INVESTMENT POLICIES

OF
COMMERCIAL BANKS
(A COMPARATIVE STUDY WITH REFERENCE TO NIBL, NABIL, SCBNL & HBL)

A THESIS
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RECOMMENDATION

This is to certify that the thesis

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

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Declaration

I hereby declare that the work reported in this thesis entitled "Investment Policies of Commercial Banks" *(A Comparative Study with Reference to NIBL, Nabil, SCBNL & HBL)* submitted to the Thakur Ram Multiple Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirements of Master of Business Studies (MBS) under the Supervision of Mr. Shambhu Sharan Sah, Lecturer of Thakur Ram Multiple Campus, Birgunj, Parsa.

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ABBREBVIATION

B.S.	: Bikram Sambat
C.V.	: Coefficient of Variation
EPS	: Earning Per Share
F/Y	: Fiscal Year
HBL	: Himalayan Bank Ltd.
JVB	: Joint Venture Bank
NABIL	: Nabil Bank Ltd.
NIBL	: Nepal Investment Bank Ltd.
NRB	: Nepal Rastra Bank
NSBL	: Nepal State Bank of India Ltd.
PEr.	: Probable Error
r	: Coefficient of Correlation
RBB	: Rastriya Banijya Bank
Rs.	: Rupees
SCBNL	: Standard Chartered Bank Nepal Ltd.
S.D.	: Standrad Deviation

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CHAPTER-I

1.1 History of Banking

It can be said that banking activities are as old as human civilization. This can be verified from the write-ups in the old religious books like Veda, Ramayana, Mahabharata, Kautilaya Ko Aarthashashtra, Bible, and others. If fact, there is no unity among the economists regarding the origin of banks.

According to Prof. Crowder: The following three groups of ancient community played very important role in the development of commercial banks. They are :

A. Merchants: Business activities have been carried out since very long. Merchants had to remit money from one place to another. It was very difficult to carry physical money like coins each time the trading was done. The merchants were so popular and creditworthy that the letters issued by them were treated as good as money. They used to make trading activities based one these letter of credit and settle the outstanding through actual coins on the periodic basis.

B. Goldsmith : Goldsmiths had very sound credit standing in the society. They used to have safe to keep valuables. Fear of theft and robbery led people keep their valuable (gold, silver and metallic coins) in the custody of the goldsmiths. Goldsmiths used to charge commission for the safe keeping and used to return on demand. The depositors had to visit goldsmiths for part or full withdrawal of gold, sliver and coins.

C. Money Lender : Money lenders used to give loan to the needy public out of their own treasury. Later on savers started depositing their savings/deposits with the money lenders. Goldsmith and moneylenders experienced that all the monies deposited with them were not withdrawn at a time. Some used to deposit while others used but a large amount used to remain with them. Then, they started to offer interest on these deposits and started utilizing these funds to disburse the

loans to the needy people. They used to keep a fraction of total deposit in the form of cash to honour withdrawal demands.

Such tasks previously performed by merchants, gold smiths and moneylenders are now a days being performed by various types of banks in modern ways.

1.2 Emergence of Bank in Nepal

Establishment of Tejaratha Adda by the then Prime Minister Rannodip Singh (B.S. 1933) was the first step towards the institutional development of banking in Nepal. Tejaratha Adda did not collect deposits from the public but gave loans to employees and general public against the bullion.

Banking in its true sense of term started with the inception of Nepal Bank Limited on 30th Kartik 1994 B.S. Right from the inception, it carried out functions of commercial banks.

Integrated and speedy development of the country is possible only when competitive banking services reaches nook and corner of the country. Being the central bank, NRB had its own limitation and reluctance of NBL to go to the un-profitable sectors / areas was not illogical. To cope with these difficulties government set up Rastriya Banijya Bank in 2002 as a fully government owned commercial bank. Deposited all this effort of the government, financial sector was found sluggish. Banking service to the satisfaction of customers was a far cry. However, the inception of Nepal Arab Bank Limited in 2041 as a first joint venture bank proved to be a milestone in the history of banking. Nabil Bank gave a new ray of hope to the sluggish financial sector. Having observed the success of Nabil based on marketing concept and also because of liberal economic policy adopted by the successive governments, taking an overview of financial institutions providing banking facility in Nepal, there are 17 Commercial banks, 29 development banks, 5 Rural Development banks, 59 Finance Companies, 20 Co- operative Societies (licensed by NRB for limited transaction).

Table No. 1.1
List of licensed commercial banks in Nepal

S.N.	Commercial Banks	Established date(B.S.)	Head office
1	Nerpal bank ltd	1994-07-30	kathmandu
2	Ratra Banijaya bank	2022-10-10	kathmandu
3	Nabil bank ltd.	2041-03-29	kathmandu
4	Nepal investment bank ltd.	2042-11-26	kathmandu
5	Standard charted bank Nepal ltd.	2043-10-16	kathmandu
6	Himalayan Bank ltd.	2049-10-05	kathmandu
7	Nepal Sbi bank ltd	2050-03-23	kathmandu
8	Nepal Bangladesh Bank ltd.	2050-02-23	kathmandu
9	Everest Bank ltd	2051-07-01	kathmandu
10	Bank of kathmandu ltd	2051-11-28	kathmandu
11	Nepal credit and commercial Bank ltd.	2053-06-28	Sidharthanagar
12	Lumbini bank ltd.	2055-04-01	Narayangadh
13	Nepal industrial and Commercial Bank ltd.	2055-04-05	iratnagar
14	Machhapuchhre bank ltd	2057-06-17	Pokhara
15	Kumari Bank ltd.	2057-12-21	kathmandu
16	Laxmi Bank ltd.	2058-06-11	Birgunj
17	Siddartha Bank ltd	2059-09-09	kathmandu
18	Global bank ltd	2063-09-18	kathmandu
19	Sun rise Bank ltd	2064-06-25	kathmandu
20	Prime bank ltd	2051-03-11	kathmandu
21	Citizen international bank Ltd.	2064-01-05	kathmandu

Source: Gorkhpatra- 2065-1-31, and Banking Financial statistics, NRB

1.3 General Background of the Study.

It has been witnessed that the Nepalese economy has been passing through very difficult times over the decade. Agriculture and Non-agriculture production has remained constant so far over the decade after the restoration of democracy in Nepal. Foreign aid in the form of grants now has been turned into loans that have to be repaid within the stipulated time period with certain interest. As a result we see that debt payment is eating up the huge portion of annual budget of the government. The tourism sector has also suffered from various serious blows. In such an adverse economic backdrop banking sector has generally not survived by also has made mark able profit.

It is the harsh reality that the development of economics conditions cannot be improved without the help of banking industry. After the implementation of the policy of privatization and economic liberalization policy by the government, it is seen that there is remarkable growth in the banking industry in Nepal.

Commercial Bank are established under company act 2021 and are governed by commercial Act. 2031. Commercial banks in Nepal started with the inception of Nepal Bank Limited in 1994 B.S. There are 17 commercial banks running in the country till date and many are in the pipeline. The commercial banks of Nepal can be catetorized into two type viz., Public Sector and private sector.

Public sector bank includes two old banks Nepal Bank Limited and Rastriya Banijya Bank. Private sector banks comprise of 15 banks. All the Nepalese Commercial banks are established and operated under the rules, regulation and guidelines of Nepal Rastriya Bank.

Although various commercial banks are operating in Nepal after HMG/N adopted the open liberal and market economy, the financial sector so far has not been so successful in meeting the growing needs of the country as expected

before. To find out the answer of this question, financial analysis is very important.

In fact, financial performance is a measurement of weakness and the strength of the bank. A strong and well developed commercial bank can contribute to national economy and attract further foreign direct investment in these sectors. Therefore, financial statements should be fully examined to find out whether the banks are economically strong or not. Weakness and inefficiently can be brought out with the analysis of financial performance.

1.3.1 Brief Profile of the Organizations Under Study :

For the purpose of study Nepal Investment Bank (NIBL) Himalayan bank Limited (HBL), Standard Character Bank Nepal Limited (SCBNL) and Everest Bank Limited (EBL) have been chosen.

i. Nepal Investment Bank Limited (NIBL)

It was formerly popular as Nepal Indosuez Bank limited. It was established in 2042/10/22 B.S. Under commercial Act 2031 with the joint venture of Banque Indosuez, French. Later, Banque Indosuez was merged with one of tenth banks in the world called "Credit Agricole". Initially, its ownership structure was 50% share of Credit Agricole Indosuez, 15% share of Rastriya Beema Sansthan, 15% shares of Rastriya Banijya Bank Limited and 20% share of general public. Later in 2002, the French partner sold its entire 50% shares to the Nepalese investors group led by Mr. Prithvi Bahadur Pande. Thus, after divest by the French partner the Bank has now renamed as Nepal Investment Bank Limited. It has now 12 branches across the country. Out which 4 are in valley. One in Banepa of Dhulikhel, one in Seepadole of Suryabinayak, one in Biratnagar, one in Butwal, one in Bhairahawa, One in Jeetpur and one in Birgunj and one in Pokhara. Paid capital of bank has now increased to Rs. 59.03 crores after issuance of right share.

ii. Nabil Bank Ltd.

'Nabil Bank Limited' the first commercial bank was incorporated in 1984. Dubai bank ltd. Was the intial joint venture partner with 80% equity investment. The shares owned by Dubai bank ltd. were transferred to emirates bank international ltd. Dubai. Later on EBIL sold its entire stock to National Bank ltd, Bangladesh (NBLB). National Bank ltd. Bangladesh is managing the bank in accordance with the technical services agreement signed between it (Nabil) and the bank on June 1995.

The present configuration consist of 50% share capital of National Bank Limited, 10% of Nepal Industrial Development Corporation, 9.67% of Rastriya Beema Sansthan, 0.33% of Nepal stock exchange and

The present configuration consist of 50% share capital of National Bank Ltd, 10% of Nepal Industrial Development Corporation 9.67% of Rastriya Beema Sansthan, 0.33% of Nepal stock exchange and 30% of Nepalese public. At present 17 branches of the bank are operating in different parts of the country. Authorized capital and paid up capital of Nabil bank limited are Rs. 500 million and Rs. 491.6544 million.

iii. Standard Chartered Bank Nepal Limited (SCBNL)

It was established in 2042 B.S. in joint venture with Grindlays bank, England. Later, when the Grindlays group sold its share to Standard Chartered in south Asia region, it become Standard Chartered bank Nepal limited. The authorized capital of the bank is Rs. 339,548,800.00 and paid up capital is Rs. 339,548,800.00. The total numbers of its shareholders are 5,037. It has is hade office in New Baneshwor, Kathmandu. The ownership structure of SCBNL is as follow.

Standard Chartered Bank, Sydney, Australia = 50%

Standard Chartered Bank, U.K   = 25%

General Public   = 25%

Total Number of Shareholders   = 5,037

iv. Himalayan Bank Limited (HBL):

It came into existence in 2049 B.S as a fourth joint venture bank in Nepal. It was established under commercial bank Act 2031 with a view to encourage efficient banking services. HBL is a joint venture with Habib Bank of Pakistan with paid up capital Rs. 60 million. Now it has raised its paid up capital to Rs. 429 million by capitalization of profit and issuance of bonus shares. HBL's ownership structure consists of 51% shares for promoters, 20% of Habib bank, 14% of Employee provident fund and 15% for public.

Himalayan bank limited has its Head office in Thamel, Kathmandu. HBL has 12 branches in Nepal altogether. Out of which 5 branches are in valley, 2 are in Tandi and rests are in Hetauda, Birgunj , Chitwan and Bhairahawa. The initial paid up capital of bank was Rs. 119.95 million. Now the bank has raised it to Rs. 425.11 million.

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1.4 Objective of the Study

Since the role of banks in the development of the economy is very important, we can't imagine the development of country without the development of former. The task of any financial institution is to mobilize the savings scattered in the country and by ensuring efficient allocation of these savings to high yielding investment it provides attractive returns to depositors in one hand and also help the economy be providing various kinds of loans to many sectors of economy.

The purpose of the study is to evaluate the financial performance of commercial banks. The specific purpose can be described as follows:

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 evaluate the comparative study on fund mobilization and investment policies of four 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 Statement of the Problem

In modern the days, especially in Nepal, Banks are being considered not as dealers of money transaction but also dealers of investment in the country. Banks are the active players of money market and capital market as well.

In fact, economic liberalization and privatization policy adopted by the government has open up the opportunity and threat as to the banking sectors. As a result, we see a rapid growth in the numbers of commercial banks in the country and of course, the rapid increment in numbers of commercial banks in small kingdom like Nepal has created tough and bottle neck competition among bankers. This study will try to seek the answers of the following statements relating to commercial banks of Nepal.

1. Is Nabil Bank's investment policy more effective and efficient than that of Nibl, SCBNL& HBL?

2. Is Nabil Bank's investment strategy successful to utilize its available fund in comparison to the NIBL, SCBNL & HBL?

3. Are they maintaining sufficient liquidity, profitability and risk position?

4. What is the relationship of investment on loan and advances with total deposits and total net profit?

5. Does the investment decision affect the total earnings of the commercial bank?

1.6 Importance of Study

Analysis of financial performance of any company is very important. Actually, on the basis of the financial analysis we can say that the concerned company is

strong or not. The financials published by the banks do not give the meaningful picture to the general public regarding the financial position of the banks. Thus, the analysis of these statements is necessary in order to give the full and clear-cut position and performance of the banks.

The study on financial performance of the bank analyses the different indicators such as:
  a.   Liquidity ratio
  b.   Asset management ratio
  c.   Profitability ratio
  d.   Risk ratio
  e.   Growth Ratio
  f.   Net profit

The analysis of financial performance of the banks on the basis of abovementioned indicators provide valuable information to the management of the bank, shareholders, stockbrokers, financial institutions, general public, depositors, prospective customers, investors, policy markers and of course to the government agencies.

1.7 Limitation of the study

Every works have its own restriction and limitation due to the lack of time resources and knowledge. Despite the enough efforts of researcher, this thesis is not free from limitation. The study is presented just for the partial fulfillment of M.B.S (Master's of Business studied) degree. The researcher has come across many problems while presenting the thesis. Following are the major limitations of this thesis.

a. This thesis is based on secondary data collected from concerned banks. Thus, the result of the analysis depends on the information provided by them.

b. The thesis covers four commercial banks only viz. Nepal Investment bank and Nabil Bank limited and Standard Chartered bank Nepal limited and Himalayan Bank Limited only.

c. The thesis is limited to analyze five years data from 2060/061 to 2064/065 B.S

d. Standard normal performance level is not available especially in Nepalese context. So, interpretations of data are depended upon and common sense. In thesis context concerned experts are also consulted.

e. The source of data i. e published annual report and internet web site is assumed to be correct.

1.8 Research Methodology:

Research methodology is a way to systematically solve the research problem. in other words, it describes the method and process applied in the entire aspects of the study. Research methodology comprises of methods and tools and technique to analyze the data for the comparison of financial performance of banks. Following are the tools and technique used to analyze the data of financial performance.

A. Financial Tools:

Under this following financial tools have been used to examine the financial performance of the four commercial banks.

1. Ratio Analysis

    i. Liquidity Ratio

    ii. Current Ratio

    iii. Activity Ratio

    iv. Profitability Ratio

    v. Average

    vi. Miscellaneous Ratio

2. Trend Analysis

B. Statistical tools:

Following statistical tools will be used to examine the relationship between the variables of these banks.

i. Correlation coefficient analysis.

1.9 Organizations of Study:

The study will be organized in five chapters:

Chapter I: Introduction

Chapter II: Review of Literature

Chapter III: Research Methodology

Chapter IV: Presentation and analysis of data

Chapter V: Summary, conclusion and recommendation.

The rational behind this kind of organization is to follow a simple research methodology approach. The contents of each of the following study are briefly mentioned as follows:

Chapter One: It contains the introductory part and explains the major issues to be dealt with including background of study, statement of problem, objectives of study, importance of study and limitation of study.

Chapter Two: It examines the theoretical analysis and review briefly existing literature in the relevant areas and past studies.

Chapter Three: It is about method used. It consists of data analysis, population sample, data processing procedure and tools and technique used for the analysis.

Chapter Four: It deals with presentation and analysis of relevant data through research methodology.

Chapter Five: It comprises summary and conclusion of the present study and recommendation for the further studies.

CHAPTER-II
REVIEW OF LITERATURE

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

1. Review of Supportive Text
2. Review of Previous Study
      Review of Articles
     Review of Research papers
     Review of thesis
3. Review of Legislative Provisions

2.1 Review of Supportive Text

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

2.1.a) Definition of Investment

Investment is nothing but deploying our savings in a manner that ensures safety of our money and provides a sustained return to supplement our regular income. (Delhi stock Exchange, January 2002). The term investment covers a wide range of activities. It is commonly known fact that an investment is only possible

where there are adequate savings. If all the incomes and savings are consumed to solve the problem of hand to mouth and to the other basic needs, then there is no existence of investment. Therefore, both savings and investment are interrelated.

Investments are made in assets. Assets in all are of two types, real assets(land, buildings, factories etc.) and financial assets (stocks, bond, T-bill etc). These two investments are not competitive but complementary. Highly – developed institutions for financial investment greatly facilities real investment. (Bhattarai Rabindra, 2004,3)

Mrs. Preeti singh has defined investment in this way, investment is the employment of funds with the aim of achieving additional income or growth in value (singh, 1992;1)

In the words of Gitman and Joehank, investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns. (Gitman and Joechank, 1990:1)

Chales P. Jones has defined that, investment as the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor's wealth, which is the sum of current income and present value of all income (Charcles, 1991;2)

2.1.b) Features of Sound Lending and Investing Policy

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

1) Safety and Security

While selecting the sectors for investing the funds, a bank should be very much conscious. It should never invest its funds in those securities, which are too volatile because a little difference may cause a great loss. Similarly, the businessman who is bankrupt at once or earns a million in a minute should not be financed at all. The banks invest its funds in legal securities only. The bank should accept that type of securities, which have marketability: ascertainability, stability & transferability and it also accept those securities, which are

commercial, durable and high market prices. For the safety and security in investing funds the bank can use the investment portfolio tools also.

II) Liquidity

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

III) Profitability

Commercial banks invest on those sectors from where more and more return can flow because through maximizing the returns on its investment, bank can maximize its volume of wealth. Hence the investment or granting of loan & advances by them are highly influenced by the profit margin. Generally, the profit of commercial bank depends upon the interest rate of the bank, volume of loan provided, time period of loan and nature of investment on different securities. Profitability is only the term, which always motivates commercial banks to invest their money more and more.

IV) Suitability

A banker should always know why a customer is in need of loan. If a borrower misuses the loan granted by the bank, he will never be able to repay the loan and bank will possess heavy bad debts. Therefore, in order to avoid such circumstances, advances should be allowed to select suitable borrowers and it should demand all the essential detailed information about the scheme of the project. Bank should also keep in mind the overall development plans of the nation and the credit policy guidelines of the central bank.

V) Diversification

The bank should be careful that while granting loan, it should not be always in one sector. To minimize risk and maximize the profit, a bank must diversify its investment on different sectors. Diversification of loan helps to sustain loss according to the law of average because if securities of a company depreciated, there may be appreciation in the securities of other companies. In this way, the loss can be recovered.

2.1. c) Sources of Funds for the Investment

There are different sources of funds for the investment of the bank.

a) Capital

Capital is the lifeblood of the trade and commerce. Therefore, capital is needed for the operation of the bank as in other business. The capital fund consist of two elements like.

i)   Issuing shares
ii) General Reserves

i)   Issuing shares

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

ii) General Reserves

Reserves are kept by the bank separated from the profit. This reserve is also invested at the time of contingency and to cover the loss in future.

b) Accumulated Profit

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

c) Deposits

Deposits are the main source of funds. By providing certain rate of interest, commercial bank calls for the deposit from the customer. Mainly , three types of deposits are accepted by the bank like current deposit, fixed deposit , saving deposits. These different types of deposits are used for lending the money to different sectors like agriculture, production, trade, service sector and other industry. The deposits will lead to increase in the working capital of the bank.

d) External and Internal Borrowings

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

2.2 Review of Previous Study

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

2.2.a) Review of Previous Study

Under the heading, efforts have been made to examine and review some of the related articles published in different economic journals, bulletin of World Bank, dissertation papers, magazines, newspapers and other related books.

F. Morris, in his discussion paper on "Latin America's Banking system in the 1980's", has concluded that most of the banks concentrated on compliance

with central bank rules on reserve requirements, credit allocation (investment decision) and interest rates. While analyzing loan portfolio quality, operating efficiency and soundness of bank investment management has largely been overlooked.

He further adds that mismanagement in financial institutions has involved inadequate and overoptimistic loan appraisal, high risk diversification of loan portfolio and investments, high risk concentration, related parties lending etc, are major cause of investment and loan that has gone bad (Morris, 1990;pp81)

Sunity Shrestha in her article, Lending operation of commercial Banks of Nepal and its impact on GDP" has presented with the objectives to make an analysis of contribution of commercial banks' lending to the gross domestic product (GDP) of Nepal. She has set hypothesis that there has been positive impact of lending of commercial banks to the GDP. In research methodology, she has considered GDP as the dependent variable and various sectors of lending viz. agriculture, industrial, commercial service and general multiple regression technique has been applied to analyze the contribution.

The multiple analyses have show that all the variables except service sector lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis that there has been positive impact by the lending of commercial banks in various sector of economy, except service of sector investment. (Dr. Shrestha,2055,23-27).

Shree Prasad Poudel, Deputy Director, NRB in his article "Government Security Markets Rational and Development in Nepal" has concluded that the Security markets are center of the financial system. Debt security market in the Nepal is highly dominated by government debt securities. Debt statistics evidenced that Nepal remained debt free nation till 1950's. From the beginning of 1960's foreign loans and domestic bonds have been alternative means of debt financing in Nepal as a result total debt as a percentage of GDP widened from 1% in 1960's to 65.3% in the year 2000.

According to Mr. Poudel, Government debt consists of Treasury bills (T-Bills), National Saving Certificates (NSCs), Development Bonds (DBs), Special Bonds (SBs), and Citizen Saving Certificates (CSCs).

He further added that NRB and commercial Banks are the main holders of government bonds. In his article he suggested following improving area in debt securities market in Nepal:

- To make government securities active instruments of open market operation, coupon rate on government securities has to be fixed closely to the market rate of interest.
- Exchange of government securities at market price has to be encouraged.
- Products of government debt securities need to be diversified to meet investor demands.
- Like equity shares the marketable government securities need to be exchanged in the floor of Nepal Stock Exchange at competitive price. (Poudel, 2059;45-51)

Bodhi B. Bajracharya has mentioned in his article, "Monetary Policy and Deposit Mobilization in Nepal" has concluded that the mobilization of domestic savings in one of the monetary policies in Nepal. For this purpose commercial banks stood as the vital and active financial intermediary for generating resources in the form deposit of the private sector so far providing credit to the investors in different aspects of the economy. (Bajaracharya, 1990;93-97)

2.2.b) Review of Research Papers

Under this heading, reviews of research papers of researchers are analyzed to find out the investment policies of commercial banks.

Dr. Govinda Bahadur Thapa, expresses his views in his research paper "Financial System of Nepal" that the commercial banks including foreign joint venture banks seem to be doing pretty well in mobilizing deposits. Likewise, loans and advances of these banks are also increasing. But compared to high

credit needs particularly by newly emerging industries, the bank still seems to lack adequate funds. The banks are increasing their lending to no-traditional sectors along with the traditional sectors.

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

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

He concludes that by its very nature of the public sector, these two domestic banks couldn't compete with the private sector banks, so only remedy to the problems of these banks, as the government decided, is to hand over the ownership as well as the management of these banks to the private banks (Dr. Thapa, 1994,PP29-37).

Dr. Radhe S. Pradhan in his re\search paper " Role of Saving Investment and Capital formation in Economic Development. A case of Nepal," has studied about the strong role and impact of saving investment and capital formation on economic development of Nepal. This study is based on secondary data only. The necessary data saving, investment, capital formation and gross domestic product has been collected for the period of 1974/75 to 2000/01. The role and impact of saving, investment and capital formation on economic development were analyzed by using various regression models. The regression equations used in this study have been estimated at current prices as well as in real terms with the entire study period divided into different sub periods.

The results presented in this paper suggest that in all cases, GDP is significantly associated with saving, investment and capital formation both at current prices and in real terms. The results of the empirical analysis led to three important conclusions: First, saving, investment and capital formation have positive impact on economic development. Second, the current values and past values of saving, investment and capital formation have positive impact on economic development but the current values have the largest impact. Third, there is a strong role played by saving and capital formation on economic development while weak role-played by investment. (Dr. radhan, 2003;pp123-133)

2.2. c) Review of Thesis

Several thesis works have been conducted by various students regarding the various aspects of commercial banks such as lending policy, investment policy, investment planning, liquidity and investment position, trends of saving investment and capital formation, investment on priority sectors etc. Some of them as supposed to be relevant for the study are presented below.

Mrs Ramala Bhattarai, in her thesis "Lending policy of Commercial Banks in Nepal, has made an effort to examine the lending policy of commercial banks. She has concluded that efficient utilization of resources are more important than collection of the same. Lower investment means lower capital formation that hampers economic development of the people and the country. So, she recommended that banks give emphasis on efficient utilization of resources (Bhattarai, 1978)

Sunity Shrestha has conducted a study on "Investment Planning of Commercial Banks in Nepal" with the objective:
- To evaluate the financial performance of commercial banks in Nepal.
- To examine the investment of commercial banks of Nepal with reference to securities, loans & advances.
- To establish the relationship of banks portfolio variables with the national income and interest rates.

The research findings of the study are summarized as:

- The general trend of commercial banks asset holding is growing. Deposits have been a major source of funds. The excess reserve level of the banks allows idle money and loss of opportunity. Debt equity ratios are very high, greater than 100%.

- The return ratios are on the average higher for foreign joint venture banks than for the Nepalese bank but return of asset found to be statistically some. Risk taking attitude is higher in foreign joint venture banks. The total management achievement index is higher in case of foreign banks in comparison to the Nepalese banks.

- The hypothesis that the commercial banks have non-professional style of decision making in investment has been accepted. The investment of commercial banks in shares and securities is normal and not found to have strategic decision towards investment in shares and securities. Yield from the security has been found to be satisfactory.

- Investment in various economic sectors shows industrial and commercial sector taking higher shares of loan till 1990.

- Investment in various sectors has positive impact on the national income from their respective sectors.

- Bending in priority sector showed cottage and small industry sector sharing higher loans.

- Priority sector lending showed positive impact on the national income.

The secured loan analysis showed commercial loan as being very important followed by social and industrial loans. The loan loss ratio has been found to be increase with low recovery of loan. Demand of bank credit has been found to be affected by the national income and lending and Treasury bill rate. The investment of commercial banks on government securities has been observed to be affected by total deposit, cash reserve requirements and Treasury bill and lending rates. Interest rates, lending rate, deposit rate were found to

constitute a set of significant variables affecting the bank portfolio composition. (Dr. Sherestha, 1993)

Kishor Poudel's, in his thesis paper "Liquidity and Investment Position of joint Venture Commercial Bank in Nepal" had made an attempt to evaluate liquidity and investment of joint venture Banks, special reference to Everest Bank Ltd. and Nabil Bank Ltd. He has concluded that liquidity position of EBL is comparatively better than Nabil. Growth rate of investment is higher in EBL than Nabil. He further found the banks do not have constant and consistent liquidity and investment policy. There is no standard and uniform rate or ratio for maintaining liquid assets by the commercial banks. A commercial bank at its own judgment may decide to maintain an appropriate level of liquid assets. So he has recommended exploring such investment and to increase its investment on share and debenture and the bank should have laid down policy for timely review of portfolio and to maintain risk and return. (Poudel, 2002)

Sharad Wagle's Study; in his thesis paper "A study on trends of savings, investment and capital formation in Nepal", he concluded that in Nepal there is large gap between investment and saving rate. The low savings rate implies that majorities of people are poor. Low rate of saving and investment has been the continuing characteristic of the Nepalese economy as compared to some selected Asian countries. The need for the improving internal savings and investment performance in the country has been high in the agenda of Nepalese policy declarations but the performance in has remained rather poor. The rate of investment and capital formation is low in Nepal because of low saving. He has recommended that the government should review existing restriction on foreign direct investment. (Wagle, 2000)

Mrs. Rabina Bajracharya, in her thesis paper entitled, "Investment of Commercial Banks in Priority Sector" has made an effort to examine the banking procedures and services in disbursing loan in priority sector. She has found that:-

- The target of 12% investment of total outstanding liabilities in priority sector and 3% out of which has been invested in deprived sector has been met by Rastriya Banijya Bank.
- The trend of investment are continued to increase in the following years.
- The regression analysis of the investment and relationship between investment and repayment.
- Investment on agriculture is higher than investment on industry and service sector because investment on agriculture benefited a higher number of households. (Bajracharya, 2000)

Kul Chandra Pandit in his thesis, "A study on the investment policy analysis of standard charted bank Nepal limited in comparison to Nabil and Nepal Bangladesh Bank" has mainly found that SCB's loan & advances to total deposits ratios are significantly lower than that of Nabil and Nepal Bangladesh Bank, SCB is recommended to follow a liberal lending policy, invest more portion of deposition loan & advances. He has further stated that besides giving priority of investing on government securities, SCB is recommended to invest its fund in the purchase of shares and debentures of other financial, non-financials companies, hotels and government companies. This also helps in the maintenance of a sound portfolio of the banks. (Pandit, 2003)

Mukunda Prasad Lamichhane in his thesis, "Investment policy of the Joint Venture Banks in Nepal" had analyzed between investment policy and different variables like deposits, commission and discount, net profit, interest on loan and investment. He applied correlation, ratio analysis, t-test, and standard deviations.

He concluded that there is significant relationship between deposit and loan and advances as well as outside assets and net profit but not deposits and total investment in case of Nabil and other joint venture banks. Most of the joint venture banks have focused their banking services especially to big clients such

as to purchase shares and debentures of other financial and non-financial companies. (Lamichhane, 2000)

2.3 Review of Legislative Provisions

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

Investment Management Regulation

"A commercial bank formulating a written policy may decide to invest in shares and securities of an organized institution. However, such investment is restricted to 10% of paid up capital of the organization. However, the cumulative amount of such investment in all the companies in which the bank has financial interest shall by limited to 20% of the paid up capital of the bank. But the total amount of investment in share and securities of organized institution is restricted to 30% of the paid up capital of the bank. "(Unified Directives No.8, NRB Banking operating department 81-82)

Likewise, commercial banks are not allowed to invest in any shares, securities, and hybrid capital instruments issued by any banks and financial institutions, licensed by NRB. Where such investment exists prior to issuance of this directive, such investment should be brought within the restrictive limitations by the fiscal year 2060/061. But investment on rural micro finance development banks' shares are not comes under such restriction. A commercial bank is directly related to the fact that how much fund must be collected as paid up capital while being established at a certain place of the nation, how much fund is needed to expand the branch and counters, how much flexible and

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helpful the NRB rules are also important. But we discuss only those, which are related to investment function of commercial banks. The main provisions, established by NRB in the form of prudential norms in above relevant area are briefly discussed here under.

i) Provisions for investment in the deprived sector

Some rules, which are formulated by NRB, affect the areas of credit and investment extension to the deprived sector by the commercial bank.

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

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

ii)   Provision for credit to the priority sector

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

iii) Provisions for investment in the productive sector

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

iv) Provision for the single borrower credit limit

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

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

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

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

v) Provisions for minimize liquidity risk

Commercial banks are required monitor their liquidity risk. This is to minimize risk inherent in the activities and portfolio of the banks. According to the

regulation a gap found between maturing assets and maturing liabilities is the liquidity risk. They are monitoring their assets and liabilities on the basis of maturity period. Maturity periods such as 0-90, 91-180, 181-270, 271-365 days and above 1 year are classified for the purpose of checking.

vi) Cash reserve requirements (CRR)

To ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at anytime and to inject the confidence in depositors regarding the safety of their deposited funds, commercial banks are required to have maximum CRR. In this regard, NRB has directed commercial banks to deposit minimum 8 percent of current and saving and 6 percent of fixed deposits in the NRB as primary cash reserve the commercial banks are further required to have 3 percent cash of total deposits in their own bank as secondary reserve.

vii) Loan Classification and loss provision

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

viii) Directives regarding interest rate spread

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

CHAPTER III
RESEARCH METHODOLOGY

3.1   Introduction

Research methodology refers to the four various sequential steps to be adopted by a researcher in the studying a problem with certain objectives in view. According to Dr. V. P. Michael, "Research is the process of systematic and in-depth study or search for any particular topic, subject, or area of investigation 'backed by collection, presentation interpretation or relevant details or data."[1] Research methodology describes the methods and process 'in the entire aspect of, the study. In other words, research methodology is a systematize way to solve the research problem. It refers to the various sequential steps to be adopted by the researcher in studying problems with certain objects. It is the method of or process applied to solve defined research process. A focus is given to research design, sample selection and size, data collection. procedures, data processing etc. This chapter highlights the research methodology used for the study of Comparative Analysis of Financial Performance of commercial banks.

3.2   Research Design:

Research design is the plan structure and strategy of investigation conceived so as to obtain answer to research questions and to control variances. In other words research design is the frame work for a study that helps the analysis of data related to study topic. For our convenience, in this study, a comparative analysis of financial performance of commercial banks is based on descriptive and analytical research

Research design is very important for scientific investigation. Research design gives the investigator a systematic direction to research work. Actually, research design is a plan for the collection of and analysis of data. It presents a series of

guideposts to enables the researcher to process in the right direction 'in order to achieve the goal.

A research design is the specification of methods and procedures for acquiring the information needed. It the overall operational pattern of framework of the project that stipulates what information is to be collected from which sources by what procedures. There are various approaches of research design. For our convenience, in this thesis, a comparative analysis of financial performance of two commercial banks based on descriptive design and analytical research design

3.3 Source of Data:

All the data used in this study are obtained from the secondary sources. The main sources of the data are the financial statements published in the annual general reports of various years of the selected commercial banks under study and of other banks also. The required financial statements have also been obtained from the website of Nepal Stock Exchange . (www.nepalstock.com).

3.4 Population and Sample:

At present there are twenty one commercial banks operating in Nepal under the guidance of Nepal Rastra Bank- For the purpose of convenience only', four commercial banks viz. Nepal Investment Bank and Himalayan Batik Limited Standard Chattered Bank and Everest Bank Limited have been taken as sample of this study . Five years data are taken to conduct the study from 2060/061 to 2064/065.Following commercial banks have been selected as a sample for the study. They are:-

1) Nepal Investment Bank Limited.(NIBL).

2) Nepal Arab Bank (Nabil)

3) Standard Chartered Bank Nepal Limited.(SCBNL)

4) Himalayan Bank Limited. (HBL)

3.5 Data processing Procedures :

To analyze and interpret the financial data of above four commercial banks, various financial and statistical tools and techniques are used in the study. A brief discussion of the tools is as follows :

3.5.1 Tools and Techniques used:

For the analysis and interpretation of data some statistical and financial tools are used which are as follows.

Financial Tools:

It is regarded as most powerful tool of financial analysis. Ratio helps the large quantities of financial data and to make qualitative judgment about the firm's financial performance. The following financial ratios are used in this study:

A) Liquidity Ratio:'

Liquidity ratio refers to the ability of a firm to meet current/ short term obligation of a firm Liquidity ratio examines the adequacy of funds, the, solvency of firm of the firms and the firms ability to pay its obligations when due. In case of commercials banks, short-term obligations are current deposit. saving deposits, short-term loans and source of meeting these obligations are cash and bank- balance, money at call and short notice., investment 'in government securities and bills discounted and purchase.) There is compulsion for commercial bank to maintain cash and bank balance according to NRB regulations. From legal perspective cash and bank balance to Total Deposit ratio snows actual liquidity position of the bank whereas other liquidity ratios are also useful. In this study following ratios are analyzed to measure the liquidity position of a firm.

i) Current Ratio:

The current ratio is the ration of total current assets to total current liabilities and measure the short-term solvency of a firm. It is calculated by dividing current assets by current liabilities.

$$\text{Current Ratio} = \frac{\text{current Assests}}{\text{Current Liability}}$$

Current Assets include normally those assets of a firm, which are converted into cash within one year. These assets of a firm includes Cash, bank Balance, Investment in Treasury Bills, Discounts, Overdrafts,, Short Term Loan, foreign Currency Loan, bills for Collection, Stock Receivables and prepaid expenses.

Similarly current liabilities include those liabilities of a firm which are paid within one year like current payment, cash margin, current deposits, saving deposit; inter bank reconciliation account., bills provision for overdrafts, accrued expenses, and bills for collection, outstanding expenses, and dividend payable, provision for taxation. Although, there is no hard and fast rule fore measuring the ratio, conventionally a current ratio of 2:1 is considered as satisfactory.

ii) Cash and Batik Balance to Total Deposits Ratio.

This ratio is applied to measure whether cash bank balance is sufficient to cover its current call margin including deposits. It is calculated by dividing cash balances in bank by current and saving deposits.

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

Higher ratio shows higher liquidity and ability to cover deposits and vice versa.

iii) Cash and Bank Balance to Current Assets Ratio

This ratio is calculated to find out the ability of a bank to pay call made on current deposits and computed dividing cash band bank balance by current Assets.

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

If the -ratio is higher then there is high margin and if lower, the b ank is less liquid. This ratio not only measures the use of total resources of a firm but also measure the use of various components of total assets.

iv) Investment on Government Securities to Current Assets Ratio

Investment on Government securities includes treasury bills and development bonds etc. This ratio is calculated to find out the percentage of current assets invested in government securities.

This ratio is calculated by dividing investment made on government securities by currents assets,

Investment on Govt. securities to current assets ratio

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

v) Loan and Advances to Current Assets Ratio

Loan and advances to current asset ratio shows the percentage of loan and advances in the total current assets. Where loan & advances include loans, advances, cash credit, local and foreign bill purchased and discounted etc.

This ratio can be calculated by dividing loans and advances by current assets.

Loan and advances to current assets ratio $= \dfrac{\text{Loan and Advances}}{\text{Current Assets}}$

B) Assets management Ratios (Activity Ratios)

Activity ratios are concerned with measuring the efficiency in assets management. Some times, these ratios are called efficiency ratios or assets utilization or turn over ratio because they indicate the speed of collection of funds and utilization of that funds to increase revenue by providing loans and advances, 'investment and other set-vice rendered by bank The greater the rate of turn over for conversion, the more efficient the utilization and management of assets. So, proper balance on sales and assets is important for a firm. Various ratios are 'used to compute the efficiency of a firm.

i) Loans and Advances to Total Deposits Ratio:

This ratio shows whether the banks are efficient to utilize he outsider's fund (Lie. Total deposits) for the purpose of profit generation on the loans and advances thus provided. The ratio can be computed by dividing the total amounts of loans and advances by total deposited fund.

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

Loans & Advances refers to the total amount of loan and advances and overdraft and total deposit refers the total of all kinds of deposits.

ii) Total Investmnet to Total Deposit Ratio :

This ratio measures the mobilization of percentage amount of total deposit on investment. It is calculated by dividing the amount of investment by the amount of total deposits.

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

iii) Loan and Advances to Working Fund Ratio

Loan and advances includes the ability of any bank to canalize its deposit in the form of loan and advances to earn high return. This ratio is computed by dividing loan and advances by total working fund, which can be states as,

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

Where, Total working fund consists current assets, net fixed assets, loan for development banks and other miscellaneous assets.

iv) Investment on Government Securities to Total Working Fund Ratio

This ratio shows that banks investment on government securities in comparison   to total working fund.

This ratio is calculated by dividing investment on government securities by total working fund which can be states as,

Investment on Govt. Securities to Total Working Fund Ratio

$$= \frac{\text{Interest on Govt. Securities}}{\text{Working Fund Ratio}}$$

Hence, investment on government securities includes treasury bills and development bonds etc.

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

This ratio shows the banks investment in shares and debenture of the subsidiary   and other companies.

This ratio can be computed by dividing investment on shares and debebtures by total working fund , which can be statesas,

Investment on Shares & Debentures to Total Working Fund Ratio

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

C) Profitability Ratios

Profit is the difference between revenues and expenses over a period of time. A company should earn profit to survive and grow over a long period of time, and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of its company in

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terms of profits. The profitability ratios are calculated to measure the operating efficiency of a company. It is the indicator of the financial performance of the bank and vice versa.

The following ratios are taken into account under this heading.

i) Return on Total Working Fund Ratio

This ratio measures the overall profitability of all working funds i.e. total assets. A firm has to earn satisfactory return on assets or working fund for its survival. This ratio is calculated by dividing net profit by total working fund.

This can be express,

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

ii) Return on Loan & Advances Ratio

This ratio indicates how efficiently the bank has employed its resources in the form of loan and advances. This ratio is computed by dividing net profit by loan & advances.

This can be express,

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

iii) Total Interest Earned to Total Outside Assets Ratio

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

This can be express,

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

iv) Total Interest Earned to Total Working Fund Ratio

It reflects the extent to which the banks are successful in mobilizing their total assets to generate high income as interest. This ratio actually reveals the earning capacity of a commercial bank by mobilizing its working fund. This ratio is computed dividing total interest earned by total working fund ratio.

We have,

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

v) Total Interest paid to Total Working Fund Ratio

Total interest paid to total working fund ratio measures the percentage of total interest paid against the total working fund. A high ratio indicates the higher interest expenses on total working fund. This ratio is computed dividing total interest paid to total working fund ratio.

We have,

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

D) Risk Ratio

The possibility of risk makes banks investment a challenging task. Bank has to take risk to get return on investment. It increases effectiveness and profitability of the bank. If a bank expects high return on its investment it has to accept the risk and manage it efficiently. The following ratios are taken into account under this heading.

i) Liquidity Risk Ratio

The liquidity risk ratio measures the level of risk associated with the liquid assets i.e. cash, bank balance that are kept in the bank for the purpose of satisfying the depositor's demand for cash. Higher the ratio , lower is the risk. Dividing cash & bank balance calculate this ratio by total deposits. This can be mentioned as,

$$\text{Liquidity Risk Ratio} = \frac{\text{Total Cash \& bank Balance}}{\text{Total Deposit}}$$

ii) Credit Risk Ratio

Credit risk ratios measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, credit risk ratio is expressed as the percentage of non-performing loan to total loan & advances. This ratio is calculated by dividing total loan and advances by total assets.

This can be mentioned as,

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

ii) Capital Risk Ratio

The capital risk ratios of a bank indicate how much asset values may decline before the position of depositors and other creditors jeopardize. The capital risk is directly related to the return on equity (ROE), Higher the ratio, low is the capital risk. This ratio is computed by dividing capital (paid up Capital + Reserves) by risk.- weighted assets as computed under BASLE committee's formula.

This can be mentioned as,

$$\text{Capital Risk Ratio} = \frac{\text{Capital(Paid up + Reserves)}}{\text{Risk Weighted Assets}}$$

E) Growth Ratios

Growth ratios measures how well the firm is maintaing its economic position in its industry. It is directly related to the fund mobilization an investment management of a commercial bank.

The following growth ratios are calculated in this study.

i. Growth ratio of total deposit

ii. Growth ratio of loan & advances

iii. Growth ratio of total investment

iv. Growth ratio of net profit

3.5.2 Statistical Tools

Some important statistical tools are used to achieve the objective of this study. In this study, statistical tools such as trend analysis of important variables, co-efficient of correlation between different variables as well as test of hypothesis have been used which are as follows.

i) Average Mean

An average is a single value related from a group of values to represent them in someway, a value, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group. There are various types of averages. Arithmetic mean (AM, Simple & Weighted), median, mode, geometric mean, harmonic mean are the major types of averages. The most popular and widely used measure representing the entire data by one value is the AM. The value of the AM is obtained by adding together all the items and by dividing this total by the number of items.

Arithmetic Mean (AM) is given by,

$$X = \frac{\Sigma x}{n} \qquad\qquad (3.1)$$

Where, X = Arithmetic mean

Σx = Sum of all the values of the variables X

n = Number of observations

ii) Standard Deviation

The standard deviation (σ) measures the absolute dispersion. The greater the standard deviation the greater will be the magnitude of the deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series and vice versa.

$$\dagger = \sqrt{\frac{1}{n-1}\sum(X-\overline{X})^2}\ldots\ldots\ldots\ldots\ldots\ldots(3.2)$$

 iii) Coefficient of Variation

The standard deviation is absolute measures of dispersion; where as the coefficient of variation (CV) is a relative measure. To compare the variability between two or more series, CV is more appropriate statistical tool.

$$CV = \frac{\dagger}{X} \qquad\qquad (3.3)$$

 iv) Trend Analysis

The topic analysis the trend of loan and advances to total deposit ratio and trend of total investment to total deposit ratio of NIBL, Nabil, SCBNL and HBL from 2003/2004 to 2007/2008 and makes the forecast for the next five years. Under this topic following sub-topic have been presented.

i)   Trend analysis of loan and advances to total deposits ratio.

ii)   Trend analysis of total investment to total deposit ratio.

v) Co-efficient of Correlation Analysis

This analysis identifies and interprets the relationship between the two or more variables. In the case of highly correlated variables, the effect on one variable may have effect on other correlated variable under this topic, Karl Pearson's co-efficient of correlation has been used to find out the relationship between the following variables.

 i) Co- efficient of correlation between deposit and loan & advances.

ii) Co- efficient of correlation between deposit and total investment.

iii) Co- efficient of correlation between total outside assets and net profits.

    These tools analyze the relationship between these variables and help the banks to make appropriate policy regarding deposit collection, fund utilization and maximization of profit.

vi) Test of Hypothesis

The objective of this test is to test 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 with the banking business.

➢   Test of hypothesis on loan and advances to total deposit ratios between NIBL, Nabil, SCBNL & HBL.

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 NIBL, Nabil, SCBNL & HBL for the study period from Fiscal year 2003/2004 to 2007/2008.

CHAPTER IV
PRESENTATION AND ANALYSIS OF DATA

In this chapter data, collected from secondary sources are presented and analyzed by using financial and statistical tools and techniques. The available data tabulated, analyzed and interpreted so that financial forecast of banks can be done easily. To evaluate the financial performance of 4 commercial banks, ratio analysis, trend analysis, correlation analysis and test hypothesis are used in this study.

4.1 Financial Ratio Analysis

In this study, financial ratio has been grouped in to liquidity ratio, activity ratio, profitability ratio and miscellaneous ratio etc.

4.1.1 Liquidity Ratio

Liquidity of a firm refers to the sound solvent position of a firm to meet its obligation. Liquidity ratio measures the ability of a firm to meets short- term obligations.

(i) Current Ratio

The current ratio is measure of the firm's short-term solvency. It indicates the availability of current assets in rupees for each one rupee of current liabilities. A ratio of greater than one means that the firm has more current assets than current liabilities current ratio measures the relationship between current assets and current liabilities.

Table 4.1

Current ratio (times)

Bank	2060/061	2061/062	2062/063	2063/064	2064/065	Average	S.D.	C.V.
NIBL	0.8993	0.8911	0.9254	0.9247	0.9466	0.9174	0.0200	2.18
NabiL	0.9200	0.9400	0.9641	0.8338	0.8774	0.9060	0.0519	5.74
SCBNL	1.06	1.07	1.06	1.06	1.08	1.07	0.008	0.75
HBL	1.02	1.01	0.98	1.04	1.05	1.02	0.025	2.45

Source : Appendix 1 'A'

In the above table, current ratio has been calculated dividing current assets by current liability. The above table shows that the current ratio of all the banks is below the normal standard of 2:1. On an average basis, current ratio of SCBNL has maintained higher current ratio than Nabil, NIBL & HBL which states that liquidity position of SCBNL is fair. The co-efficient of variation between the current ratio of Nabil is 0.0573 which is comparatively higher than NIBL, SCBNL & HBL. It shows that current ratio of Nabil is fewer consistences than other banks.

(ii) Cash & Bank Balance to Total Deposit Ratio

Cash and bank balance to deposit ratio excluding fixed deposit measures the percentage of cash and bank balance maintained by all the commercial banks to honour the cheque presented by its account holder excluding fixed deposit. The banks have to maintain enough cash and bank balance to gain confidence of its customer. The following table shows the comparative cash and bank balance to deposits ratio (without fixed deposit).

TABLE 4.2
Cash & Bank Balance to Total Deposit Ratio
(In times)

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.1169	0.1065	0.0940	0.1234	0.0997	0.1081	0.0100	9.25
Nabil	0.0851	0.0687	0.0383	0.0326	0.0600	0.0570	0.0224	39.39
SCBNL	0.0623	0.0521	0.0806	0.0707	0.0575	0.0646	0.01005	15.55
HBL	0.0814	0.0679	0.0942	0.0909	0.0812	0.0831	0.00918	11.04

Source: Appendix 1 'B'

The table No. 4.2 shows that the total mean, standard deviation and co-efficient of variation of cash and bank balance to total deposit ratio of four commercial banks.

Figure in the table shows that the ratio of NIBL of mean is higher than Nabil, SCBNL & HBL and Nabil is lower than others banks. Nabil bank is more risker than NIBL because the C.V. of Nabil is greater than NIBL.

(iii) Cash and Bank Balance to Current Assets Ratio:

Cash and bank balance is the most liquid form of current assets. This ratio reflects the position of cash and balance to current assets.

TABLE 4.3
Cash and Bank Valance to Current Assets Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.1232	0.1108	0.0960	0.1305	0.1035	0.1127	0.0141	0.1251
Nabil	0.0825	0.0681	0.0374	0.0370	0.0633	0.0577	0.0200	0.3467
SCBNL	0.050	0.045	0.0727	0.0861	0.0509	0.06094	0.01579	0.2590
HBL	0.0777	0.0637	0.0906	0.0819	0.0732	0.07742	0.00894	0.1155

Source: Appendix 1 'C'

The above ratio has been derived dividing cash and bank balance by current assets. The above table shows that the commercials bank share held less cash and bank balance and utilized the available fund into current assets by issuing

short-term loans and advances. Over the study period, SCBNL has the lowest ratio 0.0450 in 2061/62 where as NIBL has the highest ratio 0.1232 in 2060/61.

On an average, NIBL has the highest ratio and SCBNL has the lowest ratio of cash and bank balance to current assets. It lowest ratio of cash and bank balance to current assets. It implies that at some time NIBL has held more cash and bank balance than all other commercial banks. And SCBNL has held the lowest amount cash and bank balance over the study period and thus, SCBNL has been successful in utilizing the depositor's money in short- term loans.

From C.V. point of view, Nabil has the highest C.V. of 0.3467 point where as HBL has the lowest. C.V. of 11.55point. This implies that HBL has been successful in utilizing the depositor's fund in short-term loans and HBL is more consistent in holding less cash balance where as HBL has been holding more cash balance and has not been able to utilize the depositor's fund properly.

(iv) Investment on Government Securities to Current assets Ratio

The government securities are not so much liquid as cash and bank balance. But they can easily sell in the market or they can be converted into cash in other ways. Investment on government securities includes treasury bills and development bonds etc. 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 4.4

Investment on government securities to current assets Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.0532	0.1796	0.1395	0.1409	0.1381	0.1302	0.0469	0.3601
Nabil	0.2588	0.2578	0.1612	0.0717	0.1848	0.1869	0.0775	0.4147
SCBNL	0.2503	0.3156	0.3233	0.3383	0.3303	0.31156	0.3154	0.1012
HBL	0.1097	0.1303	0.1532	0.1405	0.1988	.0.1465	0.02978	0.2032

Source appendix 1 'D'

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Table No. 4.4 shows the total mean, standard deviation and coefficient of variation of investment on government securities to current assets ratio of commercial banks.

Figure in the table shows that investment on government securities to current assets ratio of NIBL, Nabil, SCBNL & HBL has in fluctuating trend and there is no consistency.

In overall, the mean ratio of investment on government securities to current assets of SCBNL is higher than other banks. On the other hand coefficient of variation of Nabil is also higher than other banks.

It can be concluded that SCBNL & Nabil uses to invest its current asset in government securities more than other banks.

(v) Loan and Advances to Current Assets Ratio

Loan and advances are the main source 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 advance 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 4.5

Loan and advances to current assets Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.3421	0.6398	0.7250	0.7135	0.7330	0.6307	0.1655	0.2624
Nabil	0.5593	0.5750	0.7071	0.7577	0.7032	0.6604	0.0883	0.1337
SCBNL	0.2998	0.2926	0.2739	02728	0.3734	0.3025	0.3696	0.1212
HBL	0.4625	0.4488	0.4577	0.4893	0.4517	0.462	0.01445	0.313

Source appendix 1 'E'

Table No. 4.5 shows the total mean, standard deviation and coefficient of variation of loan & advances to current assets ratio of commercial banks.

Through this table loan & advances to current assets ratios of the sample CBS are analyzed.

Mean value of this ratio of Nabil bank is 66.04%, which is higher than that of other banks and co-efficient of variation of this ratio of NIBL is higher than other banks.

This analysis shows that Nabil use to provide high loan & advances in comparison of other banks.

4.1.2 Activity Ratio

This ratio refers how efficiently the organization is managing its resources. Thus, this ratio measures the degree of effectiveness in use of resources or funds by a firm. It is also known as turnover or efficiency ratio or assets management ratio. Greater rater o turn over or conversion indicates more efficiency of a firm in managing and utilizing its assets. The common activity ratios that are determined under this are as follows.

(i)Loans and Advances to Total Deposits Ratio

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

TABLE 4.6

Loans and Advances to Total Deposits Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.3247	0.6187	0.7104	0.6750	0.7059	0.6069	0.1619	0.2668
Nabil	0.5768	0.5801	0.7257	0.6679	0.6660	0.6433	0.0640	0.0995
SCBNL	0.3735	0.3387	0.3037	0.3029	0.4212	0.3481	0.0450	0.1295
HBL	0.4841	0.4787	0.4761	0.5430	0.5007	0.4965	0.02477	0.499

Source: Appendix 2 'A

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Table No. 4.6 shows the total mean, S.D. and C.V. of loan & advances to total deposit ratio position of NIBL, Nabil, SCBNL and HBL.

The mean value of Nabil is highest than that of other banks and co-efficient of variation of NIBL is higher than other banks.

From the above table it shows that Nabil has strong position regarding the mobilization of total deposit an loans and advances and acquiring high profit in comparison. But only higher ratio is not better from the point of view of liquidity as the loans and advances are not as liquid as cash and bank balance.

(ii) Total Investment to Total Deposit Ratio

A commercial bank mobilizes its deposit by investing its fund 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. This ratio is calculated by dividing total investments by total deposits. The data tabulated below shows the total investment to total deposit ratio.

TABLE 4.7

Total investment to Total Deposits Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.2152	0.3351	0.2760	0.2960	0.2657	0.2776	0.0436	0.1571
Nabil	0.4485	0.4133	0.2925	0.3193	0.3832	0.3714	0.0648	0.1745
SCBNL	0.6195	0.5858	0.5516	0.5368	0.5018	0.5591	0.04049	0.0721
HBL	0.2315	0.4918	0.4844	0.4222	0.4712	0.42022	0.07942	0.2319

Source: Appendix 2 'B'

The above table shows a highly fluctuating trend in total investment to total deposit of NIBL, Nabil, SCBNL and HBL.

The mean value of SCBNL is higher than that of other banks. Coefficient of variation of HBL is also higher than that of other banks.

From the analysis of above table it is clear that SCBNL has success to better utilization of deposit to investment than other banks.

(iii) Loan and Advances to Total Working Fund Ratio

The commercial bank must be very careful in mobilizing its total asset as loan & advances in appropriate level to generate profit. This ratio reflects the extent to which the commercial banks are success in mobilizing their assets on loan & advances for the purpose of income generating. A high ratio indicates better in mobilization of funds 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 4.8

Loan and Advances to Total Working Fund Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.2853	0.5379	0.6222	0.5990	0.6265	0.5342	0.1435	0.2686
Nabil	0.4683	0.4891	0.6160	0.5787	0.5704	0.5445	0.0632	0.1161
SCBNL	0.2977	0.2908	0.2712	0.2711	0.3719	0.3005	0.03721	0.1238
HBL	0.4524	0.4312	0.4282	0.4827	0.4462	0.4481	0.0195	0.0435

Source: Appendix 2 'C'

Table No.4.8 shows the total mean, standard deviation and coefficient of loan and advances to total working fund ratio of commercial banks.

Mean value of Nabil is higher than that of other banks and coefficient of variation of

NIBL is higher than other banks.

From the above analysis it can be conclude that Nabil has success to better mobilization of funds as loan & advances for the purpose of income generation. Nabil has mobilizing its fund is higher and it has higher consistency than that of other banks.

iv) Investment on Government Securities to Total Working Fund Ratio

To some extend commercial bank seems to utilize its fund by purchasing government securities. Government securities are a safe medium of investment though it is not liquid as cash and bank balance. This ratio is very important to know the extent to which the banks are successful in mobilizing their total fund on different type of government securities to maximize its income. This ratio is calculated by investment in government securities to total working fund. The following table shows that ratios of concerned banks.

TABLE 4.9

Investment on government securities to Total Working Fund Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.0444	0.1510	0.1197	0.1183	0.1180	0.1103	0.0400	0.3628
Nabil	0.2167	0.2193	0.1405	0.0547	0.1499	0.1562	0.0678	0.4340
SCBNL	0.2485	0.3137	0.3101	0.3362	0.329	0.3095	0.0310	0.1002
HBL	0.1073	0.1252	0.1433	0.1386	0.1964	0.1422	0.0986	0.2099

Source: Appendix 2 'D'

Table No. 4.9 shows the total mean, standard deviation and coefficient of variation of investment on government securities to total working fund ratio of commercial banks.

 In the above table it shows that investment of government securities to working fund ratio of all four banks are in fluctuating trend.

Mean ratio of SCBNL (0.3095) has higher than NIBL (0.1103), Nabil (0.1562) & HBL(0.1422) and coefficient of variation of Nabil (0.4340) has higher than NIBL(0.3628), SCBNL(0.1002) & HBL(0.2099).

 From the above table we found that SCBNL has higher mean ratio of investment on government securities. It indicates that SCBNL has success to better mobilizing of funds as investment on government securities.

(v) Investment on shares and Debenture to Total Working Fund Ratio

There has been two types of investment i.e. investment on government securities and investment on shares & debenture. Investment on shares and debentures to total working fund ratio reflects the extent on which the banks are successful to mobilize their total assets on purchase of shares and debentures of other companies to generate incomes and utilize their excess fund. This ratio is calculated by dividing investment in share and debentures by total working fund. These are as follows.

TABLE 4.10

Investment on government securities to total working fund ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	0.0015	0.0010	0.0011	0.0008	0.0013	0.00114	0.00024	21.05
Nabil	0.0013	0.0080	0.0256	0.0047	0.0105	0.01002	0.0083	82.83
SCBNL	0.0058	0.006	0.0053	0.0047	0.0061	0.00558	0.00052	9.3
HBL	0.0057	0.0166	0.0147	0.0138	0.0143	0.01302	0.00378	29.03

Source: Appendix 2 'E'

Table No. 4.10 shows the total mean, standard deviation and coefficient of variation of investment on shares and debentures to total working fund ratio.

The above table reveals that all four banks are in fluctuating trend. The mean value of SCBNL (0.3095) is higher than NIBL (0.1103), Nabil (0.1562) &HBL (0.1422) and coefficient of variation Nabil (0.4340) is also higher than NIBL(0.3628), SCBNL(0.1002) & HBL(0.2099).

The above analysis shows that SCBNL has invested large portion of working fund in government securities than NIBL, Nabil & 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.

4.1.3 Profitability Ratios

Profitability ratios are very helpful to measure the overall efficiency of operation of financial institutions. Here, profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Higher the profit ratio shows that higher the efficiency of a bank. The following profitability ratios are taken into account under this heading.

(i)   Return on Total Working Fund Ratio

This ratio measures the profit earning capacity by utilizing available resources i.e. total asset. Return will be higher if the banks working fund is well managed and efficiency utilized. Maximizing taxes which the legal options available will also improve the return. 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 NIBL, Nabil, SCBNL and HBL

TABLE 4.11

Return on total Working Fund Ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	1.30	1.15	1.43	1.64	1.82	1.4670	0.2665	0.1817
Nabil	2.51	2.72	3.02	2.84	2.47	2.7136	0.2280	0.0840
SCBNL	2.23	2.6	2.41	2.28	2.46	2.4	0.131	0.0546
HBL	1.46	1.14	0.91	1.06	1.11	1.14	0.18	0.1579

Source: Appendix 3 'A'

This above Table No. 4.11 shows the total mean, standard deviation and coefficient of variation of return on total working fund ratio of commercial banks.

In above table, Mean ratio of Nabil is higher than that of NIBL, SCBNL and HBL. Similarly, C.V. and S.D. of both banks has no positive and no negative value.

From the mean ratio analysis it is fund that Nabil bank has success to maintain the higher ratio in return on total working fund. The C.V. of Nabil is less than other banks. So, Nabil has higher consistency than other banks.

(ii) Return on loan & Advances Ratio

It measures the earning capacity of a commercial banks on its deposits mobilized on loan & advances . Higher the ratio greater will be the 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 NIBL, Nabil, SCBNL and HBL during the study period.

TABLE 4.12

Return on Loan & advances ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	2.02	2.14	2.29	2.74	2.90	2.4204	0.3829	0.1582
Nabil	5.37	5.56	4.90	4.92	4.34	5.0154	0.4758	0.0949
SCBNL	7.48	8.93	8.90	8.39	6.62	8.06	0.892	0.1107
HBL	3.24	2.64	2.12	2.20	2.48	2.54	0.399	0.1571

Source: Appendix 3 'B'

The above Table No. 4.12 shows the total mean, standard deviation and coefficient of variation of return on loan & advance ratio of commercial banks.

In the above table return on loan & advances ratio of Nabil, SCBNL and HBL has fluctuating trend. In case of NIBL , it has increasing trend. Mean ratio of SCBNL is greater than NIBL, Nabil and HBL. Similarly, coefficient of variation of Nabil is lesser than other banks.

From above analysis it is found that Nabil bank has the comparatively higher return on than other banks. It concludes that Nabil has success to earn high return on its loan & advances.

(iii) Total Interest Earned to Total Outside Assets Ratio

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

TABLE 4.13

Total interest earned to total outside assets ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	6.15	6.65	6.31	6.38	6.66	6.4297	0.2249	0.0350
Nabil	7.38	7.14	7.20	6.86	6.48	7.0121	0.3504	0.0500
SCBNL	8.12	6.93	6.24	5.86	5.93	6.61	0.842	0.1272
HBL	10.51	6.36	5.95	5.86	6.00	6.94	1.795	0.2588

Source: Appendix 3 'C'

The above table No. 4.13 shows the total mean, standard deviation & coefficient of variation of total interest earned to total outside assets ratio of commercial banks.

The above table shows the ratio of total interest earned to total outside assets of NIBL, Nabil, SCBNL and HBL, all have fluctuating trend. HBL has highest ratio i.e.10.51(in 2060/061) and lowest ratio 5.86(2063/064). Similarly, C.V. of HBL is higher than other commercial banks.

This shows that Nabil has better position with respect the income earned from the total outside asset in comparison to NIBL.

(iv) Total Interest Earned to Total Working Fund Ratio

It reflects that the extent to which the bank is successful in mobilizing their total assets to generate high income as interest. This ratio actually reveals the earning capacity of a commercial bank by mobilizing its working fund. A high ratio is

indicator of high 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 NIBL, Nabil, SCBNL and HBL.

TABLE 4.14

Total interest earned to total working fund ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	5.10	2.50	5.45	5.50	5.74	4.8579	1.3381	0.2754
Nabil	6.15	5.98	6.22	5.87	5.83	6.0076	0.1712	0.0285
SCBNL	6.42	5.5	4.77	4.41	4.84	5.19	0.709	0.1367
HBL	6.8	5.56	5.14	5.03	5.19	5.55	0.652	0.1175

Source: Appendix 3 'D'

Table No. 4.14 shows the total mean, standard deviation & coefficient of variation of total interest earned to total working fund ratio of NIBL, Nabil, SCBNL & HBL.

The above table shows that the ratio of total interest earned to total working fund ratio of all have fluctuating trend. HBL has highest ratio in F.Y. 2060/061 (6.80) and lowest in F.Y.2061/062(2.50). Mean ratio of Nabil bank (6.0076) has higher than NIBL (4.8579), SCBNL (5.19) & HBL (5.55). Coefficient of variation of Nabil bank (0.0285) has lower than NIBL (0.2754), SCBNL (0.1367) & HBL (0.1175).

From above analysis we can concluded that the ratio of total interest earned to total working fund ratio of Nabil bank is satisfactory in compared to other banks. It means the total interest earned to total working fund ratio of the Nabil is stable and consistency in comparison to NIBL, SCBNL & HBL.

(v) Total Interest Paid to Total Working Fund Ratio

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

TABLE 4.15
Total interest paid to total working fund ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	2.10	2.46	2.18	2.30	2.48	2.3050	0.1694	0.0735
Nabil	1.92	1.69	1.42	1.60	2.04	1.7327	0.2484	0.1434
SCBNL	2.45	1.6	1.2	1.15	1.14	1.51	0.498	0.3293
HBL	3.76	2.8	2.37	1.99	2.02	2.59	0.655	0.25031

Source: Appendix 3 'E'

The Table No. 4.15 shows that the total mean, standard deviation and coefficient of variance of total interest paid to total working fund ratio.

The above table shows that all of banks have fluctuating trend. The mean of ratio HBL is higher than NIBL, Nabil & SCBNL and coefficient of variation of SCBNL(0.3293) is higher than NIBL(0.0735), Nabil (0.1434) & HBL(0.25031). NIBL shows the total interest paid to total working fund ratio is more consistency than that of Nabil, SCBNL & HBL.

Thus , it can conclude that the position of NIBL is not better than other banks as its ratio is paying more interest against working fund.

4.1.4 Risk Ratio

The possibility of risk makes banks investment a challenging task. Bank has to take risk to get return on investment. It increases effectiveness and profitability of the bank. If a bank expects high return on its investment it has to accept the risk and manage it efficiently.

The following ratios are calculated to measure the risk.

(i) Liquidity Risk Ratio

The liquidity risk ratio measures the Level of risk associated with the Liquid assets cash. bank balance that are kept in the bank for the purpose of satisfying the depositor's demand for cash. higher the ratio, Lower the liquidity risks is calculated by dividing cash and bank balances by total deposit. The following table shows the liquidity risk ratio of concerned banks.

TABLE 4.16

Liquidity risk ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	11.69	10.65	9.40	12.34	9.97	10.8118	1.2091	0.1118
Nabil	8.51	6.87	3.83	3.26	6.00	5.6952	2.1692	0.3809
SCBNL	6.23	5.21	8.06	7.07	5.75	5.86	1.819	0.3101
HBL	8.14	6.79	9.42	9.09	8.12	8.31	0.918	0.1105

Source: Appendix 4 'A'

The Table No. 4.16 shows the mean, standard deviation and coefficient of variation of liquidity risk ratio of commercial banks. Figure in the table shows the percentage of liquidity risk ratio of NIBL, Nabil, and SCBNL & HBL.

In above table liquidity ratios of these four commercial banks are in fluctuating trend. NIBL(12.34) is the highest of table in F.Y.2063/064 and SCBNL is the lowest of table in F.Y.2064/065.

If the mean ratios are observed Nabil has lesser than that of other banks and coefficient of variation of Nabil is higher than other banks. It indicates that Nabil's liquidity is less consistency than NIBL.

(ii) Credit Risk Ratio

Credit risk ratio measures the possibility that loan will not be repaid or the investment will deteriorate in quality or go into default with consequent loss to

the bank.. Actually credit risk ratio shows the proportion of non-performing assets in 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 4.17

Credit risk ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	28.53	53.79	62.22	59.90	62.65	53.4193	14.3537	0.2687
Nabil	46.83	48.91	61.60	57.87	57.04	54.4491	6.2908	0.1155
SCBNL	29.77	29.08	27.12	27.11	37.19	30.05	3.721	0.1238
HBL	45.24	43.12	42.82	48.27	44.92	44.81	1.95	0.0435

Source: Appendix 4 'B'

The above Table No. 4.17 shows that the total mean, standard deviation and coefficient of variation of credit risk of commercial banks.

The above table shows that the credit risk ratios of these four commercial banks are fluctuating trend. NIBL(64.03) is the highest of table and SCBNL(27.11) is the lowest of table.

Mean ratio of Nabil(54.4491) is higher than NIBL(53.4193), SCBNL(30.05) & HBL(44.81).it indicates that Nabil has more consistency than other banks.

(iii) Capital Risk Ratio

Capital ratio measures bank ability to attract deposit and inter bank funds. It also determine the level of profit, a bank can earn if a bank chooses to take high capital risk. The capital risk is directly related to return on equity. This ratio is calculated by dividing capital (paid up+ reserve) by total risk weighted assets. The following table shows the capital risk ratio of four banks.

Table No: 4.18

Capital risk ratio

Bank	2060/061	2061/62	2062/63	2063/64	2064/65	Mean	S.D.	C.V.
NIBL	24.82	10.22	11.65	11.08	10.86	13.7296	6.2235	0.4533
Nabil	16.94	18.09	15.66	14.51	13.23	15.6858	1.9240	0.1227
SCBNL	12.49	14.96	13.21	14.92	15.07	14.13	0.791	0.056
HBL	4.82	6.73	7.24	7.85	8.41	7.01	0.678	0.0967

Source: Appendix 4 'C'

The table No. 4.18 shows the mean, standard deviation & coefficient of variation of capital risk ratio of commercial banks.

 In the above table capital risk ratio of NIBL (24.82) is the highest in F.Y. 2060/061 and HBL94.82) is lowest in F.Y.2060/061.

 If the mean ratios are observed HBL (7.01) is lesser than NIBL(13.7296), Nabil (15.6858) &SCBNL(14.13).It is concluded that the HBL bank is more stable than other banks.

4.2 Statistical Tools

Some important statistical tools are used to achieve the objectives of this study. In this study, statistical tools such as, trend analysis, co-efficient of correlation analysis between different variables, test of hypothesis are used.

4.2.1 Trend Analysis

Under this topic, analysis trend of loan & advances to total deposit ratio as well as trend of total investment to total deposit ratios of Nabil, and NIBL bank are calculated and forecasted for next five years. The forecast is based on the following assumptions.

1) The first assumption is that other things will remain unchanged.
2) The bank will run in present potion.
3) The economy will remain in the present stage.

From the above Table No. 4.19 it has been shown that the ratio of loan & advances to total deposits of NIBL, Nabil, SCBNL & HBL are increasing trend.

From above trend analysis it is quite obvious that Nabil deposit utilization position in relation to loan & advances to total deposit ratio is lower than other banks. It is found that the loan and advances position of NIBL will be in better position in future.

(ii)   Trend analysis of total investment to total deposit ratio of NIBL, Nabil, SCBNL & HBL

The calculation of the trend values of total investment to total deposit sratio of NIBL, Nabil, SCBNL & HBl for 5 years from 2060/061 to2064/065 and forecast for next 5 years from 2065/066 to 2069/070 in the following Table No.4.20

Table No: 4.20
Trend analysis of total investment to total deposit ratio of
NIBL, NABIL, SCBNL, and HBL

S.N.	Fiscal Year	NIBL	Nabil	SCBNL	HBL
1	2060/61	26.53	41.63	61.59	33.82
2	2061/62	27.14	39.39	58.75	37.92
3	2062/63	27.76	37.14	55.91	42.02
4	2063/64	28.38	34.89	53.07	46.12
5	2064/65	29.00	32.65	50.23	50.22
6	2065/66	29.61	30.40	47.39	54.32
7	2066/67	30.23	28.16	44.55	58.42
8	2067/68	30.85	25.91	41.71	62.52
9	2068/69	31.46	23.67	38.87	66.62
10	2069/70	32.08	21.42	36.03	70.72

Source: Appendix 6 'E', 'F,' 'G' & 'H'

The calculated and projected trend values of total investment to total deposits of
NIBL, Nabil, SCBNL & HBL are fitted in the following trend line.

From the above figure 4.2 shows that the ratio of total investment to total deposit
ratio of Nabil & HBL are decreasing and NIBL & SCBNL are increasing trend.
If our assumption is applied the ratio of total investment to total deposit of Nabil
in 2069/070 will be (21.42), NIBL(32.08), SCBNL(36.03) & HBl(70.72).

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From the above analysis it can be concluded that Nabil & HBL are decreasing trend ratio. However, NIBL & SCBNL are increasing trend ratio. It means Nabil & HBL may use relatively low portion of deposit towards investment in different sectors. Above analysis also reveals that Nabil , HBL, SCBNL & NIBL are uses the skill and attention towards the potential sector of the investment.

From above trend chart it is found that Nabil & HBL has unfavourable condition than and NIBL & SCBNL for utilizing the total deposit towards investment.

4.2.2 Coefficient of Correlation Analysis

Under this topics, Karl person's coefficient of correlation is used to find out the relationship between deposit and loan & advances.

Co -efficient of correlation between deposits and loan & advances

Coefficient of correlation (r) between deposit and loan and advances measures the degree of relationship between these two variables. The purpose of correlation analysis between deposit and loan and advances is to find out whether deposit is significantly used as loan and advances. In this analysis deposit is independent variables (x) and loan & advances are dependent variables (y).

Table No: 4.21

Coefficient of correlation between deposit and loan & advances

	Nabil	NIBL	SCBNL	HBL
R	0.96	0.989	0.69	0.98
r2	0.92	0.978	0.48	0.96
P. E. (r)	0.02	0.007	0.157	0.01

Source: Appendix 7

From the above Table No. 4.21 shows that r, r2, p. Er. Between deposit and loan and advances of NIBL, Nabil, SCBNL & HBL for the period of 2060/061 to 2064/065.

From the above table it is found that the coefficient of correlation (r) between deposit and loan and advances of NIBL, Nabil, SCBNL & HBL are 0.989,0.96, 0.69 and 0.98. It shows that there is very high positive relationship between these two variables for NIBL, Nabil, SCBNL & HBL. But the degree of relationship between deposit and loan & advances of NIBL is greater than that of other banks.

From above analysis it can be conclude that the value of r is highly significant that means there is significant relationship between deposit and loan & advances of NIBL, Nabil, SCBNL & HBL. It also reveals that four banks are successful in mobilizing their deposit and loan & advances.

4.2.3 Test of Hypothesis

It is an assumption about the population, which may or may not be true, to determine whether it is true or not by taking some sample with followed some procedure is called testing of hypothesis. The test of hypothesis disclose the fact weather the difference between the computed the statistic and hypothetical is significant.

Test of hypothesis on loan and advances to total deposit ratios between Nabil, and NIBL.

Here, mean ratio of loan and advances to total deposit of NIBL, Nabil, SCBNL & HBL are taken and carried out under t-test of significance difference.

Table No: 4.22

S.N.	NIBL	Nabil	SCBNL	HBL
1	$\sum X_1 = 303.46$	$\sum X_2 = 321.65$	$\sum X_3 = 174$	$\sum X_4 = 248.26$
	$\overline{X_1} = 60.69$	$\overline{X_2} = 64.33$	$\overline{X_3} = 34.8$	$\overline{X_4} = 49.65$
	$\sum X_1^2 = 1049.48$	$\overline{X_2}^2 = 163.46$	$\overline{X_3}^2 = 100$	$\overline{X_4}^2 = 30.64$

Source: Appendix 8

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> Test of significance of difference between the mean ratio of loan & advance to NIBL, Nabil, SCBNL and HBL

Setting of hypothesis,

Null hypothesis (H_0) : $\overline{X_1} = \overline{X_2}$

i.e., there is no significant difference between mean ratio of loan &advance to total deposit of NIBL, Nabil, SCBNL and HBL.

Attractive hypothesis (H_1): $\overline{X_1} \neq \overline{X_2}$ (Two tailed test)

i.e., there is significant difference between mean ratios of loans & advances to total deposit of NIBL, Nabil, SCBNL and HBL.

the test statistics under H_0 is given by :

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

Where,

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

$$= \frac{1}{5+5-2}(163.46 + 1049.48)$$

$$= 151.62$$

Now,

$$t = \frac{60.69 - 64.33}{\sqrt{151.62(\frac{1}{5} + \frac{1}{5})}}$$

$$= 0.47$$

The calculated value of 't' = 0.47

Tabulated value of 't' (two-tailed test) at 5% level of(n1+n2-2) d.f. i.e. 8 d.f. is 2.306.

Decision :-

Since the calculated value of 't' (i.e. 0.47) is less than its tabulated value (i.e. 2,306) So, null hypothesis is accepted at 5% level of significance i.e. there is no. significant difference between mean ratios of loan& advance to total deposit of NIBL, Nabil, SCBNL and HBL.

4.3 Major Finding of the Study

The main finding of the study are derived on the basis of analysis of financial data of NIBL, Nabil, SCBNL & HBL are given below.

(i) Liquidity ratio

The Liquidity position of NIBL, Nabil, SCBNL & HBL reveals that:

➢ From the analysis of current ratio, it is found that the mean ratio of Nabil is lower than other banks. It means Nabil has maintained lower current ratio in compared to NIBL, SCBNL & HBL.

➢ The mean ratio of cash and bank balance to total deposits of Nabil is less than other banks. It states that the liquidity position of Nabil is not better than that NIBL, SCBNL & HBL. Nabil bank has better to maintain of its liquidity position.

➢ The mean ratio of cash and bank balance to current assets ratio of Nabil is lesser than NIBL, SCBNL & HBL. But Nabil has higher c onsistency than that of other banks. It states that the Nabil has utilized its funds more efficiency.

➢ The mean ratio of investment on government securities to current asset of NIBL is lesser than Nabil, SCBNL & HBL. It states that the Nabil uses to invest its current asset in government securities more than other banks.

➢ The mean ratio of loan & advances to current assets of Nabil is higher than NIBL, SCBNL & HBL. It reveals that Nabil use to provide high loan & advances in comparison to other banks.

The above result shows that the liquidity position of Nabil is comparatively lower than NIBL, SCBNL & HBL. It has the lower cash and bank balance to total deposit and cash and bank balance to current assets ratio. It has the highest

loan & advances to current assets and investment on government securities to current assets ratio.

2. Asset management ratio

The mean management ratio of NIBL, Nabil, SCBNL & HBL shows that:

➢ The mean ratio of loan & advances to total deposit of Nabil is higher than NIBL, SCBNL & HBL.

➢ The mean ratio of total investment to total deposit of Nabil is higher than NIBL, SCBNL & HBL. It can be concluded that Nabil is success to better utilization of deposit to investment.

➢ The mean ratio of loan & advances to working fund ratio of SCBNL is higher than NIBL, Nabil & HBL. It can be concluded that SCBNL has mobilizing its fund higher.

➢ In case of investment on government securities to total working fund ratio, SCBNL has higher mean ratio than NIBL, Nabil & HBL.

➢ The mean ratio of investment on shares and debentures to total working fund of Nabil is higher than NIBL, SCBNL & HBL.

From the above analysis, it can be conclude that Nabil has highest investment policy towards investment to total deposits, government securities to total working fund , shares and debentures to total working funds.

3. Profitability ratio

From the analysis of profitability ratio of NIBL, Nabil, SCBNL & HBL

➢ The mean ratio of return on total working fund ratio of Nabil is higher than NIBL, SCBNL & HBL. It can be conclude that Nabil has success to maintain the high ratio in return on total working fund.

➢ The mean ratio of return and loan & advances ratio of SCBNL is comparatively higher than NIBL, Nabil & HBL .The variability of the ratio of SCBNL is higher and it is also consistency in return.

➢ The mean ratio of total interest earned to total outside assets of Nabil is greater than NIBL, SCBNL & HBL. It indicated the Nabil has average position towards income earned from total outside asset in comparison other banks.

➢ The mean ratio of total investment earned to total working fund of Nabil is also greater than NIBL, SCBNL & HBL.

➢ The mean ratio of total interest paid to total working fund of SCBNL is lower than NIBL, Nabil & HBL.

From the above findings, it can be said that Nabil has higher profitable in comparison to NIBL, SCBNL & HBL. To earn high profit in future the bank must maintain its high profit margin.

4. Risk ratio

The risk ratios of Nabil, NIBL, SCBNL & HBL reveal that:

➢ The mean ratio of liquidity risk of Nabil is lower than NIBL, SCBNL & HBL. The ratio of Nabil is less consistent than investment.

➢ The mean ratio of credit risk of nabil is also higher than NIBL, SCBNL &HBL. The credit risk ratio of Nabil is more variable in comparison to other banks.

➢ Nabil has maintained higher mean ratio of capital risk than NIBL, SCBNL &HBL. The ratio of Nabil is more consistent than other banks.

From the above findings, it can be concluded that Nabil has average risk ratio. The bank should maintain risk against liquidity fund to earn high profit.

5. Trend analysis and projection for next years

The trend analysis and projection for next five years of NIBL, Nabil, SCBNL & HBL reveals that:

➢ The trend analysis of loan and advance to total deposit ratio of Nabil(2.66), NIBL(8.19), HBL(4.10) have increasing trend and SCBNL has decreasing trend (2.84).

➢ The trend analysis of total investment of total deposit ratio of Nabil is in decreasing trend but NIBL, SCBNL & HBL have increasing trend ratio in 0.62, 0.54 & 0.98.

From the above findings, it can be concluded that Nabil may be use relatively large portion of their deposit into providing loan and towards the potential sector of the investment. It shows the NIBL's position will be better in near future in comparison to other banks.

6. Co- efficient of correlation analysis

Co- efficient of correlation analysis between different variables of NIBL, Nabil, SCBNL & HBL shows that:

➢ Co- efficient of correlation between deposit and loan & advances of NIBL, Nabil, SCBNL & HBL are positive these variables. SCBNL has the lowest value of co-efficient of correlation between deposit and loan & advances than NIBL, Nabil & HBL.
From above findings, it can be concluded that there is significant relationship between deposit and loan & advances of NIBL, Nabil, SCBNL & HBL.

7.   Test of hypothesis

By analyzing the test of significance difference of regarding the parameter of the population, it has been found that:
➢ There is no significant difference between mean ratios of loan & advances to total deposits of NIBL, Nabil, SCBNL & HBL.

CHAPTER V
SUMMARY, MAJOR FINDINGS AND RECOMMENDATION

5.1 Summary :

The economic development of a country cannot be imagined without the development of commerce and industry. The role of commercial banks in the economic growth of the nation can be estimated to be prominent. The very challenging job of commercial banks is to collect the scattered idle resources from the small savers. Actually, commercial banks pool the fund in the sizable volume in order to feed to the fund requirement of productive sectors of the economy. Such investments in the productive sector promote trade and industrialization in the country thereby raising the employment opportunity and earning to the laborers and materials suppliers to such industries and traders.

Commercial banks of course contribute a lot to the development of the economy of the country. Thus, to remain in the front line of the great contributor of the economy, the banks have to have sustainable existence and growth themselves. For the sustainable existence and growth of a bank, it must ensure reasonable profitability.

Under this study, the researcher has tried to cover the various aspects of all banks covering the period of five years from 2060/ 61, 2061 / 62, 2062/ 63, 2063 / 64 and 2064 / 65. In the first introductory chapter, the study report has tried to give history and introduction of banking and its relation to the economy, status of commercial banks, brief profile of the concerned banks, general concepts of financial statement and the statement of problem, objective of the study and its limitation. During the research work , extensive review of various literature books, past thesis, journals have studied and consulted. And as per requirement, Internet materials from relevant websites were also visited. These works are complied in the second chapter titled " Review of Literature" of this report.

For this study the researcher has gathered the required data basically from annual reports published by the concerned commercial banks for the last five years. And also Internet website of Nepal Stock Exchange is used for necessary data. To analyze the financial performance of the commercial banks (1) Financial Ratios to calculate various ratios (2) Statistical tools such as Mean, Standard Deviation, Coefficient of Variance, Correlation Coefficient, trend analysis and test hypothesis(i.e. t-test) are followed for the this research work in third chapter titled " Research Methodology".

Data relating to activities of the bank has been collected and presented in bar diagrams, figures and tabular and various charts and as far as possible are tried to be interpreted in the study report in logical in ways. Data are then analyzed applying various according financial mathematical and statistical tools and findings of the study have been listed in a systernatic manner. All these works are complied in the forth chapter titled "Data presentation and Analysis" of this study.

Finally, the summary, major findings and the recommendation made by the research are presented in the current chapter titled summary, major findings and recommendations.

5.2 Recommendations:

On the basis of analysis and findings of the fours banks in previous section, they are recommended to go through following suggestion, which may overcome the weakness and less effectiveness of the existing fund mobilization and investment policy.

➢ A commercial bank must maintain its satisfactory liquidity position to meet the credit need of the customers; however, external as well as internal factors affect the liquidity position of banks. As Nabil has maintained the ratio of cash and bank balance to total deposits and current assets considerably lower than NIBL, SCBNL & HBL, Nabil is recommended to increase cash

and bank balance to make the immediate payment to the depositor and to meet the demand of loan & advances.

➤ To get success in competitive banking environment and maximize return, depositor's money must be utilized as loan and advances. If the largest item of asset side is loan and advances it has negative implication over liquidity because loans and advances are less liquid than the investment in T- bills and development bonds but it will jeopardizes the profitability. Nabil's loan & advances to total deposit ratio and loan & advances to total working fund ratio is higher than NIBL, SCBNL & HBL.

➤ Besides investing on government securities, Nabil is recommended to invest its fund in purchase of shares and debntures of other companies. Government securities such as treasury bills have very lower yield than other companies securities. This also helps to maintain the sound portfolio of the bank.

➤ Profitability is the main indicator of the financial performance of every business organization. In the study, profitability ratio is good from the angle of return but it seems that Nabil cannot earn higher interest through the outside assets and working fund. So Nabil is recommended to increase its interest earned in outside assets and working fund by investing more & more funds in loan & advances and different types of securities. Because higher interest earning capacity of the bank implies better performance of the bank.

➤ If a bank expects high return on its investment it has to accept the risk, it increases effectiveness and profitability of the bank. The risk taken by Nabil from the angle of capital risk is an average whereas liquidity risk and credit risk is lower than NIBL, SCBNL & HBL and its consistency are highly volatile which may result higher loss. The bank should not take high risk, Nabil should carefully analyze in above risk to achieve higher returns.

➤ In order to collection much funds, Nabil is suggested not to be surrounded and limited only big clients i.e. multinational companies, large industries, manufacturing companies, NGOs and INGOs etc. It should also cater the lower and middle level people too. Through different kind of scheme such as easy saving scheme, cumulative deposit scheme, house building deposit

scheme, house building deposit scheme, deposit linked life insurance scheme, recurring deposit scheme and many other the bank can collect a large fund from lower, level people of the country.

➢ In the light of growing competition in the banking sector, the business of the bank shpuld be customer oriented. The bank is recommended to adopt new technology and services such as SWIFT, ATM cards, visa electron debit card, international credit card, locker services, lending against gold and silver services, 24 hours services. The bank should involve in different kind of social and community development activities. The bank has been able to provide more personalized services and a better environment for its customer, it is an effectve tool to attract and retain the customers.

Bibliography

Books:

Basu, A.K., " Fundamental of Banking Theory and practice", A.K. Mukherjee publications, Calcutta 1996 A.D.

Bhattarai, Rabindra, " Investment Theory and Practice", Buddha Academic Publication 2004.

Charles, James P, " Investment Analysis and Management", Bombay, Himalayan Publication House 1991.

Crosse H.D., " Management policies for Commercial Banks", Englewood cliffs, NJ.,Prentice 0 Hall Inc., 2nd edition 1963

Gitman,L.J. and Joehnk, " Fundamentals of Investment", 4th edition, Harper and Row New York 1990

Pandey, I.M., " Financial Management", Vikas publishing House pvt. Ltd., New Delhi, 1992

Radhaswamy, M. and Vasudevan S.V., " A Text Book of Banking", New Delhi, S. Chand & Company Ltd, 1979.

Singh, preeti, " Investment Management" , Himalayan Publication House, 1992

Journal and Periodicals:

Bajracharya. Bhodi B. " Monetory policy and Deposit Mobilization in Nepal". Rajat Jayanti Smarika RBB Kathmandu , 2047 B.S.

F. Morris , " Lastin American's Banking System in the 1980s", World Bank's Discussion Paper-81. The World Bank, Washington D.C.-1990

Mc Naughton Diana, " Banking Institution in Developing markets", World Bank publication, 1994

Paudel, Shree Prasad, " Government Security markets Rational and Development in Nepal", Nepal Rastra Bank Samachar, NRB, 2059

Pradhan, Radhe Shyam, " Role of Saving, Investment and Capital Formulation in Economic Development: A Case of Nepal", Research in Nepalese Finance,2003

Shrestha, Sunity, ' Lending operation of Commercial Banks of Nepal and its impact on GDP. The Business Voice of Nepal", the special issue of Banijya Sancer T.U., 2055

Thapa Govinda bahadur, " Financial System of Nepal", Development Vision, Patan Multiple Campus, lalitpur, Vol 3,1994.

Dissertations

Bajracharya, Rabina, " Investment of Commercial banks in Priority Sector", an unpublished master degree's thesis, T.U., 2000

Bhattarai, Ramala, "Lending policy of Commercial Bank in Nepal" an unpublishednmaster degree thesis, T.U.1978

Lamichhane, Mukunda Prasad, "Investment Policy of Joint Venture Banks in Nepal", an unpublished master degree's thesis, T.U.2000

Laundari, Shiba Raj, "A study on Investment policy of Nepal Indosuez bank Ltd. In comparison_to Nepal SBI Bank Ltd." An unpublished Master degree thesis, Shanker Dev Campus, 2001.

Pandit Kulchandra, "A Study on the Investment Policy Analysis of S.C. bank Nepal Limited (In Comparison to other Commercial Banks of Nepal)" an unpublishedmaster degree's thesis, T.U. 2003

Poudel, Kishor, " Liquidity and Investment Position of Joint venture Commercial Banks in Nepal". , an unpulished master degree's thesis. T.U.2002

Shrestha, Sunity, " Investment planning of Commercial Banks in Nepal"., Ph.d.thesis1993

Thapa, Samiksha, " A comparative study on investment policy of Nepal Bangladesh Bank Ltd and Joint Venture Commercial Banks in Nepal , an unbalance master masterdegree's thess, Shanker Deva Campus,1999

Wagles.Shared, A suidy on trends of saving, Investment and capital formulation in Nepal". MA in Economics T. U 2000

Officials Publications

Annual Report- Nepal Investment Bank Ltd., F.y.2002 to 2006

Annual Report- NABIL Bank Ltd., F.Y.2002 to 2006

Annual Report- Standard charted Bank Ltd., F.Y.2002 to 2006

Annual Report- Himalayan Bank Limited , F.Y. 2002 to 2006

Annual Report – Research and Planning Division, NEPSE, FY 2003 to 2006

Delhi Stock Exchange, Annual Magazines, January 2005

Directives to Commercial Banks, Directive No. 8, NRB Banking operation department.

Economic Survey- HMG Ministry of Finance- 2002

Gorkhapatra, 2062-1-31

Principal of Bank operations- American Institutes of Banking 1972, 345-346

WEB- Sites

www.nabilbankltd.com

www.nibl.com.np

www.hbl.com.np

www.standardbankcom.np

www.nepalstock.com

Liquidity Ratio

A. Current Ratio

Calculation of Current Ratio of NIBL, NABIL, SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Total Current Assets	7,517.89	11,144.33	13,967.78	17,906.11	23,582.11
Total Current Liabilities	8,359.46	12, 506.94	15,093.89	19,364.70	24,912.72
Ratio (Times)	0.8993	0.8911	0.9254	0.9247	0.9466
NABIL					
Total Current Assets	13,868.30	14,244.04	14,971.80	17,054.82	22,107.02
Total Current Liabilities	15,135.42	15,153.13	15,528.69	20,454.97	25,196.34
Ratio (Times)	0.9200	0.9400	0.9641	0.8338	0.8774
SCBNL					
Total Current Assets	39584	44470.66	27709.35	23281.06	28482.90
Total Current Liabilities	37343.40	41561.36	26140.89	21963.26	26373.05
Ratio (Times)	1.06	1.07	1.06	1.06	1.08
HBL					
Total Current Assets	17458.94	22867.18	12774.28	14183.15	22897.81
Total Current Liabilities	17116.60	22640.77	13034.97	13637.64	21807.43
Ratio (Times)	1.02	1.01	0.98	1.04	1.05

B.   Cash and Bank Balance to Total Deposit Ratio

Calculation of Cash and Bank Balance to Total Deposit Ratio of NIBL, NABIL, SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Cash & Bank Balance	926.53	1226.92	1340.49	2336.52	2441.51
Total Deposit	7922.75	11524.67	14254.57	18927.31	24488.86
Ratio (Times)	0.1169	0.1065	0.0940	0.1234	0.0997
NABIL					
Cash & Bank Balance	1144.77	970.49	559.38	630.24	1399.83
Total Deposit	13447.65	14119.03	4586.61	19347.40	23342.29
Ratio (Times)	0.0851	0.0687	0.0383	0.0326	0.0600
SCBNL					
Cash & Bank Balance	1979.20	2001.18	2014.47	2004.500	1449.780
Total Deposit	31768.86	38410.36	24993.42	28352.19	25213.56
Ratio (Times)	0.0623	0.0521	0.0806	0.0707	0.0575
HBL					
Cash & Bank Balance	1356.56	1456.64	1157.35	1161.60	1676.12
Total Deposit	16679.35	21438.72	12280.09	12780.87	20656.87
Ratio (Times)	0.0814	0.0679	0.0942	0.0909	0.0812

C.   Cash and Bank Balance to Current Assets Ratio

Calculation of Cash and Bank Balance to Currents Asset Ratio of NIBL, NABIL,SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Cash & Bank Balance	926.53	1226.92	1340.49	2336.52	2441.51
Current Asset	7517.89	11144.33	13967.78	17906.11	23582.11
Ratio (Times)	0.1232`	0.1101	0.0960	0.1305	0.1035
NABIL					
Cash & Bank Balance	1144.77	970.49	559.38	630.24	1399.83
Current Asset	13868.30	14244.04	14971.80	17054.82	22107.02
Ratio (Times)	0.0825	0.0681	0.0374	0.0370	0.0633
SCBNL					
Cash & Bank Balance	1979.20	2001.18	2014.47	2004.500	1449.780
Total Current Asset	39584	44470.66	277009.35	23281.06	28482.90
Ratio (Times)	0.050	0.045	0.0727	0.0861	0.0509
HBL					
Cash & Bank Balance	1356.56	1456.64	1157.35	1161.60	1676.12
Current Asset	17458.94	22867.18	12774.28	14183.15	22897.81
Ratio (Times)	0.0777	0.0637	0.0906	0.0819	0.0732

D. Investment on Government Securities to Current Assets Ratio

Calculation of Investment on Government Securities to Currents Asset Ratio of NIBL, NABIL,SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Investment on Govt. Securities	400.00	2001.10	1948.50	2522.30	3256.40
Current Asset	7517.89	11144.33	13967.78	17906.11	23582.11
Ratio (Times)	0.0532	0.1796	0.1395	0.1409	0.1381
NABIL					
Investment on Govt. Securities	3588.77	3672.63	2413.94	1222.47	4085.84
Current Asset	13868.30	14244.04	14971.80	17054.82	22107.02
Ratio (Times)	0.2588	0.2578	0.1612	0.0717	0.1848
SCBNL					
Investment on Govt. Securities	9907.87	14034.94	8958.43	7875.98	9407.90
Total Current Asset	39584	44470.66	277009.35	23281.06	28482.90
Ratio (Times)	0.2503	0.3156	0.3233	0.3383	0.3303
HBL					
Investment on Govt. Securities	1915.24	2979.59	1957.01	1992.73	4552.08
Current Asset	17458.94	22867.18	12774.28	14183.15	22897.81
Ratio (Times)	0.1097	0.1303	0.1532	0.1405	0.1988

E.   Loan Advances to Current Assets Ratio

Calculation of Loan and Advances to Currents Asset Ratio of NIBL, NABIL,SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Loan and Advance	2572.14	7130.13	10126.06	12776.21	17286.43
Current Asset	7517.89	11144.33	13967.78	17906.11	23582.11
Ratio (Times)	0.3421	0.6398	0.7250	0.7135	0.7330
NABIL					
Loan and Advances	7755.95	8189.99	10586.17	12922.54	15545.78
Current Asset	13868.30	14244.04	14971.80	17054.82	22107.02
Ratio (Times)	0.5593	0.5750	0.7071	0.7577	0.7032
SCBNL					
Loan and Advances	11867.28	13012.11	7589.59	6351.07	10635.51
Total Current Asset	39584	44470.66	277009.35	23281.06	28482.90
Ratio (Times)	0.2998	0.2926	0.2739	0.2728	0.3734
HBL					
Loan and Advances	8074.75	10262.79	5846.78	6939.81	10342.94
Current Asset	17458.94	22867.18	12774.28	14183.15	22897.81
Ratio (Times)	0.4625	0.4488	0.4577	0.4893	0.4517

Appendix-2

Asset Management Ratio (Activity Ratio)

A.   Loan Advances to Deposit Ratio

Calculation of Loan and Advances to Deposit Ratio of NIBL, NABIL,SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Loan and Advance	2572.14	7130.13	10126.06	12776.21	17286.43
Total Deposit	7922.75	11524.67	14254.57	18927.31	24488.86
Ratio (Times)	0.3247	0.6187	0.7104	0.6750	0.7059
NABIL					
Loan and Advances	7755.95	8189.99	10586.17	12922.54	15545.78
Total Deposit	13447.65	14119.03	14586.61	19347.40	23342.29
Ratio (Times)	0.5768	0.5801	0.7257	0.6679	0.6660
SCBNL					
Loan and Advances	11867.28	13012.11	7589.59	6351.07	10635.51
Total Deposit	31768.86	38410.36	24993.42	28352.19	25213.56
Ratio (Times)	0.3735	0.3387	0.3037	0.3029	0.4212
HBL					
Loan and Advances	8074.75	10262.79	5846.78	6939.81	10342.94
Total Deposit	16679.35	21438.72	12280.09	12780.87	20656.87
Ratio (Times)	0.4841	0.4787	0.4761	0.5430	0.5007

B.   Total Investment to Total Deposit Ratio

Calculation of Total Investment to Deposit Ratio of NIBL, NABIL,SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Total Investment	1705.24	3862.48	3934.19	5602.87	6505.68
Total Deposit	7922.75	11524.67	14254.57	18927.31	24488.86
Ratio (Times)	0.2152	0.3351	0.2760	0.2960	0.2657
NABIL					
Total Investment	6031.17	5836.07	4267.23	6178.43	8945.31
Total Deposit	13447.65	14119.03	14586.61	19347.40	23342.29
Ratio (Times)	0.4485	0.4133	0.2925	0.3193	0.3832
SCBNL					
Total Investment	19680.80	22500.78	13786.37	15219.45	12652.16
Total Deposit	31768.86	38410.36	24993.42	28352.19	25213.56
Ratio (Times)	0.6195	0.5858	0.5516	0.5368	0.5018
HBL					
Total Investment	3861.26	10543.56	5948.47	5396.08	9733.51
Total Deposit	16679.35	21438.72	12280.09	12780.87	20656.87
Ratio (Times)	0.2315	0.4918	0.4844	0.4222	0.4712

C. Loan & Advance toTotal Working fund Ratio

Calculation of Loan & Advance to Total Working fund Ratio of NIBL, NABIL,SCBNL and HBL

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Loan & Advance	2572.14	7130.13	10126.06	12776.21	17286.43
Total working fund	9014.24	13255.50	16274.06	21330.14	27590.84
Ratio (Times)	0.2853	0.5379	0.6222	0.5990	0.6265
NABIL					
Loan & Advance	7755.95	8189.99	10586.17	12922.54	15545.78
Total working fund	16562.61	16745.61	17186.33	22329.97	27253.39
Ratio (Times)	0.4683	0.4891	0.6160	0.5787	0.5704
SCBNL					
Loan & Advance	11867.28	13012.11	7589.59	6351.07	10635.51
Total Working fund	39863.21	44745.90	27985.21	23427.03	28597.76
Ratio (Times)	0.2977	0.2908	0.2712	0.2711	0.3719
HBL					
Loan & Advance	8074.75	10262.79	5846.78	6939.81	10342.94
Total Working fund	17848.69	23800.53	13654.32	14377.06	23180.05
Ratio (Times)	0.4524	0.4312	0.4282	0.4827	0.4462

D. Investment on Government Securities to Total Working fund Ratio
Calculation of Investment on Government Securities to Working fund Ratio of
NIBL, NABIL,SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Investment on Govt. securities	400.00	2001.10	1948.50	2522.30	3256.40
Total working fund	9014.24	13255.50	16274.06	21330.14	27590.84
Ratio (Times)	0.0444	0.1510	0.1197	0.1183	0.1180
NABIL					
Investment on Govt. Securities	3588.77	3672.63	2413.94	1222.47	4085.84
Total working fund	16562.61	16745.61	17186.33	22329.97	27253.39
Ratio (Times)	0.2167	0.2193	0.1405	0.0547	0.1499
SCBNL					
Investment on Govt. Securities	9907.87	14034.94	8958.43	7875.98	9407.90
Total Working fund	39863.21	44745.90	27985.21	23427.03	28597.76
Ratio (Times)	0.2485	0.3137	0.3101	0.3362	0.3290
HBL					
Investment on Govt. Securities	1915.24	2979.59	1957.01	1992.73	4552.08
Total Working fund	17848.69	23800.53	13654.32	14377.06	23180.05
Ratio (Times)	0.1073	0.1252	0.1433	0.1386	0.1964

E.   Investment on Shares and Debentures to Total Working fund Ratio

Calculation of Investment on Shares and Debentures to Working fund Ratio of

NIBL, NABIL,SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Investment on Share & Debentures	13.89	13.89	17.74	17.74	35.25
Total working fund	9014.24	13255.50	16274.06	21330.14	27590.84
Ratio (Times)	0.0015	0.0010	0.0011	0.0008	0.0013
NABIL					
Investment on Share & Debentures	22.22	133.44	440.28	104.20	286.96
Total working fund	16562.61	16745.61	17186.33	22329.97	27253.39
Ratio (Times)	0.0013	0.0080	0.0256	0.0047	0.0105
SCBNL					
Investment on Share & Debentures	231.20	268.47	148.32	110.10	174.44
Total Working fund	39863.21	44745.90	27985.21	23427.03	28597.76
Ratio (Times)	0.0058	0.006	0.0053	0.0047	0.0061
HBL					
Investment on Share & Debentures	101.73	395.08	200.71	198.40	331.47
Total Working fund	17848.69	23800.53	13654.32	14377.06	23180.05
Ratio (Times)	0.0057	0.0166	0.0147	0.0138	0.0143

.Appendix-3

Profitability Ratio

A. Return on Total Working Fund Ratio

Calculation of Return on Working Fund Ratio of NIBL, NABIL, SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Net Profit	116.82	152.67	232.15	350.54	501.40
Total working fund	9014.24	13255.50	16274.06	21330.14	27590.84
Ratio (Times)	1.30	1.15	1.43	1.64	1.82
NABIL					
Net Profit	416.25	455.32	518.64	635.26	673.96
Total working fund	16562.61	16745.61	17186.33	22329.97	27253.39
Ratio (Times)	2.51	2.72	3.02	2.84	2.47
SCBNL					
Net Profit	887.67	1161.98	674.44	534.13	703.50
Total Working fund	39863.21	44745.90	27985.21	23427.03	28597.76
Ratio (Times)	2.23	2.6	2.41	2.28	2.46
HBL					
Net Profit	261.62	270.93	123.95	152.67	256.50
Total Working fund	17848.69	23800.53	13654.32	14377.06	23180.05
Ratio (Times)	1.46	1.14	0.91	1.06	1.11

B. Return on Loan & Advances Ratio

Calculation of Return on Loan & Advances Ratio of NIBL, NABIL, SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Net Profit	116.82	152.67	232.15	350.54	501.40
Loan & Advances	2572.14	7130.13	10126.06	12776.21	17286.43
Ratio (Times)	2.02	2.14	2.29	2.74	2.90
NABIL					
Net Profit	416.25	455.32	518.64	635.26	673.96
Loan & Advances	7755.90	8189.99	10586.17	12922.54	15545.78
Ratio (Times)	5.37	5.56	4.90	4.92	4.34
SCBNL					
Net Profit	887.67	1161.98	674.44	534.13	703.50
Loan & Advances	11867.28	13012.11	7589.59	6351.07	10635.51
Ratio (Times)	7.48	8.93	8.90	8.39	6.62
HBL					
Net Profit	261.62	270.93	123.95	152.67	256.50
Loan & Advances	8074.75	10262.79	5846.78	6939.81	10342.94
Ratio (Times)	3.24	2.64	2.12	2.2	2.48

C. Total Interest Earned to Total Outside Assets Ratio

Calculation of Total Interest Earned to Total Outside Assets Ratio of NIBL, NABIL, SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Total Interest Earned	459.51	731.40	886.80	1172.74	1584.99
Total Outside Assets	7477.38	10992.61	14060.25	18379.08	23792.11
Ratio (Times)	6.15	6.65	6.31	6.38	6.66
NABIL					
Total Interest Earned	1017.87	1001.62	1068.75	1310.00	1587.76
Total Outside Assets	13787.12	14026.06	14853.40	19101.07	24490.89
Ratio (Times)	7.38	7.14	7.20	6.86	6.48
SCBNL					
Total Interest Earned	2559.21	2461.02	1334.89	1033.13	1384.13
Total Outside Assets	31517.36	35512.55	21392.46	17630.20	23341.14
Ratio (Times)	8.12	6.93	6.24	5.86	5.93
HBL					
Total Interest Earned	1213.71	1323.35	701.83	723.16	1203.04
Total Outside Assets	11548.14	20806.60	11795.46	12340.61	20050.66
Ratio (Times)	10.51	6.36	5.95	5.86	6.00

D. Total Interest Earned to Total Working Fund Ratio

Calculation of Total Interest Earned to Total Working Fund Ratio of NIBL, NABIL, SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Total Interest Earned	459.51	731.40	886.80	1172.74	1584.99
Total Working Fund	9014.24	13255.50	16274.06	21330.14	27590.84
Ratio (Times)	5.10	2.50	5.45	5.50	5.74
NABIL					
Total Interest Earned	1017.87	1001.62	1068.75	1310.00	1587.76
Total Working Fund	16562.61	16745.61	17186.33	22329.97	27253.39
Ratio (Times)	6.15	5.98	6.22	5.87	5.83
SCBNL					
Total Interest Earned	2559.21	2461.02	1334.89	1033.13	1384.13
Total Working Fund	39863.21	44745.90	27985.21	23427.03	28597.76
Ratio (Times)	6.42	5.5	4.77	4.41	4.84
HBL					
Total Interest Earned	1213.71	1323.35	701.83	723.16	1203.04
Total Working Fund	17848.69	23800.53	13654.32	14377.06	23180.05
Ratio (Times)	6.8	5.56	5.14	5.03	5.19

E. Total Interest Paid to Total Working Fund Ratio

Calculation of Total Interest Paid Total Working Fund Ratio of NIBL,NABIL,SCBNL and HBL.

Particular	Fiscal Year				
	2060/61	2061/62	2062/63	2063/64	2064/65
NIBL					
Total Interest Paid	189.21	326.21	354.55	490.95	685.53
Total Working Fund	9014.24	13255.50	16274.06	21330.14	27590.84
Ratio (Times)	2.10	2.46	2.18	2.30	2.48
NABIL					
Total Interest Paid	317.35	282.94	243.54	357.15	555.71
Total Working Fund	16562.61	16745.61	17186.33	22329.97	27253.39
Ratio (Times)	1.92	1.69	1.42	1.60	2.04
SCBNL					
Total Interest Paid	976.64	715.93	335.82	269.41	326.01
Total Working Fund	39863.21	44745.90	27985.21	23427.03	28597.76
Ratio (Times)	2.45	1.6	1.2	1.15	1.14
HBL					
Total Interest Paid	671.11	666.41	323.60	286.10	468.23
Total Working Fund	17848.69	23800.53	13654.32	14377.06	23180.05
Ratio (Times)	3.76	2.8	2.37	1.99	2.02

Appendix-4

Risk Ratio

A. Liquidity Risk Ratio

Calculation of Liquidity Risk Ratio of NIBL, NABIL, SCBNL and HBL

Fiscal Year					
Particular	2060/061	2061/062	2062/063	2063/064	2064/065
NIBL					
Cash & Bank Balance	926.53	1,226.92	1,340.49	2,336.52	2,441.51
Total Deposit	7,922.75	11,524.67	14,254.57	18,927.31	24,488.86
Ratio (Times)	**11.69**	**10.65**	**9.40**	**12.34**	**9.97**
NABIL					
Cash & Bank Balance	1,144.77	970.49	559.38	630.24	1,399.83
Total Deposit	13,447.65	14,119.03	14,586.61	19,347.40	23,342.29
Ratio (Times)	**8.51**	**6.87**	**3.83**	**3.26**	**6.00**
SCBNL					
Cash & Bank Balance	1979.20	2001.18	2014.470	2004.50	1449.780
Total Deposit	31768.86	38410.36	24993.42	28352.19	25213.56
Ratio (Times)	**6.23**	**5.21**	**8.06**	**7.07**	**5.75**
HBL					
Cash & Bank Balance	1356.56	1456.64	1147.35	1161.60	1676.12
Total Deposit	16679.35	21438.72	12280.09	12780.87	20656.87
Ratio (Times)	**8.14**	**6.79**	**9.42**	**9.07**	**8.12**

B. Credit Risk Ratio

Calculation of Credit Risk Ratio of NIBL, NABIL, SCBNL and HBL

Fiscal Year					
Particular	2060/061	2061/062	2062/063	2063/064	2064/065
NIBL					
Total Loan & Advances	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
Total Assets	9,014.24	13,255.50	16,274.06	21,330.14	27,590.81
Ratio (Times)	**28.53**	**53.79**	**62.22**	**59.90**	**62.65**
NABIL					
Total Loan & Advances	7,755.95	8,189.99	10,586.17	12,329.54	15,545.78
Total Assets	16,562.61	16,745.61	17,186.33	12,329.97	27,253.39
Ratio (Times)	**46.83**	**48.91**	**61.60**	**57.87**	**57.04**
SCBNL					
Total Loan & Advances	11867.28	13012.11	7589.59	6351.07	10635.51
Total Assets	39863.21	44745.90	27985.21	2347.03	28597.76
Ratio (Times)	**29.77**	**29.08**	**27.12**	**27.11**	**37.19**
HBL					
Total Loan & Advances	8074.75	10262.79	58446.78	6939.81	10342.94
Total Assets	17848.69	23800.53	13554.32	14377.06	23180.05
Ratio (Times)	**45.24**	**43.12**	**42.82**	**48.27**	**44.92**

C. Capital Risk Ratio

Calculation of Capital Risk Ratio of NIBL, NABIL, SCBNL and HBL

Particular	Fiscal Year				
	2060/061	2061/062	2062/063	2063/064	2064/065
NIBL					
Capital	638.53	729.04	1,180.17	1,415.44	1,878.12
Risk Weighted	2,572.14	7,130.13	10,126.06	12,776.21	17,286.43
Ratio (Times)	**24.82**	**10.22**	**11.65**	**11.08**	**10.86**
NABIL					
Capital	1,314.18	1,481.68	1,657.63	1,874.99	2,056.05
Risk Weighted	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78
Ratio (Times)	**16.94**	**18.09**	**15.66**	**14.51**	**13.23**
SCBNL					
Capital	1482.22	1946.61	1002.58	947.57	1602.77
Risk Weighted	11867.28	13012.11	7589.59	6351.07	10635.5172.49
Ratio (Times)	**12.49**	**14.96**	**13.21**	**14.92**	**15.07**
HBL					
Capital	389.20	690.68	423.30	544.77	869.84
Risk Weighted	8074.75	10262.79	5846.78	6939.81	10342.94
Ratio (Times)	**4.82**	**6.73**	**7.24**	**7.85**	**8.41**

Appendix-5

Calculation of mean, Standard Deviation and Co-efficient of Variation of Current Ratio of NIBL, NABIL, SCBNL & HBL

Fiscal Year	NIBL		NABIL		SCBNL		HBL	
	x_1	$x_1{}^2$	x_2	$x_2{}^2$	x_3	$x_3{}^2$	x_4	$x_4{}^2$
060/061	0.8993	0.8087	0.92	0.8464	1.06	1.1236	1.02	1.0404
061/062	0.8911	0.7940	0.94	0.8836	1.07	1.1449	1.01	1.0201
062/063	0.9254	0.8563	0.96	0.9216	1.06	1.1236	0.98	0.9609
063/064	0.9247	0.8550	0.83	0.6952	1.06	1.1236	1.04	1.0816
064/065	0.9466	0.8961	0.88	0.7698	1.08	1.1664	1.05	1.1025
	$\sum x_2 = 4.5871$	$\sum x_2{}^2 = 0.4210$	$\sum x_1 = 4.53$	$\sum x_1{}^2 = 4.11$	$\sum x_3 = 5.33$	$\sum x3^2 = 5.6821$	$\sum x4 = 5.1$	$\sum x4^2 = 5.205$

Where,

x_1 = Total Current ratio of Investment Bank

x2 = Total Current ratio of Nabil Bank

X3= Total Current ratio of SCBNL

X4= Total Current ratio of HBL

Calculation of Mean Ratio of Nabil Bank Current Ratio

$$\text{Mean} = \frac{\sum X1}{N} = \frac{4.5871}{5} = 0.91742$$

$$\text{S.D.} = \sqrt{\frac{\sum (X_1)^2}{N} - \left(\frac{\sum X_1}{N}\right)^2}$$

$$= \sqrt{\frac{4.2101}{5} - \left(\frac{4.5871}{5}\right)^2}$$

$$= \sqrt{0.84202 - 0.84165}$$

$$= 0.20$$

Calculation of Coefficient of Variation (C.V.)

$$CV. = \left[\frac{\dagger}{X} \times 100 \right]\%$$

$$= \frac{0.20}{0.91742} \times 100$$

$$= 2.18$$

Calculation of Mean, Std. Deviation and Coefficient of Variation of NIBL, SCBEL and HBL Calculated accordingly

Appendix-6

A. Calculation of trend value of loan & Advance to total deposit ratio of NIBL

Fiscal year (f)	Ratio (y)	x=f -2005/6	x2	xy	yc=a+bx
059/060	32.47	(2.00)	4.00	(64.93)	44.32
060/061	61.87	(1.00)	1.00	(61.87)	52.50
061/062	71.04	-	-	-	60.69
062/063	67.50	1.00	1.00	67.50	68.88
063/064	70.59	2.00	4.00	141.18	77.07
Total	303.46		10.00	81.88	

Here, let the straight line trend equation Yc = a +bx

Where, Y = Annual Ratio in percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{303.46}{5} = 60.69$$

$$b = \frac{\sum xy}{\sum X2} = \frac{81.88}{10} = 8.19$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NIBL for Next Five Year

Fiscal Year (t)	X= T- 2005/06	Yc= a + bx
064/65	3.00	85.26
065/66	4.00	93.44
066/67	5.00	101.63
067/68	6.00	109.82
068/69	7.00	118.01

B)   Calculation of trend Values of loan & advances to total deposit ratio of NABIL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	57.68	(2.00)	4.00	(115.35)	59.01
061/062	58.01	(1.00)	1.00	(58.01)	61.67
062/063	72.57	-	-	-	64.33
063/064	66.79	1.00	1.00	66.79	66.99
064/065	66.60	2.00	4.00	133.20	69.65
Total	321.65		10.00	26.63	

Here, let the straight line trend equation Yc = a + bx

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{321.65}{5} = 64.33$$

$$b = \frac{\sum xy}{\sum X2} = \frac{26.63}{10} = 2.66$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NABIL for next Five year

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	72.31
066/67	4.00	74.97
067/68	5.00	77.63
068/69	6.00	80.29
609/70	7.00	82.95

C) Calculation of trend value of loan and advance to total Deposit ratio of SCBNL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	0.3735	(2)	4	(15.30)	33.72
061/062	0.3387	(1)	1	(33.87)	34.26
062/063	0.3037	-	-	-	34.80
063/064	0.3029	1	1	30.29	35.34
064/065	0.4212	2	4	84.24	35.88
Total	174		10	5.36	

Here, let the straight line trend equation Yc = a + bx

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{174}{5} = 34.8$$

$$b = \frac{\sum xy}{\sum X2} = \frac{5.36}{10} = 0.536$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of SCBNL for Next Five year

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	36.41
066/67	4.00	36.94
067/68	5.00	37.48
068/69	6.00	38.01
609/70	7.00	38.55

D) Calculation of trend value of loan and advance to total Deposit ratio of HBL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	48.41	(2)	4	(96.82)	47.69
061/062	47.87	(1)	1	(47.87)	48.67
062/063	47.61	-	-	-	49.65
063/064	54.30	1	1	54.30	50.62
064/065	50.07	2	4	100.14	51.60
Total	248.260		10	9.75	

Here, let the straight line trend equation Yc = a + bx

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{248.26}{5} = 49.65$$

$$b = \frac{\sum xy}{\sum X2} = \frac{9.75}{10} = 0.975$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of HBL for Next Five year

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	52.575
066/67	4.00	53.550
067/68	5.00	54.525
068/69	6.00	55.500
609/70	7.00	56.475

E)   Calculation of trend Values of Total investment to total deposit ratio of NIBL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	21.52	(2.00)	4.00	(43.05)	26.53
061/062	33.51	(1.00)	1.00	(33.51)	27.14
062/063	27.60	-	-	-	27.14
063/064	29.60	1.00	1.00	29.60	28.38
064/065	26.57	2.00	4.00	53.13	29.00
Total	138.81		10.00	6.17	

Here, let the straight line trend equation Yc = a + bx

Where, Y = Annual Ratio in Percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{138.81}{5} = 27.76$$

$$b = \frac{\sum xy}{\sum X2} = \frac{6.17}{10} = 0.62$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NIBL for Next Five year

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	29.61
066/67	4.00	30.23
067/68	5.00	30.85
068/69	6.00	31.46
609/70	7.00	32.08

F)   Calculation of trend values of Total in Vestment to total deposit ratio

of NABIL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	44.85	(2.00)	4.00	(89.70)	41.63
061/062	41.33	(1.00)	1.00	(41.33)	39.39
062/063	29.25	-	-	-	37.14
063/064	31.93	1.00	1.00	31.93	34.89
064/065	38.32	2.00	4.00	76.64	32.65
Total	185.69		10.00	(22.45)	

Here, Let the straight line trend equation Yc = a + bx

Where, Y = Annual Ration in Percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{185.69}{5} = 37.14$$

$$b = \frac{\sum XY}{\sum X2} = \frac{(22.45)}{10} = (2.25)$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NABL for Next Five Year .

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	30.40
066/67	4.00	28.16
067/68	5.00	25.91
068/69	6.00	23.67
609/70	7.00	21.42

G)   Calculation of trend values of Total in Vestment to total deposit ratio

of SCBNL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	61.95	(2.00)	4.00	(123.90)	61.59
061/062	58.58	(1.00)	1.00	(58.58)	58.75
062/063	55.16	-	-	-	55.91
063/064	53.68	1.00	1.00	53.68	53.07
064/065	50.18	2.00	4.00	100.36	50.23
Total	$\sum y=279.55$		10.00	(28.44)	

Here, Let the stright line trend equation Yc = a + bx

Where, Y = Annual Ration in Percentage

Now,

$$a = \frac{\sum Y}{N} = \frac{279.55}{5} = 55.91$$

$$b = \frac{\sum xy}{\sum X2} = \frac{(28.44)}{10} = (2.84)$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NABL for Next Five Year .

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	47.39
066/67	4.00	44.55
067/68	5.00	41.71
068/69	6.00	38.87
609/70	7.00	36.03

H)   Calculation of trend values of Total investment to total deposit ratio

of HBL

Fiscal Year (t)	Ratio (y)	X= t-2005/06	X^2	XY	Yc=a +bx
060/061	23.15	(2.00)	4.00	(46.3)	33.82
061/062	49.18	(1.00)	1.00	(49.18)	37.92
062/063	48.44	-	-	-	42.02
063/064	42.22	1.00	1.00	42.22	46.12
064/065	47.12	2.00	4.00	94.24	50.22
Total	$\sum y = 210.11$		$\sum x^2\ 10.00$	$\sum xy^2$ (40.98)	

Here, Let the straight line trend equation Yc = a + bx

Where, Y = Annual Ration in Percentage

Now,

$$a = \quad \frac{\sum Y}{N} \quad = \quad \frac{210.11}{5} \quad = 42.02$$

$$b = \quad \frac{\sum xy}{\sum X2} \quad = \quad \frac{40.98}{10} \quad = 4.10$$

Projected Trend Value of Loan and Advance to Total Deposit Ratio of NABL for Next Five Year .

Fiscal Year (t)	X= t- 2005/06	Yc =a +bx
065/66	3.00	54.32
066/67	4.00	58.42
067/68	5.00	62.52
068/69	6.00	66.62
609/70	7.00	70.72

Appendix -7

A)   Calculation of Co-efficient of Consultation between deposit and loan & advance of NIBL Bank

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X^2	X^2	XY
060/061	7922.75	2572.14	62769967.56	6615904.18	20378422.19
061/062	11524.67	7130.13	132818018.61	50838753.82	82172395.19
062/063	14254.67	10126.06	203192765.88	102537091.12	144342631.09
063/064	18927.31	12776.21	358253063.84	163231541.96	241819287.30
064/065	24488.86	17286.43	599704264.10	298820662.14	423324964.17
Total	$\sum X =$ 77118.16	$\sum X =$ 49890.97	$\sum X^2 =$ 1356728079.99	$\sum X^2 =$ 622043953.23	912037700.5

Now,

Co-efficient of Correlation (r) = $\dfrac{N.\sum XY - \sum X.\sum Y}{\sqrt{N\sum X^2 - (\sum X^2}\ \sqrt{N\sum Y^2 - (\sum Y)^2}}$

$\dfrac{5 \times 912037700.5 - 77118.16 \times 49890.97}{\sqrt{5 \times 1365728079.99 - (77118.160)^2}\ \sqrt{5 \times 2204395323 - (49890.97)^2}}$

= $\dfrac{7126886.93}{720774330.94}$

            =   0.989

       r^2 =   0.978

Probable Error P.F. (r) $= 0.675 \left(\dfrac{1-r^2}{\sqrt{n}} \right)$

$$= 0.65 \left(\dfrac{1-0.92}{\sqrt{5}} \right)$$

$$= 0.007$$

6P.E.(r) $= 6 \times 0.007$

$$= 0.042 < 0.989$$

$\therefore$ r is highly significant

B)   Calculation of Co-efficient of Consultation between deposit and loan & advance of NIBL Bank

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X^2	X^2	XY
060/061	13447.65	7755.95	180839290.5	60154760.4	104299301.02
061/062	141119.09	8189.99	199347008.1	67075936.20	115634714.51
062/063	14586.61	10586.17	212769191.3	112066995.3	154416333.18
063/064	19347.40	12922.54	374321886.8	166992040.05	250017550.40
064/065	23342.29	15545.78	544862502.4	241671275.81	362874105.04
Total	$\sum X = 84842.98$	$\sum X = 55000.43$	$\sum X^2 = 1512139879$	$\sum X^2 = 647961007.$	987242004.14

Now,

Co-efficient of Correlation (r) $= \dfrac{N.\sum XY - \sum X.\sum Y}{\sqrt{N\sum X^2 - (\sum X^2}\ \sqrt{N\sum Y^2 - (\sum Y)^2}}$

$$\dfrac{5 \times 987242004.14 - 84842.89 \times 55000.49}{\sqrt{5 \times 1512139879 - (84842.98)^2}\ \sqrt{5 \times 647961007.7 - (55000.49)^2}}$$

$$= \dfrac{269809639}{279864716.32}$$

$$= 0.96$$

$r^2 = 0.92$

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$$\text{Probable Error P.F. } (r^2) \quad = \quad 0.6745 \left(\frac{1-r^2}{\sqrt{n}} \right)$$

$$= \quad 0.6745 \left(\frac{1-0.92}{\sqrt{5}} \right)$$

$$= \quad 0.02$$

$$6\text{P.E.}(r) \quad = \quad 6 \times 0.02$$

$$= \quad 0.12 < 0.96$$

$$\therefore \ r \text{ is highly significant}$$

C)   Calculation of Co-efficient of Consultation between deposit and loan & advance of SCBNL Bank

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X^2	Y^2	XY
060/061	31768.86	11867.28	1009260465.69	140832334.59	377009956.90
061/062	38410.36	13012.11	1475355755.32	169315006.65	499799829.45
062/063	24993.42	7589.59	624671043.29	57601876.36	189689810.49
063/064	28352.19	63.51.07	803846677.79	40356090.14	180066743.34
064/065	25213.56	10635.51	635723607.87	113114072.96	268159069.51
Total	$\sum X = 148738.31$	$\sum y = 49455.6$	$\sum X^2 = 4548857549.96$	$\sum Y^2 = 521199380.70$	$\sum xy = 1514725409.69$

Now,

$$\text{Co-efficient of Correlation (r)} = \frac{N.\sum XY - \sum X.\sum Y}{\sqrt{N\sum X^2 - (\sum X^2}\ \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 1514725409.69 - 148738.39 \times 49455.56}{\sqrt{5 \times 4548857549.96 - (148738.39)^2}\ \sqrt{5 \times 521199380.70 - (49455.56)^2}}$$

$$= \frac{217686677.51}{315401900.07}$$

$$= \quad 0.69$$

r^2 = 0.48

Probable Error P.F. (r) = $0.6745 \left(\dfrac{1-r^2}{\sqrt{n}} \right)$

$= 0.6745 \left(\dfrac{1-0.48}{\sqrt{5}} \right)$

$= 0.157$

6P.E.(r) = 6x0.157

$= 0.69$

∴ r is Lower significant

D) Calculation of Co-efficient of Consultation between deposit and loan & advance of HBL Bank

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X^2	Y^2	XY
060/061	16679.35	8074.75	278200716.42	65201587.56	134681581.41
061/062	21438.72	10262.79	459618715.23	105324858.58	220021081.22
062/063	12280.09	5846.78	150800610.40	34184836.36	71798984.61
063/064	12780.87	6939.81	163350637.95	48160962.83	88696809.43
064/065	20656.87	10342.94	426706278.19	106976407.84	213652766.99
Total	$\sum x = 83835.90$	$\sum y = 41467.07$	$\sum X^2 = 1478676958.21$	$\sum Y^2 = 359848653.19$	$\sum xy = 728851223.66$

Now,

Co-efficient of Correlation (r) = $\dfrac{N.\sum XY - \sum X.\sum Y}{\sqrt{N\sum X^2 - (\sum X^2)} \ \sqrt{N\sum Y^2 - (\sum Y)^2}}$

$\dfrac{5 \times 1088699876.87 - 83835.90 \times 41467.07}{\sqrt{5 \times 1478676958.21 - (83835.90)^2} \ \sqrt{5 \times 359848653.19 - (41467.07)^2}}$

$= \dfrac{167826984.49}{170569223.14}$

$= 0.98$

r^2 = 0.96

Probable Error P.F. (r) $\qquad = \qquad 0.6745 \left(\dfrac{1-r^2}{\sqrt{n}} \right)$

$$= \qquad 0.6745 \left(\dfrac{1-0.96}{\sqrt{5}} \right)$$

$$= \qquad 0.01$$

6P.E.(r) $\qquad = \qquad$ 6x0.01

$$= \qquad 0.06$$

$\therefore$ r is Higher significant

Appendix-8

Calculation of hypothesis on loan & advance to total deposit ratios of NIBL, NABIL, SCBNL and HBL

Fiscal Year	NIBL			NABIL		
	x_1	$X1=\left(X1-\overline{X1}\right)$	$x_2{}^2$	x_2	$x2=\left(x2-\overline{X2}\right)$	$x_2{}^2$
060/061	32.47	(28.23)	796.77	57.68	(6.65)	44.28
061/062	61.87	1.18	1.38	58.01	(6.32)	39.98
062/063	71.04	10.35	107.02	72.57	8.25	67.98
063/064	67.50	6.81	46.37	66.79	2.46	6.06
064/065	70.59	9.90	97.94	66.60	2.27	5.15
Total	$\sum x_1 =$ **303.46**	$\sum x_1 = $ **0.00**	$\sum x_1{}^2 = $ **1,049.48**	$\sum x_2 = $ 321.65	$\sum x_2 = $ **0.00**	$\sum x_2{}^2 = $ **163.46**

Here,

$$\bar{X}1 = \frac{\sum X_2}{n} \qquad\qquad\qquad \bar{X}2 = \frac{\sum X_1}{n}$$

$$\bar{X}1 = \frac{303.46}{5} \qquad\qquad\qquad \bar{X}2 = \frac{321.65}{5}$$

$$=60.69 \qquad\qquad\qquad\qquad =64.33$$

Fiscal Year	SCBNL			HBL		
	x_3	$X3=(X3-\overline{X3})$	x_3^2	x_4	$x_{4=(X_4\overline{X}4)}$	x_4^2
060/061	37.35	2.55	6.50	48.41	(1.24)	1.53
061/062	33.87	(0.93)	(0.86)	47.87	(1.78)	3.16
062/063	30.37	(4.43)	(19.62)	47.61	(2.04)	4.16
063/064	30.29	(4.51)	20.34)	54.30	4.65	21.62
064/065	42.12	7.32)	53.58	50.07	0.42	0.17
Total	$\sum x_3 =$ 174	$\sum x_3 = 0$	$\sum x_3^2 =$ 100.90	$\sum x_4 =$ 248.26	$\sum x_4 = \mathbf{0}$	$\sum x_4^2 =$ 30.64

Here,

$$\overline{X}3 = \frac{\sum X_3}{n} \qquad\qquad \overline{X}4 = \frac{\sum X_4}{n}$$

$$\overline{X}3 = \frac{174}{5} \qquad\qquad \overline{X}4 = \frac{248.26}{5}$$

$$= 34.8 \qquad\qquad\qquad = 49.65$$