies that NABIL seems to have a much-focused policy with regards to total investment than SCBNL.
- The net profits of both the banks are in an increasing trend. The net profit of NABIL and SCBNL is predicted at Rs.3550.1 million and Rs.1451.54 million respectively by the end of F/Y 2017/18. The position of NABIL with regard to utilization of the fund to earn profit is better than SCBNL.

The liquidity position of NABIL is better than SCBNL. The cash and bank balance of SCBNL w.r.t. deposits is lower than NABIL. The cash and bank balance of SCBNL w.r.t. current assets is also lower than NABIL. From the point of view of profitability, NABIL seems to be more successful than SCBNL w.r.t. Profit earning capacity by utilizing available resources. The liquidity risk and credit risk of SCBNL is comparatively lower than NABIL. NABIL has more exposure to risk than SCBNL. NABIL has been successful in maintaining a steady growth rate on deposits, investments and loan and advances year after year.

CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

As the last part of the thesis report, this chapter presents with the summary, conclusions, and recommendations for corrective measures to be undertaken by the concerned institutions.

The first part of the chapter briefly summarizes the total study in respect with the general introduction of the study, various theoretical and application-associations of the present study, study methodology, and key findings of the study. The second part of the chapter deals with the present researcher’s conclusions drawn in the basis of this research. Finally, the recommendations have been presented in the third section of the chapter.

5.2 Summary

As an exploratory research, the present study attempts to develop comparative analysis of the financial performance of two joint venture banks, viz. NABIL and SCBNL in respect with their investment in government securities. The total study has been based on the available final accounts of the concerned banks. For the purpose of the analysis, the financial information of the five consecutive years has been taken into account of the study.

This study reveals that the current ratio of both the banks is greater than one, which should be considered satisfactory. The liquidity position of SCBNL is better than NABIL. The cash and bank balance of NABIL with respect to deposits is greater than SCBNL. This puts, NABIL in a better position with respect to meeting customer requirement than NABIL. In contrast, a high ratio of non-earning cash and bank balance is an indication of bank's inability to invest its fund in income generation areas. The cash and bank balance of SCBNL with respect to current assets is lower than NABIL. This shows greater capacity of NABIL to meet its customer's cash requirement but that does not mean SCBNL cannot meet its daily customer cash requirement. SCBNL needs to invest its funds in more productive sectors.

SCBNL has invested more portions of its current assets and total working fund in government securities than NABIL. This is due to lack of other secured and profitable investment sector, whereas NABIL has invested more of its fund in other productive sectors.

NABIL has invested more of its funds in purchasing shares and debentures of other companies than SCBNL. From the point of view of profitability, SCBNL seems to be more successful than NABIL with respect to profit earning capacity by utilizing available resources. NABIL has also been more successful in terms of interest earning power. It has been more successful in mobilizing its funds in interest bearing assets to earn higher interest income. NABIL is in a better position to meet its interest expenses as it has collected its fund from cheaper sources than SCBNL.

The liquidity risk and credit risk of SCBNL is comparatively lower than NABIL. NABIL has more exposure to risk than SCBNL. NABIL has been successful in maintaining a steady growth rate on deposits, investments and loan and advances year after year. The average growth rate of net profit of NABIL is higher than SCBNL. NABIL's growth in deposits can be accounted to its credibility, image and high quality service.

From the analysis of coefficient of correlation, we can say that both the banks show positive relationship between deposit and loan and advances, deposits and total investment. There exists a positive relationship between deposits and net profit, outside assets and net profit in case of SCBNL and also between deposits and interest earned in case of NABIL. SCBNL has insignificant relationship between deposits and interest earned, loan and advances and interest paid. There is a significant relationship between deposits and net profit in case of NABIL.

The trend value of loan and advances, net profits of NABIL and SCBNL are in an increasing trend. The trend values of deposits and investment of NABIL are proportionately higher than SCBNL in all the years. The trend value of loan and advances of NABIL is proportionately better than SCBNL in all the years.

5.3 Conclusions

On the basis of the key findings of the study, the following conclusions have been deducted:

The study results reveal that there exists difference between the JVBs in relation to their capacity to meet the customer's cash requirement. The individual bank's investment behavior also shows that the banks are not equally prioritizing the investment policies, as a result, some of them invest heavily on government securities yielding less returns on total investment.

On the basis of this study, it also can be concluded that the banks are not equally competent to select the credit risk areas as professional financial institutions. There exists a significant relationship between deposits and interest earned, loan and advances and interest paid, but the JVBs lack using their maximum risk taking potential so as to make themselves more productive institutions.

The trends value of loan and advances, net profits are in an increasing pattern, it could be as a result of the banks' limited risk taking behavior over the time. NABIL has the higher profit than the SCBNL as a result of low cost of deposits, consists good quality of assets in total volume of loan and advances as shown by the result of loan loss provision to total loan and advances ratio.

Both commercial banks NABIL and SCBNL have positive correlation between deposit and loan & advances, total assets and net profit total investment and net profit. Comparatively both banks have strong relationship between these variables. It is also found that there is positive correlation between total deposit of NABIL and SCBNL, between loan & advances of both banks and between net profits of both banks.

Total investment, loan & advances, net profit of NABIL and SCBNL are in increasing trend. It shows positive trend of both banks. Both NABIL and SCBNL have high positive co-relation between total deposit and loan & advances.

Strengthening and the institutionalization of the commercial banks are very important to have a meaningful relationship between commercial banks and national development through shift of credit to the productive industrial sectors. At the same time the series of reforms such as consolidation of commercial banks, directing attention to venture capital financing, appropriate risk return trade of by linking credit to timely repayment schedules, avoiding imperfections, allowing flexibility in lending, one window service from NRB, need of strong supervision and monitoring from NRB, diversity scope of activities for commercial banks,

professional culture within commercial banks, etc. All these are necessary to ensure better future performance of commercial banks that have already been established and growing in Nepal.

The commercial banks have to prove that they can really contribute to the national economy, are efficient and viable agencies for mobilization of saving and its canalization into productive sectors, are professionally managed and competent enough to ensure adequate rate of return on investment and are strategically well planned to be competitive with other agencies and are trust worthy.

5.4 Recommendations

On the basis of the present study, following recommendations have been deducted for necessary policy improvements in respect with investment policies of the JVBs in Nepal:

- **Increase deposits**: SCBNL, backed by its credibility and high quality service has been able to increase its deposit collection consistently. While other banks are coming up with a host of measures to increase their deposits, NABIL's strategy of selective shedding of unprofitable deposits seems off the tune. NABIL is recommended to rethink its strategy and collect more deposits. Since the past few years, banks have been targeting depositors through a large variety of deposit schemes and facilities. NABIL, itself introduced a saving plus deposit scheme a few years back to target high-end depositors, but the growth in deposits does not look convincing. Like others, it also needs to come up with various incentives, schemes, and facilities to increase deposits. As of now, the minimum balance required to operate an account is Rs. 30,000, which is too high. The minimum balance ceiling should be brought down to attract small depositors and entrepreneurs.

    - NABIL has so far been providing ATM facilities through its own premises. The ATM facilities need further expansion. For this, bank needs to identify more potential locations.

- **Increase investment in productive sectors**: SCBNL has given more priority to invest its fund in government securities and depositors' money has been less utilized

as loan and advances. Though securities issued by government are risk free but such instruments yield lower interest rate. SCBNL should identify less risky and profitable investment sectors and invest in them. SCBNL has been following a wait, watch and act policy towards investment in productive sectors for a long time. Despite the uncertain security and political situation in the country, the macro-economic indicators are good. Once the political and security conditions improve, a good turn-around in the economy is expected and unless SCBNL quickly acts it might be left behind in the race.

- **Increase consumer lending**: Currently the size of the consumer lending market is estimated at Rs. 10 billion (Himalayan News Services, March 28). Housing and vehicle finance have become two important and viable sectors with minimum risk. However, the market has not been fully exploited. The sale of automobiles recorded a two-digit growth in the past five years and the real estate business, especially in urban areas is doing much better, thanks to consumer financing. Both NABIL and SCBNL are recommended to increase their investment in consumer loan sector by offering competitive interest rates.

- **Increase investment in share and debentures**: Both the banks have invested nominal percentage of its funds in shares and debentures of other companies. They are recommended to invest more in shares and debentures of financial and non-financial companies across different sectors including government corporations. This will encourage overall economic development of the country.

- **Increase investment in deprived and priority sectors**: NRB has directed the banks to extend a certain percentage of loan and advances to the deprived and priority sector. Both the banks are recommended to adhere to the directives issued by NRB and invest more in these sectors. NRB should also speed up its supervision and monitoring in this regard. It should ensure that such directives are put into practice in letter and spirit.

- **Commence margin lending**: The introduction of margin lending by NBL at 6.5% per annum against shares of selected companies can be viewed as a new opportunity for

investment. Bank sources claim to have already disbursed over Rupees 2.5 billion in a one and a half year period to margin customers. Since NABIL and SCBNL have sound liquidity position and also as their cost of fund is lower, the banks could embark on margin lending after conducting appropriate feasibility study.

- **Effective portfolio management**: Portfolio management refers to the allocation of funds into different components of its assets, having different degree of risk and varying rate of return in such a manner that the conflicting goals of maximum yield and minimum risk can be achieved. The portfolio condition of the banks should be regularly revised from time to time. Appointing an investment specialist as a portfolio manager or assigning the task of portfolio management to Manager Finance and Planning could prove beneficial.

- **Enhancement of OBS operation**: The fee-based activities include commission, discount and fees. They yield high return to the bank. NABIL is not in a better position with regard to income from off-balance sheet activities. It is recommended to enhance off-balance sheet operations as well.

- **Increase branches in rural areas**: Integrated and speedy development of the country is possible only when competitive banking services reaches nooks and corners of the country. NABIL and SCBNL have shown no interest to open branches in rural areas. Both the banks are recommended to expand their branches and banking services and facilities in rural areas and communities to accelerate their economic development. NRB should implement policies to encourage banks, which provide extensive services while penalizing those who are not responsive to the banking needs of the community, including the underprivileged.

- **Further studies**: The present researcher strongly feels the need of conducting a series of more detailed, professional as well as academic research studies focusing in this subject matter to make the issue more clear.

Bibliography

Books

Dahal, B. S. (2002) "*A Hand Book of Banking*", Kathmandu: Ashmita Books and Stationery (2nd Edition)

Francis, J. C. (1991), "*Investments: Analysis and Management*", New York: McGraw Hill Companies (5th Edition)

Gopinath. M. N. (1972), "*Principle of Bank Operation*", India: Show White Publication

Gupta, S.C. (1992), "*Fundamental Statistic*", Bombay: Himalayan Publishing House (5th Edition)

Khan, M. and Jain, P.K. (1999), "*Financial Management*", New Delhi: Tata McGraw Hill Publishing Co. Ltd (3rd Edition)

Kothari, C.R, (1990), "*Research Methodology Methods, Techniques*", New Delhi: Vikas Publishing House (3rd Edition)

Pandey, I.M. (2009), "*Financial Management*", New Delhi: Vikas Publishing House (9th Edition)

Ronald, G. (1991), "*The New Function Banking*", London: Howard Business Review

Sharpe, W.F. Alexander, G.J. (1995), "*Investment Analysis*", New Delhi: Prentice Hall of India (4th Edition)

Wolf, H. K. and Pant, P. R. (1999), "*Social Science Research and Thesis Writing*", Kathmandu: Buddha Academic Enterprises Pvt. Ltd (2nd Edition)

Journal, Periodicals

Annual Reports of NABIL Bank Ltd. from F/Y 2008/2009 to F/Y 2012/2013

Annual Reports of SCBNL Bank Ltd. from F/Y 2008/2009 to F/Y 2012/2013

Bajracharya, B.R. (1991), "*Monetary Policy and Deposit Mobilization in Nepal*", Rastriya Banijya Bank, Rajat Jayanti Smarika, p. 93-97, Kathmandu , Vol 3

Pradhan, R.S. (2003), "Role of Saving, Investment and Capital Formation in Economic Development of Nepalese Finance", Himalayan Times, Vol 87.

Shrestha. P. (2009), "*Credit risk management of NABIL Bank Limited and Nepal Investment Bank Limited in Nepal*", The Business Age, Minds Nepal Pvt. Ltd, Kathmandu

Thapa, G. B. (2010), "*Financial System of Nepal***"**, Development Division, Patan Multiple Campus, Lalitpur.

Unpublished Master Degree Thesis

Bhattarai, A. (2011) *"A Study on Investment Policy of Joint Venture Commercial Banks with special reference to Himalayan Bank Ltd. and Nepal SBI Bank Ltd"*, an unpublished Master Degree Thesis, Shanker Dev Campus, Kathmandu.

Pathak, N. (2010), "*A Study of Investment Policy of Joint Venture Commercial Banks with special reference to Himalayan Bank Ltd. and Nepal SBI Bank Ltd*", an unpublished Master Degree Thesis, Shanker Dev Campus, Kathmandu.

Pun, J. (2013), "*Investment Policy of Commercial Bank in Nepal, a comparative study of HBL and NSBL*", an unpublished Master Degree Thesis, Shanker Dev Campus, Kathmandu.

Shrestha, P. (2010), "*Investment Policy of Joint Venture Banks in Nepal, a comparative study of NABIL Bank Ltd. and Everest Bank Ltd*", an unpublished Master Degree Thesis, Shanker Dev Campus, Kathmandu.

Shrestha, B. (2011) "*A Study of Investment Policy of Joint Venture Banks with reference to NABIL Bank Ltd. and Nepal SBI Bank Ltd***",** an unpublished Master Degree Thesis, Shanker Dev Campus, Kathmandu.

Thapa, L. (2013) "*Comparative Study on Investment Policy of NABIL Bank and Himalayan Bank Limited*", an unpublished Master Degree Thesis, Shanker Dev Campus, Kathmandu.

Websites used

http://www.edunepal.com.np

http://www.google.com

http://www.nabilbank.com

http://www.nepalnews.com

http://www.nrb.org.np

http://www.standardchartered.com.np

http://www.wikipedia.org

Appendix -1

NABIL BANK LTD

(Rs in millions)

S.N.	F/Y	2008/09	2009/10	2010/11	2011/12	2012/13
1	Current Assets	3925.40	4518.24	4889.06	5102.26	7516.87
2	Current Liabilities	1407.60	1529.38	1928.21	2114.64	2642.31
3	Cash and Bank Balance	674.40	635.99	744.59	1050.66	1140.21
4	Total Investment	10826.38	13703.02	13081.21	14055.85	16332.04
5	Total Deposit	37348.26	46410.70	49696.11	55023.70	63609.81
6	Loan and Advances	27589.93	32268.87	38034.1	41605.68	46369.84
7	Investment in Government Securities	3706.10	7941.56	8745.23	7999.98	7914.01
8	Investment on Shares and Debentures	354.93	346.86	368.51	421.56	433.38
9	Total Working Fund	43867.40	52151.68	58141.44	63200.30	73241.26
10	Total Interest Earned	2798.49	4047.73	5254.03	6133.74	5721.11
11	Total Interest Paid	1153.28	1960.11	2955.43	3155.49	2186.30
12	Net Profit	1031.05	1139.10	1337.75	1696.28	2226.69
13	Operating Income	2220.98	2764.09	3046.13	3990.48	4607.94
14	Other Assets	864.69	882	1201.98	1548.96	2150.19

Source: Annual Reports of NABIL

Appendix –2

STANDARD CHARTERED BANK NEPAL LTD.

(Rs. in millions)

S.N	F/Y	2008/09	2009/10	2010/11	2011/12	2012/13
1	Current Assets	5192.71	3598.77	7256.68	8492.27	9414.06
2	Current Liabilities	1290.34	1571.67	1717.53	1502.87	1547.07
3	Cash and Bank Balance	463.35	509.03	610.69	509.68	687.68
4	Total Investment	20236.12	19847.51	17258.68	12938.21	12753.52
5	Total Deposit	35350.82	35182.72	37999.24	35965.63	39466.45
6	Loan and Advances	13679.76	15956.96	18427.27	19575.97	22828.84
7	Investment in Government Securities	9998.75	8531.52	9957.26	7862.72	4830.90
8	Investment on Share and Debentures.	115.42	115.42	117.92	117.92	103.43
9	Total Working Fund	40587.47	40213.32	43810.52	41677.05	45631.1
10	Total Interest earned	1887.22	2042.11	2718.70	2870.97	2535.36
11	Total Interest paid	543.79	575.74	1003.10	1007.20	611.38
12	Net profit	1025.11	1085.87	1119.17	1168.97	1217.94
13	Operating Income	2092.13	2297.71	2461.26	2638.45	2776.72
14	Other Assets	1341.58	691.55	761.81	580.97	553.16

Source: Annual Reports of SCBNL

Appendix –3

NABIL BANK LTD

Cash and Bank Balance to Total Deposit Ratio

F/Y	Cash & Bank Balance	Total Deposit	Percentage
2008/2009	674.4	37348.26	1.81
2009/2010	635.99	46410.7	1.37
2010/2011	744.59	49696.11	1.50
2011/2012	1050.66	55023.7	1.91
2012/2013	1140.21	63609.81	1.79

Source: Annual Reports of NABIL

Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
1.81	0.134	0.01796
1.37	(0.306)	0.09364
1.50	(0.176)	0.03098
1.91	0.234	0.05476
1.79	0.114	0.013
$\phi X=8.38$		$\phi(X-\bar{X})^2= 0.21032$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 8.38/5 = 1.68$

$$\text{S.D} = \sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{0.21032}{5}} = 0.21$$

$$\text{C.V.} = \frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.21 \mid 100\%}{1.68} = 12.24\%$$

Appendix –4

STANDARD CHARTERED BANK NEPAL LTD

Cash and Bank Balance to Total Deposit Ratio

F/Y	*Cash & Bank Balance*	*Total Deposit*	*Percentage*
2008/2009	463.35	35350.82	1.31
2009/2010	509.03	35182.72	1.45
2010/2011	610.69	37999.24	1.61
2011/2012	509.68	35965.63	1.42
2012/2013	687.68	39466.45	1.74

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
1.31	(0.196)	0.038416
1.45	(0.056)	0.003136
1.61	0.104	0.010816
1.42	(0.086)	0.007396
1.74	0.234	0.054756
$\phi X=7.53$		$\phi(X-\bar{X})^2= 0.11452$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 7.53/5 = 1.51$

$$S.D = \sqrt{\frac{(x Z \bar{x})^2}{n}} = \sqrt{\frac{0.11452}{5}} = 0.15$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{0.15 \mid 100\%}{1.51} = 10.05\%$$

Appendix –5

NABIL BANK LTD

Cash and Bank Balance to Current Asset

F/Y	*Cash & Bank Balance*	*Current Asset*	*Percentage*
2008/2009	674.4	3925.4	17.18
2009/2010	635.99	4518.24	14.08
2010/2011	744.59	4889.06	15.23
2011/2012	1050.66	5102.26	20.59
2012/2013	1140.21	7516.87	15.17

Source: Annual Reports of NABIL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
17.18	0.73	0.5329
14.08	(2.37)	5.6169
15.23	(1.22)	1.4884
20.59	4.14	17.1396
15.17	(1.28)	1.6384
ϕX=82.25		$\phi(X - \bar{X})^2$= 26.4162

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 82.25/5 = 16.45$

$$S.D = \sqrt{\frac{(x Z \bar{x})^2}{n}} = \sqrt{\frac{26.4162}{5}} = 2.29$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{2.29 \mid 100\%}{16.45} = 13.97\%$$

Appendix -6

STANDARD CHARTERED BANK NEPAL LTD

Cash and Bank Balance to Current Asset

F/Y	*Cash & Bank Balance*	*Current Asset*	*Percentage*
2008/2009	463.35	5192.71	8.92
2009/2010	509.03	3598.71	14.14
2010/2011	610.69	7256.68	8.42
2011/2012	509.68	8492.27	6.00
2012/2013	687.68	9414.06	7.30

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
8.92	(0.036)	0.001296
14.14	5.184	26.873856
8.42	(0.536)	0.287296
6.00	(2.956)	8.737936
7.30	(1.656)	2.742336
ϕX=44.78		$\phi(X - \bar{X})^2$= 38.6427

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 44.78/5 = 8.95$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{38.6427}{5}} = 2.78$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{2.78 \mid 100\%}{8.95} = 31.04\%$

Appendix -7

NABIL BANK LTD

Loan and Advances to Total Deposit Ratio

F/Y	*Loan and Advance*	*Total Deposit*	*Percentage*
2008/2009	27589.9	37348.26	73.87
2009/2010	32268.9	46410.7	69.53
2010/2011	38034.1	49696.11	76.53
2011/2012	41605.7	55023.7	75.61
2012/2013	46369.8	63609.81	72.90

Source: Annual Reports of NABIL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
73.87	0.182	0.03312
69.53	(4.158)	17.289
76.53	2.842	8.07696
75.61	1.922	3.69408
72.90	(0.788)	0.62094
ϕX=368.44		$\phi(X - \bar{X})^2$= 29.7141

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 368.44/5 = 73.69$

$$S.D = \sqrt{\frac{(x \, Z \bar{x})^2}{n}} = \sqrt{\frac{29.7141}{5}} = 2.43$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{2.438 \mid 100\%}{73.69} = 3.31\%$$

Appendix –8

STANDARD CHARTERED BANK NEPAL LTD

Loan and Advances to Total Deposit Ratio

F/Y	*Loan and Advances*	*Total Deposit*	*Percentage*
2008/2009	13679.8	35350.82	38.70
2009/2010	15957	35182.82	45.35
2010/2011	18427.3	37999.24	48.49
2011/2012	19576	35965.63	54.43
2012/2013	22828.8	39466.45	57.84

Source: Annual Reports of SCBNL

Percentage (X)	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
38.70	(10.262)	105.308644
45.35	(3.612)	13.046544
48.49	(0.472)	0.222784
54.43	5.468	29.899024
57.84	8.878	78.818884
ϕX=244.81		$\phi(X - \bar{X})^2$= 227.2959

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 244.81/5 = 48.96$

$$S.D = \sqrt{\frac{(x\ Z\bar{x})^2}{n}} = \sqrt{\frac{227.2959}{5}} = 6.74$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{6.742 \mid 100\%}{48.962} = 13.77\%$$

Appendix –9

NABIL BANK LTD

Total Investment to Total Deposit Ratio

F/Y	*Total Investment*	*Total Deposit*	*Percentage*
2008/2009	10826.4	37348.26	28.99
2009/2010	13703	46410.7	29.53
2010/2011	13081.2	49696.11	26.32
2011/2012	14055.9	55023.7	25.55
2012/2013	16332	63609.81	25.68

Source: Annual Reports of NABIL

Percentage (X)	$\bar{X}$**-X**	$(\bar{X}\text{-X})^2$
28.99	1.776	3.15418
29.53	2.316	5.36386
26.32	(0.894)	0.79924
25.55	(1.664)	2.7689
25.68	(1.534)	2.35316
ϕX=136.07		$\phi(X - \bar{X})^2$= 14.43

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 136.07/5 = 27.21$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{14.43}{5}} = 1.70$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{1.70 \mid 100\%}{27.21} = 6.24\%$

Appendix –10

STANDARD CHARTERED BANK NEPAL LTD

Total Investment to Total Deposit Ratio

F/Y	*Total Investment*	*Total Deposit*	*Percentage*
2008/2009	20236.1	35350.82	57.24
2009/2010	19847.5	35182.82	56.41
2010/2011	17258.7	37999.24	45.42
2011/2012	12938.2	35965.63	35.97
2012/2013	12753.5	39466.45	32.31

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
57.24	11.77	138.5329
56.41	10.94	119.6836
45.42	(0.05)	0.0025
35.97	(9.5)	90.25
32.31	(13.16)	173.1856
ϕX=227.35		$\phi(X - \bar{X})^2$= 521.6546

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 227.35/5 = 45.47$

$$S.D = \sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{521.6546}{5}} = 10.21$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{10.21 \mid 100\%}{45.47} = 22.46\%$$

Appendix –11

NABIL BANK LTD

Investment in Government Securities to Total Working Fund Ratio

F/Y	*Investment in Government Securities*	*Total Working Fund*	*Percentage*
2008/2009	3706.1	43867.4	8.45
2009/2010	7941.56	52151.68	15.23
2010/2011	8745.23	58141.44	15.04
2011/2012	7999.98	63200.3	12.66
2012/2013	7914.01	73241.26	10.81

Source: Annual Reports of NABIL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
8.45	(3.988)	15.9041
15.23	2.792	7.79526
15.04	2.602	6.7704
12.66	0.222	0.04928
10.81	(1.628)	2.65038
$\phi X=62.19$		$\phi(X-\bar{X})^2= 33.1695$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 62.19/5 = 12.44$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{33.1695}{5}} = 2.58$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{2.58 \mid 100\%}{12.44} = 20.71\%$

Appendix –12

STANDARD CHARTERED BANK NEPAL LTD

Investment in Government Securities to Total Working Fund Ratio

F/Y	*Investment in Government Securities*	*Total Working Fund*	*Percentage*
2008/2009	9998.75	40587.47	24.64
2009/2010	8531.52	40213.32	21.22
2010/2011	9957.26	43810.52	22.73
2011/2012	7862.72	41677.05	18.87
2012/2013	4830.9	45631.1	10.59

Source: Annual Reports of SCBNL

Percentage (X)	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
24.64	5.03	25.3009
21.22	1.61	2.5921
22.73	3.12	9.7344
18.87	(0.74)	0.5476
10.59	(9.02)	81.3604
ϕX=98.05		$\phi(X - \bar{X})^2$= 119.5354

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 98.05/5 = 19.61$

$$S.D = \sqrt{\frac{(x \, Z\bar{x})^2}{n}} = \sqrt{\frac{119.5354}{5}} = 4.89$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{4.89 \mid 100\%}{19.61} = 24.93\%$$

Appendix -13

NABIL BANK LTD

Investment in Share & Debentures to Total Working Fund Ratio

F/Y	*Investment in Share & Debenture*	*Total Working Fund*	*Percentage*
2008/2009	354.93	43867.4	0.81
2009/2010	346.86	52151.68	0.67
2010/2011	368.51	58141.44	0.63
2011/2012	421.56	63200.3	0.67
2012/2013	433.38	73241.26	0.59

Source: Annual Reports of NABIL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
0.81	0.136	0.018496
0.67	(0.004)	0
0.63	(0.044)	0.001936
0.67	(0.004)	0
0.59	(0.08)	0.064
$\phi X=3.37$		$\phi(X-\bar{X})^2= 0.02752$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 3.37/5 = 0.67$

$$\text{S.D} = \sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{0.02752}{5}} = 0.07$$

$$\text{C.V.} = \frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.07 \mid 100\%}{0.67} = 10.44\%$$

Appendix –14

STANDARD CHARTERED BANK NEPAL LTD

Investment in Share & Debentures to Total Working Fund Ratio

F/Y	*Investment in Share & Debenture*	*Total Working Fund*	*Percentage*
2008/2009	115.42	40587.47	0.28
2009/2010	115.42	40213.32	0.29
2010/2011	117.92	43810.52	0.27
2011/2012	117.92	41677.05	0.28
2012/2013	103.43	45631.1	0.23

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
0.28	0.01	0.0001
0.29	0.02	0.0004
0.27	0	0
0.28	0.01	0.0001
0.23	(0.04)	0.0016
$\phi X=1.35$		$\phi(X-\bar{X})^2= 0.0022$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 1.35/5 = 0.27$

$$\text{S.D} = \sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{0.0022}{5}} = 0.02$$

$$\text{C.V.} = \frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.02 \mid 100\%}{0.27} = 7.77\%$$

Appendix -15

NABIL BANK LTD

Return on Loan and Advances Ratio

F/Y	*Net Profit*	*Loan and Advances*	*Percentage*
2008/2009	1031.05	27589.93	3.74
2009/2010	1139.1	32268.87	3.53
2010/2011	1337.75	38034.1	3.52
2011/2012	1696.28	41605.68	4.08
2012/2013	2226.69	46369.84	4.80

Source: Annual Reports of NABIL

Percentage (X)	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
3.74	(0.194)	0.037636
3.53	(0.404)	0.163216
3.52	(0.414)	0.171396
4.08	0.146	0.021316
4.80	0.866	0.749956
$\phi X=19.67$		$\phi(X-\bar{X})^2= 1.1435$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 19.67/5 = 3.93$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{1.1435}{5}} = 0.48$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.48 \mid 100\%}{3.93} = 12.16\%$

Appendix –16

STANDARD CHARTERED BANK NEPAL LTD

Return on Loan and Advances Ratio

F/Y	*Net Profit*	*Loan and Advances*	*Percentage*
2008/2009	1025.11	13679.76	7.49
2009/2010	1085.87	15956.96	6.80
2010/2011	1119.17	18427.27	6.07
2011/2012	1168.97	19575.97	5.97
2012/2013	1217.94	22828.84	5.34

Source: Annual Reports of SCBNL

Percentage (X)	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
7.49	1.156	1.336336
6.80	0.466	0.217156
6.07	(0.264)	0.069696
5.97	(0.364)	0.132496
5.34	(0.994)	0.988036
$\phi X=31.67$		$\phi(X-\bar{X})^2= 2.7437$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 31.67/5 = 6.33$

S.D = $\sqrt{\frac{(x \, Z \bar{x})^2}{n}} = \sqrt{\frac{2.7437}{5}} = 0.55$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.55 \mid 100\%}{6.33} = 11.70\%$

Appendix -17

NABIL BANK LTD

Return on Total Working Fund Ratio

F/Y	*Net profit*	*Total Working Fund*	*Percentage*
2008/2009	1031.05	43867.4	2.35
2009/2010	1139.1	52151.68	2.18
2010/2011	1337.75	58141.44	2.30
2011/2012	1696.28	63200.3	2.68
2012/2013	2226.69	73241.26	3.04

Source: Annual Reports of NABIL

Percentage (X)	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
2.35	(0.16)	0.0256
2.18	(0.33)	0.1089
2.30	(0.21)	0.0441
2.68	0.17	0.0289
3.04	0.53	0.2809
$\phi X=12.55$		$\phi(X-\bar{X})^2= 0.4884$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 12.55/5 = 2.51$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{0.4884}{5}} = 0.31$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.31 \mid 100\%}{2.51} = 12.45\%$

Appendix –18

STANDARD CHARTERED BANK NEPAL LTD

Return on Total Working Capital Fund

F/Y	*Net profit*	*Total Working Fund*	*Percentage*
2008/2009	1025.11	40587.47	2.53
2009/2010	1085.87	40213.32	2.70
2010/2011	1119.17	43810.52	2.55
2011/2012	1168.97	41677.05	2.80
2012/2013	1217.94	45631.1	2.67

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
2.53	(0.12)	0.0144
2.70	0.05	0.0025
2.55	(0.1)	0.01
2.80	0.15	0.0225
2.67	0.02	0.0004
$\phi X=13.25$		$\phi(X-\bar{X})^2= 0.0498$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 13.25/5 = 2.65$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{0.0498}{5}} = 0.10$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.10 \mid 100\%}{2.65} = 3.77\%$

Appendix -19

NABIL BANK LTD

Total Interest Earned to Total Operating Income Ratio

F/Y	*Total Interest Earned*	*Total Operating Income*	*Percentage*
2008/2009	2798.49	2220.98	126.00
2009/2010	4047.73	2764.09	146.44
2010/2011	5254.03	3046.13	172.48
2011/2012	6133.74	3990.48	153.71
2012/2013	5721.11	4607.94	124.16

Source: Annual Reports of NABIL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
126.00	(18.558)	344.399364
146.44	1.882	3.541924
172.48	27.922	779.638084
153.71	9.152	83.759104
124.16	(20.398)	416.078404
ϕX=722.79		$\phi(X - \bar{X})^2$= 1627.4168

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 722.79/5 = 144.56$

$$\text{S.D} = \sqrt{\frac{(x \, Z\bar{x})^2}{n}} = \sqrt{\frac{1627.4168}{5}} = 18.04$$

$$\text{C.V.} = \frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{18.04 \mid 100\%}{144.56} = 12.48\%$$

Appendix –20

STANDARD CHARTERED BANK NEPAL LTD

Total Interest Earned to Total Operating Income Ratio

F/Y	*Total Interest Earned*	*Total Operating Income*	*Percentage*
2008/2009	1887.22	2092.13	90.21
2009/2010	2042.11	2297.71	88.88
2010/2011	2718.7	2461.26	110.46
2011/2012	2870.97	2638.45	108.81
2012/2013	2535.36	2776.72	91.31

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
90.21	(7.724)	59.660176
88.88	(9.054)	81.974916
110.46	12.526	156.900676
108.81	10.876	118.287376
91.31	(6.624)	43.877376
ϕX=489.67		$\phi(X - \bar{X})^2$= 460.70

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 489.67/5 = 97.93$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{460.70}{5}} = 9.60$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{9.6 \mid 100\%}{97.93} = 9.80\%$

Appendix –21

NABIL BANK LTD

Liquidity Risk Ratio

F/Y	Cash & Bank Balance	Total Deposit	Percentage
2008/2009	674.4	37348.26	1.81
2009/2010	635.99	46410.7	1.37
2010/2011	744.59	49696.11	1.50
2011/2012	1050.66	55023.7	1.91
2012/2013	1140.21	63609.81	1.79

Source: Annual Reports of NABIL

Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
1.81	0.134	0.01796
1.37	(0.306)	0.09364
1.50	(0.176)	0.03098
1.91	0.234	0.05476
1.79	0.114	0.013
$\phi X=8.38$		$\phi(X-\bar{X})^2= 0.21032$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 8.38/5 = 1.68$

S.D = $\sqrt{\frac{(x \, Z \bar{x})^2}{n}} = \sqrt{\frac{0.21032}{5}} = 0.21$

C.V. = $\frac{\text{S.D.} \mid 100\%}{\text{Mean}} = \frac{0.21 \mid 100\%}{1.68} = 12.24\%$

Appendix –22

STANDARD CHARTERED BANK NEPAL LTD

Liquidity Risk Ratio

F/Y	*Cash & Bank Balance*	*Total Deposit*	*Percentage*
2008/2009	463.35	35350.82	1.31
2009/2010	509.03	35182.72	1.45
2010/2011	610.69	37999.24	1.61
2011/2012	509.68	35965.63	1.42
2012/2013	687.68	39466.45	1.74

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
1.31	(0.196)	0.038416
1.45	(0.056)	0.003136
1.61	0.104	0.010816
1.42	(0.086)	0.007396
1.74	0.234	0.054756
$\phi X=7.53$		$\phi(X-\bar{X})^2= 0.11452$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 7.53/5 = 1.51$

$$S.D = \sqrt{\frac{(x \, Z \bar{x})^2}{n}} = \sqrt{\frac{0.11452}{5}} = 0.15$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{0.15 \mid 100\%}{1.51} = 10.05\%$$

Appendix -23

NABIL BANK LTD

Loan And Advances to Total Assets Ratio

F/Y	*Loan and Advances*	*Total Assets*	*Percentage*
2008/2009	27589.9	43867.4	62.89
2009/2010	32268.9	52151.68	61.88
2010/2011	38034.1	58141.44	65.42
2011/2012	41605.7	63200.3	65.83
2012/2013	46369.8	73241.26	63.31

Source: Annual Reports of NABIL

Percentage (X)	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
62.89	(0.976)	0.952576
61.88	(1.986)	3.944196
65.42	1.554	2.414916
65.83	1.964	3.857296
63.31	(0.556)	0.309136
ϕX=319.33		$\phi(X - \bar{X})^2$= 11.4781

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 319.33/5 = 63.87$

$$S.D = \sqrt{\frac{(x Z \bar{x})^2}{n}} = \sqrt{\frac{11.4781}{5}} = 2.30$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{2.30 \mid 100\%}{63.87} = 2.37\%$$

Appendix –24

STANDARD CHARTERED BANK NEPAL LTD

Loan And Advances to Total Assets Ratio

F/Y	*Loan and Advances*	*Total Assets*	*Percentage*
2008/2009	13679.8	40587.47	33.70
2009/2010	15957	40213.32	39.68
2010/2011	18427.3	43810.52	42.06
2011/2012	19576	41677.05	46.97
2012/2013	22828.8	45631.1	50.03

Source: Annual Reports of SCBNL

Percentage (X)	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
33.70	(8.788)	77.228944
39.68	(2.808)	7.884864
42.06	(0.428)	0.183184
46.97	4.482	20.088324
50.03	7.542	56.881764
ϕX=212.44		$\phi(X - \bar{X})^2$= 162.27

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 212.44/5 = 42.49$

$$S.D = \sqrt{\frac{(x\ Z\bar{x})^2}{n}} = \sqrt{\frac{162.27}{5}} = 5.70$$

$$C.V. = \frac{S.D. \mid 100\%}{Mean} = \frac{5.7 \mid 100\%}{42.49} = 13.41\%$$

Appendix - 25

NABIL

Correlation between Total Deposit and Loan and Advances.

F/Y	Deposit (X)	Loan and Advance (Y)	x=(x- $\bar{x}$) (x-50417.72)	x^2	y = (y- $\bar{y}$) (y-37173.684)	y^2	xy
2008/09	37348.26	27589.93	(13069.456)	170810680	(9583.754)	91848340.7	125254451
2009/10	46410.7	32268.87	(4007.016)	16056177.2	(4904.814)	24057200.4	19653668.2
2010/11	49696.11	38034.1	(721.606)	520715.219	860.416	740315.693	(620881.348)
2011/12	55023.7	41605.68	4605.984	21215088.6	4431.996	19642588.5	20413702.7
2012/13	63609.81	46369.84	13192.094	174031344	9196.156	84569285.2	121316554
	ϕX= 252088.6	ϕY= 185868.42		ϕx^2= 382634005		ϕy^2= 136288445	ϕxy= 164700941

Source: Annual Reports of NABIL

Here, N = 5

$\bar{X}$ $= \phi X/N = 252088.6/5 = 50417.72$

$\bar{Y}$ $= \phi Y/N = 185868.42/5 = 37173.684$

We have,

$\phi x^2 = 382634005$
$\phi y^2 = 136288445$
$\phi xy = 164700941$

Calculation of correlation coefficient (r):

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =164700941/228360665.5 = 0.7212

or, r = 0.7212 $r^2 = 0.5202$

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \frac{1 - Zr^2}{\sqrt{N}}$$

Or P. Er= 0.1447 6. P. Er. = 0.8684

Appendix – 26

SCBNL

Correlation between Total Deposit and Loan and Advances.

F/Y	Deposit (X)	Loan and Advance (Y)	x=(x- $\bar{x}$) (x-36792.97)	x^2	y = (y- $\bar{y}$) (y-18093.76)	x^2	xy
2008/09	35350.82	13679.76	(1442.152)	2079802.39	(4414)	19483396	6365658.93
2009/10	35182.72	15956.96	(1610.252)	2592911.5	(2136.8)	4565914.24	3440786.47
2010/11	37999.24	18427.27	1206.268	1455082.49	333.51	111228.92	402302.441
2011/12	35965.63	19575.97	(827.342)	684494.785	1482.21	2196946.48	(1226294.59)
2012/13	39466.45	22828.84	2673.478	7147484.62	4735.08	22420982.6	12659132.2
	ϕX= 183964.9	ϕY= 90468.8		ϕx^2= 13959775.8		ϕy^2= 48778468.3	ϕxy= 21641585.5

Source: Annual Reports of SCBNL

Here, N = 5

$\bar{X}$ $= \phi X/N = 183964.9/5 = 36792.97$

$\bar{Y}$ $= \phi Y/N = 90468.8/5 = 18093.76$

We have,

$\phi x^2 = 13959775.8$
$\phi y^2 = 48778468.3$
$\phi xy = 21641585.5$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r = 21641585.5/26094759.65 = 0.8293

or, r = 0.8293 $r^2 = 0.6878$

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \frac{1 - Zr^2}{\sqrt{N}}$$

Or, P. Er. = 0.0942 6 P. Er. = 0.5650

Appendix - 27

NABIL

Correlation between Total Deposit and Total Investment.

F/Y	Deposit (X)	Total Investment (Y)	X=(x- $\bar{x}$) (x-50417.716)	x^2	y = (y- $\bar{y}$) (y-13599.7)	y^2	xy
2008/09	37348.26	10826.38	(13069.456)	170810680	(2773.32)	7691303.82	36245783.7
2009/10	46410.7	13703.02	(4007.016)	16056177.2	103.32	10675.0224	(414004.89)
2010/11	49696.11	13081.21	(721.606)	520715.219	(518.49)	268831.88	374145.49
2011/12	55023.7	14055.85	4605.984	21215088.6	456.15	208072.823	2101019.6
2012/13	63609.81	16332.04	13192.094	174031344	2732.34	7465681.88	36045286.1
	ϕX= 252088.6	ϕY= 69998.5		ϕx^2= 382634005		ϕy^2= 15644565.4	ϕxy= 74352230

Source: Annual Reports of NABIL

Here, N = 5

$\bar{X}$ $= \phi X/N = 252088.6/5 = 50417.716$

$\bar{Y}$ $= \phi Y/N = 67998.5/5 = 13599.7$

We have,

$\phi x^2 = 382634005$
$\phi y^2 = 15644565.4$
$\phi xy = 74352230$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r = 74352230/77370166.83 =0.9610

or, r = 0.9610 r^2 =0.9235

Calculation of Probable error,

$$P.\ Er. = 0.6745\ \frac{1Zr^2}{\sqrt{N}}$$

Or, P. Er. = 0.0231 6 P. Er. = 0.1386

Appendix - 28

SCBNL

Correlation between Total Deposit and Total Investment.

F/Y	Deposit (X)	Total Investment (Y)	x=(x- $\bar{x}$) (x-36792.972)	x^2	y = (y- $\bar{y}$) (y-16606.808)	y^2	xy
2008/09	35350.82	20236.12	(1442.152)	2079802.39	3629.312	13171905.6	(5234019.56)
2009/10	35182.72	19847.51	(1610.252)	2592911.5	3240.702	10502149.5	(5218346.88)
2010/11	37999.24	17258.68	1206.268	1455082.49	651.872	424937.104	786332.334
2011/12	35965.63	12938.21	(827.342)	684494.785	(3668.598)	13458611.3	3035185.21
2012/13	39466.45	12753.52	2673.478	7147484.62	(3853.288)	14847828.4	(10301680.7)
	ϕX= 183964.9	ϕY= 83034.04		ϕx^2= 13959775.8		ϕy^2= 52405431.8	ϕxy= (16932530)

Source: Annual Reports of SCBNL

Here, N = 5

$\bar{X}$ $= \phi x/N = 183964.9/5 = 36792.972$

$\bar{Y}$ $= \phi y/N = 83034.04/5 = 16606.808$

We have,

$\phi x^2 = 13959775.8$
$\phi y^2 = 52405431.8$
$\phi xy = (16932530)$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r = (16932530)/ 27047515.2

or , r = (0.6260) $r^2 = 0.3919$

Calculation of Probable error,

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

Or, P. Er. = 0.1834 6 P. Er. = 1.1006

Appendix - 29

NABIL

Correlation between Total Deposits and Net Profit

F/Y	Total Deposits (X)	Net Profit (Y)	x=(x- $\bar{x}$) (x-*50417.72*)	x^2	y = (y- $\bar{y}$) (y-*1486.174*)	y^2	xy
2008/09	37348.26	1031.05	(13069.456)	170810680	(455.124)	207137.855	5948223.09
2009/10	46410.7	1139.1	(4007.016)	16056177.2	(347.074)	120460.361	1390731.07
2010/11	49696.11	1337.75	(721.606)	520715.219	(148.424)	22029.6838	107103.649
2011/12	55023.7	1696.28	4605.984	21215088.6	210.106	44144.5312	967744.874
2012/13	63609.81	2226.69	13192.094	174031344	740.516	548363.946	9768956.68
	ϕX= 252088.6	ϕY= 7430.87		ϕx^2= 382634005		ϕy^2= 942136.378	ϕxy= 18182759.4

Source: Annual Reports of NABIL

Here, N = 5

$\bar{X}$ =ϕ*x/N =252088.6/5 =50417.72*

$\bar{Y}$ =ϕ*y/N =7430.87/5 =1486.174*

We have,

ϕxy = 18182759.4
ϕx^2 = 382634005
ϕy^2 = 942136.378

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =18182759.4/18986664.2

or, r = 0.9577 r^2 = 0.9171

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \quad \frac{1 - Zr^2}{\sqrt{N}}$$

Or, P. Er. = 0.0250 6 P. Er. = 0.15

Appendix - 30

SCBNL

Correlation between Total Deposits and Net Profit

F/Y	Total Deposits (X)	Net Profit (Y)	$x=(x-\bar{x})$ (x-36792.97)	x^2	$y=(y-\bar{y})$ (y-1123.412)	y^2	xy
2008/09	35350.82	1025.11	(1442.152)	2079802.39	(98.302)	9663.2832	141766.426
2009/10	35182.72	1085.87	(1610.252)	2592911.5	(37.542)	1409.40176	60452.0806
2010/11	37999.24	1119.17	1206.268	1455082.49	(4.242)	17.994564	(5116.98886)
2011/12	35965.63	1168.97	(827.342)	684494.785	45.558	2075.53136	(37692.0468)
2012/13	39466.45	1217.94	2673.478	7147484.62	94.528	8935.54278	252718.528
	ϕX= 183964.9	ϕY= 5617.06		ϕx^2= 13959775.8		ϕy^2= 22101.7537	ϕxy= 412127.999

Source: Annual Reports of SCBNL

Here, N = 5

$\bar{X} = \phi x/N = 183964.9/5 = 36792.97$

$\bar{Y} = \phi y/N = 5617.06/5 = 1123.412$

We have,

$\phi xy = 412127.999$
$\phi x^2 = 13959775.8$
$\phi y^2 = 22101.7537$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =412127.999/555459.743

or, r = 0.7420 $r^2 = 0.5505$

Calculation of Probable error,

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

Or, P. Er. = 0.1356 6 P. Er. = 0.8135

Appendix - 31

NABIL

Correlation between Total Deposits and Interest Earned

F/Y	Total Deposits (X)	Interest Earned (Y)	$x=(x-\bar{x})$ $(x-50417.72)$	x^2	$y=(y-\bar{y})$ $(y-4791.02)$	y^2	xy
2008/09	37348.26	2798.49	(13069.456)	170810680	(1992.53)	3970175.8	26041283.2
2009/10	46410.7	4047.73	(4007.016)	16056177.2	(743.29)	552480.024	2978374.92
2010/11	49696.11	5254.03	(721.606)	520715.219	463.01	214378.26	(334110.79)
2011/12	55023.7	6133.74	4605.984	21215088.6	1342.72	1802897	6184546.84
2012/13	63609.81	5721.11	13192.094	174031344	930.09	865067.408	12269834.7
	$\phi X=$ 252088.6	$\phi Y=$ 23955.1		$\phi x^2=$ 382634005		$\phi y^2=$ 7404998.49	$\phi xy=$ 47139928.8

Source: Annual Reports of NABIL

Here, N = 5

$\bar{X} = \phi x/N = 252088.6/5 = 50417.72$

$\bar{Y} = \phi y/N = 23955.1/5 = 4791.02$

We have,

$\phi xy = 47139928.8$
$\phi x^2 = 382634005$
$\phi y^2 = 7404998.49$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =47139928.8/53229730.7

or, r = 0.8856 $r^2 = 0.7843$

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \frac{1 - Zr^2}{\sqrt{N}}$$

Or, P. Er. = 0.0651 6 P. Er. = 0.3904

Appendix - 32

SCBNL

Correlation between Total Deposits and Interest Earned

F/Y	Total Deposits (X)	Interest Earned (Y)	x=(x- $\bar{x}$) (x-*36792.97*)	x^2	y = (y- $\bar{y}$) (y-*2410.872*)	y^2	xy
2008/09	35350.82	1887.22	(1442.152)	2079802.39	(523.652)	274211.417	755185.779
2009/10	35182.72	2042.11	(1610.252)	2592911.5	(368.762)	135985.413	593799.748
2010/11	37999.24	2718.7	1206.268	1455082.49	307.828	94758.0776	371323.066
2011/12	35965.63	2870.97	(827.342)	684494.785	460.098	211690.17	(380658.4)
2012/13	39466.45	2535.36	2673.478	7147484.62	124.488	15497.2621	332815.929
	ϕX= 183964.9	ϕY= 12054.36		ϕx^2= 13959775.8		ϕy^2= 732142.339	ϕxy= 1672466.12

Source: Annual Reports of SCBNL

Here, N = 5

$\bar{X}$ = $\phi x/N$ = 183964.9/5 = *36792.97*

$\bar{Y}$ = $\phi y/N$ = 12054.36/5 = *2410.872*

We have,

ϕxy = 1672466.12
ϕx^2 = 13959775.8
ϕy^2 = 732142.339

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =1672466.12/3196958.38

or, r = 0.5231 r^2 = 0.2737

Calculation of Probable error,

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

Or, P. Er. = 0.2191 6 P. Er. = 1.3145

Appendix - 33

NABIL

Correlation between Loan and advances and Interest Paid

F/Y	Loan and Advances (X)	Interest paid (Y)	x=(x- $\bar{x}$) (x-*37173.68*)	x^2	y = (y- $\bar{y}$) (y-*2282.122*)	y^2	xy
2008/09	27589.93	1153.28	(9583.754)	91848340.7	(1128.842)	1274284.26	10818544
2009/10	32268.87	1960.11	(4904.814)	24057200.4	(322.012)	103691.728	1579408.97
2010/11	38034.1	2955.43	860.416	740315.693	673.308	453343.663	579324.976
2011/12	41605.68	3155.49	4431.996	19642588.5	873.368	762771.663	3870763.48
2012/13	46369.84	2186.3	9196.156	84569285.2	(95.822)	9181.85568	(881194.06)
	ϕX= 185868.4	ϕY= 11410.61		ϕx^2= 220857731		ϕy^2= 2603273.17	ϕxy= 15966847.4

Source: Annual Reports of NABIL

Here, N = 5

$\bar{X}$ = $\phi x/N$ = 185868.4/5 = *37173.68*

$\bar{Y}$ = $\phi y/N$ = 11410.61/5 = *2282.122*

We have,

ϕxy = 15966847.4
ϕx^2 = 220857731
ϕy^2 = 2603273.17

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =15966847.4/23978177.7

or, r = 0.6659 r^2 = 0.4434

Calculation of Probable error,

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

Or, P. Er. = 0.1679 6 P. Er. = 1.0074

Appendix - 34

SCBNL

Correlation between Loan and advances and interest paid

F/Y	Loan and Advances (X)	Interest paid (Y)	$x=(x-\bar{x})$ (x-18093.76)	x^2	$y=(y-\bar{y})$ (y-748.242)	y^2	xy
2008/09	13679.76	543.79	(4414)	19483396	(204.452)	41800.6203	902451.128
2009/10	15956.96	575.74	(2136.8)	4565914.24	(172.502)	29756.94	368602.274
2010/11	18427.27	1003.1	333.51	111228.92	254.858	64952.6002	84997.6916
2011/12	19575.97	1007.2	1482.21	2196946.48	258.958	67059.2458	383830.137
2012/13	22828.84	611.38	4735.08	22420982.6	(136.862)	18731.207	(648052.52)
	ϕX= 90468.8	ϕY= 3741.21		ϕx^2= 48778468.3		ϕy^2= 222300.613	ϕxy= 1091828.71

Source: Annual Reports of SCBNL

Here, N = 5

$\bar{X} = \phi x/N = 90468.8/5 = 18093.76$

$\bar{Y} = \phi y/N = 3741.21/5 = 748.242$

We have,

$\phi xy = 1091828.71$
$\phi x^2 = 48778468.3$
$\phi y^2 = 222300.613$

Calculation of correlation coefficient (r) :

$$r = \frac{xy}{\sqrt{x^2}\sqrt{y^2}}$$

r =1091828.71/3292944.49

or, r = 0.3316 $r^2 = 0.1099$

Calculation of Probable error,

$$\text{P. Er.} = 0.6745 \frac{1 Z r^2}{\sqrt{N}}$$

Or, P. Er. = 0.2685 6 P. Er. = 1.6110

Appendix - 35

NABIL

The Trend value of Total Deposits of NABIL

(Rs. in Millions)

F/Y	Total Deposits (y)	x=T- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	37348.26	(2)	4	(74697)	38190.5
2009/10	46410.7	(1)	1	(46411)	44304.1
2010/11	49696.11	0	0	0	50417.7
2011/12	55023.7	1	1	55023.7	56531.3
2012/13	63609.81	2	4	127220	62644.9
	$\phi y = 252088.58$	$\phi x=0$	$\phi x^2=10$	$\phi xy=61136.1$	

Source: Annual Reports of NABIL

Here, N = 5

or, $a = \phi y/N$ =252088.58/5 or , a =50417.716

$b = \phi xy/\phi x^2$ = 61136.1/10 or , b =6113.61

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

…From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

…The straight line trend for total deposits is,

$y = a + bx$ | 50417.716+6113.61x

For year 2013/2014, $y = a + bx$ | 50417.716 + 6113.61× 3

x = 3

y = Rs.68758.5 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	y (Projected deposit) = a+bx
2013/2014	3	68758.5
2014/2015	4	74872.2
2015/2016	5	80985.8
2016/2017	6	87099.4
2017/2018	7	93213

Growth Rate

F/Y	Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
2008/09	0.00	(11.53)	133.03
2009/10	24.26	12.73	162.08
2010/11	7.08	(4.45)	19.84
2011/12	10.72	(0.81)	0.66
2012/13	15.60	4.07	16.57
	$\phi X=57.67$		$\phi(X-\bar{X})^2= 332.18$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 57.67/5 = 11.53$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{332.18}{5}} = 8.15$

Appendix - 36

SCBNL

The Trend value of Total Deposits of SCBNL

(Rs. in Millions)

F/Y	Total Deposits (y)	x=T- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	35350.82	(2)	4	(70702)	34990.1
2009/10	35182.72	(1)	1	(35183)	35891.6
2010/11	37999.24	0	0	0	36793
2011/12	35965.63	1	1	35965.6	37694.4
2012/13	39466.45	2	4	78932.9	38595.8
	$\phi y = 183964.86$	$\phi x=0$	$\phi x^2=10$	$\phi xy=9014.17$	

Source: Annual Reports of SCBNL

Here, N = 5

or, $a = \phi y/N = 183964.86/5$ or , $a = 36792.972$

$b = \phi xy/Ex^2 = 9014.17/10$ or, $b = 901.417$

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

… From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

… The straight line trend for total deposits is,

$y = a + bx \mid 36792.972 + 901.417x$

For year 2013/2014, $y = a + bx \mid 36792.972 + 901.417 \times 3$

x = 3

y = Rs.39497.2 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	y (Projected deposit) = a+bx
2013/2014	3	39497.2
2014/2015	4	40398.6
2015/2016	5	41300.1
2016/2017	6	42201.5
2017/2018	7	43102.9

F/Y	Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
2008/09	0.00	(2.38)	5.68
2009/10	(0.48)	(2.86)	8.17
2010/11	8.01	5.62	31.62
2011/12	(5.35)	(7.73)	59.82
2012/13	9.73	7.35	54.04
	$\phi X=11.91$		$\phi(X-\bar{X})^2= 159.32$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 11.91/5 = 2.38$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{159.32}{5}} = 5.64$

Appendix - 37

NABIL

The Trend value of Loan and Advances of NABIL

(Rs. in Millions)

F/Y	Loan and Advances (y)	x=t- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	27589.93	(2)	4	(55180)	27794.4
2009/10	32268.87	(1)	1	(32269)	32484
2010/11	38034.1	0	0	0	37173.7
2011/12	41605.68	1	1	41605.7	41863.3
2012/13	46369.84	2	4	92739.7	46553
	ϕy = 185868.42	ϕx=0	ϕx^2=10	ϕxy=46896.6	

Source: Annual Reports of NABIL

Here, N = 5,

or, a = $\phi y/N$ = 185868.42/5 or , a = 37173.684

b = $\phi xy/Ex^2$ = 46896.6/10 or , b = 4689.663

Let the trend line be,

y = a + bx ..... (i)

The two normal equation are

ϕ y = na + b ϕx ..... (ii)

ϕxy = a ϕx + b ϕ x^2 ..... (iii)

…From (ii) a = $\frac{y}{N}$ ..... (iv)

From (iii) b = $\frac{xy}{x^2}$ ..... (v)

Here, N = 5

…The straight line trend for total loan and advances is,

y = a + bx | 37173.684+ 4689.663x

For year 2013/2014, y = a + bx | 37173.684+ 4689.663 | 3

x = 3

y = Rs. 51242.7 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	y (Projected loan and advances) = a+bx
2013/2014	3	51242.7
2014/2015	4	55932.3
2015/2016	5	60622
2016/2017	6	65311.7
2017/2018	7	70001.3

Growth Rate

F/Y	Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
2008/09	0.00	(11.13)	123.95
2009/10	16.96	5.83	33.94
2010/11	17.87	6.73	45.33
2011/12	9.39	(1.74)	3.04
2012/13	11.45	0.32	0.10
	$\phi X=55.67$		$\phi(X-\bar{X})^2= 206.36$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 55.67/5 = 11.13$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{206.36}{5}} = 6.42$

Appendix - 38

SCBNL

The Trend value of Loan and Advances of SCBNL

(Rs. in Millions)

F/Y	Loan and Advances (y)	x=t- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	13679.76	(2)	4	(27360)	13710.3
2009/10	15956.96	(1)	1	(15957)	15902
2010/11	18427.27	0	0	0	18093.8
2011/12	19575.97	1	1	19576	20285.5
2012/13	22828.84	2	4	45657.7	22477.2
	$\phi y = 90468.8$	$\phi x=0$	$\phi x^2=10$	$\phi xy=21917.2$	

Source: Annual Reports of SCBNL

Here, N = 5

or, $a = \phi y/N = 90468.76/5$ or , $a = 18093.76$

$b = \phi xy/Ex^2 = 21917.2/10$ or , $b = 2191.717$

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

…From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

Here, N = 5

…The straight line trend for total loan and advances is,

$y = a + bx$ | 18093.76+2191.717x

For year 2013/2014, $y = a + bx$ | 18093.76+2191.717 | 3

x = 3

y = Rs. 24668.9 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	**x = t – 2010/2011**	**y (Projected loan and advances) = a+bx**
2013/2014	3	24668.9
2014/2015	4	26860.6
2015/2016	5	29052.3
2016/2017	6	31244.1
2017/2018	7	33435.8

Growth Rate

F/Y	**Percentage (X)**	**$X-\bar{X}$**	**$(X-\bar{X})^2$**
2008/09	0.00	(11.00)	120.90
2009/10	16.65	5.65	31.93
2010/11	15.48	4.49	20.12
2011/12	6.23	(4.76)	22.68
2012/13	16.62	5.62	31.60
	$\phi X=54.98$		$\phi(X-\bar{X})^2= 227.23$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 54.98/5 = 11$

S.D = $\sqrt{\frac{(x \, Z\bar{x})^2}{n}} = \sqrt{\frac{227.23}{5}} = 6.74$

Appendix - 39

NABIL

The Trend value of Investment of NABIL

(Rs. in Millions)

F/Y	Investment (y)	x=t- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	10826.38	(2)	4	(21653)	11326.9
2009/10	13703.02	(1)	1	(13703)	12463.3
2010/11	13081.21	0	0	0	13599.7
2011/12	14055.85	1	1	14055.9	14736.1
2012/13	16332.04	2	4	32664.1	15872.5
	$\phi y = 67998.5$	$\phi x=0$	$\phi x^2=10$	$\phi xy= 11364$	

Source: Annual Reports of NABIL

Here, N = 5

or, $a = \phi y/N = 67998.5/5$ or , $a = 13599.7$

$b = \phi xy/Ex^2 = 11364/10$ or , $b = 1136.415$

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

…From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

Here, N = 5

…The straight line trend for total investment is,

$y = a + bx$ | 13599.7+1136.415 x

For year 2013/2014, $y = a + bx$ | 13599.7 + 1136.415 | 3

x = 3

y = Rs. 17009 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	Y (Projected Investment) = a+bx
2013/2014	3	17008.9

2014/2015	4	18145.4
2015/2016	5	19281.8
2016/2017	6	20418.2
2017/2018	7	21554.6

Growth Rate

F/Y	**Percentage (X)**	$\mathbf{X-\bar{X}}$	$\mathbf{(X-\bar{X})^2}$
2008/09	0.00	(9.14)	83.46
2009/10	26.57	17.44	303.98
2010/11	(4.54)	(13.67)	186.96
2011/12	7.45	(1.68)	2.84
2012/13	16.19	7.06	49.82
	ϕX=45.68		$\phi(X - \bar{X})^2$= 627.06

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 45.68/5 = 9.14$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{627.06}{5}} = 11.20$

Appendix - 40

SCBNL

The Trend value of Investment of SCBNL

(Rs. in Millions)

F/Y	Investment (y)	x=t- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	20236.12	(2)	4	(40472)	20981.7
2009/10	19847.51	(1)	1	(19848)	18794.3
2010/11	17258.68	0	0	0	16606.8
2011/12	12938.21	1	1	12938.2	14419.4
2012/13	12753.52	2	4	25507	12231.9
	$\phi y = 83034.04$	$\phi x=0$	$\phi x^2=10$	$\phi xy= (21875)$	

Source: Annual Reports of SCBNL

Here, N = 5

or, $a = \phi y/N = 83034.04/5$ or , $a = 16606.808$

$b = \phi xy/Ex^2 = -21875/10$ or , $b = -2187.45$

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

… From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

Here, N = 5

… The straight-line trend for total investment is,

$y = a + bx$ | 16606.808+(-)2187.45

For year 2012/2013, $y = a + bx$ | 16606.808 – 2187.45 | 3

x = 3

y = Rs.10044 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	y (Projected Investment) = a+bx
2013/2014	3	10044.5
2014/2015	4	7857.01
2015/2016	5	5669.56
2016/2017	6	3482.11
2017/2018	7	1294.66

Growth Rate

F/Y	Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
2008/09	0.00	8.29	68.64
2009/10	(1.92)	6.36	40.51
2010/11	(13.04)	(4.76)	22.64
2011/12	(25.03)	(16.75)	280.52
2012/13	(1.43)	6.86	47.03
	$\phi X=(41.43)$		$\phi(X-\bar{X})^2= 459.34$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = (41.43)/5 = (8.29)$

S.D = $\sqrt{\frac{(x\, Z\bar{x})^2}{n}} = \sqrt{\frac{459.34}{5}} = 9.58$

Appendix - 41

NABIL

The Trend value of Net Profit of NABIL

(Rs. in Millions)

F/Y	Net profit (y)	x=t- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	1031.05	(2)	4	(2062.1)	896.482
2009/10	1139.1	(1)	1	(1139.1)	1191.33
2010/11	1337.75	0	0	0	1486.17
2011/12	1696.28	1	1	1696.28	1781.02
2012/13	2226.69	2	4	4453.38	2075.87
	$\phi y = 7430.87$	$\phi x=0$	$\phi x^2=10$	$\phi xy= 2948.5$	

Source: Annual Reports of NABIL

Here, N = 5

or, $a = \phi y/N = 7430.87/5$ or , $a = 1486.174$

$b = \phi xy/Ex^2 = 2948.5/10$ or , $b = 294.846$

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

…From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

Here, N = 5

…The straight line trend for total net profit is,

$y = a + bx$ | 1486.174+294.846x

For year 2013/2014, $y = a + bx$ | 1486.174+294.846 | 3

x = 3

y = Rs.2370.7 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	y (Projected Net Profit) = a+bx
2013/2014	3	2370.71
2014/2015	4	2665.56
2015/2016	5	2960.4
2016/2017	6	3255.25
2017/2018	7	3550.1

Growth Rate

F/Y	Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
2008/09	0.00	(17.20)	295.76
2009/10	10.48	(6.72)	45.13
2010/11	17.44	0.24	0.06
2011/12	26.80	9.60	92.22
2012/13	31.27	14.07	198.00
	$\phi X=85.99$		$\phi(X-\bar{X})^2= 631.18$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 85.99/5 = 17.20$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{631.18}{5}} = 11.24$

Appendix - 42

SCBNL

The Trend value of Net Profit of SCBNL

(Rs. in Millions)

F/Y	Net profit (y)	x=t- 2010/2011	x^2	xy	y = a + bx Trend Values
2008/09	1025.11	(2)	4	(2050.2)	1029.66
2009/10	1085.87	(1)	1	(1085.9)	1076.54
2010/11	1119.17	0	0	0	1123.41
2011/12	1168.97	1	1	1168.97	1170.29
2012/13	1217.94	2	4	2435.88	1217.16
	$\phi y = 5617.06$	$\phi x=0$	$\phi x^2=10$	$\phi xy= 468.76$	

Source: Annual Reports of SCBNL

Here, N = 5

or, $a = \phi y/N = 5617.06/5$ or, $a = 1123.412$

$b = \phi xy/Ex^2 = 468.76/10$ or, $b = 46.876$

Let the trend line be,

$y = a + bx$ ..... (i)

The two normal equation are

$\phi y = na + b \phi x$ ..... (ii)

$\phi xy = a \phi x + b \phi x^2$ ..... (iii)

… From (ii) $a = \frac{y}{N}$ ..... (iv)

From (iii) $b = \frac{xy}{x^2}$ ..... (v)

Here, N = 5

… The straight line trend for total net profit is,

$y = a + bx$ | $1123.412+46.876x$

For year 2013/2014, $y = a + bx$ | $1123.412+46.876$ | 3

x = 3

y = Rs. 1264 million

Other trend values have been calculated accordingly.

(Rs. in Millions)

Year (t)	x = t – 2010/2011	y (Projected Net Profit) = a+bx
2013/2014	3	1264.04
2014/2015	4	1310.92
2015/2016	5	1357.79
2016/2017	6	1404.67
2017/2018	7	1451.54

Growth Rate

F/Y	Percentage (X)	$X-\bar{X}$	$(X-\bar{X})^2$
2008/09	0.00	(3.53)	12.44
2009/10	5.93	2.40	5.76
2010/11	3.07	(0.46)	0.21
2011/12	4.45	0.92	0.85
2012/13	4.19	0.66	0.44
	$\phi X=17.63$		$\phi(X-\bar{X})^2= 19.70$

Here, N = 5

Mean $(\bar{X}) = \phi X/N = 17.63/5 = 3.53$

S.D = $\sqrt{\frac{(x\,Z\bar{x})^2}{n}} = \sqrt{\frac{19.70}{5}} = 1.99$