CHAPTER 1

INTRODUCTION

1.1 GENERAL BACKGROUND

The term Investment means spending or setting aside money for future financial gain. For an individual, investment might include the purchase of financial assets such as stocks, bonds, mutual funds, or life insurance. Investment can also include the purchase of durable goods, such as housing or a car. For an economist, investment refers to the increase in real capital in an economy such as an increase in factories and machinery or in its human capital i.e. a skilled and educated labor force.

In general sense, investment means to pay out money to get more. But in the broad sense, investment means the sacrifice of money today in expectation to generate additional money in the future. Investment takes place in the present and is certain but the return occurs in the future which is an uncertain that's why it involves time and risk. In some cases the element of time predominates. In other cases risk is the dominant attribute. In yet others both time and risk are important. In the study investment conceptualizes the use of income, saving or other collected fund. The term investment covers a wide rang of activities. It is a commonly known fact that an investment is possible only when there is adequate saving. Therefore, both saving and investment are interrelated.

"Investment promotes economic growth and contributes to a nation's wealth. When people deposit money in the account of the bank, the bank may invest by lending the funds to various business companies. These firms in return may invest the money in new factories and equipment to increase their production. In addition to borrowing from banks, most companies issue stock and bonds that they sell to investors to raise capital needed for business expansion. Government also issues bonds to obtain funds to invest in different projects, such as, the construction of dams, bridges, roads, schools and colleges. All such investment by individuals, businessman and groups involves a present sacrifice of income to get an expected future benefits. As a result of which investment raises a nation's standard living." *(Encyclopedia vol. - 10, 2003)*

Investment policy is an important element of overall national economic development because it ensures efficient allocation of funds to achieve the material and economic well being of the society as a whole. In this regards, commercial banks investment policy is also a push drive to achieve priority of industries in the context of Nepal's economic development. Investment policy is one fact of the overall spectrum of policies that guide banks investment

operation. A healthy development of any bank depends upon its investment policy. A sound and viable investment policy can be effective one for the economy to attain the economic objectives directed towards the acceleration of the pace of the development. A good investment policy attracts both borrowers and lenders, which help to increase the volume and quality of deposits, loans and investments. The loan provided by the commercial bank is guided by several principles such as length of time, their purpose, profitability, safety etc. These fundamental principles of commercial banks investment are considered while making investment policy. In the context of our country there is high liquidity in the market but there is no profitable place to invest. Flowing of money hundred times more than required when the banks and financial institutions called them in the example of high liquidity in the money market. At the same time the banks and financial institutions are offering very low deposit interest rate. In this situation Nepalese commercial banks are required to explore new opportunities to make investment if they want to survive in the competitive situation. The prosperity of industry and trade is essential and more important for the country to step into development. Therefore the bank must consider national interest and government emphasis for the economic growth of the country. Since, the prosperous economic condition of country is represented by the development of the industry, trade and business, which is main ground to the banks to conduct its activities and to fulfill its objectives of profit making.

As financial institutions for an instance “commercial bank” is one of the essential supporting structures of every economic transaction for the reason they collect saving as a deposit and invest for development of trade, business and industry. Thus, they help to bring about the economic growth of the nation as a whole. A key factor in the development of an economy is the mobilization of domestic resources. As intermediaries, the financial institution helps the process of resources mobilization. The importance of financial institution in the economy has of late grown to an enormous extent. The government in turn is required to regulate their activities so that the financial policies are implemented as per the requirements of the country. Policies such as lending to the priority sectors, lending to the educated unemployed people, creation of entrepreneurship in the society are certain examples, which the government in developing economies try to implement with the help of financial institutions.

Financial institutions transfer the resources by mobilizing them from surplus units and in turn lend these funds to deficit units. In this way, the financial institutions provide savers highly liquid, divisible assets at a lower risk while the investors receive a large pool of resources. Satisfaction of both lenders and borrowers preferences determines the success of intermediary function of an economy. The importance of financial institutions has been stressed by R. C. Bryant in these words: “Economists and historians agree that the process of modern economic growth has been closely associated with the

expansion and increasing diversification of financial intermediation" *(Bryant 1987)*

The development of a country is always measured by its economic indices. Therefore every country has given emphasis on up liftmen of its economy. Nowadays the financial institutions are viewed as catalyst in the process of the economic growth. The mobilization of domestic resources is one of the key factors in the economic development of a country. The financial institutions act as intermediaries by transferring the resources from the point of surplus to the deficit. Well-organized financial institutions including finance companies, commercial banks and other financial intermediaries play an important role for the development of the country. They collect scattered financial resources from the mass and invest them among those who associated with the social, commercial and the economic activities of the country. This will provide fuel to the development practices of the country. The economic activities of a country can hardly be carried forward without the assistance of the financial institutions. They are the indispensable part of the development process. It is the fact that the unorganized financial system leads the country nowhere. Therefore the central banks plays a major on keeping the financial system of a country organized by providing them guidance and directives.

"A joint venture is the joining of forces between two or more enterprises for the purpose of carrying out a specific operation (industrial or commercial investment and production or trade.)" *(Gupta 1984)*

In order to operate a business organization under joint venture basis, there should at least two partners from two different countries. JVBs are the com banks formed by joining two or more enterprises for the purpose of carrying out specific operation, such as investment in trade, business and industry as well as in the form of negotiation between various group of industries or trade to achieve mutual exchange of goods and service for sharing competitive advantage by performing joint investment scheme between Nepalese investors and their parent banks each supplying 50 percent of total investment. The parent banks, which have experience modern banking services in many parts of the world, have come to Nepal with latest technology and advanced management skills. JVBs are established by joining forces with ability to achieve a common goal with each of the partners. They are more efficient monetary institution in modern banking fields than other old type of banks in Nepalese context, the primary objectives of these joint venture banks is always to earn profit by investing or granting loan and advances to people associated with trade, business and industry etc.

1.2 FOCUS OF THE STUDY

Investors invest their money in the hope of getting good return. Some of the investor's succeed while others become failure in their goal. Due to many reasons they loose their hard earnings just not by analyzing risk and return involve in the investment thus recoverable investment is must because

investment policy is the proper management of wealth to generate income. Banks and financial institutions cannot run without sound investment policy. The main focus of the study is to analyze the sound investment policies of the joint venture banks i.e. Nabil Bank Ltd in comparison to Standard Chartered Bank Nepal Ltd and Himalayan Bank Ltd.

Nabil Bank Ltd, the first joint venture bank in Nepal was established in 1984, under company act 1964. NABIL was incorporated with the objectives of extending international standard modern banking service s to the various sectors of society. The bank provides a full range of commercial banking services through its 19 points of representation across the country and over the 170 reputed correspondent banks across the globe. The highly qualified and experienced team is operating the bank including day-to-day operation and risk management. Bank is fully equipped with modern technologies, which include ATMs, credit cards and state of art, Internet banking system, tele banking system and other modern service using modern technologies. Other facilities are international trade, bank guarantee, safe deposit locker, western union money transfer, and automatic teller machine. Its equity configuration showed that Dubai Bank Ltd owned 50% equity partner, which was transferred to emirates bank international limited. Later on, Dubai sold its entire 50% holding to National Bank Ltd, Bangladesh.

Himalayan Bank Ltd was established as a joint venture bank with Habib bank of Pakistan in 1992 A.D. under the company act 1964. This is the first joint venture bank with maximum share holding by the Nepalese private sector. The bank has five branches inside the Kathmandu valley and also has nine branches outside the Kathmandu valley. The bank will be aggressively opening new branches at different parts of the country to serve its customer better. The Bank, wherever possible, offers tailor made facilities to its clients, based on the unique needs and requirements of different clients. To further extend the reliable and efficient services to its valued customers. The Bank has adopted the latest banking technology. The Bank has already offers unique services such as SMS Banking and Internet Banking to customers and will be introducing more services like these in the near future.

Standard Chartered Bank Nepal Ltd has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation. Today the Bank is an integral part of Standard Chartered Group who has 75% ownership in the company with 25% shares owned by the Nepalese public. The Bank enjoys the status the largest international bank currently operating in Nepal. The Bank is a leading financial institution in the country. With 11 points of representation (7 Branches) and 9 ATMs across the nation and with over 300 local staff, SCBNL is in a position to service its customers through a large domestic network. In addition to which the global network of Standard Chartered Group gives the Bank the unique opportunity to provide truly international banking in Nepal.

SCBNL offers a full range of banking products and services in Wholesale and Consumer banking, catering to a wide range of customers from individuals, to mid-market local corporate to multinationals and large public sector companies, as well as embassies, aid agencies, airlines, hotels and government corporations. It is the first Bank in Nepal that has implemented the Anti-Money Laundering policy and applied the 'Know Your Customer' procedure on all the customer accounts.

1.3 STATEMENT OF THE PROBLEM

Although Nepal has adopted a planned development strategies since the implementation of its first five years plan in 1956. The financial sector has not been responsive enough to meet the growing resources need as aspired by plan. The establishment of commercial banks, the enforcement of priority sector and production sector, lending policies of Nepal Rastra Bank to financial institution does not seem to have had an appropriate impact.

It is well known fact that investment is the important factor from the viewpoint of shareholders and managers. Several commercial banks have been established in Nepal within the short period of time but strong, stable and appropriate investment policy has not been followed. In this current situation there is an unbalanced between deposit and investment of banks. The introduction of a new bank is just sharing a cake rather than pumping new capital or new technology. Only the few commercial banks are able to make profit and satisfying their shareholders. This has attracted the potential customers to deposit their money in the bank, as there are very few sectors to make profitable investment and the investors are always reluctant to risk. Due to less investment opportunity, banks use to discourage depositors by reducing the interest on deposits and increasing the minimum threshold balance. Such condition may cause the highly liquid market and can impact the condition of the whole country negatively.

Nepal being listed among least developed countries, the commercial banks has played a catalytic role in the economic growth. Its investment range is from small scales cottage industries to all types of social and commercial loans and large industries. In making investment in loans and government securities, one may always wonder which investment is better. The researcher Paul S. Andersen, William Silber, Tim S. Campbell, and many others have compared the contributions of loans and advances and the investment on securities on the national income.

It can be therefore hypothesized that bank portfolio like loans, investment cash reserve deposit and borrowing affects the national income. And also how the government policy affects these variables, such as the effect of an interest rate on the bank portfolio variables is of great concern. Therefore, when monitoring money and credit conditions, the central bank has to keep an eye on the bank portfolio behaviors.

In this study, Nabil Bank Ltd in comparison to Standard Chartered Bank Nepal Ltd and Himalayan Bank Ltd are analyzed comparatively. As mentioned above following are the major problems that have been identified for the purpose of the study.

a. Are they maintaining sufficient liquidity position?
b. Are the both banks funding mobilization and investment policy more effective an efficient?
c. What is the relationship of investment and loan & advances with total deposits and net profit?
d. Does the investment decision affect the total earning of the banks?
e. Whether these commercial banks are able to meet the current obligations of deposits?

1.4 OBJECTIVES OF THE STUDY

The basic objective of the study is to review the investment policies of concerned joint venture commercial banks as well as to compare it. The main objectives of the study are given below.

a. To evaluate the liquidity, assets management system, profitability and risk position of the commercial banks.
b. To evaluate the trends of deposit utilization and its projection for future.
c. To analyze the comparative study on fund mobilization and investment policies of two joint venture banks and their viability.
d. To analyze the relationship between total investment, deposits, loan and advances and net profit and their comparative study in between commercial banks.
e. To provide the various suggestions and recommendations on the basis of findings for further growth of the organization.

1.5 SIGNIFICANCE OF THE STUDY

Economic development is the first objective of our nation therefore the capital is one of the prime factors, which is necessary for the development of the country. The poor nation like Nepal rarely save a large parts of its income thus the possibilities of the domestic capital formation are very small. So the major problem of the developing countries is the capital formation and their proper mobilization. For the domestic resource mobilization and economic development of the nation, banking institution definitely contribute and play a vital and gigantic role to build up the confidence of business persons for promoting the business and industrialist for encouraging opening the new industries. Without the proper development of banking development of the country is impossible. Therefore, the study has significance in particular areas of Joint venture commercial banks. It fills the gap in literature and justifies the role of Joint venture commercial banks in the economic development of the country.

1.6 LIMITATIONS OF THE STUDY

The study has been made to evaluate the investment policy of Joint venture commercial banks. Every study has its own limitations. The following points are the limitation of the study.

a. The study is mainly based on the secondary data (i.e. published financial documents such as balance sheet, profit and loss account, related books, journals and magazines) so the result of all the analysis depends upon the information provides by the banks.
b. The whole study is based on the data of five years period from 2003/2004 to 2007/2008 and hence the conclusion drawn confines only to the above period.
c. Out of the numerous affecting factors, only those factors are considered which is related to investment policy.
d. Out of many banks, three banks (Nabil Bank Limited, Standard Chartered Bank Nepal Limited and Himalayan Bank Limited) are taken for the study.

1.7 ORGANIZATION OF THE STUDY

The study work has been divided into five chapters. They are as follows.

a. Introduction: The first chapter deals with general background, focus of the study, statement of the problem, objectives of the study, limitations of the study, significance of the study and organization of the study.
b. Review of Literature: The second chapter deals with the conceptual framework of investment policy, review of related books, earlier research studies and dissertations.
c. Research Methodology: The third chapter includes the research design, population and sampling sources of data, data collection techniques, data analysis tools and limitation of the methodology.
d. Data Presentation and Analysis: This chapter is mainly concerned with the analysis of different financial ratios and statistical analysis related to the investment policy and major findings of the study.
e. Summary, Conclusion and Recommendation: The fifth chapter summarizes the whole study, draw conclusions and provide suggestions and recommendations for the further improvement of the organization.

CHAPTER TWO

REVIEW OF LITERATURE

This chapter is basically concerned with review of literature relevant to the investment policy of joint venture commercial banks. It is the way to discover what other research has uncovered in the area of our problem. Every research is based on previous knowledge. The past knowledge or the previous studies provide necessary information to the present study so that it cannot be ignored. The purpose of the literature review is to find out what other studies have been conducted in one's chosen field of study. It provides the foundation for developing a comprehensive theoretical framework from which hypothesis can be developed for testing. Therefore, this chapter has its own importance. This chapter is divided into following parts.

2.1 CONCEPTUAL / THEORETICAL FRAMEWORK

"Commercial banks are the most important source of funds for business firms, in the aggregate. Banks acquire demand and time deposits from individuals, companies and government and in turn, make loan and investments." *(Van Horne and Wachowicz, 2001)* Banks are such financial institutions, which mainly accept the deposit and create credit to outsiders. So, Com banks are major financial institution which occupy quite an important place in the framework of every economy because they provide capital for the development of industry, trade and business and other resources deficit sectors by investing the saving collected as deposit. In this way they contribute to the economic growth of the nation. Besides this, com banks render numerous services to their customer in view of facilitating their economic and social life. All the economic activities of each and every country are greatly influenced by the commercial banking business of the country. Joint venture com banks by playing active role have changed the economic structure of the world. Thus Joint venture com banks have become the heart of the financial system. Their establishment as matter of fact has been a turning point in the history of Nepalese modern banking system. Basically, banks perform the accepting of deposits and granting credit to others for adequate capital formation." The defining characteristic of banks is that most of their investments are loan to business and consumers and lost of their liabilities are account of depositors. As investors, the objective of banks is to try to match the risk of assets to liabilities while earning a profitable spread between the lending and borrowing rates." *(Bodie, Kane and Marcus, 2005)*

Investment policy consists of the totality of investment plans, programs, environment, constraints, structures, opportunities, performances, alternatives etc. thus, investment policy related with management of investment made and invest to be made. Investments makers like banks are ever forced for the proper management of investment. Because, without investment, more deposit can't be collected and as well as collected deposits can't be utilized without efficient investment. Banks and other financial institutions, invest the funds, which are collected as deposits and moreover, sometimes they can create credit more than the deposit. So, the investment policy of banks and other financial institutions should be analyzed for successful running of such institutions. In simple view, the banks, which are able to make more investment in productive sector with proper return can, improve themselves than others. So, investment factors play a vital role for successful operation and gaining highly financial rank, among the banks.

Commercial banks, as a financial institution perform a number of internal functions. Among them, providing credit is considered as most important one. In the words of H. D. Crosse, "Com banks bring to being the most important ingredient of the creation of credit in the form of loan & advances and investment." *(Crosse, 1963)* Credit being the most important functions of com banks, affect overall development of the country. So far as pace of economic development is considered. It is directly related to the quality and quantity of credit that is derived from various financial institutions especially com banks in Nepal.

Commercial bank act, 2031 has defined com bank in following way:

"Com bank means a bank which operates currency exchange transactions, accepts deposits, provide loan and performs dealing relating to commerce and other than those banks which have been specified for the co-operative, agriculture, industry of likely any other specific objective."*(Bank act 2031)* The com banks are established under the com bank Act 2031 in Nepal that has been amended regularly. It has been amended for six times till today.

2.2 REVIEW OF SOUND INVESTMENT DECISION

Investment is the means to earn for the banks. If the banks invest more funds in productive sector, it will generate higher income. So, executive always must practice best decision for the investment. Thoughtless manager and return less investment make a bank empty. The profitability created by proper investment behavior or decision accelerated the banks on the top. So, investment decision made by managers, CEO's and directors play a significant role for the banks as well as depositors. Those DMUs should always consider for the effectiveness of investment decision, because, an investment consists of risk as well as return, " higher the risk, higher the return" principle always influences the decision to make. Similarly, the objectives of investment policies, plans are also important. Availability of fund, government rules & regulation, sectors to be invested, investment alternatives, market, regional and political condition etc also influence to make investment decision.
In brief, some important considerations to be adopted by commercial banks for sound investment decisions are shortly explained below:

I. Liquidity

Liquidity influences the investment policy of banks. Here, the liquidity with investment relates with timely diversion of a security against the lending, into current assets like cash. So, the bank must invest the funds in such securities or alternatives that deserve more liquidity. Similarly, the bank must not invest all collected fund to others, so that the depositors can withdraw their fund from a banks account, currently without late. The term liquid asset is used to describe money and assets that are readily convertible into money. Different assets may be said to exhibit different degrees of liquidity. Money itself is, by definition, the most liquid assets; other assets have varying degree of liquidity, depending on the ease with which they can be turned into cash. For assets other than money, liquidity has two dimensions:

II. Safety and security

As we all know that the public deposits their money at financial institutions. So that the financial institutions should never forget that the funds, which are going to invest in various sectors is borrowed from depositors on various account. Safety from probable risks must be considered for an investment decision-making. Market risks, price risks, geographical risks, political risks and managerial risks etc always direct the investors to invest. So,

proper security mechanism for investment must be cared out for fighting with such risks.

III. Profitability

Generally, the profit of bank depends upon the interest rate, volume of loan, tie period of loan and nature of investment in various sectors. So the bank must invest their funds, which generates maximum profit. If the banks are able to maximize the profit the shareholders will be happy because all the profit has been given to shareholders in the form of dividend. A good bank is one who invests most of its funds in different earning assets standing safely from the problem of liquidity i.e. keeping cash reserves to meet day-to-day requirements of the depositors.

IV. Investment Horizon

The length of time to invest and get return is another important consideration for investment decision. The investment horizon affects not only the return and risk characteristic of investment alternatives, but also frequently the tax- consequences associated wit the return.

V. Legality

Generally, the state makes various rules and regulations, under which the commercial banks are established, operated. Investment policy made by state or central bank etc always must be considered while investing. Prior sectors, interest rates, administrative laws, rules and regulations, directions stated by government are always be considered Illegal securities will bring out many problems for the investors.

2.3 INVESTMENT MANAGEMENT FUNCTIONS

Making investment decision is not easy. The total management of investment consist investment decision too. Several steps, processes should be followed for proper decision. The systematic and realistic investment decision needs the following processes: *(Francis, 1998)*

I. Setting Investment Objectives

The major investment objective is to maximize the earning through investing. For so, the investing sectors, risks, returns etc should be analyzed. As a profit making organization, banks has always set investment objective so as to earn more.

II. Security Analysis

Security accepted, secures the investment to recover. Security with higher liquidity is always advantageous for banks as investors. Similarly, adequate security against each investment must be kept for best investment management.

2.4 OVERVIEW ON INVESTMENT ALTERNATIVES

There are various alternatives for the banks to invest on, as per the books one as follows:

Table No. 1
Overview on Investment Alternatives

S. N	Investment alternatives	Varieties of Investment Alternative
1.	Equity securities	a. Common stock b. Preferred stock
2.	Short term securities	a. Negotiable certificates of deposits b. Commercial papers c. Treasury bills d. Acceptances
3.	Long term securities	a. Government securities i. Treasury notes ii. Treasury bonds iii. Saving bonds b. Agency securities c. Corporate bonds d. Municipal securities
4.	Hybrid securities	a. Convertible preferred stock b. Convertible bonds
5.	Derivative securities	a. Options b. Right current others
6.	Real assets	a. Precious metal b. Real estate c. Collectibles
7.	International investment	a. Multinational corporations b. Foreign stocks c. Others
8.	Other investment alternatives	a. Pension funds b. Mutual funds c. Others

Source: NRB Publication, 2004

2.5 SOME IMPORTANT TERMS

I. Deposits

Deposit denotes the amount deposited in a current, saving and fixed account of bank or financial institution. Deposit is the major source of fund that a bank usually uses to generate the earnings. Therefore, the competence of the banks depends on its capability to attract deposits. Deposit being the rented amount from the depositors or from general public. It constitutes the liability of bank. The management of the bank is always influencing it through deliberate policy action. The deposits of a bank are affected by various factors.

II. Loan and Advances

Loan & advances and overdraft are the main source of income and most profitable assets to a bank, bank deposits can be crossed beyond a desired level but the level of loans and advances and overdraft will never cross it Every bank is always wiling to lend as more as possible, since they constitute the larger part or revenue. But bank has to be more careful while providing loans and advances because they may not be realized at short period of time and sometimes they may turn into bad debts. Therefore, it is not sensible to take risk on them at the time of emergency for all banks a commercial bank hardily lends money for a long period of time.

III. Investment on Government Securities

Commercial banks can earn interest from the investment on government securities. It is not the major source of income. It is treated as a secondary source of banking business. A commercial bank may extend credit by purchasing government securities, bond and shares for several reasons.

IV. Investment on Other Companies Shares and Debentures

Commercial banks also invest their excess funds to the shares and debentures of other company. They generally do so when there are excess funds than required and there is no alternative opportunity to make investment in the profitable sector. Now a day the commercial banks of Nepal have purchased shares and debentures of regional development bank and other development bank etc.

V. Bond

A bond is the source of long term financing issued by an organization in written form under which the organization or the borrowers agree to pay principal and interest to the lenders or specific date. It may be secured i.e. mortgage bond with fixed assets pledged as securities unsecured like debenture bond.

VI. Securities

These are the main source of long term financing. They consist of shares and debentures issued by government or any company. This may or may not be redeemable, with interest in future.

VII. Other Use of Funds

Commercial bank must maintain the bank balance with the central bank of the nation. Similarly they have to maintain the cash balance in local currency in the vault of the bank. Again some part of the fund has to be used for the bank balance in foreign bank.

VIII. Off Balance Sheet Activities

Off balance sheet activities involve contracts for future purchase or sale of assets and all their activities are contingent obligations. These activities are not recognized as asset and liabilities balance sheet. They are LC guarantee, commission, bills for collection etc. These activities are very important, as they are the good source of profit to the bank, through they have risk. Now a day some economists and financial specialists to expand the modern transaction of a bank stressfully highlight such activities.

2.6 AN OVERVIEW ON NRB RULES REGARDING INVESTMENT OF A COMMERCIAL BANK

Nepal Rastra Bank established in 2013 B.S is the central bank of Nepal. It's determining role in economic plans and implementation in the country is major. The main objective of the Nepal Rastra Bank is to manage the economic financial transaction over the country. Systematical allocation management and implementation of economic factors over the state is governed by Nepal Rastra Bank, as a central bank. All the economic plans, programs, policies, strategies, implementations, evaluation made by government are performed under the direction of NRB. So, NRB is bank of government, works for the welfare of nation. Similarly, NRB directs the banks and other financial institutions too. Plans, policies, direction rules, regulations from NRB are major subject to run the commercial banks. Every step of the commercial banks is always observed by NRB, as a representative of the Nepalese government. To allocate and mobilize the deposits collected by commercial banks in different sectors of the different areas of the nation, the NRB as a central bank, formulates fundamental rules, regulations, directives, policies etc. in fact, NRB controls over the overall activities made by the commercial banks, as well as, establishment or operation or dissolution of banks. For so NRB has formulated commercial banks Act 2031 for the establishment and operation of commercial banks. Here, the directions, rules, regulations, directed by NRB in terms of investment by commercial banks are briefly mentioned below. *(Source: NRB rules 2061)*

I. Investment on Priority Sector

NRB has pointed priority sector as agriculture sector, cottage and small industry sector, service oriented sector, cooperative sector etc, in which the commercial bank must invest 12% of their total deposits. This provision is totally based on the objective for uplifting lifestyle of people in remote and village area.

II. Investment in Co-operative Sector (Deprived Sector)

The co-operative institution, rural development banks, etc which are licensed by NRB, are also to be compulsory invested by commercial banks in certain ratio determined to each JVBs. As per such regulation, JVB have to invest 3% of total outstanding credit to for co-operative sectors.

Table No. 2
Investment in Deprived Sectors

S.N	Name of the Banks	Percentage of total outstanding loan to invest in deprived sector
1.	Nepal Bank Limited	3%
2.	Rastriya Banijya Bank	3%
3.	Nabil bank Limited	3%
4.	Nepal Investment Bank Limited	3%
5.	Standard Chartered Bank Nepal Limited	3%
6.	Himalayan Bank Limited	3%
7.	Nepal SBI Bank Limited	2.5%
8.	Nepal Bangladesh Bank Limited	2.5%
9.	Everest Bank Limited	2.5%
10.	Bank of Kathmandu Limited	2.5%
11.	Nepal Commercial & Credit Bank Limited	1.25%
12.	Lumbini Bank Limited	0.75%
13.	Nepal Investment & Commerce Bank	0.75%
14.	Macchapuchhre Bank Limited	0.25%
15.	Kumari Bank Limited	0.25%
16.	Laxmi Bank Limited	0.25%
17.	Siddhartha Bank Limited	0.25%

Source: NRB Publication, 2061

III. Establishment of New Commercial Bank

NRB has enhanced liberal policy for establishing new commercial banks in Nepal. For such objectives, NRB has regulated the following directions:

a. A minimum of Rs. 500 million of paid up capital is required for opening a new bank inside the Kathmandu valley.

b. Similarly, as per the direction by NRB, Rs120 million necessary for starting banking business out of Kathmandu.
c. In the same way, Rs 50 million paid up capital are necessary for opening centre office of bank out of Kathmandu.
d. Commonly for establishing the commercial bank in rural areas, NRB has directed Rs 30 million as compulsory paid up capital.
e. The investor can invest his/her, its fund up to 10% of the paid up capital of each and 15% of paid up capital of all banks in average.
f. Basically the commercial bank can be invested maximum up to 70 % of total paid up capital, if the bank is promoted by domestic investors, and 30 % of paid up capital should be as liquidity margin for repayment for certain deposits.
g. For joint venture banks, foreign investors can invest minimum 40% of paid up capital and 501% as maximum. Such bank should manage 30% of paid up capital as floatation for general public.
h. Individual, firm or company or groups of company can invest up to 110% of paid up capital.
i. Applications for the establishment of new bank s are to be adopted within the stipulated time fixed by NRB.

IV. Direction for Raising Fund

The commercial banks are directed to raise the capital fund at minimum level of Rs 500 million. For this, commercial banks can include paid up capital and reserve deduction net loss for meeting such requirement.

V. Directive for Single Borrower Credit

NRB has barred the single borrower credit limit as 35% in the case of fund based credit and 50 % in the case of non fund based credit, such as letter of credit, acceptance letter etc.

VI. Regulations for Expansion of Commercial Banks

a. For opening of a branch within the area of Kathmandu, Bhaktapur, Lalitpur, Pokhara, Birgunj, Biratnagar and Narayanghat, joint venture banks need to open firstly, at least two branch in adjoining semi urban area and secondly, at least one branch in rural area not adjoining to any municipalities.
b. Banks are not required to open their new branch in semi urban or rural areas, if they open new branch outside the seven municipalities given in (a).
c. For the permission of establishment of a new branch, CBs have to specify the whole details about the new branch. If the banks are permitted to open a new branch, they must open a branch in rural or semi urban area, before opening in urban area.

VII. Directions for Extension Counter of Joint Venture Banks

a. Commercial banks can't open extension in metropolitan and semi metropolitan area except during trade, fairs, festivals, ceremonies, celebrations etc, as a directed by NRB. Such extensions must be converted as a branch with in 2 years, otherwise, must be closed.
b. The extension opened can accept deposit and make payment as well as exchange of foreign currencies after the permission from NRB.
c. If the extension is opened in the areas of royal palace, hospitals, foreign diplomatic offices, those extensions are not allowed to operate as a branch, as mentioned in (II).

VIII. Credit for Shareholders

The individual or group who holds more than 1% of shares of the commercial bank, can't borrow from same bank, under the directions from NRB-2061/ B.S

IX. Fluctuation in Interest

The agreement can be made between bank and customers for making change in bank loan interest rate up to maximum limit of 0.5% is now cancelled by NRB, to be effective from 2061/62 B.S.

2.7 RISK AFFECTION ON INVESTMENT POLICY

As already known that, every investment contains some how degree of risk in return of benefits. Sometimes the investor faces big volume of risk with high volume of loss. Risks are uncertainties, which make return from investment changed. Some noticeable risks are as follows.

I. Interest Rate Risk

Interest is the return for certain amount borrowed presently but repaid in future. Interest rate risk is the potential fluctuations in return caused affect the market make the interest changed. This type of risk is depends upon demand and supply of investment in market.

II. Purchasing Power Risk

Purchasing power relates with monetary capacity. It variability in purchasing power occurs, the investor the banks are forced to do more investment for needy returns for their existence. Purchasing power risk is cause of inflation in market.

III. Management Risk

The commercial bank has been facing management risk too, since by themselves as well as the management of policy-makers. Poor decision making leads such kinds of risk. Errors made by bad managers definitely affect investment policy.

IV. Liquidity Risk

Liquidity refers the discounts and commission given to other for converting the high priced assets ion lower price due to market factors. Basically the banks accept certain security for loan and the value of security also keeps changing time by time. This changing in the value of security as liquidity risk.

V. Default Risk

Default risk is inevitable risk, which can't be ignored, whether the banks is in liquidation or in improvement position. This is the variability in return for investment made.

VI. Callability Risk

Bonds and preferred stock are one of alternatives of investment. Nepalese bank has also invested in these types of stocks, bonds. The call ability risk is concerned with the time of bonds and preferred stock with provision that allows the issues or investors or banks to call them in for repurchase. The banks some time repurchase the already sold stock using the fund from new issues. Such kind of transaction may lead call ability risk.

The all above mentioned risks exist in Nepalese financial markets.

2.8 REVIEW OF BOOKS

Investment management is crucial part for all the banks and financial institutions. Banking activities regarding to investment, directly influence other transactions of the bank too. Different authors of books have defined investment in various ways. But, there is no actual definition of the investment policy in any books. Thus this researcher has made self-expression about investment policy, under the basis of following definitions, given by the writers, in view of investment.

Charles P. Jones (1991) has defined that "Investment is the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investors' wealth. Which is the sum of current income and present value of all income?"

According to H. D. Crosse (1963), "Lending is the essence of commercial banking consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management will conceive lending policies and careful lending practice are essential. If a bank performs its credit creating function effectively and minimize the risk in any extension of credit."

Kamal Gupta (1999) has defined investments as, "Investments are assets held by equity for earning income by way of dividends, interests and

rentals, for capital appreciation, or for benefits to the investing entity". According to Gupta, as above definition, he has focused an investment as an asset, which is held in various forms to gain dividend, interest, rentals for maximizing capital.

Similarly, as **Jack C. Francis (1998)** defined "An investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk. It requires a present certain sacrifice for future uncertain benefit." Likewise, "Concept of investment concerns with mobilization of money for extra earning in future". He further tells, "There is always some risk to gain each benefit"

William F. Sharpe, Alexander J. Gordon & Jeffery V. Bailey (2002), in their book "Investments". They had defined investment in this way "Investment means the sacrifice of current dollars for future dollars. Two different attributed are generally involved: time and risk. The sacrifice takes place in the present and is certain. The reward comes later, it at all and the magnitude is generally uncertain. In some cases the element of time predominates (for example, government bond). In other cases risk is the dominant attribute (for example, call option on common stock). In yet both time and risk are important."

John M. Cheney and Edward A. Moses (1973), in their opinion, "The objective of investment is to increase the individual wealth, defined as asset minus liabilities. The higher level of desired wealth the higher must be received. If an investor wants higher return, he must be willing to face higher risk."

According to **V. K. Bhalla (2004)**, in his book "Investment management: security analysis and portfolio management" has given the basic concept in three points.

A. Economic investment - that is an economic definition of investment.
B. Investment in a more general or extended sense which is used by the man if the street.
C. The sense in which we are going to be very much interested namely financial investment.

"Banks are those financial institutions, which accept deposit from the depositors or public and in turn provide credit in various sectors. These types of investment plays crucial role on the economic development of a country. To collect fund and utilize it in good investment is very risky job. Ad-hoc investment decision leads the bank out of the business there by downing the economic growth of a country. Hence sound investment policy of a bank is another secret of a successful bank. Various people have given their view regarding the investment policy of commercial banks, which has been written below.

Mr. Shakespeare Bhaidhya (1967) has given his view on sound investment policy. He has said that, "A sound investment policy of bank is such that its funds are distributed on different types of asset with good profitability on the one hand and provides maximum Safety and security to the depositors and bank on the other hand. Moreover, risk in banking sector trends to be concentrated in the loan portfolio. When a bank gets in to 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 down turn. Therefore the banks investment policy must be such that it is sound prudent in order to protest public funds.

"Further in details he deals with, what type of loan do bank make and how much of loan to be invested? The banks make a variety of loans to a wide variety of customers from many different purposes from purchasing automobile to construction of homes and making trade with foreign countries. There are no uniform rules can be laid down to determine the portfolio of a bank. The environment in which the banks operates is influenced its investment policy. The nature and availability of funds as also assets differ from country to country and also from region to region within a country. The scope of bank operating in remote areas will be different from the scope of bank operating in urban areas. The investment policy to be applied in urban area may not applicable to the customer of remote area because the demand for loans in remote areas whereas it is higher in urban areas."

Preeti Singh (1991) defined in this way; "Investment is the employment of funds with aim of achieving additional income or growth in value. The essential quality of an investment is that it involves "waiting" for a reward. It involves the commitment of resources, which have been saved or put away from current consumption in the hope that some benefits will accrue in future."

In this way it is clear that an investment means to trade a known rupee amount today for some expected future stream of payments or benefits that will exceed the current outlay by an amount that will exceed the current outlay by an amount that will compensate the investors for the time the funds are committed for the expected changes of prices during the period and for the uncertainty involved in future cash flow. Thus investment is the most important function of the banks. It is long term commitment of banks in the uncertain and risk atmosphere. It is very challenging task for any banks. So a bank has to consider various precautionary steps while investing their funds in various sectors.

2.9 REVIEW OF RELEVANT STUDIES

Many researchers have conducted their research on the field Commercial Banks especially on their financial performance, and fund mobilization policy, compliance with NRB directives etc. Besides this, there are some books, articles desertions and other relevant study concerned with the Lending and Investment. Some of the relevant studies, their objectives, findings and conclusions and other literature relating to the topic have been reviewed below.

2.9.1 REVIEW OF ARTICLES / JOURNALS

Investment policy is determinant factor for the successful existence of every bank. In the Nepalese context, modern concept and practice of investment is now to come. The decision-making units (DMUs) are steel applying traditional way of investments. Some of the multinational companies, joint venture banks are now starting to invest in modern as well as globalize view. For this study, some of the reports, articles World Bank discussion papers, magazines, newspapers etc are analyzed.

A report made by **Mr. Shiba Raj Shrestha (1998)**, deputy chief officer of NRB, banking operation department, has concluded some specific analysis on the report " portfolio management in commercial bank, theory-practice" Mr. Shrestha has emphasized on important of portfolio management with regards to investment behavior adopted by Nepalese banks and financial institutions. He further directs for the application and practice of portfolio management leads the economic up liftment of banks as well as individuals. Some of his conclusion for the proper investment behavior given here:

i. Higher return comparable with investment alternative opportunities available according to the risk class of investors.
ii. Good liquidity with adequate safety of investment.
iii. Certain capital gains.
iv Flexible investments
v. Maximum tax concession
vi. Economic, efficient and effective investment mix.

According to Mr. Shrestha the above considerations are most useful for an effective decision. Similarly, for successful investments, he has concluded some strategies.

i. Do not hold single security: do not relay on single investment alternative. Try to have a portfolio of different securities.
ii. Have a diversified investment, make investment in different sectors.
iii. Always select such combination or mix of investment alternatives, which consist of minimum but maximum profit as well.

Like wise, the approaches to adopt for beneficial investment portfolio management, pointed by Mr. Shrestha are:

i. Find the information's about the securities and analyzes them like age of security, physiologic condition, need, liquidity, maturity, fax aspects etc.
ii. Analysis the altitude of investors about risks.
iii. Identity the investment and risk from the investment

As the conclusion, he further points that, the application of modern concept of investment portfolio management is like bit preferred be Nepalese commercial banks. For the best operation of Nepalese banks he has determined some specific guidelines to adopt in his own words are:

i. The survival of banks depends upon its own financial health and other activities
ii. In order to develop and expand the portfolio management activated successfully the manager should practice the proper investment management methodology.
iii. The operating banks in Nepal should adopt portfolio management activities for the increment of their income as well as to enrich the customer's life style for the overall development of nation.
iv. For the proper management of investment portfolio, the banks should have capable as well as trained manpower for investment decision-making.

Prof. Dr. Radhe Shyam Pradhan (1994) in his research, "Financial management Practices in Nepal" has studied about the major features of financial management practices in Nepal. To address his issue, a survey of 78 enterprises was carried out by distributing a multiple questionnaire that question contained on various aspects.

He found that the several finance functions, the most important finance function appeared to be working capital management. While, the least important one is appeared to be maintained good relations with stockholders. The findings reveal that banks and retained earnings are the two most widely used financing sources. Most enterprises do not borrow from one bank only and they do switch between banks to which ever offers best interest rates. Most enterprises find that banks are flexible in interest rates and covenants. He further found that among the bank loans, bank loans of less than one year are more popular in public sector where as bank loans of 1-5 years are more popular in private sectors. In periods of tight money, the majority of private sectors enterprises fell that bank will treat all firms equally while public sector does not feel so. Similarly, he concluded that the majority of enterprises in

traded sector find that banks, interest rate is just right while the majority in non-traded sector find that the same is one higher side.

Mr. Bodhi B. Bajrachara (1990) in his article, " Monetary policy & deposit mobilization in Nepal" concludes that the mobilization of domestic saving is one of the prime objectives of the monetary policy in Nepal and for this purpose commercial banks are the active financial intermediary for generating resources in the form of deposit of the private sector and providing credit to the investors indifferent sector of economy.

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

He further adds that mismanagement in financial institutions has involved inadequate and over optimistic loan appraisal, tax loan recovery, high risk diversification of lending and investment, high risk concentration, connected and insider lending, loan mismatching. This has led many banks of developing countries to the failure in 1980s.

Prof. Dr. Sunity Shrestha (1995) has concluded in her study, " portfolio behavior of commercial banks in Nepal," has made specific efforts to analyze the total investment portfolio behavior of commercial banks in Nepal. She addresses that the domestic banks in Nepal are investing mostly on government securities, national saving bonds, debentures and company shares. The resources for investment of banks are related with total deposits, cash reserve, interest rate internally and externally, national income, market value etc variables which definitely influence the investment behavior of commercial banks. On the basis of her finding, the given conclusions are made:

I. Log-linear equation the banks portfolio behavior.
II. GDP of out country related with deposits to be made.
III. The commercial banks are interested to invest on governmental securities, which are influenced by total deposit cash reserve, lending rates etc.
IV. The loan loss ratio been found to increase with low recovery of loan.

Commonly an article made by **Mr. Murari Raj Sharma (1998)**, "Joint venture banks in Nepal, co-existing or growing out" in his own words, it would be definitely unwise for Nepal not to let the Joint Venture Banks operate in the country and not to take advantage of them as additional means of resources

mobilization as well as harbinger of new era in banking. But it will certainly be unfortunate for the country to develop Joint Venture Banks and the cost of domestic banks.

Similarly, **Mr. Bhagat Bista (2001)** in his research paper, " Nepal Adhunik Banking Byabastha: has made an attempt to highlight some of the important indicators, which have contributed to the efficiency and performance of Joint Venture Banks in the field of commercial banks. At the end of the paper he has concluded that the establishment of Joint Venture Banks a decade ago marks beginning of modern banking era in Nepal. The joint venture banks have brought in many new banking techniques such as computerization, hypothecation, consortium finance and modern fee based activities into the economy. These are indeed significant milestone in the financial development process to the economy.

Likewise, **Mr. Bishowamber Pyakuryal (1987)** in his article, "workshop on banking and national development" writes the present changing context of the economic calls for a substantial revitalization of the resources. How much they have gained over the years depends chiefly on how far they have been able to utilize their resource sin an efficient manner. There fore the task of utilization of resources is as much crucial as the mobilization. The under utilization of resources not only results not only results in loss of on come but also further to discourage the collection of deposits.

In the same way, **Mr. Dev Lal Kishi (1996)** in his article, "the changing face of the banking sector and the Nepalese government budgetary policy" has pointed that the banking sectors are important institutions for economic liberalization. The banking operation in Nepal is gradually stepping to the well-equipped management. Similarly government owned banks Nepal bank limited and Rastriya Banijya Bank are ready to come under globalization technique to operate them successfully. However, higher economic growth with social justice bringing a significant benefit to poor are yet to be achieved as envisaged by the Nepalese government.

Keith C. Brown & Scott Lummer (1984), Journal of financial management identifies financial management has long recognized the maintaining a portion of the firms assets in liquid balance whether their rationale for holding theses balances is speculative or precautionary. Decision makers are regularly faced with the decision of how they should be invested. The traditional approach has been to take short terms positions in relatively risk less securities such as certificates of deposits, commercial paper or treasury bills. Implicit in the acquisition of such issues has been the nation that liquidity must necessarily is traded off against high fields. Conventional wisdom has held that while the corporate cash pool shouldn't sit completely the rate of return it earns is of secondary important.

2.9.2 REVIEW OF DISSERTATIONS

As the special guidelines are needed for this study, the researcher of this study has made a quick to several theses with view to gather knowledge part for a goal oriented and successful thesis to prepare. This researcher has found theses uniform to this form TU, NCC library, some of them are analyzed as given below.

a. A thesis made by Upendra Shrestha (2004)

The subject of the thesis is "The investment practices of joint venture banks in Nepal with special reference to Nabil Bank Limited, Standard Chartered Bank Nepal Limited and Nepal SBI Bank Limited" has figured out the problem, conclusion and recommendation as follows:

Commercial Banks are more emphasized to be making loan on short-term basis against movable merchandise. Commercial Banks have a lot of deposits but very little Investment Opportunity. They are even discouraging people by offering very low interest rate and minimum threshold balances. Commercial Bank invests their funds in limited areas to achieve higher amount of profit. This regarded as a very risky step, which may lead to lose in profit as well as principle. The credit extended by commercial Banks to agriculture and industrial sector is not satisfactory to meet the growing need of the present say.

He has concluded that since the liquidity position of Nabil and SCBNL have not found satisfactory, it is, therefore, suggested them to improve cash and bank balance to meet current obligations. SCBNL's Loans and Advances to total deposit ratio is lower at all, it is recommended to follow liberal lending policy for enhancement of fund mobilization. It is recommend to Nepal SBI bank that it have to invest its fund on share and debentures of other companies. It is suggested to enhance off balance sheet transactions, diversifying their investments, open new branches, play merchant banking role and invest their risky assets and shareholder's fund to gain higher profit margin.

The function of capital in banks and other financial institutions is substantially different from that in most other business enterprises. For example, in a manufacturing concern, the capital fund is used primarily for acquisition of fixed assets, while in a banking organization the function of capital is primarily to provide a guarantee fund, its usage in fixed assets acquisition is hardly more than 15 percent (and it should never be more than 20 percent). Capital performs a guarantee function in other enterprises too, but not so predominantly, the capital of manufacturing concern is something's of cushion for long and short-term creditors to fall back on, but this is only one its purpose. Bank capital has almost no other purpose. "Of course, one of the primary functions of development in banking is deposit mobilization. Without deposits coming as they do from the public and the saver banks will not have the resources to lend. With adequate resources, lending can have wider average to meet the credit needs of all the sectors of the economy. Deposits and credit

operation always go together and each is interconnected. Unless there are advances, deposits cannot arise.

b. A thesis made by Mr. Mukunda Prasad Lamichhane (2004)

The thesis entitled "Investment policy of joint venture banks in Nepal" is relevant proposal for this research. The researcher's main objective was to study the fund mobilization and investment policy with respect to fee based off balance sheet transactions.

He has carried out for findings that proper investment activities by joint venture banks in Nepal are performed or not. Mr. Lamichhane has found that financial position due to proper investment programmers of NABIL in higher than other JVBs. He also concluded that there is no significant relationship between deposits and total investment in case of NABIL with comparison to other JVBs, due to effective investment policy. He further recommended that before mobilizing fund well, the commercial bank must collect large amount of deposits for more investments. The JVBs must mobilize the funds in different sectors such as purchase share and debentures of the financial or non-financial companies as well as government securities. He pointed that of course; the commercial banks are playing a vital role but not as neat merchant bank. He further advised to the JVBs to keep eyes and mind over open on portfolio management practically. To get the success in banking business, every manager should consider on proper utilization and mobilization of depositors deposits effectively and efficiently.

c. A thesis made by Upendra Tuladhar (1999)

"A study on investment policy of Nepal Grindlays bank Ltd in comparison to other joint venture banks (NABIL and HBL)" is another relevant literature for this proposal research. The researcher's main objectives of study was to study the fund mobilization and investment policy with respect to fee based off balance sheet transactions and to evaluate the growth ratios of loan and advances and total investment with respective growth rate of total deposits and net profit.

Through his research Mr. Tuladhar has found that NGBL has been successful to maintain in the best way both liquidity position and there consistency, among three banks NGBL has successfully managed assets to generate income source of NGBL and it can affect the banks net profit. The researcher has concluded that the joint venture banks of Nepal are not effectively informative to their clients and joint venture banks have given first priority on education sectors while making investment. The poverty stricken and deprived sectors are given second priority. The reason behind not providing banking facilities to rural areas is that these banks are profit oriented only.

d. A thesis made by Mr. Raja Ram Khadka (1998)

He has conducted his thesis entitled "A study on investment policy of NABIL bank in comparison to other joint venture banks of Nepal". The researcher's main objective of study is to find out the fund mobilization and

investment policy of NABIL in comparison to other joint venture banks along with other objectives.

Mr. Khadka through his research has found that the liquidity and assets management ratio of NABIL is worse than that of NGBL and NIBL and profitability position of NABIL is comparatively not better than other joint venture banks. Growth ratios of NABIL seems to be more successful to increase its source of funds i.e. deposits and mobilization of them seem to be failure to maintain high growth rate of profit. The researcher has concluded that there is significant relationship between deposits and loan and advances as well as outside assets and net profit but no between deposits and total investment incase of NABIL and other joint venture banks. The researcher has stated that NABIL has higher trend value of loan and advances ratio and total investment to total deposits and NABIL is comparatively less successful in on balance sheet operation as well as off balance sheet operation than that of other joint venture banks.

e. A thesis made by Mr. Ganesh Regmi (2001)

The study entitled "A comparative study of the financial performance of Himalayan bank Ltd and Nepal Bangladesh bank Ltd ". The researcher's main objective is to examine the financial position of these banks and to analyze the comparative financial position. Through his research Mr. Regmi has found that the current assets of HBL are adequate to meet the current liabilities where as it is sufficient for NBBL. Further as per his study long term debt to net worth ratio is higher in NBBL than in HBL but both banks are following an aggressive strategy of higher than that of HBL during the study period. This refers that NBBL is always capable more to meet any windfall. According to his research both banks are utilizing their deposits fund through loan and advances to generate revenue efficiently but comparatively NBBL is doing more efficiently than HBL.

Mr. Regmi has also stated that HBL has better utilization of resources in short term investment and NBBL has more non earning idle assets as cash and bank balance and profitability position of HBL is better than that of NBBL. HBL has higher net profit to working fund ratio. Newt profit to total deposits ratio and return to newt worth is also higher than NBBL. But interest earned to working fund ratio for NBBL is higher and it has also the higher interest paid to working fund ratio. Earning per share, dividend per share, dividend pay out ratios are higher in HBL than NBBL. Price earning ratio of NBBL is higher than HBL. Ha has found that average operating income from interest and commission and discount are higher in HBL, where as foreign exchange fluctuation gain and other income are higher in NBBL

f. A thesis made by Ms. Samiksha Thapa (2001)

She has conducted her study entitled. "A comparative study on investment policy of NBBL and other joint venture banks (NABIL and NGBL).the main objective of the study was to evaluate the liquidity, assets

management, profitability and risk position of NBBL in comparison to NABIL and NGBL and to examine the fund mobilization and investment policy of NBBL through off- balance sheet and on-balance sheet activities in comparison to other two joint venture banks.

The researchers found that the liquidity position of NBBL is comparatively better than the NABIL and NGBL. The liquidity ratios are moderately fluctuating which means the bank has not properly formulated stable policy. As per her study NBBL is not in better position regarding its on balance sheet as well as off balance sheet activities in compare NABIL and NGBL and it does not seem to follow any definite position regarding the management of its assets. The profitability position of NBBL is comparatively worse than that of NABIL and NGBL. The mean credit risk ratio of NBBL is higher and more variable than other. The mean interest risk ratio of NBBL is slightly higher than NGBL and lower than NABIL and has mentioned lowest capital risk ratio. The researcher has stated that NBBL has maintained higher growth rates on comparison to other banks though it is not successful in increasing to make enough investment and NBBL is successful in increasing its sources of funds and its mobilization. The researcher has shown that there is significant relationship between deposits, loan &advances and outside assets and net profit if NBBL, NABIL and NGBL but there is no significant relationship between deposit and investment of NBBL only. The researcher has concluded that the position of NBBL in regards to utilization of its funds to earn profit is not better in compare to NABIL and NGBL and NBBL has collected fund in comparatively higher cost and is paying 6% - 7.5% interest in various deposits. Further NBBL does not seem to have adequate recovery rate.

g. A thesis made by Mr. Shyam Kumar Udas (2001)

He has conducted his study entitled "A comparative appraisal on financial performance of Nepal Bangladesh bank and Bank of Kathmandu Ltd". The researcher's main objective was to examine the financial performance of BOK and NBBL for five years period and to show the causes of changes in cash position of the two banks at two-balance date.Through has research Mr. Udas has found that both banks were maintaining sufficient amount of cash to meet the demand by the customers. BOK has a higher portion of cash and banks balance out of its current assets compared to NBBL. BOK has greater variability in over all liquidity ratios. As per the researcher NBBL is in better position in terms of utilizing customers deposit in the form of loan and advances. Both of these banks are utilizing their deposits funds through loan and advances but comparatively, NBBL is more efficiently than BOK.

Further as per study the profitability position of NBBL is far better than that of BOK and is in increasing trend. BOK is suffering losses in three fiscal years, showing its operational deficiencies in mobilizing the resources in productive sectors. He has concluded that the both banks were found to be extremely levered over the study periods, as the ratio was very high in both banks. However the ratio was found to be much higher in BOK than in NBBL

which indicates that BOK may be paying more interest to its creditors than that NBBL. The earning per share was found to be always higher in case of NBBL than BOK as the BOK was suffering losses in three fiscal years and NBBL was increasing its net profit at from the inception. Dividend pay out ratio of NBBL was found to be decreasing over the study period.

h. A thesis made by Mr. Satya Ram Kishi (1999)

"Portfolio of commercial banks in Nepal" a thesis work during 1999 is another relevant literature for this proposal research. Mr. Kishi had analyzed and evaluated the investment and loan factors with relation to portfolio made by commercial bank during study work. In his thesis, proper and enough tools are used to found object results and suggestions. He has found that the establishment and operation of commercial banks in Nepal was rising day by day but basically in town areas only. The availability of bank in remote and village areas are still negative. Due to more competition among the running banks, the expected return from investment is uncertain, so most of investments are made on government securities for certain (risk -less) benefits. He concluded that less than 1% of funds of average banks were invested incorporate shares and debentures that were caused by more risks in the markets. Similarly, during 1998/99 commercial banks had invested 85% of average fund in private sectors in form of loan and advances etc. likewise, he concluded that the joint venture banks are comparatively performing well than the bank owned by government even though the same environment.

i. A thesis made by Mr. Prakash Shrestha (2003)

The thesis entitled "Portfolio Analysis in investment of Nepalese Commercial Banks" has presented that most of the commercial banks gave first priority to invest their resources on loan and advances. So, there was lack of opportunities to investment on corporate securities. All the commercial banks were found to invest in government securities for certainty, ever there is less return. The bank during research time has not applying scientific approach for investment diversification and portfolio management.

j. A thesis made by Mr. Vikram Chandra Gurung (1995)

The subject "A financial study of joint venture banks in Nepal, A comparative study of Nepal Grindlays bank and Nepal Indosuez bank Ltd" has found that both joint ventures indicate unsatisfactory in liquidity position and interest coverage ratios. The capital structure of both banks is extremely levered but thy have been maintaining sound capital adequacy ratio as per NRB directives. In addition of this he has recommended to maintain improved capital structure by increasing equity base. The researcher has further suggested extending their banking facilities even in the rural areas by opening up branches.

k. A thesis made by Mr. N. M. Pradhan (1997)

The topic "A study in investment policy of Nepal bank ltd" has emphasized that there is a greater relationship between deposits and loans and advances. He concluded that though loan and advances as well as deposits are in increasing trend, their increase is not in proportionate manner. Immense increase in deposits had led to little increase in loan and advances due to the increase in the increase in the interest rates. His recommendation was to grant loans and advances without its lengthy process. He has suggested enhancing banking transactions up to rural sector of the kingdom.

l. A thesis made by Mr. Netra Kumar Khatri (1994)

The thesis entitled "A Study on investment policy of NIDC" during 1994 A.D., has found that the volume of investment is very low made by NIDC. This is because of lack of proper exploitation of industrial opportunities regarding NIDC. It seems that allocation of investments has not been enough for the development of nation. This thesis has concluded that highest portion of loan has been invested as direct loan and the least as guarantee loan. There is more priority at central development region and least to far western region. Mostly hotels, lodges, tourism based industries etc are main invest sectors adopted by NIDC, this thesis locates.

m. A thesis made by Miss Kamala Ojha (1999)

She has drawn her conclusion in her thesis, "A study on priority sector investment in commercial bank (with special reference to RBB)" that the bank was unable to meet the requirement of 12 percent lending in the priority sector set under NRB directives. During her study period, she further found low interest rate in priority sector increasing trend of overdue and its misutilization. She has recommended improving supervision, evaluating borrowers paying capacity and reducing the over due through integrated program of priority sector loan.

2.10 JUSTIFICATION OF THE STUDY/ RESEARCH GAP

Keeping in view the fact that there is no comparative study on investment policy of NABIL in comparison to SCBNL and HBL. The previous researchers have done investigation about the investment policy of other different banks. The concerned banks are the leading joint venture banks of the country having huge market share and their investment activities and significant impact on the national economy. The above-mentioned works deal on gross concept only. To get more accuracy in result, this study has been conducted to focus on both gross and net concept. The researcher has covered five fixed years (2003/04 to 2007/08) to analyze the liquidity position, profitability position, assets management position as well as risk position also of the concerned banks. This study examines recent secondary financial data using coefficient of correlation, regression analysis, trend analysis and hypothesis test. The researcher chooses this subject to throw light on investment policy and to suggest the possible measures for the betterment and welfare of the bank. Also he attempts to show the significance to the shareholders, depositors, customers and general public etc.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Methodology states the method with which data have been extracted and discuss the tools of that have been used in interpretation of such data to fulfill the objectives. More specifically, it describes about the research design. The population and sample, nature and source of data and tools, which is be used to analyze data.

The main objective of this study is to find out the relationship between investment and the other variables, which affect investment policy. The research methodology should be used to accomplish the research objectives, which is described in this unit. Research methodology refers to the various sequential steps adopted by a researcher in studying a problem with certain objectives in view. In other words research methodology describes methods and processes applied in the entire part of the study.

3.2 RESEARCH DESIGN

The research study attempts to analyze the investment policy techniques adopted by joint venture banks in Nepal. Hence, analytical and descriptive research is applied. Descriptive research is essentially a fact finding approach relative largely to present and abstracting generalization by the cross section study of the current situation. Analytical approach is followed to parametric and non-parametric test of data. It is the process of microanalysis and appraisal to the data.

The research design is more prescriptive and less descriptive. Annual reports and financial statements published by related banks and other necessary information were collected form the concerned banks. The study period covers five years accordingly data were collected from the year 2003/2004 to year 2007/2008.

3.3 POPULATION AND SAMPLE

There are altogether 22 commercial banks operating all over the nation. All commercial banks, whole shares of stocks are traded in Nepal Stock Exchange Limited (NEPSE) i.e. that is listed in NEPSE as form the population of this study. Three of them have been selected as sample. Population and sample of this study are as follow:

POPULATION
Table No. 3
List of Licensed Commercial Banks

S. N	Commercial Banks	Operation Date (A. D.)	Head Office
1.	Nepal Bank Ltd.	1937/11/15	Kathmandu
2.	Rastriya Banijya Bank.	1966/01/23	Kathmandu
3.	NABIL Bank Ltd.	1984/07/16	Kathmandu
4.	Nepal Investment Bank Ltd.	1986/02/27	Kathmandu
5.	Standard Chartered Bank Ltd.	1987/01/30	Kathmandu
6.	Himalayan Bank Ltd.	1993/01/18	Kathmandu
7.	Nepal SBI bank Ltd.	1993/07/07	Kathmandu
8.	Nepal Bangladesh Bank Ltd.	1993/06/05	Kathmandu
9.	Everest Bank Ltd.	1994/10/18	Kathmandu
10.	Bank of Kathmandu Ltd.	1995/03/12	Kathmandu
11.	Nepal credit & commerce Bank.	1996/10/14	Siddarthanagar
12.	Lumbini Bank Ltd.	1998/07/17	Narayangadh
13.	Nepal industrial & commercial bank	1998/07/21	Biratnagar
14.	Machhapuchhre Bank Ltd.	2000/10/03	Pokhara
15.	Kumari Bank Ltd.	2001/04/03	Kathmandu
16.	Laxmi Bank Ltd.	2000/04/03	Birgunj
17	Siddhartha Bank Ltd.	2002/12/24	Kathmandu
18	Global Bank LTd.	2007/01/01	Birgunj
19	Citizen Bank International Ltd.	2007/4/20	Kathmandu
20	Prime Commercial Bank Ltd.	2007/9/28	Kathmandu
21	Bank of Asia Nepal Ltd.	200710/12	Kathmandu
22	Sunrise Bank Ltd.	2007/10/12	Kathmandu

Source: NRB, Banking and Financial Statistics,, 2009

Samples selected for this Study

1. Nabil Bank Limited (NABIL)
2. Standard Chartered Bank Nepal Limited (SCBNL)
3. Himalayan Bank Limited (HBL)

3.4 NATURE AND SOURCES OF DATA

The study is based on secondary data. The required data were directly obtained from financial statements, such as balance sheet and profit & loss account of the concerned banks.

The major sources of information collections are as follows:

Annual reports of related companies and security board of Nepal.
Financial statistics of listed companies, published by security board of Nepal.
Journals, Government and Non-government publication other supportive books and mostly websites of the companies.
Other related published and unpublished documents.
Other necessary information were collected from various institutions

3.5 DATA ANALYSIS TOOLS

In this study, only financial and statistical tools are used for the analysis of data that is already stated in the limitation of the study. The procedures of analyzing data are described as follows:

3.5.1 Financial Tools and Techniques

The focus of financial analysis is on key figures in the financial statements and the significant relationship that exist between them. The analysis of financial statements is a process of evaluating the relationship between component parts of financial statements to obtain a better understanding the firm's position and performance. Financial analysis is the process of selection, relation and evolution. Financial tools like ratio analysis have been used in this study.

3.5.1.1 Ratio Analysis

Financial ratio analysis is a widely and frequently used tool of financial analysis. It establishes the numerical relationship between the two relevant accounting figures derived from the financial statement/reports in the form of quotient, proportion or percentages and based on that, an assessment is made about the financial performance and position of an organization. Count less ratios can be formulated from financial statements/reports. A ratio reflecting a quantitative relationship should help to form qualitative judgments. It is possible only when the relationships between two figures are meaningful or some reference can be drawn from such relationship. There are many ratios, only those ratios have been covered which are related to investment operation of the banks. The study contains following ratios.

I. LIQUIDITY RATIOS

Liquidity ratios are the ratios that provide the quick measure of the liquidity position or the ability of the firm to meet its current obligations. In other words, liquidity ratios are the indicator of short-term solvency or financial strength of the firm. It is the measurement of speed with which a banks asset can be converted into cash to meet deposit withdrawal and other current obligations.

A. Current Ratio

Current ratio shows the relationship between current assets and current liabilities. It can be computed by dividing current assets by current liabilities.

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets include all those assets which are in the form of cash can be converted in to cash in a period of one year. It comprises cash and bank balance, receivables (book debts, bills receivable), inventory or stock, prepaid

expenses, marketable securities or short-term investments, short-term loan and advances, accrued income etc. Like wise current liabilities include all obligations maturing within a year and is represented by creditors, bills payable, outstanding expenses, short term loan, bank overdraft, tax payable, dividend payable and long term loan maturing during the year etc.

An organization should have enough current assets that give a promise of cash 'cash to come' to meet its commitment or to pay its current liabilities. Current ratio has a standard measure of 2:1 or that the current assets should be two times or 200% of the total current liabilities.

B. Cash and Bank Balance to Current Assets Ratio

Cash and bank balance are the most liquid current assets. This ratio measures the proportion of the most liquid assets i.e. cash and bank balance among the total current assets of bank higher ratio shows the banks ability to meet the demand for cash. This ratio is computed by dividing cash and bank balance by current assets.

$$\frac{\text{Cash and bank balance}}{\text{Current assets}}$$

C. Cash and Bank Balance to Total Deposit Ratio

This ratio measures the percentage of most liquid fund with the bank to immediate payment to the depositors. This ratio is computed by dividing cash and bank balance by total deposit. This can be presented as follows.

$$\frac{\text{Cash and bank balance}}{\text{Total deposits}}$$

D. Investment on Government Securities to Current Assets Ratio

Most of the firm has invested their fund on government securities. This ratio measures to find out the percentage of current assets invested on government securities (treasury bills, bonds) this ratio is computed by dividing investment securities by current assets.

$$\frac{\text{Investment on government securities}}{\text{Total current assets}}$$

E. Loans and advances to current assets ratio

This ratio shows the relationship between the loans & advances and current assets ratio. The ratio can be computed by dividing loans and advances by current assets. That is given below.

$$\frac{\text{Loans and advances}}{\text{Current assets}}$$

2. ASSETS MANAGEMENT RATIOS

The bank or any firm has to manage the resources in a good way otherwise it's very difficult to run. Assets management ratio measures how efficiency the banks manages the resources at its command. The following ratios are used under this ratio.

A. Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how the banks are utilizing successfully their total deposits on loan and advances for profit generating purpose. Greater ratio implies the better utilization of total deposits. This ratio can be computed by dividing loan and advances by total deposits.

$$\frac{\text{Loan and advances}}{\text{Total deposits}}$$

B. Total Investment to Total Deposit Ratio

Investment is one of the most important factors to earn income. This implies the utilization of firm's deposit on investment on government securities and share debenture of other companies and bank. This ratio can be computed by dividing total investment by total deposit. This can be mentioned as

$$\frac{\text{Total investment}}{\text{Total deposit}}$$

The numerator consists of investment on government securities, investment on debenture, investment on debenture bonds and shares in other companies and other investment.

C. Loan and Advances to Total Working Fund Ratio

Loan and advances is the major component in the total assets. It indicates the ability of bank to invest its deposits to earn high return in the form of loan and advances. This ratio is computed by dividing loan and advances by total working fund. This can be mentioned as

$$\frac{\text{Loan and advances}}{\text{Total working fund}}$$

Here, the total working fund includes all assets as of on balance sheet items. In other words this includes current assets, net fixed assets, loan for development banks and other miscellaneous assets but excludes off balance sheet items like letter of credit and letter of guarantee etc.

D. Investment on Government Securities to Total Working Fund Ratio

This ratio shows the banks investment on government securities in comparison to the total assets. This ratio is calculated by dividing investment on government securities by total working fund. This can be mentioned as:

$$\frac{\text{Investment on government securities}}{\text{Total working fund}}$$

E. Investment on Shares and Debenture to Total Working Fund Ratio

This ratio shows the banks investment in shares and debenture of other companies. This ratio can be derives by dividing investment on shares and debenture by total working fund, which can be mentioned as:

$$\frac{\text{Investment on shares and debentures}}{\text{Total working fund}}$$

F. Total OBS Operation to Loan and Advances Ratio

The OBS operation shows the banks efficiency in conducting modern off balance sheet transaction in comparison to loan and advances i.e. issue letter of credit, letter of guarantees and making other commitment etc. this ratio is calculated by dividing total OBS operation by loan and advances. This can be mentioned as:

$$\frac{\text{Total OBS operation}}{\text{Loan and advances}}$$

The transaction under OBS operations are not included in to part of balance sheet items i.e. assets or liabilities. It included letter of credit, letter of guarantee, documents negotiated under reserve capital commitment on foreign current purchase, claimed at bank but not accepted and other transaction.

G. Loan Loss Ratio

The control of loan loss is an important facet of bank operation and the bank is greatly concerned to minimize it. A poorly administered loan portfolio usually has significant negative impact on the earnings and capital of the bank. Greater loan loss provision is required to allow in income statement if high loss is expected. This leads to low profit and possible losses that produce low increases or decreases in the capital.

The loan loss ratio (garden and miller) indicates the adequacy of allowance for loan and trend in the collection of loan and the performance in loan portfolio. It is obtained by the ratio of loan loss provision to the total loan. This ratio is defined as the measure of prospective losses that are envisioned by the bank management in relation to the banks overall loan and investment. The negative sign indicates that an increase in the value of the variables is indicative of weakness of the bank.

$$\frac{\text{Total loss provision}}{\text{Total loan and advances}}$$

3. PROFITABILITY RATIOS

The firm should earn profits to survive and grow over the long period of time but not at the cost of employees, customers and society. Obviously, if the

firm in not able to make reasonable profits form its operation, it will not run for long time. The profitability ratios are used as a measure to judge the operating efficiency (success or failure) of any firm. Profitability ratios are usually computed by relating it either sales or investment as listed below.

I. Profitability Ratios on the basis of Sales

i. Gross profit margin
ii. Net profit margin
iii. Operating expenses ratio

II. Profitability Ratios on the basis of Investment

A. Return on Loan and Advances

This ratio indicates how efficiency the bank has employed its resources in the form of loan and advances. This ratio is computed by dividing net profit by loan and advances. This can be expressed as follows:

$$\frac{\text{Net profit}}{\text{Loan and advances}}$$

B. Return on Total Working Fund Ratio

This ratio measures the rate of return earned by the firm as a whole for all its investors. That is why this ratio equals net profit after tax plus interest on debt divided by total assets (exclusive of fictitious assets) are financed by the pool of funds contributed by shareholders and lenders.

$$\frac{\text{Net profit}}{\text{Total assets}}$$

Higher ratio indicates the higher return on assets or on amount contributed by investors on account of efficiency management of assets or capital.

C. Return on Equity Ratio

In general, common shareholders equity, preference equity and long term loan is used as capital. The firm has to pay preference dividend to preference shareholders and long-term loan is repaid by the profit from the firm. At last the remaining profit is given to the equity shareholders. Equity shareholders have right and control over the firm. They are the actual owner of the firm. This ratio judges the profitability of the firm with reference to the ordinary shareholders or the real stakeholders fund and is computed as:

$$\frac{\text{Net profit}}{\text{Ordinary shareholders equity}}$$

D. Total Interest Earned to Total Working Fund Ratio

This ratio shows the percentage of interest earned on total working fund. Higher ratio implies better performance of the bank its terms of interest earning on its total working fund. This ratio can calculate by dividing total interest earned by total working fund. This is expressed as

$$\frac{\text{Total interest earned}}{\text{Total working fund}}$$

E. Total Interest Earned to Total Operating Ratio

This ratio is calculated to find out the position of interest income in total operating income of the bank. It indicates how efficient the bank mobilization of its resources (fund) in interest bearing assets i.e. loan and advances investment etc. this ratio is calculated by dividing interest earned by total operating income. This ratio can be expressed as

$$\frac{\text{Total interest earned}}{\text{Total operating income}}$$

F. Total Interest Earned to Total Outside Assets Ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of outside assets. Higher ratio implies efficient use of out side assets to earn interest. This ratio can be computed by dividing total interest earned by total outside assets. This can be expressed as follows.

$$\frac{\text{Total interest earned}}{\text{Total outside assets}}$$

Total interest earned comprises total interest income from loan and, advances, cash credit and overdrafts, government securities, bank and other investments. Total outside assets includes loan and advances, bills purchased and discounted and all types of investment.

G. Total Interest Paid to Total Working Fund Ratio

This ratio measures the percentage of total interest expenses against total working fund. Higher ratio indicates the higher interest expenses on total working funds and vice versa. This ratio can be computed by dividing total interest paid by total working fund. This can be expressed as follows.

$$\frac{\text{Total interest paid}}{\text{Total working fund}}$$

4. RISK RATIOS

Risk is involved in every financial institution because a bank must have to take risk to get return; risk taking is involved in process of collecting the funds (sources) as well as in the use of funds (loans, advances and investment on securities). Therefore, one has to have idea of the level of risk that one has to have to bear while decision-making.

In this study, three major important risk ratios were computed and compared among the banks during the span of five years period.

A. Liquidity Risk Ratio

The liquidity risk of a bank refers to a comparison of a banks liquidity need for deposit. The cash and bank balance, in this study are considered as banks liquidity source and deposits as the liquidity needs. In banking funding, loans may be a major liquidity need and purchasing liabilities an important source of liquidity. This relationship is usually an indicator of banks liquidity risk.

The risk in long term security and loan is relatively higher than that of short-term securities and loans. If one shifts to long-term loan or securities from short-term securities, the return of the banks may increase but the risk will increase as well. Therefore, higher liquidity ratio indicates a less risky and less profitable bank. The ratio can be computed as.

$$\text{Liquidity risk ratio} = \frac{\text{Cash and bank balance}}{\text{Total deposits}}$$

B. Credit Risk Ratio

As the fund used in loans and advances increase the credit also increased and so does the returns. In Nepalese context, classification of high quality loans and medium quality loans are not made. According to definition, High quality loan means the loan that gives higher return. But now, Nepalese commercial banks are asked to classify their loans on the basis of direction issued by the central bank as satisfactory, not satisfactory of poor loans. But data based on types of classification is not available so far. The ratio can be computed as.

$$\text{Credit risk ratio} = \frac{\text{Loan and advances}}{\text{Total assets}}$$

C. Capital Risk Ratio

The capital risk of a bank indicates how much assets values may decline before the position of depositors and other creditors is jeopardized. The capital risk is directly related to the leverage multiplier (asset/equity), and hence to the return on equity. If a bank chooses to take high capital risk, its return on equity

will be higher and similarly if it chooses to take a low capital risk, the return on equity will also be lower. The ratio can be calculated by dividing capital (paid up + reserve) by total risk weighted assets. This can be expressed as follows.

$$\text{Capital risk ratio} = \frac{\text{Capital}}{\text{Risky assets}}$$

5. GROWTH RATIOS

In Nepal, the financial institutions have grown very slowly in terms of numbers of bank branches. With the introduction of foreign banks in Nepal, financial intermediaries' function has been geared up to a significant extent.

The emergence of foreign banks started a few years ago. Although these institutions were originally established to serve entirely trade and commercial sector of the economy, the government now wishes to involve them also in the areas where local banks have been involved. Theses foreign banks have ever since opened a few branches in some cities and area also planning to open branches in other parts of the country as well. The following growth ratios are calculated to examine and analyzed the expansion and growth of the banks business.

a. Growth ratio of total deposits.
b. Growth ratio of loan and advances.
c. Growth ratio of total investment.
d. Growth ratio of net profit.

3.5.2 STATISTICAL TOOLS

Statistical tools are also very important tools for the analysis. Some important statistical tools are used in this study to achieve the objectives. Statistical tools such as standard deviation, coefficient of variation, least square linear trend and hypothesis testing have been used. They are as follows.

A. Arithmetic Mean

An average is a single value selected from a group of values to represent them in same way, which is supposed to stand for a whole group of which it is a part, as typical of all the values in the group. Out of various measures of statistical tools, arithmetic mean is one if the useful tools applicable here. It is easy to calculate and understand and based on all observations. Arithmetic mean of a given set of observations is their sum divided by the number of observations. In general, if X_1, X_2, and X_3 _ _ _ _ _ X_n are the given observations. Then arithmetic mean usually denoted by $\overline{X}$ is given by,

$$\overline{X} = \frac{X_1 + X_2 + X_3 + \_\_\_ + X_n}{n}$$

Where, n = number of observations

B. Standard Deviation

The measurement of the scatter ness of the mass of figures in a series about an average is known as dispersion. The standard deviation measures the absolute dispersion. The greater the amount of dispersion, greater the standard deviation mean of high degree of uniformity of the observation as well as homogeneity of the series a large standard deviation means just the opposite. In this study standard deviation of different ratio are calculated. The following formula is used to calculate.

$$\text{S.D.} = \sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$$

C. Coefficient of Variance

The coefficient of variance is the relative measures of dispersion compare across distribution, which is defined as the ratio if the standard deviation to the mean expressed in percent, it is calculated as

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

D. Correlation of Coefficient Analysis

This analysis identifies and interprets the relationship between two or more variable in the case of the highly correlated variables. The effect on one variable may have effect on other correlated variable. Under this topic Karl Pearson's coefficient of correlation has been used to fund out the relationship between the following variable.

i. Correlation of coefficient between deposits and loan & advances.
ii. Correlation of coefficient between total deposit and total investments.
iii. Correlation of coefficient between deposit and net profit.
iv. Correlation of coefficient between deposit and interest earned.
v. Correlation of coefficient between loan & advances and interest paid.
vi. Correlation of coefficient between total working fund and net profit.

The tool analyzes the relationship between these variables and helps the banks to make appropriate policy regarding deposit collection, fund utilization (loan & advances and investment) and maximization of profit.
The following formulae is used to calculate,

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

Where, $x = \left(X - \bar{X}\right)$ and $y = \left(Y - \bar{Y}\right)$

E. Regression Analysis

Regression analysis is most power tools of statistics, which being used in the estimation of the strength of the relationship between two variables. Regression is stepping or returning back to the original position. It is a statistical device, with help of which, we can estimate or predict the value of the one variable when the value of other variable is known. The unknown variable, which we have to predict, is called dependent variable and the variable whose value is known is called independent variable. The analysis used to describe the average relationship between two variables is known as simple linear regression analysis. The following subtopic has been analyzed.

i. Regression analysis between total working fund and net profit.
ii. Regression analysis between total investment and net profit.
iii. Regression analysis between total deposit and net profit

F. Trend Analysis

The topic (trend analysis) analyzes the trend of deposits, loan and advances, investment and net profit of three joint venture banks from 2002/2003 to 2007/2008 and makes the forecast for the next five years from 2008/2009 to 2011/2012. The following subtopic has been presented under this topic.

i. Trend analysis of total deposits.
ii. Trend analysis of loan and advances.
iii. Trend analysis of total investment.
iv. Trend analysis of net profit.

G. Test of Hypothesis

The main objective of this test is the significance regarding the parameters of the population on the basis of sample drawn from the population. This test has been conducted on the various ratios related to the banking business.

i. Test of hypothesis on loan and advances to total deposit ratio.
ii. Test of hypothesis on total investment to total deposit ratio.
iii. Test of Hypothesis on return on loan and advances ratio.
iv. Test of hypothesis on total interest earned to total working fund ratio.
v. Test of Hypothesis of cash and bank balance to current assets ratio.
vi. Test of Hypothesis of loan and advances to current assets ratio.

Research methodology and the various financial and statistical tools discussed above have been used in the next chapter to analyze and interpret the data regarding the three joint venture banks for the study from the F/Y 2003/2004 to 2007/2008.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

4.1 DATA PRESENTATION AND ANALYSIS

This is an analytical chapter, where an attempt has been made to analyze and evaluate main financial items, which have an impact on investment management and fund mobilization of NABIL in comparison to SCBNL and HBL. There are many types of financial ratios. In this study those ratios are calculated and analyzed that are important in evaluating the fund mobilization of commercial banks.

4.1.1 FINANCIAL TOOLS

Financial analysis involves identifying the financial strength and weakness of the organization by presenting the relationship between items of balance sheet. Ratio analysis has been mainly used for the analysis of data to get the objectives. There are various financial ratios related to investment management and fund mobilization, have been presented and discussed in order to evaluate and analyze the performance of three joint venture banks. The ratios are designed and calculated to highlight the relationship between financial items and figures. These calculations are based on financial statements of concerned joint venture banks. The financial ratios that are calculated for the purpose of this study are as follows:

A. Liquidity Ratio
B. Asset Management Ratio
C. Profitability Ratio
D. Risk Ratio
E. Growth Ratio

4.1.1.1 Analysis of Liquidity Ratios

Liquidity ratio measures the firms' capability to meet its current obligation. A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community, demand for the deposit withdrawals, pay maturity in time and convert non cash assets into cash to satisfy immediate need without loss to bank and consequent impact or long -run profit The following ratios which measure the liquidity position of banks are calculated.

I. Current Ratio

This is a crude measurement of liquidity ratio. It measures the ratio between total current assets and total current liabilities. It gives only the short glimpses on the liquidity position of a firm. It indicated the extent to which the claims of short-term creditors are covered by asset expected to cover to cash in the near future. Generally, accepted current ratio is 2:1, however, it is accepted

1:1 too for banking and seasonal business. Current ratio is calculated by dividing current assets by current liabilities. The current assets include cash and bank balance with cheques in hand, balance with NRB, money at call and short notices, Investments in government securities, bills purchased and discounted, Loans and Advances and other current assets, Similarly, current liabilities includes borrowings from other banks, deposits, bills payable, and other current liabilities.

Table No. 4
Current Ratio (Times)

F/Y	NABIL	SCBNL	HBL
2003/04	1.05	1.06	1.02
2004/05	1.06	1.07	1.01
2005/06	1.08	1.06	0.98
2006/07	1.08	1.06	1.04
2007/08	1.06	1.08	1.05
Mean	1.07	1.07	1.02
S. D.	0.012	0.008	0.025
C.V.	1.13	0.75	2.4

It is clear from the above table that NABIL, SCBNL and HBL have maintained current assets more than their current liabilities. All the three banks are capable enough to pay their current obligations. NABIL has the highest current ratio of 1.08% in the F/Y 2005/06 & 2006/07 and the lowest is 1.05% in the F/Y 2003/04. SCBNL has maintained the highest ratio of 1.08% in the F/Y 2007/08 and the lowest ratio of 1.06% in the F/Y 2003/04, 2005/06 and 2006/07. Similarly, HBL has recorded the highest ratio of 1.05% and the lowest ratio of 0.98% in the F/Y 2007/08 and 2005/06 respectively.

The averages mean ratio of NABIL and SCBNL is equal and slightly higher than HBL. This shows that the liquidity position of NABIL and SCBNL is slightly better than that of HBL. In the point view of C.V. it suggests that NABIL have less consistency in their ratios. HBL seems to be more consistency. Though as per the conventional rule, current ratio should be 2:1 but for banks and other financial institutions any current ratio above 1 also considered healthy and sound but the ratio of HBL is less than 1.00 in the F/Y 2005/06 which is not good. Thus, it can conclude that the liquidity position of NABIL is satisfactory.

II. Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance is said to be assets that represent the banks first line of defense of every bank. The ratio between the cash and bank balance and total deposit measures the ability of banks highly liquid or immediate funds to meet its unanticipated calls on all types of deposits. Higher ratio indicates the

greater ability to meet the sudden demand of deposits and vice versa. But too, high ratio is undesirable since capital will be tied up and it will maximize the opportunity cost. This ratio is calculated by dividing cash and bank balance by total deposits. The cash and bank balance to total deposits ratio of NABIL, SCBNL and HBL are given below.

Table No. 5
Cash and Bank Balance to Total Deposit Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	5.13	6.23	8.14
2004/05	6.78	5.21	6.79
2005/06	8.51	8.06	9.42
2006/07	6.87	7.07	9.09
2007/08	3.83	5.75	8.12
Mean	6.22	6.46	8.31
S. D.	1.599	1.005	0.918
C.V.	25.7	15.56	11.04

The above table shows that the cash and bank balance to total deposits of NABIL, SCBNL and HBL are in fluctuating trend. NABIL has the highest ratio of 8.51% in the F/Y 2005/06 and lowest ratio of 3.83% in the F/Y 2007/08. SCBNL has the highest of 8.06% in F/Y 2005/06 and the lowest of 5.21% in F/Y 2004/05. Similarly, HBL has recorded highest ratio of 9.42% and lowest ratio of 8.12% in the F/Y 2005/06 and 2007/08 respectively. The average mean ratio of SCBNL is slightly higher than NABIL and lower than HBL. The mean ratio of NABIL is lowest. This shows SCBNL readiness to meet customer requirement better than NABIL and worst than HBL. In comparison of C.V, HBL seems to be more consistency and NABIL seems to be less consistency because HBL has less and NABIL has high C.V.

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

In conclusion we can say that NABIL is not good position in maintaining cash and bank balance. Though, it has invested more funds in other sector which is quite good to earn high income.

III. Cash and Bank Balance to Current Assets Ratio

This ratio examines the banks liquidity capacity on the basis if its most liquid assets i.e. cash and bank balance. This ratio reaches the ability of the banks to make the payment of its customer deposits. High ratio indicates the sound ability to meet their daily cash requirement of their customer deposit and

vice versa. But higher ratio is not desirable as the bank has to pay interest on deposits and some earning may be lost. Similarly, lower ratio is also not preferable as the bank may fail to make the payment against the cheques presented by the customers. This ratio is calculated by dividing cash and bank balance by current assets. The cash and bank balance to current assets ratio are presented in the following table.

Table No. 6
Cash and Bank Balance to Current Assets Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	4.49	5.00	7.77
2004/05	6.06	4.50	6.37
2005/06	7.03	7.27	9.06
2006/07	5.92	8.61	8.19
2007/08	3.41	5.09	7.32
Mean	5.38	6.09	7.74
S. D.	1.277	1.579	0.894
C.V.	23.72	25.9	11.55

Source: Appendix A

The above table shows that the cash and bank balance to current assets all three banks NABIL, SCBNL and HBL are in fluctuating trend. NABIL has maintained the highest ratio of 7.03% in the F/Y 2005/06, and the lowest ratio of 3.41% in the F/Y 2007/08. Similarly, SCBNL has recorded the highest ratio of 8.61% in F/Y 2006/07 anticipating higher cash requirement depositors in this F/Y. It has recorded the lowest ratio of 4.50% in F/Y 2004/05. HBL has maintained the highest ratio of 9.06% and the lowest ratio of 6.37% in the F/Y 2005/06 and 2004/05 respectively.

The averages mean ratio of NABIL is lower than NABIL and HBL. The C.V. of SCBNL is greater than other two banks. It shows SCBNL ratio is less consistency than that of NABIL and HBL. All the banks have fared well in meeting their depositor's daily cash requirement and investing the surplus fund in other productive areas. Comparatively, NABIL is not in good position to maintain cash and bank balance. It has invested more funds in other sectors.

IV. Investment on Government Securities to Current Assets Ratio

Every commercial bank is interested to invest their collected funds on different securities issued by government in different times to utilize their excess funds and for other purpose. Though, government securities are not so much liquid as cash and bank balance. They can be easily sold in the market or they can be converted into cash on other ways. This ratio helps to examine that portion of banks current assets, which is invested on different government securities.

This ratio is calculated by dividing investment on government securities by current assets. The investment on government securities to current assets ratio are as follows.

Table No. 7
Investment on Government Securities to Current Assets Ratio (%)

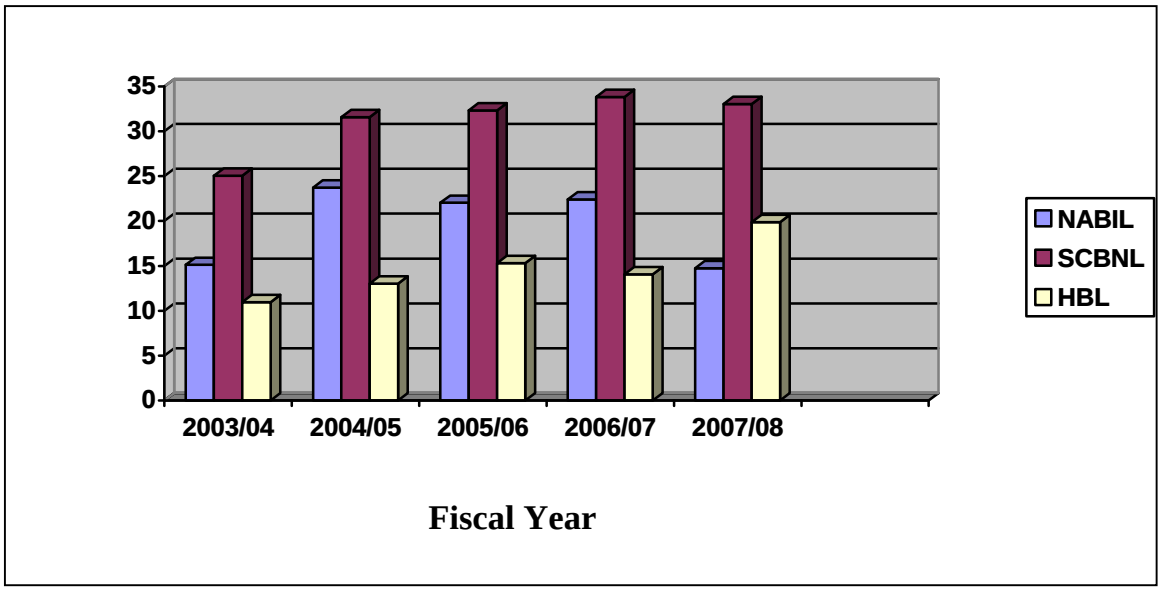
F/Y	NABIL	SCBNL	HBL
2003/04	15.11	25.03	10.97
2004/05	23.73	31.56	13.03
2005/06	22.03	32.33	15.32
2006/07	22.41	33.83	14.05
2007/08	14.73	33.03	19.88
Mean	19.6	31.16	14.65
S. D.	3.866	3.154	2.978
C.V.	19.72	10.12	20.32

The above table clearly depicts that the investment on Government securities to current assets of NABIL and HBL have in fluctuating trend. The ratio of SCBNL is in increasing trend up to 2006/07 and then, it is decreased by 7.68 points.

From the above five years picture, it is evident that the average mean ratio of SCBNL is higher than that of other two sample banks. This shows that the greater portion of current assets of SCBNL comprises on government securities. Also, SCBNL's investments on government securities to current assets have an increasing trend over the years. NABIL trend is moderate position, which is lower than SCBNL and higher than HBL. From the point of view of C.V. SCBNL's ratios have been more consistency and HBL has less consistency and uniformity. From the above analysis it is clear that NABIL and HBL has made lesser investment in government securities as it has injected more funds on other productive sectors. The reason behind SCBNL higher ratio could be attributed to more deposit collection and unavailability of other secured and profitable investment sectors. The balance sheet of SCBNL post 2003/04 shows that total fund invested in government securities is more than the loan & advances it has made.

In conclusion we can say that NABIL's liquidity position from investment on government securities is better than HBL and poorer than SCBNL. Investment on government securities of NABIL, SCBNL and HBL is graphically shown as follows:

Investment on Government Securities to Current Assets Ratio (%)



V. Loan and Advances to Current Assets Ratio

Loan and advances are the main sources of income and profitable assets for every bank. Every bank is willing to lend as more as possible. This ratio shows the relationship between loan and advances and current assets. This ratio is calculated by dividing total loan and advances by current assets. The ratios are presented in the following table.

Table No. 8
Loan and Advances to Total Current Assets Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	42.72	29.98	46.25
2004/05	42.82	29.26	44.88
2005/06	47.62	27.39	45.77
2006/07	49.98	27.28	48.93
2007/08	64.6	37.34	45.17
Mean	49.54	30.25	46.2
S. D.	8.029	3.696	1.445
C.V.	16.21	12.21	3.13

Source: Appendix B

The above table clearly shows favorable increasing trend of NABIL. The average mean ratio of NABIL is highest in comparison to other banks. SCBNL has decreasing trend up to 2006/07 and then it has increased. HBL has a fluctuating trend. NABIL has the highest ratio of 64.60% in the F/Y 2007/08 and the lowest ratio of 42.72% in F/Y 2003//04. Similarly SCBNL has experienced the highest ratio o 37.34% in F/Y 2007/08 and the lowest of 27.28% in the F/Y 2006/2007. Similarly, HBL has maintained the highest ratio of 48.93% and the lowest of 44.88% in the F/Y 2006/07 and 2004/05

respectively. In the point of view C.V, HBL seems to be more consistency and NABIL seems to be less consistency.

The above analysis reveals that NABIL has been more successful in identifying profitable investment sectors and increasing its earning. The same does not hold true for SCBNL, whose efforts seems to be more focused on investing in risk free assets, rather than increasing its loan and advances volume and subsequent earnings from it. HBL also has made successful loan and advances.

4.1.1.2 Analysis of Assets Management Ratios

A commercial bank must be able to manage its assets very well to earn high profit to satisfy its customers and for its own existence. This ratio measures how efficiently the bank manages the resources at its command. The following ratios measure the assets management ability of NABIL, SCBNL and HBL.

I. Loan and Advances to Total Deposit Ratio

This ratio shows the relationship between loans and advances which are granted and the total deposit collected by the banks. This ratio actually measures the extent to which the banks are successful to mobilize their total deposits on loan and advances. This ratio is calculated by dividing loan and advances by total deposits.

Table No. 9
Loan and Advances to Total Deposit Ratio (%)

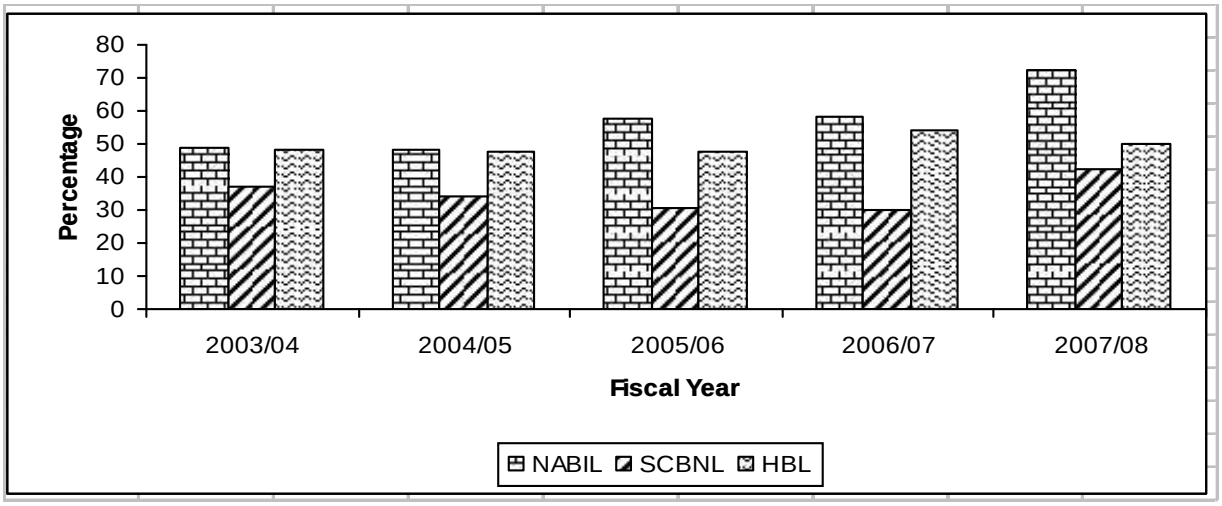
F/Y	NABIL	SCBNL	HBL
2003/04	48.82	37.35	48.41
2004/05	47.97	33.87	47.87
2005/06	57.68	30.37	47.61
2006/07	58.01	30.29	54.3
2007/08	72.57	42.12	50.07
Mean	57.05	34.81	49.65
S. D.	8.858	4.509	2.477
C.V.	15.53	12.95	4.99

Source: Appendix c

The above table shows that loan and advances to total deposit of all three banks have a fluctuating trend. NABIL has the highest ratio of 72.57% in the F/Y 2007/08 and the lowest ratio of 47.97% in the F/Y 2004/05. Accordingly, SCBNL has the highest of 42.12% and the lowest of 30.29%. HBL has the highest ratio of 54.30% in the F/Y 2006/07 and the lowest ratio of 47.61% in the F/Y 2005/06. The mean ratio of NABIL is higher than SCBNL and HBL. NABIL seems to be strong in terms of mobilizing on its total deposits as loan and advances when compared to SCBNL and HBL.

In terms of C.V. NABIL seems to be less consistency but HBL has the lowest ratio of all so it seems to be more consistency. It can be concluded that, NABIL has been more successful in mobilizing its total deposit as loan and advances. On the contrary, a high ratio should not be perceived as a better state of affairs from the point of view of liquidity, as loan and advances are not as liquid as cash and bank balance and other investment. In portfolio management of bank various factors such as availability of funds, liquidity requirements, central bank norms etc. needs to be taken into account. Loan and advances to total deposit ratio of NABIL, SCBNL and HBL is graphically shown as follows:

Figure No. 2
Loan and Advances to Total Deposit Ratio (%)



II. Total Investment to Total Deposit Ratio

The commercial banks are interested to invest its funds in different securities issued by government and other financial or non-financial companies. This ratio measures the extent to which the banks are able to mobilize their deposit on investment in various securities. High ratios indicate the high success in mobilizing deposit in securities and vice versa. This ratio is calculated by dividing total investments by total deposits. The data tabulated below shows the total investment to total deposit ratio.

Table No. 10
Total Investment to Total Deposit Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	48.64	61.95	23.15
2004/05	52.88	58.58	49.18
2005/06	44.85	55.16	48.44
2006/07	41.33	53.68	42.22
2007/08	29.25	50.18	47.12
Mean	43.39	55.91	42.02
S.D.	8.049	4.049	9.743
C.V.	18.55	7.24	23.19

Source: Appendix D

The above table shows a highly fluctuating trend in total investment to total deposit of NABIL and HBL. But SCBNL has decreasing trend. NABIL has the highest ratio of 52.88% and the lowest ratio of 29.25%. SCBNL, on the other hand has the highest ratio of 61.95% and the lowest ratio of 50.18% in F/Y 2003/04 and 2007/08 respectively. Similarly, HBL has the highest ratio of 49.18% in the F/Y 2004/05 and the lowest ratio of 23.15 in the F/Y 2003/04. SCBNL has higher mean ratio than NABIL and HBL. From mean ratio perspective, SCBNL has been more successful in mobilization of deposit on various forms of investment. From view point of C.V, SCBNL is being little better in terms of consistency than NABIL and HBL. NABIL is in moderate position. The ratio of C.V. is higher than SCBNL and lower than HBL.

In conclusion, we can say that SCBNL has been more successful in mobilizing its resources on various forms of investment.

III. Loan and Advances to Total Working Fund Ratio

The main purpose of this ratio is to examine how broad area the bank has covered to provide its service efficiently. Each commercial banks working fund should play vital role on profit generating through fund mobilizing its total asset as loan and advances in appropriate levels. This ratio measures the extent to which the commercial banks are success in mobilizing their assets on loan and advances for the purpose of income generation. A higher ratio preferable as it includes better mobilization of fund as loan and advances and vice versa. This ratio is computed by dividing loan and advances by total working fund. The following table exhibits the ratio of loan and advances to total working fund.

Table No. 11
Loan and Advances to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	42.1	29.77	45.24
2004/05	42.19	29.08	43.12
2005/06	46.83	27.12	42.82
2006/07	48.91	27.11	48.27
2007/08	61.6	37.19	44.62
Mean	48.33	30.05	44.81
S.D.	7.144	3.721	1.95
C.V.	14.78	12.38	4.35

From the above table, the loan and advances to total working fund ratio of NABIL is increasing trend and the ratio of SCBNL is decreasing trend up to the F/Y 2006/07 and the ratio of HBL is in fluctuating trend. NABIL has maintained the highest ratio of 61.60% in F/Y 2007/08 and the lowest ratio of

42.10% in F/Y 2003/04. Similarly, SCBNL has maintained the high ratio of 37.19% in the F/Y 2007/08 and the lowest ratio of 27.11% in F/Y 2006/07. HBL has the highest ratio of 48.27% and the lowest ratio of 42.82% in the F/Y 2006/07 and 2005/06 respectively.

If mean ratio is considered, NABIL has the highest ratio of loan and advances to total working fund than both banks. It reveals the strength of NABIL in mobilizing its total assets as loan and advances. According to view point of C.V, SCBNL is 12.38% which is slightly lower than NABIL and higher than HBL. It proves that its ratios are more stable and consistent than NABIL and less stable and consistent than HBL.
From above analysis, it can conclude that NABIL is in strong position in term of mobilizing the loans and advances with respect to total working fund in comparing to other banks.

IV. Investment in Government Securities to Total Working Fund Ratio

Government securities are a safe medium of investment though it is not liquid as cash and bank balance. Therefore, a bank never used as its resources as loan and advances. It utilizes its funds by purchasing government securities, this ratio is very helpful to measure the extent on which the banks are successful in mobilizing their total working fund on different types of government securities to maximize the income. High ratio shows better mobilization of fund as investment on government securities and vice versa. This ratio is calculated by dividing investment in government securities to total working fund. The following table shows that ratios of concerned banks.

Table No. 12
Investment in Government Securities to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	14.88	24.85	10.73
2004/05	23.38	31.37	12.52
2005/06	21.67	31.01	14.33
2006/07	21.93	33.62	13.86
2007/08	14.05	32.9	19.64
Mean	19.18	30.95	14.22
S.D.	3.904	3.102	2.986
C.V.	20.35	10.02	20.99

The above table reveals that all three banks are in fluctuating trend. NABIL had the highest ratio 23.38% in F/Y 2004/05 and the lowest ratio of 14.05% in F/Y 2007/08. Similarly, SCBNL has the highest ratio of 33.62% in F/Y 2006/07 and the lowest ratio of 24.85% in 2003/04. Similarly, HBL has high ratio of 19.64% and low ratio of 10.73% in the year 2007/08 and 2003/04 respectively. If mean ratio is considered, SCBNL seems to be stronger than

NABIL and HBL in mobilizing of total assets as investment in Government securities. According to the view point of C.V, SCBNL seems to be more consistency and HBL seems to be less consistency because SCBNL has the lowest C.V. and HBL has the highest C.V.

From the above analysis, we can conclude that SCBNL has invested large portion of working fund in government securities than NABIL and HBL. The ratios also indicate that the banks have no certain investment policy with regards to what percentage of working fund to be invested in purchasing government securities. In this case NABIL is in moderate position.

V. Investment in Share and Debentures to Total Working Fund Ratio

Commercial banks are now interested to invest its funds not only government securities but also shares and debentures of other different types of companies. The investments in government securities are safer than the investment in debenture and share of other companies. These banks are showing response on investment, the main purpose of the ratio is to measure to which extent the banks are successful to mobilize their assets on purchase of shares and debentures of other companies to generate and utilize their excess funds, a high ratio indicates greater portion of investment on shares and debentures out to total working funds and vice versa. This ratio is calculated by dividing investment in share and debentures by total working fund. These are as follows.

Table No. 13
Investment in Shares and Debentures to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	0.103	0.058	0.057
2004/05	0.124	0.06	0.166
2005/06	0.134	0.053	0.147
2006/07	0.133	0.047	0.138
2007/08	0.16	0.061	0.143
Mean	0.131	0.056	0.13
S.D.	0.0183	0.0912	0.038
C.V.	13.97	162.86	29.23

The above table clearly reveals that all three banks have invested miniscule percentage of total working fund in purchasing share and debentures of other companies. In either case the ratio percentage is less than 0.20%. In average, NABIL has invested slightly higher amount of total working fund on shares and debenture than other banks. The mean ratio is also higher. It indicates that NABIL has been more successful in mobilizing its fund as investment in shares and debenture. The above table shows NABIL has an

increasing trend in investment on shares and debentures; where as SCBNL and HBL has a fluctuating trend through out the period of study.

From the above analysis, it can be concluded that the ratios of NABIL with other two banks as shown in the table, it has maintained the highest ratio. It means it has comparatively higher percentage of its total asset into other company's shares and debentures

VI. Total OBS Operation to Loan and Advances Ratio

This ratio shows the proportion of fee based off balance sheet activities to fund based loan and advances of the bank. These fee based activities are very much dependent on mode of operation, management strategy, banking network with foreign banks etc. a commercial banks should not concentrate only on fund based activities such as loan and advances, investment on different sectors but it should pay its attention to increase fee based off balance activities. Income generated through the fee based off balance sheet activities constitutes a significant proportion in the total income of commercial banks income statement. A high ratio indicates the higher OBS transaction and vice versa. The ratio can be calculated by dividing total OBS operation by loan and advances.

Table No. 14
Total OBS Operation to Loan and Advances Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	64.50	106.6	60
2004/05	67.12	82.16	60.41
2005/06	70.72	76.15	50.1
2006/07	64.69	67.57	52.12
2007/08	44.31	50.07	62.13
Mean	61.71	76.51	56.95
S.D.	10.272	12.55	5.177
C.V.	16.65	16.4	9.09

The above table shows that the ratios of NABIL and HBL are in fluctuating trend. The ratio of SCBNL has in decreasing trend. The highest ratio of NABIL is 70.72% in the F/Y 2005/06 and the lowest ratio of 44.31% in the F/Y 2007/08. SCBNL has the highest ratio of 106.60% and the lowest ratio of 50.07% in the F/Y 2003/04 and 2007/08 respectively. Similarly, the highest ratio of HBL is 62.13% in the F/Y 2007/08 and the lowest ratio of 50.10% in the F/Y 2005/06. if the mean ratio is considered, SCBNL has the highest ratio of 76.51% and HBL has the lowest ratio of 56.95%. HBL seems to be more consistency and NABIL seems to be less consistency.

Thus, we can say that NABIL is in moderate position, which is better than HBL and poorer than SCBNL.

VII. Loan Loss Ratio

Loss of loan is occurred when the debtors fail to pay their. Loss o f loan is not only the default of debtors but it is because of the failure of recovery of loan by the bank**.** Negligence in its part makes a negative impact on the earning and capital of a bank very badly. Greater loan loss provision is made in income statement if high loss is expected. But this will lead to low profit and possible losses and produces low increase or decrease in capital. The loan loss ratio shows how efficiently the bank manages its loan and advance and makes effort for timely recovery of loan. This ratio is calculated by dividing loan loss provision by loan and advances.

Table No. 15
Loan Loss Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	7.65	5.07	4.03
2004/05	4.89	6.19	7.22
2005/06	4.61	5.35	8.43
2006/07	4.38	4.42	8.1
2007/08	3.41	3.41	8.26
Mean	4.99	5	7.21
S.D.	1.421	0.932	1.643
C.V.	28.49	19.07	22.8

From the above table, it is clearly seen that, NABIL and HBL has fluctuating trend and SCBNL has decreasing from F/Y 2005/06. NABIL has the maximum ratio of 7.65% in the fiscal year 2003/04 and the minimum ratio of 3.41% in the fiscal year 2007/08. In case of SCBNL, it has the maximum ratio of 6.19% in the fiscal year 2004/05 and the minimum ratio of 3.41% in the F/Y 2007/08. Similarly, HBL has the maximum ratio of 8.43% in the F/Y 2005/06 and the minimum ratio of 4.03% in the F/Y 2003/04.

In average, NABIL has lowest loan loss provision ratio comparing with other two banks. So, it shows that the position is better in this regard. It concludes that the performance of NABIL in terms of recovery of loan is satisfactory in comparison to HBL and SCBNL.

4.1.1.3. Analysis of Profitability Ratios

The main objectives of a commercial bank are 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, over come the future contingencies, grab hidden investment opportunities, expand banking transactions in different places, finance government in need of development funds etc. a commercial bank must have to earn sufficient profit. Of course, 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 fund mobilization. Through the following ratios, effort has been made to measure the profit earning capacity of NABIL, SCBNL and HBL.

I. Returns on Loan and Advances Ratio

Return on loan and advances ratio measures the earning capacity of commercial banks its mobilized fund - based loan and advances. The high ratio indicates the high return and vice versa. This ratio is calculated by dividing net profit by loan and advances. The following table shows the return on loan and advances ratio of NABIL, SCBNL and HBL during the study period.

Table No. 16
Return on Loan and Advances Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	3.77	7.48	3.24
2004/05	3.65	8.93	2.64
2005/06	5.37	8.9	2.12
2006/07	5.56	8.39	2.2
2007/08	4.5	6.62	2.48
Mean	4.57	8.06	2.54
S.D.	0.789	0.892	0.399
C.V.	17.26	11.07	15.71

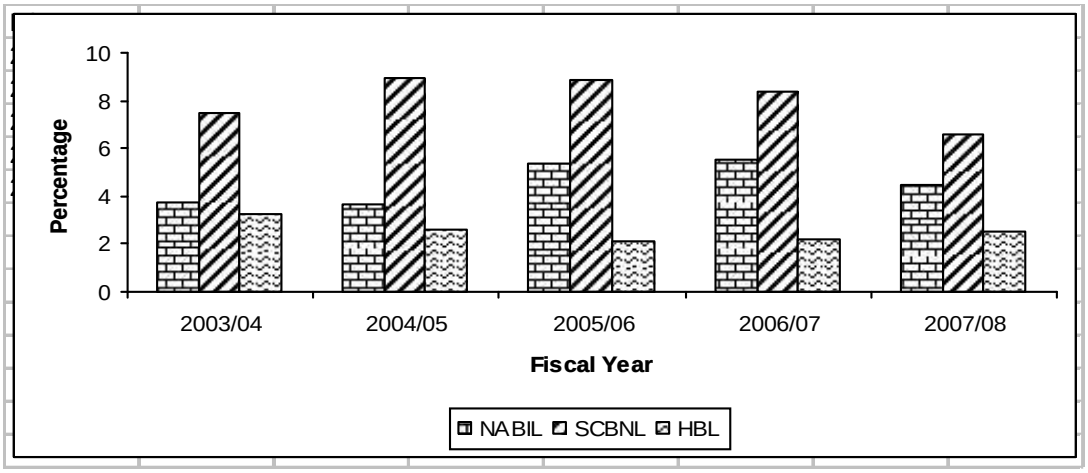
Source: Appendix E

The above table shows that the ratio of return on loan and advances of SCBNL is better than NABIL and HBL in the all fiscal years, through they have a fluctuating trend. NABIL's ratios have witnessed a decreasing trend up to F/Y 2004/05; there after it has an increasing trend. NABIL has recorded the highest ratio of 5.56% in F/Y 2006/07, and the lowest ratio of 3.65% in F/Y 2004/05. SCBNL has recorded the highest of 8.90% in F/Y 2005/06 and the lowest of 7.48% in F/Y 2003/04. Similarly, HBL has the highest ratio of 3.24% and the lowest ratio of 2.12% in the F/Y 2003/04 and 2005/06 respectively.

The comparison of mean ratio reveals that SCBNL has higher ratio than other banks. This shows that SCBNL has been more successful in maintaining its higher return on loan and advances. If C.V. is considered, NABIL is significantly higher than other two sample banks. It proves that NABIL is more consistency and uniformity than SCBNL and HBL. Thus it can be concluded that NABIL has failed to earn higher return on loan and advances then

SCBNL. NABIL's ratio on return on loan and advances is in moderate position among three banks. Returns on loan and advances ratio of NABIL, SCBNL and HBL is graphically shown as follows:

Figure No. 3
Returns on Loan and Advances Ratio



II. Return on Total Working Fund Ratio

Return on total working fund ratio measures the profit earning capacity by investing financial resources of the bank assets. Return will be higher if the banks working fund is well managed and efficiently utilized and vice versa. This ratio is calculated by dividing net profit by total working fund. The data tabulated below reflects the profitability position with respect to total assets of NABIL, SCBNL and HBL.

Table No. 17
Return on Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	1.59	2.23	1.46
2004/05	1.54	2.6	1.14
2005/06	2.51	2.41	0.91
2006/07	2.72	2.28	1.06
2007/08	3.02	2.46	1.11
Mean	2.28	2.4	1.14
S.D.	0.603	0.131	0.18
C.V.	26.45	5.46	15.79

Form the above listed comparative table, it is found that the return on total working fund is in fluctuating trend in case of all three banks. NABIL has the highest ratio of 3.02% in the F/Y 2007/08 and the lowest ratio of 1.54% in the F/Y 2004/05. SCBNL has the highest ratio of 2.60% and the lowest ratio of

2.23% in the F/Y 2004/05 and 2003/04 respectively. Similarly, HBL has recorded the highest ratio of 1.46% and the lowest ratio of 0.91% in the F/Y 2003/2004 and 2005/2006 respectively.

Among three banks, SCBNL has slightly higher mean ratio than NABIL and HBL. It reveals that SCBNL has been able to earn high profit on total working fund in comparison with other two banks. One point worth making here is that NABIL has managed and utilized its assets more efficiently than SCBNL and HBL from F/Y 2005/06 onwards and its return on assets have also been higher. HBL has not managed its assets well because the return on total working fund is lower than other banks. From the viewpoint of C.V., SCBNL are more consistency than NABIL and HBL. HBL is also more consistency than NABIL.

From the above analysis, it can be concluded that NABIL is little bit poorer in return on total working fund than SCBNL and better than HBL.

III. Return on Equity Ratio

The objective of every bank is to earn high profit. If the banks utilize its equity capital properly then only bank can earn maximum profit. The return on equity capital shows the extent to which a bank is successful to mobilize its equity. It is measuring rod of the profitability of a bank. A high ratio indicates the success of bank in mobilizing its equity capital and vice versa. The ratio can be calculated by dividing net profit by equity capital.

Table No. 18
Return on Equity Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	59.26	126.88	92.35
2004/05	55.25	141.13	60.26
2005/06	84.66	149.3	49.45
2006/07	92.61	143.55	49.05
2007/08	105.5	143.92	47.91
Mean	79.46	140.96	59.8
S.D.	18.592	3.373	6.177
C.V.	23.4	2.39	10.33

The above table shows that the ratio of NABIL has followed the fluctuating trend. It has the highest ratio of 105.50% in the F/Y 2007/08 and the lowest ratio of 55.25% in the F/Y 2004/05. The ratio of SCBNL has followed increasing trend from 2003/04 to 2005/06 and then decreases. It has the highest ratio of 149.30% and the lowest ratio of 126.88% in the F/Y 2005/06 and 2003/04 respectively. Similarly, the ratio of HBL has followed decreasing trend. It has the highest ratio of 92.35% and the lowest ratio of

47.91% in the F/Y 2003/04 and 2007/08 respectively. When mean ratios are observed, it is found that SCBNL has the highest ratio comparing with NABIL and HBL. HBL has the lowest ratio. The C.V. of SCBNL is low so that it seems to be less consistency and NABIL seems to be more consistency. Thus, it can conclude that NABIL's return on equity is better than HBL and poorer than SCBNL.

IV. Total Interest Earned to Total Working Fund Ratio

This ratio is very helpful to reveals the earning capacity of commercial banks by mobilizing its working fund. This ratio is important to know the extent on which the banks are successful in mobilizing their total assets to generate high income as interest. Higher the ratio, higher will be the earning power of the bank on its total working fund and vice versa. This ratio is calculated by dividing total interest earned by total assets. The following table shows interest earned to total working fund ratio of NABIL, SCBNL and HBL.

Table No. 19
Total Interest Earned to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	6.9	6.42	6.8
2004/05	6.35	5.5	5.56
2005/06	6.15	4.77	5.14
2006/07	5.98	4.41	5.03
2007/08	6.22	4.84	5.19
Mean	6.32	5.19	5.55
S.D.	0.314	0.709	0.652
C.V.	4.96	13.67	11.75

Source: Appendix F

The above table reflects a decreasing trend in interest earning ratio of all the banks up to the fiscal year 2006/07. NABIL has the highest ratio of 6.90% in F/Y 2003/2004 and the lowest ratio of 5.98% in the F/Y 2006/2007. SCBNL has experienced the highest ratio of 6.42% in the F/Y 2003/2004 and the lowest ratio of 4.41% in F/Y 2006/2007. Similarly, HBL has the highest ratio of 6.80% and the lowest ratio of 5.03% in the F/Y 2003/2004 and 2006/2007 respectively.

The average interest earned ratio of NABIL is 6.32% where as the same for SCBNL and HBL are 5.19% and 5.55% respectively. This reflects that NABIL has been stronger in terms of interest earning power on total working fund. According to view point of C.V, the ratio of NABIL is lower than HBL and slightly lower than SCBNL. It can be concluded that NABIL is more consistency than other two banks.

From the above analysis, we can conclude that NABIL is in better position and has been able to earn high interest on its total assets i.e., it has been more successful in mobilizing its assets to generate high income.

V. Total Interest Earned to Total Operating Income Ratio

Total interest earned to total operating income ratio helps to depict the earning capacity of a commercial bank on its total operating income, this ratio indicated the extent to which the bank has successfully mobilized its fund in interest bearing asset. This ratio is calculated by dividing total interest earned to total operating income. The following table shows interest earned to total operating income ratio of NABIL, SCBNL and HBL.

Table No. 20
Total Interest Earned to Total Operating Income Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	80.51	75.78	84.33
2004/05	68.34	70	82.82
2005/06	75.93	66.6	83.21
2006/07	75.1	68.51	82.17
2007/08	74.3	67.3	82.28
Mean	74.84	69.64	82.96
S.D.	3.897	3.281	0.78
C.V.	5.208	4.71	0.94

The above table exhibits that the ratio of all three bank follows the fluctuating trend in the study period. NABIL has the highest ratio of 80.51% in the F/Y 2003/2004 and the lowest ratio of 74.30% in the F/Y 2007/08. SCBNL has the highest ratio of 75.78% in the F/Y 2003/04 and the lowest ratio of 67.30% in the F/Y 2007/08. Similarly, HBL has recorded the highest ratio of 84.33% and lowest ratio of 82.17% in the F/Y 2003/04 and 2006/07 respectively.

If the mean ratios are observed, it is found that the HBL has the highest ratio than NABIL and SCBNL. Mean ratio of HBL is 82.96%, whereas the NABIL and SCBNL mean ratios are 74.84% and 69.64% respectively. The C.V. of NABIL is 5.208% that are comparatively higher than SCBNL and HBL. It indicates that the total interest earned to total operating income ratio of the NABIL is less consistency than other banks. The C.V. of HBL is lower than other two banks. It means more consistency and uniformity than other banks.

From the above analysis, it can be concluded that NABIL is in moderate position among three banks. HBL has mobilized more of its funds in interest bearing assets.

VI. Total Interest Earned to Total outside Assets Ratio

The main assets of a commercial bank are its outside assets, which includes loan and advances, investment on government securities, investment on shares and debentures and other all types of investments. This ratio reflects the extent on which the banks are successful to earn interest as major income on al the outside assets. A high ratio shows high earning power of total outside assets and vice versa. This ratio is calculated by dividing total interest earned by total outside asset. The following table shows interest earned to total outside assets.

Table No. 21
Total Interest Earned to Total outside Assets Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	8.21	8.12	10.51
2004/05	7.16	6.93	6.36
2005/06	7.38	6.24	5.95
2006/07	7.14	5.86	5.86
2007/08	7.2	5.93	6
Mean	7.41	6.61	6.94
S.D.	0.405	0.842	1.795
C.V.	5.46	12.72	25.88

The above comparative table proves that the ratio of NABIL exhibits fluctuating trend and SCBNL & HBL has decreased up to 2006/07 and then increased during the study period. NABIL has the highest ratio of 8.21% in the F/Y 2003/04 and the lowest ratio of 7.14% in the F/Y 2006/07. In case of SCBNL, it has followed almost decreasing trend, though it has increased for the year 2006/07 to 2007/08 from 5.86% to 5.93%. Similarly, HBL has recorded highest ratio of 10.51% and lowest ratio of 5.86% in the F/Y 2003/04 and 2006/07 respectively.

If the mean ratios are observed it is found that the NABIL has the highest ratio of all. It has the mean ratio of 7.41%. The mean ratios of SCBNL and HBL are 6.61% and 6.94% respectively. The C.V. of ratios of SCBNL is 12.72% that is comparatively higher than NABIL but lower than that of HBL. NABIL seems to be more consistency and HBL seems to be less consistency.

From the above table, it can be concluded that the ratio of total interest earned to total outside assets of NABIL is satisfactory in comparing to other two banks because high ratio is an indicator of high earning power of the banks.

VII. Total Interest Paid to Total Working Fund Ratio

This ratio measures the percentage of total interest expenses against total working fund. The higher ratio is the indicator of higher interest expenses on total working fund and vice versa. This ratio is calculated by dividing total interest paid by total working fund. The following table shows the total interest paid to total working fund ratio.

Table No. 22
Total Interest Paid to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	3.15	2.45	3.76
2004/05	2.57	1.6	2.8
2005/06	1.92	1.2	2.37
2006/07	1.65	1.15	1.99
2007/08	1.42	1.14	2.02
Mean	2.14	1.51	2.59
S.D.	0.634	0.498	0.655
C.V.	29.61	32.93	25.31

The above table shows that the interest paid by NABIL and SCBNL is in decreasing trend. HBL has a fluctuating trend. The ratio of NABIL has decreased from 3.15% to 1.42% in the F/Y 2001/02 and 2005/06 respectively. Similarly, the ratio of SCBNL has decreased from 2.45% to 1.14% in the F/Y 2001/02 and 2005/06. HBL has maximum ratio of 3.76% in the F/Y 2001/02 and minimum ratio of 1.99% in the F/C 2004/05. When mean ratios are observed, it is found that HBL has the highest of all. It has the mean ratio of 2.59% against the 2.14% and 1.51% of NABIL and SCBNL. Thus, it means HBL has paid higher interest in comparison to other two banks. The C.V. of HBL is lower than other banks. It shows the total interest paid to total working fund ratio is more consistency than that of NABIL and SCBNL.

Thus, it can conclude that the position of HBL is not better than other banks as its ratio is paying more interest against working fund. It has collected the funds from expensive sources, which may be the higher portion of fixed deposit in its total deposit. SCBNL is in better position from interest payment point of view than other banks. SCBNL seems to have collected its funds from cheaper sources than other banks.

4.1.1.4. Analysis of Risk Ratios

The possibilities of risk make banks investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So that the banks opting for high profit have to accept the risk and manage of the level of risk that one has to bear while investing its funds. The following ratios are calculated to measure the risk.

I. Liquidity Risk Ratio

The ratio of cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposits as the liquidity needs. A higher liquidity indicates less risk and less profitable banks and vice versa. Liquidity risk is calculated by dividing cash and bank balance by total deposit. The following table shows the liquidity risk ratio of concerned banks.

Table No. 23
Liquidity Risk Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	5.13	6.23	8.14
2004/05	6.78	5.21	6.79
2005/06	8.5	8.06	9.42
2006/07	6.87	7.07	9.09
2007/08	3.84	2.75	8.12
Mean	6.22	5.86	8.31
S.D.	1.599	1.819	0.918
C.V.	25.69	31.01	11.05

The above table shows that the liquidity risk ratios of all the banks have fluctuating trend. NABIL has recorded the highest ratio of 8.50% in the fiscal year 2005/06 and the lowest ratio of 5.13% in the fiscal year 2003/04. SCBNL has recorded the highest ratio of 8.06% and the lowest ratio of 5.21% in the F/Y 2005/06 and 2004/05 respectively. Similarly, HBL has recorded the highest ratio of 9.42% in the fiscal year 2005/06 and the lowest ratio of 6.79% in the fiscal year 2004/05.

When mean ratios are taken it is found that SCBNL'S liquidity risk is lower than that of NABIL and HBL. SCBNL has more cash & bank balance to meet its current obligations. On the other hand, too much idle cash might have an adverse impact on profitability. A trade off between liquidity and profitability must be maintained at all times. In comparison of C.V.'s of the banks HBL seems to be more stable and consistent. SCBNL seems to be less consistency. Thus, it can be concluded that NABIL is in moderate position among three banks. Its mean liquidity risk ratio is higher than SCBNL and lower than HBL.

II. Credit Risk Ratio

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan while making investment; bank examines the credit risk involved in the project. Generally credit risk ratio shows the proportion of non-performing assets in the total loan and advances of a bank. But, here, we presented the credit risk as the ratio of total loan and advances to total assets due to lack of relevant data.

Table No. 24
Credit Risk Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	42.1	29.77	45.24
2004/05	42.19	29.08	43.12
2005/06	46.83	27.12	42.82
2006/07	48.91	27.11	48.27
2007/08	61.6	37.19	44.62
Mean	48.33	30.05	44.81
S.D.	7.144	3.721	1.95
C.V.	14.78	12.38	4.35

The above table shows that NABIL ratios are in increasing trend. The ratios of SCBNL and HBL have a fluctuating trend. NABIL has witnessed the highest ratio of 61.60% in the F/Y 2007/08 and the lowest ratio of 42.10% in the F/Y 2003/04.

Similarly, SCBNL has the highest ratio of 37.19% in F/Y 2007/08 and the lowest ratio of 27.11% in F/Y 2006/07. HBL has had a high ratio of 48.82% in the F/Y 2005/06 and low ratio of 42.27% in the F/Y 2006/07. The mean ratio of NABIL is higher than that of SCBNL and HBL. This indicates that NABIL has more exposure to credit risk than its counterpart.

From the point of view of C.V., HBL seems to be more consistency and uniformity because it has low C.V. NABIL seems to be less consistency because it has high C.V.

III. Capital Risk Ratio

The capital risk of a bank indicates how much assets value may decline before the position of deposit and other creditors is jeopardized. Therefore, a bank must maintain adequate capital in relation to the nature and condition of its assets, its deposits liabilities and other corporate responsibility. Capital risk ratio measures banks ability to attract deposits and inter bank funds.

It also determines the level of profit. A bank can earn if a bank chooses to take high capital risk and its ROE will be higher and vice versa. This ratio is calculated by dividing capital (paid up + reserve) by total risk weighted assets. The following table shows the capital risk ratio of three banks.

Table No. 25
Capital Risk Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	10.89	12.49	4.82
2004/05	10.85	14.96	6.73
2005/06	11.79	13.21	7.24
2006/07	12.48	14.92	7.85
2007/08	11.68	15.07	8.41
Mean	11.7	14.13	7.01
S.D.	0.579	0.791	0.678
C.V.	4.95	5.6	9.67

Above table shows that the capital risk ratio of NABIL and SCBNL are in fluctuating trend. HBL's ratio is increasing trend. NABIL has the highest ratio of 12.48% in the F/Y 2006/07 and the lowest ratio of 10.85% in the F/Y 2004/05.

SCBNL has maintained the highest ratio of 15.07% and the lowest ratio 12.49% in the F/Y 2007/08 and 2003/04 respectively. Similarly, HBL has recorded the highest ratio of 8.41% in the F/Y 2007/08 and the lowest ratio of 4.82% in the F/Y 2003/04. In average, SCBNL has the highest capital risk ratio i.e. 14.13% and HBL has the lowest ratio of 7.01%. In the point view of C.V. HBL seems to be more consistency and NABIL seems to be less consistency.

Thus, it can be concluded that, NABIL can earn high profit because it has high mean capital risk ratio

4.1.1.5. Analysis of Growth Ratios:

Those growth ratios are analyzed and interpreted which are directly related to the fund mobilization and investment of a commercial bank. Growth ratio represents how well the commercial banks are maintaining their economic and financial position. Under this topic the following ratios directly related to fund mobilization and investment of the banks are calculated.

I. Growth ratio of total deposits.
II. Growth ratio of total loan and advances.
III. Growth ratio of total investment.
IV. Growth ratio of net profit.

The ratio can be calculated by dividing the last period figure by the first period figure there by referring to the compound interest tables. The high ratio generally indicates better performance of a bank and vice versa.

Table No. 26
Growth Ratio of Total Deposit (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	15839	15430.1	17636.9
2004/05	15506.4	15835.8	18619.4
2005/06	13447.7	18755.6	21007.4
2006/07	14119	21161.5	22010.3
2007/08	14586.6	19335.1	24814
G. R. (%)	-2.04	5.8	8.91

The above comparative table shows that the deposit trend of NABIL is fluctuating and the deposit trend of SCBNL is in increasing up to the F/Y 2006/07 and then it decreased. Similarly, the deposit trend of HBL is increasing. The growth ratio of HBL is higher (i.e. 8.91%) than other banks. This indicates that HBL has good performance in collecting more deposits. NABIL has experienced negative growth ratio i.e. -2.04% where as SCBNL has growth ratio of 5.80%.

On the contrary, HBL has been successful in increasing its deposit year by year. This is a very good proof of its high quality service, security and credibility in the mind of depositors. NABIL has been failed to increase its deposit because its growth ratio is in negative.

Table No. 27
Growth Ratio of Total Loan and Advances (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	7732.64	5763.13	8537.67
2004/05	7437.9	5364	8913.72
2005/06	7755.95	5695.82	10001.9
2006/07	8189.99	6410.24	11951.9
2007/08	10586.2	8143.21	12424.5
G. R (%)	8.17	9.03	9.83

The above table shows that the loan and advances pattern of NABIL and SCBNL is increasing from the F/Y 2003/04. The pattern of HBL is increasing in all the F/Y. The growth ratio of total loan and advances of HBL is better than other two banks i.e. 9.83%. Among the three banks the growth ratio of NABIL has the lowest i.e. 8.17% where as SCBNL has ratio of 9.03%. Thus, it indicates that the performance of HBL is better in compare to other banks year

by year. The performance on loan and advances of NABIL is poorer than other banks because it has lowest growth ratio.

Table No. 28
Growth Ratio of Total Investment (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	7704.31	9547.98	4083.16
2004/05	8199.51	9264.68	9157.11
2005/06	6031.18	10346.5	10175.4
2006/07	5835.95	11360.3	9292.1
2007/08	4267.23	9702.55	11692.3
G. R. (%)	-13.73	0.4	30.08

From the above table, the investment pattern of all the banks is in fluctuating trend. HBL has the highest growth ratio of 30.08% and SCBNL has recorded the growth ratio of 0.40% Similarly, NABIL has experienced negative growth ratio of -13.73%.

Thus, we can conclude that the HBL is better in investment pattern than other banks. The performance of NABIL to invest in various sectors is worst in compared to other banks year by year.

Table No. 29
Growth Ratio of Net Profit (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	291.37	430.83	277.04
2004/05	271.63	479.21	235.02
2005/06	416.25	506.95	212.13
2006/07	455.32	537.8	263.05
2007/08	518.64	539.2	308.28
G. R. (%)	15.51	5.77	2.07

The above comparative table shows that the trend of net profit of NABIL is increasing from the F/Y 2005/06 and also the net profit pattern of SCBNL is increasing year by year. Similarly, HBL has fluctuating trend. NABIL has recorded the highest growth ratio of 15.51%. The growth ratio of SCBNL is 5.77%. Similarly, the HBL has lowest growth ratio of 2.07% among three banks.

Thus, it can conclude that NABIL is very successful to maintain growth ratio of net profit and HBL seems to be failure to maintain growth ratios.

4.1.2 STATISTICAL TOOLS

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

4.1.2.1. COEFFICIENT OF CORRELATION ANALYSIS

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

I. Coefficient of Correlation between Deposits and Loan & Advances

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

The following table shows the value of 'r', r^2, P.Er and 6.P.Er. between total deposits and loan & advances of NABIL, SCBNL and HBL during the study period.

Table No. 30
Correlation between Deposit and Loan and Advances

Banks	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	-0.1694	0.0287	0.293	1.758
SCBNL	0.5349	0.2861	0.2153	1.292
HBL	0.9535	0.9091	0.0274	0.1645

In the above table, the coefficient of correlation between deposit and loan and advances in the case of NABIL is -0.1694. This indicates that there is a negative relationship between deposit and loan and advances. The calculated value of (r^2) or coefficient of determination is 0.0287. This means 2.87% of variation of the dependent variable (deposit). When the value of 'r' i.e. -0.1694 is compared with six times the probably error or 6P.Er. i.e. 1.7580, we can say

that there is no significant relationship between deposits and loan advances because 'r' is lower than six times P.Er. (i.e. -0.1694<1.7580) The coefficient of correlation 'r' between deposits and loan and advances incase of SCBNL is 0.5349, which gives us an indication of a positive correlation between them. Similarly, the value of coefficient of determination (r^2) is found to be 0.2861. This shows that 28.61 % variation of dependent variable (loan and advances) has been explained by the independent variable (deposits). The value of 'r' is lower than six times P.Er. This further shows that the value of 'r' is significant. In other words, there is significant relationship between deposit and loan and advances.

In the case of HBL, the coefficient of correlation (r) is 0.9535. This indicates the positive relationship between these two variables. The calculated value of determination (r^2) is 0.9091. This means 90.91% of variation of dependent variable.

In case of SCBNL the value of (r^2) shows higher percentage of dependency. In case of NABIL the relationship is less significant and (r^2) shows lower percentage of dependency. It indicates SCBNL has been more successful in utilizing its deposits in a proper manner than NABIL. Further, the increase in loan and advances is due to effective mobilization of deposits, and other factors have marginal role in increase in loan and advances.

II. Coefficient of Correlation between Deposit and Investment

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

The following table shows the value r, r^2, P.Er and 6P.Er of NABIL, SCBNL and HBL during the study period.

Table No. 31
Correlation between Deposit and Investment

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	0.64	0.4096	0.1781	1.0685
SCBNL	0.8494	0.7215	0.084	0.504
HBL	0.8165	0.6666	0.1006	0.6034

The coefficient of correlation 'r' between deposits and total investment in case of NABIL is 0.64, which indicates a positive correlation between deposits and total investment. Coefficient of determination (r^2) is 0.40.96. This means 40.96% of variation of the dependent variable has been explained by

independent variable. The value of 'r' is lower than six times P.Er. This states that there exists a insignificant relationship between deposits and total investment.

The coefficient of correlation 'r' between deposits and total investment in case of SCBNL is 0.8494, which indicates a positive relationship between the two variables. The coefficient of determination (r^2) is 0.7215. This indicates that 72.15% of the variation of the dependent variable has been explained by independent variable. Moreover, 'r' is greater than six times P.Er, which further states that there is a significant relationship between deposits and total investment.

The coefficient of correlation 'r' incase of HBL is 0.8165, which indicates positive relation between two variables. Here, coefficient of correlation 'r' is greater than six times P.Er. It means there is significant relationship between two variables.

In conclusion, it can be said that in case of NABIL the relationship is less significant and SCBNL and HBL shows significant relationship between total deposit and total investment.

III. Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here, deposit is independent variable (x) and net profit is dependent variable (y). The main purpose of calculating between these two variables is to justify whether net profit is significantly correlated with deposits or not.

The following table shows table shows the value of r, r^2, P.Er and 6P.Er of NABIL, SCBNL and HBL during the study period.

Table No. 32
Correlation between Deposit and Net Profit

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	-0.7011	0.4914	0.1534	0.9205
SCBNL	0.9094	0.827	0.0522	0.3131
HBL	0.4443	0.1974	0.2421	1.4526

The coefficient of correlation between deposits and net profit in case of NABIL is -0.7011, which indicates a negative relationship between deposits and net profit. It has been able to increase it s net profit despite shedding of Rs 2 billion in deposits. The coefficient of determination (r^2) is 0.4914, which indicates 49.14% of the variation of the dependent variable (net profit) has

been explained by the independent variable (deposits). The value of 6P.Er is greater than r i.e. 0.9205>-0.7011. This states that there exists an insignificant relationship between deposits and net profit.

The coefficient of correlation between deposits and net profit in case of SCBNL is 0.9094, which indicates a positive relationship between these variables. The value of (r^2) is 0.8270 indicates that 82.70% of the variation of the dependent variable has been explained by the independent variable. The value of (r) is greater than 6PEr i.e. 0.9094>0.3131, which further states that these exists a significant relationship between deposits and net profit.

In the case of HBL, the value of 'r' is 0.4443. It means there is positive relationship between two variables. The value of 'r2' i.e. 19.74% indicates that the variation of the dependent variables has been explained by the independent variables. The value of 'r' is lower than 6P.Er. It indicates that there is insignificant relationship between these two variables.

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

IV. Coefficient of Correlation between Deposits and Interest Earned

The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. Here, deposit is independent variable (x) and interest earned is dependent variable (y). The main objective of calculating between these two variables is to justify whether deposit is significantly used to earn interest or not. The following table shows the values of r, r^2, P.Er and 6P.Er of concerned banks.

Table No. 33
Correlation between Deposits and Interest Earned

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	0.8817	0.7774	0.0671	0.4029
SCBNL	-0.5008	0.2508	0.226	1.356
HBL	0.5662	0.3206	0.2049	1.2296

The coefficient of correlation (r) between deposit and interest earned in case of NABIL is 0.8817, which indicates a positive relationship between these variables, when deposits increased; the interest income subsequently increased but when it fall the interest income also fall. The coefficient of determination (r^2) is 0.7774, which shows that 77.74% of the variation of dependent variable has been explained by independent variable. The value of 6P.Er is less than (r) i.e.0.4029<0.8817. This states that there is a significant relationship between deposits and interest earned.

The coefficient of correlation (r) between deposits and interest earned incase of SCBNL is -0.5008, which projects a negative relationship between these variables. Its interest income has decreased despite an increase in total deposits. The coefficient of determination (r^2) is 0.2508, which shows that 25.08% of the variation of dependent variable has been explained by the independent variable. The value of (r) is considerably less than six times P.Er. This shows that there is insignificant relationship between interests' earned and total deposits.

In case of HBL, the coefficient of correlation 'r' is 0.5662, which shows positive relationship between these two variables. The coefficient of determination 'r2' is 0.3206; it means 32.06% of the variation of dependent variable has been explained by the independent variables. The value of 'r' is lower than six times P.Er. it means there is insignificant relationship between two variables.

In conclusion, we can say that the relationship between and interest earned in case of NABIL is highly significant with NABIL showing higher percentage of dependency and the relationship between the variables is insignificant in case of SCBNL. In case of NABIL effective mobilization of deposits has had a major role to play in its earnings.

V. Coefficient of Correlation between Loan & Advances and Interest Paid

The coefficient of correlation between loan and advances and interest paid to measures the relationship between these two variables. Here, loan and advances is independent variable (x) and interest paid is dependent variable(y). the purpose of calculating 'r' between these variables is to establish whether increase in loan and advances has any role to play in decrease in interest expenses and vice versa.

The following table shows the values of r, r^2, P.Er and 6P.Er of NABIL, SCBNL and HBL during the period of study.

Table No. 34
Correlation between Loan & Advances and Interest Paid

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	-0.6274	0.3936	0.1829	1.0975
SCBNL	-0.3664	0.1342	0.2612	1.567
HBL	-0.6448	0.4157	0.1762	1.0575

The calculated values of (r) of all the three banks show a negative relationship between loan and advances and interest paid. The coefficient of determination in case of NABIL shows 39.36% of variation of the dependent variables has been explained by independent variables. In the case of SCBNL the coefficient of determination i.e. 13.42% of the variation of the dependent variables has been explained by independent variables. Similarly, in the case of HBL, 41.57% variation of the dependent variables has been explained by independent variables. The coefficient of determination (r^2) in case of NABIL and HBL shows a higher degree of dependency.

The value of 6.P.Er is considerably greater than (r) in all the cases, which states that there is not any significant relationship between loan and advances and interest paid for the above mentioned banks.

In conclusion, we can say that none of the banks can establish significant relationship between the loan & advances and interest paid because the 6P.Er is greater than coefficient of correlation.

VI. Coefficient of Correlation between Total Working Fund and Net Profit:

The coefficient of correlation between these variables measures the degree of relationship between them. In our analysis, total working fund is taken as independent variable (x) and net profit is taken as dependent variable (y). the main objective of calculating 'r' is to justify whether total working fund is significantly used to generate earnings or in other words whether total working fund and net profit are significantly correlated or not. The following table shows the value of r, r^2, P.Er, and 6P.Er between these two variables of NABIL, SCBNL and HBL.

Table No. 35
Correlation between Total Working Fund and Net Profit

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6 P.Er.
NABIL	-0.6938	0.4813	0.1565	0.9388
SCBNL	0.8065	0.6504	0.1055	0.6327
HBL	0.4035	0.1628	0.2525	1.5152

The coefficient of correlating (r) between total assets and net profit in case of NABIL is -0.6938, which indicates a negative relationship between these variables. The coefficient of determination (r^2) is 0.4813, which shows that 48.13% of the variation of the dependent variable has been explained by independent variable. The value of 6.PE.r is greater than 'r'. There exists an insignificant relation between the variables.

In the case of SCBNL, the coefficient of correlation (r) between total assets and net profit is 0.80.65, which shows a positive relationship. The coefficient of determination (r^2) is 0.65.04, which indicates that 65.04% of the variation of the dependent variable has been explained by the independent variables. The value of 6P.Er is lower than (r), which states that there is significant relationship between these variables.

The coefficient of correlating (r) between total assets and net profit in case of HBL is -0.4035, which indicates a positive relationship between variables. The coefficient of determination (r^2) is 0.1628, which shows that 16.28% of the variation of the dependent variable has been explained by independent variable. The value of 6.PE.r is greater than 'r'. There exists an insignificant relation between the variables.

In conclusion we can say that NABIL and HBL have insignificant relationship between total working fund and net profit.

Significant difference between NABIL & HBL.

4.1.2.2. REGRESSION ANALYSIS

Regression analysis is mathematical measures of the average relationship between two or more variables in terms of original units of data. There are two types of variables in regression analysis- dependent variable and independent variable. The variable whose value is influenced of is to predict is called dependent variable whereas the variable, which influences the value or is used for prediction is called independent variable. The main objective of regression analysis is to predict or estimate the value of depending variable corresponding to the given value of independent variables.

The regression line of Y on X estimated the most probable values of Y for given values of X. The regression equation of Y on X expressed as

$$y = a + b\,x$$

Where, y = dependent variable

x = independent variable

a = intercept of line

b = The slope of the line (it measures the average change in the value of Y as a result of one unit change in value of X). It is also called regression

coefficient of Y on X. To find out the exact relationship different variables simple regression analysis has been used.

I. Regression Analysis between Total Working Fund and Net Profit

In our analysis, total working fund is taken as independent variable (x) and net profit is taken as dependent variable (y). The main objective of analysis is to predict the value of dependent variable i.e. net profit (y) corresponding to given value of independent variable i.e. total working fund (x). The following table shows the results of the analysis between these two variables of NABIL, SCBNL and HBL.

Table No. 36
Regression Analysis between Total Working Fund and Net Profit

Bank	Regression equation of net profit (y) on working fund (x)	value of constant (a)	regression coefficient (b)
NABIL	y = 2148.14 - 0.1016 x	a = 2148.14	b = - 0.1016
SCBNL	y = 127.36 + 0.0178 x	a = 127.36	b = 0.0178
HBL	y = 159.77 + 0.0043 x	a = 159.77	b = 0.0043

Above table shows that regression equation between net profit and total working fund of NABIL, SCBNL and HBL. Regression equation of net profit (y) on working capital (x), y = 2148.14 - 0.1016 x in NABIL. The regression coefficient is negative i.e. - 0.1016. Which indicates the negative relationship exists between net profit and working fund i.e. The slope b = -0.1016 represents that each increase in working fund of one million, we predict that the expected change in the value of net profit is -0.1016, i.e. the value is predicted to decrease by -0.1016 million for each one million increase in working fund. The y intercept a = 2148.14 indicates us that when value of working fund is zero, the expected change in the value net profit is 2148.14, i.e. the value is predicted to increase by 2148.14 million during the year.

In case of SCBNL there is positive relationship between two variables. According to the table, regression equation of net profit (y) on working capital (x), y = 127.36 + 0.0178 x. Value of constant (a) is 127.36 indicates that when the working fund is zero then the expected change in the value of net profit is 127.36, i.e. the value is predicted by 127.36 million during the year. The regression coefficient (b) represents that the value of net profit is predicted to increase by 0.0178 million for each one million increase in working fund. In case of HBL, there is positive relationship. According to the table, regression equation of net profit (y) on working capital (x), y = 159.77 + 0.0043 x. The regression coefficient is positive which indicates the positive relationship i.e. one million increase in working capital leads to average 0.0043 million increase in net profit. Value of constant (a) indicates that if working fund is zero then value of net profit is predicted to increase by 159.77 million.

II. Regression Analysis between Investment and Net Profit

In our analysis, total investment is taken as independent variable (x) and net profit is taken as dependent variable (y). The main objective of analysis is to predict the value of dependent variable i.e. net profit (y) corresponding to given value of independent variable i.e. total investment (x). The following table shows the results of the analysis between these two variables of NABIL, SCBNL and HBL.

Table No. 37
Regression Analysis between Investment and Net Profit

Banks	Regression equation of net profit (y) on investments (x)	value of constant (a)	regression coefficient (b)
NABIL	y = 817.39-0.0666 x	a = 817.39	b = - 0.0666
SCBNL	y = 179.39+0.0318x	a = 179.39	b = 0.0318
HBL	y = 296.40-0.0042x	a = 296.40	b = - 0.0042

Table No. 37 shows that regression equation between net profit and investment of NABIL, SCBNL and HBL. In case of NABIL Regression equation of net profit (y) on total investment (x), y = 2148.14 - 0.1016 x. The regression coefficient is negative i.e. - 0.1016. Which indicates the negative relationship exists between net profit and investment The y intercept a = 817.39 indicates that when value of investment is zero, the expected change in the value net profit is 817.39, i.e. the value is predicted to decrease by 817.39 million during the year. The slope b = - 0.0666 represents that each increase in investment of one million, we predict that the expected change in the value of net profit is - 0.0666, i.e. the value is predicted to decrease by - 0.0666 million for each one million increase in investment.

In case of SCBNL there is positive relationship between two variables. According to the table, regression equation of net profit (y) on total investment (x), y = 179.39 + 0.0318 x. Value of constant (a) is 179.39 indicates that when the investment is zero then the expected change in the value of net profit is 179.39, i.e. the value is predicted by 179.39 million during the year. The regression coefficient (b) represents that the value of net profit is predicted to increase by 0.0318 million for each one million increase in total investment. In case of HBL, there is negative relationship between two variables. According to the table, regression equation of net profit (y) on total investment (x), y = 296.40 - 0.0042 x. The regression coefficient is negative which indicates the negative relationship i.e. one million increase in total investment leads to average 0.0043 million decrease in net profit. Value of constant (a) indicates that if total investment is zero then value of net profit is predicted to increase by 296.40 million.

III. Regression Analysis between Total Deposit and Net Profit

In our analysis, total deposit is taken as independent variable (x) and net profit is taken as dependent variable (y). The main objective of analysis is to predict the value of dependent variable i.e. net profit (y) corresponding to given value of independent variable i.e. total deposit (x). The following table shows the results of the analysis between these two variables of NABIL, SCBNL and HBL.

Table No. 38
Regression Analysis between Total Working Fund and Net Profit

Bank	Regression equation of net profit (y) on total deposit (x)	value of constant (a)	regression coefficient (b)
NABIL	y = 1505.38 - 0.0758 x	a = 1505.38	b = - 0.0758
SCBNL	y = 191.38 + 0.0170 x	a = 191.38	b = 0.0170
HBL	y = 138.09 + 0.0058 x	a = 138.09	b = 0.0058

Above table shows that regression equation between net profit and loan and advances of NABIL, SCBNL and HBL. Regression equation of net profit (y) on total deposit (x), y = 1505.38 - 0.0758x in NABIL. The regression coefficient is negative i.e. - 0.0758. Which indicates the negative relationship exists between net profit and total deposit i.e. The slope b = -0.0758 represents that each increase in total deposit of one million, we predict that the expected change in the value of net profit is - 0.0758, i.e. the value is predicted to decrease by -0.0758 million for each one million increase in total deposit. The y intercept a = 1505.38 indicates us that when value of loan and advances is zero, the expected change in the value net profit is 1505.38, i.e. the value is predicted to increase by 1505.38 million during the year.

In case of SCBNL there is positive relationship between two variables. According to the table, regression equation of net profit (y) on total deposit (x), y = 191.38 + 0.0170 x. Value of constant (a) is 191.38 indicates that when the total deposit is zero then the expected change in the value of net profit is 191.38, i.e. the value is predicted to increase by 191.38 million during the year. The regression coefficient (b) represents that the value of net profit is predicted to increase by 0.0170 million for each one million increase in total deposit. In case of HBL, there is positive relationship. According to the table, regression equation of net profit (y) on total deposit(x), y = 138.09 + 0.0058 x. The regression coefficient is positive which indicates the positive relationship i.e. one million increase in total deposit leads to average 0.0058 million increase in net profit. Value of constant (a) indicates that if total deposit is zero then value of net profit is predicted to increase by 138.09 million.

4.1.2.3. TREND ANALYSIS AND PROJECTION FOR NEXT FIVE YEARS

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

The projections are based on the following assumptions:

a. The bank will run in this present position i.e. trend will repeat itself.
b. Other things will remain constant or unchanged.
c. The economy will remain in the present stage.
d. Nepal Rastra Bank will not change its guidelines relating to joint venture banks.

e. The forecast will hold true only when the limitation of least square method is carried out.

I. Analysis of Trend Value of Deposit:

The trend values of deposit from F/Y 2002/2003 to 2007/2008, an attempt has been made to forecast the projection for next five years i.e. up to F/Y 20011/2012. The following table shows the trend value of deposits from F/Y 2002/20003 to F/Y 2011/2012.

Table No. 39
Trend values of Deposit of NABIL, SCBNL and HBL
(Rs. in million)

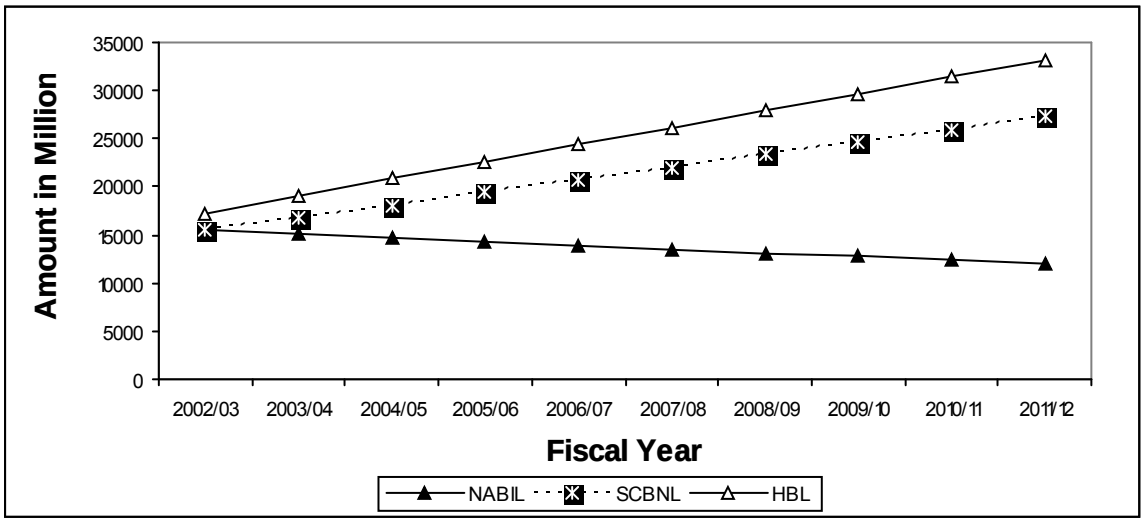
F/Y	NABIL	SCBNL	HBL
2002/03	15478.19	15476.44	17268.53
2003/04	15088.97	16790.02	19043.06
2004/05	14699.75	18103.6	20817.59
2005/06	14310.53	19417.18	22592.12
2006/07	13921.31	20730.76	24366.65
2007/08	13532.09	22044.34	26141.18
2008/09	13142.86	23357.92	27915.7
2009/10	12753.64	24671.51	29690.23
2010/11	12364.42	25985.09	31464.76
2011/12	11975.2	27298.67	33239.29

From the above comparative table it is clear that trend values of SCBNL and HBL are in an increasing trend. The trend values of deposit are in decreasing. If other things remain unchanged the total deposit of NABIL prescribed to be Rs. 11975.20 million and that of SCBNL to be more than two

times the deposit of NABIL by the end F/Y 2011/2012 i.e. Rs 27298.67 million and HBL to be near about three times i.e. Rs 33239.29 million.

From the above trend analysis, it is quite obvious that HBL's deposit collection is proportionately much better than NABIL and SCBNL from F/Y 2004/2005 onwards. NABIL has to launch new strategy to collect more deposits. The trend values of total deposit of NABIL, SCBNL and HBL are fitted in the following figure.

Figure No. 4
Trend values of Deposit of NABIL, SCBNL and HBL



II. Analysis of Trend Values of Loan and Advances:

Under this topic, the trend values of loan and advances of NABIL,SCBNL and HBL has been calculated for five years from F/Y 2002/03 to 2007/08 and the forecast for next five years upto 2011/012.

Table No. 40
Trend values of Loan and Advances of NABIL, SCBNL and HBL
(Rs. in million)

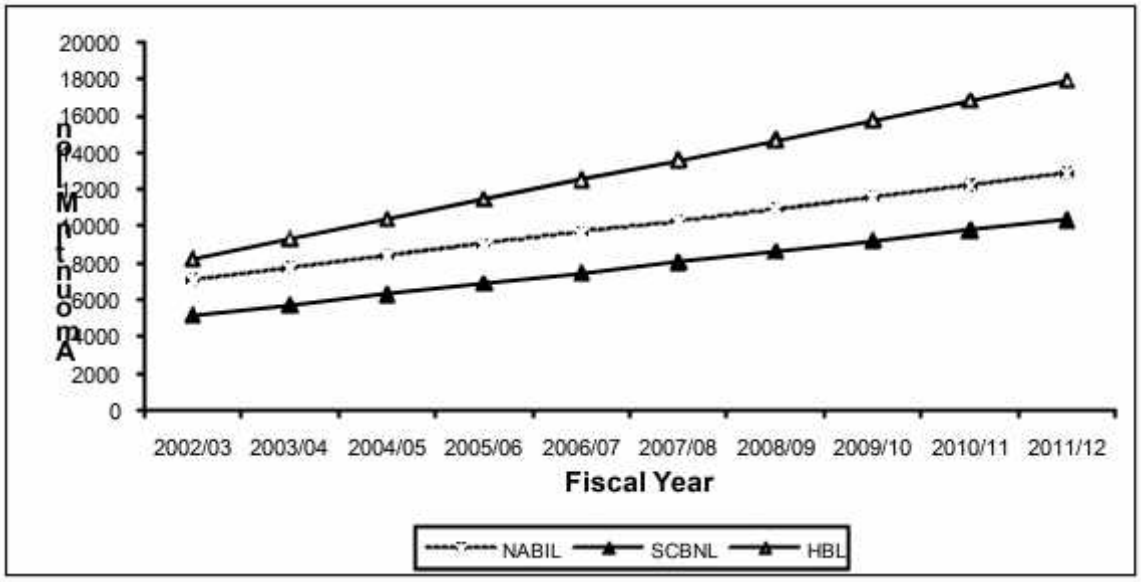
F/Y	NABIL	SCBNL	HBL
2002/03	7048.7	5114	8203.56
2003/04	7694.61	5694.64	9284.75
2004/05	8340.53	6275.28	10365.93
2005/06	8986.45	6855.92	11447.12
2006/07	9632.36	7436.56	12528.3
2007/08	10278.27	8017.2	13609.49
2008/09	10924.19	8597.84	14690.67
2009/10	11570.1	9178.48	15771.86
2010/11	12216.02	9759.12	16853.04
2011/12	12861.93	10339.76	17934.23

The above table clearly shows that the loan and advances of all the sample banks are in an increasing trend. Assuming that other things will remain

constant, the loan and advances of NABIL at the end of F/Y 2011/12 is predicted to be Rs. 12861.93 and SCBNL is 10339.76. Similarly, the projection for HBL at the end of F/Y 2011/12 is Rs 17934.23 million.

From above trend analysis, it is quite clear that loan and advances of HBL is comparatively higher than NABIL and SCBNL through out the trend projection period. The above trends values of loan and advances of NABIL, SCBNL and HBL are fitted in the trend line given in figure No.

Figure No. 5
Trend Values of Loan and Advances of NABIL, SCBNL and HBL



III. Analysis of Trend Values of Investment

Here, the trend values of total investment of concerned banks have calculated for five years and an attempt has been made to forecast the projections for next five years upto 2011/012. The following table shows the trend value if investment from 2002/03 to 2011/12.

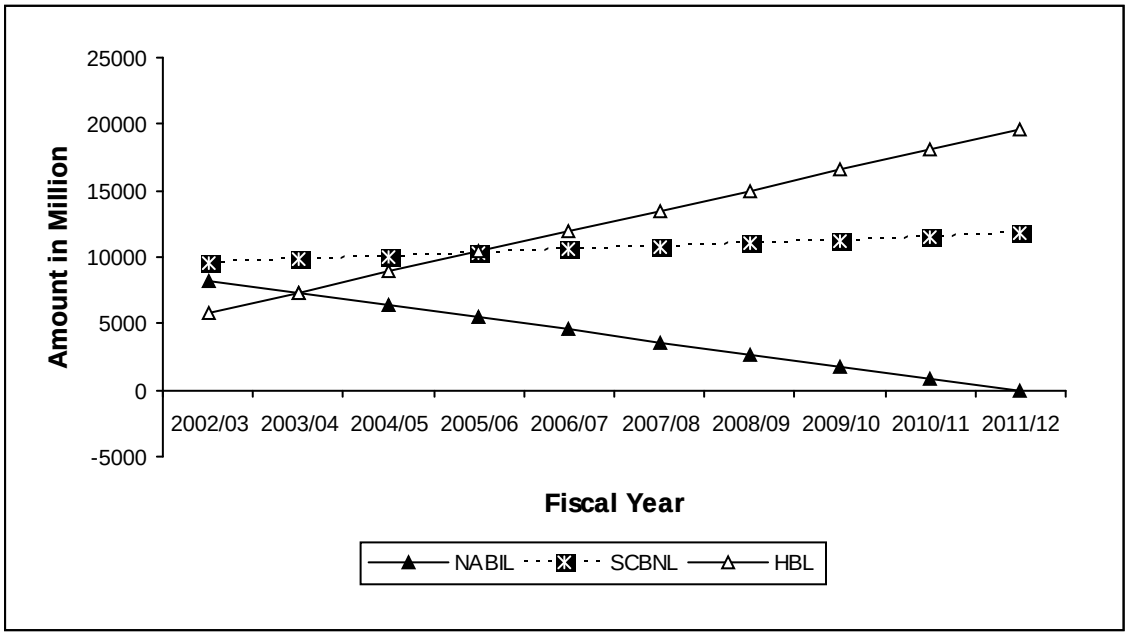
Table No. 41
Trend values of Investment of NABIL, SCBNL and HBL
(Rs. in million)

F/Y	NABIL	SCBNL	HBL
2002/03	8273.18	9563.45	5809.36
2003/04	7340.41	9803.93	7344.7
2004/05	6407.64	10044.41	8880.03
2005/06	5474.86	10284.89	10415.37
2006/07	4542.09	10525.37	11950.7
2007/08	3609.32	10765.85	13486.04
2008/09	2676.55	11006.33	15021.37
2009/10	1743.78	11246.81	16556.71
2010/11	811	11487.28	18092.04
2011/12	-121.768	11727.76	19627.38

From above table it is clear that the trend values of all three banks are in increasing trend. If other things remain unchanged total investment of NABIL is projected to be Rs -121.768 in F/Y 2011/012 and that of SCBNL to be Rs. 11727.76. Similarly, HBL has projected Rs. 19627.38 in the F/Y 2011/012.

The above table reveals that HBL's total investment is higher than that of NABIL and SCBNL through out the trend projection period. It can be said that all the three banks have followed the policy of maximizing their investment. The above calculated trend values are fitted in the trend line given in following figure.

Figure No. 6
Trend values of Investments of NABIL, SCBNL and HBL



IV. Analysis of Trend Values of Net Profit

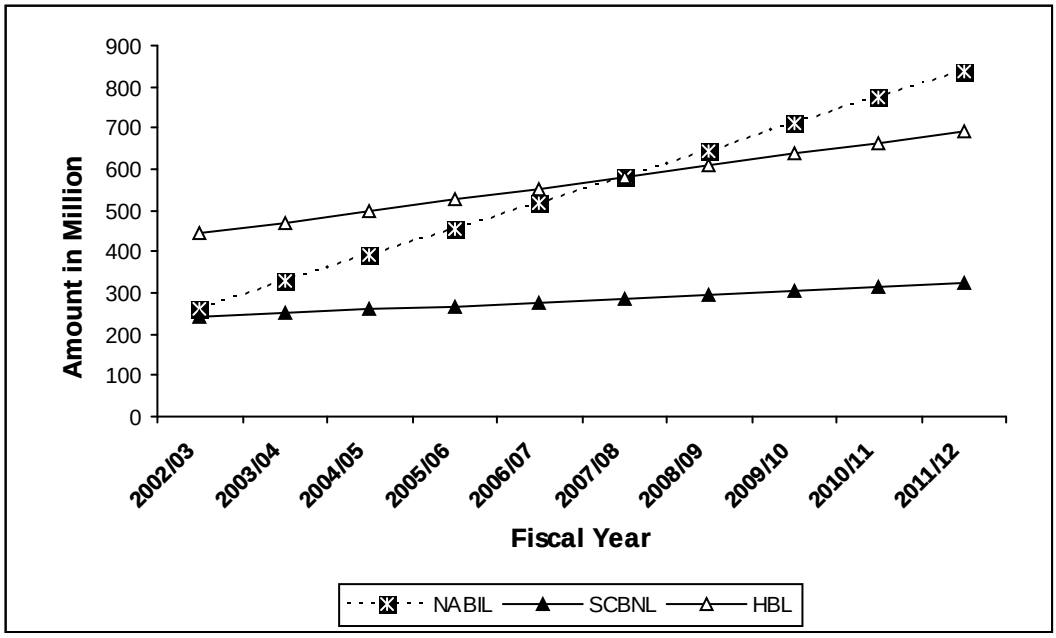
Under this topic on the trend values of net profit from F/Y 2002/03 to 2006/07, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 20011/012. The following table shows the trend value of net profit form F/Y 2002/3 to 20011/012.

Table No. 42
Trend Values of Net Profit of NABIL, SCBNL and HBL
(Rs. in million)

F/Y	NABIL	SCBNL	HBL
2002/03	262.99	241	443.73
2003/04	326.82	250.05	471.27
2004/05	390.64	259.1	498.8
2005/06	454.47	268.16	526.33
2006/07	518.29	277.21	553.86
2007/08	582.11	286.26	581.4
2008/09	645.93	295.31	608.93
2009/010	709.76	304.36	636.46
20010/11	773.58	313.41	663.99
2011/12	837.4	322.46	691.53

From the above table it is clear that the trend value of the banks are in increasing trend. Other things remaining the same the trend value of the banks are in increasing trend. The trend value of NABIL will be highest in F/Y 2011/12 i.e. Rs 837.403 million. In case of SCBNL net profit will be Rs 322.461 million. Similarly, HBL net profit will be Rs. 691.529 in the F/Y 20011/12. NABIL's net profit is higher than that of SCBNL and HBL through the review period. It can be said that all the banks have followed the policy of maximizing their net profit. The above calculated trend values are fitted in the trend line given in following figure.

Figure No. 7
Trend Values of Net Profit of NABIL, SCBNL and HBL



4.1.2.4. TEST OF HYPOTHESIS

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

I. Formulating the Hypothesis
   a. Null Hypothesis
   b. Alternative Hypothesis
II. Computing the test statistic
III. Fixing the level of significance
IV. Deciding the two tail or one tail test
V. Making decision

Here, some of main hypothesis tests are calculated and decision is made. Null Hypothesis (H_0): $\mu 1 = \mu 2 = \mu 3$ i.e. there is no significant difference between mean ratios of two variables of NABIL, SCBNL and HBL.

Alternative Hypothesis (H_1): $\mu 1 \neq \mu 2 \neq \mu 3$ i.e. there is significant difference between mean ratios of two variables of NABIL, SCBNL and HBL.

t - test

In this research study, if we draw large number of small samples i.e. n < 30, and compute the mean for each sample and then plot the frequency distribution of these means, the resulting sampling distribution would be t- test. The samples are taken only for five years i.e. (5<30)

Assumptions:

I. The parent population from which the sample is drawn is normal or approximately normal.
II. The given sample is drawn by random sampling method.
III. The population standard deviation is not known.

I. Test of Hypothesis on Loan and Advances to Total Deposit Ratios

Table No. 43

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
20003/04	48.82	-8.19	67.08	37.35	2.54	6.45	48.41	-1.242	1.54
2004/05	47.97	-9.04	81.72	33.87	-0.94	0.88	47.87	-1.782	3.18
2005/06	57.68	0.67	0.45	30.37	-4.44	19.71	47.61	-2.042	4.17
2006/07	58.01	1.00	1.00	30.29	-4.52	20.43	54.3	4.648	21.6
2007/08	72.57	15.56	242.11	42.17	7.36	54.17	50.07	0.418	0.17
sum	285.05		392.36	174.05		101.65	248.26		30.67

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{285.05}{5} \qquad \bar{x}_2 = \frac{174.05}{5} \qquad \bar{x}_3 = \frac{248.26}{5}$$

$$\bar{x}_1 = 57.01 \qquad \bar{x}_2 = 34.81 \qquad \bar{x}_3 = 49.65$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of loan and advances to total deposit of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different 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 of SCBNL)

The test statistic under H_0 is given by,

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

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) = \frac{1}{5+5-2}(392.36 + 101.649) = 61.7511$$

Now, Test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \quad \text{or,} \quad t = \frac{57.01 - 34.81}{\sqrt{61.7511\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.4688$$

The calculated value of 't' = 4.4688

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

Decision: Since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant

different between two means i.e. loan and advances to total deposit of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of loan and advances to total deposit of NABIL and HBL.

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p^{\,2}$ = an unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^{\,2} + \sum x_3^{\,2}\right) = \frac{1}{5+5-2}(392.36 + 30.667) = 52.8784$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{57.01 - 49.65}{\sqrt{52.8784\left(\frac{1}{5} + \frac{1}{5}\right)}} = 1.6003$$

The calculated value of 't' = 1.6003

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. loan and advances to total deposit of SCBNL and HBL.

II. Test of Hypothesis on Total Investment to Total Deposit Ratio

Table No. 44

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	48.64	5.25	27.5625	61.95	6.04	36.4816	23.15	-18.87	356.0769
2004/05	52.88	9.49	90.0601	58.58	2.67	7.1289	49.18	7.16	51.2656
2005/06	44.85	1.46	2.1316	55.16	-0.75	0.5625	48.44	6.42	41.2164
2006/07	41.33	-2.06	4.2436	53.68	-2.23	4.9729	42.22	0.2	0.04
2007/08	29.25	-14.14	199.9396	50.18	-5.73	32.8329	47.12	5.1	26.01
sum	216.95		323.9374	279.55		81.9788	210.11		474.6089

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{216.95}{5} \qquad \bar{x}_2 = \frac{279.55}{5} \qquad \bar{x}_3 = \frac{210.11}{5}$$

$$\bar{x}_1 = 43.39 \qquad \bar{x}_2 = 55.91 \qquad \bar{x}_3 = 42.02$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of loan and advances to total deposit of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different 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 of SCBNL)

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(323.9374 + 81.9788) = 50.7395$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}} = \frac{43.39 - 55.91}{\sqrt{50.7395\left(\frac{1}{5}+\frac{1}{5}\right)}} = -3.5153$$

The calculated value of 't' = -3.5153

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. total investment to total deposit of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of total investment to total deposit of NABIL and HBL.

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1+n_3-2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}\left(323.9374 + 474.6089\right) = 99.8183$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{43.39 - 42.02}{\sqrt{99.8183\left(\frac{1}{5} + \frac{1}{5}\right)}} = 0.2168$$

The calculated value of 't' = 0.2168

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. total investment to total deposit of SCBNL and HBL.

III. Test of Hypothesis of Return on Loan and Advances Ratio:

Table No. 45

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	3.77	-0.8	0.6400	7.48	-0.584	0.3411	3.24	0.704	0.4956
2004/05	3.65	-0.92	0.8464	8.93	0.866	0.7499	2.64	0.104	0.0108
2005/06	5.37	0.8	0.6400	8.90	0.836	0.6989	2.12	-0.416	0.1731
2006/07	5.56	0.99	0.9801	8.39	0.326	0.1063	2.20	-0.336	0.1129
2007/08	4.5	-0.07	0.0049	6.62	-1.444	2.0851	2.48	-0.056	0.0031
sum	22.85		3.1114	40.32		3.98132	12.68		0.7955

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{22.85}{5} \qquad \bar{x}_2 = \frac{40.30}{5} \qquad \bar{x}_3 = \frac{12.68}{5}$$

$$\bar{x}_1 = 4.57 \qquad \bar{x}_2 = 8.06 \qquad \bar{x}_3 = 2.536$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of return on loan and advances of NABIL and SCBNL.

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

(Where $\bar{x}_1$ is mean ratio of NABIL and $\bar{x}_2$ is mean ratio of SCBNL)
The test statistic under H_0 is given by,

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

Where,
$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) \quad = \frac{1}{5+5-2}(3.1114 + 3.9813) \qquad = 0.8866$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \qquad = \frac{4.57 - 8.06}{\sqrt{0.8866\left(\frac{1}{5} + \frac{1}{5}\right)}} \qquad = -5.8606$$

The calculated value of 't' = -5.8606

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. return on loan and advances of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of return on loan and advances of NABIL and HBL.

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(3.1114 + 0.7955) = 0.4884$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{4.57 - 2.536}{\sqrt{0.4884\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.6018$$

The calculated value of 't' = 4.6018

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. return on loan and advances of SCBNL and HBL.

IV. Test of Hypothesis of Total Interest Earned to Total Working Fund Ratio

Table No. 46

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	$x_1{}^2$	x_2	x_2	$x_2{}^2$	x_3	x_3	$x_3{}^2$
2003/04	6.90	0.58	0.3364	6.42	1.232	1.5178	6.8	1.254	1.5725
2004/05	6.35	0.03	0.0009	5.5	0.312	0.0973	5.56	0.014	0.0002
2005/06	6.15	-0.17	0.0289	4.77	-0.418	0.1747	5.14	-0.406	0.1648
2006/07	5.98	-0.34	0.1156	4.41	-0.778	0.6053	5.03	-0.516	0.2663
2007/08	6.22	-0.10	0.01	4.84	-0.348	0.1211	5.2	-0.346	0.1197
sum	31.6		0.4918	25.94		2.5163	27.73		2.12352

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$\bar{x}_1 = \frac{31.6}{5}$ $\bar{x}_2 = \frac{25.94}{5}$ $\bar{x}_3 = \frac{27.73}{5}$

$\bar{x}_1 = 6.32$ $\bar{x}_2 = 5.188$ $\bar{x}_3 = 5.546$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of total interest earned to total working fund of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different between mean ratios of total interest earned to total working fund of NABIL and SCBNL.

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(0.4918 + 2.5163) = 0.3760$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{6.32 - 5.188}{\sqrt{0.3760\left(\frac{1}{5} + \frac{1}{5}\right)}} = 2.9190$$

The calculated value of 't' = 2.9190

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. total interest earned to total working fund of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of total interest earned to total working fund NABIL and HBL.

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(0.4918 + 2.1235) = 0.3269$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

or, $$t = \frac{6.32 - 5.546}{\sqrt{0.3269\left(\frac{1}{5} + \frac{1}{5}\right)}} = 2.1405$$

The calculated value of 't' = 2.1405

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. total interest earned to total working fund of SCBNL and HBL.

V. Test of Hypothesis of Cash and Bank Balance to Current Assets Ratio

Table No. 47

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	4.49	-0.892	0.7957	5.00	-1.094	1.1968	8.64	0.724	0.5242
2004/05	6.06	0.678	0.4597	4.50	-1.594	2.5408	6.37	-1.546	2.3901
2005/06	7.03	1.648	2.7159	7.27	1.176	1.3829	9.06	1.144	1.3087
2006/07	5.92	0.538	0.2894	8.61	2.516	6.3303	8.19	0.274	0.0751
2007/08	3.41	-1.972	3.8888	5.09	-1.004	1.0080	7.32	-0.596	0.3552
sum	26.91		8.14948	30.47		12.4589	39.58		4.65332

Here, $\bar{x}_1\ \bar{x}_2\ \bar{x}_3$

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{26.91}{5} \qquad \bar{x}_2 = \frac{30.47}{5} \qquad \bar{x}_3 = \frac{39.58}{5}$$

$$\bar{x}_1 = 5.382 \qquad \bar{x}_2 = 6.094 \qquad \bar{x}_3 = 7.916$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of cash and bank balance to current assets of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different between mean ratios of cash and bank balance to current assets of NABIL and SCBNL.

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = An unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(8.149 + 12.459) = 2.576$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{5.382 - 6.094}{\sqrt{2.576\left(\frac{1}{5} + \frac{1}{5}\right)}} = -0.7015$$

The calculated value of 't' = -0.7015

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. cash and bank balance to current assets of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_3$ i.e. there is no significant different between two mean ratios of cash and bank balance to current assets of NABIL and HBL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of cash and bank balance to current assets of NABIL and HBL.

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p^{\,2}$ = An unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^{\,2} + \sum x_3^{\,2}\right) = \frac{1}{5+5-2}(8.1495 + 4.6533) = 1.6004$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

or,

$$t = \frac{5.382 - 7.916}{\sqrt{1.6004\left(\frac{1}{5} + \frac{1}{5}\right)}} = -3.1675$$

The calculated value of 't' = -3.1675

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. cash and bank balance to current assets of SCBNL and HBL.

VI. Test of Hypothesis of Loan and Advances to Current Asset Ratio

Table No. 48

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	42.72	-6.828	46.6216	30	-0.254	0.0645	51.40	4.17	17.3889
2004/05	42.82	-6.728	45.2659	29.26	-0.994	0.9880	44.88	-2.35	5.5225
2005/06	47.62	-1.928	3.7171	27.39	-2.864	8.2025	45.77	-1.46	2.1316
2006/07	49.98	0.432	0.1866	27.28	-2.974	8.8447	48.93	1.7	2.8900
2007/08	64.6	15.052	226.5627	37.34	7.086	50.2114	45.17	-2.06	4.2436
	247.74		322.3541	151.27		68.3111	236.15		32.1766

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{247.74}{5} \qquad \bar{x}_2 = \frac{151.27}{5} \qquad \bar{x}_3 = \frac{236.15}{5}$$

$$\bar{x}_1 = 49.55 \qquad \bar{x}_2 = 30.25 \qquad \bar{x}_3 = 47.23$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of loan and advances to current assets of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different between mean ratios of loan and advances to current assets of NABIL and SCBNL.

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(322.3541 + 68.3111) = 48.833$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{48.55 - 30.25}{\sqrt{48.833\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.1403$$

The calculated value of 't' = 4.1403

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

Decision: since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. loan and advances to current assets of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of loan and advances to current assets of NABIL and HBL.

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

S_p^2 = An unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^2 + \sum x_3^2\right) = \frac{1}{5+5-2}(322.3541 + 32.1766) = 44.3163$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{49.55 - 47.23}{\sqrt{44.3163\left(\frac{1}{5} + \frac{1}{5}\right)}} = 0.5510$$

The calculated value of 't' = 0.5510

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level of significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. loan and advances to current assets of NABIL and HBL.

4.2 MAJOR FINDINGS OF THE STUDY

The basic analysis required for this study having completed. The final and most important task of the researcher is to enlist the findings. This will give meaning to the desired result. A comprehensive summary of the major findings of this study as presented below.

The main findings of the study derived from the analysis of financial data of NABIL in comparison to SCBNL and HBL are given below.

I. Liquidity Ratio

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

c. From the analysis of current ratio, it is found that the mean ratio of NABIL and SCBNL is equal and the ratio of HBL is lowest. It means NABIL and SCBNL has maintained the higher liquidity and lower risk in compared to HBL.

d. The mean ratio of cash of bank balance to total deposits of HBL is higher than NABIL and SCBNL. It states that the liquidity position of HBL is better in this regard because of high percentage of liquid assets. On the contrary, a high liquid also indicates the inability of the bank to mobilize its current assets. The ratios of HBL are more consistency than other banks.

e. The mean ratio of cash and bank balance to current asset of HBL is higher than NABIL and SCBNL. It states that the liquidity position of HBL is better in this regard. And the ratio of HBL is more variable than that of other two compared banks. The ratio of SCBNL is less consistency.

f. The mean ratio of investment on government securities to current asset of SCBNL is higher in compared to NABIL and HBL. It reveals that it has invested more of its fund on government securities. The ratios of SCBNL are more consistency.
g. The mean ratio of loan and advances to current assets of NABIL is highest. The variability of ratios of HBL is slightly greater than other two banks. HBL seems to be more consistency and NABIL seems to be less consistency.

The above result shows that the liquidity positions of all three banks are satisfactory. NABIL has the highest current ratio which justifies that it is capable enough to meet its current obligations and also it has highest loan and advances to current assets ratio. It means NABIL is very successful in mobilizing its funds as loan and advances. The investment policy is better than other banks. In case of SCBNL, it has highest current ratio and investment on government securities. It means SCBNL has invested more of its funds in government securities but has maintained moderate investment policy on loan and advances. HBL has highest cash and bank balance to total deposit and current assets ratio. It indicates that it has lower investment policy on loan and advances and government securities.

II. 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 highest. SCBNL is lowest. In terms of consistency, NABIL seems to be less consistency.
- The mean ratio of total investment to total deposit of NABIL is slightly higher than HBL and lower than SCBNL. The ratio of SCBNL is more consistency and the ratio of HBL is less consistency.
- In case of loan and advances to working fund ratio, the mean ratio of NABIL is highest. The ratio of HBL is more consistent than that of NABIL and SCBNL.
- The mean ratio of investment on government securities to total working fund of SCBNL is greater than other banks. HBL has lower mean ratio. NABIL is in moderate position. SCBNL seems to be more consistency and HBL seems to be less consistency.
- The mean ratio of investment on shares and debentures to total working fund of NABIL is significantly higher than SCBNL and HBL. The ratio of SCBNL is less consistency and ratio of NABIL is more consistency.
- The mean ratio of total OBS operation to loan and advances of NABIL is higher than HBL and lower than SCBNL. It seems to be less consistency.
- The mean ratio of loan loss provision of HBL is highest and NABIL is lowest. NABIL seems to be less consistency.

From the above findings, it helps to conclude that NABIL has been more successful in mobilization of its total deposits and working fund as loan & advances, investment in shares and debentures and total OBS operation to loan and advances. On the other hand, SCBNL appears to be stronger in mobilization of total deposit as investment in risk free government securities. HBL seems to be stronger in loan loss provision. The investment policy of NABIL has better than other two banks towards loan and advances and in other companies shares and debentures. NABIL has successfully managed their assets towards different income generation activities.

III. Profitability Ratio

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

- The mean ratio of return on loan and advances of SCBNL has been found to be significantly greater than other two banks. The ratios of SCBNL are fewer variables and more consistency.
- The mean ratio of return on total working fund of NABIL is in between SCBNL and HBL. SCBNL has high ratio. On the other hand, the ratio of SCBNL is more consistency and fewer variables in compared to other banks.
- The mean ratio on equity capital ratio of NABIL is higher than HBL and lower than SCBNL. NABIL seems to be less consistency in this case.
- The mean ratio of total interest earned to total working fund of NABIL is highest of all. The total interest earned to total outside assets ratio of the NABIL is less variable in comparison to SCBNL and HBL.
- The mean ratio of total interest earned to total operating income of HBL is higher than other two banks. HBL seems to be more consistency and fewer variables.
- The mean ratio of total interest earned to total outside assets of NABIL is higher than other compared banks. The ratio of NABIL is more consistency and fewer variables.
- The mean ratio of total interest paid to total working fund of NABIL is greater than SCBNL and lower than HBL. It means NABILL has paid higher interest than SCBNL and lower than HBL. The ratio of HBL is more consistent than that of other two compared banks.

On the basis of above, we can conclude that NABIL has been more successful in mobilization of its funds in interest bearing assets to earn higher interest income form working fund and outside assets. SCBNL has been more successful in maintaining its higher return on loan and advances, total working fund and equity capital. HBL is better in interest earning from its total operating income and also better position than other banks from interest payment point of view.

IV. Risk Ratio

The Risk ratio of NABIL, SCBNL and HBL reveals that,

e. The mean liquidity risk ratio of NABIL is higher than SCBNL and lower than HBL. SCBNL has lower mean liquidity risk ratio. On the contrary, HBL seems to be more stable and less variable.
f. The mean credit risk ratio of NABIL is higher than SCBNL and HBL. SCBNL has lower risk ratio. NABIL seems to be less stable and HBL seems to be more stable.
g. The mean capital risk ratio of NABIL is higher than HBL and lower than SCBNL. NABIL seems to be less consistency and HBL seems to be more consistency.

Based on above findings we can conclude that NABIL is in moderate position in liquidity and capital risk. It has more credit risk. SCBNL has lower liquidity risk and credit risk ratio than NABIL and HBL. NABIL and HBL have greater exposure to risk in its financial operations.

V. Growth Ratio

The growth ratio of NABIL, SCBNL and HBL reveals that,

f. The growth ratio of deposits of NABIL is negative lower than HBL and SCBNL. It means the performance of NABIL is poorer in collecting more deposit in comparison to other banks year by year. HBL has highest growth ratio of deposit.
g. The growth ratio of total loan and advances of NABIL is lower than HBL and SCBNL. It means the performance of NABIL to grant loan and advances in compared to studied banks is not good. HBL seems to stronger in this case.
h. The growth ratio of total investment of NABIL is negative lower than HBL and SCBNL. HBL has good performance of investing in different sectors.
i. The growth ratio of net profit of NABIL is higher than SCBNL and HBL. HBL has lower ratio. It means that the earning profit from various sectors is better than other banks.

Based on the above findings, we can conclude that, HBL has been more successful in increasing its deposits, loan & advances and investment during the study period, whereas, NABIL has been more efficient in terms of increasing its net profit, but less successful in deposit collection, loan & advances and investing. SCBNL is moderate. Among three banks, NABIL'S strategy of shedding deposits seems to be off the tune. NABIL needs to seriously rethink about its strategy.

VI. Co-efficient of Correlation Analysis

Co-efficient of correlation between different variables of NABIL, SCBNL and HBL reveal that:

- HBL has a higher value of coefficient of correlation between deposits and loan and advances than NABIL and SCBNL. This indicates that HBL is better position of it in mobilization of deposits as loan and advances in compared to other banks. NABIL has negative value. It means it has poor performance.
- The coefficient of correlation between deposits and total investment of NABIL is lower than SCBNL and HBL. It indicates that NABIL is worst in total deposit in mobilizing as on investment. SCBNL has highest value.
- The coefficient of correlation between deposit and net profit of NABIL has negative value. In case of SCBNL, it has highest value, whereas the coefficient of correlation between the same variables in case of HBL has a lower positive value. This indicates that SCBNL is capable to earn net profit by mobilizing its total deposit in compared other banks.
- The coefficient of correlation between deposits and interest earned in case of NABIL is highest, whereas SCBNL has a negative value of coefficient of correlation. HBL has lower positive value. This indicates that NABIL has earned higher interest on deposits
- The coefficient of correlation between loan & advances and interest paid of all three banks has negative value. SCBNL has highest negative value. HBL has lowest value. This indicates that SCBNL has paid high interest. NABIL is in moderate position.
- The coefficient of correlation between total working fund and net profit in case of NABIL is negative, whereas the same has a lower positive value in case SCBNL. HBL has highest positive value. This indicates that HBL has good capacity to earn net profit by mobilizing its working fund.

In conclusion, we can say that there is a significant relationship between deposits and investment, deposit and interest earned in case of NABIL, and the relationship is insignificant between deposits and loan & advances, deposit and net profit, loan & advances and net profit, total working fund and net profit.

In case of SCBNL, three exists a significant relationship between deposits and loan and advances, deposits and investments, deposits and net profit whereas the relationship in insignificant between deposit and interest earned, loan and advances and interest paid, total working fund and net profit.

In case of HBL, there is a significant relationship between deposits and loan & advances, deposit and investment, deposit and net profit, deposit and interest earned, total working fund and net profit where as insignificant relationship between loan & advances and interest paid.

VII. Regression Analysis

Regression analysis between different variable of NABIL, SCBNL and HBL reveals that,

- Regression analysis between total working fund and net profit of NABIL shows the negative relationship. There is positive relationship between these two variables of SCBNL and HBL.
- Regression analysis between total investment and net profit of NABIL and HBL shows the negative relationship and analysis between these two variables of SCBNL shows the positive relationship.
- Regression analysis between loan and advances and net profit of NABIL shows the negative relationship between two variables. The ratio of SCBNL and HBL shows positive relationship.

In conclusion we can say that there is negative relationship between total working fund and total investment to net profit of NABIL. SCBNL's relationship is positive in both cases.

VII. Trend Analysis and Projection for next five years

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

The deposit trend of the bank SCBNL and HBL have an increasing trend. The total deposit trend of NABIL has decreasing trend. The total deposit of NABIL is predicted to be 11975.20 million and that of SCBNL to be 27298.67 million at the end of F/Y 2009/10. Similarly, the total deposit of HBL is predicted to be 33239.29 million. The deposit collection of HBL is much better than other two banks.

The loan and advance of all the sample banks have an increasing trend. The total loan and advance of NABIL is predicted to be 12862.93 million and that of SCBNL to be 10339.76 million at the end of F/Y 2009/10. Similarly, the amount is predicted to be 17934.23 million. The loan and advances of HBL is much better in compared to NABIL and SCBNL.

The total investment of the banks SCBNL and HBL have an increasing trend. The total investment of NABIL is decreasing trend. The total investment of NABIL is projected negative -121.768 million and that of SCBNL is 11727.76 million by the end F/Y 2009/2010. HBL is predicted to be 19627.38 million at the end of F/Y 2009/2010. HBL seems to have much focused policy with regards to total investment than NABIL and SCBNL.

The net profits of all the three banks are in an increasing trend. The net profit of NABIL and SCBNL is predicted at 837.40 million and

322.46 million respectively by the end of F/Y 2008/2009. Similarly, HBL is predicted to be 691.53 million. The position of NABIL with regard to utilization of the fund to earn profit is better than SCBNL and HBL.

VIII. Test of Hypothesis

The test of significance regarding the parameter of the population, the basis sample drawn from the population reveals that:

f. There is significance difference between mean ratio of loan and advances to total deposit of NABIL and SCBNL. There is no significant difference between NABIL & HBL.
g. There is no significant difference between mean ratio of total investment to total deposit of NABIL & SCBNL and NABIL & HBL.
h. There is significant difference between mean ratio of return on loan and advances of NABIL & SCBNL and NABIL & HBL.
i. There is no significant difference between mean ratios of total interest earned to total working fund of NABIL & HBL. There is significant difference between NABIL & SCBNL.
j. There is no significant difference between mean ratio of cash and bank balance to current assets of NABIL & SCBNL and NABIL & HBL.

There is significant difference between mean ratio of loan and advances to current assets of NABIL & SCBNL.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

4.1 DATA PRESENTATION AND ANALYSIS

This is an analytical chapter, where an attempt has been made to analyze and evaluate main financial items, which have an impact on investment management and fund mobilization of NABIL in comparison to SCBNL and HBL. There are many types of financial ratios. In this study those ratios are calculated and analyzed that are important in evaluating the fund mobilization of commercial banks.

4.1.1 FINANCIAL TOOLS

Financial analysis involves identifying the financial strength and weakness of the organization by presenting the relationship between items of balance sheet. Ratio analysis has been mainly used for the analysis of data to get the objectives. There are various financial ratios related to investment management and fund mobilization, have been presented and discussed in order to evaluate and analyze the performance of three joint venture banks. The ratios are designed and calculated to highlight the relationship between financial items and figures. These calculations are based on financial statements of concerned joint venture banks. The financial ratios that are calculated for the purpose of this study are as follows:

A. Liquidity Ratio
B. Asset Management Ratio
C. Profitability Ratio
D. Risk Ratio
E. Growth Ratio

4.1.1.1 Analysis of Liquidity Ratios

Liquidity ratio measures the firms' capability to meet its current obligation. A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the community, demand for the deposit withdrawals, pay maturity in time and convert non cash assets into cash to satisfy immediate need without loss to bank and consequent impact or long -run profit The following ratios which measure the liquidity position of banks are calculated.

I. Current Ratio

This is a crude measurement of liquidity ratio. It measures the ratio between total current assets and total current liabilities. It gives only the short glimpses on the liquidity position of a firm. It indicated the extent to which the claims of short-term creditors are covered by asset expected to cover to cash in the near future. Generally, accepted current ratio is 2:1, however, it is accepted

1:1 too for banking and seasonal business. Current ratio is calculated by dividing current assets by current liabilities. The current assets include cash and bank balance with cheques in hand, balance with NRB, money at call and short notices, Investments in government securities, bills purchased and discounted, Loans and Advances and other current assets, Similarly, current liabilities includes borrowings from other banks, deposits, bills payable, and other current liabilities.

Table No. 4
Current Ratio (Times)

F/Y	NABIL	SCBNL	HBL
2003/04	1.05	1.06	1.02
2004/05	1.06	1.07	1.01
2005/06	1.08	1.06	0.98
2006/07	1.08	1.06	1.04
2007/08	1.06	1.08	1.05
Mean	1.07	1.07	1.02
S. D.	0.012	0.008	0.025
C.V.	1.13	0.75	2.4

It is clear from the above table that NABIL, SCBNL and HBL have maintained current assets more than their current liabilities. All the three banks are capable enough to pay their current obligations. NABIL has the highest current ratio of 1.08% in the F/Y 2005/06 & 2006/07 and the lowest is 1.05% in the F/Y 2003/04. SCBNL has maintained the highest ratio of 1.08% in the F/Y 2007/08 and the lowest ratio of 1.06% in the F/Y 2003/04, 2005/06 and 2006/07. Similarly, HBL has recorded the highest ratio of 1.05% and the lowest ratio of 0.98% in the F/Y 2007/08 and 2005/06 respectively.

The averages mean ratio of NABIL and SCBNL is equal and slightly higher than HBL. This shows that the liquidity position of NABIL and SCBNL is slightly better than that of HBL. In the point view of C.V. it suggests that NABIL have less consistency in their ratios. HBL seems to be more consistency. Though as per the conventional rule, current ratio should be 2:1 but for banks and other financial institutions any current ratio above 1 also considered healthy and sound but the ratio of HBL is less than 1.00 in the F/Y 2005/06 which is not good. Thus, it can conclude that the liquidity position of NABIL is satisfactory.

II. Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance is said to be assets that represent the banks first line of defense of every bank. The ratio between the cash and bank balance and total deposit measures the ability of banks highly liquid or immediate funds to meet its unanticipated calls on all types of deposits. Higher ratio indicates the

greater ability to meet the sudden demand of deposits and vice versa. But too, high ratio is undesirable since capital will be tied up and it will maximize the opportunity cost. This ratio is calculated by dividing cash and bank balance by total deposits. The cash and bank balance to total deposits ratio of NABIL, SCBNL and HBL are given below.

Table No. 5
Cash and Bank Balance to Total Deposit Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	5.13	6.23	8.14
2004/05	6.78	5.21	6.79
2005/06	8.51	8.06	9.42
2006/07	6.87	7.07	9.09
2007/08	3.83	5.75	8.12
Mean	6.22	6.46	8.31
S. D.	1.599	1.005	0.918
C.V.	25.7	15.56	11.04

The above table shows that the cash and bank balance to total deposits of NABIL, SCBNL and HBL are in fluctuating trend. NABIL has the highest ratio of 8.51% in the F/Y 2005/06 and lowest ratio of 3.83% in the F/Y 2007/08. SCBNL has the highest of 8.06% in F/Y 2005/06 and the lowest of 5.21% in F/Y 2004/05. Similarly, HBL has recorded highest ratio of 9.42% and lowest ratio of 8.12% in the F/Y 2005/06 and 2007/08 respectively. The average mean ratio of SCBNL is slightly higher than NABIL and lower than HBL. The mean ratio of NABIL is lowest. This shows SCBNL readiness to meet customer requirement better than NABIL and worst than HBL. In comparison of C.V, HBL seems to be more consistency and NABIL seems to be less consistency because HBL has less and NABIL has high C.V.

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

In conclusion we can say that NABIL is not good position in maintaining cash and bank balance. Though, it has invested more funds in other sector which is quite good to earn high income.

III. Cash and Bank Balance to Current Assets Ratio

This ratio examines the banks liquidity capacity on the basis if its most liquid assets i.e. cash and bank balance. This ratio reaches the ability of the banks to make the payment of its customer deposits. High ratio indicates the sound ability to meet their daily cash requirement of their customer deposit and

vice versa. But higher ratio is not desirable as the bank has to pay interest on deposits and some earning may be lost. Similarly, lower ratio is also not preferable as the bank may fail to make the payment against the cheques presented by the customers. This ratio is calculated by dividing cash and bank balance by current assets. The cash and bank balance to current assets ratio are presented in the following table.

Table No. 6
Cash and Bank Balance to Current Assets Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	4.49	5.00	7.77
2004/05	6.06	4.50	6.37
2005/06	7.03	7.27	9.06
2006/07	5.92	8.61	8.19
2007/08	3.41	5.09	7.32
Mean	5.38	6.09	7.74
S. D.	1.277	1.579	0.894
C.V.	23.72	25.9	11.55

Source: Appendix A

The above table shows that the cash and bank balance to current assets all three banks NABIL, SCBNL and HBL are in fluctuating trend. NABIL has maintained the highest ratio of 7.03% in the F/Y 2005/06, and the lowest ratio of 3.41% in the F/Y 2007/08. Similarly, SCBNL has recorded the highest ratio of 8.61% in F/Y 2006/07 anticipating higher cash requirement depositors in this F/Y. It has recorded the lowest ratio of 4.50% in F/Y 2004/05. HBL has maintained the highest ratio of 9.06% and the lowest ratio of 6.37% in the F/Y 2005/06 and 2004/05 respectively.

The averages mean ratio of NABIL is lower than NABIL and HBL. The C.V. of SCBNL is greater than other two banks. It shows SCBNL ratio is less consistency than that of NABIL and HBL. All the banks have fared well in meeting their depositor's daily cash requirement and investing the surplus fund in other productive areas. Comparatively, NABIL is not in good position to maintain cash and bank balance. It has invested more funds in other sectors.

IV. Investment on Government Securities to Current Assets Ratio

Every commercial bank is interested to invest their collected funds on different securities issued by government in different times to utilize their excess funds and for other purpose. Though, government securities are not so much liquid as cash and bank balance. They can be easily sold in the market or they can be converted into cash on other ways. This ratio helps to examine that portion of banks current assets, which is invested on different government securities.

This ratio is calculated by dividing investment on government securities by current assets. The investment on government securities to current assets ratio are as follows.

Table No. 7
Investment on Government Securities to Current Assets Ratio (%)

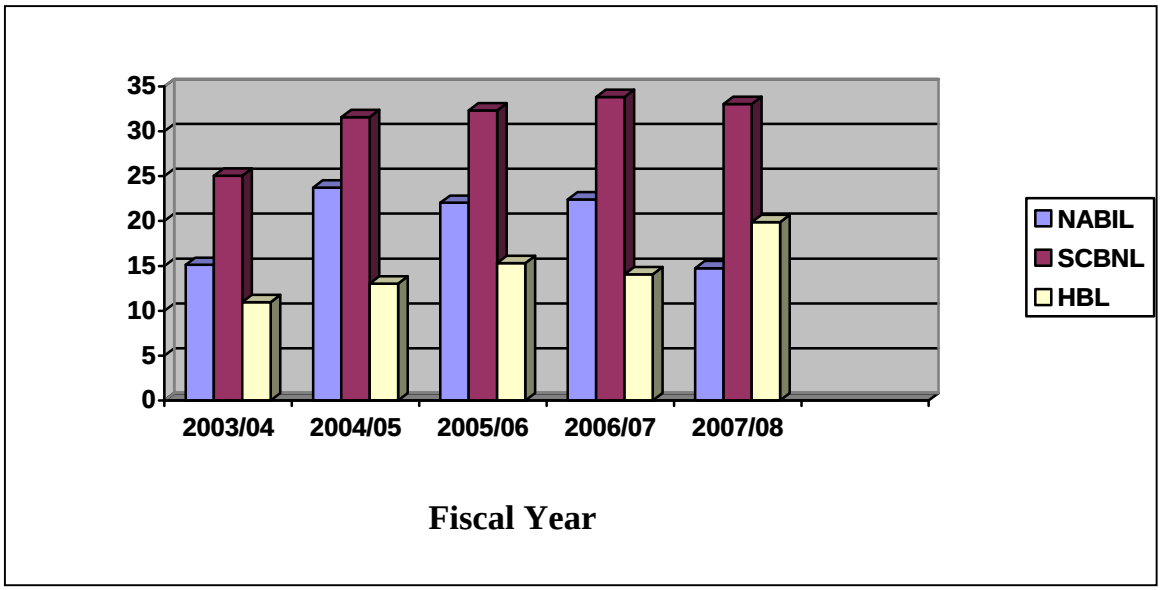
F/Y	NABIL	SCBNL	HBL
2003/04	15.11	25.03	10.97
2004/05	23.73	31.56	13.03
2005/06	22.03	32.33	15.32
2006/07	22.41	33.83	14.05
2007/08	14.73	33.03	19.88
Mean	19.6	31.16	14.65
S. D.	3.866	3.154	2.978
C.V.	19.72	10.12	20.32

The above table clearly depicts that the investment on Government securities to current assets of NABIL and HBL have in fluctuating trend. The ratio of SCBNL is in increasing trend up to 2006/07 and then, it is decreased by 7.68 points.

From the above five years picture, it is evident that the average mean ratio of SCBNL is higher than that of other two sample banks. This shows that the greater portion of current assets of SCBNL comprises on government securities. Also, SCBNL's investments on government securities to current assets have an increasing trend over the years. NABIL trend is moderate position, which is lower than SCBNL and higher than HBL. From the point of view of C.V. SCBNL's ratios have been more consistency and HBL has less consistency and uniformity. From the above analysis it is clear that NABIL and HBL has made lesser investment in government securities as it has injected more funds on other productive sectors. The reason behind SCBNL higher ratio could be attributed to more deposit collection and unavailability of other secured and profitable investment sectors. The balance sheet of SCBNL post 2003/04 shows that total fund invested in government securities is more than the loan & advances it has made.

In conclusion we can say that NABIL's liquidity position from investment on government securities is better than HBL and poorer than SCBNL. Investment on government securities of NABIL, SCBNL and HBL is graphically shown as follows:

Investment on Government Securities to Current Assets Ratio (%)



V. Loan and Advances to Current Assets Ratio

Loan and advances are the main sources of income and profitable assets for every bank. Every bank is willing to lend as more as possible. This ratio shows the relationship between loan and advances and current assets. This ratio is calculated by dividing total loan and advances by current assets. The ratios are presented in the following table.

Table No. 8
Loan and Advances to Total Current Assets Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	42.72	29.98	46.25
2004/05	42.82	29.26	44.88
2005/06	47.62	27.39	45.77
2006/07	49.98	27.28	48.93
2007/08	64.6	37.34	45.17
Mean	49.54	30.25	46.2
S. D.	8.029	3.696	1.445
C.V.	16.21	12.21	3.13

Source: Appendix B

The above table clearly shows favorable increasing trend of NABIL. The average mean ratio of NABIL is highest in comparison to other banks. SCBNL has decreasing trend up to 2006/07 and then it has increased. HBL has a fluctuating trend. NABIL has the highest ratio of 64.60% in the F/Y 2007/08 and the lowest ratio of 42.72% in F/Y 2003//04. Similarly SCBNL has experienced the highest ratio o 37.34% in F/Y 2007/08 and the lowest of 27.28% in the F/Y 2006/2007. Similarly, HBL has maintained the highest ratio of 48.93% and the lowest of 44.88% in the F/Y 2006/07 and 2004/05

respectively. In the point of view C.V, HBL seems to be more consistency and NABIL seems to be less consistency.

The above analysis reveals that NABIL has been more successful in identifying profitable investment sectors and increasing its earning. The same does not hold true for SCBNL, whose efforts seems to be more focused on investing in risk free assets, rather than increasing its loan and advances volume and subsequent earnings from it. HBL also has made successful loan and advances.

4.1.1.2 Analysis of Assets Management Ratios

A commercial bank must be able to manage its assets very well to earn high profit to satisfy its customers and for its own existence. This ratio measures how efficiently the bank manages the resources at its command. The following ratios measure the assets management ability of NABIL, SCBNL and HBL.

I. Loan and Advances to Total Deposit Ratio

This ratio shows the relationship between loans and advances which are granted and the total deposit collected by the banks. This ratio actually measures the extent to which the banks are successful to mobilize their total deposits on loan and advances. This ratio is calculated by dividing loan and advances by total deposits.

Table No. 9
Loan and Advances to Total Deposit Ratio (%)

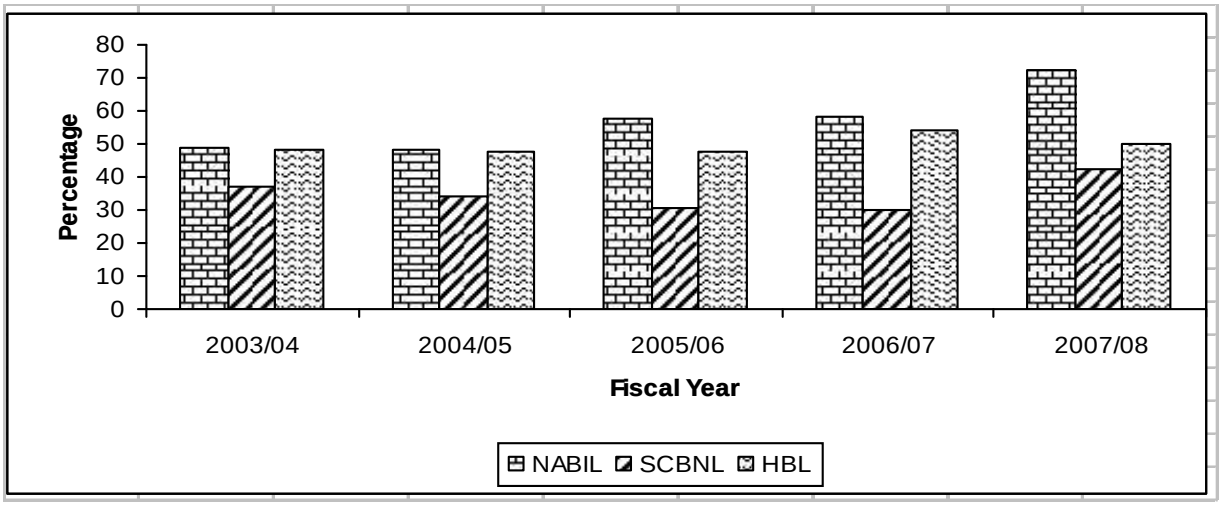
F/Y	NABIL	SCBNL	HBL
2003/04	48.82	37.35	48.41
2004/05	47.97	33.87	47.87
2005/06	57.68	30.37	47.61
2006/07	58.01	30.29	54.3
2007/08	72.57	42.12	50.07
Mean	57.05	34.81	49.65
S. D.	8.858	4.509	2.477
C.V.	15.53	12.95	4.99

Source: Appendix c

The above table shows that loan and advances to total deposit of all three banks have a fluctuating trend. NABIL has the highest ratio of 72.57% in the F/Y 2007/08 and the lowest ratio of 47.97% in the F/Y 2004/05. Accordingly, SCBNL has the highest of 42.12% and the lowest of 30.29%. HBL has the highest ratio of 54.30% in the F/Y 2006/07 and the lowest ratio of 47.61% in the F/Y 2005/06. The mean ratio of NABIL is higher than SCBNL and HBL. NABIL seems to be strong in terms of mobilizing on its total deposits as loan and advances when compared to SCBNL and HBL.

In terms of C.V. NABIL seems to be less consistency but HBL has the lowest ratio of all so it seems to be more consistency. It can be concluded that, NABIL has been more successful in mobilizing its total deposit as loan and advances. On the contrary, a high ratio should not be perceived as a better state of affairs from the point of view of liquidity, as loan and advances are not as liquid as cash and bank balance and other investment. In portfolio management of bank various factors such as availability of funds, liquidity requirements, central bank norms etc. needs to be taken into account. Loan and advances to total deposit ratio of NABIL, SCBNL and HBL is graphically shown as follows:

Figure No. 2
Loan and Advances to Total Deposit Ratio (%)



II. Total Investment to Total Deposit Ratio

The commercial banks are interested to invest its funds in different securities issued by government and other financial or non-financial companies. This ratio measures the extent to which the banks are able to mobilize their deposit on investment in various securities. High ratios indicate the high success in mobilizing deposit in securities and vice versa. This ratio is calculated by dividing total investments by total deposits. The data tabulated below shows the total investment to total deposit ratio.

Table No. 10
Total Investment to Total Deposit Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	48.64	61.95	23.15
2004/05	52.88	58.58	49.18
2005/06	44.85	55.16	48.44
2006/07	41.33	53.68	42.22
2007/08	29.25	50.18	47.12
Mean	43.39	55.91	42.02
S.D.	8.049	4.049	9.743
C.V.	18.55	7.24	23.19

Source: Appendix D

The above table shows a highly fluctuating trend in total investment to total deposit of NABIL and HBL. But SCBNL has decreasing trend. NABIL has the highest ratio of 52.88% and the lowest ratio of 29.25%. SCBNL, on the other hand has the highest ratio of 61.95% and the lowest ratio of 50.18% in F/Y 2003/04 and 2007/08 respectively. Similarly, HBL has the highest ratio of 49.18% in the F/Y 2004/05 and the lowest ratio of 23.15 in the F/Y 2003/04. SCBNL has higher mean ratio than NABIL and HBL. From mean ratio perspective, SCBNL has been more successful in mobilization of deposit on various forms of investment. From view point of C.V, SCBNL is being little better in terms of consistency than NABIL and HBL. NABIL is in moderate position. The ratio of C.V. is higher than SCBNL and lower than HBL.

In conclusion, we can say that SCBNL has been more successful in mobilizing its resources on various forms of investment.

III. Loan and Advances to Total Working Fund Ratio

The main purpose of this ratio is to examine how broad area the bank has covered to provide its service efficiently. Each commercial banks working fund should play vital role on profit generating through fund mobilizing its total asset as loan and advances in appropriate levels. This ratio measures the extent to which the commercial banks are success in mobilizing their assets on loan and advances for the purpose of income generation. A higher ratio preferable as it includes better mobilization of fund as loan and advances and vice versa. This ratio is computed by dividing loan and advances by total working fund. The following table exhibits the ratio of loan and advances to total working fund.

Table No. 11
Loan and Advances to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	42.1	29.77	45.24
2004/05	42.19	29.08	43.12
2005/06	46.83	27.12	42.82
2006/07	48.91	27.11	48.27
2007/08	61.6	37.19	44.62
Mean	48.33	30.05	44.81
S.D.	7.144	3.721	1.95
C.V.	14.78	12.38	4.35

From the above table, the loan and advances to total working fund ratio of NABIL is increasing trend and the ratio of SCBNL is decreasing trend up to the F/Y 2006/07 and the ratio of HBL is in fluctuating trend. NABIL has maintained the highest ratio of 61.60% in F/Y 2007/08 and the lowest ratio of

42.10% in F/Y 2003/04. Similarly, SCBNL has maintained the high ratio of 37.19% in the F/Y 2007/08 and the lowest ratio of 27.11% in F/Y 2006/07. HBL has the highest ratio of 48.27% and the lowest ratio of 42.82% in the F/Y 2006/07 and 2005/06 respectively.

If mean ratio is considered, NABIL has the highest ratio of loan and advances to total working fund than both banks. It reveals the strength of NABIL in mobilizing its total assets as loan and advances. According to view point of C.V, SCBNL is 12.38% which is slightly lower than NABIL and higher than HBL. It proves that its ratios are more stable and consistent than NABIL and less stable and consistent than HBL.
From above analysis, it can conclude that NABIL is in strong position in term of mobilizing the loans and advances with respect to total working fund in comparing to other banks.

IV. Investment in Government Securities to Total Working Fund Ratio

Government securities are a safe medium of investment though it is not liquid as cash and bank balance. Therefore, a bank never used as its resources as loan and advances. It utilizes its funds by purchasing government securities, this ratio is very helpful to measure the extent on which the banks are successful in mobilizing their total working fund on different types of government securities to maximize the income. High ratio shows better mobilization of fund as investment on government securities and vice versa. This ratio is calculated by dividing investment in government securities to total working fund. The following table shows that ratios of concerned banks.

Table No. 12
Investment in Government Securities to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	14.88	24.85	10.73
2004/05	23.38	31.37	12.52
2005/06	21.67	31.01	14.33
2006/07	21.93	33.62	13.86
2007/08	14.05	32.9	19.64
Mean	19.18	30.95	14.22
S.D.	3.904	3.102	2.986
C.V.	20.35	10.02	20.99

The above table reveals that all three banks are in fluctuating trend. NABIL had the highest ratio 23.38% in F/Y 2004/05 and the lowest ratio of 14.05% in F/Y 2007/08. Similarly, SCBNL has the highest ratio of 33.62% in F/Y 2006/07 and the lowest ratio of 24.85% in 2003/04. Similarly, HBL has high ratio of 19.64% and low ratio of 10.73% in the year 2007/08 and 2003/04 respectively. If mean ratio is considered, SCBNL seems to be stronger than

NABIL and HBL in mobilizing of total assets as investment in Government securities. According to the view point of C.V, SCBNL seems to be more consistency and HBL seems to be less consistency because SCBNL has the lowest C.V. and HBL has the highest C.V.

From the above analysis, we can conclude that SCBNL has invested large portion of working fund in government securities than NABIL and HBL. The ratios also indicate that the banks have no certain investment policy with regards to what percentage of working fund to be invested in purchasing government securities. In this case NABIL is in moderate position.

V. Investment in Share and Debentures to Total Working Fund Ratio

Commercial banks are now interested to invest its funds not only government securities but also shares and debentures of other different types of companies. The investments in government securities are safer than the investment in debenture and share of other companies. These banks are showing response on investment, the main purpose of the ratio is to measure to which extent the banks are successful to mobilize their assets on purchase of shares and debentures of other companies to generate and utilize their excess funds, a high ratio indicates greater portion of investment on shares and debentures out to total working funds and vice versa. This ratio is calculated by dividing investment in share and debentures by total working fund. These are as follows.

Table No. 13
Investment in Shares and Debentures to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	0.103	0.058	0.057
2004/05	0.124	0.06	0.166
2005/06	0.134	0.053	0.147
2006/07	0.133	0.047	0.138
2007/08	0.16	0.061	0.143
Mean	0.131	0.056	0.13
S.D.	0.0183	0.0912	0.038
C.V.	13.97	162.86	29.23

The above table clearly reveals that all three banks have invested miniscule percentage of total working fund in purchasing share and debentures of other companies. In either case the ratio percentage is less than 0.20%. In average, NABIL has invested slightly higher amount of total working fund on shares and debenture than other banks. The mean ratio is also higher. It indicates that NABIL has been more successful in mobilizing its fund as investment in shares and debenture. The above table shows NABIL has an

increasing trend in investment on shares and debentures; where as SCBNL and HBL has a fluctuating trend through out the period of study.

From the above analysis, it can be concluded that the ratios of NABIL with other two banks as shown in the table, it has maintained the highest ratio. It means it has comparatively higher percentage of its total asset into other company's shares and debentures

VI. Total OBS Operation to Loan and Advances Ratio

This ratio shows the proportion of fee based off balance sheet activities to fund based loan and advances of the bank. These fee based activities are very much dependent on mode of operation, management strategy, banking network with foreign banks etc. a commercial banks should not concentrate only on fund based activities such as loan and advances, investment on different sectors but it should pay its attention to increase fee based off balance activities. Income generated through the fee based off balance sheet activities constitutes a significant proportion in the total income of commercial banks income statement. A high ratio indicates the higher OBS transaction and vice versa. The ratio can be calculated by dividing total OBS operation by loan and advances.

Table No. 14
Total OBS Operation to Loan and Advances Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	64.50	106.6	60
2004/05	67.12	82.16	60.41
2005/06	70.72	76.15	50.1
2006/07	64.69	67.57	52.12
2007/08	44.31	50.07	62.13
Mean	61.71	76.51	56.95
S.D.	10.272	12.55	5.177
C.V.	16.65	16.4	9.09

The above table shows that the ratios of NABIL and HBL are in fluctuating trend. The ratio of SCBNL has in decreasing trend. The highest ratio of NABIL is 70.72% in the F/Y 2005/06 and the lowest ratio of 44.31% in the F/Y 2007/08. SCBNL has the highest ratio of 106.60% and the lowest ratio of 50.07% in the F/Y 2003/04 and 2007/08 respectively. Similarly, the highest ratio of HBL is 62.13% in the F/Y 2007/08 and the lowest ratio of 50.10% in the F/Y 2005/06. if the mean ratio is considered, SCBNL has the highest ratio of 76.51% and HBL has the lowest ratio of 56.95%. HBL seems to be more consistency and NABIL seems to be less consistency.

Thus, we can say that NABIL is in moderate position, which is better than HBL and poorer than SCBNL.

VII. Loan Loss Ratio

Loss of loan is occurred when the debtors fail to pay their. Loss o f loan is not only the default of debtors but it is because of the failure of recovery of loan by the bank**.** Negligence in its part makes a negative impact on the earning and capital of a bank very badly. Greater loan loss provision is made in income statement if high loss is expected. But this will lead to low profit and possible losses and produces low increase or decrease in capital. The loan loss ratio shows how efficiently the bank manages its loan and advance and makes effort for timely recovery of loan. This ratio is calculated by dividing loan loss provision by loan and advances.

Table No. 15
Loan Loss Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	7.65	5.07	4.03
2004/05	4.89	6.19	7.22
2005/06	4.61	5.35	8.43
2006/07	4.38	4.42	8.1
2007/08	3.41	3.41	8.26
Mean	4.99	5	7.21
S.D.	1.421	0.932	1.643
C.V.	28.49	19.07	22.8

From the above table, it is clearly seen that, NABIL and HBL has fluctuating trend and SCBNL has decreasing from F/Y 2005/06. NABIL has the maximum ratio of 7.65% in the fiscal year 2003/04 and the minimum ratio of 3.41% in the fiscal year 2007/08. In case of SCBNL, it has the maximum ratio of 6.19% in the fiscal year 2004/05 and the minimum ratio of 3.41% in the F/Y 2007/08. Similarly, HBL has the maximum ratio of 8.43% in the F/Y 2005/06 and the minimum ratio of 4.03% in the F/Y 2003/04.

In average, NABIL has lowest loan loss provision ratio comparing with other two banks. So, it shows that the position is better in this regard. It concludes that the performance of NABIL in terms of recovery of loan is satisfactory in comparison to HBL and SCBNL.

4.1.1.3. Analysis of Profitability Ratios

The main objectives of a commercial bank are 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, over come the future contingencies, grab hidden investment opportunities, expand banking transactions in different places, finance government in need of development funds etc. a commercial bank must have to earn sufficient profit. Of course, 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 fund mobilization. Through the following ratios, effort has been made to measure the profit earning capacity of NABIL, SCBNL and HBL.

I. Returns on Loan and Advances Ratio

Return on loan and advances ratio measures the earning capacity of commercial banks its mobilized fund - based loan and advances. The high ratio indicates the high return and vice versa. This ratio is calculated by dividing net profit by loan and advances. The following table shows the return on loan and advances ratio of NABIL, SCBNL and HBL during the study period.

Table No. 16
Return on Loan and Advances Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	3.77	7.48	3.24
2004/05	3.65	8.93	2.64
2005/06	5.37	8.9	2.12
2006/07	5.56	8.39	2.2
2007/08	4.5	6.62	2.48
Mean	4.57	8.06	2.54
S.D.	0.789	0.892	0.399
C.V.	17.26	11.07	15.71

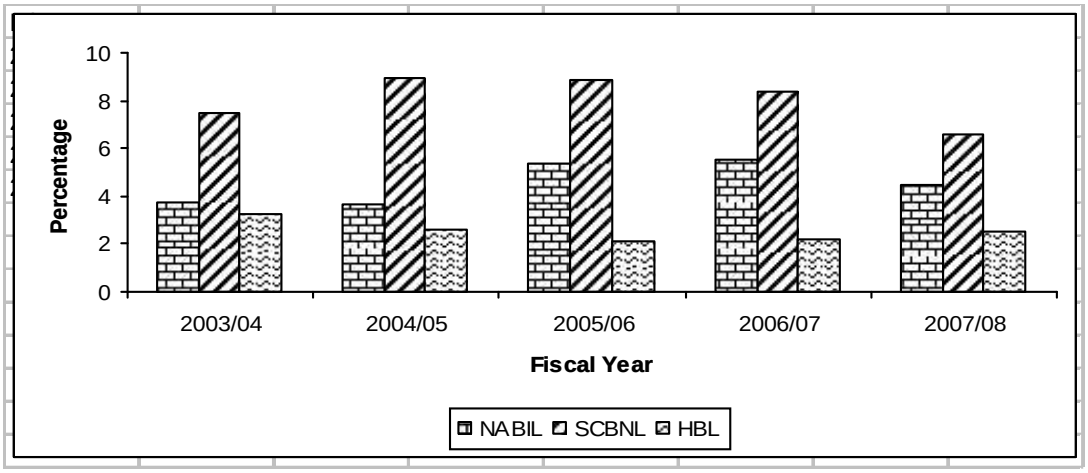
Source: Appendix E

The above table shows that the ratio of return on loan and advances of SCBNL is better than NABIL and HBL in the all fiscal years, through they have a fluctuating trend. NABIL's ratios have witnessed a decreasing trend up to F/Y 2004/05; there after it has an increasing trend. NABIL has recorded the highest ratio of 5.56% in F/Y 2006/07, and the lowest ratio of 3.65% in F/Y 2004/05. SCBNL has recorded the highest of 8.90% in F/Y 2005/06 and the lowest of 7.48% in F/Y 2003/04. Similarly, HBL has the highest ratio of 3.24% and the lowest ratio of 2.12% in the F/Y 2003/04 and 2005/06 respectively.

The comparison of mean ratio reveals that SCBNL has higher ratio than other banks. This shows that SCBNL has been more successful in maintaining its higher return on loan and advances. If C.V. is considered, NABIL is significantly higher than other two sample banks. It proves that NABIL is more consistency and uniformity than SCBNL and HBL. Thus it can be concluded that NABIL has failed to earn higher return on loan and advances then

SCBNL. NABIL's ratio on return on loan and advances is in moderate position among three banks. Returns on loan and advances ratio of NABIL, SCBNL and HBL is graphically shown as follows:

Figure No. 3
Returns on Loan and Advances Ratio



II. Return on Total Working Fund Ratio

Return on total working fund ratio measures the profit earning capacity by investing financial resources of the bank assets. Return will be higher if the banks working fund is well managed and efficiently utilized and vice versa. This ratio is calculated by dividing net profit by total working fund. The data tabulated below reflects the profitability position with respect to total assets of NABIL, SCBNL and HBL.

Table No. 17
Return on Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	1.59	2.23	1.46
2004/05	1.54	2.6	1.14
2005/06	2.51	2.41	0.91
2006/07	2.72	2.28	1.06
2007/08	3.02	2.46	1.11
Mean	2.28	2.4	1.14
S.D.	0.603	0.131	0.18
C.V.	26.45	5.46	15.79

Form the above listed comparative table, it is found that the return on total working fund is in fluctuating trend in case of all three banks. NABIL has the highest ratio of 3.02% in the F/Y 2007/08 and the lowest ratio of 1.54% in the F/Y 2004/05. SCBNL has the highest ratio of 2.60% and the lowest ratio of

2.23% in the F/Y 2004/05 and 2003/04 respectively. Similarly, HBL has recorded the highest ratio of 1.46% and the lowest ratio of 0.91% in the F/Y 2003/2004 and 2005/2006 respectively.

Among three banks, SCBNL has slightly higher mean ratio than NABIL and HBL. It reveals that SCBNL has been able to earn high profit on total working fund in comparison with other two banks. One point worth making here is that NABIL has managed and utilized its assets more efficiently than SCBNL and HBL from F/Y 2005/06 onwards and its return on assets have also been higher. HBL has not managed its assets well because the return on total working fund is lower than other banks. From the viewpoint of C.V., SCBNL are more consistency than NABIL and HBL. HBL is also more consistency than NABIL.

From the above analysis, it can be concluded that NABIL is little bit poorer in return on total working fund than SCBNL and better than HBL.

III. Return on Equity Ratio

The objective of every bank is to earn high profit. If the banks utilize its equity capital properly then only bank can earn maximum profit. The return on equity capital shows the extent to which a bank is successful to mobilize its equity. It is measuring rod of the profitability of a bank. A high ratio indicates the success of bank in mobilizing its equity capital and vice versa. The ratio can be calculated by dividing net profit by equity capital.

Table No. 18
Return on Equity Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	59.26	126.88	92.35
2004/05	55.25	141.13	60.26
2005/06	84.66	149.3	49.45
2006/07	92.61	143.55	49.05
2007/08	105.5	143.92	47.91
Mean	79.46	140.96	59.8
S.D.	18.592	3.373	6.177
C.V.	23.4	2.39	10.33

The above table shows that the ratio of NABIL has followed the fluctuating trend. It has the highest ratio of 105.50% in the F/Y 2007/08 and the lowest ratio of 55.25% in the F/Y 2004/05. The ratio of SCBNL has followed increasing trend from 2003/04 to 2005/06 and then decreases. It has the highest ratio of 149.30% and the lowest ratio of 126.88% in the F/Y 2005/06 and 2003/04 respectively. Similarly, the ratio of HBL has followed decreasing trend. It has the highest ratio of 92.35% and the lowest ratio of

47.91% in the F/Y 2003/04 and 2007/08 respectively. When mean ratios are observed, it is found that SCBNL has the highest ratio comparing with NABIL and HBL. HBL has the lowest ratio. The C.V. of SCBNL is low so that it seems to be less consistency and NABIL seems to be more consistency. Thus, it can conclude that NABIL's return on equity is better than HBL and poorer than SCBNL.

IV. Total Interest Earned to Total Working Fund Ratio

This ratio is very helpful to reveals the earning capacity of commercial banks by mobilizing its working fund. This ratio is important to know the extent on which the banks are successful in mobilizing their total assets to generate high income as interest. Higher the ratio, higher will be the earning power of the bank on its total working fund and vice versa. This ratio is calculated by dividing total interest earned by total assets. The following table shows interest earned to total working fund ratio of NABIL, SCBNL and HBL.

Table No. 19
Total Interest Earned to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	6.9	6.42	6.8
2004/05	6.35	5.5	5.56
2005/06	6.15	4.77	5.14
2006/07	5.98	4.41	5.03
2007/08	6.22	4.84	5.19
Mean	6.32	5.19	5.55
S.D.	0.314	0.709	0.652
C.V.	4.96	13.67	11.75

Source: Appendix F

The above table reflects a decreasing trend in interest earning ratio of all the banks up to the fiscal year 2006/07. NABIL has the highest ratio of 6.90% in F/Y 2003/2004 and the lowest ratio of 5.98% in the F/Y 2006/2007. SCBNL has experienced the highest ratio of 6.42% in the F/Y 2003/2004 and the lowest ratio of 4.41% in F/Y 2006/2007. Similarly, HBL has the highest ratio of 6.80% and the lowest ratio of 5.03% in the F/Y 2003/2004 and 2006/2007 respectively.

The average interest earned ratio of NABIL is 6.32% where as the same for SCBNL and HBL are 5.19% and 5.55% respectively. This reflects that NABIL has been stronger in terms of interest earning power on total working fund. According to view point of C.V, the ratio of NABIL is lower than HBL and slightly lower than SCBNL. It can be concluded that NABIL is more consistency than other two banks.

From the above analysis, we can conclude that NABIL is in better position and has been able to earn high interest on its total assets i.e., it has been more successful in mobilizing its assets to generate high income.

V. Total Interest Earned to Total Operating Income Ratio

Total interest earned to total operating income ratio helps to depict the earning capacity of a commercial bank on its total operating income, this ratio indicated the extent to which the bank has successfully mobilized its fund in interest bearing asset. This ratio is calculated by dividing total interest earned to total operating income. The following table shows interest earned to total operating income ratio of NABIL, SCBNL and HBL.

Table No. 20
Total Interest Earned to Total Operating Income Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	80.51	75.78	84.33
2004/05	68.34	70	82.82
2005/06	75.93	66.6	83.21
2006/07	75.1	68.51	82.17
2007/08	74.3	67.3	82.28
Mean	74.84	69.64	82.96
S.D.	3.897	3.281	0.78
C.V.	5.208	4.71	0.94

The above table exhibits that the ratio of all three bank follows the fluctuating trend in the study period. NABIL has the highest ratio of 80.51% in the F/Y 2003/2004 and the lowest ratio of 74.30% in the F/Y 2007/08. SCBNL has the highest ratio of 75.78% in the F/Y 2003/04 and the lowest ratio of 67.30% in the F/Y 2007/08. Similarly, HBL has recorded the highest ratio of 84.33% and lowest ratio of 82.17% in the F/Y 2003/04 and 2006/07 respectively.

If the mean ratios are observed, it is found that the HBL has the highest ratio than NABIL and SCBNL. Mean ratio of HBL is 82.96%, whereas the NABIL and SCBNL mean ratios are 74.84% and 69.64% respectively. The C.V. of NABIL is 5.208% that are comparatively higher than SCBNL and HBL. It indicates that the total interest earned to total operating income ratio of the NABIL is less consistency than other banks. The C.V. of HBL is lower than other two banks. It means more consistency and uniformity than other banks.

From the above analysis, it can be concluded that NABIL is in moderate position among three banks. HBL has mobilized more of its funds in interest bearing assets.

VI. Total Interest Earned to Total outside Assets Ratio

The main assets of a commercial bank are its outside assets, which includes loan and advances, investment on government securities, investment on shares and debentures and other all types of investments. This ratio reflects the extent on which the banks are successful to earn interest as major income on al the outside assets. A high ratio shows high earning power of total outside assets and vice versa. This ratio is calculated by dividing total interest earned by total outside asset. The following table shows interest earned to total outside assets.

Table No. 21
Total Interest Earned to Total outside Assets Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	8.21	8.12	10.51
2004/05	7.16	6.93	6.36
2005/06	7.38	6.24	5.95
2006/07	7.14	5.86	5.86
2007/08	7.2	5.93	6
Mean	7.41	6.61	6.94
S.D.	0.405	0.842	1.795
C.V.	5.46	12.72	25.88

The above comparative table proves that the ratio of NABIL exhibits fluctuating trend and SCBNL & HBL has decreased up to 2006/07 and then increased during the study period. NABIL has the highest ratio of 8.21% in the F/Y 2003/04 and the lowest ratio of 7.14% in the F/Y 2006/07. In case of SCBNL, it has followed almost decreasing trend, though it has increased for the year 2006/07 to 2007/08 from 5.86% to 5.93%. Similarly, HBL has recorded highest ratio of 10.51% and lowest ratio of 5.86% in the F/Y 2003/04 and 2006/07 respectively.

If the mean ratios are observed it is found that the NABIL has the highest ratio of all. It has the mean ratio of 7.41%. The mean ratios of SCBNL and HBL are 6.61% and 6.94% respectively. The C.V. of ratios of SCBNL is 12.72% that is comparatively higher than NABIL but lower than that of HBL. NABIL seems to be more consistency and HBL seems to be less consistency.

From the above table, it can be concluded that the ratio of total interest earned to total outside assets of NABIL is satisfactory in comparing to other two banks because high ratio is an indicator of high earning power of the banks.

VII. Total Interest Paid to Total Working Fund Ratio

This ratio measures the percentage of total interest expenses against total working fund. The higher ratio is the indicator of higher interest expenses on total working fund and vice versa. This ratio is calculated by dividing total interest paid by total working fund. The following table shows the total interest paid to total working fund ratio.

Table No. 22
Total Interest Paid to Total Working Fund Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	3.15	2.45	3.76
2004/05	2.57	1.6	2.8
2005/06	1.92	1.2	2.37
2006/07	1.65	1.15	1.99
2007/08	1.42	1.14	2.02
Mean	2.14	1.51	2.59
S.D.	0.634	0.498	0.655
C.V.	29.61	32.93	25.31

The above table shows that the interest paid by NABIL and SCBNL is in decreasing trend. HBL has a fluctuating trend. The ratio of NABIL has decreased from 3.15% to 1.42% in the F/Y 2001/02 and 2005/06 respectively. Similarly, the ratio of SCBNL has decreased from 2.45% to 1.14% in the F/Y 2001/02 and 2005/06. HBL has maximum ratio of 3.76% in the F/Y 2001/02 and minimum ratio of 1.99% in the F/C 2004/05. When mean ratios are observed, it is found that HBL has the highest of all. It has the mean ratio of 2.59% against the 2.14% and 1.51% of NABIL and SCBNL. Thus, it means HBL has paid higher interest in comparison to other two banks. The C.V. of HBL is lower than other banks. It shows the total interest paid to total working fund ratio is more consistency than that of NABIL and SCBNL.

Thus, it can conclude that the position of HBL is not better than other banks as its ratio is paying more interest against working fund. It has collected the funds from expensive sources, which may be the higher portion of fixed deposit in its total deposit. SCBNL is in better position from interest payment point of view than other banks. SCBNL seems to have collected its funds from cheaper sources than other banks.

4.1.1.4. Analysis of Risk Ratios

The possibilities of risk make banks investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So that the banks opting for high profit have to accept the risk and manage of the level of risk that one has to bear while investing its funds. The following ratios are calculated to measure the risk.

I. Liquidity Risk Ratio

The ratio of cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposits as the liquidity needs. A higher liquidity indicates less risk and less profitable banks and vice versa. Liquidity risk is calculated by dividing cash and bank balance by total deposit. The following table shows the liquidity risk ratio of concerned banks.

Table No. 23
Liquidity Risk Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	5.13	6.23	8.14
2004/05	6.78	5.21	6.79
2005/06	8.5	8.06	9.42
2006/07	6.87	7.07	9.09
2007/08	3.84	2.75	8.12
Mean	6.22	5.86	8.31
S.D.	1.599	1.819	0.918
C.V.	25.69	31.01	11.05

The above table shows that the liquidity risk ratios of all the banks have fluctuating trend. NABIL has recorded the highest ratio of 8.50% in the fiscal year 2005/06 and the lowest ratio of 5.13% in the fiscal year 2003/04. SCBNL has recorded the highest ratio of 8.06% and the lowest ratio of 5.21% in the F/Y 2005/06 and 2004/05 respectively. Similarly, HBL has recorded the highest ratio of 9.42% in the fiscal year 2005/06 and the lowest ratio of 6.79% in the fiscal year 2004/05.

When mean ratios are taken it is found that SCBNL'S liquidity risk is lower than that of NABIL and HBL. SCBNL has more cash & bank balance to meet its current obligations. On the other hand, too much idle cash might have an adverse impact on profitability. A trade off between liquidity and profitability must be maintained at all times. In comparison of C.V.'s of the banks HBL seems to be more stable and consistent. SCBNL seems to be less consistency. Thus, it can be concluded that NABIL is in moderate position among three banks. Its mean liquidity risk ratio is higher than SCBNL and lower than HBL.

II. Credit Risk Ratio

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan while making investment; bank examines the credit risk involved in the project. Generally credit risk ratio shows the proportion of non-performing assets in the total loan and advances of a bank. But, here, we presented the credit risk as the ratio of total loan and advances to total assets due to lack of relevant data.

Table No. 24
Credit Risk Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	42.1	29.77	45.24
2004/05	42.19	29.08	43.12
2005/06	46.83	27.12	42.82
2006/07	48.91	27.11	48.27
2007/08	61.6	37.19	44.62
Mean	48.33	30.05	44.81
S.D.	7.144	3.721	1.95
C.V.	14.78	12.38	4.35

The above table shows that NABIL ratios are in increasing trend. The ratios of SCBNL and HBL have a fluctuating trend. NABIL has witnessed the highest ratio of 61.60% in the F/Y 2007/08 and the lowest ratio of 42.10% in the F/Y 2003/04.

Similarly, SCBNL has the highest ratio of 37.19% in F/Y 2007/08 and the lowest ratio of 27.11% in F/Y 2006/07. HBL has had a high ratio of 48.82% in the F/Y 2005/06 and low ratio of 42.27% in the F/Y 2006/07. The mean ratio of NABIL is higher than that of SCBNL and HBL. This indicates that NABIL has more exposure to credit risk than its counterpart.

From the point of view of C.V., HBL seems to be more consistency and uniformity because it has low C.V. NABIL seems to be less consistency because it has high C.V.

III. Capital Risk Ratio

The capital risk of a bank indicates how much assets value may decline before the position of deposit and other creditors is jeopardized. Therefore, a bank must maintain adequate capital in relation to the nature and condition of its assets, its deposits liabilities and other corporate responsibility. Capital risk ratio measures banks ability to attract deposits and inter bank funds.

It also determines the level of profit. A bank can earn if a bank chooses to take high capital risk and its ROE will be higher and vice versa. This ratio is calculated by dividing capital (paid up + reserve) by total risk weighted assets. The following table shows the capital risk ratio of three banks.

Table No. 25
Capital Risk Ratio (%)

F/Y	NABIL	SCBNL	HBL
2003/04	10.89	12.49	4.82
2004/05	10.85	14.96	6.73
2005/06	11.79	13.21	7.24
2006/07	12.48	14.92	7.85
2007/08	11.68	15.07	8.41
Mean	11.7	14.13	7.01
S.D.	0.579	0.791	0.678
C.V.	4.95	5.6	9.67

Above table shows that the capital risk ratio of NABIL and SCBNL are in fluctuating trend. HBL's ratio is increasing trend. NABIL has the highest ratio of 12.48% in the F/Y 2006/07 and the lowest ratio of 10.85% in the F/Y 2004/05.

SCBNL has maintained the highest ratio of 15.07% and the lowest ratio 12.49% in the F/Y 2007/08 and 2003/04 respectively. Similarly, HBL has recorded the highest ratio of 8.41% in the F/Y 2007/08 and the lowest ratio of 4.82% in the F/Y 2003/04. In average, SCBNL has the highest capital risk ratio i.e. 14.13% and HBL has the lowest ratio of 7.01%. In the point view of C.V. HBL seems to be more consistency and NABIL seems to be less consistency.

Thus, it can be concluded that, NABIL can earn high profit because it has high mean capital risk ratio

4.1.1.5. Analysis of Growth Ratios:

Those growth ratios are analyzed and interpreted which are directly related to the fund mobilization and investment of a commercial bank. Growth ratio represents how well the commercial banks are maintaining their economic and financial position. Under this topic the following ratios directly related to fund mobilization and investment of the banks are calculated.

I. Growth ratio of total deposits.
II. Growth ratio of total loan and advances.
III. Growth ratio of total investment.
IV. Growth ratio of net profit.

The ratio can be calculated by dividing the last period figure by the first period figure there by referring to the compound interest tables. The high ratio generally indicates better performance of a bank and vice versa.

Table No. 26
Growth Ratio of Total Deposit (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	15839	15430.1	17636.9
2004/05	15506.4	15835.8	18619.4
2005/06	13447.7	18755.6	21007.4
2006/07	14119	21161.5	22010.3
2007/08	14586.6	19335.1	24814
G. R. (%)	-2.04	5.8	8.91

The above comparative table shows that the deposit trend of NABIL is fluctuating and the deposit trend of SCBNL is in increasing up to the F/Y 2006/07 and then it decreased. Similarly, the deposit trend of HBL is increasing. The growth ratio of HBL is higher (i.e. 8.91%) than other banks. This indicates that HBL has good performance in collecting more deposits. NABIL has experienced negative growth ratio i.e. -2.04% where as SCBNL has growth ratio of 5.80%.

On the contrary, HBL has been successful in increasing its deposit year by year. This is a very good proof of its high quality service, security and credibility in the mind of depositors. NABIL has been failed to increase its deposit because its growth ratio is in negative.

Table No. 27
Growth Ratio of Total Loan and Advances (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	7732.64	5763.13	8537.67
2004/05	7437.9	5364	8913.72
2005/06	7755.95	5695.82	10001.9
2006/07	8189.99	6410.24	11951.9
2007/08	10586.2	8143.21	12424.5
G. R (%)	8.17	9.03	9.83

The above table shows that the loan and advances pattern of NABIL and SCBNL is increasing from the F/Y 2003/04. The pattern of HBL is increasing in all the F/Y. The growth ratio of total loan and advances of HBL is better than other two banks i.e. 9.83%. Among the three banks the growth ratio of NABIL has the lowest i.e. 8.17% where as SCBNL has ratio of 9.03%. Thus, it indicates that the performance of HBL is better in compare to other banks year

by year. The performance on loan and advances of NABIL is poorer than other banks because it has lowest growth ratio.

Table No. 28
Growth Ratio of Total Investment (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	7704.31	9547.98	4083.16
2004/05	8199.51	9264.68	9157.11
2005/06	6031.18	10346.5	10175.4
2006/07	5835.95	11360.3	9292.1
2007/08	4267.23	9702.55	11692.3
G. R. (%)	-13.73	0.4	30.08

From the above table, the investment pattern of all the banks is in fluctuating trend. HBL has the highest growth ratio of 30.08% and SCBNL has recorded the growth ratio of 0.40% Similarly, NABIL has experienced negative growth ratio of -13.73%.

Thus, we can conclude that the HBL is better in investment pattern than other banks. The performance of NABIL to invest in various sectors is worst in compared to other banks year by year.

Table No. 29
Growth Ratio of Net Profit (%)

(Rs. In million)

F/Y	NABIL	SCBNL	HBL
2003/04	291.37	430.83	277.04
2004/05	271.63	479.21	235.02
2005/06	416.25	506.95	212.13
2006/07	455.32	537.8	263.05
2007/08	518.64	539.2	308.28
G. R. (%)	15.51	5.77	2.07

The above comparative table shows that the trend of net profit of NABIL is increasing from the F/Y 2005/06 and also the net profit pattern of SCBNL is increasing year by year. Similarly, HBL has fluctuating trend. NABIL has recorded the highest growth ratio of 15.51%. The growth ratio of SCBNL is 5.77%. Similarly, the HBL has lowest growth ratio of 2.07% among three banks.

Thus, it can conclude that NABIL is very successful to maintain growth ratio of net profit and HBL seems to be failure to maintain growth ratios.

4.1.2 STATISTICAL TOOLS

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

4.1.2.1. COEFFICIENT OF CORRELATION ANALYSIS

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

I. Coefficient of Correlation between Deposits and Loan & Advances

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

The following table shows the value of 'r', r^2, P.Er and 6.P.Er. between total deposits and loan & advances of NABIL, SCBNL and HBL during the study period.

Table No. 30
Correlation between Deposit and Loan and Advances

Banks	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	-0.1694	0.0287	0.293	1.758
SCBNL	0.5349	0.2861	0.2153	1.292
HBL	0.9535	0.9091	0.0274	0.1645

In the above table, the coefficient of correlation between deposit and loan and advances in the case of NABIL is -0.1694. This indicates that there is a negative relationship between deposit and loan and advances. The calculated value of (r^2) or coefficient of determination is 0.0287. This means 2.87% of variation of the dependent variable (deposit). When the value of 'r' i.e. -0.1694 is compared with six times the probably error or 6P.Er. i.e. 1.7580, we can say

that there is no significant relationship between deposits and loan advances because 'r' is lower than six times P.Er. (i.e. -0.1694<1.7580) The coefficient of correlation 'r' between deposits and loan and advances incase of SCBNL is 0.5349, which gives us an indication of a positive correlation between them. Similarly, the value of coefficient of determination (r^2) is found to be 0.2861. This shows that 28.61 % variation of dependent variable (loan and advances) has been explained by the independent variable (deposits). The value of 'r' is lower than six times P.Er. This further shows that the value of 'r' is significant. In other words, there is significant relationship between deposit and loan and advances.

In the case of HBL, the coefficient of correlation (r) is 0.9535. This indicates the positive relationship between these two variables. The calculated value of determination (r^2) is 0.9091. This means 90.91% of variation of dependent variable.

In case of SCBNL the value of (r^2) shows higher percentage of dependency. In case of NABIL the relationship is less significant and (r^2) shows lower percentage of dependency. It indicates SCBNL has been more successful in utilizing its deposits in a proper manner than NABIL. Further, the increase in loan and advances is due to effective mobilization of deposits, and other factors have marginal role in increase in loan and advances.

II. Coefficient of Correlation between Deposit and Investment

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

The following table shows the value r, r^2, P.Er and 6P.Er of NABIL, SCBNL and HBL during the study period.

Table No. 31
Correlation between Deposit and Investment

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	0.64	0.4096	0.1781	1.0685
SCBNL	0.8494	0.7215	0.084	0.504
HBL	0.8165	0.6666	0.1006	0.6034

The coefficient of correlation 'r' between deposits and total investment in case of NABIL is 0.64, which indicates a positive correlation between deposits and total investment. Coefficient of determination (r^2) is 0.40.96. This means 40.96% of variation of the dependent variable has been explained by

independent variable. The value of 'r' is lower than six times P.Er. This states that there exists a insignificant relationship between deposits and total investment.

The coefficient of correlation 'r' between deposits and total investment in case of SCBNL is 0.8494, which indicates a positive relationship between the two variables. The coefficient of determination (r^2) is 0.7215. This indicates that 72.15% of the variation of the dependent variable has been explained by independent variable. Moreover, 'r' is greater than six times P.Er, which further states that there is a significant relationship between deposits and total investment.

The coefficient of correlation 'r' incase of HBL is 0.8165, which indicates positive relation between two variables. Here, coefficient of correlation 'r' is greater than six times P.Er. It means there is significant relationship between two variables.

In conclusion, it can be said that in case of NABIL the relationship is less significant and SCBNL and HBL shows significant relationship between total deposit and total investment.

III. Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here, deposit is independent variable (x) and net profit is dependent variable (y). The main purpose of calculating between these two variables is to justify whether net profit is significantly correlated with deposits or not.

The following table shows table shows the value of r, r^2, P.Er and 6P.Er of NABIL, SCBNL and HBL during the study period.

Table No. 32
Correlation between Deposit and Net Profit

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	-0.7011	0.4914	0.1534	0.9205
SCBNL	0.9094	0.827	0.0522	0.3131
HBL	0.4443	0.1974	0.2421	1.4526

The coefficient of correlation between deposits and net profit in case of NABIL is -0.7011, which indicates a negative relationship between deposits and net profit. It has been able to increase it s net profit despite shedding of Rs 2 billion in deposits. The coefficient of determination (r^2) is 0.4914, which indicates 49.14% of the variation of the dependent variable (net profit) has

been explained by the independent variable (deposits). The value of 6P.Er is greater than r i.e. 0.9205>-0.7011. This states that there exists an insignificant relationship between deposits and net profit.

The coefficient of correlation between deposits and net profit in case of SCBNL is 0.9094, which indicates a positive relationship between these variables. The value of (r^2) is 0.8270 indicates that 82.70% of the variation of the dependent variable has been explained by the independent variable. The value of (r) is greater than 6PEr i.e. 0.9094>0.3131, which further states that these exists a significant relationship between deposits and net profit.

In the case of HBL, the value of 'r' is 0.4443. It means there is positive relationship between two variables. The value of 'r2' i.e. 19.74% indicates that the variation of the dependent variables has been explained by the independent variables. The value of 'r' is lower than 6P.Er. It indicates that there is insignificant relationship between these two variables.

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

IV. Coefficient of Correlation between Deposits and Interest Earned

The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. Here, deposit is independent variable (x) and interest earned is dependent variable (y). The main objective of calculating between these two variables is to justify whether deposit is significantly used to earn interest or not. The following table shows the values of r, r^2, P.Er and 6P.Er of concerned banks.

Table No. 33
Correlation between Deposits and Interest Earned

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	0.8817	0.7774	0.0671	0.4029
SCBNL	-0.5008	0.2508	0.226	1.356
HBL	0.5662	0.3206	0.2049	1.2296

The coefficient of correlation (r) between deposit and interest earned in case of NABIL is 0.8817, which indicates a positive relationship between these variables, when deposits increased; the interest income subsequently increased but when it fall the interest income also fall. The coefficient of determination (r^2) is 0.7774, which shows that 77.74% of the variation of dependent variable has been explained by independent variable. The value of 6P.Er is less than (r) i.e.0.4029<0.8817. This states that there is a significant relationship between deposits and interest earned.

The coefficient of correlation (r) between deposits and interest earned incase of SCBNL is -0.5008, which projects a negative relationship between these variables. Its interest income has decreased despite an increase in total deposits. The coefficient of determination (r^2) is 0.2508, which shows that 25.08% of the variation of dependent variable has been explained by the independent variable. The value of (r) is considerably less than six times P.Er. This shows that there is insignificant relationship between interests' earned and total deposits.

In case of HBL, the coefficient of correlation 'r' is 0.5662, which shows positive relationship between these two variables. The coefficient of determination 'r2' is 0.3206; it means 32.06% of the variation of dependent variable has been explained by the independent variables. The value of 'r' is lower than six times P.Er. it means there is insignificant relationship between two variables.

In conclusion, we can say that the relationship between and interest earned in case of NABIL is highly significant with NABIL showing higher percentage of dependency and the relationship between the variables is insignificant in case of SCBNL. In case of NABIL effective mobilization of deposits has had a major role to play in its earnings.

V. Coefficient of Correlation between Loan & Advances and Interest Paid

The coefficient of correlation between loan and advances and interest paid to measures the relationship between these two variables. Here, loan and advances is independent variable (x) and interest paid is dependent variable(y). the purpose of calculating 'r' between these variables is to establish whether increase in loan and advances has any role to play in decrease in interest expenses and vice versa.

The following table shows the values of r, r^2, P.Er and 6P.Er of NABIL, SCBNL and HBL during the period of study.

Table No. 34
Correlation between Loan & Advances and Interest Paid

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6P.Er.
NABIL	-0.6274	0.3936	0.1829	1.0975
SCBNL	-0.3664	0.1342	0.2612	1.567
HBL	-0.6448	0.4157	0.1762	1.0575

The calculated values of (r) of all the three banks show a negative relationship between loan and advances and interest paid. The coefficient of determination in case of NABIL shows 39.36% of variation of the dependent variables has been explained by independent variables. In the case of SCBNL the coefficient of determination i.e. 13.42% of the variation of the dependent variables has been explained by independent variables. Similarly, in the case of HBL, 41.57% variation of the dependent variables has been explained by independent variables. The coefficient of determination (r^2) in case of NABIL and HBL shows a higher degree of dependency.

The value of 6.P.Er is considerably greater than (r) in all the cases, which states that there is not any significant relationship between loan and advances and interest paid for the above mentioned banks.

In conclusion, we can say that none of the banks can establish significant relationship between the loan & advances and interest paid because the 6P.Er is greater than coefficient of correlation.

VI. Coefficient of Correlation between Total Working Fund and Net Profit:

The coefficient of correlation between these variables measures the degree of relationship between them. In our analysis, total working fund is taken as independent variable (x) and net profit is taken as dependent variable (y). the main objective of calculating 'r' is to justify whether total working fund is significantly used to generate earnings or in other words whether total working fund and net profit are significantly correlated or not. The following table shows the value of r, r^2, P.Er, and 6P.Er between these two variables of NABIL, SCBNL and HBL.

Table No. 35
Correlation between Total Working Fund and Net Profit

Bank	Evaluation Criteria			
	r	r^2	P.Er.	6 P.Er.
NABIL	-0.6938	0.4813	0.1565	0.9388
SCBNL	0.8065	0.6504	0.1055	0.6327
HBL	0.4035	0.1628	0.2525	1.5152

The coefficient of correlating (r) between total assets and net profit in case of NABIL is -0.6938, which indicates a negative relationship between these variables. The coefficient of determination (r^2) is 0.4813, which shows that 48.13% of the variation of the dependent variable has been explained by independent variable. The value of 6.PE.r is greater than 'r'. There exists an insignificant relation between the variables.

In the case of SCBNL, the coefficient of correlation (r) between total assets and net profit is 0.80.65, which shows a positive relationship. The coefficient of determination (r^2) is 0.65.04, which indicates that 65.04% of the variation of the dependent variable has been explained by the independent variables. The value of 6P.Er is lower than (r), which states that there is significant relationship between these variables.

The coefficient of correlating (r) between total assets and net profit in case of HBL is -0.4035, which indicates a positive relationship between variables. The coefficient of determination (r^2) is 0.1628, which shows that 16.28% of the variation of the dependent variable has been explained by independent variable. The value of 6.PE.r is greater than 'r'. There exists an insignificant relation between the variables.

In conclusion we can say that NABIL and HBL have insignificant relationship between total working fund and net profit.

Significant difference between NABIL & HBL.

4.1.2.2. REGRESSION ANALYSIS

Regression analysis is mathematical measures of the average relationship between two or more variables in terms of original units of data. There are two types of variables in regression analysis- dependent variable and independent variable. The variable whose value is influenced of is to predict is called dependent variable whereas the variable, which influences the value or is used for prediction is called independent variable. The main objective of regression analysis is to predict or estimate the value of depending variable corresponding to the given value of independent variables.

The regression line of Y on X estimated the most probable values of Y for given values of X. The regression equation of Y on X expressed as

$$y = a + b\,x$$

Where, y = dependent variable

x = independent variable

a = intercept of line

b = The slope of the line (it measures the average change in the value of Y as a result of one unit change in value of X). It is also called regression

coefficient of Y on X. To find out the exact relationship different variables simple regression analysis has been used.

I. Regression Analysis between Total Working Fund and Net Profit

In our analysis, total working fund is taken as independent variable (x) and net profit is taken as dependent variable (y). The main objective of analysis is to predict the value of dependent variable i.e. net profit (y) corresponding to given value of independent variable i.e. total working fund (x). The following table shows the results of the analysis between these two variables of NABIL, SCBNL and HBL.

Table No. 36
Regression Analysis between Total Working Fund and Net Profit

Bank	Regression equation of net profit (y) on working fund (x)	value of constant (a)	regression coefficient (b)
NABIL	y = 2148.14 - 0.1016 x	a = 2148.14	b = - 0.1016
SCBNL	y = 127.36 + 0.0178 x	a = 127.36	b = 0.0178
HBL	y = 159.77 + 0.0043 x	a = 159.77	b = 0.0043

Above table shows that regression equation between net profit and total working fund of NABIL, SCBNL and HBL. Regression equation of net profit (y) on working capital (x), y = 2148.14 - 0.1016 x in NABIL. The regression coefficient is negative i.e. - 0.1016. Which indicates the negative relationship exists between net profit and working fund i.e. The slope b = -0.1016 represents that each increase in working fund of one million, we predict that the expected change in the value of net profit is -0.1016, i.e. the value is predicted to decrease by -0.1016 million for each one million increase in working fund. The y intercept a = 2148.14 indicates us that when value of working fund is zero, the expected change in the value net profit is 2148.14, i.e. the value is predicted to increase by 2148.14 million during the year.

In case of SCBNL there is positive relationship between two variables. According to the table, regression equation of net profit (y) on working capital (x), y = 127.36 + 0.0178 x. Value of constant (a) is 127.36 indicates that when the working fund is zero then the expected change in the value of net profit is 127.36, i.e. the value is predicted by 127.36 million during the year. The regression coefficient (b) represents that the value of net profit is predicted to increase by 0.0178 million for each one million increase in working fund. In case of HBL, there is positive relationship. According to the table, regression equation of net profit (y) on working capital (x), y = 159.77 + 0.0043 x. The regression coefficient is positive which indicates the positive relationship i.e. one million increase in working capital leads to average 0.0043 million increase in net profit. Value of constant (a) indicates that if working fund is zero then value of net profit is predicted to increase by 159.77 million.

II. Regression Analysis between Investment and Net Profit

In our analysis, total investment is taken as independent variable (x) and net profit is taken as dependent variable (y). The main objective of analysis is to predict the value of dependent variable i.e. net profit (y) corresponding to given value of independent variable i.e. total investment (x). The following table shows the results of the analysis between these two variables of NABIL, SCBNL and HBL.

Table No. 37
Regression Analysis between Investment and Net Profit

Banks	Regression equation of net profit (y) on investments (x)	value of constant (a)	regression coefficient (b)
NABIL	y = 817.39-0.0666 x	a = 817.39	b = - 0.0666
SCBNL	y = 179.39+0.0318x	a = 179.39	b = 0.0318
HBL	y = 296.40-0.0042x	a = 296.40	b = - 0.0042

Table No. 37 shows that regression equation between net profit and investment of NABIL, SCBNL and HBL. In case of NABIL Regression equation of net profit (y) on total investment (x), y = 2148.14 - 0.1016 x. The regression coefficient is negative i.e. - 0.1016. Which indicates the negative relationship exists between net profit and investment The y intercept a = 817.39 indicates that when value of investment is zero, the expected change in the value net profit is 817.39, i.e. the value is predicted to decrease by 817.39 million during the year. The slope b = - 0.0666 represents that each increase in investment of one million, we predict that the expected change in the value of net profit is - 0.0666, i.e. the value is predicted to decrease by - 0.0666 million for each one million increase in investment.

In case of SCBNL there is positive relationship between two variables. According to the table, regression equation of net profit (y) on total investment (x), y = 179.39 + 0.0318 x. Value of constant (a) is 179.39 indicates that when the investment is zero then the expected change in the value of net profit is 179.39, i.e. the value is predicted by 179.39 million during the year. The regression coefficient (b) represents that the value of net profit is predicted to increase by 0.0318 million for each one million increase in total investment. In case of HBL, there is negative relationship between two variables. According to the table, regression equation of net profit (y) on total investment (x), y = 296.40 - 0.0042 x. The regression coefficient is negative which indicates the negative relationship i.e. one million increase in total investment leads to average 0.0043 million decrease in net profit. Value of constant (a) indicates that if total investment is zero then value of net profit is predicted to increase by 296.40 million.

III. Regression Analysis between Total Deposit and Net Profit

In our analysis, total deposit is taken as independent variable (x) and net profit is taken as dependent variable (y). The main objective of analysis is to predict the value of dependent variable i.e. net profit (y) corresponding to given value of independent variable i.e. total deposit (x). The following table shows the results of the analysis between these two variables of NABIL, SCBNL and HBL.

Table No. 38
Regression Analysis between Total Working Fund and Net Profit

Bank	Regression equation of net profit (y) on total deposit (x)	value of constant (a)	regression coefficient (b)
NABIL	y = 1505.38 - 0.0758 x	a = 1505.38	b = - 0.0758
SCBNL	y = 191.38 + 0.0170 x	a = 191.38	b = 0.0170
HBL	y = 138.09 + 0.0058 x	a = 138.09	b = 0.0058

Above table shows that regression equation between net profit and loan and advances of NABIL, SCBNL and HBL. Regression equation of net profit (y) on total deposit (x), y = 1505.38 - 0.0758x in NABIL. The regression coefficient is negative i.e. - 0.0758. Which indicates the negative relationship exists between net profit and total deposit i.e. The slope b = -0.0758 represents that each increase in total deposit of one million, we predict that the expected change in the value of net profit is - 0.0758, i.e. the value is predicted to decrease by -0.0758 million for each one million increase in total deposit. The y intercept a = 1505.38 indicates us that when value of loan and advances is zero, the expected change in the value net profit is 1505.38, i.e. the value is predicted to increase by 1505.38 million during the year.

In case of SCBNL there is positive relationship between two variables. According to the table, regression equation of net profit (y) on total deposit (x), y = 191.38 + 0.0170 x. Value of constant (a) is 191.38 indicates that when the total deposit is zero then the expected change in the value of net profit is 191.38, i.e. the value is predicted to increase by 191.38 million during the year. The regression coefficient (b) represents that the value of net profit is predicted to increase by 0.0170 million for each one million increase in total deposit. In case of HBL, there is positive relationship. According to the table, regression equation of net profit (y) on total deposit(x), y = 138.09 + 0.0058 x. The regression coefficient is positive which indicates the positive relationship i.e. one million increase in total deposit leads to average 0.0058 million increase in net profit. Value of constant (a) indicates that if total deposit is zero then value of net profit is predicted to increase by 138.09 million.

4.1.2.3. TREND ANALYSIS AND PROJECTION FOR NEXT FIVE YEARS

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

The projections are based on the following assumptions:

a. The bank will run in this present position i.e. trend will repeat itself.
b. Other things will remain constant or unchanged.
c. The economy will remain in the present stage.
d. Nepal Rastra Bank will not change its guidelines relating to joint venture banks.

e. The forecast will hold true only when the limitation of least square method is carried out.

I. Analysis of Trend Value of Deposit:

The trend values of deposit from F/Y 2002/2003 to 2007/2008, an attempt has been made to forecast the projection for next five years i.e. up to F/Y 20011/2012. The following table shows the trend value of deposits from F/Y 2002/20003 to F/Y 2011/2012.

Table No. 39
Trend values of Deposit of NABIL, SCBNL and HBL
(Rs. in million)

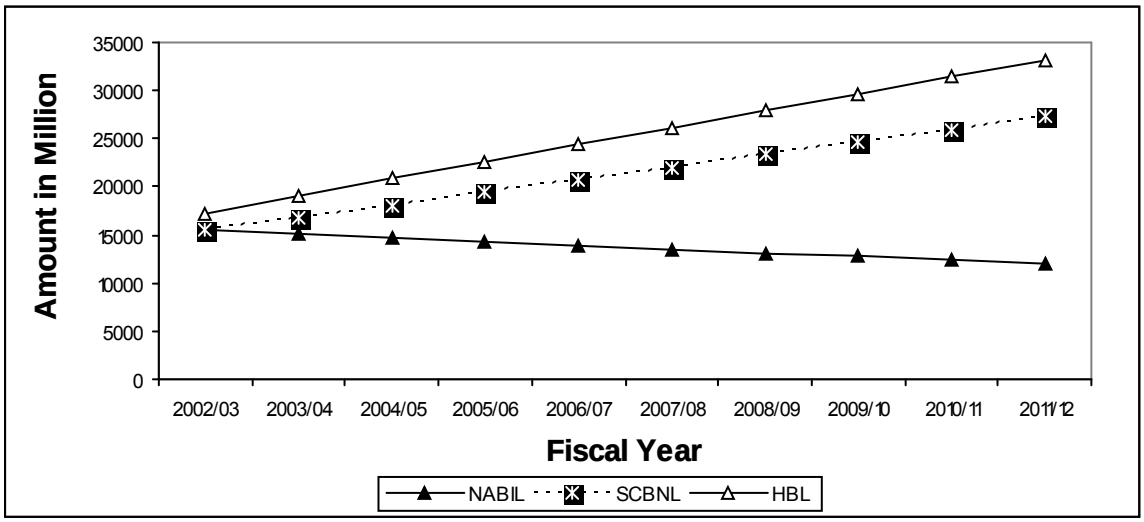
F/Y	NABIL	SCBNL	HBL
2002/03	15478.19	15476.44	17268.53
2003/04	15088.97	16790.02	19043.06
2004/05	14699.75	18103.6	20817.59
2005/06	14310.53	19417.18	22592.12
2006/07	13921.31	20730.76	24366.65
2007/08	13532.09	22044.34	26141.18
2008/09	13142.86	23357.92	27915.7
2009/10	12753.64	24671.51	29690.23
2010/11	12364.42	25985.09	31464.76
2011/12	11975.2	27298.67	33239.29

From the above comparative table it is clear that trend values of SCBNL and HBL are in an increasing trend. The trend values of deposit are in decreasing. If other things remain unchanged the total deposit of NABIL prescribed to be Rs. 11975.20 million and that of SCBNL to be more than two

times the deposit of NABIL by the end F/Y 2011/2012 i.e. Rs 27298.67 million and HBL to be near about three times i.e. Rs 33239.29 million.

From the above trend analysis, it is quite obvious that HBL's deposit collection is proportionately much better than NABIL and SCBNL from F/Y 2004/2005 onwards. NABIL has to launch new strategy to collect more deposits. The trend values of total deposit of NABIL, SCBNL and HBL are fitted in the following figure.

Figure No. 4
Trend values of Deposit of NABIL, SCBNL and HBL



II. Analysis of Trend Values of Loan and Advances:

Under this topic, the trend values of loan and advances of NABIL,SCBNL and HBL has been calculated for five years from F/Y 2002/03 to 2007/08 and the forecast for next five years upto 2011/012.

Table No. 40
Trend values of Loan and Advances of NABIL, SCBNL and HBL
(Rs. in million)

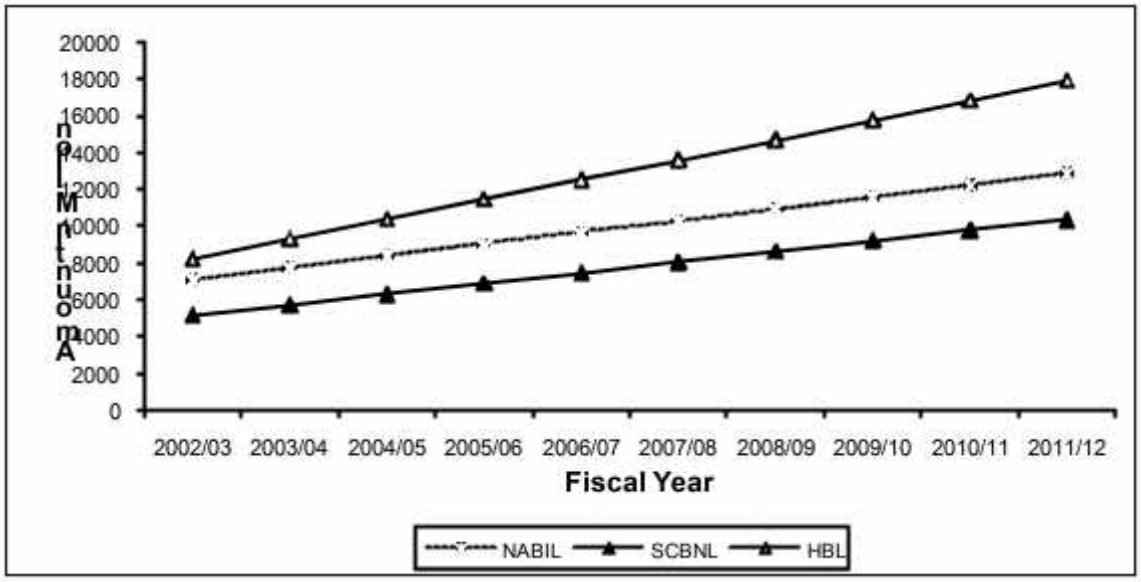
F/Y	NABIL	SCBNL	HBL
2002/03	7048.7	5114	8203.56
2003/04	7694.61	5694.64	9284.75
2004/05	8340.53	6275.28	10365.93
2005/06	8986.45	6855.92	11447.12
2006/07	9632.36	7436.56	12528.3
2007/08	10278.27	8017.2	13609.49
2008/09	10924.19	8597.84	14690.67
2009/10	11570.1	9178.48	15771.86
2010/11	12216.02	9759.12	16853.04
2011/12	12861.93	10339.76	17934.23

The above table clearly shows that the loan and advances of all the sample banks are in an increasing trend. Assuming that other things will remain

constant, the loan and advances of NABIL at the end of F/Y 2011/12 is predicted to be Rs. 12861.93 and SCBNL is 10339.76. Similarly, the projection for HBL at the end of F/Y 2011/12 is Rs 17934.23 million.

From above trend analysis, it is quite clear that loan and advances of HBL is comparatively higher than NABIL and SCBNL through out the trend projection period. The above trends values of loan and advances of NABIL, SCBNL and HBL are fitted in the trend line given in figure No.

Figure No. 5
Trend Values of Loan and Advances of NABIL, SCBNL and HBL



III. Analysis of Trend Values of Investment

Here, the trend values of total investment of concerned banks have calculated for five years and an attempt has been made to forecast the projections for next five years upto 2011/012. The following table shows the trend value if investment from 2002/03 to 2011/12.

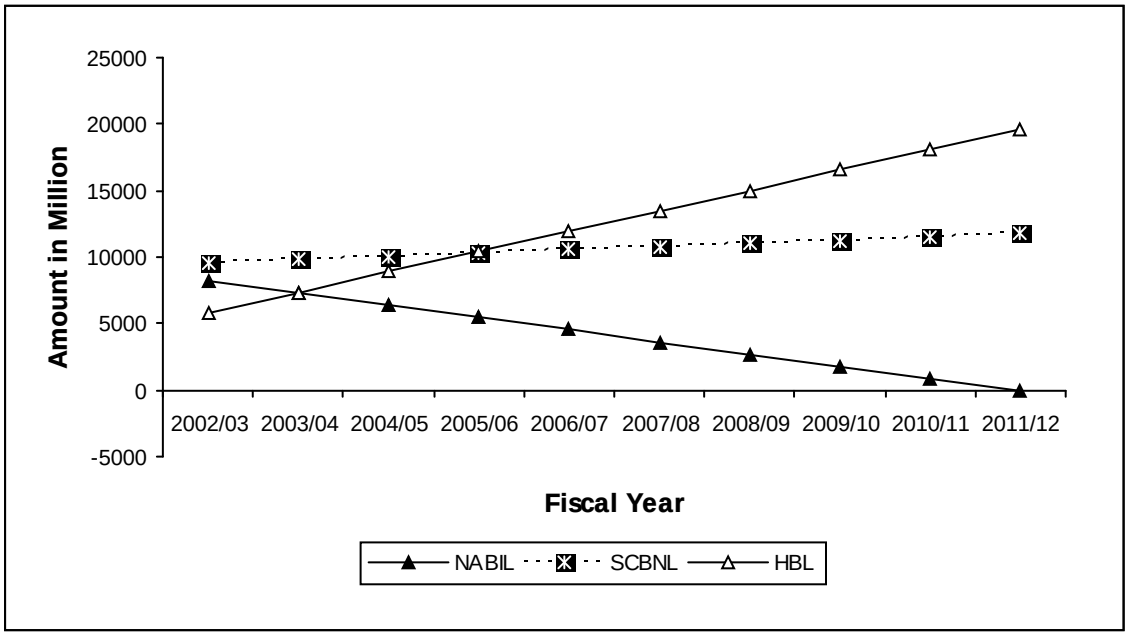
Table No. 41
Trend values of Investment of NABIL, SCBNL and HBL
(Rs. in million)

F/Y	NABIL	SCBNL	HBL
2002/03	8273.18	9563.45	5809.36
2003/04	7340.41	9803.93	7344.7
2004/05	6407.64	10044.41	8880.03
2005/06	5474.86	10284.89	10415.37
2006/07	4542.09	10525.37	11950.7
2007/08	3609.32	10765.85	13486.04
2008/09	2676.55	11006.33	15021.37
2009/10	1743.78	11246.81	16556.71
2010/11	811	11487.28	18092.04
2011/12	-121.768	11727.76	19627.38

From above table it is clear that the trend values of all three banks are in increasing trend. If other things remain unchanged total investment of NABIL is projected to be Rs -121.768 in F/Y 2011/012 and that of SCBNL to be Rs. 11727.76. Similarly, HBL has projected Rs. 19627.38 in the F/Y 2011/012.

The above table reveals that HBL's total investment is higher than that of NABIL and SCBNL through out the trend projection period. It can be said that all the three banks have followed the policy of maximizing their investment. The above calculated trend values are fitted in the trend line given in following figure.

Figure No. 6
Trend values of Investments of NABIL, SCBNL and HBL



IV. Analysis of Trend Values of Net Profit

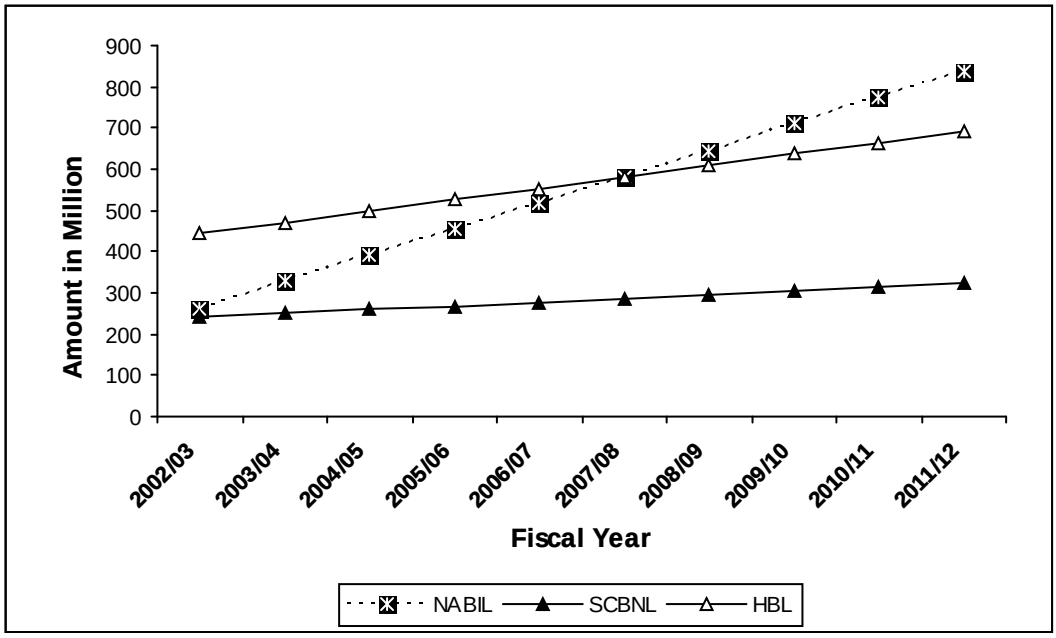
Under this topic on the trend values of net profit from F/Y 2002/03 to 2006/07, an attempt has been made to forecast the projections for next five years i.e. up to F/Y 20011/012. The following table shows the trend value of net profit form F/Y 2002/3 to 20011/012.

Table No. 42
Trend Values of Net Profit of NABIL, SCBNL and HBL
(Rs. in million)

F/Y	NABIL	SCBNL	HBL
2002/03	262.99	241	443.73
2003/04	326.82	250.05	471.27
2004/05	390.64	259.1	498.8
2005/06	454.47	268.16	526.33
2006/07	518.29	277.21	553.86
2007/08	582.11	286.26	581.4
2008/09	645.93	295.31	608.93
2009/010	709.76	304.36	636.46
20010/11	773.58	313.41	663.99
2011/12	837.4	322.46	691.53

From the above table it is clear that the trend value of the banks are in increasing trend. Other things remaining the same the trend value of the banks are in increasing trend. The trend value of NABIL will be highest in F/Y 2011/12 i.e. Rs 837.403 million. In case of SCBNL net profit will be Rs 322.461 million. Similarly, HBL net profit will be Rs. 691.529 in the F/Y 20011/12. NABIL's net profit is higher than that of SCBNL and HBL through the review period. It can be said that all the banks have followed the policy of maximizing their net profit. The above calculated trend values are fitted in the trend line given in following figure.

Figure No. 7
Trend Values of Net Profit of NABIL, SCBNL and HBL



4.1.2.4. TEST OF HYPOTHESIS

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

I. Formulating the Hypothesis
   a. Null Hypothesis
   b. Alternative Hypothesis
II. Computing the test statistic
III. Fixing the level of significance
IV. Deciding the two tail or one tail test
V. Making decision

Here, some of main hypothesis tests are calculated and decision is made. Null Hypothesis (H_0): $\mu 1 = \mu 2 = \mu 3$ i.e. there is no significant difference between mean ratios of two variables of NABIL, SCBNL and HBL.

Alternative Hypothesis (H_1): $\mu 1 \neq \mu 2 \neq \mu 3$ i.e. there is significant difference between mean ratios of two variables of NABIL, SCBNL and HBL.

t - test

In this research study, if we draw large number of small samples i.e. n < 30, and compute the mean for each sample and then plot the frequency distribution of these means, the resulting sampling distribution would be t- test. The samples are taken only for five years i.e. (5<30)

Assumptions:

I. The parent population from which the sample is drawn is normal or approximately normal.
II. The given sample is drawn by random sampling method.
III. The population standard deviation is not known.

I. Test of Hypothesis on Loan and Advances to Total Deposit Ratios

Table No. 43

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
20003/04	48.82	-8.19	67.08	37.35	2.54	6.45	48.41	-1.242	1.54
2004/05	47.97	-9.04	81.72	33.87	-0.94	0.88	47.87	-1.782	3.18
2005/06	57.68	0.67	0.45	30.37	-4.44	19.71	47.61	-2.042	4.17
2006/07	58.01	1.00	1.00	30.29	-4.52	20.43	54.3	4.648	21.6
2007/08	72.57	15.56	242.11	42.17	7.36	54.17	50.07	0.418	0.17
sum	285.05		392.36	174.05		101.65	248.26		30.67

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{285.05}{5} \qquad \bar{x}_2 = \frac{174.05}{5} \qquad \bar{x}_3 = \frac{248.26}{5}$$

$$\bar{x}_1 = 57.01 \qquad \bar{x}_2 = 34.81 \qquad \bar{x}_3 = 49.65$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of loan and advances to total deposit of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different 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 of SCBNL)

The test statistic under H_0 is given by,

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

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) = \frac{1}{5+5-2}(392.36 + 101.649) = 61.7511$$

Now, Test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \quad \text{or,} \quad t = \frac{57.01 - 34.81}{\sqrt{61.7511\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.4688$$

The calculated value of 't' = 4.4688

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

Decision: Since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant

different between two means i.e. loan and advances to total deposit of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of loan and advances to total deposit of NABIL and HBL.

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p^{\,2}$ = an unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^{\,2} + \sum x_3^{\,2}\right) = \frac{1}{5+5-2}(392.36 + 30.667) = 52.8784$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{57.01 - 49.65}{\sqrt{52.8784\left(\frac{1}{5} + \frac{1}{5}\right)}} = 1.6003$$

The calculated value of 't' = 1.6003

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. loan and advances to total deposit of SCBNL and HBL.

II. Test of Hypothesis on Total Investment to Total Deposit Ratio

Table No. 44

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	48.64	5.25	27.5625	61.95	6.04	36.4816	23.15	-18.87	356.0769
2004/05	52.88	9.49	90.0601	58.58	2.67	7.1289	49.18	7.16	51.2656
2005/06	44.85	1.46	2.1316	55.16	-0.75	0.5625	48.44	6.42	41.2164
2006/07	41.33	-2.06	4.2436	53.68	-2.23	4.9729	42.22	0.2	0.04
2007/08	29.25	-14.14	199.9396	50.18	-5.73	32.8329	47.12	5.1	26.01
sum	216.95		323.9374	279.55		81.9788	210.11		474.6089

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{216.95}{5} \qquad \bar{x}_2 = \frac{279.55}{5} \qquad \bar{x}_3 = \frac{210.11}{5}$$

$$\bar{x}_1 = 43.39 \qquad \bar{x}_2 = 55.91 \qquad \bar{x}_3 = 42.02$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of loan and advances to total deposit of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different 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 of SCBNL)

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(323.9374 + 81.9788) = 50.7395$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}} = \frac{43.39 - 55.91}{\sqrt{50.7395\left(\frac{1}{5}+\frac{1}{5}\right)}} = -3.5153$$

The calculated value of 't' = -3.5153

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. total investment to total deposit of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of total investment to total deposit of NABIL and HBL.

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1+n_3-2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}\left(323.9374+474.6089\right) = 99.8183$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{43.39 - 42.02}{\sqrt{99.8183\left(\frac{1}{5} + \frac{1}{5}\right)}} = 0.2168$$

The calculated value of 't' = 0.2168

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. total investment to total deposit of SCBNL and HBL.

III. Test of Hypothesis of Return on Loan and Advances Ratio:

Table No. 45

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	3.77	-0.8	0.6400	7.48	-0.584	0.3411	3.24	0.704	0.4956
2004/05	3.65	-0.92	0.8464	8.93	0.866	0.7499	2.64	0.104	0.0108
2005/06	5.37	0.8	0.6400	8.90	0.836	0.6989	2.12	-0.416	0.1731
2006/07	5.56	0.99	0.9801	8.39	0.326	0.1063	2.20	-0.336	0.1129
2007/08	4.5	-0.07	0.0049	6.62	-1.444	2.0851	2.48	-0.056	0.0031
sum	22.85		3.1114	40.32		3.98132	12.68		0.7955

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{22.85}{5} \qquad \bar{x}_2 = \frac{40.30}{5} \qquad \bar{x}_3 = \frac{12.68}{5}$$

$$\bar{x}_1 = 4.57 \qquad \bar{x}_2 = 8.06 \qquad \bar{x}_3 = 2.536$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of return on loan and advances of NABIL and SCBNL.

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

(Where $\bar{x}_1$ is mean ratio of NABIL and $\bar{x}_2$ is mean ratio of SCBNL)
The test statistic under H_0 is given by,

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

Where,
$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) \quad = \frac{1}{5+5-2}(3.1114 + 3.9813) \qquad = 0.8866$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \qquad = \frac{4.57 - 8.06}{\sqrt{0.8866\left(\frac{1}{5} + \frac{1}{5}\right)}} \qquad = -5.8606$$

The calculated value of 't' = -5.8606

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. return on loan and advances of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of return on loan and advances of NABIL and HBL.

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(3.1114 + 0.7955) = 0.4884$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{4.57 - 2.536}{\sqrt{0.4884\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.6018$$

The calculated value of 't' = 4.6018

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. return on loan and advances of SCBNL and HBL.

IV. Test of Hypothesis of Total Interest Earned to Total Working Fund Ratio

Table No. 46

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	$x_1{}^2$	x_2	x_2	$x_2{}^2$	x_3	x_3	$x_3{}^2$
2003/04	6.90	0.58	0.3364	6.42	1.232	1.5178	6.8	1.254	1.5725
2004/05	6.35	0.03	0.0009	5.5	0.312	0.0973	5.56	0.014	0.0002
2005/06	6.15	-0.17	0.0289	4.77	-0.418	0.1747	5.14	-0.406	0.1648
2006/07	5.98	-0.34	0.1156	4.41	-0.778	0.6053	5.03	-0.516	0.2663
2007/08	6.22	-0.10	0.01	4.84	-0.348	0.1211	5.2	-0.346	0.1197
sum	31.6		0.4918	25.94		2.5163	27.73		2.12352

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$\bar{x}_1 = \frac{31.6}{5}$ $\bar{x}_2 = \frac{25.94}{5}$ $\bar{x}_3 = \frac{27.73}{5}$

$\bar{x}_1 = 6.32$ $\bar{x}_2 = 5.188$ $\bar{x}_3 = 5.546$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of total interest earned to total working fund of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different between mean ratios of total interest earned to total working fund of NABIL and SCBNL.

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(0.4918 + 2.5163) = 0.3760$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{6.32 - 5.188}{\sqrt{0.3760\left(\frac{1}{5} + \frac{1}{5}\right)}} = 2.9190$$

The calculated value of 't' = 2.9190

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. total interest earned to total working fund of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of total interest earned to total working fund NABIL and HBL.

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p^{\,2}$ = an unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^{\,2} + \sum x_3^{\,2}\right) = \frac{1}{5+5-2}(0.4918 + 2.1235) = 0.3269$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{6.32 - 5.546}{\sqrt{0.3269\left(\frac{1}{5} + \frac{1}{5}\right)}} = 2.1405$$

The calculated value of 't' = 2.1405

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. total interest earned to total working fund of SCBNL and HBL.

V. Test of Hypothesis of Cash and Bank Balance to Current Assets Ratio

Table No. 47

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	4.49	-0.892	0.7957	5.00	-1.094	1.1968	8.64	0.724	0.5242
2004/05	6.06	0.678	0.4597	4.50	-1.594	2.5408	6.37	-1.546	2.3901
2005/06	7.03	1.648	2.7159	7.27	1.176	1.3829	9.06	1.144	1.3087
2006/07	5.92	0.538	0.2894	8.61	2.516	6.3303	8.19	0.274	0.0751
2007/08	3.41	-1.972	3.8888	5.09	-1.004	1.0080	7.32	-0.596	0.3552
sum	26.91		8.14948	30.47		12.4589	39.58		4.65332

Here, $\bar{x}_1\ \bar{x}_2\ \bar{x}_3$

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{26.91}{5} \qquad \bar{x}_2 = \frac{30.47}{5} \qquad \bar{x}_3 = \frac{39.58}{5}$$

$$\bar{x}_1 = 5.382 \qquad \bar{x}_2 = 6.094 \qquad \bar{x}_3 = 7.916$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of cash and bank balance to current assets of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different between mean ratios of cash and bank balance to current assets of NABIL and SCBNL.

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = An unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(8.149 + 12.459) = 2.576$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{5.382 - 6.094}{\sqrt{2.576\left(\frac{1}{5} + \frac{1}{5}\right)}} = -0.7015$$

The calculated value of 't' = -0.7015

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. cash and bank balance to current assets of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_3$ i.e. there is no significant different between two mean ratios of cash and bank balance to current assets of NABIL and HBL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of cash and bank balance to current assets of NABIL and HBL.

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p^{\,2}$ = An unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^{\,2} + \sum x_3^{\,2}\right) = \frac{1}{5+5-2}(8.1495 + 4.6533) = 1.6004$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

or,

$$t = \frac{5.382 - 7.916}{\sqrt{1.6004\left(\frac{1}{5} + \frac{1}{5}\right)}} = -3.1675$$

The calculated value of 't' = -3.1675

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. cash and bank balance to current assets of SCBNL and HBL.

VI. Test of Hypothesis of Loan and Advances to Current Asset Ratio

Table No. 48

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	42.72	-6.828	46.6216	30	-0.254	0.0645	51.40	4.17	17.3889
2004/05	42.82	-6.728	45.2659	29.26	-0.994	0.9880	44.88	-2.35	5.5225
2005/06	47.62	-1.928	3.7171	27.39	-2.864	8.2025	45.77	-1.46	2.1316
2006/07	49.98	0.432	0.1866	27.28	-2.974	8.8447	48.93	1.7	2.8900
2007/08	64.6	15.052	226.5627	37.34	7.086	50.2114	45.17	-2.06	4.2436
	247.74		322.3541	151.27		68.3111	236.15		32.1766

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{247.74}{5} \qquad \bar{x}_2 = \frac{151.27}{5} \qquad \bar{x}_3 = \frac{236.15}{5}$$

$$\bar{x}_1 = 49.55 \qquad \bar{x}_2 = 30.25 \qquad \bar{x}_3 = 47.23$$

a. Test of significant difference between NABIL and SCBNL

Here,

Null Hypothesis (H_0): $\bar{x}_1 = \bar{x}_2$ i.e. there is no significant different between two mean ratios of loan and advances to current assets of NABIL and SCBNL.

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_2$ (two - tailed test) i.e. there is significant different between mean ratios of loan and advances to current assets of NABIL and SCBNL.

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(322.3541 + 68.3111) = 48.833$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{48.55 - 30.25}{\sqrt{48.833\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.1403$$

The calculated value of 't' = 4.1403

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

Decision: since calculated value of 't' is greater than tabulated value, the null hypothesis is rejected. Therefore we can conclude that there is significant different between two means i.e. loan and advances to current assets of NABIL and SCBNL.

b. Test of significant different between NABIL and HBL

Here,

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

Alternative Hypothesis (H_1): $\bar{x}_1 \neq \bar{x}_3$ (two - tailed test) i.e. there is significant different between mean ratios of loan and advances to current assets of NABIL and HBL.

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

S_p^2 = An unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^2 + \sum x_3^2\right) = \frac{1}{5+5-2}(322.3541 + 32.1766) = 44.3163$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \qquad \text{or,} \quad t = \frac{49.55 - 47.23}{\sqrt{44.3163\left(\frac{1}{5} + \frac{1}{5}\right)}} \qquad = 0.5510$$

The calculated value of 't' = 0.5510

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level of significance for two tailed test and for 8 d.f is 2.306.

Decision: Since calculated value of 't' is less than tabulated value, the null hypothesis is accepted. Therefore we can conclude that there is no significant different between two means i.e. loan and advances to current assets of NABIL and HBL.

4.2 MAJOR FINDINGS OF THE STUDY

The basic analysis required for this study having completed. The final and most important task of the researcher is to enlist the findings. This will give meaning to the desired result. A comprehensive summary of the major findings of this study as presented below.

The main findings of the study derived from the analysis of financial data of NABIL in comparison to SCBNL and HBL are given below.

I. Liquidity Ratio

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

h. From the analysis of current ratio, it is found that the mean ratio of NABIL and SCBNL is equal and the ratio of HBL is lowest. It means NABIL and SCBNL has maintained the higher liquidity and lower risk in compared to HBL.

i. The mean ratio of cash of bank balance to total deposits of HBL is higher than NABIL and SCBNL. It states that the liquidity position of HBL is better in this regard because of high percentage of liquid assets. On the contrary, a high liquid also indicates the inability of the bank to mobilize its current assets. The ratios of HBL are more consistency than other banks.

j. The mean ratio of cash and bank balance to current asset of HBL is higher than NABIL and SCBNL. It states that the liquidity position of HBL is better in this regard. And the ratio of HBL is more variable than that of other two compared banks. The ratio of SCBNL is less consistency.

k. The mean ratio of investment on government securities to current asset of SCBNL is higher in compared to NABIL and HBL. It reveals that it has invested more of its fund on government securities. The ratios of SCBNL are more consistency.
l. The mean ratio of loan and advances to current assets of NABIL is highest. The variability of ratios of HBL is slightly greater than other two banks. HBL seems to be more consistency and NABIL seems to be less consistency.

The above result shows that the liquidity positions of all three banks are satisfactory. NABIL has the highest current ratio which justifies that it is capable enough to meet its current obligations and also it has highest loan and advances to current assets ratio. It means NABIL is very successful in mobilizing its funds as loan and advances. The investment policy is better than other banks. In case of SCBNL, it has highest current ratio and investment on government securities. It means SCBNL has invested more of its funds in government securities but has maintained moderate investment policy on loan and advances. HBL has highest cash and bank balance to total deposit and current assets ratio. It indicates that it has lower investment policy on loan and advances and government securities.

II. 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 highest. SCBNL is lowest. In terms of consistency, NABIL seems to be less consistency.
- The mean ratio of total investment to total deposit of NABIL is slightly higher than HBL and lower than SCBNL. The ratio of SCBNL is more consistency and the ratio of HBL is less consistency.
- In case of loan and advances to working fund ratio, the mean ratio of NABIL is highest. The ratio of HBL is more consistent than that of NABIL and SCBNL.
- The mean ratio of investment on government securities to total working fund of SCBNL is greater than other banks. HBL has lower mean ratio. NABIL is in moderate position. SCBNL seems to be more consistency and HBL seems to be less consistency.
- The mean ratio of investment on shares and debentures to total working fund of NABIL is significantly higher than SCBNL and HBL. The ratio of SCBNL is less consistency and ratio of NABIL is more consistency.
- The mean ratio of total OBS operation to loan and advances of NABIL is higher than HBL and lower than SCBNL. It seems to be less consistency.
- The mean ratio of loan loss provision of HBL is highest and NABIL is lowest. NABIL seems to be less consistency.

From the above findings, it helps to conclude that NABIL has been more successful in mobilization of its total deposits and working fund as loan & advances, investment in shares and debentures and total OBS operation to loan and advances. On the other hand, SCBNL appears to be stronger in mobilization of total deposit as investment in risk free government securities. HBL seems to be stronger in loan loss provision. The investment policy of NABIL has better than other two banks towards loan and advances and in other companies shares and debentures. NABIL has successfully managed their assets towards different income generation activities.

III. Profitability Ratio

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

- The mean ratio of return on loan and advances of SCBNL has been found to be significantly greater than other two banks. The ratios of SCBNL are fewer variables and more consistency.
- The mean ratio of return on total working fund of NABIL is in between SCBNL and HBL. SCBNL has high ratio. On the other hand, the ratio of SCBNL is more consistency and fewer variables in compared to other banks.
- The mean ratio on equity capital ratio of NABIL is higher than HBL and lower than SCBNL. NABIL seems to be less consistency in this case.
- The mean ratio of total interest earned to total working fund of NABIL is highest of all. The total interest earned to total outside assets ratio of the NABIL is less variable in comparison to SCBNL and HBL.
- The mean ratio of total interest earned to total operating income of HBL is higher than other two banks. HBL seems to be more consistency and fewer variables.
- The mean ratio of total interest earned to total outside assets of NABIL is higher than other compared banks. The ratio of NABIL is more consistency and fewer variables.
- The mean ratio of total interest paid to total working fund of NABIL is greater than SCBNL and lower than HBL. It means NABILL has paid higher interest than SCBNL and lower than HBL. The ratio of HBL is more consistent than that of other two compared banks.

On the basis of above, we can conclude that NABIL has been more successful in mobilization of its funds in interest bearing assets to earn higher interest income form working fund and outside assets. SCBNL has been more successful in maintaining its higher return on loan and advances, total working fund and equity capital. HBL is better in interest earning from its total operating income and also better position than other banks from interest payment point of view.

IV. Risk Ratio

The Risk ratio of NABIL, SCBNL and HBL reveals that,

h. The mean liquidity risk ratio of NABIL is higher than SCBNL and lower than HBL. SCBNL has lower mean liquidity risk ratio. On the contrary, HBL seems to be more stable and less variable.
i. The mean credit risk ratio of NABIL is higher than SCBNL and HBL. SCBNL has lower risk ratio. NABIL seems to be less stable and HBL seems to be more stable.
j. The mean capital risk ratio of NABIL is higher than HBL and lower than SCBNL. NABIL seems to be less consistency and HBL seems to be more consistency.

Based on above findings we can conclude that NABIL is in moderate position in liquidity and capital risk. It has more credit risk. SCBNL has lower liquidity risk and credit risk ratio than NABIL and HBL. NABIL and HBL have greater exposure to risk in its financial operations.

V. Growth Ratio

The growth ratio of NABIL, SCBNL and HBL reveals that,

j. The growth ratio of deposits of NABIL is negative lower than HBL and SCBNL. It means the performance of NABIL is poorer in collecting more deposit in comparison to other banks year by year. HBL has highest growth ratio of deposit.
k. The growth ratio of total loan and advances of NABIL is lower than HBL and SCBNL. It means the performance of NABIL to grant loan and advances in compared to studied banks is not good. HBL seems to stronger in this case.
l. The growth ratio of total investment of NABIL is negative lower than HBL and SCBNL. HBL has good performance of investing in different sectors.
m. The growth ratio of net profit of NABIL is higher than SCBNL and HBL. HBL has lower ratio. It means that the earning profit from various sectors is better than other banks.

Based on the above findings, we can conclude that, HBL has been more successful in increasing its deposits, loan & advances and investment during the study period, whereas, NABIL has been more efficient in terms of increasing its net profit, but less successful in deposit collection, loan & advances and investing. SCBNL is moderate. Among three banks, NABIL'S strategy of shedding deposits seems to be off the tune. NABIL needs to seriously rethink about its strategy.

VI. Co-efficient of Correlation Analysis

Co-efficient of correlation between different variables of NABIL, SCBNL and HBL reveal that:

- HBL has a higher value of coefficient of correlation between deposits and loan and advances than NABIL and SCBNL. This indicates that HBL is better position of it in mobilization of deposits as loan and advances in compared to other banks. NABIL has negative value. It means it has poor performance.
- The coefficient of correlation between deposits and total investment of NABIL is lower than SCBNL and HBL. It indicates that NABIL is worst in total deposit in mobilizing as on investment. SCBNL has highest value.
- The coefficient of correlation between deposit and net profit of NABIL has negative value. In case of SCBNL, it has highest value, whereas the coefficient of correlation between the same variables in case of HBL has a lower positive value. This indicates that SCBNL is capable to earn net profit by mobilizing its total deposit in compared other banks.
- The coefficient of correlation between deposits and interest earned in case of NABIL is highest, whereas SCBNL has a negative value of coefficient of correlation. HBL has lower positive value. This indicates that NABIL has earned higher interest on deposits
- The coefficient of correlation between loan & advances and interest paid of all three banks has negative value. SCBNL has highest negative value. HBL has lowest value. This indicates that SCBNL has paid high interest. NABIL is in moderate position.
- The coefficient of correlation between total working fund and net profit in case of NABIL is negative, whereas the same has a lower positive value in case SCBNL. HBL has highest positive value. This indicates that HBL has good capacity to earn net profit by mobilizing its working fund.

In conclusion, we can say that there is a significant relationship between deposits and investment, deposit and interest earned in case of NABIL, and the relationship is insignificant between deposits and loan & advances, deposit and net profit, loan & advances and net profit, total working fund and net profit.

In case of SCBNL, three exists a significant relationship between deposits and loan and advances, deposits and investments, deposits and net profit whereas the relationship in insignificant between deposit and interest earned, loan and advances and interest paid, total working fund and net profit.

In case of HBL, there is a significant relationship between deposits and loan & advances, deposit and investment, deposit and net profit, deposit and interest earned, total working fund and net profit where as insignificant relationship between loan & advances and interest paid.

VII. Regression Analysis

Regression analysis between different variable of NABIL, SCBNL and HBL reveals that,

- Regression analysis between total working fund and net profit of NABIL shows the negative relationship. There is positive relationship between these two variables of SCBNL and HBL.
- Regression analysis between total investment and net profit of NABIL and HBL shows the negative relationship and analysis between these two variables of SCBNL shows the positive relationship.
- Regression analysis between loan and advances and net profit of NABIL shows the negative relationship between two variables. The ratio of SCBNL and HBL shows positive relationship.

In conclusion we can say that there is negative relationship between total working fund and total investment to net profit of NABIL. SCBNL's relationship is positive in both cases.

VII. Trend Analysis and Projection for next five years

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

The deposit trend of the bank SCBNL and HBL have an increasing trend. The total deposit trend of NABIL has decreasing trend. The total deposit of NABIL is predicted to be 11975.20 million and that of SCBNL to be 27298.67 million at the end of F/Y 2009/10. Similarly, the total deposit of HBL is predicted to be 33239.29 million. The deposit collection of HBL is much better than other two banks.

The loan and advance of all the sample banks have an increasing trend. The total loan and advance of NABIL is predicted to be 12862.93 million and that of SCBNL to be 10339.76 million at the end of F/Y 2009/10. Similarly, the amount is predicted to be 17934.23 million. The loan and advances of HBL is much better in compared to NABIL and SCBNL.

The total investment of the banks SCBNL and HBL have an increasing trend. The total investment of NABIL is decreasing trend. The total investment of NABIL is projected negative -121.768 million and that of SCBNL is 11727.76 million by the end F/Y 2009/2010. HBL is predicted to be 19627.38 million at the end of F/Y 2009/2010. HBL seems to have much focused policy with regards to total investment than NABIL and SCBNL.

The net profits of all the three banks are in an increasing trend. The net profit of NABIL and SCBNL is predicted at 837.40 million and

322.46 million respectively by the end of F/Y 2008/2009. Similarly, HBL is predicted to be 691.53 million. The position of NABIL with regard to utilization of the fund to earn profit is better than SCBNL and HBL.

VIII. Test of Hypothesis

The test of significance regarding the parameter of the population, the basis sample drawn from the population reveals that:

k. There is significance difference between mean ratio of loan and advances to total deposit of NABIL and SCBNL. There is no significant difference between NABIL & HBL.
l. There is no significant difference between mean ratio of total investment to total deposit of NABIL & SCBNL and NABIL & HBL.
m. There is significant difference between mean ratio of return on loan and advances of NABIL & SCBNL and NABIL & HBL.
n. There is no significant difference between mean ratios of total interest earned to total working fund of NABIL & HBL. There is significant difference between NABIL & SCBNL.
o. There is no significant difference between mean ratio of cash and bank balance to current assets of NABIL & SCBNL and NABIL & HBL.

There is significant difference between mean ratio of loan and advances to current assets of NABIL & SCBNL.

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a **Appendix :A**

Test of Hypothesis of Cash and Bank Balance to Current Assets Ratio

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	4.49	-0.892	0.7957	5.00	-1.094	1.1968	8.64	0.724	0.5242
2004/05	6.06	0.678	0.4597	4.50	-1.594	2.5408	6.37	-1.546	2.3901
2005/06	7.03	1.648	2.7159	7.27	1.176	1.3829	9.06	1.144	1.3087
2006/07	5.92	0.538	0.2894	8.61	2.516	6.3303	8.19	0.274	0.0751
2007/08	3.41	-1.972	3.8888	5.09	-1.004	1.0080	7.32	-0.596	0.3552
sum	26.91		8.14948	30.47		12.4589	39.58		4.65332

Here, $\bar{x}_1\ \bar{x}_2\ \bar{x}_3$

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{26.91}{5} \qquad \bar{x}_2 = \frac{30.47}{5} \qquad \bar{x}_3 = \frac{39.58}{5}$$

$$\bar{x}_1 = 5.382 \qquad \bar{x}_2 = 6.094 \qquad \bar{x}_3 = 7.916$$

a. Test of significant difference between NABIL and SCBNL

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

The test statistic under H_0 is given by,

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

Where,

$S_p^{\,2}$ = An unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^{\,2} + \sum x_2^{\,2}\right) = \frac{1}{5+5-2}(8.149 + 12.459) = 2.576$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{5.382 - 6.094}{\sqrt{2.576\left(\frac{1}{5} + \frac{1}{5}\right)}} = -0.7015$$

The calculated value of 't' = -0.7015

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

b. Test of significant different between NABIL and HBL

(Where $\bar{x}_1$ is mean ratio of NABIL and $\bar{x}_3$ is mean ratio of HBL)
The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p^{\,2}$ = An unbiased estimate of common population variance and its value is computed by

$$S_P^{\,2} = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1^{\,2} + \sum x_3^{\,2}\right) = \frac{1}{5+5-2}(8.1495 + 4.6533) = 1.6004$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P^{\,2}\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{5.382 - 7.916}{\sqrt{1.6004\left(\frac{1}{5} + \frac{1}{5}\right)}} = -3.1675$$

The calculated value of 't' = -3.1675

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Appendix:B

Test of Hypothesis of Loan and Advances to Current Asset Ratio

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	$x_1^{\,2}$	x_2	x_2	$x_2^{\,2}$	x_3	x_3	$x_3^{\,2}$
2003/04	42.72	-6.828	46.6216	30	-0.254	0.0645	51.40	4.17	17.3889
2004/05	42.82	-6.728	45.2659	29.26	-0.994	0.9880	44.88	-2.35	5.5225
2005/06	47.62	-1.928	3.7171	27.39	-2.864	8.2025	45.77	-1.46	2.1316
2006/07	49.98	0.432	0.1866	27.28	-2.974	8.8447	48.93	1.7	2.8900
2007/08	64.6	15.052	226.5627	37.34	7.086	50.2114	45.17	-2.06	4.2436
	247.74		322.3541	151.27		68.3111	236.15		32.1766

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{247.74}{5} \qquad \bar{x}_2 = \frac{151.27}{5} \qquad \bar{x}_3 = \frac{236.15}{5}$$

$\bar{x}_1 = 49.55$ $\bar{x}_2 = 30.25$ $\bar{x}_3 = 47.23$

a. Test of significant difference between NABIL and SCBNL

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

The test statistic under H_0 is given by,

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

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) = \frac{1}{5+5-2}(322.3541 + 68.3111) = 48.833$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{48.55 - 30.25}{\sqrt{48.833\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.1403$$

The calculated value of 't' = 4.1403

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

b. Test of significant different between NABIL and HBL

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = An unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(322.3541 + 32.1766) = 44.3163$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_3}\right)}} \qquad \text{or,} \quad t = \frac{49.55 - 47.23}{\sqrt{44.3163\left(\frac{1}{5}+\frac{1}{5}\right)}} \qquad = 0.5510$$

The calculated value of 't' = 0.5510

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level of significance for two tailed test and for 8 d.f is 2.306.

Appendix:C

Test of Hypothesis on Loan and Advances to Total Deposit Ratios

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
20003/04	48.82	-8.19	67.08	37.35	2.54	6.45	48.41	-1.242	1.54
2004/05	47.97	-9.04	81.72	33.87	-0.94	0.88	47.87	-1.782	3.18
2005/06	57.68	0.67	0.45	30.37	-4.44	19.71	47.61	-2.042	4.17
2006/07	58.01	1.00	1.00	30.29	-4.52	20.43	54.3	4.648	21.6
2007/08	72.57	15.56	242.11	42.17	7.36	54.17	50.07	0.418	0.17
sum	285.05		392.36	174.05		101.65	248.26		30.67

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{285.05}{5} \qquad \bar{x}_2 = \frac{174.05}{5} \qquad \bar{x}_3 = \frac{248.26}{5}$$

$$\bar{x}_1 = 57.01 \qquad \bar{x}_2 = 34.81 \qquad \bar{x}_3 = 49.65$$

a. Test of significant difference between NABIL and SCBNL

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

The test statistic under H_0 is given by,

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

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) = \frac{1}{5+5-2}\left(392.36 + 101.649\right) = 61.7511$$

Now, Test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \qquad \text{or,} \quad t = \frac{57.01 - 34.81}{\sqrt{61.7511\left(\frac{1}{5} + \frac{1}{5}\right)}} = 4.4688$$

The calculated value of 't' = 4.4688

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.

b. Test of significant different between NABIL and HBL

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1+n_3-2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(392.36+30.667) = 52.8784$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{57.01-49.65}{\sqrt{52.8784\left(\frac{1}{5}+\frac{1}{5}\right)}} = 1.6003$$

The calculated value of 't' = 1.6003

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Appendix:D

Test of Hypothesis on Total Investment to Total Deposit Ratio

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	48.64	5.25	27.5625	61.95	6.04	36.4816	23.15	-18.87	356.0769
2004/05	52.88	9.49	90.0601	58.58	2.67	7.1289	49.18	7.16	51.2656
2005/06	44.85	1.46	2.1316	55.16	-0.75	0.5625	48.44	6.42	41.2164
2006/07	41.33	-2.06	4.2436	53.68	-2.23	4.9729	42.22	0.2	0.04
2007/08	29.25	-14.14	199.9396	50.18	-5.73	32.8329	47.12	5.1	26.01
sum	216.95		323.9374	279.55		81.9788	210.11		474.6089

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{216.95}{5} \qquad \bar{x}_2 = \frac{279.55}{5} \qquad \bar{x}_3 = \frac{210.11}{5}$$

$$\bar{x}_1 = 43.39 \qquad \bar{x}_2 = 55.91 \qquad \bar{x}_3 = 42.02$$

a. Test of significant difference between NABIL and SCBNL

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

The test statistic under H_0 is given by,

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

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) = \frac{1}{5+5-2}(323.9374 + 81.9788) = 50.7395$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{43.39 - 55.91}{\sqrt{50.7395\left(\frac{1}{5} + \frac{1}{5}\right)}} = -3.5153$$

The calculated value of 't' = -3.5153

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

b. Test of significant different between NABIL and HBL

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(323.9374 + 474.6089) = 99.8183$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

or, $$t = \frac{43.39 - 42.02}{\sqrt{99.8183\left(\frac{1}{5} + \frac{1}{5}\right)}} = 0.2168$$

The calculated value of 't' = 0.2168

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Appendix:E

Test of Hypothesis of Return on Loan and Advances Ratio:

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	x_1^2	x_2	x_2	x_2^2	x_3	x_3	x_3^2
2003/04	3.77	-0.8	0.6400	7.48	-0.584	0.3411	3.24	0.704	0.4956
2004/05	3.65	-0.92	0.8464	8.93	0.866	0.7499	2.64	0.104	0.0108
2005/06	5.37	0.8	0.6400	8.90	0.836	0.6989	2.12	-0.416	0.1731
2006/07	5.56	0.99	0.9801	8.39	0.326	0.1063	2.20	-0.336	0.1129
2007/08	4.5	-0.07	0.0049	6.62	-1.444	2.0851	2.48	-0.056	0.0031
sum	22.85		3.1114	40.32		3.98132	12.68		0.7955

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{22.85}{5} \qquad \bar{x}_2 = \frac{40.30}{5} \qquad \bar{x}_3 = \frac{12.68}{5}$$

$$\bar{x}_1 = 4.57 \qquad \bar{x}_2 = 8.06 \qquad \bar{x}_3 = 2.536$$

a. Test of significant difference between NABIL and SCBNL

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

The test statistic under H_0 is given by,

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

Where,

S_p^2 = an unbiased estimate of common population variance and its value is computed by

$$S_P^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1^2 + \sum x_2^2\right) = \frac{1}{5+5-2}(3.1114 + 3.9813) = 0.8866$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}} \qquad = \frac{4.57-8.06}{\sqrt{0.8866\left(\frac{1}{5}+\frac{1}{5}\right)}} \qquad = -5.8606$$

The calculated value of 't' = -5.8606

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

b. Test of significant different between NABIL and HBL

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

The test statistics under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1+n_3-2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) \quad = \frac{1}{5+5-2}(3.1114+0.7955) \; = 0.4884$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1}+\frac{1}{n_3}\right)}} \qquad \text{or,} \quad t = \frac{4.57-2.536}{\sqrt{0.4884\left(\frac{1}{5}+\frac{1}{5}\right)}} \qquad = 4.6018$$

The calculated value of 't' = 4.6018

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2= 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

Appendix:F

Test of Hypothesis of Total Interest Earned to Total Working Fund Ratio

Table No. 46

F/Y	NABIL			SCBNL			HBL		
	x_1	x_1	$x_1{}^2$	x_2	x_2	$x_2{}^2$	x_3	x_3	$x_3{}^2$

2003/04	6.90	0.58	0.3364	6.42	1.232	1.5178	6.8	1.254	1.5725
2004/05	6.35	0.03	0.0009	5.5	0.312	0.0973	5.56	0.014	0.0002
2005/06	6.15	-0.17	0.0289	4.77	-0.418	0.1747	5.14	-0.406	0.1648
2006/07	5.98	-0.34	0.1156	4.41	-0.778	0.6053	5.03	-0.516	0.2663
2007/08	6.22	-0.10	0.01	4.84	-0.348	0.1211	5.2	-0.346	0.1197
sum	31.6		0.4918	25.94		2.5163	27.73		2.12352

Here,

$$\bar{x}_1 = \frac{\sum x_1}{n} \qquad \bar{x}_2 = \frac{\sum x_2}{n} \qquad \bar{x}_3 = \frac{\sum x_3}{n}$$

$$\bar{x}_1 = \frac{31.6}{5} \qquad \bar{x}_2 = \frac{25.94}{5} \qquad \bar{x}_3 = \frac{27.73}{5}$$

$$\bar{x}_1 = 6.32 \qquad \bar{x}_2 = 5.188 \qquad \bar{x}_3 = 5.546$$

a. Test of significant difference between NABIL and SCBNL

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

The test statistic under H_0 is given by,

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

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_2 - 2}\left(\sum x_1{}^2 + \sum x_2{}^2\right) = \frac{1}{5+5-2}(0.4918 + 2.5163) = 0.3760$$

Now, the test statistic under H_0 is

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = \frac{6.32 - 5.188}{\sqrt{0.3760\left(\frac{1}{5} + \frac{1}{5}\right)}} = 2.9190$$

The calculated value of 't' = 2.9190

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f is 2.306.

b. Test of significant different between NABIL and HBL

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

The test statistic under H_0 is given by,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}}$$

Where,

$S_p{}^2$ = an unbiased estimate of common population variance and its value is computed by

$$S_P{}^2 = \frac{1}{n_1 + n_3 - 2}\left(\sum x_1{}^2 + \sum x_3{}^2\right) = \frac{1}{5+5-2}(0.4918 + 2.1235) = 0.3269$$

Now, test statistic under H_0 is,

$$t = \frac{\bar{x}_1 - \bar{x}_3}{\sqrt{S_P{}^2\left(\frac{1}{n_1} + \frac{1}{n_3}\right)}} \quad \text{or,} \quad t = \frac{6.32 - 5.546}{\sqrt{0.3269\left(\frac{1}{5} + \frac{1}{5}\right)}} = 2.1405$$

The calculated value of 't' = 2.1405

Degree of freedom = $n_1 + n_2 - 2 = 5+5-2 = 8$

Critical value = The tabulated value of 't' at 5% level significance for two tailed test and for 8 d.f. is 2.306.