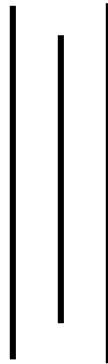


**A COMPARATIVE STUDY ON INVESTMENT
PRACTICES OF COMMERCIAL BANKS**
(With Special Reference to NABIL Bank Limited, Standard Chartered Bank
Nepal Limited and Himalayan Bank Limited)

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A Thesis Submitted to:
Office of the Dean
Faculty of Management
Tribhuvan University



*In partial fulfillment of the requirement for the Degree of
Master of Business Studies (M.B.S)*

Kathmandu, Nepal
November, 2008

RECOMMENDATION

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Entitled:

A COMPARATIVE STUDY ON INVESTMENT PRACTICES OF COMMERCIAL BANKS

**(With Special Reference to NABIL Bank Limited, Standard Chartered Bank
Nepal Limited and Himalayan Bank Limited)**

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

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Nepal Limited and Himalayan Bank Limited)**

*And found the thesis to be the original work of the student and written
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Master Degree of Business Studies (M.B.S.)

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DECLARATION

I hereby declare that the work reported in this thesis entitled “**A COMPARATIVE STUDY ON INVESTMENT PRACTICES OF COMMERCIAL BANKS (With Special Reference to NABIL Bank Limited, Standard Chartered Bank Nepal Limited and Himalayan Bank Limited)**” submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master’s Degree in Business Study (M.B.S.) under the supervision of **Mr. Kishor Maharjan** of Shanker Dev Campus.

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ACKNOWLEDGEMENT

First of all, I would like to thank Tribhuvan University for giving chance to prepare the thesis for a partial requirement to the fulfillment of M.B.S. program held under Tribhuvan University.

I express my profound gratitude to my supervisor **Mr. Kishor Maharjan**, for his patience and continuous guidance with valuable comments and kind support to me all way through this thesis.

I also owe an indebtedness to all reputed authors whose writings have provided me the necessary guidance and invaluable materials for the enrichment of my research paper in all possible ways. I would like to express my genuine appreciation to all the staff of Shanker Dev Campus, Central Library Staff and Security Board Library that provide me necessary information & data. And also express my gratitude to the staff of various corporate bodies who bigheartedly made accessible the requisites information.

At last but not least, my paramount dedication is to my family members and friend Mr. Suresh Raut and Mr. Prakash Dhakal who have been uninterrupted source of sustain for me while in during the tribulation of this research work.

I have tried to cover all the possible matters that I felt, important to sum up the “**A Comparative Study on Investment Practices of Commercial Banks (With Special Reference to NABIL Bank Limited, Standard Chartered Bank Nepal Limited and Himalayan Bank Limited)**”. I am hopeful that this task will be helpful to the students of business studies & to those who want to make further researchers under this topic.

Muskan Thapa

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ABBREVIATIONS

A.D.	:	Anno Domini
A/C	:	Account
AGM	:	Annual General Meeting
ATM	:	Automatic Teller Machine
B.S.	:	Bikram Sambat
C.V	:	Coefficient of Variation
EPS	:	Earning Per Share
F/Y	:	Fiscal Year
HBL	:	Himalayan Bank Ltd
i.e.	:	That is
JVB	:	Joint Venture Bank
NABIL	:	Nabil Bank Ltd.
NBL	:	Nepal Bank Limited
NIDC	:	Nepal Industrial Development Corporation
NRB	:	Nepal Rastra Bank
P.E.	:	Probable Error
r	:	Coefficient of Correlation
RBB	:	Rastriya Banijya Bank
Rs.	:	Rupees
S.D.	:	Standard Deviation
SCBNL	:	Standard Chartered Bank Nepal Ltd.
TU	:	Tribhuvan University

CHAPTER - I

INTRODUCTION

1.4 General Background of the Study

Nepal is a landlocked and agricultural country which lies in South East Asia. Nepal is one of the least developed countries in the world with per capita income of US\$ 272. Draped along the greatest heights of the Himalayan, Nepal is a land of sublime scenery time- worn temples & some of the best walking trails on earth. Nepal being listed among least developed country is trying to embark upon the path of economic development by economic growth rate & developing all sectors of economic. Nepal is a poor country and the problem of fulfilling basic needs poses a huge burden, but it is rich in scenic splendor & cultural treasures. The nation has long exerted a pull on the western imagination. Nepal, officially nation of Nepal, constitutional monarchy in southern Asian, bounded on the North by the Tibetan autonomous region in china & on the East, South & West by India.

Financial institutions are the back bone of the economic development of any country. A small financial institution is a vital contributor to the financial health of the national economic. The financial institutions are often fragile and susceptible to failure because of poor management, particularly financial management. National development of any economic development is supported by financial infrastructure of that country. Financial infrastructure indicates the financial strength, position and environment of the institutions. The various branches of bank in towns and villages offering various types of services. In past, they just used to accept deposits from the saver of money and give loan to the users of money. Savers of the money are those units whose earning exceeds expenditure on

real assets and user of money are those units whose expenditure on real assets exceeds their earnings.

Banking plays a significant role in the development of national economic is a financial institution which primary classes in borrowing and lending. Modern bank prefers varieties of function; therefore it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the word "Bank" in different ways. "A commercial bank is dealer in money and it substitutes for money such a check or a bills of exchange, he also provides a variety of financial service" (The new Encyclopedia of Britannica, 1985: 600: Vol. 4).

One of the functions of commercial bank is investment policy, which help to economic development of the country. The process of the economic development depends upon various factors, however economists are now convinced that capital formation and its proper utilization plays a paramount role for rapid economic development. Hence, investment policy is one such tool that helps for proper utilization of resources.

Investment policy is an important ingredient of overall nation economic development because it insures efficient also allocation of funds to archive the materials and economic well being of the society as a whole. In this regard, joint venture Bank investment policy push drives to achieve priority of commercial sector in the context of Nepal economic development.

Banking plays a significant role in the development of national economic is a financial institution which primary classes in borrowing and lending. Modern bank prefers varieties of function; therefore it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the word "Bank" in different ways. "A commercial bank is

dealer in money and it substitutes for money such a check or a bills of exchange, he also provides a variety of financial service" (The new Encyclopedia of Britannica, 1985: 600: Vol. 4).

Banks constitute an important segment of financial infrastructure of any country. A bank is the financial departmental store, which render various financial services besides taking deposits and lending loans. Banks are to be not as the dealer of money but as the lender of the economic development. For the strengthening the economy of any country both the private and public sector should play a great role. Both private and public sector have been contributing to our nation. Integrated and speedily development of the country is possible only when competitive banking service reaches nook and corners of the country. Commercial banks occupy an important place in the framework of every economy because they provide capital for the development of industry, trade, business and other resources deficit sectors by investing the saving collected as deposits. All the economic activities of each and every country are greatly influenced by the commercial banking business of the country.

Only in 1990 A.D. after restoration of democracy, the government took the liberal policy in banking sector. As an open policy of Nepal Government to get permission to invest in banking sector from private & foreign investor under commercial bank act 1975AD. , different private banks are getting permission to establish with the joint venture of other countries. The development of Commercial Bank's in Nepal is categorized in three phases on the basis of financial institutions policies adopted by the country from time to time.

Now, there are 25 commercial banks in operation. Among them two are under government control and other 15 are private and joint venture banks. One of the most important achievements of the growth of commercial banks is domestic

savings. Joint Venture Banks (JVB's) gave a new horizon to the financial sector of the country. They were expected to bring the foreign capital, technology, experience, healthy competition, expertise and skills in Nepal. The following table below shows in a chronological order a list of the licensed commercial banks and their branches operating in Nepal.

Table 1.1
List of Licensed Commercial Banks

S.N.	Commercial Banks	Established Date	Head Office
1.	Nepal Bank Ltd.	1937/11/15	Kathmandu
2.	Rastriya Banijya Bank	1966/01/23	Kathmandu
3.	Nabil Bank	1984/07/16	Kathmandu
4.	Nepal Investment Bank Ltd.	1986/02/27	Kathmandu
5.	Standard Chartered Bank	1987/01/30	Kathmandu
6.	Himalayan Bank Ltd.	1993/01/18	Kathmandu
7.	Nepal Bangladesh Bank	1993/06/05	Kathmandu
8.	Nepal SBI Bank Ltd.	1993/07/07	Kathmandu
9.	Everest Bank Ltd.	1994/10/18	Kathmandu
10.	Bank of Kathmandu Ltd.	1995/03/12	Kathmandu
11.	Nepal Credit and Commercial Bank	1996/10/14	Siddhartha Nagar
12.	Lumbini Bank Ltd.	1998/07/17	Naryanghat
13.	Nepal Industrial and Commercial Bank Ltd.	1998/07/2	Biratnagar
14.	Macchapuchhre Bank Ltd.	2000/10/03	Kathmandu
15.	Kumari Bank Ltd	2001/04/03	Pokhara
16.	Laxmi Bank Ltd.	2002/04/03	Kathmandu
17.	Siddhartha Bank Ltd	2002/12/24	Kathmandu
18.	Agricultural Development Bank Ltd.	1968/01/02	Kathmandu
19.	Global Bank Ltd.	2007/01/02	Birgunj, Parsa
20.	Citizen Bank Ltd.	2007/06/21	Kathmandu
21.	Prime Bank Ltd.	2007/09/24	Kathmandu
22.	Sunrise Bank Ltd.	2007/10/12	Kathmandu
23.	Bank of Asia Nepal Ltd.	2007/10/12	Kathmandu
24.	NMB Bank Ltd.	2008/05/02	Kathmandu
25.	Development Credit Bank Ltd.	2008/05/25	Kathmandu

Source: <http://brf.nrb.org.np>

In the study of this thesis, three banks are selected and explained in detail of them in below:

1.1.1 Profile of the Concern Banks

A. Nabil Bank Limited

NABIL Bank Ltd, the first joint venture commercial bank in Nepal was established in 1984 under the company act 1964 as Nepal Arab Bank Ltd. Dubai Bank Ltd. was the initial joint venture partner with fifty percent (50%) equity investment. The shares owned by Dubai Bank Ltd., (DBL) were transferred to Emirates Bank International Limited, Dubai by virtue of its annexation with the letter. Letter on, Emirates Bank International Limited, Dubai sold its entire 50% equity holding to National Bank Ltd., Bangladesh. Being the largest equity holder, National Bank Ltd., Bangladesh is managing the bank in accordance with the technical services agreement signed between it (NABIL) and the bank on June 1995. Nepal Arab Bank Limited changed its name as Nabil Bank Limited (NABIL).

The promoters and their shares holding patterns of Nabil Bank Ltd are as follows:

National Bank Limited, Bangladesh	-	50.00%
Financial Institutions	-	20.00%
Nepalese Public	-	30.00%

Share Capital of Nabil Bank Ltd.

a. Authorized capital

5,000,000 ordinary shares @ Rs.100 per share = Rs. 500,000,000.

b. Issued capital

4,916,544 ordinary shares @ Rs. 100 per share = Rs. 491,654,400.

c. Paid up capital

4,916,544 ordinary share @ Rs. 100 per share = Rs. 491,654,400.

The bank has changed its name as Nabil Bank Ltd. The bank expanded its banking services towards the different regions and part of the country by establishing altogether seventeen branches in urban as well as rural areas of the country.

Besides banking facilities it provides other facilities too, they are given as:

- Tele Banking
- Credit Card Facilities
- Safe Deposit Locker
- International Trade and Bank Guarantee
- Western Union Money Transfer
- SWIFT (Society for Worldwide Inter bank financial Tele-communication)
- ATM (Automatic Teller machine)

B. Himalayan Bank Limited

Himalayan Bank Limited was incorporated in 1992 by the distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial banks of Pakistan. Banks operation was commenced from January 1993. It is the first commercial bank of Nepal with maximum share holding by Nepalese private sector. Beside commercial activities, the Bank also offers industrial and merchant banking. The promoters and their shares holding patterns of Himalayan Bank Ltd are as follows:

Nepali Promoters	-	51.00%
Habib Bank of Pakistan	-	20.00%
Karmachari Sanchaya Kosh	-	14.66%
General Public	-	15.34%

Share Capital of Himalayan Bank Ltd.

a. Authorized capital

10,000,000 ordinary shares @ Rs.100 per share = Rs. 1000,000,000.

b. Issued capital

6,500,000 ordinary shares @ Rs. 100 per share = Rs. 6500000

c. Paid up capital

5362500 ordinary share @ Rs. 100 per share = Rs. 536250000

Besides banking facilities it provides other facilities too, they are given as:

- Tele Banking
- Credit Card Facilities
- Safe Deposit Locker
- International Trade and Bank Guarantee
- Western Union Money Transfer
- SWIFT (Society for Worldwide Inter bank financial Tele-communication)
- ATM (Automatic Teller machine)

C. Standard Chartered Bank Nepal Limited (SCBNL)

Standard Chartered Bank Limited was established in 1985 as a second foreign joint venture bank under the Company Act 1964 by the name of Nepal Grindlays Bank Limited. ANZ Grindlays Bank PLC held 50 percent, 33.34 percent shares are held by Nepal Bank Limited and remaining 16.66 percent shares by general public of Nepal. ANZ Grindlays Bank PLC is managing the bank under joint venture ad technical service agreement singed between ANZ Grindlays Bank Limited had changed its name as standard Chartered Bank Limited (SCBNL). Its share subscription is given as:

ANZ Grindlays Bank PLC	-	50.00%
Nepal Bank Limited	-	33.37%
Nepalese Public	-	16.66%

Share Capital of SCBNL

a. Authorized capital

10,000,000 ordinary shares @ Rs.100 per share = Rs. 1000,000,000.

b. Issued capital

5,000,000 ordinary shares @ Rs. 100 per share = Rs. 500,000,000.

c. Paid up capital

4,132,548 ordinary share @ Rs. 100 per share = Rs. 413,254,800.

The following extra facilities have been providing by the bank.

- Credit Cards
- Tele Banking
- Any Branch Banking
- ATM (Automatic Teller Machine)
- VISA Card
- 24 Hours Banking

1.5 Focus of the Study

In Nepal, banking sector seems to be growing more rapidly than industry and commerce itself because more and more banks are being established and apparently they all are providing good return to the investors. Strength and sound management of their resources directly affect the profit or profitability. A comparative analysis of investment policies of NABIL, SCBNL and HBL is crucial as it determines the strength and weakness of these three joint venture commercial banks on the aspect of investment policies.

The study focuses on the problems of resources mobilization and proper utilization of such resources by the joint venture commercial banks of Nepal. viz. NABIL, SCBNL and HBL. This study consists, mainly, the study of investment policies

and rifled on the position of Joint Venture Commercial Bank's deposits and allocation of it on different sectors of the economy.

The focus of this study is also to provide the information to the management, shareholders, investors and customers, general public, competitors as well as those concern parties who want to know the operating efficiency and financial position of a bank.

1.6 Statement of Problem

Various financial institutions have been established to assist the process of economic development of a country. All commercial banks have played a vital role by accepting deposits and providing various types of loans. Loan affects overall development of a country. The problem of lending has become very serious for a developing country like Nepal. This is due to lack of sound investment policy of commercial banks.

Investment greatly depends on saving behavior of citizens but the saving rate of Nepalese is very low because most of the citizens are below the poverty level. They don't have enough income for daily consumption. Some people hardly save some money but they want to save for the future. Only few people invest in industries. People must be motivated to use their savings and mobilize their excess fund in economic activities.

Commercial banks are fond of making loans only on short term basis against moveable merchandise. There is hesitation to invest on long term projects because they are much more safety minded. So, they follow conservative loan policy, which is based on strong security. They are found to be more interested in investing in less risky and highly liquid sectors i.e. treasury bills, development bonds and other securities. They keep high liquid position and flow lower fund to

the productive sectors, this results into lower profitability to commercial banks and ignorance to the national economic growth process.

Nepalese commercial banks have not formulated their investment policy in an organized manner. They mainly rely upon the instructions and guidelines of Nepal Rastra Bank. They don't have clear view towards investment policy. There is a lack of sound investment policy of commercial bank. Furthermore, the implementation of policy is not in an effective manner.

With some 25 commercial banks and many development banks operating in Nepal, the market seems over crowded and the banks are now finding a tough competition among themselves. Since the entry barriers are not so high due to the governments liberal policy, this competition is expected to be more intense in the near future, as there is always the possibility of a new player entering this sector.

Profit is must to a bank, not only from the point of view of bank but also from the view of shareholders and depositors. And profit is only possible if the bank makes proper and safe investment policy. Every bank must make profit to survive in the competitive market where there is excess money and very little investment opportunity exists. Therefore, appropriate investment policy is the basic function of all the commercial banks, joint venture banks and other financial institutions.

This study basically deals with following issues of the banks:

1. Utilization of available fund: Does NABIL Bank have a more effective and efficient fund mobilization and investment policy than Himalayan Bank and SCBNL.
2. What is the relationship of investment, loan and advances with total deposit and total net profit of NABIL Bank and compare this performance with that of Himalayan Bank and SCBNL?

3. To what extent has affect the total earning of the bank?
4. Are they maintaining sufficient liquidity position?

1.4 Objective of the Study

The basic objective of this study is to examine and evaluate the investment practices of NABIL Bank Ltd. and compare the same with Himalayan Bank Ltd. and SCBNL. To achieve this prime objective the following objectives are considered in the study:-

- a. To analyze trend of investment made by NABIL Bank Ltd, SCBNL and Himalayan Bank Ltd., and compare this with the total deposit of these commercial banks.
- b. To analysis the different investment sectors of NABIL Bank Ltd., SCBNL and Himalayan Bank Ltd.
- c. To evaluate and criteria efficient, inefficient, the liquidity assets management efficiency and profitability position of the selected banks.
- d. To recommend the policies to be adopted by the selected banks on the basis of the study.

1.6 Scope of the Study

Investment is a primary factor for economic development of any country. Investment refers to as using present money to get long term benefit. Investment in its broadest sense means the sacrifice of current money for future money. Two different attributes are generally involved, they are time and risk. The sacrifice takes place in the present and is certain. The reward or result of sacrifice comes later and the magnitude is generally uncertain. Time and risk are predominates for investment. Such as investment in government bond time is predominating, where as in common stock time and risk both are important (Sharpe, 2000:1).

The scope of the study lies mainly in filling a research gap on the study of investment policy of commercial banks. The study is basically confined to reviewing the investment policy of commercial banks in the five year period. The study is expected to definitely provide a useful feedback to the policy makers of commercial banks of Nepal, and also to the government and the central bank in formulating appropriate strategies for the improvement in the performance of commercial banks.

1.7 Significance of the Study

The proper mobilization and utilization of domestic resources become indispensable for any developing country aspiring for a sustainable economic development and there is no doubt that commercial banks have a vital role in the collection of dispersed small saving of the Nepalese people and transforming them into meaningful capital investment. The success and prosperity of the bank relies heavily upon the successful investment of collected resources to the important sectors of economy. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of commercial banks. Good investment policy has a positive impact on economic development to the country and vice-versa. So, the investment policy of commercial banks should be in accordance with the spirit of the economic upliftment of the people.

As mentioned above, there are many loopholes in the in the investment policies of commercial banks of Nepal which affects their performance to the great extent. It becomes every body's concern when their performance doesn't see so satisfactory in terms of utilizing its resource efficiently in productive sectors. The study of commercial banks investment policy focusing on interest rate structure, portfolio management and credit management will strive to disclose the internal weakness and furnish the ideas for improvement. Therefore, the researcher has undertaken

the study to analyze the existing investment policy of commercial banks and point out the defects inherent in it and provide package of suggestions for its improvement.

1.7 Limitation of the Study

In the context of Nepal, data problem is major problem for study. Every works have restriction and limitation without limitation work is not done sweet and taste. This study has been made by using certain methodology and based available data which is related with the study.

This study is simply a partial requirement of M.B.S program so this study is limited by the following factors.

1. Among the various JVB's, the study focuses only on three JVB's namely, NABIL bank limited, Himalayan bank limited and SCBNL.
2. The study covers the period of five years only i.e. from FY 2002/03 to 2006/07.
3. The study is based on secondary data and therefore, the findings are based on the information provided by the banks.
4. The utilization tools have assuming and limitation which is not satisfied to us.
5. The time factor is major limitation of this study become this study is completed within a short span of time.

1.8 Scheme of the Study

This study has been organized over altogether five chapters. Starting from Introduction, Review of Literature, Research methodology, Presentation & Analysis of data and summary, to conclusion & Recommendation as get of the entire study. A brief outline of this chapter has been outlined as under.

The first chapter entitled “Introduction” introduces the subject, present the research problem, reason for studying, objective of the study, along with limitation.

The second chapter entitled “Review of Literature” concerned with the study of investment patterns have been reviews & presented.

The third chapter discussed the “Research Methodology” used in the study. It comprises research design, nature & source of data, data gathering method and analytical tools used.

The fourth chapter deals with the “Presentation & Analysis” of data & scoring the empirical finding out the study through definite course of research methodology.

The last chapter i.e. “Summary, Conclusion and Recommendations” of the study, which is followed by the basic conclusion of the study based in the fourth chapter on the basic of these conclusion and recommendation has also been presented for consideration.

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is the study of past research studies and relevant materials. It is an advancement of existing knowledge and in-depth study of subject matter. It starts with a search of a suitable topic and continues throughout the volumes of similar or related subjects. It is very rare to find out completely new problem. In literature review, researcher takes hints from past dissertation but he or she should take heed of replication. Literature review means reviewing research studies and other pertinent propositions in the related area of the study so that all the past studies their conclusions and deficiencies and further research take place. It is a vital and mandatory process in research works. During the review of this research, in depth study and theoretical investigation regarding Investment Policy aspects and their present application and potentialities made. Investment “Range of investment held by an investor, company etc”(Oxford Dictionary: 1994). Hence, in this chapter, the focus has been made on the review of literature relevant to the investment policy of commercial banks in Nepal. For this study, different Journals, Article, Books, Annual reports, and some research paper related with this topic has been reviewed.

2.1 Review of Supportive Text

Review of supportive text 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 and portfolio analysis are taken into consideration.

2.1.1 Commercial Banks

Commercial banks are the major financial institutions which occupy the quite an important place in the framework of every economy because they provide capital

for the development of industry, trade and business and other resource deficit sectors by investing the saving collected as deposits. Besides these commercial banks renders numerous services to their customer in view of facilitating their economic and social life. Commercial banks, play active roles, have changed the economic structure of the world. Thus the commercial banks become the heart of financial system.

"Bank is a financial intermediary accepting deposits and granting loans, offer the widest menu of services of any financial institutions" (Rose, 2002:4).

"Financial institutions are currently viewed as catalyst in the process of economic growth of a country. A key factor in the development of an economy is the mobilization of domestic resources. As intermediaries the financial institutions helps the process of resource mobilization" (Shrestha, 1995:1).

A commercial bank is a corporation, which accepts demand deposits subject to check and makes short-term loans to business enterprises, regardless of the scope of its other services (American Institute of Banking, 1972: 345).

Commercial bank is engaged in performing the routine banking business of accepting the deposits of public and granting loans. A commercial bank receives money from the depositors and lends it to trade, commerce and industry. Commercial bank allows its customers to draw cheque against their deposits. In addition to the primary function of receiving deposits and lending to others it undertakes a wide variety of function like collection of cheques, bills, dividends etc. on behalf of customers, payment of insurance premium, subscription, rent, and salary on behalf of customer, transfer of funds, purchase and sale of securities etc. Apart from the agency functions, the banker also provides certain general utility services like safe custody deposits and safe deposit locker facilities, issuing of

traveler's cheques, credit cards, debit cards, ATM, LC, gift cheques or vouchers. It can also act as a referee and guarantor of its customers.

"The commercial bank pool together the saving of the community and arrange for their productive use. They supply the financial need of the modern business. They accept the deposits from the public which are repayable on demand or on short notice. They can not afford to invest their funds in long term securities or loans. Their business is restricted to financing the short term needs of trade and industry. They provide the working capital required by the industries in their day to day transactions. They grant the loan in the form of cash credit and over draft. They also render a number of subsidiary services such as collection of bills and cheques, safe keeping of the valuables of their customers etc. Commercial Banks deals with other people's money. They have to find out the ways of keeping their assets liquid so that they could meet the demands of their customers. In their anxiety to make profits, the bank can not afford to lock up their funds in assets which are not easily realizable. The depositor must be made to understand that the bank is fully solvent. The depositors' confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The banker has to keep adequate cash for this purpose" (Radhaswamy, 1979:495).

"The role of banks is more significant in financing the private sector. It is true that the growth of private sectors solely depend upon banking. Banking is the mother industry that caters to the development of industry, trade and commerce. In a rapid developing economy the banker has to play a more effective role in national reconstruction. After all banking can be said to be the basic activity in planning. Bank advances and investments are indicatives of the role played by them in the economic development of the country" (Desai, 1967:7).

2.1.2 Investments

The word investment sounds very good & attractive that is why every individual in the world is interested in it. In Layman's sense, there is always a return if there is investment. This may be favorable as well as unfavorable to the investor's stand point.

The word "Investment" sounds very good, attractive and prestigious too. The form "Investment" has primary significance in financial sector, which refers to the process of determining the proper area in order to lodge a firm's fund to procure expected gain or profit known as the favorable return by its maximum utility at minimized risks. In laymen's sense, there is always a return if there is investment. This return may favorable as well as unfavorable to the investor's standpoint.

The word investment conceptualized the investment of income, saving or other collected funds. Investment covers a wide range of activities. It is commonly known fact that an investment is only possible where there adequate savings. If all the incomes and saving 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 saving and investment are interrelated.

"A distinction is often made between investments and saving. Saving is defined as foregone consumption, investment is restricted to "real" investment of the sort that increases national output in the future" (W.J Sharpe and G.J Alexander, 4th Edition: 1).

Investment is concerned with the management of an investor's wealth. Which are the sum of current income and the present value of all future income. Funds are invest come from assets already owned borrowed money and saving or forgone consumption by foregoing today and investing the saving, investors expect to

enhance their future consumption possibilities i.e. It 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 factors.

Easily, the amount of risk is uncertain as well. Investment in its broad sense means the sacrifice of current money for future money. Two different attributes are generally involved time and risk. The sacrifice takes place in present and is certain. The reward comes later, if at all and the magnitude is generally uncertain. In some cases, the elements of time predominate (For e.g. Government bonds in 1994).

Investment brings forth vision of profit, risk, speculation & wealth. For the uninformed, investing may result in disaster. In general sense; investment means to pay out money to get more. But in the broadest sense, investment means the sacrifice of current money for future money. Two different attributes are generally involved time & risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain (Sharpe, Alexander & Baily, 2003:1). Shrestha (2002) write investment as utilization of saving for something that is expected to produce profit or benefits. Investment is employment of funds with the aim of achieving additional income or growth in value. It involves the commitment of resources that have been saved or put away from current consumption, in the hope that some benefits will accrue in the future. Investment generally involves real assets and financial assets. Real assets investment involves some kinds of tangible assets such as building, land, machinery, factory etc. and financial assets investment are pieces of paper representing an indirect claim to real assets held by someone else. Real assets are generally less liquid than financial assets.

According to Reilly “ Investment is the current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time funds are committed, for the expected rate of inflation and also for uncertainty involved in the future flow of the funds” (Frank & Reilly, 1998:265).

According to Gitman and Joehnk, “Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generated positive returns” (Gitman & Joehnk, 1990:248).

F. Amling “Investment may be defined as the purchase by an individual or institutional investor of a financial or real asset that produces a return proportional to the risk assumed over some future investment period”.

Dr. Preeti Singh defined investment as “Investment is the employment of funds with the aim of achieving additional income or growth in value”.

A banker does not prefer to invest his funds in company shares and debentures. The shares and debentures may be very easily sold on the stock exchange. But the bank will incur a loss if the market value of the securities falls. Unlike the government securities there is no maturity date for shares. The income from shares depends upon the prosperity of the company issuing the shares. If the company becomes insolvent the banker loses heavily. If a bank has certain amount of funds which can be left undisturbed for a number of years, investment in long term government securities becomes profitable proposition” (Radhaswamy, 1979:549).

2.1.3 Feature of a Sound Lending and Investment Policy

The income and profit of the bank depends upon its lending procedures, lending policy and investment of its funds in different securities. The greater the credit created by the banks, the higher will be the profitability. A sound lending and

investment policy is not only prerequisite for banks profitability, but also crucially significant for the promotion of commercial savings of a backward country like Nepal.

Many authors have given some necessities or some of the main characteristics for sound lending and investment policies, which must be considered by the commercial banks:

i. Safety and Security

The bank should never invest its funds in those securities, which are too volatile i.e. which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It must not invest its funds into speculative businessman who may be bankrupt at once and who may earn millions in a minute also. Security means adequate collateral having good value. This can be easily sold off if required at any point of time. The bank should accept that type of securities, which are commercial, durable and marketable having fair market value. For this purpose 'MAST' should be applied while reaching an investment decision, where MAST stands for,

M = Marketability

A = Ascertainability

S = Stability

T = Transferability

ii. Profitability

A commercial bank can maximize its volume of wealth through maximization of return on their investments and lending. So, they must invest their funds where they can gain maximum profit. The profit of commercial banks depends on the interest rate, volume of loan, its time period and nature of investment in different securities.

iii. Liquidity

Liquidity is the ability of the firm to satisfy its short-term obligations as they come due. Generally, people used to deposit their earnings in the different accounts of the banks, having 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.

iv. Purpose of Loan

In the viewpoint of security, a banker should always know that why a customer is in need have loan. If a borrower misuses the loan granted by the bank, he can never repay therefore in order to avoid this situation each and every bank should demand all the essential detailed information about the scheme of project or activities.

v. Diversification

“A bank should not lay all its eggs on the same basket.” This saying is very important to the bank and it should always be careful not to grant loan in only one sector. To minimize risk, 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 deprived, there may be appreciation in the securities of other companies. In this way the loss can be minimized or recovered.

vi. Tangibility

A commercial bank should prefer tangible security to an intangible one. Though it may be considered that tangible property doesn't yield an income apart from intangible securities, which have lost their value due to price level inflation.

vii. Legality

Illegal issued securities may cause problems to the investors. Therefore, all commercial banks should follow the directives of NRB, Ministry of Finance and other relevant organization at the time of mobilizing funds.

viii. National Interest

In addition to its own profitability the bank should also consider the national interest. Even though the bank cannot get maximum return from such investment, it should carry out its obligation towards the society and the country. The bank is required to invest on such sectors as per the government and Nepal Rastra Bank's instruction. Investment on government bonds, priority and deprived sector lending are the examples so such investments.

2.1.4 Some Important Terms

The study in this section comprises of some important banking terms for which efforts have been made to clarify the meaning, which are frequently used in this study, which are given below.

i. Loan and Advance

Loan, advance and overdraft are the main source of income for a bank. Bank deposits can cross beyond a desired level but the level of loans, advances and overdraft will never cross it. The facilities of granting loan, advances and overdrafts are the main service in which customers of the bank can enjoy.

Funds borrowed from banks are much cheaper than those borrowed from unorganized moneylenders. The demand for loan has excessively increased due to cheaper interest rate. Furthermore, an increase in economic and business activities always increases the demand for funds. Due to limited resources and increasing loan, there is some fear that commercial banks and other financial institutions too

may take more preferential collateral while granting loans causing unnecessary botheration to the general customers. Such loan from these institutions would be available on special request only and there is a chance of utilization of resources in economically less productive fields. There lies the undesirable effect, of low interest rate.

In addition to this, some portion of loan, advances and overdraft includes that amount which is given to staff of the bank for house loan, vehicle loan, personal loan and others, in mobilization of commercial banks fund, loan, advances and overdrafts have occupied a large portion.

ii. Investment on Government Securities, Shares and Debentures

Though a commercial bank can earn some interest and dividend from the investment on government securities, shares and debentures, it is not the major portion of income, but it is treated as a second source of banking business. A commercial bank may extend credit by purchasing government securities bond and shares for several reasons. Some of them are given as;

- It may want to space its maturates so that the inflow of cash coincide with expected withdrawals by depositors or large loan demands of its customers.
- It may wish to have high-grade marketable securities to liquidate if its primary reserve becomes inadequate.
- It may also be forced to invest because the demand for loans has decreased or is not sufficient to absorb its excess reserves.

However, investment portfolio of commercial bank is established and maintained primarily with a view of nature of banks liabilities that is since depositors may demand funds in great volume without previous notice to banks. The investment must be of a type that can be marketed quickly with little or no shrinkage in value.

iii. Investment on Other Company's Shares and Debentures

Due to excess funds and least opportunity to invest these funds in much more profitable sector and to meet the requirement of NRB directives many commercial banks have to utilize their funds to purchase shares and debentures of many other financial and non-financial companies. Nowadays most of the commercial banks have purchased regional development banks NIDC and other development banks shares.

iv. Other use of Fund

A commercial bank must maintain the maximum bank balance with REB i.e. 6% for fixed deposits and 8% for each of current and saving deposit account in local currency. Similarly 3% cash balance of local cash balance, in local currency, accounts must be maintained in the vault of the bank. Again a part of the fund should be used for bank balance in foreign bank and to purchase fixed assets like land, building, furniture, computers, stationery etc.

v. Off- Balance Sheet Activities

Off-balance sheet activities involve contracts for future purchase and sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet. Some good examples of these items are letter of credit, letter of guarantee, bills of collections etc. Nowadays, such activities are stressfully highlighted by some economist and finance specialists to expand the modern transaction of a bank.

vi. Deposits

For a commercial bank, deposit is the most important source of the liquidity. For bank's financial strength, it is treated as a barometer. In the word of Eugene, "a bank's deposits are the amount that it owes to its customers." Deposit is the lifeblood of the commercial bank. Though, they constitute the great bulk of bank

liabilities, the success of a bank greatly depends upon the extent to which it may attract more and more deposits, for accounting and analyzing purpose, deposits are categorized in three headings. They are; current deposits, saving deposits, fixed deposits.

2.2 Review of Relevant Studies

2.2.1 Review of Books, Articles and Journals

Banks are such an institution, which deals with credit and substitutes for money. They deal with credit and instruments. So good circulation of credit is important for any bank. Any financial intermediates (commercial banks, joint venture banks) or financial company utilize its fund in suitable area or sector. They cannot get its aim of profit earning without mobilizing its funds in suitable area or sector. They cannot get its aim of profit earning without mobilizing its funds in right sectors and difference activities. Many types of activities and other things can originate for the purpose of receiving investment from the finance company. But finance should separate the useful and profitable sector for mobilization of its funds.

According to **William F. Sharpe, Gordon .T. Alexander and Jeffery V. Baily**, “Investment in it’s broaden sense, means the sacrifice of current dollars for future dollars. Two difference attributes are generally involved: time and risk. The sacrifice takes places in the present and its magnitude as generally uncertain” (Sharpe, Alexander and Baily, 1998:1).

In the words of **Gitman and Joehnk**, “Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns” (Gitman & Joehnk, 1990: 258).

“The term investment can cover a wide range of activities. It often refers to investing money in certificate of deposits, bonds, common stocks or mutual funds.

More knowledgeable investors would include other financial assets such as warrants, puts and calls future contracts and convertible securities. Investing encompasses very conservative position and aggressive speculation” (Charles, 1998:248).

Frank K. Reilly defines investment as, “An investment may be defined as the current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time the funds are committed, for the expected rate of inflation and also for the uncertainty involved in the future flow of the funds”.

According to **Reed, Cotter, Gill and Smith**, “Commercial banks still remain the heart of our financial system holding the deposits of millions of persons, governments and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms and governments. Commercial banks are the most important type of financial institutions in the nation in terms of aggregate assets” (Edward W. Reed, Edward K. Gill, Richard V. Cotter, Richard K. Smith: 1980:1-5). The primary function of commercial banks is the extension of credit to worthy borrowers. In making credit available, commercial banks are rendering a great social service. Through their action, production is increased, capital investments are expanded, and a higher standard of living is realized. Although the investment activities of commercial banks are usually considered separately from lending, the economic effects and social results are the same.

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

Emphasizing the importance of investment policy, **H.D. Crosse** puts his view in this way, “Lending is the essence of commercial banking, and consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management. Well conceived lending policies and careful lending practices are essential if a bank is to perform its crediting function effectively and minimize the risk inherent in any extension of credit” (H.K. Crosse, 2nd Edition: 1963).

According to **I.M. Pandey**, “In investment decision expenditure and benefits should be measured in cash. In investment analysis, cash flow is more important than accounting profit. It may also be pointed out of that investment decision affects the firm’s value. The firm’s value will increase if investments are profitable and add to the shareholders wealth. Thus, investment should be evaluated on the basis of a criterion, which is compatible with the objective of the shareholder’s funds maximization. Investments will all to the shareholders wealth if it yield benefit in excess of the minimum benefits as per the opportunity cost of capital” (Pandey, 1999: 407).

S.P. Singh and S. Singh, “ The investment (credit) policies of banks are conditional, to great extent, by the national policy framework, every banker has to apply his own judgment for arriving at a credit decision, keeping of course, his bank’s credit policy also in mind” (Singh, 1983:128).

According to Mr. **Shakespeare Baidhya** on sound investment policy, he has said “A sound investment policy of a bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provide maximum safety and security to the depositors and banks on the other hand. Moreover, risk in banking sectors tends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble, its problem usually spring from

significant amounts of loan that have become un-collectable due to mismanagement, illegal manipulation of loan, misguided lending policy or unexpected economic downturn. Therefore, the bank investment policy must be such that it ensures that it is sound and prudent in order to protect public funds” (Shakespeare Baidhya, 1997:46-47).

Dr. Sunity Shrestha, in her book “Portfolio behavior of commercial banks in Nepal” said “The commercial banks fulfill the credit needs of various sector of the economy including agriculture, industry, commercial and social service sectors. The lending policy of commercial banks is based on the profit maximization of the institution as well as the economic enhancement of the country” (Shrestha, 2003: 51-52).

“The term investment can cover a wide range of activities. It often refers to investing money in certificates of deposits, bonds, common stocks or mutual funds. More knowledgeable investors would include other financial assets such as warrants, puts and calls future contracts and convertible securities. Investing encompasses very conservative position and aggressive speculation” (Charles, 1998:269).

“Financial investment is a form if this general or extended sense of the term. It means an exchange of financial claims, stocks and bonds (collectively termed securities), real estate mortgages etc. Investors to differentiate between the pseudo investment concept of the consumer and the real investment of the businessman often use the term financial investment. Semantics aside, there is still a difference between an “Investment” in a ticket on a horse and the construction of a new plant; between the pawing of watch and the planting of a field of corn. Some investment are simple transaction among people, other involve nature. The later

are “real” investment. The former is “Financial” Investment. We now turn to a closer examination of finance and investment decision” (Bhalla, 1983:245).

From the views and definitions of various authors above, it is clear that an investment means to trade a known rupee amount today for some expected future stream of payments of benefits that will exceed the current outlay by an amount that will compensate the investor for the time. The funds are committed for the expected change in prices during the period and uncertainty involve in expected future cash flows. Thus investment is the most important function of commercial banks. So a bank has to be very cautious while investing their funds in various sectors. The success of a bank heavily depends upon the proper management of it’s invest able funds.

Investment management of bank is guided by the investment policy adopted by the bank. The investment policy of the bank helps the investment operation of the bank to be efficient and profitable by minimizing the inherent risk.

Prabhakar Ghimire (1999) has published an article in which he has mentioned that most of the commercial banks of Nepal are ready to pay the penalty in spite of investing on rural, priority sector, poverty stricken and deprived areas. In the directives of Nepal Rastra Bank it is clearly mentioned and directed that all the commercial banks (under NRB) should invest 12% of its total investments to the priority sectors. Out of this 12%, they should invest 3% to the lower class of countrymen. However these commercial banks are unable to meet the requirements of NRB.

In the light of above, foreign joint venture banks use to justify that they don’t have any network among these priority areas. So, if investment is made to these areas, operation cost will be very high, that exceeds the penalty if investment won’t be

made. That is why they are interested in paying penalty rather than investing in priority sectors.

Another article published on The Kathmandu Post daily of 28th April 2004 entitled “Efficient Banking” by **L.D. Mahat**, in his article he has accomplished, the efficiency of banks can be measured using different parameters. The concept of productivity and profitability can be applied while evaluating efficiency of banks. The term productivity refers to the relationship between the quantity of inputs employed and the quantity of outputs produced. An increase in productivity means that more output can be produced from the same inputs or the same outputs can be produced from fewer inputs. Interest expense to interest income ratio shows the efficiency of banks in mobilizing resource at lower cost and investing in high yielding asset. In other words, it reflects the efficiency in use of funds.

According to Mr. Mahat, the analysis of operational efficiency of banks will help one in understanding the extent of vulnerability of banks under the changed scenario and deciding whom to bank upon. This may also help the inefficient banks to upgrade their efficiency and be winner in the situations developing due to slowdown in the economy. The regulators should also be concerned on the fact that the banks with unfavorable ratio may bring catastrophe in the banking industry.

Bajracharya (2047) through his article, “Monetary Policy and deposit mobilization in Nepal” has concluded that mobilization of domestic savings is one of the prime objectives of the monetary policy in Nepal. For this purpose commercial banks stood as the vital and more active financial intermediary for generation resources in the form of deposit of private sector so far providing credit to the investor’s in the different sectors of the economy.

The article entitled. “Role of Foreign Banks in Nepal” of Mr. Sunil Chopra concluded that joint venture banks are playing an increasing, dynamic and vital role in the economic development of the country. This will undoubtedly increase with time.

Ramesh Lal Shrestha (2045) in his article, “A study on deposits and credits of commercial bank in Nepal” concluded that the credit deposit ratio would be 51.30%, other things remaining the same, in 2004 AD, which was the lowest under the period of review. So he had strongly recommended that the commercial bank should try to give more credit entering new field as far as possible. Other wise, they might not be able to absorb even its total expenses.

2.2.2 Review of Thesis

Several researches have been performed on investment policy of commercial banks. Previous research studies on the various aspects of commercial banks such as investment policy, lending policy, capital structure are reviewed. Some of them are supposed to be relevant for this study so findings of such researches are presented below;

Dinesh Raj Shakya (1998), in his thesis paper, "Financial Analysis of joint venture Banks in Nepal, (with special reference to Nepal Arab Bank and Nepal Standard Chartered Bank)", has made an attempt to calculate and analyze the financial health of NABIL and SCBNL. His main objectives are to find out the correlation between total deposits and loan and advances of both Banks and to find the capital adequacy position. Actually he found the following findings.

- There existed highly positive correlation between total deposits and loan and advances of both NABIL and SCBNL.

- SCBNL's liquidity and profitability position was comparatively better than that of NABIL.
- Capital adequacy position of NABIL was more satisfactory than that of SCBNL in average, but NABIL's position was deterioration each year.

At the end of his study, he has recommended that both banks so should following all directions of Nepal Rastra Bank for the sake of national development.

Dinesh Raj has analyzed the financial position in his study. He has not tried to analyze the investment policy of the firms and risk analysis is not mentioned. He has mainly tried to show the correlation between the variables. His study is mainly concerned to two JVB's. He has not tried to analyze the financial performance of finance companies. His study period is up to fiscal year 1997/98. It cannot explain and interpret the financial position of Nepal Arab Bank Limited and Nepal Standard Chartered Bank Limited after fiscal year 1997/98.

Prabhakar Dhungana (2002), in his thesis, "A comparative study on investment policy of Nepal Bangladesh Bank and other joint venture banks" tries to compare the investment policy of NB Bank with HBL and Nepal SBI Bank.

Main objectives of study were;

- To study the fund mobilization and investment policy with respect to fee based off- balance sheet transaction and fund based on- balance sheet transaction.
- To evaluate the liquidity, efficiency of assets management and profitability position, the trends of deposit utilization towards total investment and loan and advances, growth ratios loan and advances and total investment with respective growth rate of total deposit and net profit.
- To study the various risks in investment.

Findings and conclusions of the study were as follows;

- NBBL has not good deposit collection, it doesn't have made enough cash and bank balance and it has made negligible amount of investments in government securities.
- The assets management ratios were highly variable which reveals NBBL has not followed stable policy.
- NBBL's ratios of OBS operation to loan and advances lower than that of HBL but its ratio is greater than that of NSBI.
- The profitability position of NBBL is comparatively not better than that of HBL but better than NSBI.
- The credit risk ratios and interest risk ratios of NBBL is higher than that of HBL and NSBI. Banks profitability solely depends on interest charged by a bank but the high interest rate risk of NBBL shows that bank is failure to maintain this.
- Trends of deposit collection, lending, investment and net profit were not better than HBL but better than NSBI.

Dina Shrestha (2003), has conducted her study on “Investment analysis of commercial banks, a comparative study on HBL and Nepal SBI Bank”, to assess the role and impact of investment on economic development of the country.

The major objectives of the study were;

- To analyze percentage of investment made by Himalayan Bank and NSBI bank in total investment made by commercial banks.
- To analyze investments trend, deposit trend and total income and their projection for next five years of Himalayan Bank and compare them with that of Nepal SBI Bank.
- To identify investment sectors of Himalayan bank and SBI Bank.

- To evaluate the liquidity, assets management efficiency, profitability and risk position of Himalayan Bank in comparison to that of Nepal SBI Bank.
- To study the relationship between investment and deposits of the bank.

The major findings of the study were;

- Mean ratio of HBL investment to total commercial banks investment is higher than that of Nepal SBI bank investment to total commercial banks. The portion of HBL investment is increasing every in the total investment of commercial banks.
- Mean current ratio of HBL is higher than that of Nepal SBI bank. HBL is nearer to standardized current ratio but both banks hadn't been able to maintain standardized current ratio.
- The mean ratio of investment to total deposit of HBL is higher than that of Nepal SBI bank. The mean ratio of investment plus loan and advances to deposit ratio of HBL is lower than that of Nepal SBI bank. But its ratio is more variable than that of Nepal SBI bank. The mean ratio of investment to total assets shows that HBL has mobilized its assets more in income generating assets than that of Nepal SBI bank. The mean ratio of investment on government securities of HBL is higher than that of Nepal SBI bank. Both HBL and Nepal SBI bank invest less on share and debentures of other companies.
- Profitability ratio of both commercial banks shows that both banks are running on profit. Mean return on loan and advances ratio, mean return on total assets, mean return on equity ratio shows that HBL has higher return than that of Nepal SBI bank but the ratio of Nepal SBI bank is more variable than that of HBL. But the mean ratio of interest income to total income of HBL is 83.21% and that of Nepal SBI bank is 86.37%. It shows that both bank's main income generating source is investment and loan and advances.

- Growth ratio of investment, Deposit, loan and advances and net profit of HBL is higher than that of Nepal SBI bank. It show that HBL is running successfully and been able to increase its profit in comparison to Nepal SBI bank.
- From the statistical analysis of financial data of both banks it is found that total investment and total deposit of HBL and Nepal SBI bank both has positive relation.

Raya T.K. (2003), in his thesis, “Investment Policy and Analysis of Commercial Banks in Nepal” made a comparative study of Standard Chartered Bank Ltd. with Nepal Investment Bank and Nepal Bangladesh Bank Ltd. His main objectives were as follows:

- To discuss fund mobilization and Investment policy of SCBNL in respect to its fee based off-balance sheet transaction and fund based balance sheet transaction.
- To evaluate the liquidity, efficiency and profitability and risk position.
- To evaluate trend of deposit, Investment, loan and advances and projection for next five years.

His main findings were as follows:

- Mean current ratio of SCBNL is slightly higher than that of NIBL and NBBL
- Mean ratio of cash and bank balance to total deposit of SCBNL is lower than NIBL and NBB.
- Liquidity position of SCBNL is comparatively better than NIBL and NBBL. It has lowest cash and bank balance to current ratio. SCBNL has a good deposit collection. It has made enough Investment on government securities but it has maintained low investment policy on loan and advances.

- SCBNL is comparatively average successful in its on balance sheet operation. But off balance sheet operation activities in compared to NIBL and NBBL has maintained the strong position.
- SCBNL is comparatively higher position than that of other banks, as well as it uses to provide interest to the customers for different activities.
- There is significant relationship between deposit of loan and advances and between assets and net profit of SCBNL.

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

Joshi Jyoti (2005), conducted a study on "Investment Policy of Commercial Banks in Nepal: A Comparative Study of Everest Bank Limited with NABIL Bank Limited and Bank of Kathmandu" with the objective of;

- To discuss fund mobilization and investment policy of EBL, NABIL and BOK Ltd.
- To evaluate the liquidity, efficiency and profitability and risk position.
- To evaluate the growth ratios of loan & advances, total investments with other financial variables.
- To analyze the trend of deposits utilization towards total investment and loan & advances.
- To conduct hypothetical test to find whether there is significant difference between the various important ratios of EBL & NABIL & BOK.

The research findings of the study are:

- The liquidity position of the EBL is comparatively better than NABIL and BOK. EBL has the highest cash and bank balance to total deposits, cash and bank balance to current assets ratio. NABIL has the lowest liquidity position than that of other two banks. EBL has good deposit collection and

- has made enough investment on government securities but it has maintained moderate investment policy on loan & advances.
- From the analysis of assets management ratio or activity ratio, it can be concluded that EBL is comparatively average or in between successful in compared to NABIL and BOK. The total investment of EBL is in between in compared to other two banks.
 - In the study, loan & advances to total deposit is higher in BOK but total investment to total deposit is higher in NABIL. Investment on shares and debentures to total working fund ratio is higher in BOK. But the coefficient of variation is higher in EBL.
 - In analysis of profitability, total interest earned to total outside assets of EBL is lowest at all. But overall analysis of profitability ratios, EBL is average profitable in comparison to other compared banks i.e., NABIL and BOK. From the viewpoint of risk ratio, EBL has higher capital risk ratio but average of credit risk ratio in compared to NABIL and BOK.

2.3 Review of Legislative Provision

In the section, the review of legislative framework (environment) 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 provision specified in the Commercial Bank Act 2031 and the rules and regulations formulated to facilitate the smooth running of commercial banks. The preamble of Nepal Bank Act 1994 clearly states the need of commercial bank in Nepal. "In the absence of any bank in Nepal the economic progress of the country was being hampered and causing inconvenience to the people and therefore with the objective of fulfilling that need by providing services to the people. For the betterment of the country this law is hereby promulgated for the establishment of the bank and operation".

As mentioned in this act, commercial banks will help in banking business by opening its branches in the different parts of the country under the direction of NRB, The main function of commercial banks established under this act will be, exchange money, to accept deposits and give loan to commercial and business activities.

NRB Rules Regarding Fund Mobilization of Commercial Bank

To mobilize bank's deposit in different sectors of the different parts of the nation to prevent them from the financial problems, central bank (NRB) any establish a legal framework by formulating various rules and regulations (prudential norms). The directives must have direct or indirect impact while making decision to discuss those rules and regulation, which are formulated by NRB in terms of investment and credit to priority sector, deprived sector, other institution, single borrower limit, CRR, loan loss provision, capital adequacy ratio, interest spread, productive sector investment. A commercial bank is directly related to the fact 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.

1. Provision 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%, HBL, NSBL, NBBL, EBL, are required to invest 2%, Bank of Kathmandu id required to invest 1.75%, NBCL is required to invest 0.75%. While newer commercial banks are required to invest 0.25% of their total loans & advances to the deprived sector.

2. Provision for Credit to the Priority Sector

NRB requires commercial banks to extend loan & advances, amounting at least to 12% of their total outstanding credit to the priority sector. Commercial banks credit to the deprived sector is also a part of priority sector credit. Under priority sector, credit to agriculture, credit to the cottage and small industries and credit to service are counted commercial banks' loan to the co-operatives licensed by the NRB is also to be computed as the priority sectors credit from the fiscal year 1995/96 onwards.

3. 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% 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.

4. Provision for the Single Borrower Credit Limit

With the objective of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size 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 35% in the case of fund-based credit and 50%, in the case of non-fund based credit. Such as the letter of credit, guarantee, acceptance letter, and commitment has been fixed is a proportion of capital funds of bank.

In the case of consortium financing, commercial banks are permitted to extend an additional 10% credit above the limit fixed by the NRB as before. In addition, Nepal Oil-Corporation, Agriculture-inputs Corporation and Nepal Food Corporation for their impost petrol, diesel, kerosene, fertilizer and food stuffs respectively have been removed from the restrictions of single borrower credit limit.

5. Directive to Raise Capital Funds (CAR)

The commercial banks under operation and having low capital base have been directed to raise their capital funds at a minimum level of rest. 500 million with 5 years of period i.e. by the end FY 2000/01. "Moreover, the commercial banks are allowed to include paid up capital and reserves for meeting the minimum capital requirement but they have to deduct the net loss from such funds if they are in loss.

Besides this, following the BASEL Capital Adequacy Accord, NRB has directed commercial banks to maintain at least 8% capital adequacy ratio (CAR) of their risk weighted assets (RWA) and off-balance sheet transaction i.e. letter of credit, letter of acceptance, Bonds, Guarantee etc. They are further required to classify their capital requirement in to (1) core capital (Tier 1) and (2) supplementary capital (Tier 2) and maintain at least 4% of their total capital in the form of core capital. As per the provision, risk weighted assets (RWA) are to be calculated by classifying assets and giving them different risk weights as presented below.

Allocation of Risk Factors

S. No.	Assets	Weight
1.	Cash balance	0
2.	<u>Bank Balance:</u> With NRB With other domestic banks With foreign banks	 0 20 20
3.	Call deposits	10
4.	<u>Investments:</u> Government papers Share & Debenture Other investment	 0 50 50
5.	Loan & Advances	100
6.	Fixed Assets	100
7.	<u>Contingent Liabilities:</u> Fully secured three months LC Commitment of more than a year Letter of acceptance, simple commitment and other LC transactions	 20 50 100

6. 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.

7. 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 10 million 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 10 million have to be classified as per maturity period.

Furthermore, NRB has directed commercial banks to maintain certain reserves for loans so classified. The existing loan loss provisioning is as follows:

Loan Loss Provisioning (LLP)

(In % of Overdue Loan)

Loan Classification	Loan Loss Provisioning:
Good	1
Acceptable	1
Evidence of substandard	5
Doubtful	25
Bad	50
Total	100

LLP has affected banks capability to extend loans and made them risk averse in issuing newer loans, particularly to the private sector and priority sector where the loan default is high.

8. 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. Which has caused lower financial intermediation. Therefore, NRB has required commercial banks to limit interest rate spread between deposit and lending rated to a maximum extent of 5%. NRB has also provided commercial banks with new calculation method of interest rate spread for a certain period recently.

2.4 Research Gap

We have had a plenty of research work done on the topic ‘Investment Practices’ of Nabil Bank Limited, Standard Chartered Bank Nepal Limited and Himalayan Bank Limited. And among those studies - some focused basically on the investment practices of the Nabil Bank Limited, some included the study on their deposit mobilization and some also

emphasized on the consistency of the investment. A comparative analysis of investment policies of NABIL, SCBNL and HBL, where these banks were crucial as it determine its strength and weakness on the aspect of investment policies with the NRB directives.

Here, this study also focuses on all the above issues related to the investment policy of the bank – with similar kind of analysis tools. However the previous study on their selection of the samples, i.e. on their selection of the banks – they have done random sampling without any base to its selection. Hence in this study the selection is categorized in a definable way which makes sense. The selection of the banks here is made on the basis of their establishment date, i.e. they are categorized on the basis of their establishment time. Besides this study on the investment practices on NABIL, SCBNL and HBL has covered the latest data which covers the information from 2002-2007; which makes it the latest version on this study with these banks.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology is the process of arriving at the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. Research is a systematic method of finding right solution for the problem whereas research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view. In other words research methodology refers to the various methods of practices applied by the researcher in the entire aspect of the study. It is the plan, structure and strategy of investigations conceived to answer the research question or test the research hypothesis. Research design is used to control variance (Wolff & Pant, 2002:51). It includes different dependent & independent variables, types of research design, research questions and hypothesis sample, data collection activities, technique of analysis etc.

3.1 Research Design

The present study is mainly based on two type of research design i.e. descriptive and analytical. Descriptive research design describes the general pattern of the Nepalese investors, business structure, problem of Investment policy etc. The analytical research design makes analysis of the gathered facts and information and makes a critical evaluation of it.

Finally research design is the plan, structure and strategy of investigations conceived so as to obtain answers to research questions and to control variances. To achieve this study descriptive and analytical research designs have been used.

3.2 Population and Sample

Under the study of investment practices of Nepalese commercial banks, the total number of commercial banks including domestic and joint venture banks operating in the Nepal is the population. At present there are twenty three licensed commercial banks are running in Nepal. All 25 licensed Nepalese CBs will consider as the total population out of them this study will be concern with three CBs as a sample. In the sample, banks are taken according to their rapid growth rate & gradually growth rate which head office is in Kathmandu by which we can compare about the investment practices of this bank. For this population NABIL, SCBNL and HBL have been selected as sample and its data related to investment practice are comparatively studied

3.3 Nature and Sources of Data

This study mainly based on secondary data of the concerned banks, Nepal Rastra Bank, SEBO, and different library are the providers of the data. The review of literature of the proposed study was based on the text books, official publications, journals, unpublished thesis, web site etc. The necessary data and information at macro level have been collected from relevant institutions and authorities such as NRB Ministry of Finance, NEPSE, SEBO and their respective publications similarly the required micro level data derived from annual reports of selected banks, SEBO and NEPSE. In addition to above, supplementary data and information were collected from different library such as library of Shankar Dev Campus, T.U. Central library, SEBO etc. The major sources of data and information are as follows;

NRB Economic Report, NRB

Non-Banking Financial Statistics, NRB

Banking and Financial Statistics, NRB

Economic Survey, Ministry of Finance

Annual Reports of Concern Commercial Banks (from 2002/03 to 2006/07)

Annual Report of SEBO Nepal

Trading Report of NEPSE

Journal of Finance

Journal of Business

Previous Research Studies, Dissertation and Articles on the Subject

Various Text Books

Different Library

Different Website Related to study

3.4 Methods of Analysis

To achieve the objective of the study, various financial and statistical tools have been used. The analysis of data will be done according to the pattern of data available. Due to limited time and resources, simple analytical statistical tools such as percentage, graph, Karl Pearson's coefficient of correlation are used in this study. Likewise, some financial tools such as ratio analysis and trend analysis have also been used for financial analysis.

The various calculated results obtained through financial and statistical tools are tabulated under the different headings. Then they are compared with each other to interpret the results.

3.4.1 Financial Tools

Financial tools are used to examine the strength and weakness of banks. In this study financial tools like ratio analysis and financial statement analysis have been used.

Ratio Analysis

Financial ratio is the mathematical relationship between two accounting figures. Ratio analysis is a part of the whole process of analysis of financial statements of any business or industrial concern especially to take output and credit decisions. Thus ratio analysis is used to compare a firm's financial performance and status to that of other firm's to it overtime. The qualitative judgment regarding financial performance of a firm can be done with the help of ratio analysis.

A. Liquidity Ratios

Liquidity ratios are used to judge the ability of banks to meet its short- term liabilities that are likely to mature in the short period. From them, much insight can be obtained into present cash solvency of the bank and its ability to remain solvent in the event of adversities. It is measurement of speed with which a bank's assets can be converted into cash to meet deposit withdrawal and other current obligations.

i. Current Ratio

The current ratio is the ratio of total current assets and current liabilities. It shows the relationship between current assets and current liabilities.

Mathematically it is represented as:

$$\text{Current ratio} = \frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

Where,

Current assets include cash and bank balance, money at call or short-term notice, loans and advances, investment in government securities and other interest receivable and miscellaneous current assets where as current liabilities include deposits and other accounts of short-term loan, bills payable, tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

The widely accepted standard of current ratio is 2:1 but accurate standard depends on circumstances in case of seasonal business ratio.

ii) Cash and Bank Balance to Total Deposit Ratio

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

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

Where, total deposits consist of deposits on current account; saving account; fixed account, money at call and other deposits.

iii) Cash and Bank Balance to Current Assets Ratio

This ratio measures the percentages of liquid assets i.e. cash and Bank balance among the current assets of a firm. Higher ratio shows the higher capacity of firms to meet the cash demand.

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

Hence, cash and banks balance includes cash in hand, foreign cash and foreign banks.

iv) Investment on Government Securities to Current Asset Ratio

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds. This ratio can be calculated

dividing the amount of investment on government securities by the total amount of current assets and can be stated as follows,

$$\text{Investment of Government Securities to Current Asset Ratio} = \frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

v) Loan and Advances to Current Assets Ratio

Bank's major earning source is loan. Loans are also taken as current assets as most of them are maturing within a period of one year and represent short term disbursement. A Bank should not allocate all funds in loan and advances so it must maintain in an appropriate level. In order to calculate the proportion of loan and advances to total current assets, the ratio is obtained by dividing loan and advances by current assets.

$$\text{Loan \& Advances to Current Assets Ratio} = \frac{\text{Total Loan \& Advances}}{\text{Current Assets}}$$

B. Assets Management Ratios (Activity Ratios)

Asset management ratio is here used to indicate how efficiently the selected banks have arranged and invested their limited resources .The following financial ratios related to investment policy is calculated under asset management ratio and interpretations are made by these calculations.

i) Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the selected banks and finance companies are utilizing their total collections/deposits on loan and advances for the purpose of earning profit.

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

ii) Total Investment to Total Deposit Ratio

Investment is one of the major sources of earning money. This ratio includes how properly firms' deposits have been invested on government securities and shares and debentures of other companies. This ratio can be computed dividing total amount of investment by total amount deposit collection, which can be shown as;

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

iii) Loan and Advances to Total Working Fund Ratio

The main element of total working fund is loan and advances. This ratio indicates the ability of selected banks and finance companies in terms of earning high profit from loan and advances. Loan and advances amount by total working fund. That is formulizing as;

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

Where, total working fund include total amount of assets given balance sheet which refers to current assets, net fixed assets, total loans for development banks and other sundry assets except off balance sheet items i.e., letter of credit, letter of guarantee etc.

iv) Investment on Government Securities to Total Working Fund Ratio

Investment on government securities to working fund ratio shows how much part of total investment is there on government securities in percentage. It can be obtained by;

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

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

Investment on shares and debentures to total working fund ratio shows the investment of Banks and finance companies on the shares and debentures of obtained dividing on shares and debentures by total working fund. That can be calculated as;

Investment on Shares and

$$\text{Debentures to Total Working Fund Ratio} = \frac{\text{Investment on Share \& Debenture}}{\text{Total Working Fund}}$$

C. Profitability Ratios

Profitability ratios are calculated to measure the efficiency of operation of a firm on term of profit. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio, better the financial performance of the bank and vice versa. Profitability position can be evaluated through following different way.

i) Return on Total Assets

This ratio establishes the relationship between net profit and total assets. This ratio is also called 'profit to assets ratio'. It is calculated dividing return on net profit/loss by total working fund and can expressed as;

$$\text{Return on Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

ii) Total Interested Earned to Total Outside Assets

This ratio shows the relationship between interests earned amount and total outside assets borrowed by the Bank. Total interest earned is that amount which is earned investing in different sectors by the Bank in an accounting year. Whereas,

total outsiders assets include loans (short term as well as long term), borrowings and bond amounts. This ratio is calculated as follows;

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

iii) Return on Loan and Advances Ratio

Return on loan and advances ratio shows how efficiency of the Banks and finance companies have utilized their resources to earn good return from provided loan and advances. This ratio is computed to divide net profit/loss by the total amount of loan and advances. It can be mentioned as;

$$\text{Return on Loan \& Advances Ratio} = \frac{\text{Net Profit or Loss}}{\text{Total Loan \& Advances}}$$

iv) Total Interest Earned to Total Working Fund Ratio

Total interest earned to total working fund is calculated to find out the percentage of interest earned to total assets. Higher the ratio indicates the better performance of financial institutions in the form of interest earning on the better working fund. This ratio is calculated dividing total interest earned from investment by total working fund and is mentioned as below;

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

v) Total Interest Paid to Total Working Fund Ratio

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

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

vi) Return on Equity Ratio (ROE)

The ratio measures how efficiently the banks have used the funds of the owners. The ratio is calculated by dividing net profit by total equity capital (net worth). This can be started as,

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit}}{\text{Total Equity Capital}}$$

D. Growth Ratios

Here, the growth ratios represent how well the commercial banks are maintaining their economic and financial condition. The higher ratios represent the better performance of the selected firms to calculate, check and analyze the expansion and growths of the selected Banks of the following growth ratios are calculated. Growth ratios are directly related to the fund mobilization and investment of those firms.

- a) Growth Ratio of Total Deposit
- b) Growth Ratio of Loan and Advances
- c) Growth Ratio of Total Investment
- d) Growth Ratio of Net Profit

3.4.2 Statistical Tools

Statistical tools help to find out the trends of financial position of the bank. It also analyzes the relationship between variables and helps banks to make appropriate investment policy regarding to profit maximization and deposit collection, fund utilization through providing loan & advances or investment on other companies. Ranges of statistical tools are also used to analyze the collected data and to achieve the objectives of the study. Simple analytical tools such as standard deviation, Karl Pearson's coefficient of correlation, trend analysis adopted which are as follows:

A. Arithmetical Mean

It represents the entire data by a single value. It provides the gist and gives the bird's eye view of the huge mass of unwieldy numerical data. It is calculated as:

$$\bar{X} = \frac{\sum X}{N}$$

Where:

$$\bar{X} = \text{Arithmetic mean}$$

$$N = \text{Number of observations}$$

$$\sum X = \text{Sum of observations}$$

B. Standard Deviation

Standard deviation is an important and widely used to measure dispersion. A standard deviation is the positive square root of the arithmetic mean of the squares of the deviations of the given observations from their arithmetic mean. It is denoted by the letter σ (sigma). In this study standard deviation of different ratios are calculated.

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

Where,

$$= \text{Standard Deviation}$$

$$\frac{\sum X^2}{N} = \text{Sum of Squares of Observation}$$

$$\left(\frac{\sum X}{N}\right)^2 = \text{Sum of Squares of Mean}$$

C. Coefficient of Variation

The Coefficient of variation is the most commonly used measure of relative variation. It is the relative measures of dispersion, comparable across distribution,

which is defined as the ratio of the standard deviation to the mean expressed in percent. It is used in such problems where the researcher wants to compare the variability of data more than two years. A series with smaller C.V. is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the others and vice versa. It is calculated as;

$$\text{Coefficient of variation} = \frac{\text{Standard Deviation}}{\text{Mean}} \times 100\%$$

$$\text{C.V.} = \frac{\sigma}{\bar{X}}$$

Where,

$$\bar{X} = \text{Mean}$$

$$\sigma = \text{Standard Deviation}$$

$$\text{C.V.} = \text{Coefficient of Variation}$$

D. Coefficient of Correlation

Coefficient of correlation is the mathematical method of measuring the degree of association between the two variables i.e. one dependent and one independent. This analysis interprets and identifies the relationship between two or more variables. In the case of highly correlated variables, the effect of none variable may have effect on other correlated variable. Under this topic, this study tries to find out relationship between the following variables:

Coefficient of correlation between Deposit and Loan and Advances

Coefficient of correlation between Total Deposit and Total Investment

Coefficient of correlation between Total Loan and Advance Assets and Net Profit

The above analysis tools analyze the relationship between these the relevant variables and helps the bank to make appropriate policies regarding deposit

collection, fund utilization (loan and advances and investment) and profit maximization.

To find out those relationships, the following formula is used:

$$\text{Coefficient of correlation (r)} = \frac{\sum xy}{N \cdot s_x \cdot s_y}, \quad \text{Where, } x = (X - \bar{X}), y = (Y - \bar{Y})$$

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

E. Trend Analysis

Under this topic we analyze and interpret the trend of deposits, loan and advances, investment and net profit of NABIL, SCBNL and HBL that helps to make forecasting for next five years. The following trend value analyses have been used in this study.

Trend analysis of total deposit, loan and advances, total investment and net profit
The trends of related variables can be calculated as, $Y = a + bx$

F. Hypothesis Testing

To test the set hypotheses, t-test has been employed. Under Null Hypothesis (H_0), t-test statistics is:

$$t = \frac{\bar{X} - \mu}{S/\sqrt{n}}$$

where, \bar{X} = average return of the common stock of sample under study

μ = average market return (assumed as population)

S = sample standard deviation

n = number of observation

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

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

4.1 Financial Tools

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

- a) Liquidity Ratio
- b) Assets management Ratio
- c) Profitability Ratio
- d) Risk Ratio
- e) Growth Ratio

4.1.1 Liquidity Ratio

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

The following ratios are evaluated and interpreted under liquidity ratios.

(i) Current Ratio

Current ratio indicates the ability of a bank to meet its current obligation. This is the broad measure of liquidity position of the financial institution. Current ratio is derived by dividing current assets by current liabilities.

$$\text{Current Ratio} = \frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

Where,

Current assets consist of cash and bank balance, money at call or short-term notice, loan and advances, investment in government securities and other interest receivable and other miscellaneous current assets.

Current liabilities consist of deposits, loan and advances, bills payable, tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

Table 4.1
Current Ratio (Times)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	1.067	1.099	1.113	1.0732	1.155	1.1016	0.035	3.21%
SCBNL	0.971	0.9698	1.0226	0.981	0.946	0.978	0.028	2.86%
HBL	0.854	0.993	1.098	1.103	1.446	0.898	0.498	55.49%

Sources: Appendix 1(i)

The above table shows that current assets of NABIL is higher than current liabilities and ratios are in increasing trend from 2002/03 to 2004/05 and again increases in 2006/07. SCBNL has lower current assets than current liabilities in FY 2002/03, 2003/04, 2005/06, 2006/07 and higher C.A in 2004/05, it means SCBNL has not sound ability to pay short term obligations due to more liabilities. In case of HBL in FY 2002/03 to 2003/04 it's current assets if lower than current liabilities but from FY 2005/06 to 2006/07 it's current assets is greater than current liabilities and HBL ratio is in increasing trend during the study period.

In average liquidity position of NABIL is greater than other banks i.e. $1.106 > 0.978 > 0.898$. So, NABIL is sound in liquidity position than other banks.

Likewise the co-efficient of variation (C.V) of NABIL is less than HBL and slightly higher than SCBNL i.e. $3.21\% > 2.86\%$ and $3.21\% < 55.49\%$. It can be said that current ratio of NABIL is more consistent than HBL and less consistent than SCBNL.

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

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

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

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

Where,

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

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

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	8.51	6.87	3.83	2.87	5.93	5.60	2.27	40%
SCBNL	8.06	9.56	5.75	5.53	8.21	7.42	1.73	24%
HBL	9.42	9.10	8.12	6.48	5.85	7.79	1.61	21%

Sources: Appendix I(ii)

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

In average, NABIL has maintained lower cash & bank balance to total deposit ratio than SCBNL i.e. $5.60 < 7.42 < 7.79$. It states that cash and bank balance in liquidity position of NABIL is lower than other two banks. The C.V of NABIL is 40%, which is comparatively higher than that of SCBNL 24% and HBL 21%. So that NABIL shows the less consistent than that of SCBNL and HBL.

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

(iii) Cash and Bank Balance to Current Assets Ratio

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

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

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

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	8.25	6.81	3.74	3.07	6.06	5.59	2.21	38%
SCBNL	8.85	10.76	5.53	5.94	9.18	7.91	2.04	26%
HBL	12.14	10.76	9.45	7.42	6.33	9.22	2.37	26%

Sources: Appendix I(iii)

Above table exhibits that cash and bank balance to current assets ratio of NABIL has followed decreasing trend from FY 2002/03 to 2005/06 and increased in FY 2005/06. SCBNL has followed fluctuating trend from FY 2002/03 to 2005/06 & it followed increasing trend from 2005/06 to 2006/07. In case of HBL it has followed decreasing trend.

While examining the mean ratio, NABIL had maintained 5.59 which is less than SCBNL and HBL i.e. 7.91 and 9.22. It states that liquidity position of NABIL is lower than other two banks. In this regard, the co-efficient of variation between the above ratios of NABIL is 38% which is comparatively higher than that of SCBNL & HBL i.e., $38% > 26\%$ it shows less consistent of NABIL than that of SCBNL & HBL. It shows the current ratios are less heterogeneous than that of other two banks.

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

(iv) Investment on Government Securities to Current Assets Ratio

The commercial banks are interested to invest their collected funds in various government securities issued by government. Though government securities are not so much liquid as cash & bank balance, they can be easily sold in the market

or they can be converted into cash in other ways. The main purpose of this ratio is to examine the portion of commercial banks current assets that is invested on different government securities.

Investment on Government Securities to Current Assets Ratio

$$= \frac{\text{Investment Govt. Securities}}{\text{Current Assets}}$$

Table 4.4

Investment on Government Securities to Current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	25.87	25.78	16.12	12.69	21.06	21.36	5.85	28.83%
SCBNL	38.52	39.56	37.28	40.22	32.27	36.97	3.23	8.75%
HBL	20.54	18.45	25.68	22.22	23.24	22.02	2.72	12.36%

Sources: Appendix I(iv)

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

In overall, the mean ratio of investment n govt. securities to current assets ratio of NABIL is lower than that of SCBNL & HBL i.e. $21.36 < 22.02 < 36.97$. It means NABIL had invested its fewer portions of current assets on government securities, than other two banks. On the other had C.V in ratios of NABIL is greater than that of SCBNL & HBL i.e. $28.83\% > 12.36\% > 8.75\%$. Which means the variability's of ratios of NABIL is less consistent than that of SCBNL & HBL.

It can be concluded that NABIL has invested its less portion of current assets as government securities than that of SCBNL & HBL. NABIL's liquidity portion

from the point of view of investment on government securities is poorer than that of other two banks.

(v) Loan and Advances to Current Assets Ratio

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

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

$$\text{Loan and Advances to Current Assets Ratio (\%)} = \frac{\text{Loan \& Advances}}{\text{Current Assets}}$$

Table 4.5

Loan & Advances to Current Assets Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	55.93	57.50	70.71	71.26	68.11	64.70	7.40	11.45%
SCBNL	33.34	31.40	42.14	41.61	47.68	39.33	6.58	16.74%
HBL	66.56	69.45	63.07	68.08	59.59	65.34	4.00	6.12%

Sources: Appendix 1(v)

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

While examining the mean ratio, NABIL has maintained 64.70 which is slightly lower than HBL i.e. 65.34 and higher than SCBNL i.e. 39.33. On the other side co-efficient of variation of NABIL 11.45% is lower than SCBNL and higher than HBL i.e. $16.74 > 11.45 > 6.12$.

From the above table it can be concluded that NABIL has succeeded to invest its fund in loan and advances in comparison to SCBNL but seen little weak in comparison to HBL in point of view of meant & C.V.

4.1.2 Assets Management Ratio (Activity Ratio)

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

(i) Loan and Advances to Total Deposit Ratio

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

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

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

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	57.67	5.8	72.57	66.79	66.61	34.33	5.72	8.89%
SCBNL	30.36	30.30	42.12	38.75	42.61	36.86	5.47	14.84%
HBL	51.62	58.70	54.21	59.50	56.57	56.12	2.94	5.24%

Sources: Appendix I(vi)

In the table 4.6, all the banks have fluctuating trend regarding the ratios. During the study period, NABIL has highest ratio of 72.57 is FY 2004/05 ad lowest ratio 57.67 is FY 2002/03, SCBNL has highest ad lowest ratios 42061 and 30.30 is FY 2006/07 and 2003/04 and HBL has highest & lowest ratios 59.50 and 51.62 is FY 2005/06 and 2002/03 respectively.

In over all men ratio of loan & advances to total deposit of NABIL is higher than that of SCBNL & HBL is side co-efficient of variation of above banks. NABIL has 8.89%, which is comparatively higher than 5.24% of HBL and less than 14.84% of SCBNL. It shows that HBL is more than other banks.

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

(ii) Total Investment to Total Deposit Ratio

A commercial bank mobilizes its deposits by investing its fund is different securities issued by government and other financial or no financial institutions. Now, effort has been made to measure the extent to which the banks are successful is mobilizing the total deposits on investment.

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

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

Table 4.7
Total Investment to Total Deposit Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	44.85	41.33	29.27	31.93	38.32	37.14	5.79	1.6%
SCBNL	54.47	53.68	50.18	55.71	55.10	53.83	1.94	3.6%
HBL	48.44	42.22	47.20	41.10	39.34	43.66	3.54	8.1%

Sources: Appendix I(vii)

The above table exhibits that the ratio of NABIL is in decreasing trend from 2002/03 to 2004/05 and is increasing trend from 2005/06 to 2006/07. In the case of SCBNL it's also in decreasing trend from 2002/03 to 2004/05 and increases in FY 2005/06 & 2006/07. And in case of HBL its ratio has fluctuating trend which is 48.44, 42.22, 47.20, 41.10 and 39.35 in the year 2002/03, 2003/04, 2004/05, 2005/06 & 2006/07.

In average NABIL has maintained lower, mean value i.e. 37.14 < 43.66 < 53.83 than other two banks. SCBNL has maintained the highest mean value of 53.83.

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

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

(iii) Loan & Advances to Total Working Fund Ratio

Loan & advances is an important part of total assets (total working fund). Commercial bank must be very careful in mobilizing its total assets. As loan and advances in appropriate level to generate profit this ratio reflects the extent to which the commercial banks are successful in mobilizing their assets, loan & advances for the purpose of income generation. A high ratio indicates better mobilization of funds as loan and advances and vice versa.

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

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

Table 4.8
Loan & Advances to Total Working Fund Ratio %

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	46.82	48.91	61.60	57.87	57.04	54.45	6.29	11.56%
SCBNL	27.24	27.11	37.19	34.67	36.73	32.59	5.03	15.44
HBL	44.82	50.21	46.60	51.54	49.53	48.54	2.75	5.66

Sources: Appendix I(viii)

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

On the basis of mean ratios, NABIL has maintained the higher ratio than that of SCBNL & HBL i.e. $54.45 > 48.54 > 32.59$. So, NABI is in good condition to mobilize its total working fund as loan and advances. Co-efficient of variation of NABIL is less than SCBNL and higher than HBL i.e. $11.56\% > 15.44\% > 5.66\%$. It indicates more uniform of NABIL is comparison to SCBNL and very less uniform than HBL.

So that NABIL's fund mobilization in terms of loan & advances with respect of total working fund is more satisfactory than that of other two banks.

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

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

Investment an Government Securities to Total Working Fund Ratio

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

Table 4.9

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

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	21.67	21.93	14.04	10.31	17.64	17.12	4.99	29%
SCBNL	31.47	33.62	31.90	33.54	24.85	31.28	30.70	11.8%
HBL	13.82	13.34	18.94	16.82	18.81	16.35	2.67	16.31%

Sources: Appendix I(ix)

From the above table it is clearly seen that investment on government securities to working fund ratio of NABIL, SCBNL & HBL is in fluctuating trend.

On the basis of mean, NABIL has maintained slightly higher ratio than HBL and lower ratio than SCBNL i.e. $17.12 > 16.35 < 31.28$. The co-efficient of variation of NABIL is higher than that of SCBNL & HBL i.e. $29\% > 16.31\% > 11.8\%$.

From the above analysis, it can be concluded that NABIL's fund mobilization in terms of government securities with respect of total working fund is not more satisfactory than that of other two banks. And NABIL is not satisfactory of ratios point of view is fund mobilizing term and less homogeneous.

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

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

Investment on shares and debentures to total assets ratio reflects the extent to which the banks are successful to mobilize their assets on purchase of shares and

debentures of other companies to generate incomes and utilize their excess fund. A high ratio indicates more portion of investment on share and debentures out of total working fund and vice versa.

Investment on Shares and Debentures to Total Working Fund Ratio

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

Table 4.10

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

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	0.13	0.13	2.56	0.47	1.053	0.87	1.02	11.7%
SCBNL	0.05	0.05	0.06	0.06	0.16	0.076	0.047	62.13%
HBL	0.14	0.13	0.14	0.13	0.21	0.15	0.03	22.6%

Sources: Appendix 1(x)

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

On the basis of mean ratios, NABIL has higher investment than other two banks i.e. 0.87%>0.15>0.076. Moreover, CV of NABIL is less than other two banks i.e. 11.7 %< 22.6 %< 62.13%, which states that the position of NABIL is better in this regard.

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

4.1.3 Profitability Ratio

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

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

(i) Return on Total Working Fund Ratio

It measures the profit earning capacity by utilizing available resources ie, total assets.

Return will be higher if the banks working fund is well managed and are efficiently utilized, maximizing taxes with in legal options available will also improve the return.

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

Where,

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

Table 4.11
Return on Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	2.51	2.72	3.02	2.84	2.47	2.71	0.23	8.47%
SCBNL	2.42	2.27	2.46	2.55	2.42	2.42	0.10	4.18%
HBL	0.88	1.02	1.06	1.50	1.43	1.18	0.27	23.05%

Sources: Appendix I(xi)

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

In the mean ratios, it is observed that the NABIL has the highest mean value i.e. $2.71 > 2.42 > 1.18$. So, NABIL is highly efficient to earn net profit and return as well. On the other hand C.V of NABIL is less than HBL and higher than SCBNL i.e. $8.47\% < 23.05\% > 4.18\%$.

From the above analysis it can be concluded that NABIL is in strong position in the earning capacity by utilizing available resources than other banks. It's less consistent and homogeneous than SCBNL & more than HBL.

(ii) Total Interest Earned to Total outside Assets Ratio

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

$$\text{Total Interest Earned to Total outside Assets} = \frac{\text{Total Interest Earned}}{\text{Total Outside Asset}}$$

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

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

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	7.38	7.14	7.20	6.86	6.50	7.02	0.34	4.89%
SCBNL	14.9	5.86	5.93	5.46	5.87	7.66	4.08	53.72%
HBL	5.71	5.61	5.75	6.10	6.10	5.85	0.23	3.94%

Sources: Appendix I(xii)

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

On the basis of mean ratios NABIL is less than SCBNL $7.02 < 7.66$ & higher than HBL i.e. $7.02 > 5.85$ in respect to total interest earned to total outside assets. On the other hand, C.V of NABIL is less than that of SCBNL and higher than HBL.

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

(iii) Total Interest Earned to Total Working Fund Ratio

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

$$\text{Total interest earned to total working fund ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

Table 4.13

Total Interest Earned to Total Working Fund Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	6.15	5.98	6.22	5.87	5.88	6.01	0.17	2.84%
SCBNL	4.81	4.41	4.83	4.61	5.94	4.72	0.21	4.45%
HBL	4.96	4.84	5.01	5.32	5.17	4.96	0.22	4.40%

Sources: Appendix I(xiv)

The above comparative table reveals that NABIL & SCBNL has followed fluctuating trend during the study period. In the case of HBL it is in fluctuating trend from FY 2002/03 to FY 2005/06 and decreasing is 2006/07 like wise 4.96, 4.84, 5.01, 5.32, 5.17 is FY 2002/03 to 2006/07.

The mean of NABIL is greater than that of other two banks i.e. $6.01 > 4.96 > 4.72$. So, we can say that NABIL is in strong position to generate interest income from the total working fund than other two banks. On the other hand, C.V of NABIL is lower than that of SCBNL & HBL i.e. $2.84\% < 4.40\% < 4.45\%$. It means more consistent their two banks.

Thus, it can be concluded that the ratio of total interest earned to total working fund ratio of NABIL is satisfactory is compared to other two banks. That means the total interest earned to total working fund ratio of NABIL is stable in comparison to SCBNL & HBL.

(iv) Total Interest Paid to Total Working Fund Ratio

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

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

Table 4.14

Total Interest Paid to Total Working Fund Ratio

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	1.91	1.70	1.42	1.55	2.04	1.72	0.25	14.76%
SCBNL	1.22	1.20	1.16	1.20	1.44	1.24	0.11	9.02%
HBL	2.31	1.91	1.95	2.12	2.24	2.11	0.17	8.3%

Sources: Appendix 1(xv)

The above comparative table reveals that total interest paid to total working fund ratio of NABL and SCBNL is in decreasing trend at first 3 years i.e. FY 2002/03 to 2004/05 and then it is in increasing trend from 2005/06 to 2006/ 07 . In case of HBL its ratio is in decreasing trend from FY 2002/03 to 2003/04 and in increasing trend from 2004/05 to 2005/06.

The mean ratio of NABIL i.e. 1.72 is average between SCBNL and HBL i.e. 1.24 and 2.11. It means NABIL pays average interest than other two banks during the study period. On the other hand NABIL'S coefficient of variable is higher i.e. 14.76% in comparison to SCBNL and HBL i.e. 9.02% and 8.3%. It indicates that NABIL ratio is less consistent than other two banks.

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

(v) Return on Loan & Advances Ratio

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

$$\text{Return Loan \& Advances Ratio} = \frac{\text{Net Profit}}{\text{Loan \& Advances}}$$

Table 4.15
Return on Loan & Advances Ratio (%)

Banks	Fiscal Year					Mean	S.D	C.V (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	5.37	5.56	4.90	4.92	4.33	5.02	.48	9.5%
SCBNL	8.9	8.41	6.62	7.37	6.6	7.58	1.64	13.77%
HBL	1.96	2.03	2.30	2.90	2.89	2.42	0.45	18.8%

Sources: Appendix I(xiii)

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

The mean of the NABIL is higher than HBL i.e. 5.02>2.42 and lower than SCBNL i.e. 5.02<7.58 is respect to return on loan & advances ratio. On the other hand C.V

of NABIL is less than that of other two banks. So NABIL has maintained high return with variability ratios.

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

(vi) Return on Equity

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

$$\text{Return on equity} = \frac{\text{Net Profit}}{\text{Total Equity Capital}}$$

Table 4.16
Return on Equity Ratio (%)

Banks	Fiscal Year					Mean	SD	CV (%)
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	35.12	30.77	31.30	33.91	32.79	32.88	1.42	4.32%
SCBNL	37.03	35.96	33.89	37.55	32.68	35.42	2.08	5.86%
HBL	19.95	19.87	19.99	25.90	36.89	24.52	7.38	30.10%

Sources: Appendix I(xvi)

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

case of HBL ratio, it followed decreasing trend is FY 2002/03 to FY 2003/04 and then increased from FY 2004/05 to 2006/07.

In the mean ratios, it is observed that NABIL has the average mean value i.e., 32.88 which is less than 35.42 of SCBNL and higher than 24.52 of HBL. The coefficient of variation of NABIL is less than other two banks i.e., $4.32\% < 5.86\% < 30.10\%$.

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

4.1.4 Growth Ratio

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

- (i) Growth Ratio of Total Deposit.
- (ii) Growth of Total Loan and Advances.
- (iii) Growth of Total Investment.
- (iv) Growth Ratio of Total Net Profit.

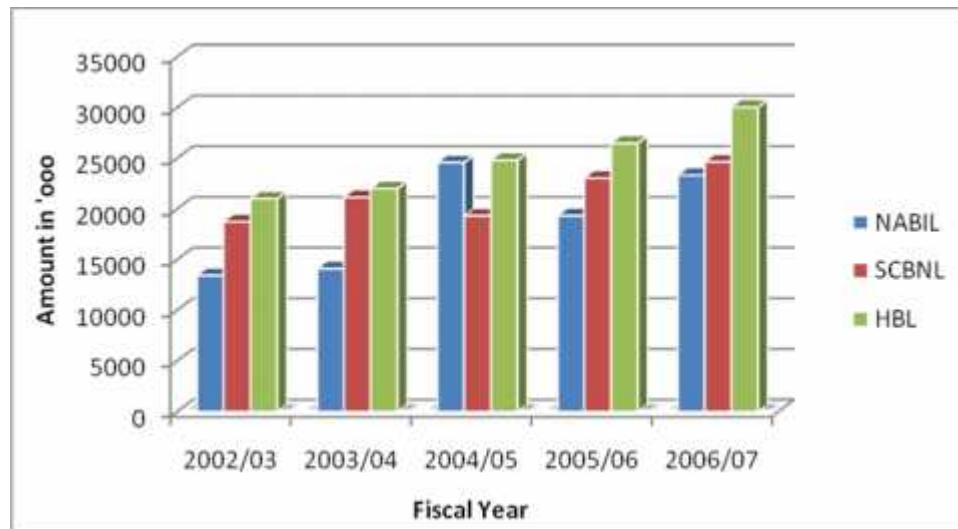
(i) Growth Ratio of Total Deposit

Table 4.17
Growth Ratio of Total Deposit (%)

Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	13448	14119	24587	19347	23342	14.74%
SCBNL	18756	21161	19335	23061	24647	7.06%
HBL	21007	22010	24814	26490	30048	9.36%

Sources: Appendix I(xvii)

Figure 4.1
Growth Ratio of Total Deposit



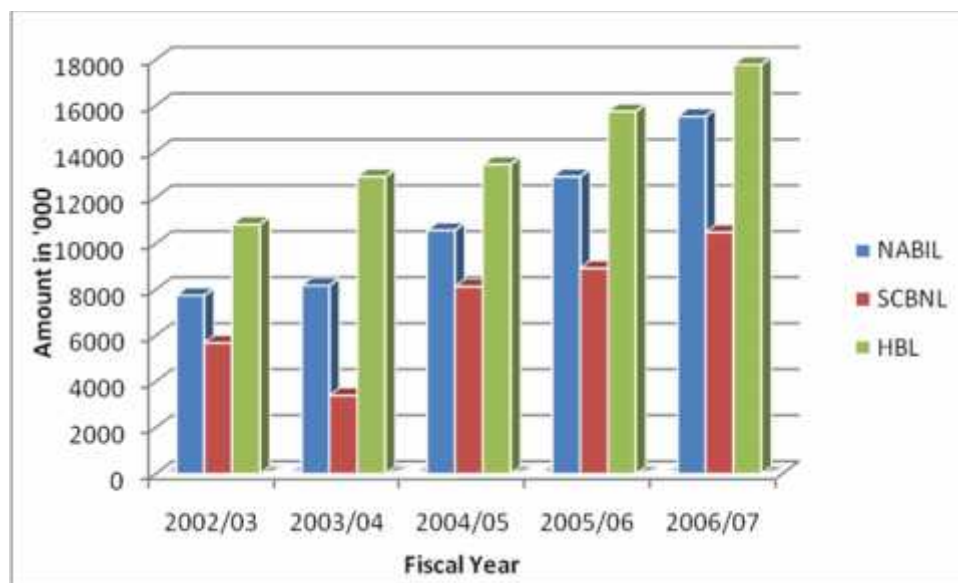
The above comparative table shows that the growth ratio of NABIL deposit is higher than that of SCBNL and HBL i.e. $14.74\% > 9.36\% > 7.06\%$. It means that the performance of NABIL to collect greater deposit compared to SCB & HBL is better year-by-year.

(ii) Growth of Total Loan and Advances

Table 4.18
Growth Ratio of Loan and Advances (%)

Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	7756	8190	10586	12923	15546	18.98%
SCBNL	5696	3410	8143	8935	10502	16.53%
HBL	10845	12920	13451	15762	17794	13.18%

Figure 4.2
Growth Ratio of Loan and Advances



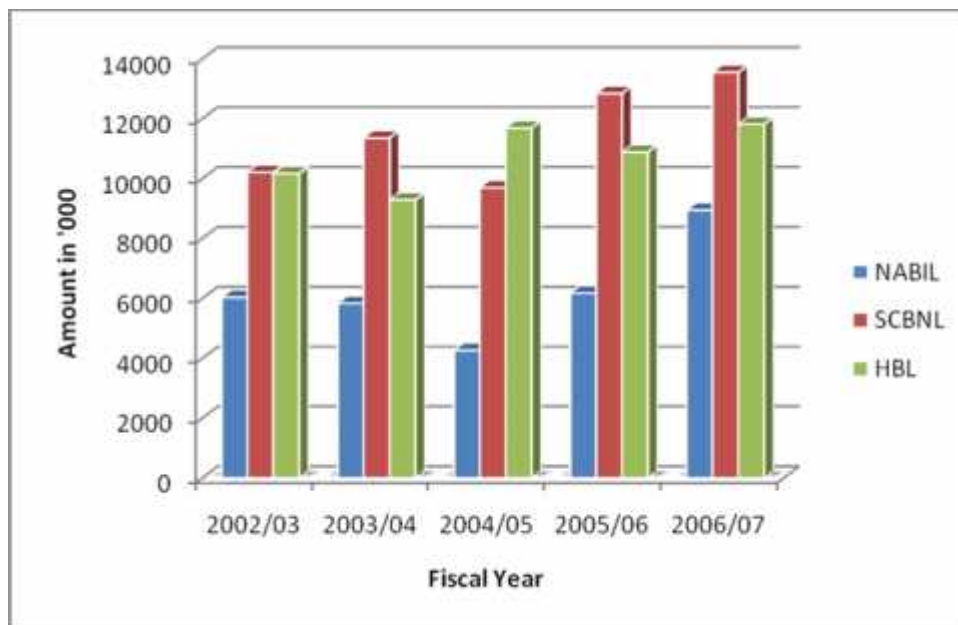
The above comparative table no. 19 shows that the growth ratio of NABIL has maintained a ratio of 18.98% whereas SCBNL & HBL maintained 16.53% and 13.18% respectively. It means the performance of HBL to grant loan and advances in comparison to other banks is better year-by-year.

(iii) Growth of Total Investment

Table 4.19
Growth Ratio of Total Investment

Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	6031	5836	4270	6179	8945	10.35%
SCBNL	10216	11360	9703	12848	13553	7.32%
HBL	10175	9292	11692	10889	11823	3.82%

Figure 4.3
Growth Ratio of Total Investment



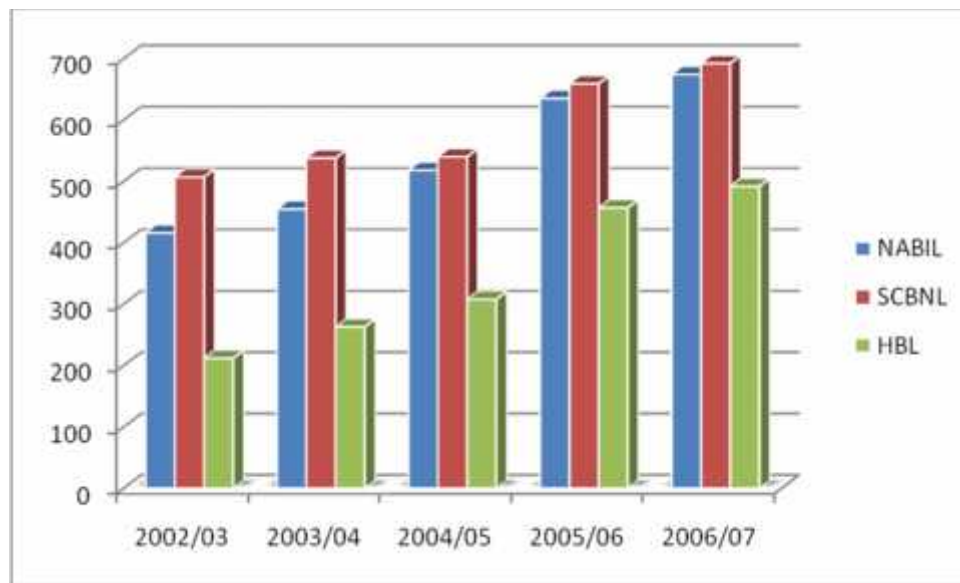
The above comparative table shows that growth ratio of total investment of NABIL is higher than SCBNL & HBL i.e. $10.35\% > 7.32\% > 3.82\%$. So we can say that NABIL has better growth level for investment sector even FY 2003/04 to 2004/05 has decreasing growth amount and then increasing growth amount there after.

(iv) Growth Ratio of Total Net Profit

Table 4.20
Growth Ratio of Total Net Profit

Banks	Fiscal Year					Growth Ratio (%)
	2002/03	2003/04	2004/05	2005/06	2006/07	
NABIL	416	455	518	635	674	12.82%
SCBNL	507	538	540	659	692	8.08%
HBL	212	263	308	457	492	23.43%

Figure 4.4
Growth Ratio of Total Net Profit



The above comparative shows that the growth ratio of NABIL's net profit i.e. 12.82% is lower than HBL i.e. 23.43% and higher than SCBNL i.e. 8.08%. In the view of net profit NABIL has average position in comparison to other two banks.

4.2 Statistical Tools

Under this heading some statistical tools such as co-efficient of correlation analysis between different various, trend analysis of deposits, loan and advances,

investment and net profit as well as hypothesis test are used to achieve the objectives of the study.

4.2.1 Coefficient of Correlation Analysis

(i) Coefficient of Correlation between Deposit and Loan & Advances

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

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

Table 4.21
Correlation between Total Deposits and Loan and Advances

Evaluation Criteria				
Banks	r	r²	P.E.	6 P.E.r
NABIL	0.97	0.9409	0.0178	0.1068
SCBNL	0.83	0.6889	0.0938	0.5628
HBL	0.96	0.9216	0.0236	0.1416

Sources: Appendix 2(i, iv, vii)

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

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

Likewise, in the case of SCBNL & HBL, it has high degree of positive correlation between deposit and loan & advances., However by application of coefficient of determination (r^2) it indicates that SCBNL and HBL has 68.89% and 92.16% respectively of the variation in the dependent variable i.e. loan and advances has been explained by the independent variable i.e. deposits. Moreover considering the probable error, in case of SCBNL and HBL, (r) is greater than 6 P.E it can be said that the value of (r) is significant i.e., there is significant relationship between total deposit and loan & advances.

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

(r^2) than those of SCBNL & HBL. Which indicates that it is in strong condition to grand loan & advances for mobilizing the collected deposits in comparison to other two banks.

(ii) Coefficient Of Correlation between Deposit and Total Investment

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

The table 4.22 shows the value of r, r^2 , P.E and 6P.E between deposit and total investment of NABIL, SCBNL & HBL for the study period of 2002/03 to 2006/07.

Table 4.22
Correlation between Deposit and Total Investment

Evaluation Criteria				
Banks	r	r^2	P.E.	6 P.E.
NABIL	0.82	0.6724	0.0988	0.5928
SCBNL	0.98	0.9604	0.0119	0.0714
HBL	0.79	0.6241	0.1134	0.6804

Sources: Appendix 2(ii, v, viii)

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

6P.E. i.e. 0.5928. So, we can say that there is significant relationship between total deposits and total investments.

On the other hand in case of SCBNL and HBL, both have high degree of correlation between deposit and total investment. However, by the application of coefficient of determination i.e. r^2 it indicates SCBNL to be 96.04% and HBL to be 62.41% respectively of the variation in the dependent variable i.e. total investment has been explained by the independent variables i.e. deposit more over considering the probable error since the value of r i.e. 0.98 of SCBNL and 0.79 of HBL is more than 6 P.E. So we can say that there is significant relationship between total deposit and total investment of SCBNL & HBL.

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

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

Coefficient of correlation 'r' between outside assets and net profit measures the degree of relationship between these two variables. Here, outside assets are independent variable (x) and net profit is dependent variable (y). The purpose of computing co-efficient of correlation between outside assets and net profit is to

find out whether the net profit is significantly correlated with respective total assets or not.

Table 4.23

Co-efficient of Correlation between Outside Assets and Net Profit

Evaluation Criterions				
Banks	r	r²	P.E.	6 P.E.
NABIL	0.93	0.8649	0.0408	0.2448
SCBNL	0.83	0.6889	0.0938	0.5628
HBL	0.96	0.9216	0.0236	0.1416

Sources: Appendix 2(iii, vi, ix)

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

Similarly, co-efficient of correlation between outside assets and net profit in case of SCBNL and HBL is found to be 0.83 and 0.96 respectively, which indicates high degree of correlation between these two variables. On the other hand, considering the value of co-efficient of determination r^2 i.e. it indicates SCBNL to be 68.89% and HBL to 92.16% respectively of the variation in the dependent variable i.e. net profit has been explained by the independent variables i.e. outside assets moreover, considering the probable error since the value of r i.e. 0.83 of

SCBNL & 0.96 of HBL is more than 6 P.E. So we can say that there is significant relationship between net profit and total outside assets of SCBNL & HBL.

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

4.2.2. Trend Analysis and Projection for Next Five Years

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

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

(i) Trend Analysis of Total Deposit

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

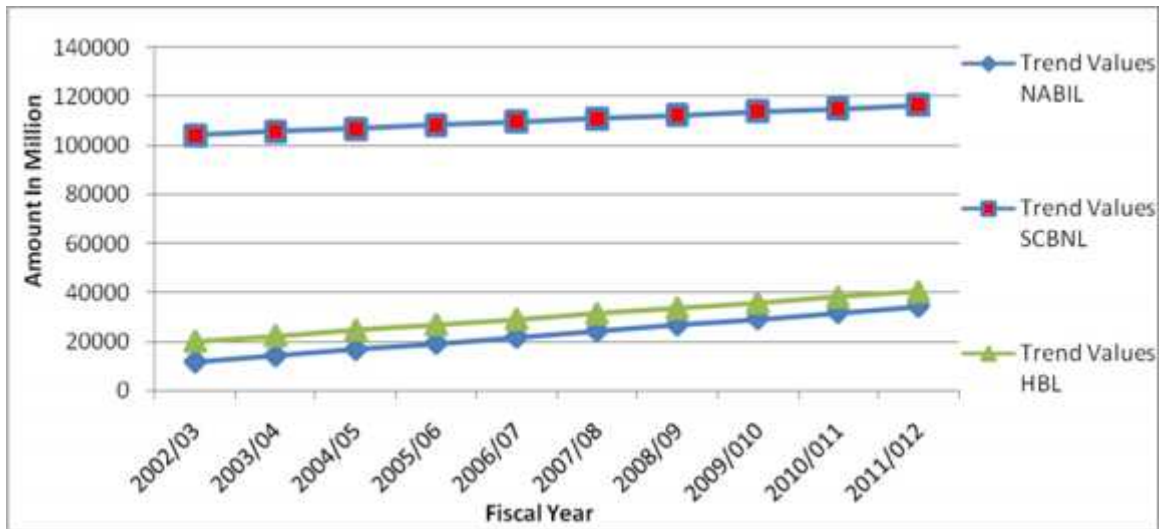
Table 4.24
Trend Value of Total Deposit

(Rs. in million)

Year	Trend Values NABIL	Trend Values SCBNL	Trend Values HBL
2002/03	11965	104223.75	20361.68
2003/04	14466.80	105591.99	22618.54
2004/05	16968.60	106960.23	24875.40
2005/06	19470.40	108328.47	27132.26
2006/07	21972.20	109696.71	29389.12
2007/08	24474	111064.95	31645.98
2008/09	26975.80	112433.19	33902.84
2009/010	29477.60	113801.43	36159.70
2010/011	31979.40	115169.67	38416.56
2011/012	34481.20	116537.91	40673.42

Sources: Appendix 3(i, iv, vii)

Figure 4.5
Trend Value of Total Deposit



The above table shows that the deposit of all the three banks has the increasing trend. If other thing remains the same, the total deposit of the same, the total deposit of NABIL will be 34481.20 million in FY 2011/012 which is less deposit among the three banks. Similarly deposit of SCBNL & HBL will be 116537.91 million and 40673.42 million for the FY 2011/012 respectively.

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

(ii) Trend Analysis of Investment

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

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

Table 4.25
Trend Value of Total Investment

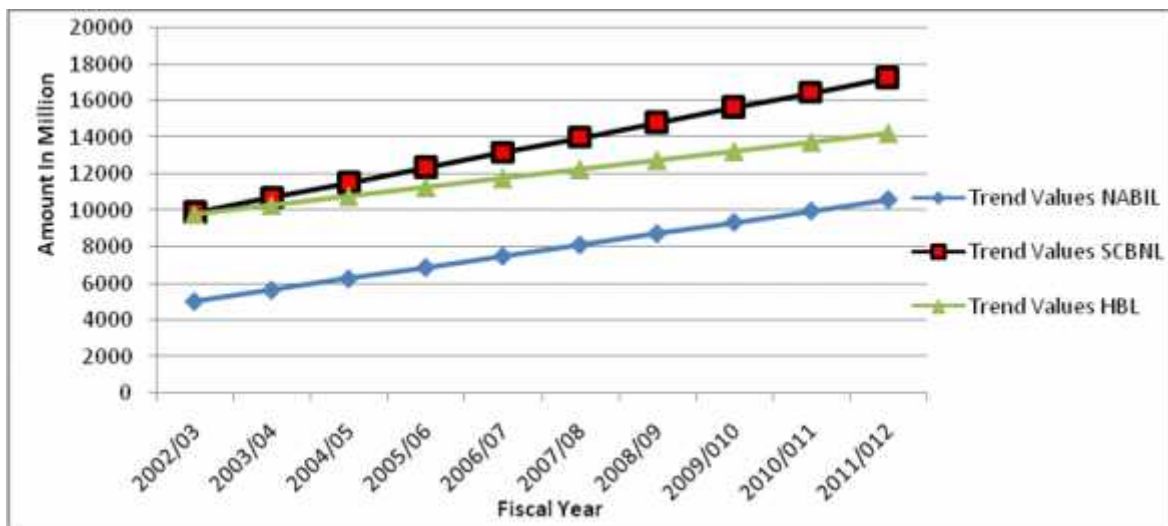
(Rs in million)

Year	Trend Values NABIL	Trend Values SCBNL	Trend Values HBL
2002/03	5017.95	9903.71	9795.98
2003/04	5635.04	10719.84	10285.18
2004/05	6252.13	11535.97	10774.38
2005/06	6869.22	12352.10	11263.58
2006/07	7486.31	13168.23	11752.78
2007/08	8103.40	13984.36	12241.98
2008/09	8720.49	14800.49	12731.18
2009/010	9337.58	15616.62	13220.38
2010/011	9954.67	16432.75	13709.58
2011/012	10571.76	17248.88	14198.78

Sources: Appendix 3(ii, iv, viii)

Figure 4.6

Trend Value of Total Investment



The above table shows the total investment of NABIL, SCBNL & HBL has the increasing trend value. Other things remaining the same the total investment of NABIL will be 10571.76 million in the mid July 2012. That is the average investment among three banks. Similarly, the deposit of SCBNL & HBL will be 17248.88million and 14198.78 million respectively.

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

(iii) Trend Analysis of Net Profit

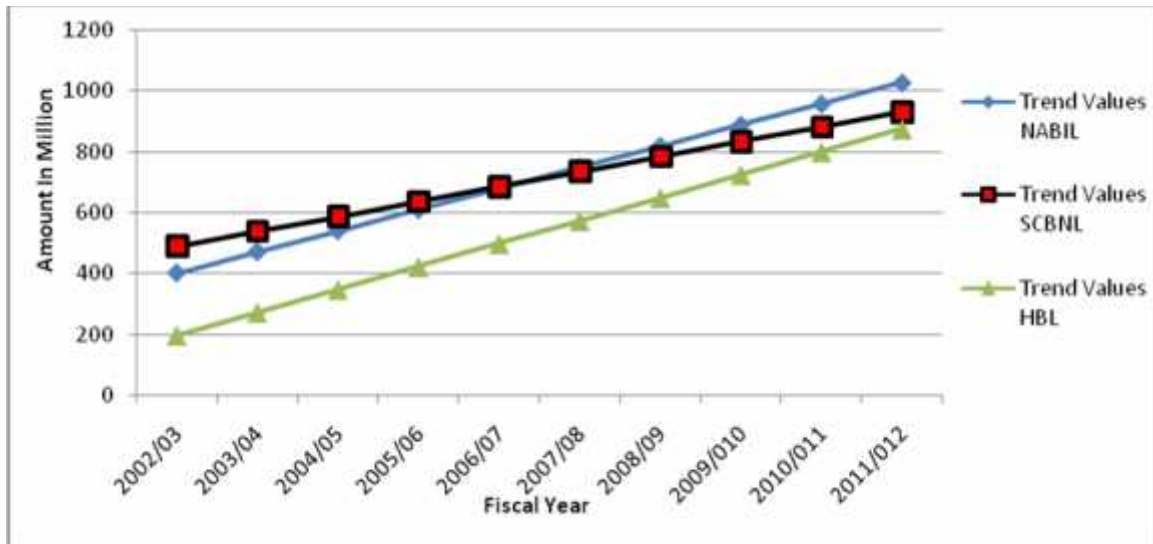
Under this topic, the trend values of net profit for five years from mid July 2002/03 to 2006/07 have been calculated and forecasted for next five years from mid July 2006/07 to 2011/012.

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

Year	Trend Values NABIL	Trend Values SCBNL	Trend Values HBL
2002/03	400.74	488.79	195.79
2003/04	470.28	537.83	271.17
2004/05	539.82	586.87	346.55
2005/06	609.36	635.91	421.93
2006/07	678.90	684.95	497.31
2007/08	748.44	733.99	572.69
2008/09	817.98	783.03	648.07
2009/10	887.52	832.07	723.45
2010/11	957.06	881.11	798.83
2011/12	1026.60	930.15	874.21

Sources: Appendix 3(iii, vi, ix)

Figure 4.7
Trend Value of Net Profit



The above table shows that the net profit of NABIL, SCBNL & HBL is in increasing trend value. Other things remaining the same, the net profit of NABIL will be 1026.60 million in the mid July 2012. That is the highest among the three during the study period. Similarly, the net profit of SCBNL and HBL will be 930.15 million and 874.21 million in mid 2012 respectively.

From the above trend analysis, it is found that the net profit of NABIL is the highest among three sample banks. The calculated trend values of net profit of NABIL, SCBNL and HBL are fitted in the trend line.

4.2.3 Test of Hypothesis

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

- i) Formulating of hypothesis
 - Null Hypothesis
 - Alternative Hypothesis
- ii) Computing the test statistic
- iii) Fixing the level of significance
- iv) Deciding two tailed or one tailed test
- v) Having decision

t-test

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

We set up the Null hypothesis (H_0): $\mu_1 = \mu_2$ i.e., the samples have been drawn from the normal population, or the sample means \bar{X}_1 and \bar{X}_2 do not differ significantly. Under the assumption that $\sigma^2 = 6\sigma_1^2$ i.e., population variances are equal but unknown, the test statistic under (H_0) is:

$$= \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \times \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad \text{with d.f.} = n_1 + n_2 - 2$$

Where,

$$\bar{X}_1 = \frac{\sum X_1}{n_1}$$

$$\bar{X}_2 = \frac{\sum X_2}{n_2}$$

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

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

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

Fiscal Year	NABIL			SCBNL			HBL		
	X_1	x_1	x_1^2	X_2	x_2	x_2^2	X_3	x_3	x_3^2
2002/03	57.67	-6.66	44.36	30.36	-6.47	41.86	51.62	- 4.5	20.25
2003/04	58.00	-6.33	40.07	30.30	-6.53	42.65	58.70	2.58	6.66
2004/05	72.57	8.24	67.89	42.12	5.29	27.98	54.21	-1.91	3.65
2005/06	66.79	2.46	6.05	38.75	1.92	3.69	59.50	3.38	11.42

2006/07	66.61	2.28	5.21	42.61	5.78	33.41	56.57	0.45	0.2025
	321.64		163.57	184.14		149.59	280.6		42.18

$$\bar{X}_1 = \frac{\sum X_1}{n} \quad \bar{X}_2 = \frac{\sum X_2}{n} \quad \bar{X}_3 = \frac{\sum X_3}{n}$$

$$\bar{X}_1 = \frac{321.64}{5} \quad \bar{X}_2 = \frac{184.14}{5} \quad \bar{X}_3 = \frac{280.6}{5}$$

$$\bar{X}_1 = 64.33 \quad \bar{X}_2 = 36.83 \quad \bar{X}_3 = 56.12$$

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

a. Test of Significance of Difference Between NABIL and SCBNL

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

Alternative Hypothesis (H_1): $\mu_1 \neq \mu_2$ i.e., (two tailed) i.e. there is significant difference between mean ratios of loan and advances to total deposit of NABIL and SCBNL (where \bar{x}_1 is mean ratio of NABIL and \bar{x}_2 is mean ratio is SCBNL)

Under H_0 the test statistics is given by $t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$ with.....d.f. = $n_1 + n_2 - 2$

$$\begin{aligned}
\text{Where } s^2 &= \frac{1}{n_1+n_2-2} (\sum X_1^2 + \sum X_2^2) \\
&= \frac{1}{5+5-2} (163.57+149.59) \\
&= \frac{1}{8} \times 313.16 \\
&= 39.145
\end{aligned}$$

Now,

Test statistics under Ho is,

$$\begin{aligned}
t &= \frac{64.33-36.83}{\sqrt{39.145(\frac{1}{5} + \frac{1}{5})}} \\
&= \frac{27.5}{\sqrt{15.66}} = \frac{27.5}{3.96} = 6.95
\end{aligned}$$

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

Decision

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

b) Test of Significance Difference between NABIL & HBL

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_3$ i.e. there is no significant different between mean ratios of loan and advances to total deposit of NABIL and HBL

Alternative Hypothesis (H₁): $\bar{x}_1 \neq \bar{x}_3$ (two tailed test) i.e. there is significant difference between mean ratios of loan and advances to total deposit of NABIL and HBL.

Under H₀ the test statistics,

The calculated value of $S^2 = 25.718$

The calculated value of $t = 0.739$

Tabulated value of 't' (two tailed) at 5% level of (n_1+n_3-2) d.f. i.e. 8 is 2.306

Decision

Since the calculated value of $t = 0.739$ is greater than tabulated value i.e. 2.306 therefore the Null hypothesis is rejected and hence alternative hypothesis (H₁) is accepted i.e. there is significant difference between mean ratio of loan and advances to total deposit of NABIL and HBL

(ii) Hypothesis Test of Investment on Government

Securities to current assets ratios between NABIL and SCBL and between NABIL and HBL

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

Fiscal year	NABIL			SCBL			HBL		
	x ₁	x ₁	x ₁ ²	x ₂	x ₂	x ₂ ²	x ₃	x ₃	x ₃ ²
2002/03	25.87	5.57	31.02	38.52	0.95	0.9025	20.54	-1.48	2.19
2003/04	25.78	5.476	29.98	39.56	1.99	3.9601	18.45	-3.57	12.74
2004/05	16.12	-4.184	17.506	37.28	-0.29	0.0841	25.65	3.63	13.176
2005/06	12.69	-7.614	57.973	40.22	2.65	7.0225	22.22	0.2	0.04
2006/07	21.06	0.756	0.572	32.27	-5.3	28.09	23.24	1.22	1.488

	$\sum X_1 =$ 101.52		$\sum x_1^2 =$ 137.02	$\sum X_2^2 =$ 187.85		$\sum X_2^2 = 4$ 0.059	$\sum X_3 =$ 110.1		$\sum X_3^2$ =29.64
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Here, $\bar{x}_1 = \frac{\sum X_1}{n}$ $\bar{x}_2 = \frac{\sum X_2}{n}$ $\bar{x}_3 = \frac{\sum X_3}{n}$
 $\bar{x}_1 = 20.304$ $\bar{x}_2 = 37.57$ $\bar{x}_3 = 22.02$

Again,

$$x_1 = (x_1 - \bar{x}_1) \quad x_2 = (x_2 - \bar{x}_2) \quad x_3 = (x_3 - \bar{x}_3)$$

a) Test of Significance of difference between NABIL and SCBL

Null Hypothesis (H₀): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant difference between mean ratios of investment on government securities to current asset ratios of NABIL and SCBL

Alternative Hypothesis (H₁): $\bar{x}_1 \neq \bar{x}_2$ (two tailed test) i.e., there is significant difference between mean ratios of invest on government securities to current assets ratios of NABIL and SCBL.

Under H₀ the test statistics is given by

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

With.....d.f.=n₁+n₂-2

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

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

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

$$= 22.13$$

Now,

Test statistics under H_0 is,

$$t = \frac{20.304-37.57}{\sqrt{22.13(\frac{1}{5} + \frac{1}{5})}} = 5.803$$

The calculated value of $(t) = 2.803$

Tabulated value of (t) (two tailed test) at 5% level of (n_1+n_2-2) d.f. i.e. 8 d.f. is 2.306

Decision

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

b) Test of significance of difference between NABIL and HBL

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_3$ i.e. there is no significant difference between mean ratios of investment on government securities to current assets ratios of NABIL and HBL

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two tailed test) i.e. there is significant difference between mean ratios of investment on govt. Securities to current assets ratios of NABIL and HBL.

Where \bar{x}_1 is mean ratio of NABIL and \bar{x}_3 is mean ratio of HBL:

The calculated value of $S^2 = 20.83$

The calculated value of $(t) = 0.594$

Tabulated value of (t) (two tailed test) at 5% level of (n_1+n_2-2) d.f. i.e. 8 d.f. is 2.306

Decision

Since the calculated value of (t) = 0.594 is lower than tabulated value i.e. 2.306 therefore the Null hypothesis H_0 is accepted i.e. there is no significant difference between mean ratios of investment in government securities to current assets ratio of NABIL and HBL

(iii) Hypothesis Test of Return on Loan and Advances Ratio between NABIL and SCBL and Between NABIL and HBL

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

Fiscal year	NABIL			SCBL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2002/03	5.37	0.345	0.1253	8.9	1.32	1.7424	1.96	-0.456	0.2079
2003/04	5.56	0.544	0.2959	8.41	0.83	0.6889	2.03	-0.386	0.14899
2004/05	4.90	-0.116	0.01346	6.62	-0.96	0.9216	2.30	-0.116	0.01345
2005/06	4.92	-0.096	0.009216	7.37	-0.21	0.6441	2.90	0.484	0.23425
2006/07	4.33	0.686	0.470596	6.6	-0.98	0.9604	2.89	0.474	0.22467
	$\sum X_1$ 25.08		$\sum x^2$ = 0.91447	$\sum X_2$ =37.9		$\sum X^2 =$ 4.3574	$\sum X_3$ =12.08		$\sum X_3^2$ =0.82932

$$\text{Here, } \bar{x}_1 = \frac{\sum X_1}{n} \quad \bar{x}_2 = \frac{\sum X_2}{n} \quad \bar{x}_3 = \frac{\sum X_3}{n}$$

$$\bar{x}_1 = 5.016 \quad \bar{x}_2 = 7.58 \quad \bar{x}_3 = 2.416$$

$$\text{Again } x_1 = (x_1 - \bar{x}_1) \quad x_2 = (x_2 - \bar{x}_2) \quad x_3 = (x_3 - \bar{x}_3)$$

a) Test of Significance difference between NABIL and SCBL

Null Hypothesis H_0 : $\bar{x}_1 = \bar{x}_2$ i.e. there is no significance difference between mean ratios of return on loan and advances of NABIL and SCBL

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two tailed test) i.e. there is significant difference between mean ratios on loan and advances of NABIL and SCBL.

(Where \bar{x}_1 is the mean ratio of NABIL and \bar{x}_2 is ratio of SCBNL)

Under H_0 the test statistics

$$\begin{aligned} S^2 &= \frac{1}{n_1+n_2-2} (\sum X_1^2 + \sum X_2^2) \\ &= \frac{1}{5+5-2} (.91447+4.3547) \\ &= 0.6589 \end{aligned}$$

Now,

Test of statistics under H_0 is

$$\begin{aligned} t &= \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \\ &= \frac{5.016 - 7.58}{\sqrt{.6589 \left(\frac{1}{5} + \frac{1}{5} \right)}} \\ &= \frac{-2.564}{0.26356} \\ &= -9.728 \end{aligned}$$

Calculated value of $|t| = 9.728$

Tabulated value of 't' (two tailed test) at 5% level of (n_1+n_2-2) d.f. i.e., 8 d.f. is 2.306

Decision

Since the calculated value of $|t|= 9.728$ is greater than tabulated value of $t = 2.306$ therefore the Null hypothesis (H_0) is rejected and hence alternative hypothesis (H_1) is accepted i.e., there is significant difference between mean ratios of return on loan and advances of NABIL and SCBL.

b) Test of Significance difference between NABIL and HBL

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_3$ i.e. there is no significant difference between mean ratios of return and advances ratios of NABIL and HBL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two tailed test) i.e. there is significant difference between mean ratios of return on loan and advances of NABIL & HBL.

(Where \bar{x}_1 is mean ratio of NBIL and \bar{x}_3 is mean ratio of HBL)

Under H_0 the test statistics

$$s^2 = \frac{1}{n_1+n_2-2}(\sum X_1^2 + \sum X_3^2)$$
$$= \frac{1}{5+5-2}(.91447+.82932)$$
$$=0.21797$$

Now,

Test statistics under H_0 is

$$\begin{aligned}
 t &= \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \\
 &= \frac{5.016 - 2.416}{\sqrt{0.21797 \left(\frac{1}{5} + \frac{1}{5} \right)}} \\
 &= \frac{2.6}{0.29527} \\
 &= 8.805
 \end{aligned}$$

Calculated value of 't' (two tailed test) at 5% level of (n_1+n_2-2) 8 d.f. is 2.306

Decision

Since the calculated value of 't' = 8.805 is greater than tabulated value of $t = 2.306$ therefore the Null hypothesis is rejected and hence alternative hypothesis is accepted. i.e. there is significant difference between mean ratios of return on loan and advances of NABIL and HBL

(iv) Hypothesis Test of Total Interest Earned to Total Outside Assets Ratio of NABIL, SCBL and HBL

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

Fiscal year	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2002/03	7.38	0.364	0.1325	14.9	7.294	53.2316	5.71	-0.144	0.0207
2003/04	7.14	0.124	0.01538	5.86	-1.744	3.0415	5.61	-0.244	0.0595
2004/05	7.20	0.184	0.0338	5.93	-1.674	2.8022	5.75	-0.104	0.0108

2005/06	6.86	-0.156	0.0243	5.46	-2.144	4.5967	6.10	-0.246	0.0605
2006/07	6.50	-0.516	0.2662	5.87	-1.734	3.0067	6.10	0.246	0.0605
	35.08		0.47232	38.02		66.6789	29.27		0.21212

Here,

$$x_1 = \frac{\sum X_1}{n_1} \quad x_2 = \frac{\sum X_2}{n_2} \quad x_3 = \frac{\sum X_3}{n_3}$$

$$\bar{x}_1 = 7.016 \quad \bar{x}_2 = 7.604 \quad \bar{x}_3 = 5.854$$

Again,

$$x_1 = (x_1 - \bar{x}_1) \quad x_2 = (x_2 - \bar{x}_2) \quad x_3 = (x_3 - \bar{x}_3)$$

a) Test of Significance difference between NABIL and SCBNL

Null Hypothesis (H₀): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant difference between mean ratios of total interest earned to total outside assets of NABIL and SCBL

Alternative Hypothesis (H₁): $\bar{x}_1 \neq \bar{x}_2$ (two tailed test) i.e., there is significant difference between mean ratios of total interest earned to total outside assets ratios of NABIL and SCBNL.

(Where \bar{x}_1 is mean ratio of NABIL and \bar{x}_2 is mean ratio of SCBL)

Under H₀ the test statistics is given by

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \text{ With.....d.f.} = n_1 + n_2 - 2$$

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

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

$$=8.394$$

Now,

Test statistics under H_0 is,

$$t = \frac{7.016-7.604}{\sqrt{8.394(\frac{1}{5} + \frac{1}{5})}} = -0.0262$$

The calculated value of (t) = 0.0262

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

Decision

Since the calculated value of (t) = 0.262 is lower than tabulated value of (t) = 2.326 therefore the Null Hypothesis (H_0) is accepted and alternative Hypothesis is rejected i.e., there is no significant difference earned to total outside assets of NABIL and SCBNL

b) Test of Significance difference between NABIL and HBL

Null Hypothesis H_0 : $\bar{x}_1 = \bar{x}_3$ i.e., there is no significant difference between mean ratios of total interest earned to total outside assets ratios of NABIL and HBL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two tailed test) i.e., there is significant difference between mean ratios of total interest earned to total outside assets ratio of NABIL and HBL.

(Where, \bar{x}_1 is mean ratio of NABIL and \bar{x}_3 is mean ratio of HBL)

Under H_0 the test statistics

$$\begin{aligned} S^2 &= \frac{1}{n_1+n_2-2} (\sum X_1^2 + \sum X_3^2) \\ &= \frac{1}{5+5-2} (0.47232-0.21212) \\ &= 0.08555 \end{aligned}$$

Test statistics under H_0 is

$$\begin{aligned} t &= \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_3} \right)}} \\ &= \frac{7.016 - 5.854}{\sqrt{0.0855 \left(\frac{1}{5} + \frac{1}{5} \right)}} \\ &= \frac{1.162}{0.1849} \\ &= 6.284 \end{aligned}$$

The calculated value of (t) = 6.284

Tabulated value of 't' (two tailed test) at 5% level of (n_1+n_2-2) 8.d.f. is 2.306

Decision

Since calculated value of $t = 6.284$ is greater than tabulated value of $t = 2.306$ there fore the Null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted i.e. there is significant difference between mean ratios of total interest earned to total outside assets of NABIL and HBL.

4.3 Major Findings of the Study

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

Liquidity Ratio

The liquidity position of NABIL, SCBNL and HBL reveals that:

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

Assets Management Ratio (Activity Ratio)

The assets management ratio of NABIL, SCBNL and HBL reveals that.

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

Profitability Ratio

The profitability ratio of NABIL, SCBNL and HBL reveal that:

- The mean ratio of return on total working fund is higher than SCBNL and HBL. On the other hand NABIL is less consistent and homogeneous than SCBNL and more than HBL.

- The mean ratio of return on total working fund is higher than SCBNL and HBL. On the other hand NABIL is less consistent and homogeneous than SCBNL and more than HBL.
- The mean ratio of total interest earned to total outside Assets of NABIL is higher than HBL and slightly lower than SCBNL. The variability of the ratio of NABIL is in between in comparison to SCBNL and HBL.
- The mean ratio of return on loan and advances of NABIL is higher than of NABIL is more consistent than other two banks.
- The mean ratio of total Interest earned to total working fund of NABIL is higher than that of SCBNL and HBL. The ratio of NABIL is more consistent than that of other two banks.
- The mean ratio of total interest pays to total working fund is higher than SCBNL and lower than HBL. NABIL'S ratio is less consistent than other two banks.
- From the above findings of profitability ratios, it can be concluded that the NABIL is comparatively in higher position than that of SCBNL and HBL. So, the profit earning capacity of NABIL is high in comparison to other two banks.

Growth Ratios

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

- The growth ratio of NABIL deposit is higher than that of SCBNL and HBL. It means the performance of NABIL to collect deposit is greater than SCBNL and HBL.
- The growth ratio of NABIL loan and advances is higher than that of SCBNL and HBL. It means the performance of NABIL to grant loan and advances in compared to other two banks is better.

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

Coefficient of Correlation Analysis

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

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

Trend Analysis and Projection for Next Five Years

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

- Total deposits of all the three banks have increasing trend. The total deposit of NABIL will be 34481.20 million in the mid July of 2012, which is the lower deposit among the sample banks similarly the total deposit of SCBNL and HBL will be 116537.91 million and 40673.42 million respectively in the mid July of 2012. The deposit collection of NABIL is lower than SCBNL and HBL.
- The total investment of all the three banks has increasing trend. The total investment of NABIL will be 10571.76 million in the mid of July 2012 similarly, the total investment of SCBNL and HBL will be 17248.88 million and 14198.78 million in the mid July 2002. The total investment of NABIL is not better in comparison to SCBNL and HBL.
- The net profit of all three banks has increasing trend. The net profit of NABIL will be 1026.60 million in the mid of July 2012 that is the highest net profit among three banks. Similarly the net profit of SCBNL and HBL will be 930.15 million and 874.21 million respectively in the mid July 2012.

Test of Hypothesis

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

- There is significant difference between mean ratio of loan and advances to total deposit of NABIL and SCBNL and NABIL and HBL
- There significant difference, between mean ratios of investment in government securities to current Assets of NABIL and SCBNL but there is no significant difference between mean ratios of investment in government securities to current Assets ratio of NABIL and HBL.

- There is significant difference between mean ratios of Return on loan and advances of NABIL and SCBNL and BABIL and HBL.
- There is no significant difference between mean ratios of total interest earned to total outside assets of NABIL and SCBNL but there is significant difference between mean ratios of total interest earned to total outside assets of NABIL and HBL.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

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

5.1 Summary

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

The evolution of the organized financial system in Nepal has a more recent history than in other countries of the world. In Nepalese content, the history of development of modern banks started from the establishment of Nepal bank limited in 1937 A.D. nowadays there are 25 CBs operating in Nepal financial market which is in increasing due to the country moved towards economic liberalization, financial scenario has changed, and foreign banks were invited to operate in Nepal. For the better performance of CBs, successful formulation & effective implementation of investment policy is the prime requisite. Nowadays there is a very high competition in the banking industries but very less opportunity to make investment. The opportunities are hidden. Thus these CBs should take

initiative action in search of the new opportunities. So that, they can easily survive in this competitive banking business world & earn profit. A bank manager its investment has a lot to do with the economic health of the country because the bank loans support the growth of new business & trade empowering the economic activities of the country.

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

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

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

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

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

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

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

presentation. From which various finding have shown in above chapter from that finding conclusion have been drawn which are presented as below.

Investments are valued at lower of cost or market value. Diminution in the value of investments is provided for to cover the possible losses. Investments in unlisted companies' shares are valued at cost. All investments are subject to regular review as required by Nepal Rastra Directive. Commercial banks invest in different sector like Nepal government treasury bills, Nepal government saving bonds, Nepal government other securities, Nepal Rastra banks bonds, foreign securities, local licensed institutions, foreign banks, organized institutions' shares, organized institutions' bonds and debentures, other investments, NCM mutual funds and SWIFT investment etc. 53.75% of investment of government securities from total investment by the NABIL bank, 52.44% of investment of government securities from total investment by the SCBNL and 54.60% of investment of government securities form total investment by the HBL bank. Investment in share and debenture by NABIL is 3.21%, SCBNL is 0.33% and HBL is 0.62%. Likewise investment to other sector by NABIL is 43.041%, SCBNL is 47.22% and HBL is 44.78%. By which HBL investment in government securities is high as compare to other two banks because in government securities risk is minimized there is no more risk. But investment in share and debenture NABIL bank investment is higher than SCBNL and HBL. And investment in other sector is higher than NABIL and HBL.

In loan it's divided into two parts priority sector and deprived loan. NABIL bank priority sector is 365.24 million, SCBNL is 191.9 million and HBL is 407.4 million, priority sector is divided into two parts direct investment and indirect investment but all the banks has invest in direct investment i.e. in agriculture, domestic industries, services and power sector. And NABIL bank deprived loan is 430.2 million, SCBNL is 303.2 million and HBL is 533.7 million. NABIL

deprived loan is in direct investment i.e. 11.4 million and indirect investment is 418.8 million and other two banks all deprived loan is in indirect investment.

5.2 Conclusion

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

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

In profitability ratio, the mean of return on total working fund and total interest earned to total working fund of NABIL is higher than SCBNL and HBL. The mean ratio of total interest earned to total outside Assets return on loan and advances and total interest paid to total working fund of NABIL is in moderate position in comparison to SCBNL and HBL. So, the profit earning capacity of NABIL is high in comparison to other two banks.

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

Total deposit, total investment and net profit of three sample banks are in increasing trend. Other things remaining the total deposit of NABIL will be on average position in compare to other two banks but total investment trend of NABIL is not better in comparison to SCBNL and HBL. The net profit of NABIL will be highest among three banks.

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

Ratio	NABIL	SCBNL	HBL	1st Position	2nd Position	3rd Position
Liquidity Ratio						
Current Ratio	1.1016	0.035	3.21	NABIL	HBL	SCBNL
Cash and Bank Balance to Total Deposit Ratio	5.60	7.42	7.79	HBL	SCBNL	NABIL
Cash and Bank Balance to Current Assets	5.59	7.91	9.22	HBL	SCBNL	NABIL
Investment on Government Securities to Current Assets	21.36	36.97	22.02	SCBNL	HBL	NABIL
Loan and Advances to Current Assets	64.70	39.33	65.34	HBL	NABIL	SCBNL
Assets Management Ratio						
Loan and Advances to Total Deposit	34.33	36.86	56.12	HBL	SCBNL	NABIL
Total Investment to Total Deposit	37.14	53.83	43.66	SCBNL	HBL	NABIL
Loan & Advances to Total Working Fund	54.45	32.59	48.54	NABIL	HBL	SCBNL
Investment on Government Securities to Total Working Fund	17.12	31.28	16.35	SCBNL	NABIL	HBL
Investment on shares and Debentures to Total Working Fund	0.87	0.076	0.15	NABIL	HBL	SCBNL
Profitability Ratio						
Return on Total Working Fund	2.71	2.42	1.18	SCBNL	NABIL	HBL
Total Interest Earned to Total outside Assets	7.02	7.66	5.85	SCBNL	NABIL	HBL
Total Interest Earned to Total Working Fund	6.01	4.72	4.96	NABIL	HBL	SCBNL
Total Interest Paid to Total Working Fund	1.72	1.24	2.11	HBL	NABIL	HBL
Return on Loan & Advances	5.02	7.58	2.42	SCBNL	NABIL	HBL

Return on Equity	32.88	35.42	24.52	SCBNL	NABIL	HBL
Growth Ratio						
Total Deposit	14.74	7.06	9.36	NABIL	HBL	SCBNL
Total Loan and Advances	18.98	16.53	13.18	NABIL	SCBNL	HBL
Total Investment	10.35	7.32	3.82	NABIL	SCBNL	HBL
Total Net Profit	12.83	8.08	23.43	HBL	NABIL	SCBNL

In average liquidity position of NABIL is greater than other banks i.e. $1.106 > 0.978 > 0.898$. So, NABIL is sound in liquidity position than other banks. NABIL has maintained lower cash & bank balance to total deposit ratio than SCBNL i.e. $5.60 < 7.42 < 7.79$. It states that cash and bank balance in liquidity position of NABIL is lower than other two banks. While examining the mean ratio, NABIL had maintained 5.59 which is less than SCBNL and HBL i.e. 7.91 and 9.22. It states that liquidity position of NABIL is lower than other two banks. In overall, the mean ratio of investment in govt. securities to current assets ratio of NABIL is lower than that of SCBNL & HBL i.e. $20.30 < 22.02 < 36.97$. It means NABIL had invested its fewer portions of current assets on government securities, than other two banks. While examining the mean ratio, NABIL has maintained 64.70 which is slightly lower than HBL i.e. 65.34 and higher than SCBNL i.e. 39.33. On the other side co-efficient of variation of NABIL 11.45% is lower than SCBNL and higher than HBL i.e. $16.74 > 11.64 > 6.12$. In overall liquidity ratio of HBL is in 1st position and SCBNL is in 2nd position and NABIL is in 3rd position.

In over all mean ratio of loan & advances to total deposit of NABIL is higher than that of SCBNL & HBL. Investment to total deposit ratio, NABIL has maintained lower, mean value i.e. $37.14 < 43.66 < 53.83$ than other two banks. SCBNL has maintained the highest mean value of 53.83. On the basis of mean ratio of loan & advances with respect of total working fund, NABIL has maintained the higher ratio than that of SCBNL & HBL i.e. $54.45 > 48.54 > 32.59$. So, NABIL is in good condition to mobilize its total working fund as loan and advances. NABIL has

maintained slightly higher ratio than HBL and lower ratio than SCBNL i.e. $17.12 > 16.35 < 31.28$ in case of government securities with respect of total working fund. Investment on shares and debentures to total working fund ratio, NABIL has higher investment than other two banks i.e. $0.87\% > 0.15 > 0.076$. Return on total working fund ratio, it is observed that the NABIL has the highest mean value i.e. $2.71 > 2.24 > 1.18$. So, NABIL is highly efficient to earn net profit and return as well. On the other hand C.V of NABIL is less than HBL and higher than SCBNL i.e. $8.47\% < 23.05\% > 4.18\%$. On the basis of mean ratios NABIL is less than SCBNL $7.02 < 7.66$ & higher than HBL i.e. $7.02 > 5.85$ in respect to total interest earned to total outside assets. NABIL is higher than HBL i.e. $5.02 > 2.42$ and lower than SCBNL i.e. $5.02 < 7.58$ is respect to return on loan & advances ratio. The mean of NABIL is greater than that of other two banks i.e. $6.01 > 4.96 > 4.72$. So, we can say that NABIL is in strong position to generate interest income from the total working fund than other two banks. The overall assets management ratio of SCBNL and NABIL is in equally position and HBL is in last position.

NABIL i.e. 1.72 is average between SCBNL and HBL i.e. 1.24 and 2.11. It means NABIL pays average interest than other two banks during the study period. Return on equity, it is observed that NABIL has the average mean value i.e., 32.79 which is less than 35.42 of SCBNL and higher than 24.52 of HBL. The mean ratio of NABIL i.e. 54.45 is higher than that of SCBNL i.e. 32.59 and HBL 48.54, it means credit risk of NABIL is higher that of other two banks. The mean capital risk ratio of NABIL i.e. 3.49 is higher than SCBNL i.e. 1.81 and lowers than HBL i.e. 5.55. From the analysis it can be concluded that NABIL has degree of capital risk is higher that SCBNL and its more variable than HBL and less then SCBNL. The growth ratio of NABIL deposit is higher then that of HBL and SCBNL i.e., $14.74\% > 9.36\% > 7.06\%$. It means that the performance of NABIL to collect greater deposit compared to SCBNL & HBL is better year-by-year. Growth ratio of total investment of NABIL is higher than SCBNL & HBL and the growth ratio of

NABIL net profit i.e. 12.82% is lower than HBL i.e. 23.43% and higher than SCBNL i.e. 8.08%. In profitability ratio, the overall position of SCBNL is in 1st position, NABIL is in 2nd position and HBL is in 3rd position. In overall growth ratio, NABIL holds the 1st position, SCBNL hold 2nd position and HBL holds in 3rd position.

NABIL, SCBNL and HBL, there is positive relationship between total deposits and loan & advances. NABIL, SCBNL and HBL have high degree of correlation between deposit & total investment and outside assets & net profit. So we can say that there is significant relationship between deposit & total investment and outside assets & net profit of NABIL, SCBNL & HBL. From the trend analysis, it is found that the deposit collection position of NABIL is weak in comparison to SCBNL and HBL, it is found that the total investment of NABIL is lower in compared to SCBNL & HBL. It is found that the net profit of NABIL is the highest among three sample banks.

5.4 Recommendations

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

- Current ratio of three sample banks are not sufficient to achieve standard ratio i.e. 2:1, so it is recommended to both banks to maintain required current ratio. They need to maintain the present mean current ratio for the proper management of their liquidity position.
- The liquidity position of a bank may be affected by external as well as internal factors. The affecting factors may be interest rates, supply as demand position of loan and advances as well as savings, investment

- situations, central banks directives, the lending policies, capability of management, strategic planning and funds flow situation. As NABIL has maintained lower cash and banker to total deposit and current assets ratio, NABIL is recommended to increase cash and bank balance to meet current obligations and loan demand.
- To get success in competitive banking environment, depositors' money must be utilized as loan and advances. Negligence in administering these assets could be the main cause of liquidity crisis in the bank and one of the main reasons of a bank failure. It has been found from the study that NABIL has greater ratios at all, because its large portion of fund is invested as loan and advances and negligence to invest in other sectors. HBL and SCBNL have not properly used their existing funds as loan and advances to overcome this situation, NABIL and SCBNL are strongly recommended to follow liberal lending policy.
 - As banks of the private sector commercial banks cannot keep their eyes closed from the profit motive. They should be careful as increasing profit is a real sense to maintain the confidence of shareholders, depositors and all customers. NABIL has high profit earning capacity, but HBL's profitability position is worse than that of the other two banks. So, HBL is strongly recommended to utilize risk assets and shareholders' funds to gain highest profit margin. Similarly, it should reduce its expenses and should try to collect cheaper funds being more profitable.
 - Out of working funds, NABIL has not invested its more funds as total investment in comparison to the other two banks. Though, the percentage of funds invested by all three banks is very nominal. So, it is recommended to all three banks to invest their more funds in different types of companies' indifferent areas.
 - In terms of recovery of loans, NABIL is worse in comparison to SCBNL and HBL. The loan loss ratio is comparatively high that makes negative

impact on profit. It may be facing a lot of problems on recovering loans. It has large no-performing asset as loan unrecovered. Therefore it is recommended to apply recovery act that would help to realize overdue loan in time.

- Most of the joint venture banks have focused their banking services especially to big clients such as multinational companies, large-scale industries, manufactures and exporters of garments and carpets. The minimum level bank balance and the amount needed to open an account in there banks are very high amount. So, small depositors are very far from enjoying the banking facilities provided by such joint venture banks. So, all three banks should open its doors to the small depositors and entrepreneurs for promoting and mobilizing small investors' funds and to attract depositors through variety of deposit schemes and facilities like cumulative deposit scheme, prize bonds scheme, gift cheques scheme, recurring deposit scheme (life insurance), monthly interest scheme etc.
- In the light of growing competition in the banking sector, the business of the bank should be customer oriented. It should strengthen and activate its marketing function, as it is an effective tool of attracting and retaining customers. For this purpose, the banks should develop an "Innovative approach to Bank Marketing" and formulate new strategies of serving customers in a more convenient and satisfactory way.
- Although NABIL has recently expanded its nine braches all over the country but NABIL do not have branches in the rural areas of the country. Its branches are limited to the urban areas only. Therefore, NABIL Bank is recommended to open branches in rural areas too to help in economic development of the country. Nepal Government has also encouraged the joint venture banks to expand banking service in rural areas and communities without making unfavorable impact in their profit.

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APPENDIX - 1

i. Current Ratio Times

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

NABIL

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Current Assets	16297019	18602009	21326260	23153115	2777553
Current Liabilities	19083160	18733141	19422823	20991038	1920853
Ratio	0.854	0.993	1.098	1.103	1.446

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

NABIL

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Cash and Bank Balance	1979209	2001184	2014471	1717352	1757341
Total Deposit	21007379	22010333	54814012	26490852	30048418
Ratio	9.42	9.092	8.12	6.84	5.85

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

NABIL

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Cash and Bank Balance	1979209	2001184	2014471	1717352	17581910
Current Assets	16297019	18602009	21326260	23153115	2777553
Ratio	12.14	10.76	9.45	7.42	6.33

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

NABIL

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

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Investment Got. Securities	6581348	7948217	7203066	8635875	7107937
Current Assets	1708440	20093715	19322679	21472350	22025802
Ratio	38.52	39.56	37.28	40.22	32.27

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Investment Got. Securities	3347102	3431728	5469729	5144312	6454873
Current Assets	16297019	18602009	21326260	23153115	2777533
Ratio	20.54	18.45	25.65	22.22	23.24

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

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Loan and Advances	10844599	12919631	13451168	15761977	16997997
Current Assets	16297019	18602009	21326260	23153115	27775533
Ratio	66.54	69.45	63.07	68.08	61.20

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

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

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Loan and Advances	5695823	6410242	8143208	8935418	10502637
Current Assets	18755635	21161442	19335095	23061032	24647021
Ratio	30.36	30.30	42.12	38.75	42.61

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Loan and Advances	10844599	12919631	13451168	15761977	16997797
Current Assets	21007379	22010333	24814012	26490852	30048418
Ratio	51.62	58.70	54.21	59.50	56.57

vii. Total Investment to Total Deposit Ratio (%)**NABIL**

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Investment	10175435	9292103	11692342	10889031	11822985
Total Deposit	21007379	22010333	24814012	26496852	30048418
Ratio	48.44	42.22	47.20	41.10	39.35

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

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

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Loan and Advances	5695823	6410242	8143208	8935418	10502637
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	27.24	21.11	37.19	34.67	36.73

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Loan and Advances	10844599	12919631	13451168	15761977	16997997
Total Working Fund	24197974	25729787	28871343	30579808	34315868
Ratio	44.82	50.21	46.60	51.54	49.53

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

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Investment Govt. Securities	3347102	3431729	5469729	5144313	6454873
Total Working Fund	24197974	25729787	28871343	30579808	34315868
Ratio	13.82	13.34	18.94	16.82	18.81

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

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

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Investment on S& D	11195	11195	13348	15348	44943
Total Working Fund	20910970	23642060	21893578	25776332	28596689
Ratio	0.05	0.05	0.06	0.06	0.06

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Investment on S& D	34266	34266	39909	39909	73424
Total Working Fund	24197974	25729787	28871343	30579808	34315868
Ratio	0.14	0.13	0.14	0.13	0.21

xi. Return Total Working Fund Ratio (%)**NABIL**

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Net Profit	212132	263052	308277	457458	491823
Total Working Fund	24197974	25729787	28871343	30579808	34315868
Ratio	0.88	1.02	1.06	1.50	1.43

xii. Total Interest Earned to Total Outside Assets Ratio (%)**NABIL**

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

SCBNL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Earned	1001359	1042175	1058677	1189603	1411942
Total Outside Assets	6722023	17770570	17845761	21782954	24055870
Ratio	14.90	5.86	5.93	5.46	5.87

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Earned	1201233	1245895	1446468	1626474	1775583
Total Outside Assets	21020034	22211734	25143510	26651008	29616709
Ratio	5.71	5.61	5.75	6.10	6.10

xiii. Return on Loan and Advances (%)**NABIL**

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Net Profit	212132	263052	308277	457458	491823
Loan and Advances	10844599	12919331	13451168	15761977	16997997
Ratio	1.96	2.03	2.30	2.90	2.89

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

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Earned	1201233	1245895	1446468	1626474	1775583
Total Working Fund	24197974	25729787	28871343	30579808	34315868
Ratio	4.96	4.84	5.01	5.32	5.17

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

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Interest Paid	554128	491543	561964	648842	167411
Total Working Fund	24197974	25729787	28871343	30579808	34315868
Ratio	2.31	1.91	1.95	2.12	2.24

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

NABIL

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

SCBNL

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

HBL

Fiscal Year	2002/03	2003/04	2004/05	2005/06	2006/07
Net Profit	212132	263052	308277	457458	491823
Equity Capital	1905883	2291928	2568395	2885593	2146538
Ratio	11.13	11.47	12	15.85	22.91

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

Growth rate is calculated from

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

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

D_o = Total deposit of initial year.

G = Growth rate.

N = Number of year.

$$D_{2006/07} = 23342$$

$$D_{2002/03} = 13448$$

$$N = 5$$

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

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

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

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

Other growth ratios are same as above methods.

APPENDIX - 2

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

(Rs. in Million)

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

$$\begin{aligned}
 r &= \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \times \sqrt{N \sum Y^2 - (\sum Y)^2}} \\
 &= \frac{5 \times 987242081.71 - 84842.99 \times 55000.43}{\sqrt{5 \times 1512140148.11 - (84842.99)^2} \times \sqrt{5 \times 647961007.73 - (55000.43)^2}} \\
 &= \frac{4936210408.55 - 4666400932.49}{19035.96 \times 14654.61} = \frac{269809476.06}{278964569.78} = 0.97
 \end{aligned}$$

$$r^2 = 0.9409$$

Calculation of Probable Error (P.E.)

$$\begin{aligned}
 \text{P.E.} &= 0.6745 \times \frac{(1 - r^2)}{\sqrt{N}} \\
 &= 0.6745 \times \frac{(1 - 0.9409)}{\sqrt{5}} = 0.6745 \times 0.0264 = 0.0178
 \end{aligned}$$

$$6\text{P.E.} = 6 \times 0.0178 = 0.1068$$

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

(Rs. in Million)

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

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

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

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

$$r^2 = 0.6724$$

Calculation of Probable Error (P.E.)

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

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

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

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

(Rs. in Million)

Year	Outside Assets (X)	X²	Net Profit (Y)	Y²	XY
00/01	13787.13	190084953.64	416.24	173255.74	5738754.99
01/02	14025.94	196726992.88	455.31	207307.20	6386150.74
02/03	14853.40	220623491.56	518.34	268676.36	7699111.36
03/04	19101.08	364851257.17	635.26	403555.27	12134152.08
04/05	24491.09	599813489.39	673.96	454222.08	16506015.02
N =5	86258.64	1572100184.64	2699.11	1507016.64	48464184.19

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

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

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

$$r^2 = 0.8649$$

Calculation of Probable Error (P.E.)

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

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

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

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

(Rs. in Million)

Year	Total Deposit (X)	X²	Loan & Advances (Y)	Y²	XY
00/01	18755.6	351774031.81	5695.82	32442365.47	106828749.42
01/02	21161.4	447806542.87	6410.24	41091176.86	135649909.15
02/03	19335.1	373846092.01	8143.21	66311869.10	157449779.67
03/04	23061	531811104.66	8935.42	79841730.58	206059988.68
04/05	24647	607475594.88	10502.6	110305446.97	258858778.13
N = 5	106960	2312713366.23	39687.33	329992588.98	864847205.06

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

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

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

$$r^2 = 0.6889$$

Calculation of Probable Error (P.E.)

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

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

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

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

(Rs. in Million)

Year	Total Deposit (X)	X²	Total Investment (Y)	Y²	XY
00/01	18755.64	351774031.81	10216.20	104370742.44	191611369.37
01/02	21161.44	447806542.87	11360.33	129057097.71	240400941.68
02/03	19335.10	373846092.01	9702.55	94139476.50	187599774.51
03/04	23061.03	531811104.66	12847.54	165059284.05	296277505.37
04/05	24647.02	607475594.88	13553.23	183690043.43	334046730.87
N =5	106960.23	2312713366.23	57679.85	676316644.14	1249936321.79

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

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

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

$$r^2 = 0.9604$$

Calculation of Probable Error (P.E.)

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

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

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

vi. Calculation of Correlation Between Outside Assets and Net Profit of SCBNL
(Rs. in Million)

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

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

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

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

$$r^2 = 0.6889$$

Calculation of Probable Error (P.E.)

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

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

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

vii. Calculation of Correlation Between Total Deposit and Loan & Advances of HBL

(Rs. in Million)

Year	Total Deposit (X)	X ²	Loan & Advances (Y)	Y ²	XY
00/01	21007.38	441310014.46	10844.60	117605349.16	227816633.15
01/02	22010.33	484454626.71	12919.33	166909087.65	284358716.68
02/03	24814.01	615735092.28	13451.17	180933974.37	333777466.89
03/04	26496.85	702083059.92	15761.98	248440013.52	417642819.76
04/05	30048.42	902907544.50	16997.99	288931664.04	510762742.68
N =5	124376.99	3146490337.87	69975.07	1002820088.74	1774358379.16

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

$$= \frac{5 \times 1774358679.16 - 124376.99 \times 69975.07}{\sqrt{5 \times 3146490337.87 - (124376.99)^2} \times \sqrt{5 \times 1002820088.74 - (69975.07)^2}}$$

$$= \frac{8871791895.80 - 8703288581.64}{16211.60 \times 10843.89} = \frac{168503314.16}{17579607.10} = 0.96$$

$$r^2 = 0.9216$$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{(1 - 0.9216)}{\sqrt{5}} = 0.6745 \times 0.0351 = 0.0236$$

$$6P.E. = 6 \times 0.0236 = 0.1416$$

viii. Calculation of Correlation Between Total Deposit and Total Investment of HBL

(Rs. in Million)

Year	Total Deposit (X)	X ²	Total Investment (Y)	Y ²	XY
00/01	21007.38	441310014.46	10175.44	103539579.19	213759334.75
01/02	22010.33	484454626.71	9292.10	86343122.41	204522187.39
02/03	24814.01	615735092.28	11692.34	136710814.68	290133841.68
03/04	26496.85	702083059.92	10889.03	118570974.34	288524994.56
04/05	30048.42	902907544.50	11822.99	139783092.54	355262169.18
N =5	124376.99	3146490337.87	53871.90	584947583.16	1352202527.55

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

$$= \frac{5 \times 1352202527.55 - 124376.99 \times 53871.90}{\sqrt{5 \times 3146490337.87 - (124376.99)^2} \times \sqrt{5 \times 584947583.16 - (53871.90)^2}}$$

$$= \frac{6761012637.75 - 6700424767.58}{16211.60 \times 4749.35} = \frac{60587870.17}{76994562.46} = 0.79$$

$$r^2 = 0.6241$$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{(1 - 0.6241)}{\sqrt{5}} = 0.6745 \times 0.1681 = 0.1134$$

$$6P.E. = 6 \times 0.1134 = 0.6804$$

ix. Calculation of Correlation Between Outside Assets and Net Profit of HBL

(Rs. in Million)

Year	Outside Assets (X)	X²	Net Profit (Y)	Y²	XY
00/01	21020.03	441841661.20	212.13	44999.14	4458978.96
01/02	22211.73	493360949.59	263.05	69195.30	5842795.58
02/03	25143.51	632196095.12	308.28	95036.56	7751241.26
03/04	26651.01	710276334.02	457.46	209269.65	12191771.03
04/05	29616.71	877149511.22	491.82	241886.91	14566090.31
N =5	124642.99	3154824551.16	1732.74	660387.56	44810877.15

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

$$= \frac{5 \times 44810877.15 - 124642.99 \times 1732.74}{\sqrt{5 \times 3154824551.16 - (124642.99)^2} \times \sqrt{5 \times 660387.56 - (1732.74)^2}}$$

$$= \frac{224054385.75 - 215973894.49}{15435.28 \times 547.31} = \frac{8080491.26}{8447883.10} = 0.96$$

$$r^2 = 0.9216$$

Calculation of Probable Error (P.E.)

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

$$= 0.6745 \times \frac{(1 - 0.9216)}{\sqrt{5}} = 0.6745 \times 0.0351 = 0.0236$$

$$6P.E. = 6 \times 0.0236 = 0.1416$$

APPENDIX – 3

i. Trend Value of Total Deposit of NABIL

(Rs. In Million)

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

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

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

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 16968.60 + 2501.76x$$

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

ii. Trend Value of Total Investment of NABIL

(Rs. In Million)

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

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

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

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 6252.13 + 617.09x$$

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

iii. Trend Value of Net Profit of NABIL

(Rs. In Million)

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

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

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

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 539.82 + 69.54x$$

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

iv. Trend Value of Total Deposit of SCBNL

(Rs. In Million)

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

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

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

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 106960.23 + 1368.24x$$

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

v. Trend Value of Total Investment of SCBNL

(Rs. In Million)

Fiscal Year (t)	Total Investment (y)	x = (t-2005)	X²	xy
2002/03	10216.20	-2	4	-20432.4
2003/04	11360.33	-1	1	-11360.33
2004/05	9702.55	0	0	0
2005/06	12847.54	1	1	12847.54
2006/07	13553.23	2	4	27106.46
N = 5	57679.85	0	10	8161.27

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

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

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 11535.97 + 816.13x$$

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

vi. Trend Value of Net Profit of SCBNL

(Rs. In Million)

Fiscal Year (t)	Net Profit (y)	x = (t-2005)	X²	xy
2002/03	506.93	-2	4	-1013.86
2003/04	537.80	-1	1	-537.8
2004/05	539.20	0	0	0
2005/06	658.76	1	1	658.76
2006/07	691.67	2	4	1383.34
N = 5	2934.36	0	10	490.44

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

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

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 586.87 + 49.04x$$

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

vii. Trend Value of Total Deposit of HBL

(Rs. In Million)

Fiscal Year (t)	Total Deposit (y)	x = (t-2005)	X²	xy
2002/03	21007.38	-2	4	-42014.76
2003/04	22010.33	-1	1	-22010.33
2004/05	24814.01	0	0	0
2005/06	26496.85	1	1	26496.85
2006/07	30048.42	2	4	60096.84
N = 5	124376.99	0	10	22568.6

$$a = \frac{\sum y}{N} = \frac{124376.99}{5} = 24875.40$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{22568.6}{10} = 2256.86$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 24875.40 + 2256.86x$$

Year	x = (t-2003)	Trend Value $Y_c = 24875.40 + 2256.86x$
2002/03	-2	20361.68
2003/04	-1	22618.54
2004/05	0	24875.40
2005/06	1	27132.26
2006/07	2	29389.12
2007/08	3	31645.98
2008/09	4	33902.84
2009/10	5	36159.70
2010/11	6	38416.56
2011/12	7	40673.42

viii. Trend Value of Total Investment of HBL

(Rs. In Million)

Fiscal Year (t)	Total Investment (y)	x = (t-2005)	X ²	xy
2002/03	10175.44	-2	4	-20350.88
2003/04	9292.10	-1	1	-9292.1
2004/05	11692.34	0	0	0
2005/06	10889.03	1	1	10889.03
2006/07	11822.99	2	4	23645.98
N = 5	53871.9	0	10	4892.03

$$a = \frac{\sum y}{N} = \frac{53871.9}{5} = 10774.38$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{4892.03}{10} = 489.20$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 10774.38 + 489.20x$$

Year	x = (t-2003)	Trend Value $Y_c = 10774.38 + 489.20x$
2002/03	-2	9795.98
2003/04	-1	10285.18
2004/05	0	10774.38
2005/06	1	11263.58
2006/07	2	11752.78
2007/08	3	12241.98
2008/09	4	12731.18
2009/10	5	13220.38
2010/11	6	13709.58
2011/12	7	14198.78

ix. Trend Value of Net Profit of HBL

(Rs. In Million)

Fiscal Year (t)	Net Profit (y)	x = (t-2005)	X²	xy
2002/03	212.13	-2	4	-424.26
2003/04	263.05	-1	1	-263.05
2004/05	308.28	0	0	0
2005/06	457.46	1	1	457.46
2006/07	491.82	2	4	983.64
N = 5	1732.74	0	10	753.79

$$a = \frac{\sum y}{N} = \frac{1732.74}{5} = 346.55$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{753.79}{10} = 75.38$$

The Equation of the Straight Line Trend is;

$$Y_c = a + bx$$

$$Y_c = 346.55 + 75.38x$$

Year	x = (t-2003)	Trend Value $Y_c = 346.55 + 75.38x$
2002/03	-2	195.79
2003/04	-1	271.17
2004/05	0	346.55
2005/06	1	421.93
2006/07	2	497.31
2007/08	3	572.69
2008/09	4	648.07
2009/10	5	723.45
2010/11	6	798.83
2011/12	7	874.21