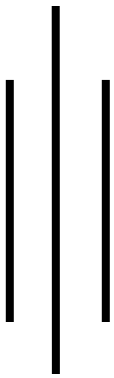
A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE OF NABIL BANK LIMITED, NEPAL INVESTMENT BANK LIMITED & HIMALAYAN BANK LIMITED



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Date: ……....

RECOMMENDATION

This is to certify that the thesis

Submitted by:

VESH RAJ PUN

Entitled:

"A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE OF NABIL BANK LIMITED, NEPAL INVESTMENT BANK LIMITED & HIMALAYAN BANK LIMITED"

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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VIVA-VOCE SHEET

We have conducted the viva-voce examination of the thesis presented by

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"A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE OF NABIL BANK LIMITED, NEPAL INVESTMENT BANK LIMITED & HIMALAYAN BANK LIMITD"

And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment for the Degree of Master of Business Studies (M.B.S)

Viva-Voce Committee

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DECLARATION

I hereby, declare that the work reported in this thesis entitled ***"A Comparative Study on Financial Performance of NABIL Bank Limited, Nepal Investment Bank Limited & Himalayan Bank Limited"*** submitted to Central Department of Management , Tribhuvan University , is my original work done in the form of partial fulfillment of the requirement of the Degree of Masters of Business Studies (MBS) under the guidance and supervision of **Mr. Sanjay Kumar Shrestha ,** Central Department of Management, Tribhuvan University.

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ACKNOWLEDGEMENT

This thesis entitled "**A Comparative Study on Financial Performance of NABIL Bank Limited, Nepal Investment Bank Limited & Himalayan Bank Limited**" is a Masters Degree thesis prepared as practical fulfilled of MBS course under Tribhuvan University of Nepal. It aims to analysis the comparative financial position of these banks.

I have felt a great pleasure to express my heartiest and sincere thanks to my honorable thesis supervisor lecturers Mr. Sanjay Kumar Shrestha who guided me through out this research and I shall ever remain indebted to them for scholarly conservative directions, useful suggestions and incentive challengeable comments during the course of preparing this thesis. Their patient guidance and constant encouragement has been a great source of inspiration to me. Without their kindly help and valuable guidance, this thesis wouldn't have come in this form.

I would like to express my heartfelt gratitude to my respected parents, who spent their valuable time effort to make a great sacrifice for my higher education. Despite of them I am owed to them who gave me a regular inspiration and continuous contribution for secret success. I am also indebted to my co-workers and friends.

However, last but not least, I am alone responsible for my errors and deficiencies and apologize for any of them committed that have remained in this work.
Thank you.

Vesh Raj Pun

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ABBREVIATIONS

NRB	:	Nepal Rastra Bank
NBL	:	Nepal Bank Limited
NIDC	:	Nepal Industrial Development Corporation
QMS	:	Quality Management System
IFC	:	International Finance Corporation
ATM	:	Automated Teller Machine
B.S.	:	Bikram Sambat
EBL	:	Everest Bank Limited
HBL	:	Himalayan Bank Limited
NBBL	:	Nepal Bangladesh Bank Limited
SCBNL	:	Standard Chartered Bank Nepal Limited
NIBL	:	Nepal Investment Bank Limited
BOK	:	Bank of Kathmandu
NABIL	:	NABIL BankLimited
CRR	:	Cash Reserve Ratio
JVBs	:	Joint Venture banks
F.Y.	:	Fiscal Year
i.e.	:	That is
Ltd.	:	Limited
NGOs	:	Non-Government Organizations
S.N.	:	Serial Number
NPA	:	Non-Performing Assets
SWOT	:	Strength, Weakness, Opportunity & Threats (Analysis)
EPS	:	Earning Per Share
MPS	:	Market Value Per Share
BVPS	:	Book Value Per Share

NWPS	:	Net Worth Per Share
NPAT	:	Net Profit After Tax
P/E Ratio	:	Price-Earning Ratio
ROA	:	Return on Assets
ROE	:	Return on Net worth / Shareholder's Equity
S.D.	:	Standard Deviation
C.V.	:	Co-efficient of Variation
P.E.	:	Probable Error
EBIT	:	Earning Before Interest and Tax

CHAPTER I
INTRODUCTION

1.1 General Background of the Study

Integrated and speedy development of the country is possible only when competitive banking service reaches nook and corners of the country because it is not possible to develop all the sectors by the investment of funds by the government alone. The role of money in an economic is very important. Proper and well-planned management of money directs, determines and enhances the health and productivity of total financial sector and the performance financial sector affects the growth of economy. The economy of a country indicates the development of the country. The financial sector plays an important role in the development of the country and mobilization of financial resources. Hence, money is a subject to manage, and banks are the manager. Therefore, bank as manager collects, disperse and controls the flow of money. Banks collect the fund from financial sector organizes the scattered domestic financial resources and invests them in different sectors. Economic development depends upon various factors however, the major are capital formation and proper utilization of the capital. The organized financial sector collects the fund, mobilize and invest the fund in the best possible manner.

Banks play an important role in the economic growth of a country. Banking, when properly organized, aids and facilitates the growth of trade and industry. The issue of development always rests upon the mobilization of resources. Banks function of lending ensures required volume of capital to resources mobilization. In the modern economy, banks are to be considered not as dealers in money but as the leaders of development. “Banks are not just the storehouse of the country’s wealth but are the reservoirs of resources necessary for economic development. Bank renders valuable services to trade and industry. The economic growth of a country depends on the growth and development of trade and industry, Industrial development can take place only if sufficient money is invested in industries. Banks undertake the stupendous task by mobilizing the savings of the people and lending the same to the trades and industrialists. The banks help in the uniform development of the different regions in the country.

Therefore, a bank is an institution that deals with money by accepting various types of deposits, disbursing loan and rendering other financial services. Since banks are rendering a wide range of services to the people from different walk of life, they have become an essential part of modern society. In other words, bank is an institution that accepts the deposits from people and in turn advance loan by creating credit. In this process, they earn interest and commission, out of which they pay interest to the depositors i.e. People who deposits fund with them. Banks have opened their branches in towns and villages offering different types of services to the different level of people. Banks' debt-usually referred as 'Bank Deposit' that is commonly accepted in final settlement of debt of other people. It is different from other financial institution in the sense that they cannot create credit though they may be accepting deposits and making advances. Thus, bank's business was basically to buy and sale of credit. Credit instruments are kept on stock-in-trade also on the basis of its own credit and banks create money transferred by credit instruments. They must gain the confidence and trust of the people to create credits. It is said that the flow of credit is very much important like the circulation of blood in human life. If the circulation of blood is not smooth it will do irreparable harm to the body. Similarly, unsteady and unevenly flow of credit harms the economy. Bank came in existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sectors and causing an overall economic development. That mobilized deposits contribute to the development of economic infrastructure of the nation. Banks are not just storehouses of the wealth but are reservoir of resources. The contribution of the bank has been very substantial in increasing production and employment by motivating people to save and in collecting the scattered saving in the form of deposits. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving.

Economists do not have exact records about the origin of the word "Banking". The term bank is derived from the Latin word "Bancus" which refers to the bench on which the banker would keep his money and records. Some Economists says its origin to the French word" Banque" and the Italin word "Banco" which means a bench for keeping, lending and exchanging of money or coins in the market place by money lenders.The invention of money was a milestone in the history of economy and developing the banking as a habit people. It has made economic and business activity more precise and efficient. This gave the emergence of non-institutional

banking activities. Merchants, Money Lender and Goldsmith were the ancestors of modern bankers. During the early periods, although the banking business was mostly done by private individuals, many countries established public banks either for the purpose of facilitating, commerce or to serve the government. The Bank of Venice established in 1157, is supposed to be the most ancient bank. Originally, it was not a bank in modern sense being simply an office for the transfer of public debt.

1.2 An Introduction of Sampled Banks

NABIL Bank Limited, Nepal Investment Bank Limited (NIBL) and Nepal Industrial and Commercial Bank Ltd (HBL bank) are taken as samples of study out of 31 commercial banks. These three banks were formerly established with the motive of commercial nature.

1.2.1 NABIL Bank Limited

NABIL Bank which previously known as Nepal Arab Bank Limited is the first private commercial bank of Nepal and major joint venture Bank commenced operation on July 12, 1984 A.D. Under the technical service agreement approved by Nepal Rastra Bank, Joint venture operation in Nepal was started by NABIL Bank after Nepal encouraged foreign investment and joint venture operation with Nepalese investors or in certain circumstances as fully owned subsidiary. NABIL Bank has worldwide correspondent network, which enables it to conduct International Trade Business with high level of accuracy and efficiency. NABIL Bank has Head office in Kamaladi, Kathmandu has 37 branches of joint venture Bank in Nepal. NABIL Bank is the only authorized Bank to operate inside the International Airport at arrival and departure lounges. In addition, NABIL Bank is authorized to collect embarkation fee of departing passengers. NABIL Bank provides the issuance of international Bank guarantee and letter of credit and any other Banking services anywhere in the world. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Banglore, India, Internet banking system and Telebanking system. In 2004 A.D., NABIL Bank has awarded for “Bank of the Year”.

The mission of NABIL bank is to be the "Bank of the 1st Choice". The slogan of NABIL Bank is "Your Bank at Your Service". The value of NABIL Bank is CRISP.

C=Customer Focus I= Innovation P=Professional

R= Result Oriented S=Synergistic

Its share capital distribution is as follows

Authorized Capital (16,000,000 shares of Rs. 100) Rs 1,600,000,000

Issued Capital (14,491,240 shares of Rs. 100) Rs 1,449,124,000

Paid up Capital (14,491,240 shares of Rs. 100) Rs 1,449,124,000

1.2.2 Nepal Investment Bank Limited

Nepal Investment bank limited (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1980 as a joint venture between Nepalese and French partners which was the second private commercial bank of Nepal. The French partners (holding 50 % of the capital of NIBL) were Credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of banks, professionals, industrialists and businessmen, has acquired on April 2002 the 50% share holding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Limited upon approval of bank's Annual General Meeting, NRB, and Company Registrar's office with the following shareholding structure.

- A group of company's holding 50% of the capital
- RBB holding 15% of the capital
- Rastriya Beema Sansthan holding 15% of capital
- Remaining 20% being held by the general public

NIBL has Head office in Durbar Marg, Kathmandu and has 34 branches in Nepal. NIBL, which is managed by a group of experienced bankers and professionals having proven track record, are offering customers what they are looking for. The bank claims to ensure that the customer's choice of the bank will be guided among other things by its reliability and

professionalism as the slogan states that "Our vision is to be the most preferred provider of financial service in Nepal."

The mission of Nepal Investment bank is to be the leading Nepali Bank, delivering world class service through the blending of state of the art technology and visionary management in partnership with competent and committed staff, to achieve sound financial health with sustainable value addition to all our stakeholders. We are committed to do this mission while ensuring the highest level of ethical standards, professional integrity, corporate governance and regulatory compliance. In 2003, 2005, 2008 & 2010, NIBL has awarded for "Bank of the Year".

Its share capital distribution is as follows
Authorized Capital (40,000,000) shares @ Rs 100) Rs 4,000,000,000
Issued Capital (24,090,977 shares @ Rs 100) Rs 2,409,097,700
Paid up Capital (24,090,977 shares @ Rs 100) Rs 2,409,097,700

The main focus of NIBL is to become most preferred provision of financial services. It is operating with a motto: "Truly a Nepali Bank". Mobile Recharging Facility Through ATM, Savings A/c in Re 1, Family Saving A/c, NTC- Recharge through internet (1st in Nepal) etc are some focuses of this bank.

1.2.3 Himalayan Bank Limited

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.
Himalayan Bank Limited holds of a vision to become a Leading Bank of the country by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the Bank.

The Bank's mission is to become preferred provider of quality financial services in the country. There are two components in the mission of the Bank; Preferred Provider and Quality Financial Services**;** therefore we at HBL believe that the mission will be accomplished only by satisfying these two important components with the Customer at focus. The Bank always strives positioning itself in the hearts and minds of the customers.

The himalayan bank's objectives is to become the Bank of first choice is the main objective of the Bank

Its share capital distribution is as follows
Authorized Capital (30,000,000 shares @ Rs 100) Rs 3,000,000,000
Issued Capital (16,000,000 shares@ Rs 100) Rs 1,600,000,000
Paid up Capital (16,000,000 shares@ Rs 100) Rs 1,600,000,000

The Bank is committed towards providing financial services to its patrons by the means of efficient and cost effective service delivery through its Transaction Banking, Consumer Banking, Business Banking and Treasury divisions. Consumer Banking comprises of consumer lending, retail credit products and banking services for individuals with dedicated teams. Consumer Banking services include home loans, auto loans, personal loans, education loans, travel loans, etc. Liability Marketing & Transaction Banking comprises of institutional and personal deposit products and transaction banking services including debit cards, ATMs, safe deposit lockers, payment services, drafts, remittance, SMS Banking, Travelers' Cheques, etc.

1.3 Statement of the Problem

Financial Performance Analysis or Financial Management is the main indicator of the success or failure of any financial institution and commercial banks. Financial condition of the business firm should be sound from the viewpoint of shareholders, debenture holders, financial institution and nation as a whole. The survival of the existing commercial bank and other financial institutions depend upon how they manage their assets and liabilities to maximize their profits with the minimum exposure of assets to risk, and are guided by three important

conflicting criteria of solvency, liquidity and profitability. Commercial banks deal with other people's deposits, adequate cash flow, liquidity, and better utilization of assets.

Joint venture Banks and Nepalese Promoters bank are being increased in response to the economic liberalization policies of government. Besides joint venture banks, Nepalese promoters are also registering numbers of commercial banks. Other institutes offering similar services are finance company, saving & co-operative societies and development banks. These institutions have the tendency to centralize in major cities focusing the activities among the industrialists, traders & entrepreneurs. Because of number of banks & financial institutions are come into existence, in the recent years that creates intense competition in the banking sectors. Banks have been facing the considerable pressure to lower the lending rates, which has been adversely affecting the profitability of banks. The commercial banks are competing with limited opportunity, narrow clientele base and barring investment in the economic activities in the country, the demand for credit has not picked up. Besides, competition in the banking sectors has turned intense and lending opportunity in the good projects is very limited. Government policies on economic liberalization have further intensified the competition. Every banks shows their huge amount of profit & high technology, however, the profit is not the instrument to measure good health of that institution. There should also be the proper examination of their performance in term of overall management of the banks. Financial plans may take many forms, but any good plan must be related to the firms exciting strength & weakness. The strength must be understood if they are to be used to proper advantage & the weakness must be recognized if effective action is to be taken.

Saving mobilization and effective credit management system is must for economic development especially for a country like Nepal where the economic growth rate is very low. In this regard, the good banking system can play a vital role in accelerating the pace of economic development through the mobilization of scattered savings and channeling it in the productive sector of the economy. The adaptation of open and free marker economic and financial policies is believed to generate more savings as well as improve investment opportunities. Adequate infrastructure development in saving mobilization and investment is therefore the demand of the day. Therefore the bank can contribute a lot by savings and investing it in the productive

and development sector of the economy of Nepal through bringing in appropriate and new innovative banking technologies. Keeping in pace with the development in the banking industry, the leading commercial banks NABIL, NIBL & HBL have been regularly coming up with new and innovative service to attract customers as well as doing its level best to satisfy the existing customers. They have been able to maintain the position as the market leaders in the banking industry. In compare to other commercial banks, they are getting success in terms of recognize and profitability.

Nepal has become 147th member of World Trade Organization (WTO). In general, there is much curiosity in people about the opportunities and threats after the accession of membership of WTO. Many questions may arise at once. It is crystal clear that Nepal as to face various challenges in different aspects in coming days. Liberalization in services sector is inevitable. We cannot escape from the ground reality of globalization, widespread acceptance of WTO and necessity of membership in this international trade institution. It should not be opposed to hide our inefficiencies or governance problems. Rather it is right time to find out the impacts, continue and finish the reform process making the service sector really competitive. Otherwise, we will lose the opportunities. Transparency and disclosure practices are must for the sustainable liberalization process and for the growth and development of financial services sector especially commercial banks. In short, SWOT analysis is necessary in this sector.

There are altogether 31commercial banks among them two banks are state owned and remaining 28 are in private sectors. Recently, Civil Bank and Century Bank are operated in the country. They had used customers' oriented marketing concepts as well as modern technology as required by the present competitive environments. The problem of the study on the issues related to the comparative strength & weakness of NABIL Bank Ltd, NIBL & HBL Bank Ltd. Thus, this study is strived to find the answer of the following question:

- What is the comparative position of the three banks in term of liquidity, profitability, turnover, leverage and capital adequacy?
- Is there any difference in financial performance between these three banks?
- What is the relation between the major financial indicators and the future trend of them in the three banks?

- How sound the operational result in relation their profitability?
- What is the overall financial status of NABIL Bank, NIBL & HBL Bank running their business?

1.4 Objectives of the Study

The basic objectives of this study is to analyze, examine, compare and interpret the financial performance of NABIL Bank Ltd, Nepal Investment Bank Ltd & Nepal Industrial and Commercial Bank Ltd by using financial & statistical tools, and to recommend the suitable suggestion for improvement of those banks to management team owners.

More specifically, the following are the objective of the study:

- To determine the liquidity, profitability, leverage, efficiency of capital adequacy position of NABIL Bank, NIBL & HBL Bank.
- To analyze the comparative financial position of these three banks.
- To examine the trend of financial performance of three banks.
- To explore the relationship of financial performance of three commercial banks.

1.5 Limitation of the Study

The study has been conducted for the requirement of the master degree in business study and it has been limited in terms of period of study as well as source & nature of data. Every study has its own limitations. This study is also not an exception. Thus, the limitations of this study are:

- There are more than 31 commercial banks operating with in Nepal. Since the study deals with only three commercial banks namely NABIL, NIBL & HBL Bank. The conclusion drawn from the study may not applicable to other banks.
- The study covers the period of five years starting from FY 2006/07 to 2010/11 of three banks. Hence conclusions drawn are confined only the above period.

- The study is mainly focused on the financial performance of three banks among various commercial banks. It does not cover the other areas of the banks.
- Many financial & statistical tools are used to study the financial performance. But this study has used limited tools.
- The study is carried out on based of secondary data from the annual report of the banks. Similarly, the study focused on Balance Sheet & Profit And Loss A/C maintained by banks & published in annual reports.

1.6 Organization of the Study

The study has been divided into five sequential Chapters and at the end bibliography & appendices have been maintained. Chapter one deals with Introductory aspects like general background of the study, introduction of sampled banks, statement of problems, objective of study, and limitation of the study and organization of the study. The Second chapter presents the Review of Literature which contains conceptual review/ review of related books, journals & articles, and past research works. The third Chapter contains Research Methodology which includes research design, population & sample, nature & source of data, data processing procedure, tools & techniques for analysis, period covered and diagram & graphical representation. The forth chapter deals with presentation, analysis and interpretation of data which attempt to analysis and evaluate the data with the help of analytical tools, i.e. ratio analysis, income and expenditure analysis, bankruptcy test, correlation analysis and trend analysis and interpretation of the results obtained. Finally, the fifth chapter contains summary, conclusion and recommendation which includes summary of whole study, main conclusion that flow from the study, and offers suggestions & recommendations for the improvement in future.

CHAPTER II
REVIEW OF LITERATURE

"Review of literature refers the survey of materials which means reviewing research studies or other relevant propositions in the related area of the study. So that all past studies, their conclusion and deficiencies may be known and the further research can be conducted. It is an integral and mandatory process in research work." (Joshi P.R, 2003:107)

In other words, review of literature is finding the pertinent fact with the available literature in ones fields of research. The study of the material available on research topics is called review of literature. Review of literature not only provides solid information on the topic but also guides along the future stream of action. The textual constraints would help it to support area of research in order to explore the relevant and true facts for the reporting purpose.

The study aims to analyze and compare the financial performance of NABIL Bank, NIBL & HBL Bank. For the purpose it needs to review of literatures on the concern area. There are several studies have been already done from which the researches can make clear ideas and concepts. What is other opinion and concepts? What is the outcome of others researches? What has done and written? These all and other related questions are reviewed in this chapter, which is the guideline and inputs of the study. This chapter has been organized into three headings i.e. conceptual framework, review of related articles and review of different masters' theses.

2.1 Conceptual Framework (*Review of Books*)

The concept of derived from the review of text books have presented in this section. It gives an overview of the concept of joint venture banks and commercial bank. In addition, concept of financial analysis & its methods and steps have been described in this section.

Banks are financial institutions play significant role in the development of country. Bank is an intermediary of lender and borrower. It collects funds from surplus unit of the society and provides to deficit unit. A bank is a business organization that receives and holds deposits of

funds from others makes loans or intends credit and transfers fund by written orders of deposit. (Encyclopedia, 1984: Vol 3)

Traditionally, banks act as financial intermediaries to channel funds from surplus units to deficits units. Unlike other non-banking financial companies, commercial banks do not produce loans and financial innovations to facilitate trade transactions, because of especial role they play in the economy concerned authorities have regulate them. Analysis of banks' financial statement is different from threat of other companies due to especial nature of assets and liabilities.

2.1.1 Concept of Joint Venture Banks

Joint venture means two or more persons or parties or organization carried out their business or work for specific objectives. They use and do work by using each other's resources, technologies or services etc. Joint venture is a single deal, which is jointly undertaken by two or more person to fulfill their objectives such as profit or wealth maximization by optimum use of resources etc. It takes place at that time when they have exceptional profit or advantages in relation to business deal.

Joint venture is a general model for direct foreign investment. A joint venture bank is the joining of forces between for the purpose of carrying out a specific operation (Gupta D.P., 1984:15). Joint venture is a new organization two or more independent firms mutually decide to participate in a business by contribution their resources, capital establishes.

Their objectives is fulfilling the shortage of funds required to investment in development works and to make competence in the field of resources, they share new methods, new technology and services of management and get advantages from foreign investors.

To establish a new bank requires capital, technology, experience and new market etc. For the purpose, a new bank and an established bank enters into technical services agreement in which old bank provides channel of global network disputes its experts to help the new bank in technical aspects. Sometimes old bank provides management services and investment also.

The joint venture banks are playing, increasing dynamic and vital role in the economic development of the country that will undoubtedly increase with time.

2.1.2 Concept of Commercial Banks

Commercial banks are those financial institutions that accept the deposit from saver and provide short term and long-term loan to productive sector or different forms. They purchase and discount the bills for exchange, promissory notes, exchange foreign currency, issue bank guarantee, bills of exchange, sales and purchase of shares etc. Commercial bank obtain deposit from the customers as saving and distributes it to trade industry and agriculture a need of short-term finance. Principally commercial banks accept deposits and provide loans, primary to business firms, there by facilitating the transfer of funds in the economy.

Commercial bank is a corporation, which accepts demand deposits subjects to check and make short-term loan to business entreaties regardless of the scope of its other services (American Institute of Banking , 1972:45).

Unlike the past where major activities of banks were confined to accepting deposits and providing loans banks today offers a wide range of products and services to its clients like trade finance, remittances, and export credit, tele-banking, ATM debit card, Credit card etc. Banks have made significant stride in the use of modern technology to provide improved services to its clients. Highly qualified, experienced and energetic management team manages banking operations including day-to-day operations and risk management.

Main function of commercial bank is accepting deposit and provides loan or formation of capital, collection of small savings. Vaidya (1999) says the functions of commercial banks are: credit creation, accepting deposits and advancing loans, romoting foreign trade, safeguarding valuables, agency services.

2.1.3 Role of Commercial Banks in the National Economy

Commercial banks are the major component in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development of the economy, with major thrust in industrial development. So, commercial banks are those that accept deposits and finance to the business and finance to the business and project. They provide short tem and long- term finance. As per Commercial Bank Act 2031 B.S, "*A commercial Bank means the bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions."*

Commercial Banks play the role of financial intermediary collecting the fund from surplus unit and supplying the to deficit units (investors). Commercial banks help the process of saving and of the holding of saving in a socially describe form. Though their advances bank also help the creation of the incomes which further saving by the community and further growth potentials emerge for the good of economy. In a planned economy, bank emerges for the good economy and makes the entire planned productive process possible by providing funds for all types of production incorporated in the plan, regardless of whether the production is in the public sector or whether the production is undertaken by one type of organization or another. All employment income distribution and other objectives of plan are as far as possible subsumed into production plan which banks finance. The importance of commercial banks is directing the economic activities in the system is indeed overwhelming with the establishment of commercial banks the flood gates of development promising great hopes for people in the life open.

However, poor economy may be there will be needed for institution, which allows such saving as are currently forthcoming to be invested conveniently and safely and which ensure that they are channeled into the most useful purpose. Therefore, the tasks of commercial banks in underdeveloped countries are almost self-evident. Their purpose is to provide a collecting point for saving of a relatively small average amount from a large number of individual sources so long as the means to utilize saving safely and profitably are not available within an economy, funds will either to be directed aboard, sterilized in useless hoards of cash or precious metals or more likely still will not accumulated all.

2.1.4 Development of Banking System in Nepal

The development of banking is relatively recent in Nepal. In case of Nepal too there were merchants, goldsmiths and moneylenders working as ancestors of modern banking. In Nepal, the origination of banks started through Sahu (Goldsmith).Even though the specific date of the beginning of money and banking deal in Nepal is not obvious, it is speculated that during the Lichhavi period, King Gunkamdev had borrowed money from the rich people to build the city. The historical record shows that Gunkamdev, the king of Kathmandu, borrowed money to rebuild his kingdom in 723AD. Some fifty-seven years thereafter, a merchant 'Shankhadhar' introduced 'Nepal Sambat' by clearing all the indebtedness of the people in 880AD. This clearly proved that money-lending practices were prevalent at that time. Later, during the regime of Mallas, money-lending business became more penetrating and popular. Towards the end of the 14th century, Jayasthiti Mallas, the rular of Kathmandu, divided the people in sixty-four classes on the basis of their occupation. Among them one was Tankadhari and the people belonging to this class were engaged in money lending business. It is believed that the money lending business became quite popular in the reign of Mallas, particularly in financing the trade with Tibet and India. Thus, the role of Tankadhari was akin to that of a banking agent. However, these moneylenders advanced loan against personal security of land, building etc. As they were free to charge any amount as interest and other charges on the loan advances. Naturally, the interest rate was higher, discriminatory and unfair. Of course, this gave birth to malpractices, frauds and exploitation in the whole Nepalese society. Even today, such practices of usury are prevalent in Nepalese village, which are beyond the purview of modern banking system. Thus, it was the duty of government to control the malpractices of the moneylenders and to set up a financial institution to make easy credit facilities for the general people. As a result, with growing consciousness and awareness of this, 'Tejarath Adda' had been established as an institution, during the period of Rana , under the Prime Minister of Ranodip Singh in 1933 B.S.

Modern baking started with the inception of NBL under the Nepal Bank Act 1936 in 1994 B.S. NBL had Herculean responsibilities of attracting people towards the banking system from pre-dominant moneylenders and to expand banking services. Thus, Nepal Rastra Bank (NRB) was set up in 14th Baishk 2012 B.S. as a central bank with an authorized capital of Rs 10 million

fully subscribed by the HMG under Nepal Rastra Bank Act 2012 B.S. Nepal Rastra Bank, the central bank of Nepal regulates, inspects, supervise and monitor the whole functions of bank and financial companies of Nepal. The second commercial bank Rastriya Banijaya Bank was established in 2022 B.S. The two commercial banks extended their operation extensively throughout the country.

Nepal Industrial Development Corporation (NIDC) and Agriculture Development Bank were established to facilitate development activities by providing loans and equity capital. The former Industrial Development Center was established in 2013 B.S. and was converted into NIDC in 2016 B.S. to finance equity and loan capital to industries that are going to be established in the country. Agricultural Development Bank Nepal was established in 2004 to finance agricultural sector as well as agro-based industries within the country.

In modern times , commercial banks , which are facilitated, regulated and supervised by the Central bank, confined them and concentrated in their activities of fulfilling the financial needs of their customers. With the opening of NABIL bank in1985 A.D. the door of opening commercial banks was opened to the private sector. As the commercial banks grew they stopped entertaining small projects. Thus a scope for opening finance companies emerged. In 2042 B.S., finance company Act was passed; but private sector kept stony silence till 2049 B.S. The first break came in the month of Shrawan of that year, when the first company Nepal Housing and Finance Company came. The second came in the Poush of the same year, Nepal Finance and Saving Company. Now there are altogether 79 finance companies operating in Nepal.

Altogether there are 31 Commercial Banks, 83 Development Banks, 79 Finance Companies and 35 microfinance and cooperatives. They all have got their own rules and regulations and own vision but ultimately they are serving the nation to build a huge financial resource and mobilize in the best possible way. The banking Sector remained still for a long period of time but as the time passed on many developments occurred. In the present scenario, Nepalese banking system is evolving itself as a powerful instrument of planning and economic growth of all the developed and underdeveloped sectors. The scope and scale of banking too have undergone substantial change in response to the saving and credit needs of people.

2.1.5 Concept of Financial Performance

Financial analysis is concerned with analyzing the financial statement of an organization in difference aspect. The term indicates the real picture of an organization by interpreting financial ratios and analysis, which enables to evaluate and disclose the conditions of an organization. Every stakeholder such as share holders, Trade creditors, long term investors or debtor, customers, employees, tax authorities, managements etc. wants to know about the position or condition of an organization before or after their involvement to the organization. By financial statement analysis they are able to take corrective actions to introduce new policies or to correct their old policies, to know about their strength weakness etc. By analyzing financial statements someone can predict or know the financial performance of that organization.

"Financial performance as a part of financial management is the main indicator of the success or failure of the enterprises. Financial performance analysis can be considered as a heart of the financial decisions (Clark John, Chicago)."

"Financial analysis is the process of determining financial strength and weakness of a company by establishing strategic relationship between the components of a balance sheet and other operative data (Pandey I.M., 1993:94)." Therefore, the analysis of financial statement consists of a study of relationship and trends to determine whether or not the financial position and results operations and financial progress of the company are satisfactory. "It is the process of determining the significant operating and financial statements. The goal of such analysis is to determine the efficiency and performance of the firm's management reflected in the financial records and reports (Hampton, J.J. (1998:98)."

"Financial statement analysis involves a comparison of a firm's performance with that of other firms in the same line of business which often is identified by the firm's industry classification. Generally speaking the analysis is used to determine the firm's financial position in order to identify its current strengths and weakness and to suggest actions that might enable the firm to take advantage of the strengths and correct its weakness (Weston J.F. Besley S. and Bringham, (1996:78)."

The main function of financial strength and weakness of a business undertaking by regrouping and analysis of figures contained in financial statements by making comparison of various components and by examining their content. This can be used to financial managers as basic to plan future financial requirements by means of forecasting and budgeting procedures.

2.1.5.1 Method of Financial Performance Analysis

An enterprise communicates financial information to users through financial statement and reports. Financial statements are summarized information of the firm's financial affairs, organized systematically. They are the means to present the firm's financial situation to owners, creditors and general public. The preparation of financial statement is the responsibility of top management. As investor and financial analysis to examine the firm's performance in use these statement under to make investment decisions. So concern authority should be prepared very carefully and contain as much as information as possible. The two basic financial statements are prepared for the purpose of external reporting to owner, investor and creditors are:

1. Balance Sheet (*or Statement of Financial Position)*
2. Profit and Loss Account (*or, Income Statement)*

For internal management purpose i.e. for the planning and controlling much information than contained in published financial statement is needed. The accountant or account officer prepares these financial statements at the end of firm's income year. Balance sheet and income statement undoubtedly provides useful financial data regarding the operation of an enterprise but they fail to present all the useful financial data required for major investing and financial decision by the management. Therefore, another financial statement fund flow statement is also in use. It summarized the source from which funds have been applied. It is prepared to show additional useful information not covered by the traditional statements.

2.1.5.2 Limitations of Financial Performance Analysis

From the above discussion, it has been evident that financial performance analysis of great significance for investor, creditors, management, economist and other parties having interest in business. It helps management to evaluate its efficiency in past performance and take decisions

relating to future. However, it is not free from drawbacks. Its limitations are listed below (Jain, S.P, and Narang K.L, 1989:B23-B25):

a) Historical Nature of Financial Statements: - The basic nature of statements is historical. Past can never be a precise and infallible index of the future and can never be perfectly helpful for the future forecast and planning.

b) No Substitute for Judgment:- Analysis of financial analysis is a tool to be used by expert analyst to evaluate the financial performance of a firm. That's why; it may lead to faculty conclusion if used by unskilled analyst.

c) Reliability of Figures:- Reliability of analysis depends on reliability of figures of the financial statements under scrutiny. The entire working of analysis will be vitiated by manipulation in the income statement, window dressing in the balance sheet, questionable producers adopted by the accountant for the valuation of fixed assets and such other facts.

d) Single year Analysis is not much valuable: - The analysis of these statements relating to single year only will have limited use and value. From this, one cannot draw meaningful conclusion.

e) Result may have different Interpretation: - Different users may differently interpret the result derived from the analysis. For example, a high current ratio may suit the banker but it may be the index of sufficiency of the management due to under-utilization of fund.

f) Changes in Accounting Methods: - Analysis will be effective if the figures derived from the financial statements are comparable. Due to change in accounting methods, the figures of current period may have no comparable base, and then the whole exercise of analysis will become futile.

g) Pitfall in inter-firm Comparison: - When different firms are adopting different procedures, records, objectives, policies and different items under similar heading, comparison will be more

difficult. If done, it will not provide reliable basis to assess the performance, efficiency, profitability and financial condition of firm as compared to whole industry.

h) Price level change reduces the validity of analysis: - The continuous and rapid changes in value of money, in the present day, economically also reduces the validity of the analysis. Acquisition of assets at different levels of prices makes comparison useless as no meaningful conclusion can be drawn from a comparative analysis of such items relating to several accounting period.

2.2 Review of Related Articles

Some of the journals and articles published by management experts in financial aspects have been reviewed in this section:

Mr. N.P. Poudel, in the journal entitled, "Financial statement Analysis: An Approach to Evaluate bank's Performance" which was published NRB Samachar (An annual publication-2053) is reviews as follows:

According to Mr. Poudel, Balance sheet, profit and loss a/c and the accompanying notes are the most useful aspects of the banks. It needs to understand the major characteristics of bank's balance sheet and profit and loss a/c. The bank's balance sheet is composed of financial claims as liabilities in the form of deposits and as assets in the form of loans. Fixed assets accounts form a small portion of the total assets. Financial innovations, which are generally contingent in nature, are considered as off-balance sheet item.

According to Mr. Poudel the principle objectives of analyzing financial statement are to identify: Liquidity, Profitability and solvency. Most of users of the financial statements are interest in assessing the bank's overall performance which is affected by the following factors:

- The structure of Balance sheet and profit and Loss account
- Operating efficiency and internal management system
- Managerial decision taken by top management regarding interest rate, exchange rate, lending policies etc.

- Environmental changes (Technology, Government, Competition and economy).

The other factors to be considered in analyzing the financial statement of bank are to assess the capital adequacy ratio and liquidity position. in the line of adequacy of bank is assessed on the basis of risk weighted assets. In indicates a bank's strength and solvency. Bank facing with capital adequacy problem may increase capital or reduce assets or reallocate the existing assets structure in order to maintain the desired level of capital base.

Govinda Bahadur Thapa in his articles "Nepal banking system: can on the mess be managed" stated that the joint venture banks have been earning a huge profit not from fund based lending but from investing outsides. That is why, there banks have been less interested to lending aggressively in the domestic market. Economics activities have slowed down in Nepal for several years; however commercial banks have not lowered their lending rate to revitalize the economy. On the contrary, the commercial banks have been discouraging the deposit to get rid of excess liquidity. And new avenue that is investing aboard has been opened for the commercial banks to earn profit rather then motivating then to invest locally.

The above journals & articles focus in the various aspects of the bank's economic environment. What over aspects of the bank the above journals target, they all have to be combinable assessed and kept in strict consideration for effective & efficient financial performance of the banks in the Nepalese economy.

2.3 Review of Previous Theses

Various studies have been conducted on the financial performance of commercial banks of Nepal. Many of them are concentrated to Nepalese commercial banks and only few are focused on joint venture bank especially comparative studies. In this chapter, different previous studies have been reviewed so that the chances of duplication will be avoided from the present study and some newness can be created in this field of study.

Mr. Manandhar (2005) conducted a dissertation on a topic "*Financial performance analysis of Nepal Bangladesh bank Ltd*". In this study, various financial research and statistical tools have been used to achieve the objective of the study. The analysis of data will be done

according to the pattern of data available. Likewise, some financial tools such as ratio analysis and trend analysis have been also been used for financial analysis.

The specific objectives of his research are:

- To analyze the functions, objectives procedure and activities of the NBBL.
- To analyze the lending practices and resources utilizations of NBBL.
- To determine the impact of growth in deposit on liquidity and lending practices.
- To examine the lending efficiency and its contribution to profit.
- To make suitable suggestions based on the findings of this study, The financial and statistical tools are used.

It found that NBBL has sufficient liquidity. It shows that bank has not got investment sectors to utilize their liquid money. So, the study has the following findings:

- NBBL has utilized most funds in the form of credit and advances. More than 75% of total deposits of the bank have been forwarded to customers as a credit and advances.
- The major part of utilizing deposits and income generating sectors. If the bank has high deposits, bank can provide money to its customers as credit and advances. Therefore, there is highly positive correlation between total deposits and credit and advances of NBBL.
- Bank is providing different schemes to attract good customers. After attracting deposits from the customers, bank has issued the deposits to the needy area to make for the profit.

The recommendations of this study are:

- The bank has enough liquated but enables to invest the liquidity in proper sector so it is recommended that the bank should made proper investment to commercial sector.
- The bank providing different schemes to attract good customer and has issued the deposit to the needy area to make profit for the bank.

Mr. Gautam (2006) has conducted a study on "*Comparative study on financial performance of Standard Chartered Bank Limited and Nepal Bangladesh Bank Limited"*. The financial performance is analyzed with two important tools. The first most important tools are the

financial tools, which includes ratio analysis and other is a statistical tools, which is bankruptcy score.

The objectives of his study are:

- To study the existing capital structure of financial position of selected joint venture commercial banks and to analyze its impact on the profitability.
- To access the debt serving of the joint venture commercial bank.
- To examine the correlation and the signification of their relationship between different ratios related to capital structure.
- To provide suggestions and the recommendations for the optimal capital structure of the joint venture commercial bank.
- To obtain the objectives, some financial, statistical and accounting tools.

He has found his study were the joint venture banks are operating in Nepal as commercial merchant banks. The growth is still going on as so many new banks are coming into existence after this study. However, this study has been undertaking SCBNL and NBBL to examine and evaluation the financial data. In this study, the following are the findings of his study:

- The study sample JVB's have used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsider's claims in total assets of the bank is owner's claim.
- On an average, NBBL bank constitutes 16.27 times of P/E ratio, which should be reduced as quickly as possible.
- The financial risk of the banks NBBL average degree of finance leverage constitute 3.73 times which indicates the higher degree of financial risks 3.73 times which indicates the higher degree of financial risks.
- The average ROE of JVB's i.e. SCBNL and NBBL area 37.63% & 21.75% respectively.

Now, in Nepal many banks and other financial institution are functioning to collect deposits and invest money somewhere in the investable sectors. So, the recommendations of his study are:

- The bank use high percentage of debt which indicates that it has highly financial risk. It is recommended that the bank immediately control the financial risk.

- P.E ratio of NBBL is 16.27 times. It is too high, so the bank reduces the position.
- Nepal is underdeveloped country; almost banks are established and operated in urban area. So, it is recommended that the bank should open its branch different parts of the country.

Mr. Bobby K.C (2007) has conducted a thesis on a topic "*Comparative Financial Performance Analysis of Everest Bank Limited and Bank of Kathmandu*". He has mainly focused his study on comparing & analyzing liquidity, profitability, solvency and activity ratio analysis as well as reviewing the government policies related to banking industry of Nepal. The main objectives of his study are:

- To compare the financial ratios of sampled banks in terms of liquidity, capital adequacy, capital structure, activity and profitability.
- To evaluate the trends of growth of in total deposit, loan and advances & net profit.
- To examine the relationship between key financial variables such as total deposit and net profit, total deposit and total investment & net worth and net profit of the sampled banks.
- To review the government policies related to banking industry of Nepal.

Time period covered by it was five years data from 2001/02 to 2005/2006. Necessary data and other information have been collected from the secondary sources of data. In this study, Mr. Booby had pointed out various remarkable findings were:

- The cash reserve ratio of the banks was maintained as per the directives of NRB. So, BOK is utilizing its liquid assets better than EBL.
- EBL has maintained liquidity as per financial standard than BOK. So, BOK has poor in the liquidity.
- EBL & BOK appeared highly levered and capital structure of EBL is a little riskier than BOK.
- Earning generating capacity of EBL's assets is far better than BOK. Management of EBL is successful to utilize their resources efficiently and effectively.

The recommendations of this study are:

- EBL has maintained liquidity as per financial standard but BOK is not able to meet the

standard. So EBL can be recommended to utilize the excess amount of current assets on secured and highly liquidity investment and BOK is to increase the liquidity capacity to meet immediate and short term obligations.

- Capital structures of booth banks are highly levered so it is recommended to introduce new products with high quality services, adopt new technology, made adjustment interest rate as per situation.
- To meet their objectives and goals it is recommended to open new branches at new potential urban areas to collect more deposit and to increase investment as well as shareholder's wealth.

Mr. Madhav Prasad Kuikel (2008) conducted a thesis on a topic "*Financial Performance of Leading Commercial Banks in Nepal*". He attempt to analysis the financial performance with the help of financial analysis such as liquidity, leverage, activity, profitability & solvency ratio of SCBNL, NABIL, HBL and EBL. The main objectives of his study are as follows:

- To measure liquidity, leverage, activity, profitability ratio and ownership/solvency ratios of SCBNL, NABIL, HBL and EBL.
- To analyze and compare the position of NPA.
- To analyze the comparative financial position of SCBNL, NABIL, HBL and EBL.
- To examine whether these commercial banks are following NRB directives or not.

Mr. Madhav comes out with some valuable findings which are as follows:

- Regarding the liquidity management, all the banks are in better position except EBL. EBL was unable to maintain the liquidity (CRR) as per the directives of central bank (NRB). It obviously strikes that EBL was failure to meet short-term obligations.
- SCBNL is successful on maintaining capital adequacy ratio as per the directives of central bank. However, NABIL, HBL and EBL had not significant differences as per the directives should be maintained. HBL had least ratio.
- The analysis of P/E ratio indicates all banks SCBNL, NABIL, HBL and EBL had getting more competitive value. This shows they all had better P/E ratio. Among them, HBL is the highest.

- The analysis of NPA indicates that EBL, NABIL and SCBNL had comparatively lower average of such ratio. HBL had comparatively high average. EBL has lowest and is more consistent in NPA; which indicates its sound lending & recovery policy.

Mr. Madhav has recommended some measure on the basis of his studies. His major recommendations were:

- For strengthening the liquidity position; EBL is strongly recommended to maintain CRR as per the directives of central bank.
- He has suggested improving the credit collection performance and maintaining an adequate bad debt provision.
- Except SCBNL and NABIL; he recommended to HBL & EBL to maintain Capital Adequacy ratio as per the directives of central bank. EBL is strongly recommended to generate cheaper fund by bearing favorable lower interest rate on deposits. SCBNL is suggested to keep-it-up.
- NPA is the most sensitive part of banking performance. The effectiveness of loan & recovery is depicted from NPA position. It is key variable for measuring bank's performance. HBL is recommended to make conscious efforts for lowering NPA in recent years. EBL is highly appreciated for its substantially lowest NPA and suggested to keep-it-up.

Mr. Mohan Prasad Tiwari (2009) has conducted a dissertation on "*Financial Performance Analysis as Tools for Profit Planning"***.** He attempts to analysis the financial performance with the help of financial analysis of EBL, NABIL and BOK. The objectives of this study are:

- To find out the relationships between total investment, loan and advances, deposit, net profit and outside assets.
- To identify the investment priority sectors of Commercial banks.
- To assess the impact of investment on profitability.
- To analyze and forecast the trend and structure of deposit utilization and its projection for five years of Commercial banks.
- To provide suggestions and possible guidelines to improve investment policy and its problems.

In this study, the findings of his study are:

- Current assets of all three banks i.e. EBL, NABIL & BOK are not satisfactory.
- The ratio of cash & bank balance to total deposit and current assets of EBL is higher than that of NABIL & BOK.
- From the study, he found that NABIL has not invested funds in government securities than that of other banks which shows that NABIL has kept relatively funds as cash and bank balance which does not earn any return.
- Profitability ratios of banks are not satisfactory, if resources held idle bank have to bear more cost and result would be lower profit margin.
- The investment policy of EBL is good in every aspect as studied above but the consistency in the above investment sectors is in equilibrium states. He found that bank focuses much of its attention to one sectors leaving other sectors untouched.

Now, in Nepal many banks & other financial institutions are functioning to collect the deposits and invest money somewhere in the productive sectors. Therefore, efficiency has been increased since liberalization policy taken by the government. Heavy remittance has also helps to increase the amount of deposits in bank. On the other hand, due to political crisis, economic sectors have been fully damaged. So, the recommendations of this study are as follows:

- In commercial banks the liquidity position affects external & internal factors such as saving for investment situations, central banks requirements, the leading policies management capacity etc. So, all the banks are recommended to improve current assets and mobilize cash and bank balance in profitable as loan and advances.
- In the light of growing competition in the banking sectors the business of the bank is customer oriented. It should strengthen and active its marketing function as it is an effective part of attracting and retaining customers. The bank should develop on Innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient way.
- EBL's investment policy is satisfactory so EBL is recommended to touch all the sectors and balance it effectively as to have the optimal performance of the bank.

2.4 Research Gap

Commercial Bank invests its deposit in different profitable sector according to the directives and circulars of the Nepal Rastra bank and guidelines and policy of their own bank. Financial analysis statement has to prepare according to direction of NRB. Nepal Rastra Bank's policy and guidelines are changing according time. So, the up to dated study over the change of time frame is major concern for the researcher and concerned organization as well as industry as a whole. This study covers the more recent financial data and analysis is done within the latest guidelines and curriculum of Nepal Rastra Bank.

There is a certain gap between the present research and past research. Previous research‘s analyses expressed all items in the statement in the form of amount. The previous researchers did not disclose the practical comparative analysis, which is practiced by the commercial banks. Thus, to fulfill this gap the present research is conducted. The analysis based on expressing all items in the statement as a percentage taking the most recent data.

Most important point to remember about performance analysis is that every financial measure should be compared across time and across over same line of companies to be meaningful. Banks as a service-organization, only few financial ratios would be sufficient to compare the performance; however, different sources and different analyses use different lists or combination of financial ratio analysis. Prior research has been conducted on the basis of traditional financial ratio analysis. The value of the approach was quantitative relations.

The world is becoming more dynamic and subject to rapid changes. This research will be based upon the modern approaches to financial analysis; in which comparable group approach and include consideration of economic and strategic factors where feasible. Even the study will base upon those core indicators especially related with banking sector as well as it will compares across time and across same line of banks i.e. maximum of leading three commercial banks (NABIL, NIBL & HBL). Thus the research will be an interest to a wide range of its stakeholders and other government regulatory interests.

CHAPTER III
RESEARCH METHODOLOGY

The objectives of study are to analyze the financial position, evaluate strength and weakness, and recommend policy measures for improvement of NABIL, NIBL and HBL. To fulfill the objective a scientific analytical procedure should be adopted. Thus the method of the study has been described in this chapter. In this chapter, we study the various steps that are generally adopted by studying other research problem along with the logic behind them. It consists of research design, population and sampled source of data, data processing procedure and tools & techniques of analysis of data. The main purpose of the research is to discover answer to questions through the application of scientific procedures. The aim of research is to find the truth which is hidden and has not been discovered yet.

3.1 Research Design

Research Design is a method of defining the research problem. According to C.R. Kothari, "Research design is a plan, structure and strategy of investing conceived so as obtain answer to research question and to control variances". Research design refers to the framework of the study. It is the blue print for any kinds of studies. "Research design is the arrangement of condition and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Research design is plan for collection and analysis of data. The purpose of design is to provide answer to research questions and control variance. Some financial & statical tools will be used to examine the facts and descriptive techniques to evaluate the financial performance of three banks and comparing between themselves. This study aims to find out the relation of financial performance of three commercial banks fully managed and owned by Nepalese entrepreneurs. The research design used for is basically, a historical, empirical, descriptive-cum-analytical research methodology.

3.2 Populations and Sample

The population for this study comprises all the license commercial banks of the country. The commercial banks of Nepal can be categorized into two type namely public sector and private sector. Out of total 31 commercial banks, NABIL Bank Limited, Nepal Investment Bank Limited and Himalayan Bank Limited have been chosen as sample banks for study by using judgmental sampling method. Population comprises of data published by the concerned authority or institution to make the descriptive and analytical study. For the analytical part, sample of data should be taken into consideration within which the analysis and evaluation is made. The financial statements of latest five years (i.e. from 2005/2006 to 2009/2010) have been taken as sample data for analyzing the financial performance.

3.3. Nature and Source of Data

The study is mainly based on secondary data. Data relating to financial performance of these three banks are directly obtained from concerned banks. The supplementary data were obtained from unpublished official records of concern banks, bank's staff, booklets, and journals and other sources viz. Security Exchange Center and Nepal Rastra Bank.

3.4 Data Processing Procedure

The data analysis tools are applied as simple as possible. Data obtained from the various sources cannot directly be used in their original form. They need to further verified and simplified for the purpose of analysis. Data, information, figures and facts so obtained need to be checked, rechecked, edited and tabulated for computation. According to the nature of data, they have been inserted in meaningful Tables, which have been shown in appendices. Homogeneous data have been sorted in one Table and similarly various Tables have been prepared in understandable manner, odd data are excluded from the Table. Data have been analyzed and interpreted using financial and statical tools. The detail calculations that cannot be shown in the body part of the report are presented in appendices at the end of the report.

3.5 Tools and Techniques of Analysis

On the basis of historical data financial and statistical tools are used to analysis of different variables.

3.5.1. Financial Tools

Financial tools are those, which are used for the analysis and interpretation of financial data. These tools can be used to get the prescribe knowledge of business which in turn are fruitful in exploring the strength and weakness of the financial policies and strategies. In order to meet the purpose of study, following financial tools have been used.

3.5.1.1. Ratio Analysis

Ratio analysis is a technique of analysis and interpretation of financial statement evaluate the performance of an organization by creating the ratio from the figures if different accounts consisting in balance sheet and income statement is know as ratio analysis. It is a powerful tool of financial analysis. An explained in second Chapter, ratio analysis is most frequently used tool to evaluate the financial health, operating result and growth of the banks under scrutiny. It helps to summarize the large quantities of financial data and to make quantitative judgments about the firm's financial performance. The ratios calculated for the study is described separately under following headings.

3.5.1.1.1. Liquidity Ratios

The liquidity refers the liquid assets of a firm or those types of assets, which can convert into cash easily. And liquidity ratio measures the ability of a firm to meet its short-term obligations. The ratio reflects its short-term solvency capacity. It shows the capacity of a firm to pay interest and principal to suppliers of short-term credit and trade creditors. It is extremely essential for a firm to be able to meet its current obligations as they become due.

Depending on the special nature of current assets and current liabilities of the banks the following ratios are calculated.

a) Current Ratio

Current ratio is also known as Working capital ratio. The ratio is to evaluate or indicates the current solvency position of the organization. The current ratio (CR) represents a margin of safety for creditors at bad situation. It is the ratio of total current assets to current liabilities. Financial norms say that 2:1 is the optimal position of liquidity and profitability point of view. If the current ratio of the firm is less than 2:1 the solvency position of the firm is not good .The cash may not be available to pay current liabilities. If the ratio of the firm is under financial standard, the firms'liquidity position measured as better. Higher ratio of the firm is measured higher liquidity, i.e. meant the firm has excessive investment in current assets that do not produce a return so more than financial standard is poor utilization of assets.. It is calculated by dividing current assets by current liabilities, which is expressed as follows:

$$\text{Current ratio} = \frac{\textit{Current assets}}{\textit{Current liabilities}}$$

In which current assets represents those assets which can be converted into cash within an accounting period such as cash balance, bank balance, investment in treasurer bills, money at call, bills purchase, inter branch account, other short terms, receivable, prepaid expenses, etc. Current liabilities refers to short term maturing obligation such as deposits bills payable, tax provisions, dividend payable staff bonus, bank over drafts, accrued expanses and provisions etc.

b) Quick Ratio

Quick ratio established a relationship between quick asset and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonable soon without a loss of value cash is the most liquid asset. Other assets which are considered to be relatively liquid are included in quick assets are book debts and marketable securities. This quick ratio can be calculated by dividing the total of quick assets by total current liabilities.

$$\text{Quick Ratio} = \frac{\textit{Quick assets}}{\textit{Current liabilities}}$$

c) Cash and Bank Balance to Current Assets Ratio

This ratio is found out the ability of banks to pay total call made on current deposit. Cash and Bank Balance is highly liquid assets than others in current assets proportions. Higher ratio indicates the banks ability to meet the daily cash requirement of their customer deposit and vice versa. But higher ratio is not preferred as the bank has to pay more interest in deposit and will increase the cost of fund. Lower ratio is also very risky as the bank may not be able to make the payment against the cheque presented by the clients. So, the bank has must be maintain such ratio in such way that it should have sufficient cash for the clients demand against deposits when required and less interest is required to pay against the cash deposit. These ratios not only analyzed the use of total resources of the firm but also the use of resources component of total assets. The formula to obtain this ratio is;

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

Cash and Bank balance includes cash in hand, foreign cash in hand, clearing cheque and other cash items, balance with NBR current account, other domestic bank current account and balance held in foreign banks.

d) Cash and Bank Balance to Current, Saving & Margin Deposit Ratio

The ratio measures the ability of bank to meet its immediate obligations. The bank should maintain adequate cash and bank balance to meet the unexpected as well as heavy withdrawal of deposits. High ratio indicates sound liquidity position of the bank. However, too high ratio is not good enough as it reveals the under utilization of fund. The ratio is computed by dividing the total amount of cash and bank balance held in the bank by total deposit (expect fixed deposits) collected by the bank.

$$\text{Cash \& Bank Balance to Deposits (Expect FD Ratio)} = \frac{Cash\ \&\ Bank\ Balance}{Total\ deposit\ (Except\ FD)}$$

Cash and Bank balance comprises cash on hand, foreign cash on hand, cheque and other cash items, balance with domestic bank and balance held in foreign banks. Current and saving deposits consist of all types of deposits excluding fixed deposits.

e) Cash and Bank Balance to Total Deposits Ratio

The ratio is employed to measure whether cash & bank balance is sufficient to cover its current call margin including deposits. It shows the proportion of total deposits held as most liquid assets. High ratio shows the strong liquidity position of the bank. But too high ratio is not favorable for the bank because it produces adverse effect n profitability due to idleness of high-interest bearing fund. The ratio is calculated using following formula;

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

Total deposit consists of both interest bearing deposits & non-interest bearing deposits i.e. current deposits, saving deposit, fixed deposit, money at call and short notice and other deposits.

f) NRB Balance to Current Saving Deposit Ratio

The ratio shows the percentage of amount deposited by the bank in Nepal Rastra bank (NRB) as compared to current & saving deposits. Commercial banks are required to hold certain portion of current and saving deposits in Nepal Rastra Bank's account. It is to ensure th e smooth functioning and sound liquidity position of the bank. As per the directive of Nepal Rastra Bank, the required ratio is 8%. Therefore, the ratio measures whether the bank is following the direction of NRB or not. The ratio is computed by dividing the balance held with Nepal Rastra Bank by saving deposits. It express as;

$$\text{NRB Balance to Current and Saving Deposit Ratio} = \frac{NRB\ Balance}{Current\ \&\ Saving\ deposits}$$

g) NRB Balance to Fixed Deposit Ratio

The ratio shows the percentage of the amount deposited by the bank in Nepal Rastra Bank as compared to fixed deposits. According to the direction of NRB, this ratio should be maintained 6%. Hence the ratio so calculated finds whether the bank has obeyed the direction of central bank or not. The ratio is computed by dividing the balance held with Nepal Rastra Bank by fixed deposits accepted.

$$\text{NRB Balance to Fixed Deposit Ratio} = \frac{NRB\ Balance}{Fixed\ Deposits}$$

3.5.1.1.2 Efficiency Ratio

The fund of creditors and owners are invested in various assets to generate income and profit. Better the management of assets, the larger the amount of income. Activity ratio measures the degree of effectiveness in use of resources of fund by an entrepreneur. This ratio is also called turnover ratio because they indicate the number of times the assets are being converted or turnover into income. In other words, turnover ratios, also known as utilization ratios or activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. They measure how effectively the firm uses investment and economic resources at its command. High ratio depicts the managerial efficiency in utilizing the resources. They show the sound profitability position of the bank. Low ratio is the result of insufficient utilization of resources. However, too high ratio is also not good enough as it may be due to the sufficient liquidity. Depending upon special nature of assets and sales of the banks, following ratios are tested.

a) Loans and Advances to Total Deposit Ratio

The ratio indicates the proportion of total deposits invested in loans and advances. It is calculated to find out how the banks are successfully utilizing their total deposits for profit generating purpose on loan and advances. High ratio means the greater use of deposit for investing in loans and advances. In other words, Greater the ratio implies the better utilization of outsiders fund (Total Deposits). But very high ratio shows poor liquidity position and risk in loans. On the contrary, too low ratio may be the cause of idle cash or use of fund in less productive sector. The ratio is computed by dividing total loans and advances by total deposit liabilities.

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

Loan and advanced consist of loans, advances, cash credit, overdrafts, and foreign bills purchased and discounted.

b) Loans and Advances to Fixed Deposit Ratio

The ratio indicates what proportion of fixed deposits has been used for loans and advances. Loans and advances are the major sources of investment to generate income by the commercial banks. Fixed deposits are long-term interest-bearing obligation. It carries high rate of interest. Funds collected are needed to invest in such sectors, which yield at least sufficient return to meet the obligations. The ratio measures the extent to which the fixed deposits are utilized for the income generating purpose. High ratio means utilization of fixed deposit in form of loans. The ratio is calculated by dividing loans and advances by fixed deposits.

$$\text{Loans and Advances to Fixed Deposits Ratio} = \frac{Loans\ \&\ Advances}{Fixed\ deposits}$$

c) Loans and Advances to saving Deposit Ratio

The ratio indicates how many times the short-term interest bearing deposits are utilized for generating the income. Saving deposits are the short-term interest bearing liabilities. Loans and advances are the major sources of investment to generate income in commercial banks. Loans and advances to saving deposits ratio is measured to find out how many time of fund is used in loan and advances against saving deposit. High ratio indicates greater utilization of the saving deposits in advancing loans. The ratio is calculated dividing the amount of loan and advances by total deposit in saving account. The following formula is used to calculate this ratio as:

$$\text{Loans and Advances to Saving Deposit Ratio} = \frac{Loans\ \&\ Advances}{Saving\ deposits}$$

3.5.1.1.3 Profitability Ratio

A company should earn profits to survive & grow over a long period of time. It is a fact that sufficient profit must be earned to sustain the operations of the business; to be able to obtain funds from investors for expansion and growth; and to contribute towards the social overheads for the welfare of society. The profitability ratios are calculated to measure the operating efficiency of the company. Management of the company, creditors and owners are interested in the profitability of the firm. Creditors want to get interest and repayment of principal regularly. Owners want to get a reasonable return from their investment (Pandey, 1994:116) Profitability ratios are calculated to measure the operating efficiency of the company. Various profitability

ratios are calculated to measure operating efficiency of business enterprises. Though profitability ratios the lender & investors want to decide whether to invest in particular business or not. To meet the objective of the study, following ratios are calculated in this group.

a) Return on Total Asset

The ratio is measuring the profitability of funds invested in the bank's assets. In other words, it measures the efficiency of bank in utilization of the overall assets. High ratio indicates the success of management in overall working fund i.e. total assets. It is also called net profit or loss to working fund i.e. total assets ratio or simply called ROA. The firm has to earn satisfactory return on assets or working funds otherwise its survival is threatened. High ratio indicates the success of management in overall operation. Lower ratio means insufficient operation of the bank. It is calculated by dividing net profit after tax (NPAT) by total assets of the bank

$$\text{Return on Assets} = \frac{Net\ \text{Pr}ofit\ After\ tax(NPAT)}{Total\ Assets}$$

Net profit refers to the profit after deduction of interest and tax. Total assets mean the assets that appear in asset side of balance sheet.

b) Return on Net Worth

The ratio is tested to see the profitability of the owner's investment. It reflects the extent to which the objective of business is accomplished. All commercial banks have its main objective to earn the maximum profit, so that they can run smoothly and get the fame. For that they must mobilize resources and its equity capital properly. Equity capital is owned capital of banks. The ratio is also called net profit (or loss) to net worth or net profit (or loss) to shareholder's equity or return on shareholders equity or simply called *ROSE*. The ratio is of great interest to present as well as prospective shareholders and also of great significance to management, which has the responsibility of maximizing the owner's welfare. So, higher ratio is desirable. It is computed by dividing net profit after tax by net worth.

$$\text{Return on Net Worth} = \frac{Net\ \text{Pr}ofit\ After\ tax(NPAT)}{Net\ Worth}$$

Net worth refers the owner's claim on banks. It can be find out subtracting the total liabilities from total assets. It includes shareholder's reserve and share capital.

3.5.1.1.4 Capital Structure Ratio

Short-term financial positions refer to the liquidity position of the firm. Long-term financial position refers to the capital structure or financial leverage. Long-term financial position of the firm is judged by the capital structure ratio or leverage ratio or structure ratio. The leverage ratio or structural ratio is calculated to measure the financial risk and the firm's ability of the using for debt the benefit for the shareholders. Leverage refers to the ratio of debt to equity in the equity in the capital structure of the firm. Debt & equity are long-term obligation and remaining parts in the ability side of the balance sheet are termed as short –term obligation. Both types of obligations are required in forming the capital structure of the firm. The long-term financial position of the firm is determined by leverage or capital structure. Debt is more risky from the form the firm's point of view. The firm has legal obligation to pay interest to debt holders irrespective of the profit made or losses incurred by the firm. But use of debt is advantageous to shareholders in two ways:

- They can retain control on the firm with a limited stake.
- Their earning is magnified when rate of return of the firm on total capital is higher than the cost of debt.

  Following ratios are calculated to test the optimality of capital structure.

a) Debt-Equity Ratio

This ratio is calculated to find out the proportion of the outsider's fund to owner's fund to finance the total assets. It is also called the proportion of outsider's claim and insider's claim on total assets of the banks. It is also called debt to net worth ratio. The ratio shows the mix of debt and equity in capital. It measures creditors' claims against owners'. High ratio shows that the creditors' claims are greater than those of owners. Such a situation introduces inflexibility in the firm's operation due to the increasing interference and pressures from creditors. Low ratio

implies a greater than claim of owners than creditors. In such a situation, shareholders are less benefited if economic activities are good enough. Therefore, the ratio should neither be too high nor too low. The ratio is calculated by dividing total debt by shareholder's equity.

$$\text{Debt-Equity Ratio} = \frac{Total\ Debt}{Shareholder's\ Equity}$$

Total debt consists of all interest-bearing long-term debts. These include loans and short-term debts. These include loans advances taken from other financial institutions, deposits carrying interest etc. Shareholder's equity includes paid-up capital, reserves and surplus and undistributed profit.

b) Debt- Asset Ratio

This ratio shows the contribution of creditors in financing the assets of the bank. It is the proportion of debt on the total capital or proportion of outsider's claim on total assets. Greater proportion of the banks assets has been financing through outsider's funds. High ratio indicates that the greater portion of the bank's assets has been financed through outsider's fund. The ratio should neither be too high per too low. The ratio can be calculated by dividing total debt by total assets.

$$\text{Debt-Assets Ratio} = \frac{Total\ Debt}{Total\ Assets}$$

c) Interest Coverage Ratio

This ratio is calculated to find out the banks ability to meet interest obligation. The ratio also known as times interest-earned ratio is used to test the debt servicing capacity of the bank. It shows the number of times the interest charges are covered by funds that are ordinarily available for their payment. It indicates the extent to which the earning may fail without causing any embarrassment to the firm regarding the payment of interest. Higher ratio is desirable, but too high a ratio indicates the firm is very conservative in using debt. A lower ratio indicates excessive use of debt or insufficient operation. The ratio calculated by dividing net profit before deduction of interest and tax by interest charges.

$$\text{Interest Coverage Ratio} = \frac{\text{Earning Before Interest \& T}ax(\text{EBIT})}{Interest\ Ch\arg ed}$$

EBIT or Earning Before Interest and Tax Net Profit Before Interest and Tax (NPBIT) is amount of operating profit before deduction of the amount of interest and tax.

3.5.1.1.5 Capital Adequacy Ratio

Capital adequacy ratio measures whether the firm has maintained sufficient capital or not. In other words, it helps to decide whether the existing capital is adequacy or there is the not need of reforms. The ratio is tested to ensure the safety and stability of the firm in long run. Over capitalization and under capitalization both have adverse effect on profitability of the firm. If the capital is excess, it remains idle. If the capital is insufficient, the firm may not be able to grasp the opportunity from potential profitable sectors. Therefore, the commercial banks have been directed to retain sufficient ratio by the central bank. Here, capital fund refers to the core capital and supplementary capital. Commercial banks cannot declear and distribute dividend until they meet capital adequacy ratio. Under this group, following ratios are tested.

a) Net Worth to Total Deposit Ratio

This ratio measures the percentage of net worth n relation to the total deposits collected in the bank. The ratio is a yardstick to see whether the bank has maintained the capital fund according to the direction of Nepal Rastra Bank. The ratio is calculated by dividing net worth by total deposits.

$$\text{Net Worth to Total Deposit Ratio} = \frac{Net\ Worth}{Total\ Deposits}$$

b) Net Worth to Total Assets Ratio

The ratio measure what is the percentage of shareholders' fund is relation to the total assets owned by the bank. High ratio means greater contribution of investors' fund and strong capital adequacy position. The ratio is calculated by dividing the net worth by total assets of the bank.

$$\text{Net Worth to Total Assets Ratio} = \frac{Net\ Worth}{Total\ Assets}$$

c) Net Worth to Total Credit Ratio

It measures the relative proportion of the shareholders fund with respect to the credit. High ratio shows that the firm has adequacy capital, which is the index of safety. Moreover, a bank with higher ratio is less affected by the instability of the financial market. The ratio is obtained when net worth is dividend by the total credit of the bank

$$\text{Net Worth to Total Credit Ratio} = \frac{Net\ Worth}{Total\ Credit}$$

Total credit refers to the total of loans and advances granted, cash credit, overdrafts, bill purchased and discounted.

3.5.1.1.6 Assets Quality Ratio

As explained earlier, turnover ratios measure the turnover of economic resource in terms of quality. Only the investment is not of great significance, but the return from them with minimum default in payment by debtors is significant. A firm may be in a state of enough profit and through unable to meet liabilities. Therefore, asset quality ratios are intended to measure the quality of assets contained by the bank. Following ratios are dealt in this group.

a) Loan Loss Coverage Ratio

Nepal Rastra Bank has directed commercial banks to maintain provision for loan loss on the basis of category of loans and risk grade. The ratio, therefore, measures whether the provision is sufficient to meet the possible loss created by defaulted in payment of loan or not. High ratio indicates that the major portion of loan is risky. The ratio is calculated by dividing provision for loan loss by total risk assets.

$$\text{Loan Loss Coverage Ratio} = \frac{Loan\ Loss\ \text{Pr}ovision}{Total\ Risk\ Assets}$$

For the study purpose, risk assets constitute loans and advances, bill purchased and discounted.

b) Loan Loss Provision to Total Income Ratio

This ratio shows what portion of total income has been held as safety cushion against the possible bad loan. Higher ratio indicates that the greater portion of loan advanced by the bank is inferior in quality. Low ratio means that the bank has provided most of its loans and advances in secured sector. The ratio is obtained by dividing loan loss provision by total income.

$$\text{Loan Loss Provision to Total Income Ratio} = \frac{Loan\ Loss\ \text{Pr}ovision}{Total\ Income}$$

c) Loan Loss Provision to Total Deposit Ratio

It shows the proportion of bank's income held as loan loss provision in relation to the total deposit collected. Higher ratio means quality of assets contained by the bank in form of loan is not much satisfactory. Low ratio is the index of utilization of resources in healthy sector. The ratio is obtained by dividing the provision for loan loss by total deposit in the bank.

$$\text{Loan Loss Provision to Total Deposit Ratio} = \frac{Loan\ Loss\ \text{Pr}ovision}{Total\ Deposits}$$

d) Accrued Interest to Total Interest Income Ratio

This ratio shows the percentage of accrued interest with respect to total income in form of interest. High ratio indicates the large portion interest remained to be collected. Lower ratio reflects the better quality of assets in the bank. The ratio is obtained by dividing accrued interest by total interest income.

$$\text{Accrued Interest to Total Income Ratio} = \frac{Accrued\ Interest}{Total\ Interest}$$

Accrued interest refers to the interest that is accrued but not collected. Total interest income includes the interest received from the investment in various sectors.

3.5.1.1.7 Others Indicators

Above stated ratios throw light on various aspects of bank. Management, investors and creditors can get information regarding their interest. Some indicators are dealt here which provide more knowledge about the performance of bank. They are listed below.

a) Earning Per Share (EPS)

Earning Per Share refers to the income available to the common shareholders on per share basis. It enables us to compare whether the earning based on per share basis has changed over past period or not. The investors favor high EPS. It reflects the sound profitability position of the bank. It is obtained by dividing earning available to common shareholders by number of equity shares outstanding.

$$\text{Earning Per Share} = \frac{\text{Earning Available Common Shareholder(EAC)}}{\text{No of Equity Share Outstanding}}$$

Earning available to common shareholders is the amount of that profit which can be found after deducting the amount of interest to the outsiders' fund, dividend to the preferred shareholders and income tax to the government. For this purpose, it is net profit after tax.

b) Price –Earning Ratio (P/E ratio)

P/E Ratio is widely used to evaluate the bank's performance as expected by investors. It represents the investors' judgment or expectation about the growth in the bank's earning. In other words, it measures how the market is responding towards the earning performance of the concerned institution. High ratio indicates greater expectation of the market towards the achievement of firm. It is obtained by dividing market value per share by earning per share.

$$\text{Price-Earning Ratio} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Earning Per Share (EPS)}}$$

c) Market Value Per Share to Book Value Per Share (MVPS/BVPS)

The ratio measures the value that the financial market attaches to the management and organization of the bank as a growing concern. High ratio is the indication of strong management and organization. It is the ratio of market value per share to book value per share.

$$\text{Market Value Per Share to Book Value Per Share} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Book Value Per Share (BVPS)}}$$

BVPS is net worth dividend by the number of shares outstanding.

3.5.1.1.8 Income & Expenditure Analysis

Except various analyses, income and expenditure analysis is one of the major tools financial performance analyses of banks. The profit & loss account of the bank is used to find out operating income, expenditure and profit and loss percentage. This is a tool with the help of which the components of income and expenditure can be compared between two competitive firms. By this analysis, one is able to conclude which sources of income & expenditure are dominant in the related concerns. Under income analysis, overall operating income is split up into major headings- Interest income, commission & discount, foreign exchange income and other income. Under expenditure analysis, entire operating expenses are split up into four major headings- Interest expenses, staff expenses, office operating expenses and bonus facility. Operating profit (loss) is the difference between total operating income and total operating expenses. If total operating income is higher than total operating expenses, then it is operating profit, other wise operating loss.

3.5.2 Statistical Tools

Various statistical tools can be used to analyze it. These tools are used in order to draw the reliable conclusion through the analysis of financial data. Following tools are used for this purpose.

3.5.2.1 Arithmetic Mean

An average is a single value selected from a group of values to represent them in same way, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group (Waugh A.E). Out of various measures of the central tendency, arithmetic mean is one of the useful tools applicable here. It is easy to calculate and understand and understand and based on all observations.

Arithmetic mean of a given set of observations is their sum divided by the number of observation. In general, if X1, X2, X3----------Xn are the given observations, then arithmetic mean usually denoted by X is given by;

$$X = \frac{X_1 + X_2 + X_3 + ...X_n}{n} = \frac{\sum X}{n}$$

Where, n = number of observation.

3.5.2.2 Standard Deviation

Average like other mean, mode and medium gives us the idea of concentration of the items around the central part of distribution. But average do not gives clear picture about the distribution because two distributions with same average may differ in the scatter ness of the items from the central value. To remove this drawback, dispersion is used. Dispersion is defined as the measure of variation I the item from the central value. Among various measure of dispersion, standard deviation is widely used. Standard deviation is absolute measure of dispersion, which defined as the positive square root of the mean of the square of deviation taken from the arithmetic means, if X1, X2, X3------Xn are the given observations, then standard deviation denoted by σ is given by;

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

Where, n= number of observation in series X

ΣX =Sum of observation in series X

ΣX^2 = Sum of squared observations in series X

Standard deviation is the absolute measure of dispersion. The relative measure of dispersion based on the standard deviation is known as the Coefficient of Standard deviation.

$$\text{Coefficient of S.D.} = \frac{S\tan dard\ deviation}{Mean} = \frac{\sigma}{\sum}$$

The coefficient of dispersion based on standard deviation multiplied by 100 is known as Coefficient of Variance and written, as C.V is given by;

$$\text{C.V} = \frac{\sigma}{X} \times 100$$

It is independent unit. So two distributions can bitterly compared with the help of C.V. for their variability. Less the C.V more will be the uniformity consistency etc and more the C.V less will be the uniformity consistency etc.

According to Prof. Karl Pearson, coefficient of variation is the percentage variation in mean, standard deviation being considered as the total variation in the mean. It is one of the relative measures of dispersion that is useful in comparing the amount of variation in data groups with different mean.

For comparing the variability of two distributions, we compute the coefficient of variation for each distribution. A distribution with smaller CV is said to be more homogeneous or uniform or less variable than other. Conversely, a series with greater CV is said to be more variable or heterogeneous than the other (Gupta, S.C. 2000:769).

3.5.2.3. Correlation Coefficient Analysis

If the distribution consists of two variables then correlation is used to find out the relation between them. Two variables are said to correlation when they are so related that the change in the value of one variable is accompanied by the change in the value of other. Correlation is the measure of relationship between two or more characteristics of population or sample. It is simply measure the chance between the phenomenons's (Joshi, R.P. 2001).

Correlation is a statistical tools with the help of which we can determine whether or not two or more variable are correlated & if they are correlated the degree (extent) and direction of correlation is determined (Shrestha S and Silwal D.P)

Correlation is the statistical tools that we can used to describe the degree of which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two set of figure. Among the various method of finding out coefficient (i.e. Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation Coefficient, Kendall's Tau etc); **Karl Pearson's** method is applied in this study.

If two variables vary in the same direction i.e. if increase (or decrease) in the value of one variable result increase (or decrease) in the value of other variable, then two variables are said to have positive correlation. Similarly, the two variables are said have negative correlation if they very in the opposite direction i.e. if increase (or decrease) in the value of one variable result decrease (or increase) in the value of other variable.

One of the widely used mathematical methods of calculating the correlation coefficient between two variables is Karl Pearson's Correlation coefficient. It is also known as Pearson's correlation coefficient & denoted by rxy or, simply r. if x be the one variable and y be the other variable with n number of observation then r is defined;

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

Where,

n = number of observation in series X and Y

ΣX= Sum of observations in series X

ΣY= Sum of observation in series Y

ΣX2= Sum of squared observations in series X

ΣY2= Sum of squared observations in series Y

ΣXY= Sum of the product of observations in series X and Y

The result of correlation coefficient is always lies between –1 & +1

When, r = +1, there is positively perfect correlation between two variables

When, r = -1, there is negatively perfect correlation between two variables

When, r = 0, there is no correlation between two variables or the variables are uncorrelated.

Neither the value of r to +1, closer will be relationship between two variables nor will the value of r to 0 lesser be the relationship between two variables.

Probable Error of Correlation Coefficient

Probable error of correlation coefficient is an old measure of testing the reliability of an observed value of correlation coefficient. It is calculated to find the extent to which correlation coefficient is dependable as it depends upon the condition of random sampling.

Probable error of correlation coefficient denoted by P.E(r) is obtained as;

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

where,

$\frac{1 - r^2}{\sqrt{n}}$ = Standard Error

Reasons for taking 0.6745 is that in a normal distribution 50% of observation lie in the range $\mu \pm 0.6745\ \sigma$ where, μ and σ denoted the populations mean and standard deviation.

P.E(r) is used to test if an observed value of sample correlation coefficient is significant of any correlation in the population. It is used to interpret whether the calculated value of r is significant or not.

If r>P.E; correlation is insignificant. So there is no evidence of correlation
If r>6P.E. r is definitely significant.

In this study, following relationship is calculated;

- Total Deposits and Loan and Advances
- Total Deposits and Net Profit
- Loan and Advances and Net Profit
- Performing Assets and Net Profit
- EPS and MVPS

3.5.2.4 Trend Analysis

Trend analysis is a very useful and commonly applied tool to forecast the future event in quantitative term, on the basis of the tendencies in the dependent variable in the past period.

The straight-line trend implies that irrespective or decrease by absolute amount per unit of time. The linear trend values form a series in arithmetic progression.

The tools that are used to show gradually increase or a decrease of variable over a period of time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly.

Mathematically, Y= a + bx

Where,
Y = the value of dependent variable
a = Y-intercept, b = slope of the trend line
X = value of the independent variable i.e. time = Year-2006/07 (with regard to the data used in the study)

Normal equations fitting above equation are;
$\Sigma Y = Na + b\Sigma X$
$\Sigma XY = a\Sigma X + b\Sigma X^2$ Since $\Sigma X = 0$ $a = \frac{\sum X}{N}$, $b = \frac{\sum X^4}{EX^2}$

For this study, the following variables are used: Total Deposits, Loans and Advance, Performing Assets, Net Profit and Net worth etc.

3.5.2.5 Diagrammatic & Graphical Representation

Diagrams and graphs are visual aids that give a bird's eye view of a given set numerical data. They present the data in simple and readily comprehensive form. Diagrams are primarily used for comparative studies and can't be used to study the relationship between the variables under study. This is done through graphs.

3.6 Period Covered

This study covers a period of five years from FY 2005/06 to 2009/10 of the three commercial banks. They analysis is done on the basis of data covering five years.

CHAPTER IV
PRESENTATION AND ANALYSIS OF DATA

This Chapter deals with the analysis and interpretation of data following the research methodology dealt in the third chapter. In course of analysis, data gathered from the various sources have been inserted in the tabular form according to their homogeneous nature. The various tables prepared for the analysis purpose have been shown in annexes. Using financial and statistical tools, the data have been analyzed. The result of the analysis has been interpreted keeping in mind the conventional standard with respect to ratio analysis, directives of NRB and other factors while using other tools. Moreover, financial performance of the sampled banks has especially been analyzed in cross sectional manner. Specially, the chapter includes and interpretation of the ratio Analysis, Income and Expenditure Analysis, Correlation Analysis and Trend Analysis.

4.1 Ratio Analysis

Financial tools are an instrument that helps to analyze and interpret the financial performance of an organization. In other words, financial tools help to analyze the strength and weakness of a firm. Ratio analysis is a most important part of financial analysis, which is used in this study that gives us financial performance of three sampled banks. It helps to show the quantities relationship between two numbers. It may be expressed in terms of proportion, rates and times or in percentage. It is used to compare a firm's financial performance and status with other firms. Many writers like J.C Vanhorn, R.M Srivatav, I.M Pandey, etc. describe that the following ratios have been used according to data which helps to analyze, interpret and find out the actual financial performance of any organization.

i) Liquidity Ratios
ii) Efficiency/Activity/Turnover Ratios
iii) Profitability Ratios
iv) Capital Structure/ Leverage/ Solvency Ratios
v) Capital Adequacy Ratios

vi) Assets Quality Ratios

vii) Other indicators

4.1.1 Liquidity Ratios

Liquidity ratios have been employed to test the ability of the banks to pay immediate liabilities (i.e. short term liabilities). These include current ratio, quick ratio, cash & bank balance to current assets ratio, cash & bank balance to deposit (expect Fixed Deposits) ratio, cash & bank balance to total deposit ratio, NRB balance to current and saving deposit ratio and NRB balance to Fixed deposits ratio.

4.1.1.1 Current Ratio

Current ratio is also known as working capital ratio. The ratio is to evaluate or indicates the current solvency position of the organization. The current ratio (CR) represents a margin of safety for creditors at bad situation. It is the ratio of total current assets to current liabilities. Higher ratio of the firm is measured higher liquidity, i.e. meant the firm has excessive investment in current assets that do not produce a return so more than financial standard is poor utilization of assets. It is computed by dividing the current assets liabilities.

$$\text{Current Ratio} = \frac{\textit{Current assets}}{\textit{Current Liabilities}}$$

Table 4.1

Current Ratio (Times)

Rs in million

NABIL				NIBL			HBL		
FY	**Current Asset**	**Current Liabilities**	**Ratio**	**Current Asset**	**Current Liabilities**	**Ratio**	**Current Asset**	**Current Liabilities**	**Ratio**
2005/06	14,909	12,718	1.17	13,955	11,532	1.21	7,061	3,443	2.05
2006/07	18,122	16,363	1.11	17,786	13,821	1.29	9,618	4,879	1.97
2007/08	22,827	18,369	1.24	23,424	17,352	1.35	11,029	6,122	1.80
2008/09	31,169	24,155	1.29	34,022	27,075	1.26	14,275	7,498	1.90
2009/10	35,916	30,004	1.20	46,876	35,857	1.31	17,656	8,628	2.05
Mean			1.20			1.28			1.95
SD			0.06			0.05			0.10
CV			5.09%			3.67%			4.87%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

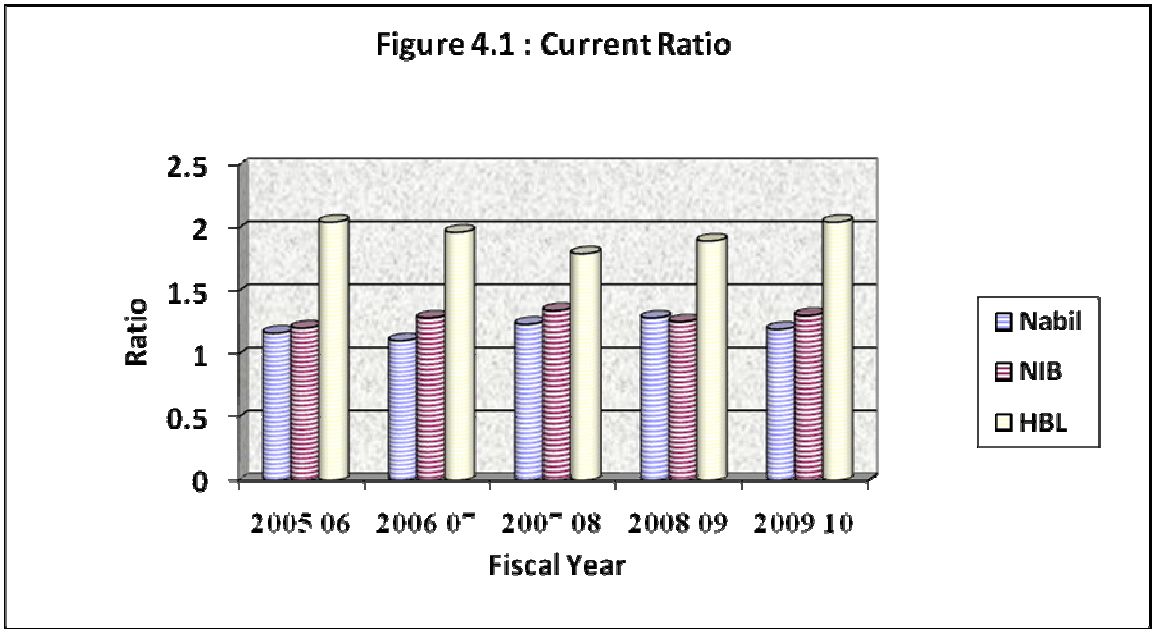


Table 4.1 clearly depicts that Current Assets and Current Liabilities of NABIL have adopted an increasing trend over the study period. Current ratio of NABIL has ranged between 1.11 and 1.29 times and has mean current ratio of 1.20 times. CV of NABIL (i.e. 5.09 %) indicates that NABIL's current ratio has been more consistent over the study period. The current ratios of NIBLL have fluctuating trend over the study period. NIBLL has highest current ratio (i.e. 1.35 times) in FY 2007/08 & lowest ratio (i.e. 1.21times) in FY 2005/06. Similarly, HBL has highest current ratio (i.e. 2.05 times) in FY 2005/06 and lowest current ratio (i.e. 1.80 times) in FY 2007/08. Mean current ratio of HBL, NIBLL & NABIL are 1.95, 1.28, & 1.20 times respectively. Similarly, CV of NIBLL, HBL, & NABIL are 3.67%, 4.87% and 5.09% respectively. The mean current ratio of HBL is greater than those of NIBLL & NABIL, which depicts that HBL has strong liquidity position than NABIL & NIBLL. Similarly, NABIL and NIBLL have not been able to maintain the standard current ratio of 2:1 except HBL in FY 2005/06 and 2009/10. The ratio below the stated standard may be accepted as satisfactory, but it signifies that the banks have the poor liquidity position and face the problem of working capital if they need to pay the current liabilities at demand. It is very important for banks to maintain a good balance between liquidity and profitability. If banks keep large portion of money under its control it affects in profit because idle money earn nothings but other hand the bank should have enough cash balance with it to fulfill the requirement of short-term liabilities.

4.1.1.2 Quick Ratio

Quick ratio establishes a relationship between quick or liquid assets & current liabilities. It is computed by dividing the quick assets by current liabilities.

$$\text{Quick Ratio} = \frac{\textit{Quick assets}}{\textit{Current liabilities}}$$

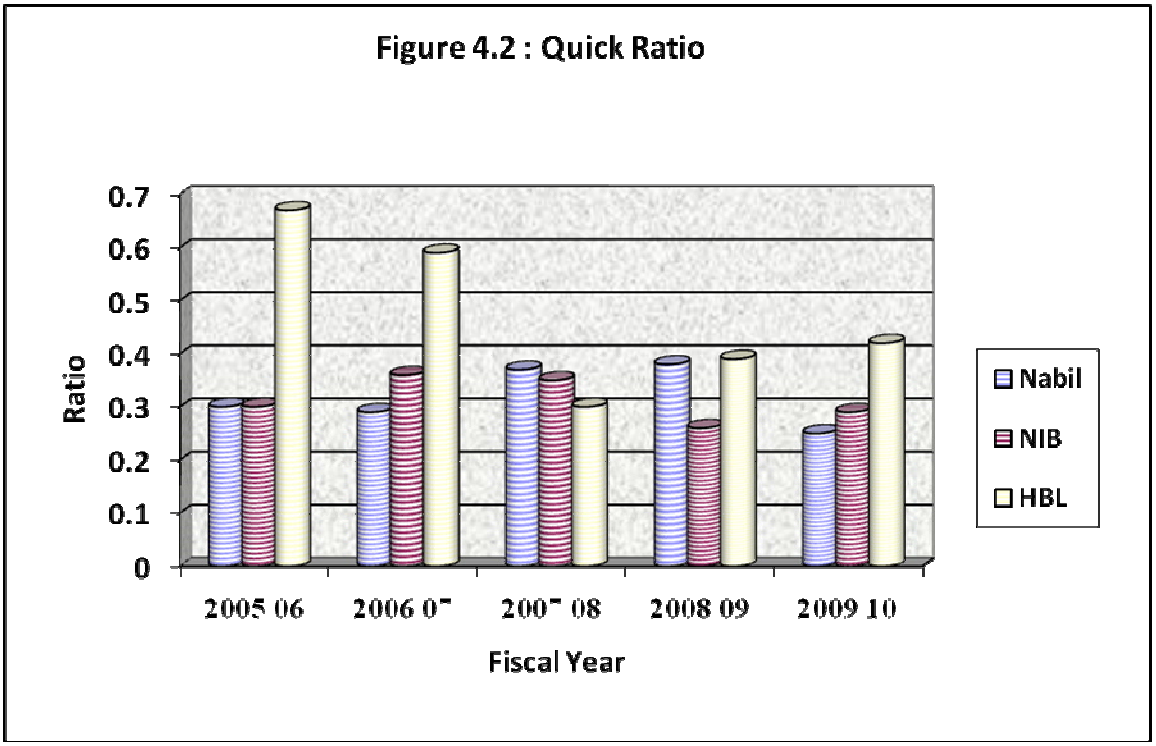
Table 4.2

Quick Ratio (Times)

Rs in 'million'

NABIL				NIBL			HBL		
FY	**Quick Asset**	**Current Liabilities**	**Ratio**	**Quick Asset**	**Current Liabilities**	**Ratio**	**Quick Asset**	**Current Liabilities**	**Ratio**
2005/06	3,842	12,718	0.30	3,429	11,532	0.30	2,290	3,443	0.67
2006/07	4,667	16,363	0.29	4,929	13,821	0.36	2,859	4,879	0.59
2007/08	6,772	18,369	0.37	6,061	17,352	0.35	1,867	6,122	0.30
2008/09	9,270	24,155	0.38	6,910	27,075	0.26	2,898	7,498	0.39
2009/10	7,632	30,004	0.25	10,449	35,857	0.29	3,656	8,628	0.42
Mean			0.32			0.31			0.47
SD			0.05			0.04			0.14
CV			15.58%			12.06%			28.64%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



According to Table 4.2, the quick ratio of NABIL and NIBLL have fluctuating trend over the study period. So, NABIL has highest ratio of 0.38 times in FY 2008/09 and lowest ratio of 0.25 times in FY 2009/10. Similarly, highest ratio of NIBL is 0.36 times in 2006/07 and lowest ratio is 0.26 times in FY 2008/09. Similarly, the ratio of HBL has decreasing trend. HBL's ratio is highest (i.e. 0.67 times) in 2005/06 and lowest (i.e. 0.30 times) in FY 2007/08. The mean ratio of HBL (i.e. 0.47) is significantly higher than that of NABIL and NIBLL (i.e. 0.32 &0.31 times respectively) because of higher quick assets due to the amount of investment in government securities. The standard quick ratio is 1:1 i.e. quick assets must be equal to current liabilities. But the quick ratios of all three banks are below than standard form, which indicates that they have very weak position of immediate payment of short-term obligation (i.e. current liabilities) because current liabilities were greater than that of quick assets. From the standard point of view, we can say that the HBL's ratio is higher than that of other two banks. The highest CV of ratios of HBL (i.e. 28.64%) as compared to NABIL and NIBLL (i.e. 15.58% and 12.06% respectively) signifies greater variation in the ratios. Hence, HBL seems to be slightly in the better position than NABIL & NIBLL.

4.1.1.3 Cash and Bank Balance to Current Assets Ratio

The ratio shows the ability of banks to pay total call made on current deposits. Cash and bank balance are highly liquid assets in current assets proportion. So, the ratio utilizes higher liquidity position than current ratio. The ratio is calculated by dividing cash and bank balance by current assets and expressed as:

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

Table 4.3

Cash & Bank Balance to Current Assets Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Cash & Bank Balance**	**Current Assets**	**Ratio %**	**Cash & Bank Balance**	**Current Assets**	**Ratio %**	**Cash & Bank Balance**	**Current Assets**	**Ratio %**
2005/06	559	14,909	3.75	1,340	13,955	9.61	1,006	7,061	14.24
2006/07	630	18,122	3.48	2,337	17,786	13.14	749	9,618	7.79
2007/08	1,400	22,827	6.13	2,442	23,424	10.42	600	11,029	5.44
2008/09	2,671	31,169	8.57	3,755	34,022	11.04	1,192	14,275	8.35
2009/10	3,373	35,916	9.39	7,918	46,876	16.89	1,461	17,656	8.28
Mean			6.26			12.22			8.82
SD			2.42			2.61			2.91
CV			38.57			21.37			33.01

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

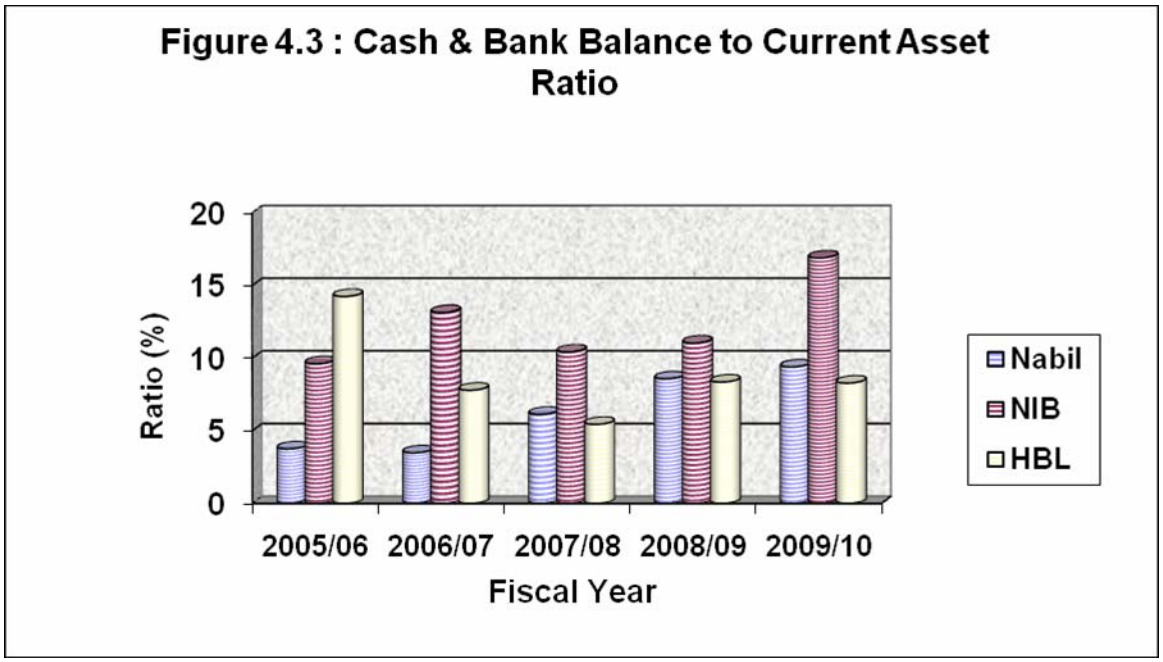


Table 4.3 indicates that NABIL has highest ratio (i.e. 9.39%) in FY 2009/10 and lowest ratio (i.e. 3.48%) in FY 2006/07. Similarly, the ratios of NIBLL & HBL have adopted fluctuating trend over the study period. The highest ratio of NIBLL is 16.89% in FY 2009/10 and lowest is 9.61% in FY 2005/06. Similarly, the highest ratio of HBL was 14.24% in FY 2005/06 and lowest was 5.44% in FY 2007/08. Similarly, mean ratio of NIBLL, HBL and NABIL are 12.22, 8.82 and 6.26 respectively. The mean ratio of NIBLL is higher than that of HBL and NABIL, which indicates that NIBLL has higher ability to meet the daily cash requirement of their customer's deposits. NIBLL has more liquidity position & utilized its fund more effectively. Higher CV of ratios in NABIL as compared to HBL and NIBL signifies greater variation in the ratios.

4.1.1.4 Cash and Bank Balance to Deposits (Except Fixed Deposits) Ratio

The ratio measures the ability of the banks to meet its immediate obligation. The bank should adequate cash and bank balance to meet the unexpected as well as the heavy withdrawal of deposits. The ratio is computed by dividing the cash and bank balance to total short-term deposits i.e. Saving Deposits, current Deposits, and Margin Deposits & Call deposits. It express as:

$$\text{Cash \& Bank Balance to Deposit (except FD) Ratio} = \frac{Cash\ \&\ Bank\ Balance}{Total\ deposit\ (Except\ FD)}$$

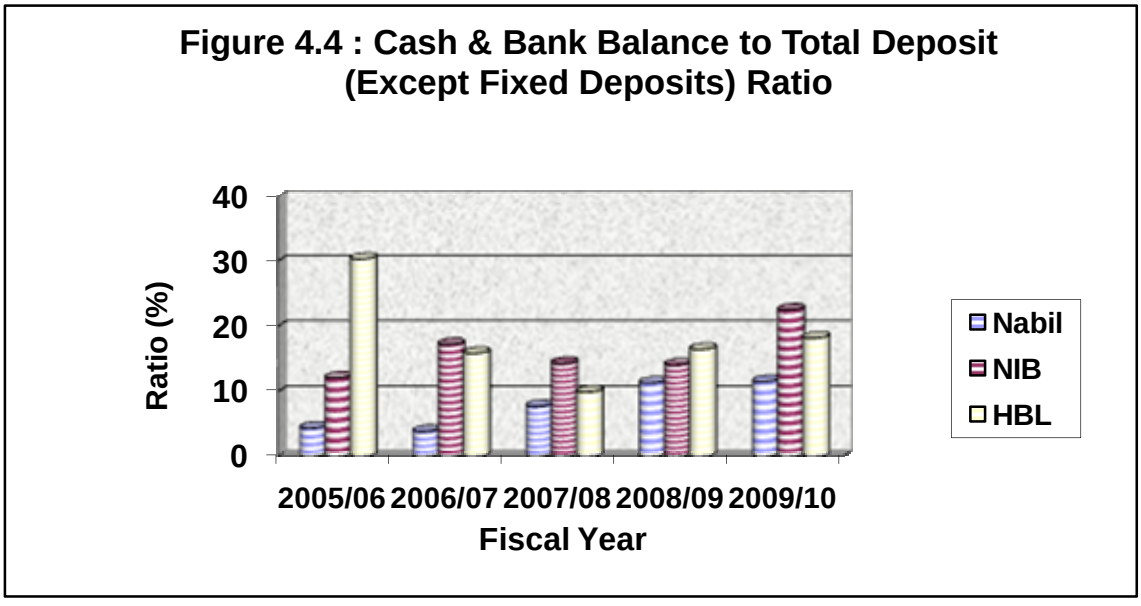
Table 4.4

Cash & Bank Balance to Total Deposit (Expect Fixed Deposits) Ratio

Rs in 'million'

NABIL				NIBL			HBL		
FY	Cash & Bank Balance	Total Deposit (Except FD)	Ratio %	Cash & Bank Balance	Total Deposit (Except FD)	Ratio %	Cash & Bank Balance	Total Deposit (Except FD)	Ratio %
2005/06	559	12,508	4.47	1,340	11,042	12.14	1,006	3,311	30.37
2006/07	630	15,898	3.96	2,337	13,514	17.29	749	4,701	15.93
2007/08	1,400	17,907	7.82	2,442	16,972	14.39	600	5,994	10.01
2008/09	2,671	23,451	11.39	3,755	26,507	14.17	1,192	7,209	16.54
2009/10	3,373	29,038	11.61	7,918	35,065	22.58	1,461	8,000	18.26
Mean			7.85			16.11			18.22
SD			3.26			3.63			6.68
CV			41.56			22.50			36.66

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



In Table 4.4, the ratios of NABIL have shown decreasing trend initially and adopted increasing trend then after with highest ratio in FY 2009/10 (i.e. 11.61%) and lowest in FY 2006/07 (i.e.3.96%). Similarly, the ratio of NIBLL & HBL has maintained fluctuating trend. NIBL has the highest in FY 2009/10 (i.e. 22.58%) and lowest in FY 2005/06 (i.e. 12.14%). Likewise, HBL has the highest in FY 2005/06 (i.e. 30.37%) and lowest in FY 2007/08 (i.e. 10.01%). The mean ratio of HBL (i.e. 18.22%) appeared greater than that of NIBLL and NABIL (i.e. 16.11% and 7.85% respectively), which indicates that HBL can maintain its immediate obligation and also should maintain its adequate cash and bank balance efficiently than NABIL and NIBL. Higher ratio indicates sound liquidity position of bank. But higher ratio is not good enough to reveal under utilization of its fund. Higher CV of ratios in NABIL as compared to two banks signifies greater variation in the ratios.

4.1.1.5 Cash and Bank Balance to Total Deposit Ratio

The ratio shows the proportion of total deposits held at most liquid assets. It shows the proportion of total deposits held as most liquid assets. High ratio shows the strong liquidity position of the bank. But too high ratio is not favorable for the bank because it produces adverse effect n profitability due to idleness of high-interest bearing fund. The ratio computed by dividing the cash & bank balance by total Deposits.

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

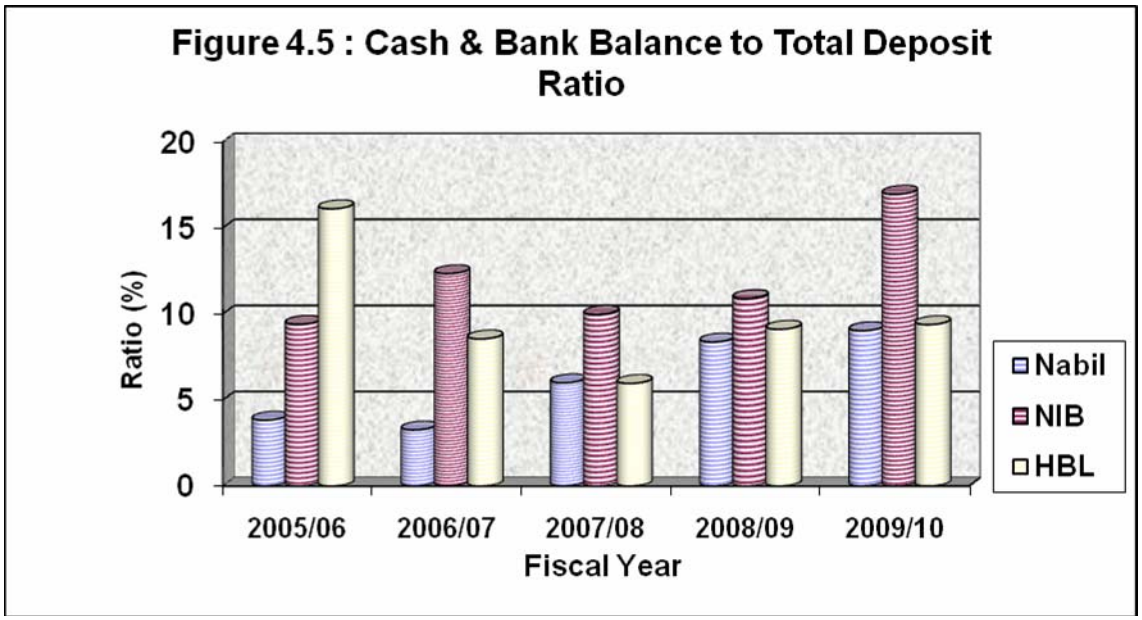
Table 4.5

Cash and Bank Balance to Total Deposit Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Cash & Bank Balance**	**Total Deposit**	**Ratio %**	**Cash & Bank Balance**	**Total Deposit**	**Ratio %**	**Cash & Bank Balance**	**Total Deposit**	**Ratio %**
2005/06	559	14,587	3.83	1,340	14,255	9.40	1,006	6,241	16.11
2006/07	630	19,347	3.26	2,337	18,927	12.34	749	8,766	8.55
2007/08	1,400	23,342	6.00	2,442	24,489	9.97	600	10,068	5.96
2008/09	2,671	31,915	8.37	3,755	34,452	10.90	1,192	13,085	9.11
2009/10	3,373	37,348	9.03	7,918	46,698	16.96	1,461	15,580	9.38
Mean			6.10			11.91			9.82
SD			2.32			2.71			3.37
CV			38.08			22.76			34.31

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



As per Table 4.5, the ratios of NABIL have decreasing trend up to FY 2006/07 and than after it has maintained increasing trend. NABIL has highest ratio in FY 2009/10 (i.e. 9.03%) & lowest in FY 2006/07 (i.e. 3.26%). The ratio of NIBL has fluctuating trend with highest ratio of 16.96% in FY 2009/10 and lowest ratio of 9.40% in FY 2005/06. The highest ratio of HBL was 16.11% in FY 2005/06 and lowest ratio was 5.96% in FY 2007/08. The mean ratio of NIBL (i.e. 11.91%) is greater than that of HBL & NABIL (i.e. 9.82% & 6.10% respectively), which means that NIBL has greater ability to repay the deposits, i.e. NIBL is more efficient to serve the customers from liquidity point of view. A high ratio represents the greater ability to meet their all types of deposits. But too high ratio of cash and bank balance to total deposits may be unsuitable and harmful because it affects their profitability position and also low ratio is unfavorable as capital will be tide up and opportunity cost will be higher.

4.1.1.6 NRB Balance to Current and Saving Deposit Ratio

The ratio shows the percentage of amount deposits by the banks in Nepal Rastra Bank (NRB) as compare to the current and saving deposits. Commercial banks required holding certain position of current and saving deposits in NRB account. It is computed by dividing the NRB balance by current and saving deposits.

$$\text{NRB Balance to Current and Saving Deposit Ratio} = \frac{NRB\ Balance}{Current\ \&\ Saving\ deposits}$$

Table 4.6 denotes that the ratios were 3.97%, 2.73%, 8.20%, 10.49% and 13.18% in NABIL in the respectively years for the FY 2005/06 to FY 2009/10. Mean and CV of the ratios were 7.71% and 50.77% respectively. Similarly, the ratios remained 9.42%, 15.59%, 10.69%, 10.82% & 21.18% in NIBL in the respectively years for the FY 2005/06 to FY 2009/10. Mean and CV of the ratios were 13.54% and 32.20% respectively. Similarly, the ratios remained 36.88%, 14.29%, 6.83%, 14.67% & 20.11% in HBL in the respectively years for the FY 2005/06 to FY 2009/10. Mean and CV of the ratios were 18.56% and 54.37% respectively.

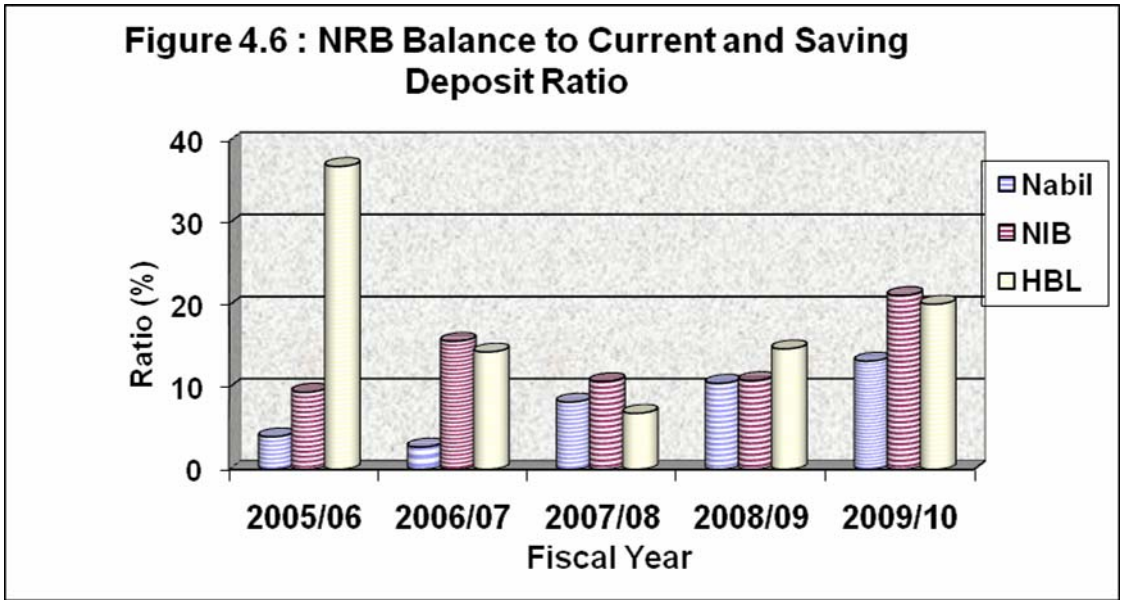
Table 4.6

NRB Balance to Current and Saving Deposit Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**NRB Balance**	**Current & Saving Deposit**	**Ratio %**	**NRB Balance**	**Current & Saving Deposit**	**Ratio %**	**NRB Balance**	**Current & Saving Deposit**	**Ratio %**
2005/06	390	9,826	3.97	780	8,287	9.42	832	2,257	36.88
2006/07	318	11,681	2.73	1,526	9,788	15.59	456	3,189	14.29
2007/08	1,113	13,583	8.20	1,381	12,917	10.69	263	3,846	6.83
2008/09	1,829	17,444	10.49	1,820	16,827	10.82	634	4,322	14.67
2009/10	2,649	20,101	13.18	4,411	20,823	21.18	971	4,828	20.11
Mean			7.71			13.54			18.56
SD			3.92			4.36			10.09
CV			50.77			32.20			54.37

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



In above figure 4.6, the ratio of NABIL & NIBL remained highest in 5th year i.e.13.18% & 21.18% respectively whereas in HBL, it remained highest in the 1st year i.e. 36.88%. Similarly, the lowest ratios went in 3rd year i.e. 2.73% in NABIL, in 1st year i.e.9.42% in NIBL & in 4th year i.e.6.83% in HBL. As per directive of Nepal Rastra Bank, the required ratio is 8%. Therefore, NABIL bank shows below the standard in FY 2005/06 & 2006/07 and HBL shows below the standard in FY 2007/08. Mean ratio of HBL came higher than that of NABIL and NIBL, which means that HBL has greater ability to repay the current & saving deposits i.e. HBL is more efficient to serve the customers from liquidity point of view. From the CV analysis, it can be concluded that the ratio of HBL varied to a greater than that of NABIL & HBL.

4.1.1.7 NRB Balance to Fixed Deposit Ratio

The ratio shows the proportion of cash balance at Nepal Rastra Bank's current account as compare to the commercial banks' fixed deposits amount. According to the direction of NRB, this ratio should be maintained 6%. Hence the ratio so calculated finds whether the bank has obeyed the direction of central bank or not.The ratio is calculated as using the following formula:

$$\text{NRB Balance to Fixed Deposit Ratio} = \frac{NRB\ Balance}{Fixed\ Deposits}$$

Table 4.7

NRB Balance to Fixed Deposit Ratio

Rs in 'million'

NABIL				NIBL			HBL		
FY	**NRB Balance**	**Fixed Deposit**	**Ratio %**	**NRB Balance**	**Fixed Deposit**	**Ratio %**	**NRB Balance**	**Fixed Deposit**	**Ratio %**
2005/06	390	2,079	18.75	780	3,212	24.29	832	2,931	28.41
2006/07	318	3,449	9.23	1,526	5,413	28.19	456	4,064	11.21
2007/08	1,113	5,435	20.49	1,381	7,517	18.38	263	4,074	6.45
2008/09	1,829	8,464	21.61	1,820	7,944	22.91	634	5,876	10.79
2009/10	2,649	8,311	31.87	4,411	11,633	37.92	971	7,580	12.81
Mean			20.39			26.34			13.93
SD			7.22			6.59			7.54
CV			35.40			25			57.10

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

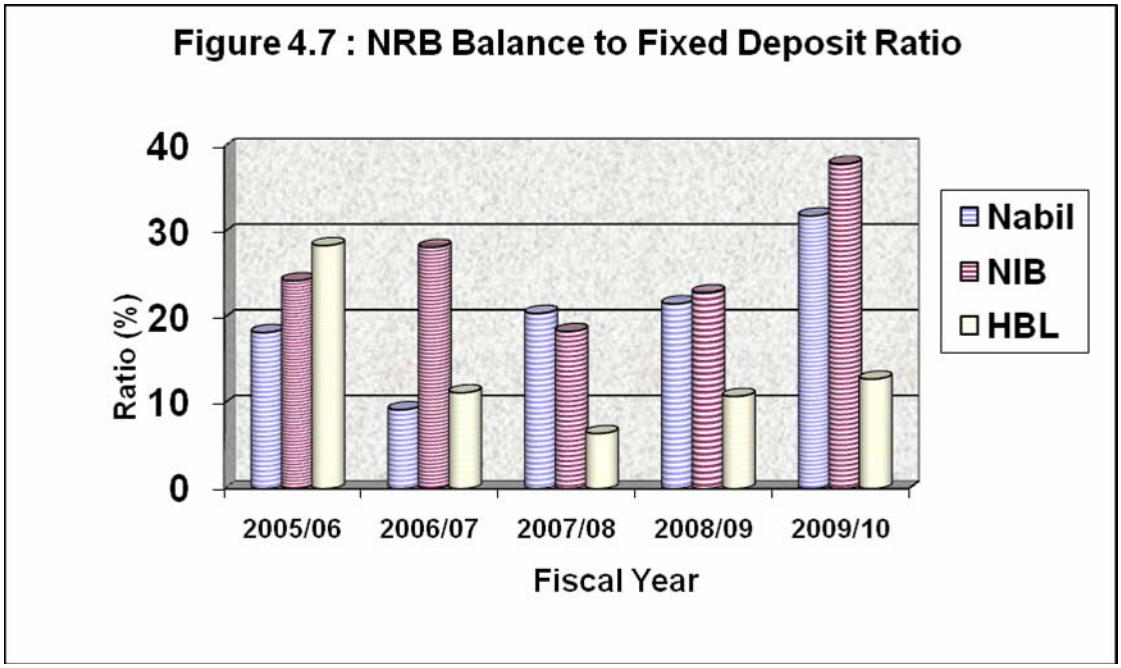


Figure 4.7 discuss that the ratios of NABIL indicate decreasing trend to 2nd year than after that it started to rise. So, it ranged from minimum of 9.23% in 3rd year and maximum of 31.87% in last year. In NIBL, it has fluctuating trend in the period of review. So, it ranged from minimum of 18.38% in 4th year and maximum of 37.92% in last year. In HBL, it has decreasing trend in the period of review. So, it ranged from minimum of 6.45% in 4th year and maximum of 28.41% in 2nd year. In all of the years, the ratio remained higher than 6%, the minimum standard set by NRB. Mean ratio of NIBL slightly greater than that of two banks. It reveals that NIBL has slightly stronger the fixed deposits to be repaid than that of NABIL & HBL. Furthermore, CV of the ratios remained higher in HBL than NABIL & NIBL, due to greater fluctuation in the ratios of HBL.

4.1.2 Efficiency Ratios

Turnover ratios have been used to evaluate the efficiency with which the banks have managed and utilized their assets. So, it is also called Efficiency ratio. These ratios are also employed to evaluate the speed with which assets are being converted and turnover. These ratios moreover help in measuring the bank's ability to utilize their available resources. In this study these ratios include; loans and advances to total deposit ratio, loans and advances to saving deposit ratio, loans and advances to fixed deposit ratio, investment total deposit ratio and performing assets to total assets ratio.

4.1.2.1 Loans and Advances to Total Deposit Ratio

This ratio is calculated to find out how the banks are successful utilizing the outsiders' fund i.e. total deposits for profit generating purpose in the form of extending loan and advances. It is calculated as;

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

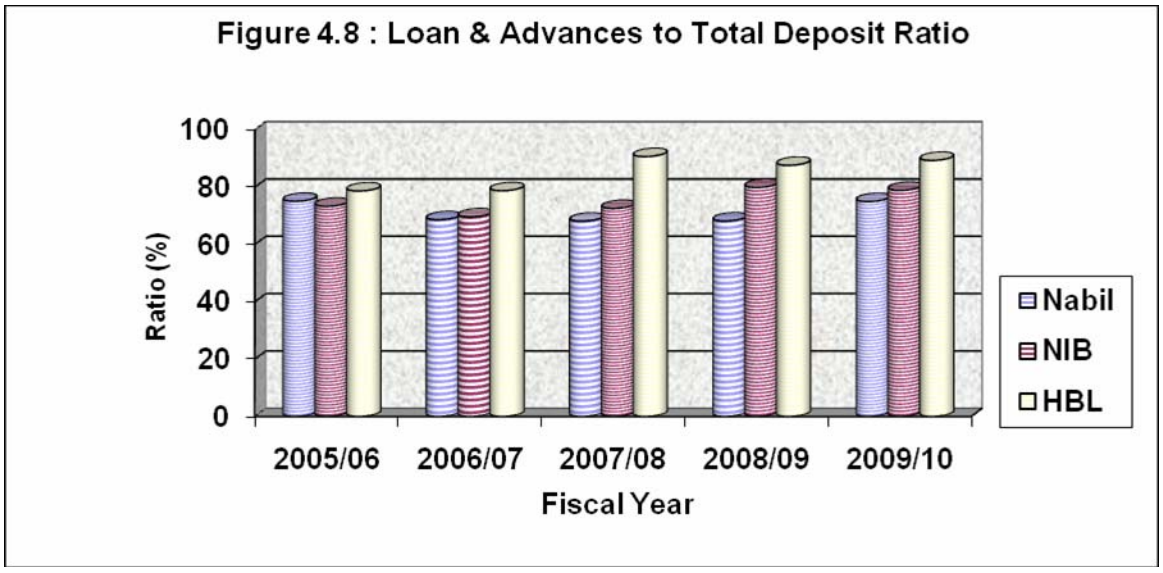
Table 4.8

Loans and Advances to Total Deposit Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Loans & Advances**	**Total Deposit**	**Ratio %**	**Loans & Advance**	**Total Deposit**	**Ratio %**	**Loans & Advance**	**Total Deposit**	**Ratio %**
2005/06	10,947	14,587	75.05	10,453	14,255	73.33	4,909	6,241	78.66
2006/07	13,279	19,347	68.63	13,178	18,927	69.63	6,902	8,766	78.74
2007/08	15,903	23,342	68.13	17,769	24,489	72.56	9,129	10,068	90.67
2008/09	21,759	31,915	68.18	27,529	34,452	79.91	11,465	13,085	87.62
2009/10	27,999	37,348	74.97	36,827	46,698	78.86	13,916	15,580	89.32
Mean			70.99			74.86			85
SD			3.29			3.91			5.24
CV			4.63			5.22			6.16

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



The Figure 4.8 depicts that the ratio in the three banks fluctuated throughout the study period. In NABIL bank, it ranged from minimum in 3rd year i.e.68.13% to maximum in second year i.e. 75.05%. In NIBL, it is highest in FY 2008/09 i.e.79.91% and lowest in FY 2006/07 i.e. 69.63%. In HBL, it is highest in FY 2007/08 i.e.90.67% and lowest in FY 2007/05 i.e. 78.66%. Mean ratio of HBL appeared considerably higher than that of NABIL & NIBL, which signifies

that HBL is more successful in utilizing the resource in profitable sectors than two banks. From the CV analysis, it can be concluded that the ratio of HBL varied to a slightly greater than that of two banks. There is not standard turnover ratio for loan and advances to total deposits. Higher turnover ratio is considered significant as it is indicated that the bank is utilizing its assets in profitable field and vice versa. For this analysis we can say that from point of the view of both amount & ratio, the HBL is better than that of NABIL & NIBL. Similarly, NIBL is better than that of NABIL from above analysis.

4.1.2.2 Loans and Advances to Saving Deposit Ratio

Saving deposits are interest- bearing obligation for short- term purpose where as loan and advances are long-term investment for generating income. So the ratio indicates how money time's short –term interest-bearing deposits are utilized for income generating purpose. It is calculated as;

$$\text{Loan and Advances to Saving Deposit Ratio} = \frac{Loans\ \&\ Advances}{Saving\ deposits}$$

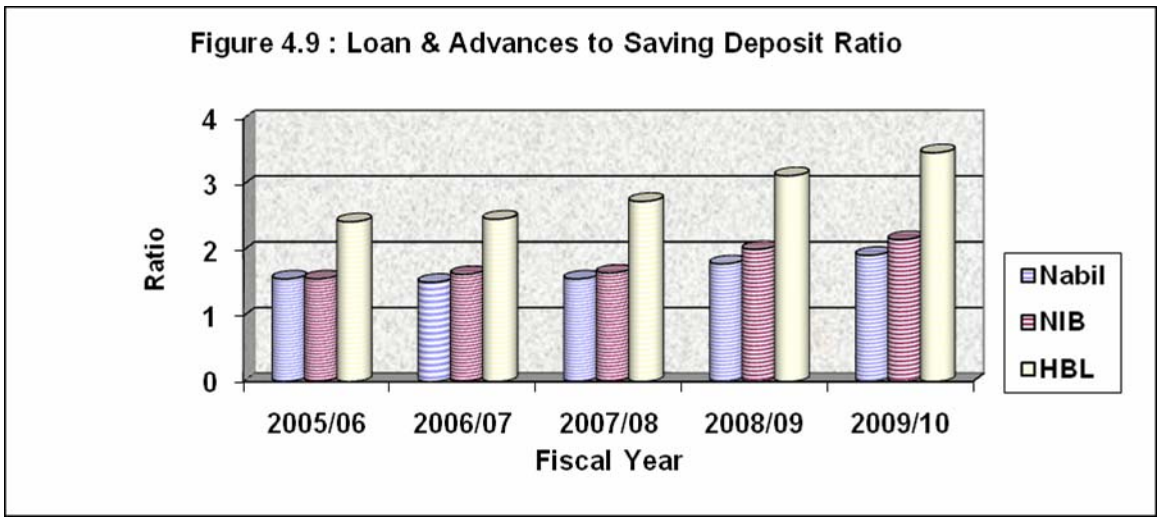
Table 4.9

Loans and Advances to Saving Deposit Ratio

Rs in 'million'

NABIL				NIBL			HBL		
FY	**Loans & Advance**	**Saving Deposit**	**Ratio**	**Loans & Advance**	**Saving Deposit**	**Ratio**	**Loans & Advance**	**Saving Deposit**	**Ratio**
2005/06	10,947	7,026	1.56	10,453	6,704	1.56	4,909	2,024	2.43
2006/07	13,279	8,771	1.51	13,178	8,082	1.63	6,902	2,797	2.47
2007/08	15,903	10,187	1.56	17,769	10,742	1.65	9,129	3,336	2.74
2008/09	21,759	12,160	1.79	27,529	13,689	2.01	11,465	3,668	3.13
2009/10	27,999	14,620	1.92	36,827	17,066	2.16	13,916	3,994	3.48
Mean			1.67			1.80			2.85
SD			0.16			0.24			0.40
CV			9.54%			13.19%			14.11%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



The ratios of all three banks show the increasing trend in FY 2005/06 to FY 2009/10 from above figure 4.9. In NABIL, the highest ratio is 1.92 times in FY 2009/10 and lowest ratio is 1.51 in FY 2006/07. In NIBL, the highest ratio is 2.16 times in FY 2009/10 and lowest is 1.56 times in FY 2005/06. So, in NIBL, the highest ratio is 3.48 times in FY 2009/10 & lowest ratio is 2.43 times in FY 2005/06. With respect to these ratios, the three banks have not shown good performance. In other hand, these banks have not well utilized the interest bearing deposits in term of loan and advances. Since average of the ratios in HBL seemed greater than that of NIBL & NABIL, the turnover position of HBL was greater than that of these two banks. But in comparing the each year ratio and CV analysis, HBL has also good performance than NABIL & NIBL.

4.1.2.3 Loans and Advances to Fixed Deposits Ratio

The ratio examines that how many the fund is used in loans and advance against fixed deposits. They are interest bearing long-term obligation where as loans and advance are the major sources of investment in generating income for commercial banks. It is calculated as:

$$\text{Loans and Advances to Fixed Deposit Ratio} = \frac{Loans\ \&\ Advances}{Fixed\ deposits}$$

Table 4.10

Loans and Advances to Fixed Deposit Ratio (Times)

Rs in 'million'

NABIL				NIBL			HBL		
FY	**Loans & Advance**	**Fixed Deposit**	**Ratio**	**Loans & Advance**	**Fixed Deposits**	**Ratio**	**Loans & Advance**	**Fixed Deposits**	**Ratio**
2005/06	10,947	2,079	5.27	10,453	3,212	3.25	4,909	2,931	1.68
2006/07	13,279	3,449	3.85	13,178	5,413	2.43	6,902	4,065	1.70
2007/08	15,903	5,435	2.93	17,769	7,517	2.36	9,129	4,075	2.24
2008/09	21,759	8,464	2.57	27,529	7,944	3.47	11,465	5,876	1.95
2009/10	27,999	8,311	3.37	36,827	11,633	3.17	13,916	7,580	1.84
Mean			3.60			2.94			1.88
SD			0.94			0.45			0.20
CV			26.11%			15.43%			10.85%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

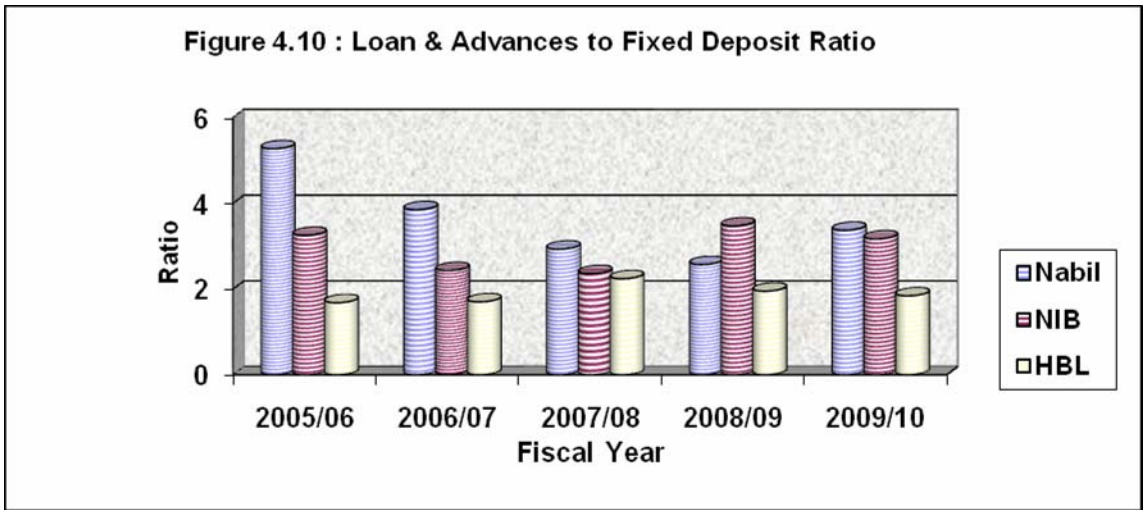


Figure 4.10 indicates that the ratio of NABIL revealed decreasing trend to 4th year and than after it start to rise slightly. It is highest in FY 2005/06 i.e. 5.27 times and lowest in FY 2008/09 i.e. 2.57 times. It showed fluctuating trend in NIBL & HBL for the period. In NIBL, the highest was in FY 2008/09 i.e. 3.47 times and lowest in FY 2007/08 i.e. 2.36 times. In NIBL, the highest was in FY 2007/08 i.e. 2.24 times and lowest in FY 2005/06 i.e. 1.68 times. Mean turnover ratio of NABIL is greater than that of NIBL & HBL, which means it utilized the high

interest bearing fixed deposits in yielding sector satisfactory return or utilizes its fixed deposits more efficiently. As compared to NABIL, mean ratio is slightly lower in NIBL than HBL; it also utilized the high interest bearing fixed deposits in yielding sectors satisfactory return in comparing the saving turnover ratio. CV analysis of NABIL is greater than NIBL & HBL. In comparing the saving deposits turnover ratio, the fixed deposits turnover gives good performance in three banks.

4.1.3 Profitability Ratio

Profit is an important factor that determines the firm's expansion &diversification. A required level of profit is necessary for the firm's growth and survives in the competitive environment. Profitability ratios have been employed to measures the operating efficiency of the sampled banks. For the purpose, return on assets, return on net worth, return on total deposit, total interest expenses to total interest income ratio and interest earned to total asset ratio have been analyzed and interpreted.

4.1.3.1 Return on Assets (ROA)

The ratio is useful in measuring the profitability of all financial resources invested the firm's assets. It is also called net profit or loss to total assets or working fund ratio and denoted by ROA. It is calculated as:

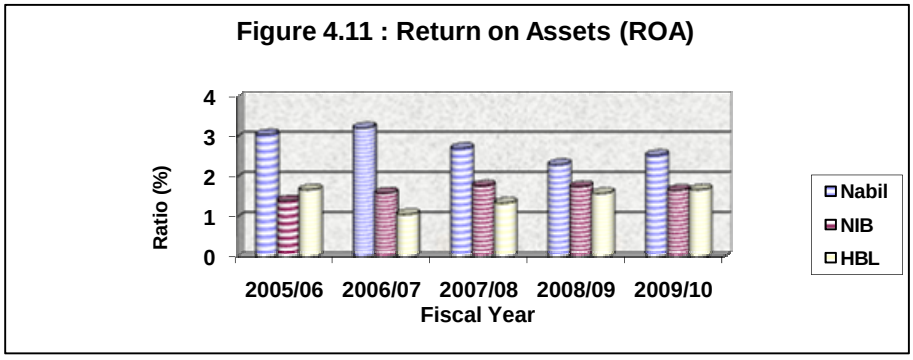
$$\text{Return on Assets} = \frac{Net\ \text{Pr}ofit\ After\ tax(NPAT)}{Total\ Assets}$$

Table 4.11

Return on Assets (ROA)

FY	2005/06	2006/07	2007/08	2008/09	2009/010	Mean	S.D	C.V
NABIL	3.06%	3.23%	2.72%	2.32%	2.55%	2.78%	0.33%	11.94%
NIBL	1.42%	1.61%	1.79%	1.77%	1.68%	1.65%	0.13%	8.08%
HBL	1.69%	1.08%	1.36%	1.60%	1.69%	1.48%	0.24%	15.86%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



Above figure 4.11 states that the ratios of NABIL shows the increasing trend to FY 2006/07 and than after it starts to fall and in last year slightly rise. It reached 3.23% in FY 2006/07 at highest posint & 2.32% in FY 2008/09 at lowest. The ratios of NIBL are increasing trend. It was highest in FY 2007/08 i.e. 1.79% and lowest in FY 2005/06 i.e. 1.42%. Similarly, the ratios of HBL are decreasing trend to 2nd year and then it started to rise. It was highest in FY 2009/10 i.e. 1.69% and lowest in FY 2006/07 i.e. 1.08%.The mean ratio was considerably higher in NABIL bank than that of NIBL & HBL, which signifies that the profitability position of NABIL in the relation to this ratio is better than that of NIBL & HBL. If bank earns high profit, it will increase its goodwill in competitive market at it can gives attractive bonus and dividend to staffs and shareholders respectively. From the above analysis overall profitability of NABIL is better than NIBL & HBL and whole credit goes to good management of banking sectors. CV of the ratios was higher in HBL than that of NABIL & NIBL. In total, the three banks profitability position was in satisfactory.

4.1.3.2 Return on Net Worth / Shareholders' Equity (ROE)

The ratio is tested to see the profitability of owners' investment. It reflects the extent to which the objective of business is accomplished. So, all commercial banks have its main objectives to earn the maximum profit, so that they can run smoothly and get the name and fame. The ratio is of great interest to present as prospective shareholders' and also of great significance to management, which has the responsibility maximizing the owners' welfare. So, higher is desirable. Net worth refers the owner's claim on banks. It is also called net profit to shareholders equity ratio on shareholder equity simply denoted by ROE. It is calculated as;

$$\text{Return on Net Worth} = \frac{Net\ \text{Pr}ofit\ After\ tax(NPAT)}{Net\ Worth}$$

Table 4.12

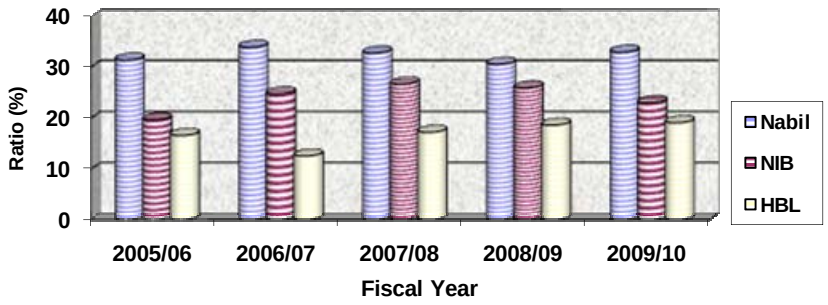
Return on Net Worth

Rs in 'million'

NABIL				NIBL			HBL		
FY	**NPAT**	**Net Worth**	**Ratio %**	**NPAT**	**Net Worth**	**Ratio %**	**NPAT**	**Net Worth**	**Ratio %**
2005/06	520	1,657	31.39	232	1,180	19.67	114	684	16.63
2006/07	635	1,873	33.91	350	1,415	24.77	97	766	12.60
2007/08	674	2,055	32.79	501	1,878	26.70	158	918	17.25
2008/09	746	2,440	30.60	697	2,687	25.93	243	1,303	18.65
2009/10	1,031	3,129	32.95	901	3,908	23.05	317	1,660	19.12
Mean			32.33			24.02			16.85
SD			1.18			2.50			2.31
CV			3.65			10.41			13.70

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

Figure 4.12 : Return on Net Worth



The figure 4.12 denotes that the ratio in NABIL showed fluctuating trend. In NIBL, the ratio was increasing trend to 3rd year and then it started to fall. In HBL, the ratios was also decreasing trend to 2nd year and then it started to rise. Mean ratio of NABIL appeared more

than that of NIBL and almost two times of HBL, which indicates that NABIL has effectively utilized the owners' capital and able to give regular & significant return to them. Higher CV of the ratios in HBL signifies that the lesser uniformity in the ratio or the ratios were far from the mean ratios.

4.1.4 Capital Structure Ratio

Leverage refers to the ratio of debt to total equity in the capital structure of the firm. Debt and equity are long- term obligation and remaining part of the liabilities side of Balance Sheet are term as short-term obligation. Therefore a firm has strong short-term liabilities as well as long-term financial position. Long-term financial position of the firm is determined by leverage or capital structure. So, leverage ratios have been analyzed and interpreted to judge the long-term financial health of the sampled banks. These include debt-equity ratio, debt-assets ratio, debt to total capital ratio and interest coverage ratio.

4.1.4.1 Debt-Equity Ratio

The ratio shows the mixed of debt & equity in capital. It measures creditors' claim against owners'. High ratio shows that the creditors' claims are greater than those of owners. Such a situation introduces inflexibility in the firm's operation due to the increasing interference and pressures from creditors. Low ratio implies a greater than claim of owners than creditors. In such a situation, shareholders are less benefited if economic activities are good enough. Therefore, the ratio should neither be too high nor too low. It is computed as:

$$\text{Debt-Equity Ratio} = \frac{Total\ Debt}{Shareholder's\ Equity}$$

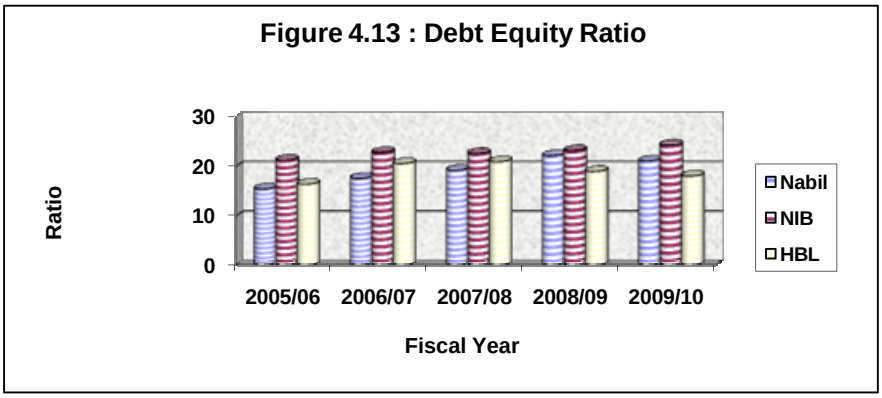
Table 4.13

Debt- Equity Ratio (Times)

Rs in 'million'

NABIL				NIBL			HBL		
FY	**Total Debt**	**Net worth**	**Ratio**	**Total Debt**	**Net worth**	**Ratio**	**Total Debt**	**Net worth**	**Ratio**
2005/06	25,743	1,657	15.54	25,197	1,180	21.35	11,283	684	16.49
2006/07	33,091	1,873	17.67	32,412	1,415	22.90	15,846	766	20.67
2007/08	39,707	2,055	19.32	42,638	1,878	22.70	19,326	918	21.04
2008/09	54,379	2,440	22.29	62,548	2,687	23.28	24,839	1,303	19.06
2009/10	66,313	3,129	21.19	95,336	3,908	24.40	30,124	1,660	18.14
Mean			19.20			22.93			19.08
SD			2.42			0.98			1.67
CV			12.60%			4.29%			8.76%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



In above figure, the ratios in NABIL Bank showed increasing trend to 4th year. The ratio of NIBL revealed increasing trend. The ratio of HBL followed rising trend up to 3rd year and then it started to decrease. Average of the ratios appeared significantly greater in NIBL as compared to that of two banks. Such situation introduces in flexibility in the bank's operation due to the increasing interference and pressure from creditors. From the above analysis we can say that the three banks seemed levered. In other words, capital structure of NIBL is riskier than that of NABIL & HBL bank. CV of NIBL is lower, which clarifies that the ratios of NABIL & HBL were less consistent.

4.1.4.2 Debt Assets Ratio

The ratio shows the contribution of creditors in financing the assets of the bank. It is calculated as:

$$\text{Debt-Asset Ratio} = \frac{Total\ Debt}{Total\ Assets}$$

Table 4.14

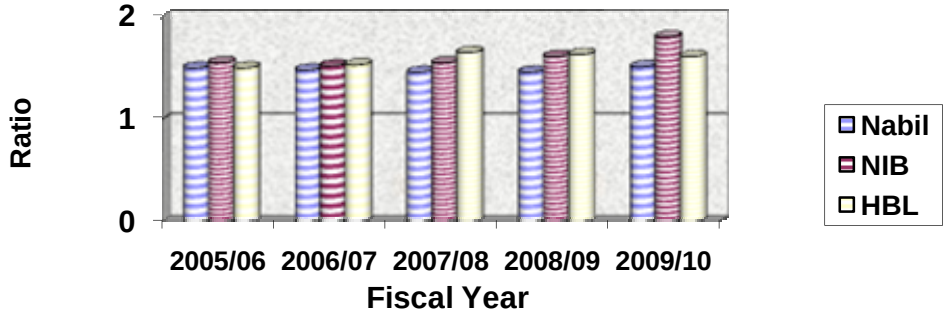
Debt Assets Ratio

Rs in 'million'

NABIL				NIBL			HBL		
FY	**Total Debt**	**Total Assets**	**Ratio**	**Total Debt**	**Total Assets**	**Ratio**	**Total Debt**	**Total Assets**	**Ratio**
2005/06	25,743	17,186	1.50	25,197	16,274	1.55	11,283	7,508	1.50
2006/07	33,091	22,330	1.48	32,412	21,330	1.52	15,846	10,384	1.53
2007/08	39,707	27,253	1.46	42,638	27,591	1.55	19,326	11,679	1.65
2008/09	54,379	37,133	1.46	62,548	38,873	1.61	24,839	15,239	1.63
2009/10	66,313	43,867	1.51	95,336	53,011	1.80	30,124	18,751	1.61
Mean			1.48			1.61			1.58
SD			0.02			0.10			0.06
CV			1.38%			6.31%			3.69%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

Figure 4.14 : Debt Assets Ratio



According to the above figure, Mean of the ratios came slightly greater in NIBL as compared to that in HBL & NABIL, which signifies that the former followed more aggressive policy in raising the capital. On the other hand, capital structure of NABIL seems less risky. Higher ratio in NIBL indicates that the greater portion of the banks assets has been financed through outsider's fund. From the CV analysis, it can be noticed that the ratios of NIBL varied considerably throughout the review period.

4.1.4.3 Interest Coverage Ratio

The ratio is known as time interest earned ratio is used to test the debt servicing capacity of bank. It shows the number of times the interest charged are covered by fund that ordinary available for their payment. It is calculated by dividing the EBIT by interest charged.

$$\text{Interest Coverage Ratio} = \frac{\text{Earning Before Interest \& Tax (EBIT)}}{\text{Interest Charged}}$$

Table 4.15

Interest Coverage Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**EBIT**	**Int. Charged**	**Ratio**	**EBIT**	**Int. Charged**	**Ratio**	**EBIT**	**Int. Charged**	**Ratio**
2005/06	1,001	244	4.11	688	355	1.94	391	226	1.73
2006/07	1,255	357	3.51	996	491	2.03	478	340	1.40
2007/08	1,551	556	2.79	1,409	686	2.06	652	421	1.55
2008/09	1,847	758	2.44	2,012	992	2.03	861	506	1.70
2009/10	2,632	1,153	2.28	2,986	1,687	1.77	1,222	767	1.59
Mean			3.03			1.97			1.59
SD			0.69			0.11			0.12
CV			22.73%			5.39%			7.39%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

Figure 4.15 : Interest Coverage Ratio

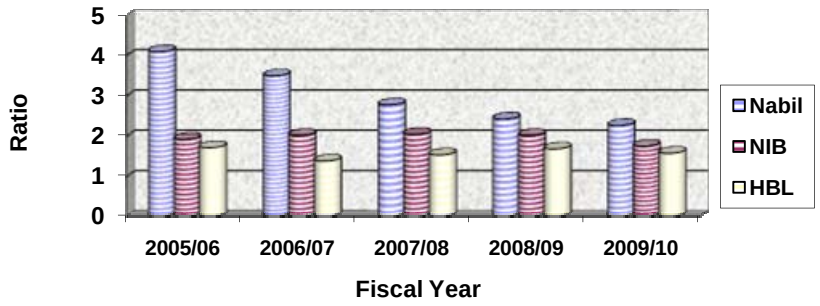


Table 4.15 reveals that mean and CV of the ratios of NABIL seemed 3.03 times and 22.73% respectively. Accordingly, Mean of the ratios in NIBL was 1.97 times whereas CV was 5.39%. Mean and CV of the ratios in HBL seemed 1.59 times and 7.39% respectively. Mean ratio of NABIL bank higher than that of NIBL & HBL, which reveals the better debt servicing capacity of NABIL bank. By comparing the CV of the ratios, NABIL has more varied than two banks. In total analysis of leverage ratios, the three banks seemed levered and debt-serving capacity also seemed satisfactory.

4.1.5 Capital Adequacy Ratios

Capital adequacy ratios of the banks have been tested to find whether they are successful to Measures the depositors and creditors about their soundness; and also to maintain general confidence in banking system. These include net worth to total deposit ratio, net worth to total assets and net worth to total credit ratio.

4.1.5.1 Net Worth to Total Deposits Ratio

The ratio measures the percentage of shareholders' fund in relation to the total deposits collected in the bank. It is the yardstick to see whether the bank has maintained the capital fund according to the direction of Nepal Rastra Bank. It is calculated as:

$$\text{Net worth to Total Deposit} = \frac{Net\ Worth}{Total\ Deposits}$$

Table 4.16

Net Worth to Total Deposit Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Net Worth**	**Total Deposits**	**Ratio %**	**Net Worth**	**Total Deposit**	**Ratio %**	**Net Worth**	**Total Deposit**	**Ratio %**
2005/06	1,657	14,587	11.36	1,180	14,255	8.28	684	6,241	10.96
2006/07	1,873	19,347	9.68	1,415	18,927	7.48	766	8,766	8.74
2007/08	2,055	23,342	8.80	1,878	24,489	7.67	918	10,068	9.12
2008/09	2,440	31,915	7.64	2,687	34,452	7.80	1,303	13,085	9.96
2009/10	3,129	37,348	8.38	3,908	46,698	8.37	1,660	15,580	10.66
Mean			9.17			7.92			9.89
SD			1.28			0.35			0.86
CV			13.93			4.38			8.65

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

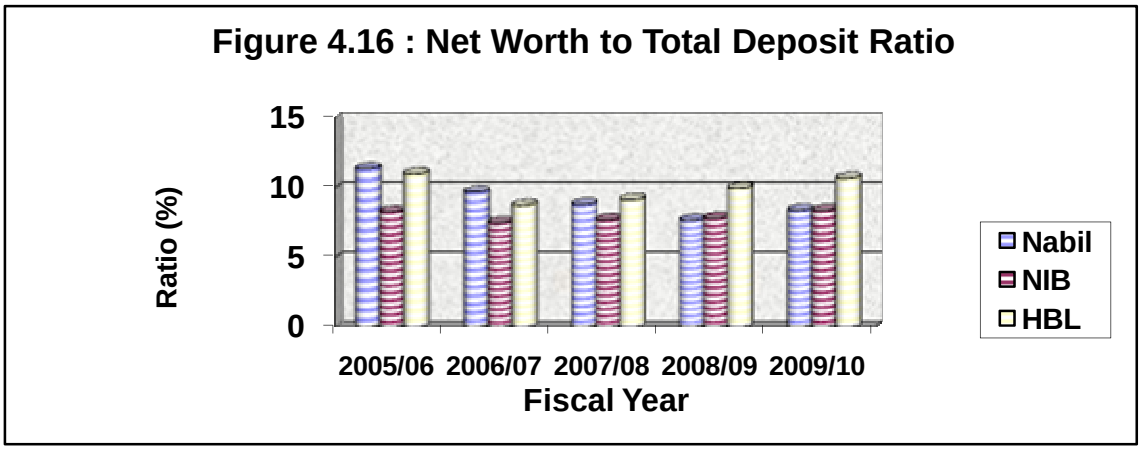


Figure 4.16 denotes that average ratio of HBL appeared higher then NABIL & HBL and average ratio of NABIL appeared higher then NIBL which means the former is better with respect to the capacity adequacy position. Higher CV of the ratios of NABIL shows less consistency in the maintaining net worth with respect to deposits.

4.1.5.2 Net Worth to Total Assets Ratio

The ratio measures the percentage of net worth in relation to the total assets owned by the banks. It is calculated as;

$$\text{Net Worth to Total Assets Ratio} = \frac{Net\ Worth}{Total\ Assets}$$

Table 4.17

Net Worth to Total Assets Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Net Worth**	**Total Assets**	**Ratio %**	**Net Worth**	**Total Assets**	**Ratio %**	**Net Worth**	**Total Assets**	**Ratio %**
2005/06	1,657	17,186	9.64	1,180	16,274	7.25	684	7,508	9.11
2006/07	1,873	22,330	8.39	1,415	21,330	6.64	766	10,384	7.38
2007/08	2,055	27,253	7.54	1,878	27,591	6.81	918	11,679	7.86
2008/09	2,440	37,133	6.57	2,687	38,873	6.91	1,303	15,239	8.55
2009/10	3,129	43,867	7.13	3,908	53,011	7.37	1,660	18,751	8.85
Mean			7.85			7			8.35
SD			1.07			0.27			0.64
CV			13.65			3.90			7.67

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

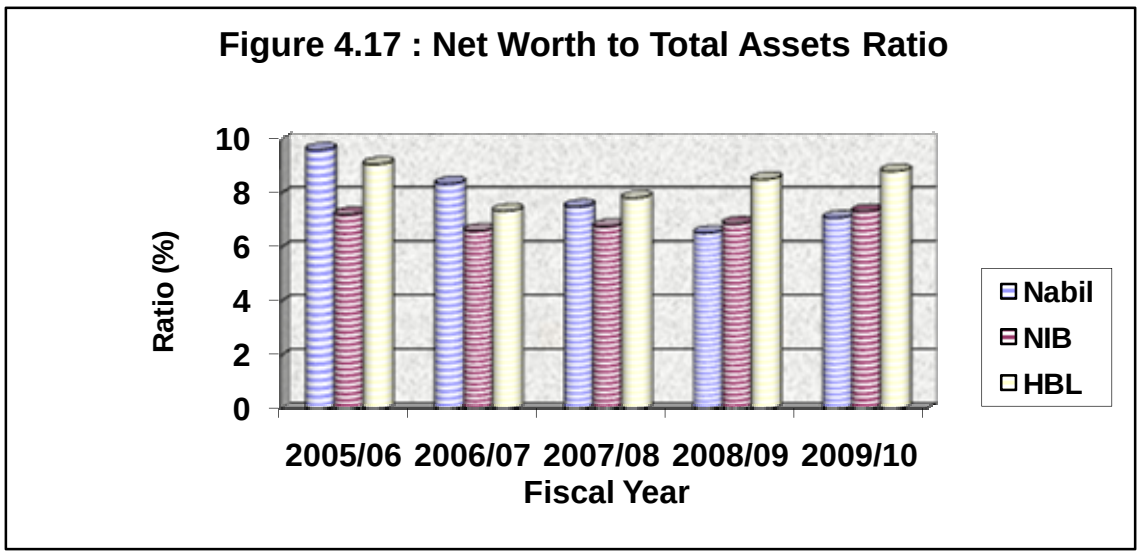


Figure 4.17 explores that the ratios of NABIL bank seemed decreasing trend to 4th year and then after it will start to rise slightly. It remained at maximum in FY 2005/06 i.e.9.64% and

minimum in FY 2008/09 i.e.6.57%. Similarly, the ratio of NIBL shows increasing trend from 2nd year and it ranged from 7.37% in FY 2009/10 to 6.64% in FY 2006/07. Again the ratio of HBL shows decreasing trend to 2nd year and then after it starts to rise. It was highest in FY 2005/06 i.e. 9.11% & lowest in FY 2006/07 i.e. 7.38%. Mean ratio of HBL seemed higher than that of NABIL & NIBL, which indicates that net worth in it has covered comparatively greater portion of total assets. In other words, HBL is superior to NABIL & NIBL and NABIL is superior to NIBL which refers to check the possible risk that might arise due to high leverage.

4.1.5.3 Net Worth to Total Credit Ratio

The ratio measures the relative portion of the shareholders fund with respect to the total credit. It is calculated as;

$$\text{Net Worth to Total Credit Ratio} = \frac{Net\ Worth}{Total\ Credit}$$

Table 4.18

Net Worth to Total Credit Ratio

Rs in 'million'

FY	NABIL			NIBL			HBL		
	Net Worth	**Total Credit**	**Ratio %**	**Net Worth**	**Total Credit**	**Ratio %**	**Net Worth**	**Total Credit**	**Ratio %**
2005/06	1,657	10,947	15.14	1,180	10,453	11.29	684	4,909	13.94
2006/07	1,873	13,279	14.11	1,415	13,178	10.74	766	6,902	11.10
2007/08	2,055	15,903	12.92	1,878	17,769	10.57	918	9,129	10.06
2008/09	2,440	21,759	11.21	2,687	27,529	9.76	1,303	11,465	11.37
2009/10	3,129	27,999	11.18	3,908	36,827	10.61	1,660	13,916	11.93
Mean			12.91			10.59			11.68
SD			1.57			0.49			1.28
CV			12.15			4.63			10.98

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

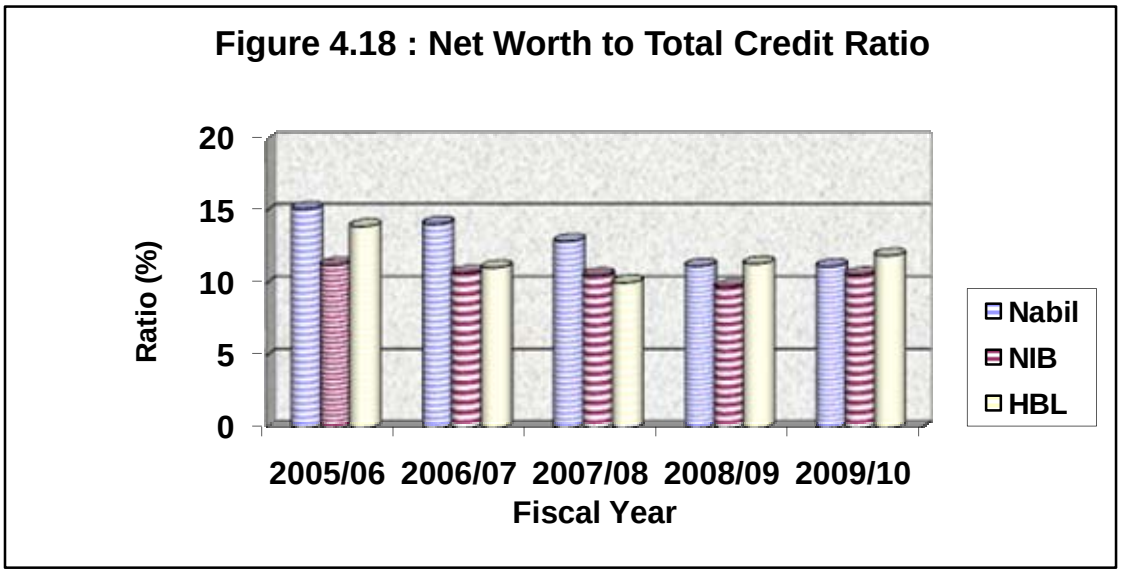


Figure 4.18 demonstrates that the ratio of NABIL Bank shows the decreasing trend. It was at maximum in FY 2005/06 i.e. 15.14% and minimum in FY 2008/09 i.e.11.21%. The ratio of NIBL shows fluctuating trend. It ranged from 11.29% in 2nd year and 9.76% to 4th year. The ratio of HBL decreased in trend to 3rd year and after that it will start to rise. It was highest in FY 2005/06 i.e. 13.94% and lowest in FY 2007/08 i.e.10.06%. Mean ratios of NABIL bank appeared greater than that of HBL & NIBL, which indicates that the capacity adequacy position of NABIL is better than that. In totality, capital adequacy position of NABIL appeared stronger than that of NIBL & HBL. In this sense, NABIL is successful to reassure creditors and depositors about its soundness. Similarly, the banks differ significantly with respect to capital adequacy position.

4.1.6 Assets Quality Ratio

Assets quality ratios intend to measure the quality of assets owned by the banks. These include loan loss coverage ratio, loan loss provision to total income ratio, loan loss provision to total deposit ratio and accrued interest to total interest income ratio.

4.1.6.1 Loan Loss Coverage Ratio

This ratio measures whether the provision is sufficient to meet the possible loss created by defaulted in payment of loan or not. High ratio indicates that the major portion of loan is risky.

Therefore, for the study purpose, risky assets constitute loans and advances, bill purchased and discounted. It is computed by dividing loan loss provision by total risk assets.

$$\text{Loan Loss Coverage Ratio} = \frac{Loan\ Loss\ \text{Pr}ovision}{Total\ Risk\ Assets}$$

Table 4.19

Loan Loss Coverage Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Loan Loss Provision**	**Total Risk Assets**	**Ratio %**	**Loan Loss Provision**	**Total Risk Assets**	**Ratio %**	**Loan Loss Provision**	**Total Risk Assets**	**Ratio %**
2005/06	361	10,947	3.29	325	10,453	3.11	198	4,909	4.03
2006/07	356	13,279	2.68	402	13,178	3.05	246	6,902	3.57
2007/08	357	15,903	2.25	484	17,769	2.72	187	9,129	2.05
2008/09	394	21,759	1.81	533	27,529	1.93	201	11,465	1.75
2009/10	409	27,999	1.46	586	36,827	1.59	236	13,916	1.70
Mean			2.30			2.48			2.62
SD			0.64			0.61			0.98
CV			28.02			24.69			37.47

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

Figure 4.19 :Loan Loss Coverage Ratio

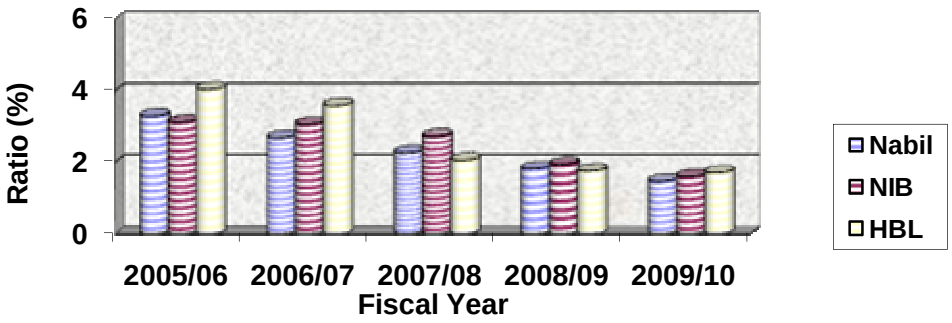


Figure 4.19 exhibits that the ratios of all Banks were in decreasing trend. Mean ratio of HBL was slightly greater than NIBL & NABIL. It indicates that NABIL & NIBL has been more successful to foresee the quality of loans lent. Conversely, the assets possessed by HBL have higher degree of risk as compared to that of NABIL & NIBL. That's why, the former bank has maintained comparatively higher ratio to prevent itself from possible default in payment by borrowers. CV of the ratios seemed less in NIBL, which reveals that consistency in the ratios greater in HBL & NABIL bank.

4.1.6.2 Loan Loss Provision to Total Income Ratio

The ratio shows that portion of total income has been held as safety cushion against the possible bad loan. Higher ratio indicates that the greater portion of loan advanced by the bank is inferior in quality. Low ratio means that the bank has provided most of its loans & advances in secured sector. It is calculated as:

$$\text{Loan Loss Provision to Total Income Ratio} = \frac{\textit{Loan Loss Provision}}{\textit{Total Income}}$$

Table 4.20

Loan Loss Provision to Total Income Ratio

Rs in 'million'

NABIL				NIBL			HBL		
FY	**Loan Loss Provision**	**Total Income**	**Ratio %**	**Loan Loss Provision**	**Total Income**	**Ratio %**	**Loan Loss Provision**	**Total Income**	**Ratio %**
2005/06	361	1,069	33.74	325	887	36.67	198	458	43.19
2006/07	356	1,310	27.19	402	1,173	34.27	246	580	42.44
2007/08	357	1,588	22.50	484	1,585	30.52	187	726	25.80
2008/09	394	1,979	19.93	533	2,194	24.27	201	931	21.54
2009/10	409	2,798	14.62	586	3,268	17.93	236	1,284	18.42
Mean			23.60			28.73			30.28
SD			6.50			6.83			10.50
CV			27.53			23.78			34.69

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

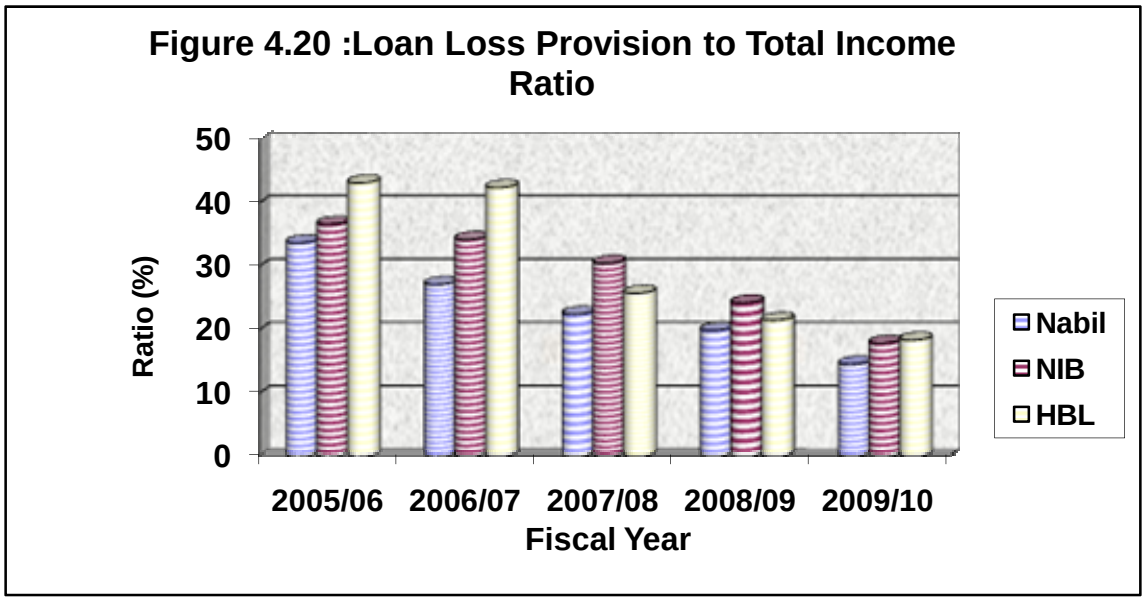


Figure 4.20 explains that the ratios of all three Banks were in decreasing trend. The three banks have at maximum in FY 2005/06 i.e. 33.74%, 36.67% & 43.19% and minimum in FY 2009/10 i.e.14.62%, 17.93% & 18.42% in NABIL, NIBL & HBL respectively. Mean ratio remained higher in HBL than in NIBL & NABIL, which signifies that HBL held comparatively greater portion of risky assets. Moreover, HBL has been forced to retain greater portion of its income idle as the cushion against loans of inferior quality. CV analysis signifies that the ratios of NIBL remained less uniformity as compared with NABIL & HBL.

4.1.6.3 Loan Loss Provision to Total Deposit Ratio

The ratio shows the proportion of banks income held as loan loss provision in relation to total deposits collected. It is calculated as;

$$\text{Loan Loss Provision to Total Deposits Ratio} = \frac{Loan\ Loss\ \text{Pr}ovision}{Total\ Deposits}$$

Table 4.21

Loan Loss Provision to Total Deposits Ratio

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Loan Loss Provision**	**Total Deposit**	**Ratio %**	**Loan Loss Provision**	**Total Deposit**	**Ratio %**	**Loan Loss Provision**	**Total Deposit**	**Ratio %**
2005/06	361	14,587	2.47	325	14,255	2.28	198	6,241	3.17
2006/07	356	19,347	1.84	402	18,927	2.12	246	8,766	2.81
2007/08	357	23,342	1.53	484	24,489	1.98	187	10,068	1.86
2008/09	394	31,915	1.24	533	34,452	1.55	201	13,085	1.53
2009/10	409	37,348	1.06	586	46,698	1.14	236	15,580	1.29
Mean			1.63			1.81			2.13
SD			0.50			0.42			0.73
CV			30.55			22.89			34.36

Source: Annual Reports (2005/06 - 2009/10)

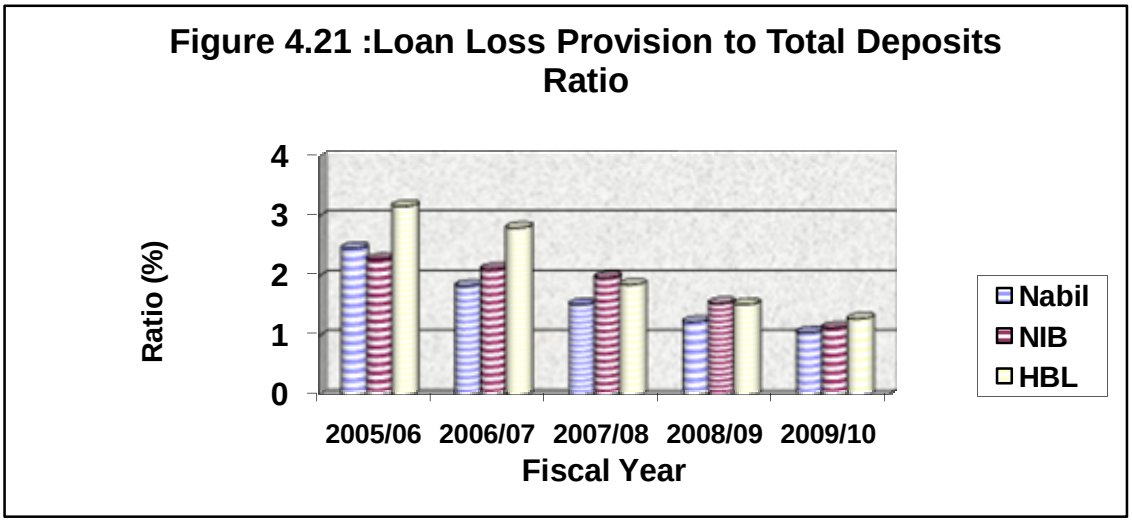


Figure 4.21 highlights that the ratios of all three Banks were in decreasing trend. Average ratio in HBL exceeded that in NABIL & NIBL, which means assets owned by NABIL, are superior to that of HBL & NABIL and assets owned by NIBL are superior to that of HBL. In other words, HBL has lent greater portion of its loans in riskier sectors. Lower CV of the ratios in NIBL means that the consistency in the loan loss provision with respect to the deposits was higher in HBL & NABIL.

4.1.6.4 Accrued Interest to Total Interest Income Ratio

The ratio shows the percentage of accrued interest with respect to total income in form of interest. It is calculated as:

$$\text{Accrued Interest to Total Interest Income Ratio} = \frac{Accrued\ Interest}{Total\ Interest}$$

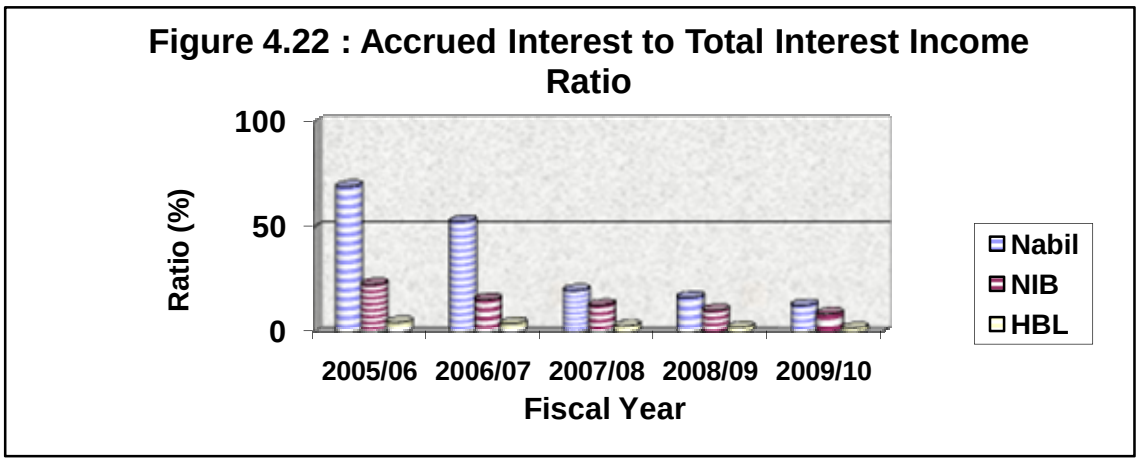
Table 4.22

Accrued Interest to Total Interest Income Ratio

Rs in '000'

NABIL Bank Ltd				NIBL			HBL		
FY	**Accrued Interest**	**Total Interest**	**Ratio %**	**Accrued Interest**	**Total Interest**	**Ratio %**	**Accrued Interest**	**Total Interest**	**Ratio %**
2005/06	168,863	243,545	69.34	81,581	354,549	23.01	11,375	225,992	5.03
2006/07	188,634	357,161	52.81	77,941	490,947	15.88	15,134	340,222	4.45
2007/08	112,187	555,710	20.19	90,440	685,530	13.19	13,465	421,375	3.20
2008/09	128,043	758,436	16.88	106,677	992,158	10.75	12,914	505,996	2.55
2009/10	151,568	1,153,280	13.14	153,600	1,686,973	9.11	16,381	767,197	2.14
Mean			34.47			14.39			3.47
SD			22.45			4.88			1.10
CV			65.13			33.92			31.75

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10



In above figure 4.22, the ratios of all three Banks were in decreasing trend. Mean of the ratios appeared greater in NABIL bank, which signifies that comparatively more portion of total interest income in the bank remained accrued. Moreover, the loans advanced by NABIL bank seemed less effective. Lower ratio in HBL indicates better quality of assets. Higher CV of the ratios in NABIL indicates greater variability of the ratios in it.

4.1.7 Other Indicators

Above stated ratio shows light on various aspect of the banks management, investment & creditors can get information regarding their investment. Besides the above-analyzed ratios, some indicators have been tested to have the boarder knowledge of financial performance of the banks. For this, EPS, P/E ratio and MVPS to BVPS have been analyzed.

4.1.7.1 Earning Per Share (EPS)

EPS refers to the income available to the common shareholder on per share basis. It is computed as:

$$\text{Earning Per Share} = \frac{\text{Earning Available Common Shareholder(EAC)}}{\text{No of Equity Share Outstanding}}$$

Table 4.23

Earning Per Share (EPS)

FY	2005/06	2006/07	2007/08	2008/09	2009/10	Mean	S.D	C.V
NABIL	105.49	129.21	137.08	108.31	106.76	117.37	13.15	11.20%
NIBL	39.50	59.35	62.57	57.87	37.42	51.34	10.65	20.74%
HBL	22.75	16.10	24.01	25.75	27.83	23.29	3.98	17.09%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

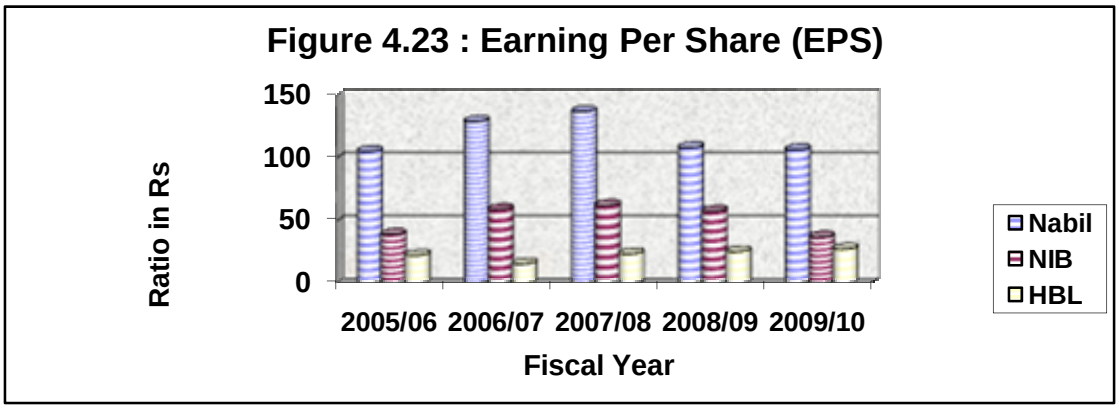


Figure 4.23 indicates that Mean of the EPS was much higher in NABIL Bank in contrast to NIBL &HBL; which indicates that the profitability position of the former is far better than that of the latter. In this sense, NABIL bank seems more successful to attract the investors. Net profit earned by NABIL is greater than that of NIBL & HBL but number of equity share outstanding in NIBL is greater than HBL & NABIL and HBL is greater than NABIL, so EPS of NABIL was seemed well than NIBL and HBL.

4.1.7.2 Price-Earning Ratio (P/E ratio)

P/E ratios widely used to evaluate the banks performance as expected by investors. It represents the investor's judgment or expectation about the growth in banks earning. In other words, it measures how the market is responding toward the earning performance of the concerned banks. It is obtained as:

$$\text{Price –Earning Ratio} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Earning Per Share (EPS)}}$$

Table 4.24

Price- Earning Ratio (P/E ratio)

FY	2005/06	2006/07	2007/08	2008/09	2009/10	Mean	S.D	C.V
NABIL	14.27	17.34	36.84	48.70	45.89	32.61	14.30	43.86%
NIBL	20.25	21.23	27.63	42.33	37.09	29.71	8.71	29.33%
HBL	16.09	30.81	39.56	49.86	40.46	35.30	11.29	31.99%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

Figure 4.24 : Price- Earning Ratio (P/E ratio)

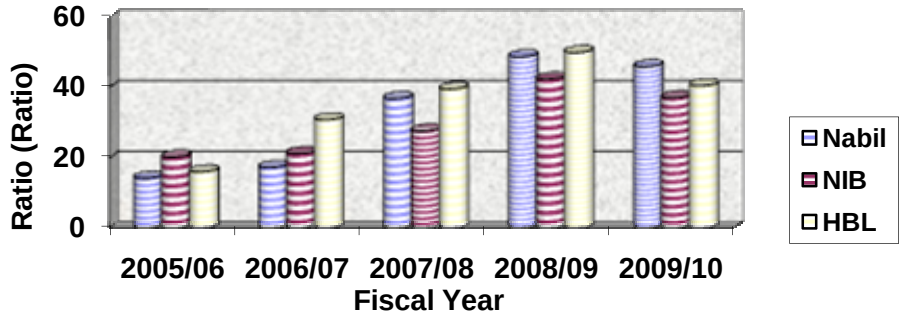


Figure 4.24 displays that the P/E ratios in NABIL bank, NIBL & HBL showed increasing trend to 4th year and after that slightly decline. Mean ratios of HBL appeared higher than NABIL & NIBL. It indicates that the investors are well satisfied with the performance of the bank or market has positively judged the performance of HBL and NABIL. At CV analysis, NABIL has higher CV than NIBL & HBL, which indicates that the ratios varied in the bank.

4.1.7.3 Market Value Per Share to Book Value Per Share (MVPS/BVPS)

The ratio measures the value that the financial market attaches to the management and organization of the banks as a growing concern. It is calculated as:

$$\text{Market Value Per Share to Book Value Per Share} = \frac{\text{Market Value Per Share(MVPS)}}{\text{Book Value Per Share (BVPS)}}$$

Table 4.25

Market Value Per Share to Book Value Per Share

FY	2005/06	2006/07	2007/08	2008/09	2009/10	Mean	S.D	C.V
NABIL	4.47	5.88	12.08	14.90	15.12	10.49	4.49	42.82%
NIBL	3.98	5.25	7.39	10.98	8.57	7.23	2.46	34.07%
HBL	2.67	4.28	6.83	9.30	7.71	6.16	2.38	38.72%

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

Figure 4.25 : Market Value Per Share to Book Value Per Share

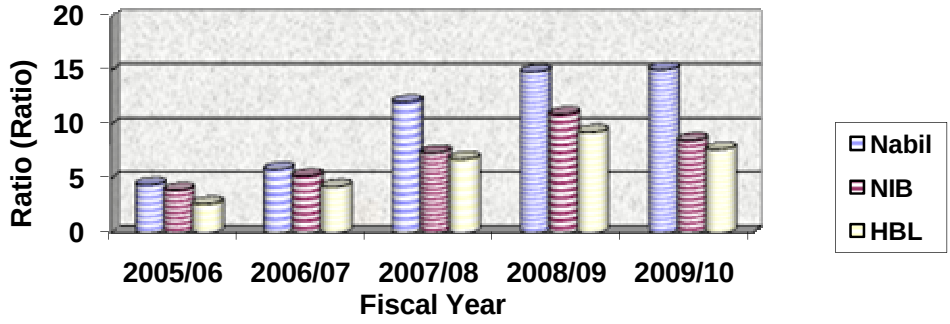


Figure 4.25 exhibit that the indicators showed NABIL banks in increasing trend. And other two banks i.e. NIBL & HBL were in increasing trends to 4th year and after that it slightly declines. Mean value of the indicators appeared greater in NABIL, which indicates comparatively stronger management and organization in NABIL than HBL & NIBL. CV of the indicators came less in NIBL, which means the indicators, varied less over the period of study.

4.2 Incomes and Expenditure Analysis

Income and expenditure analysis is one of the very important tools to measure the financial performance of the banks. In competitive environment for the survival of banks should earn profit. If banks should earn profit, its market value of share will increased; banks will be able to give regular dividend to shareholder and interest to debenture holders; staffs can enjoy better salary and bonus and enhanced facilities which will increase the productivity of banks. So, the income & expenditure analysis is important not only in banks but also in other field. If banks are able to decrease unnecessary expenditure it will directly affect in the profit. The analysis covers the following heading in income and expenditure analysis;

- Operating Income Analysis
- Operating Expenditure Analysis
- Operating Profit (Loss) Analysis

4.2.1 Operating Income Analysis

Commercial Banks generate income from the investment made in various sectors. The banks, being services- oriented organization, do not produce physical goods. They produce loans and advances and innovations and sell the same. In the courses of carrying out their functions, they receive income from various sources, which have been spilt up into the following major headings:

- Interest Income
- Commission and Discount
- Foreign Exchange Fluctuation Income
- Other Operating Income

The following table shows the various sources of operating income and its proportion in total operation income in percentage.

Table 4.26 : Operating Income Analysis of NABIL Bank Limited

Rs in 'million'

FY	2005/06	2006/07	2007/08	2008/09	2009/10	Mean	SD	CV
Interest Income	1,069	1,310	1,588	1,979	2,498	1,689	506	29.94%
	74.30%	76.31%	77.99%	81.47%	81.27%	78.27%	2.79%	3.56%
Commission & Discount	129	138	151	156	180	151	17	11.49%
	8.96%	8.06%	7.40%	6.43%	5.85%	7.34%	1.11%	15.16%
Foreign Exchange Fluctuation Income	185	185	210	196	252	206	25	12.07%
	12.85%	10.80%	10.31%	8.09%	8.19%	10.05%	1.78%	17.68%
Other Operating Income	56	83	88	97	144	94	29	30.75%
	3.89%	4.83%	4.30%	4.01%	4.69%	4.34%	0.37%	8.46%
Total operating Income	**1,438**	**1,717**	**2,036**	**2,429**	**3,074**	**2,139**	**572**	**26.76%**
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**-**	**-**

Table 4.27 : Operating Income Analysis of Nepal Investment Bank Limited

Rs in 'million'

FY	2005/06	2006/07	2007/08	2008/09	2009/10	Mean	SD	CV
Interest Income	887	1,176	1,585	2,194	3,268	1,822	846	46.43%
	77.83%	80.90%	82.06%	83.06%	85.92%	81.95%	2.65%	3.23%
Commission & Discount	94	116	164	215	263	170	62	36.64%
	8.21%	7.98%	8.49%	8.15%	6.91%	7.95%	0.54%	6.85%
Foreign Exchange Fluctuation Income	103	126	135	166	185	143	29	20.53%
	9.00%	8.65%	7.01%	6.28%	4.87%	7.16%	1.53%	21.31%
Other Operating Income	57	36	47	66	88	59	18	29.94%
	4.96%	2.47%	2.45%	2.51%	2.30%	2.94%	1.01%	34.50%
Total operating Income	**1,139**	**1,453**	**1,932**	**2,642**	**3,804**	**2,194**	**951**	**43.34%**
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**-**	**-**

Table 4.28 : Operating Income Analysis of Himalayan Bank Limited

Rs in 'million'

FY	2005/06	2006/07	2007/08	2008/09	2009/10	Mean	SD	CV
Interest Income	458	580	726	931	1,284	796	291	36.52%
	88.26%	88.54%	87.21%	88.51%	86.31%	87.77%	0.87%	1%
Commission & Discount	27	29	36	43	62	40	13	31.64%
	5.23%	4.50%	4.33%	4.12%	4.16%	4.47%	0.40%	9.05%
Foreign Exchange Fluctuation Income	25	25	44	40	98	46	27	57.89%
	4.75%	3.88%	5.32%	3.77%	6.57%	4.86%	1.03%	21.19%
Other Operating Income	9	20	26	38	44	28	12	45.16%
	1.77%	3.09%	3.14%	3.60%	2.96%	2.91%	0.61%	20.96%
Total operating Income	**518**	**655**	**832**	**1,052**	**1,487**	**909**	**340**	**37.39%**
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**-**	**-**

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

a) Interest Income

Interest is the main and major source of the income in the commercial banks. These banks charged interest on loans and advances provide by them. They also received interest from investment made in government securities, debentures and inter-bank lending.

The above table 4.26 highlights that interest income in NABIL Bank Limited was slightly increasing trend except in last year. Interest income ranged from 74.30% in 2nd year to 81.47% in last year. So, the proportion of interest income with compared to total operating income shows slightly increasing trend. Mean of the interest income proportion was 78.27%, which shows that interest income was covered almost seven-tenth to total operating income in NABIL Bank Limited. Similarly, Table 4.27 shows that the interest income in NIBL was shows increasing trend. Interest income of NIBL ranged from the 77.83% in 1st year to 85.92% in last year. Mean of the proportion was 81.95%, which indicates that the interest income was covered almost forth-fifth of total income in NIBL. Similarly, Table 4.28 shows that the interest income in HBL was fluctuating trend. It was highest in FY 2006/07 i.e.88.54% and lowest in FY 2009/10 i.e.86.31%. Mean of the proportion was 87.77%, which indicates that the interest income was covered almost nine-tenth of total income in HBL.

Average of the income in HBL was greater than in NIBL and NIBL was greater than in NABIL Bank, which indicates that average interest earning greater proportion in HBL. In other words, HBL might have focused more of its activities the lending and investment on Govt. securities. CV of the interest income came 3.56% in NABIL, 3.23% in NIBL & 1% in HBL. It signifies that interest income remained more uniform in HBL. From the above table we can conclude that three banks' main sources of operating income were interest income, through greater promotion incurred in NABIL than NIBL & HBL.

b) Commission and Discount

Commercial banks render various types of services to their customers. They provide remittance facility, guarantees, standing instructions, open letter of credit, and purchase and discount bill of exchange along with other agency functions. For making such facilities available, they receive certain charges in form of commission and discount. It also covers significant portion of total operating income.

Table 4.26 depicts that the commission and discount earned by NABIL in the respective years of the study period shows the decreasing trend. It ranged from 5.85%to 8.96% in FY 2009/10 to 2005/06 respectively. Mean and CV of the proportion appeared 7.34% and 15.16% respectively. Similarly, table 4.27 shows that the commission and discount eared by NIBL was fluctuating trend. It ranged from 6.91% in last year to 8.49% in 4th year. Mean and CV of the proportion were 7.95% and 6.85% respectively. Similarly, table 4.28 shows that the commission and discount eared by HBL was decreasing trend. It ranged from 4.11% in 4th year to 5.23% in 1st year. Mean and CV of the proportion were 4.47% and 9.05% respectively.

Mean of the proportion of commission and discount with compared to total operating income seemed greater in NIBL than in NABIL & HBL, which signifies that commission & discount covered higher proportion in total operating income in NABIL Bank. CV of the incomes in NABIL came higher than in HBL & NIBL. This shows that the proportion of commission and discount in total income remained more varied in NABIL.

c) Foreign Exchange Fluctuation Income

One of the major functions of the commercial bank is transaction of foreign currency. Joint venture banks are allowed to purchase and sell foreign currencies under the directives of NRB and rules, regulations and laws in effect. Income under this heading encompasses the trading gain derived from the exchange of foreign currencies due to the fluctuation in the exchange rate.

Table 4.26 explores that foreign exchange fluctuating income of NABIL was decreasing trend. It remained lowest in FY 2008/09 i.e. 8.09% and highest in FY 2005/06 i.e. 12.85%. Mean and CV of the proportions were came 10.05% and 17.68% respectively. Accordingly to table 4.27, the income of NIBL shows decreasing trend. It can be ranged 4.87% to 9% in 5th and 1st year respectively. Mean and CV of the proportion came 7.16% and 21.31% respectively. Similarly, table 4.28 shows that foreign exchange fluctuating income of HBL was fluctuating trend. It remained lowest in FY 2008/09 i.e. 3.77% and highest in FY 2009/10 i.e. 6.57%. Mean and CV of the proportions were came 4.86% and 21.19% respectively.

Mean of the foreign exchange fluctuating income was higher in NABIL Bank. It indicates that foreign exchange fluctuating income occupied comparatively higher proportion in NABIL than NIBL & HBL and NIBL than HBL. At CV analysis it seemed lower in NABIL than HBL & NIBL and HBL than NIBL. It indicates income analysis in various years remained more uniform in NABIL as compared to HBL & NIBL.

d) Other Operating Income

The fourth source of operating income is other income. Income not included in any of the above headings comes under this heading. It includes only operating and non-operating income was not included for the study purpose.

Table 4.26 highlights that other operating income in NABIL revealed fluctuating trend. It was seemed least in 1st year i.e. 3.89% and most in 2nd year i.e. 4.83% of total operating income. The mean and CV of the proportion were came 4.34% and 8.46% respectively. In similar way, table 4.27 indicates that the other income in NIBL showed decreasing trend. It ranged from 2.30% in last year to 4.96% in first year. Mean and CV of the proportion appeared 2.94% & 34.50% respectively. Similarly, table 4.28 shows that other income in HBL revealed fluctuating trend. It was seemed least in 1st year i.e. 1.77% and most in 4th year i.e. 3.60% of total operating income. The mean and CV of the proportion were came 2.91% and 20.96% respectively.

Mean of the income was slightly higher in NABIL bank than in NIBL & HBL, which shows more portions of other incomes were held in NABIL.CV of incomes remained higher in NIBL. It means the income received from this source appeared less consistent in NIBL.

4.2.2. Operating Expenses Analysis

Expenses are the cost incurred in course of operating various activities. The banks need to pay interest for the deposits and borrowings. To handle all other resources, there is a team of personnel whom the bank pays salaries and provides other facilities. Besides, a significant portion of income is spent for day-to-day operation. For the study purpose, evaluation of the following form of expenses has been made:

- Interest Expenses
- Staff Expenses

- Office Operation Expenses
- Provision for Staff Bonus

The following Table shows the various sources of operating expenses of NABIL, NIBL & HBL and its percentage in total operating expenses.

Table 4.29

Operating Expenses Analysis of NABIL Bank Limited

Rs in 'million'

FY	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**Mean**	**SD**	**CV**
Interest Expenses	244	357	556	758	1,153	614	322	52.47%
	33.94%	42.05%	51.29%	56.14%	60.50%	48.78%	9.63%	19.73%
Staff Expenses	200	220	240	263	340	252	49	19.22%
	27.80%	25.87%	22.16%	19.46%	17.83%	22.62%	3.76%	16.60%
Other Operating Expenses	190	183	188	221	265	209	31	14.74%
	26.52%	21.51%	17.37%	16.34%	13.91%	19.13%	4.44%	23.19%
Staff Bonus Provision	84	90	100	109	148	106	23	21.26%
	11.73%	10.57%	9.18%	8.06%	7.76%	9.46%	1.50%	15.90%
Total Operating Expenses	**718**	**849**	**1,084**	**1,351**	**1,906**	**1,182**	**422**	**35.69%**
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**-**	**-**

Table 4.30

Operating Expenses Analysis of Nepal Investment Bank Limited

Rs in 'million'

FY	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**Mean**	**SD**	**CV**
Interest	355	491	686	992	1,687	842	474	56.25%

Expenses	52.80%	57.58%	59.78%	62.23%	68.68%	60.21%	5.25%	8.72%
Staff	97	121	145	187	226	155	46	29.77%
Expenses	14.44%	14.15%	12.68%	11.74%	9.19%	12.44%	1.90%	15.27%
Other	183	191	243	313	414	269	86	32.07%
Operating								
Expenses	27.24%	22.35%	21.23%	19.64%	16.85%	21.46%	3.43%	15.98%
Staff Bonus	37	50	72	102	130	78	34	43.20%
Provision	5.52%	5.92%	6.31%	6.40%	5.29%	5.89%	0.43%	7.34%
Total	**672**	**853**	**1,147**	**1,594**	**2,456**	**1,344**	**638**	**47.43%**
Operating								
Expenses	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**-**	**-**

Table 4.31

Operating Expenses Analysis of Himalayan Bank Limited

Rs in 'million'

FY	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**Mean**	**SD**	**CV**
Interest	226	340	421	506	767	452	183	40.39%
Expenses	67.47%	74.48%	74.71%	72.83%	76.19%	73.14%	3.03%	4.14%
Staff	39	45	55	72	85	59	17	28.48%
Expenses	11.65%	9.96%	9.74%	10.37%	8.40%	10.02%	1.05%	10.45%
Other	52	57	65	81	110	73	21	28.71%
Operating								
Expenses	15.41%	12.56%	11.46%	11.69%	10.90%	12.40%	1.60%	12.86%
Staff	18	14	23	36	45	27	12	42.84%
Bonus								
Provision	5.46%	3.01%	4.09%	5.11%	4.51%	4.44%	0.86%	19.29%
Total	**335**	**457**	**564**	**695**	**1,007**	**612**	**231**	**37.72%**
Operating								
Expenses	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**-**	**-**

Source: Annual Reports of NABIL, NIBL and HBL from 2005/06 to 2009/10

a) Interest Expenses

It is one of the major parts of operating expenses. Commercial banks pay interest on various types of deposits, loans and advances taken from other banking and financial institutions, government etc. Since transfer of money from the excess units to the deficits units is the significant function of the commercial banks, interest occupies more than three-fourth of operating expenses.

Table 4.29 depicts that interest expenses of NABIL Bank showed increased trend. It ranged from 33.94% in 1st year to 60.50% in last year. Mean and CV of the interest expenses appeared 48.78% and 19.73% respectively. Likewise, Table 4.30 depicts the interest expense out of the total expenses in NIBL showed increasing trend. Mean and CV of the proportion came 60.21% and 8.72% respectively. Similarly, Table 4.31 exhibits the interest expenses of HBL showed fluctuating trend. It has highest in FY 2009/10 i.e. 76.19% and lowest in FY 2005/06 i.e. 67.47%. Mean and CV of the proportion came 73.14% and 4.14% respectively.

Mean of the interest expenses in HBL more than that of two banks indicates that the interest expenses covered more portions in HBL as compared with two banks. CV of the expenses came less in HBL than in NABIL & NIBL. It signifies that interest expenses in the total mix of the operating expenses remained more consistent in HBL.

b) Staff Expenses

In any organization, manpower plays vital role in the success or failure of that organization. Well-motivated staffs are the ornaments of the organization. In return of the services provided by them, they need to be paid remuneration, which are includes under this headings. Staff expenses include salary, different forms of allowances, incentives, fringe benefits etc.

Table 4.29 reveals that the staff expenses in NABIL decreasing trend. It ranged from 17.83% in 5th year to 27.80% in 1st year of the study period. Mean and CV of the staff expenses appeared 22.62% and 16.60% respectively. Similarly, table 4.30 depicts that the staff expenses in NIBL shows decreasing trend. It ranged from 9.19% in last year to 14.44% in 1st year. Mean & CV of the proportion came 12.44% and 15.27% respectively. Likewise, table 4.31 reveals that the staff expenses in HBL showed fluctuating trend over the study period. It ranged from 8.40% in last year to 11.65% in 1st year. Mean & CV of staff expenses of HBL came 10.02% & 10.45% respectively.

Average of the staff expenses to total operating seemed greater in NABIL than two banks, it indicates greater portion of staff expenses paid by NABIL than that of these two banks. By the CV analysis, the proportions were more varied on NABIL because of higher CV in NABIL than in NIBL & HBL.

c) Office Operation Expenses

For the routine work of the commercial banks, considerable amount of the expenses is incurred. All the expenses made for the operation of the bank such as rent, hire, telephone charges, electricity charge, administrative expenses etc come under this heading. Generally, these expenses occupy second major portion in the composition of total expenses.

Table 4.29 indicates that the office operating expenses in NABIL showed decreasing trend. It was highest in 1st year i.e. 26.52% and lowest in last year i.e. 13.91%. Mean and CV of the proportion came 19.13% and 23.19% respectively. Similarly, table 4.30 appears that the office operating expenses in NIBL showed in decreasing trend. The proportion of these expenses ranged from 27.24% to 16.85% in first to last year respectively. Mean and CV of the office operation expenses came 21.46% & 15.98% respectively. Like wise, table 4.31 depicts that the office operating expenses in HBL showed decreasing trend over the study period. It ranged from 10.90% in last year to 15.41% in 1st year. Mean & CV of office operating expenses came 12.40% & 12.86%.

Lower mean expenses in HBL signify that it is more successful to perform its operation efficiently. CV of the expenses appeared higher in NABIL, which means it maintained less consistency in making office operation expenses over the study period.

d) Staff Bonus Facility (Provision)

When the bank earns profit, dividend is paid to the owners. Similarly, a part of profit is paid to the staff as bonus, which is as the reward for their services. In other words, bonus refers to the extra incentive provided to employees for their efficient services to the banks. It is distributed from the profit earned by the banks. Generally, staffs prefer that bank pays greater percentage of bonus. It acts as the motivator for them but it increases the volume of operating expenses.

Table 4.29 shows that bonus or provision of NABIL showed decreasing trend. It ranged from 7.76% in last year to 11.73% in 1st year. Mean and CV of staff bonus provision came 9.46% & 15.90% respectively. Similarly, table 4.30 reveals that staff bonus provision in NIBL showed

increasing trend to 4th year and after that it started to decline. It ranged from 5.29% to 6.40% last to forth year respectively. Mean & CV of bonus expenses came 5.89% and 7.34% respectively. Likewise, table 4.31 depicts that the staff bonus provision in HBL showed fluctuating trend in the study period. It ranged from 3.01% in 2nd year to 5.46% in 1st year. Mean & CV of bonus expenses came 4.44% & 19.29%.

Mean of the expenses higher in NABIL than NIBL & HBL. It reveals that NABIL bank is more efficient in updating and motivating its staff. CV of the expenses appeared less in NIBL than in NABIL & HBL. It signifies that NIBL paid bonus to its staff more consistently as compared to these two banks.

4.2.3 Operating Profit/Loss Analysis

Operating profit (Loss) is the difference between total operating income and total operating expenses. If total operating income is higher than that of total operating expenses than its operating profit otherwise operating loss. If firm's profit has to examine from the point of view of all investors (both lenders' and owners'), the appropriate measure of profit is operating profit. It shows the earning gained from commercial operation of business without effect of financing. The following Tables show the operating income, operating expenses and operating profit of NABIL, NIBL & HBL for the five years study period.

Table 4.32

Operating Profit Analysis of NABIL, NIBL & HBL

Rs in 'million'

	NABIL			NIBL			HBL		
FY	**Op. Income**	**Op. Expenses**	**Op. Profits**	**Op. Income**	**Op. Expenses**	**Op. Profit**	**Op. Income**	**Op. Expense**	**Op. Profits**
2005/06	1,438	718	**720**	1,139	672	**467**	518	335	**183**
2006/07	1,717	849	**868**	1,453	853	**600**	655	457	**198**
2007/08	2,036	1,084	**952**	1,932	1,147	**785**	832	564	**268**
2008/09	2,429	1,351	**1,078**	2,642	1,594	**1,048**	1,052	695	**357**

2009/10	3,074	1,906	**1,168**	3,804	2,456	**1,348**	1,487	1,007	**480**
Mean	2,139	1,182	**957**	2,194	1,344	**850**	909	612	**297**
SD	572	422	**150**	951	638	**313**	340	231	**109**
CV	26.76%	35.69%	**16.38%**	43.34%	47.43%	**37.17 %**	37.39%	37.72%	**37.01 %**

From the above Table, we can see that the operating income, operating expenses and operating profit of NABIL was greater than NIBL & HBL and greater in NIBL than HBL. Similarly, the amount of incomes was greater than that of total expenses for the three banks. Therefore, the three banks can earn operating profit it can be shown in above table 4.32.

At CV analysis, NIBL has higher CV than HBL & NABIL and HBL than NABIL with respect to operating income, operating expenses and profit i.e. 43.34%>37.39%>26.76%, 47.43%>37.72%>35.69% and 37.17%>37.01%>16.38% respectively.

4.3 Correlation Analysis

Correlation coefficient is the statistical tools that can be describe to which one variable is linearly related to another the coefficient of correlation measures the degree of relationship between two sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's Method is applied in the study. It is the most common and useful tool to measure the relationship between two variables in the bank. The correlation coefficient(r) between two variables X and Y can be obtained by using following formula:

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

Where,

n = number of observation in series X and Y

ΣX= Sum of observations in series X

ΣY= Sum of observation in series Y

ΣX^2= Sum of squared observations in series X

ΣY^2= Sum of squared observations in series Y

ΣXY= Sum of the product of observations in series X and Y

Here,

r = +1 implies that two variables are positively and perfectly correlated.

r = -1 implies that two variables are negatively perfectly correlated.

r = 0, does not necessarily mean that the variables are independent. They may, however be related in some other form such as quadratic, logarithm or exponential.

Under the correlation analysis, the intensity of linear relation between the following variables has been measured:

- Total Deposit and Loans and Advances
- Total Deposit and Net Profit
- Loans and Advances and Net Profit
- Performing Assets and Net Profit
- EPS and MPS

4.3.1 Correlation Analysis between Total Deposit and Loans and Advances

The correlation coefficient between total deposits and loan and advances to measure the relationship between major financial sources i.e. total deposits and major component of income generating assets i.e. loans and advances. In Correlation Analysis, deposit is the independent variable (Y) and loan and advances is dependent variable (X). The purpose of computing the coefficient of correlation is to justify whether the deposits are significant used in loan and advances or not and whether there is any relationship between these two variables.

Table 4.33

Correlation Coefficient and Probable Error between Total Deposits and Loans and Advances of NABIL, NIBL and HBL

Banks	r_{xy}	PE(r)	6PE(r)	Condition
NABIL	0.9901	0.0059	0.0355	$r_{xy} > 6PE(r)$
NIBL	0.9982	0.0011	0.0067	$r_{xy} > 6PE(r)$
HBL	0.9954	0.0028	0.0167	$r_{xy} > 6PE(r)$

(See Appendix 1.1)

Table 4.33 denotes that the correlation coefficient of NABIL, HBL & NIBL is highly strong. Also they have significant relationship between total deposit & loan and advances because of

correlation coefficient came greater than six times the probable error i.e. r_{xy}>6PE (r). This indicates that the three sampled banks seems to increase or decrease the investment in loans and advances portfolio with the increase or decrease in the deposit. But between three banks, NIBL shows better relationship as well as utilization of deposits on loans and advances than HBL & NABIL due to higher value of r.

4.3.2 Correlation Analysis between Total Deposit and Net Profit

Coefficient of correlation between total deposits and net profit measures the degree of relationship between total deposits and net profit. In Correlation Analysis deposit is the independent variable (Y) and net profit is dependent variable (X). The purpose of computing the coefficient of correlation is to justify whether the banks significantly utilization of deposits for income generating purpose or not and whether there is any relation ship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.34

Correlation Coefficient and Probable Error between Total Deposits and Net Profit of NABIL, NIBL and HBL

Banks	r_{xy}	PE(r)	6PE(r)	Condition
NABIL	0.9388	0.0358	0.2145	r_{xy} > 6PE(r)
NIBL	0.9949	0.0031	0.0184	r_{xy} > 6PE(r)
HBL	0.9494	0.0297	0.1783	r_{xy} > 6PE(r)

(See Appendix 1.2)

As shown in table 4.34, the coefficient of correlation strongly or near to perfect (i.e.1) for all banks. This indicates positive relation between deposit and net profit. The empirical teat of significance of correlation with the help of probable error shows that the relation is significant for NABIL, HBL & NIBL. In other words, in all three banks the net profit depends upon deposit. But between three banks, NIBL seems more efficient regarding the utilization of the deposit for income generating purpose as reveals by greater coefficient of correlation in NIBL.

4.3.3 Correlation Analysis between Loans and Advances and Net Profit

The basis function of commercial banks to collect deposits and used these funds on loan and advances to generate higher profit. Large amount of Loan and advances generate higher profit. Correlation coefficient between loans and net profit measures the degree of relationship between loan and advances and net profit. In Correlation Analysis, loans and advances is the independent variable (Y) and net profit is dependent variable (X). The purpose of computing the coefficient of correlation is to justify whether the banks loans and advances are significantly generate profit or not and whether there is any relationship between two variables. To find out the correlation (r) various calculations are done.

Table 4.35

Correlation Coefficient and Probable Error between Net Profit and Loans & advance of NABIL, NIBL and HBL

Banks	r_{xy}	PE(r)	6PE(r)	Condition
NABIL	0.9677	0.0191	0.1148	$r_{xy} > 6PE(r)$
NIBL	0.9920	0.0048	0.0287	$r_{xy} > 6PE(r)$
HBL	0.9544	0.0269	0.1611	$r_{xy} > 6PE(r)$

(See Appendix 1.3)

Table 4.35 highlights that the coefficient of correlation for all the sampled banks found to be almost '1' which indicates there is proportional relationship between the net profit and loan & advances for all the banks. While testing of 6 PE (r) for all sample banks found to be 'significant" as the r_{xy} value for all the banks are greater than 6PE (r) value. This implies there found to be perfect correlation. It shows that the loan & Advance depends upon net profit and net profit depends upon loan & advances.

4.3.4 Correlation Analysis between Performing Assets and Net Profit

Commercial banks being service-oriented organization do not produce physical goods. They produce loan and advance and innovation and sell same to generate profit. Correlation coefficient between performing assets and net profit measures the degree of relationship between performing assets and net profit. In Correlation Analysis, performing assets is the independent variable (Y) and net profit is dependent variable (X). The purpose of computing the coefficient of correlation is justify whether the banks performing assets are significantly generate profit or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.36

Correlation Coefficient and Probable Error between Performing Assets and Net Profit of NABIL, NIBL and HBL

Banks	r_{xy}	PE(r)	6PE(r)	Condition
NABIL	0.9416	0.0342	0.2050	$r_{xy} > 6PE(r)$
NIBL	0.9980	0.0012	0.0073	$r_{xy} > 6PE(r)$
HBL	0.9423	0.0337	0.2025	$r_{xy} > 6PE(r)$

(See Appendix 1.4)

Table 4.36 explains that the coefficient of correlation of all banks are highly strong i.e. nearly '1'. This indicates proportional relationship between Performing Assets and Net Profit. The testing of significance empirically proves this significant relationship for all the banks since r_{xy} > 6P.E(r) for all of them. It signifies that the net profit and performing assets of the bank are highly and positively related. Furthermore, all the banks can raise its net profit by increasing the performing assets.

4.3.5 Correlation Analysis between EPS and MVPS

Correlation coefficient between MPS and EPS measures the degree of the relationship between two variables. In correlation Analysis, EPS is the independent variable (Y) and MVPS is dependent variables (X). The purpose of computing the coefficient of correlation is justify

whether the MVPS significantly relation in EPS or not and whether there is any relationship between these two variables. To find out the correlation (r) various calculations are done.

Table 4.37

Correlation Coefficient and Probable Error between EPS and MVPS of NABIL, NIBL and HBL

Banks	r_{xy}	PE(r)	6PE(r)	Condition
NABIL	0.0912	0.2986	1.7917	$r_{xy} < 6PE(r)$
NIBL	0.5671	0.2043	1.2256	$r_{xy} < 6PE(r)$
HBL	0.7258	0.1425	0.8549	$r_{xy} < 6PE(r)$

(See Appendix 1.5)

Table 4.37 exhibits that the coefficient of correlation of NABIL, HBL & NIBL is moderate or negative. The relationship between EPS and MVPS is insignificant due to $r_{xy}<6PE(r)$. To sum up, the relation between EPS and MVPS is negative & insignificant.

4.4 Trend Analysis

Trend analysis is very useful to predict the future events on the basis of the past tendencies. This method is based on the assumption that past tendency continues in the future. The future trend of any variable is forecasted using the equation,

$$Yc = a + bX$$

Where,

Yc = The dependent variable

a = Y-intercept

b = The slope of the trend line

X = Year-2007/08 (with regard to the data used in the study)

The normal equations on fitting the trend equation are:

$Y = Na + b\Sigma X$

$\Sigma XY = a\Sigma X + b\Sigma X^2$ Since $\Sigma X = 0$ $a = \frac{\sum X}{N}$, $b = \frac{\sum X^4}{\sum X^2}$

With the help of the trend equation, future values of the following variables for coming five years have been predicted:

- Total Deposits
- Loan and Advances
- Performing Assets
- Net Worth
- Net Profit

4.4.1 Trend Analysis of Total Deposits

Table 4.38

Least Square Trend Equation & Its Determinant of Total Deposits

Bank	a	b	Yc = a + bX
NABIL	25,307,919,356.20	5,809,094,229.30	25,307,919,356.20 + 5,809,094,229.30X
NIBL	27,764,112,317.80	8,041,147,302.10	27,764,112,317.80 + 8,041,147,302.10X
HBL	10,748,035,848.60	2,299,584,352.20	10,748,035,848.60 + 2,299,584,352.20X

(See: Appendix 2.1)

Table 4.38 depicts that total deposits in NABIL, NIBL & HBL showed increasing trend. On the average, total deposit in NABIL, NIBL & HBL increased by Rs. 5,809,094,229.30, Rs. 8,041,147,302.10 & Rs. 2,299,584,352.20 per year in the past period respectively. Therefore, trend equation of the total deposit in NABIL, NIBL & HBL are, Yc=25,307,919,356.20 + 5,809,094,229.30X; Yc= 27,764,112,317.80 + 8,041,147,302.10X & Yc=10,748,035,848.60 + 2,299,584,352.20X respectively.

On the basis of the trend equation, the forecasted value of the total deposit in NABIL, NIBL & HBL for FY 2010/11 was Rs. 42,735,202,044.10, Rs. 51,887,554,224.10 & Rs. 17,646,788,905.20 respectively and for FY 2011/12 was Rs. 48,544,296,273.40, Rs. 59,928,701,526.20 & Rs. 19,946,373,257.40 respectively.

Between three banks, average deposit and rate of the increment in total deposit seem higher in NIBL. In other words, total deposit of NIBL will increase in higher rate for forecasted periods if the past trend continues.

4.4.2 Trend Analysis of Loans and Advances

Table 4.39

Least Square Trend Equation & Its Determinant of Loans and Advances

Bank	**a**	**b**	**Yc = a + bX**
NABIL	17,977,403,001.20	4,258,522,906.30	17,977,403,001.20 + 4,258,522,906.30X
NIBL	21,151,375,573.80	6,709,913,973.60	21,151,375,573.80 + 6,709,913,973.60X
HBL	9,264,262,478	2,257,619,973.10	9,264,262,478 + 2,257,619,973.10X

(See: Appendix 2.2)

Table 4.39 highlights that loans and advances of all banks revealed increasing trend throughout the study period. On the average, loans and advances in NABIL, NIBL & HBL increased by Rs. 4,258,522,906.30; Rs. 6,709,913,973.60 & Rs. 2,257,619,973.10 respectively per year in the past period. Therefore, trend equation of loans and advances in NABIL, NIBL & HBL are, Yc=17,977,403,001.20 + 4,258,522,906.30X; Yc=21,151,375,573.80 + 6,709,913,973.60X & Yc=9,264,262,478 + 2,257,619,973.10X respectively.

On the basis of above trend equation, the forecasted value of the loan and advances for FY 2010/11 are Rs. 30,752,971,720.10; Rs. 41,281,117,494.60 & Rs. 16,037,122,397.30 respectively and for FY 2011/12 is Rs. 35,011,494,626.40; Rs. 47,991,031,468.20 & Rs. 18,294,742,370.40 respectively.

Between two banks, average Loans and advances and rate of the increase both seem higher in NIBL. In other words, Loans and Advances will increase with higher rate in NIBL forecasted periods if the past trend continues.

4.4.3 Trend Analysis of Performing Assets

Table 4.40

Least Square Trend Equation & Its Determinant of Performing Assets

Bank	**a**	**b**	**Yc = a + bX**
NABIL	27,161,423,917.40	5,916,780,661.60	27,161,423,917.40 + 5,916,780,661.60X
NIBL	27,331,024,107.60	7,496,354,069.60	27,331,024,107.60 + 7,496,354,069.60X
HBL	11,653,065,040.40	2,456,507,561.30	11,653,065,040.40 + 2,456,507,561.30X

(See: Appendix2.3)

Table 4.40 explains that investment of all banks showed increasing trend. On the average, investment in NABIL, NIBL & HBL increased by Rs. 5,916,780,661.60; Rs. 7,496,354,069.60 & Rs. 2,456,507,561.30 respectively per year in the past period. Therefore, trend equation of investment in NABIL, NIBL & HBL are, Yc=27,161,423,917.40 + 5,916,780,661.60X; Yc=27,331,024,107.60 + 7,496,354,069.60X & Yc=11,653,065,040.40 + 2,456,507,561.30X respectively.

On the basis of above trend equation, the forecasted value of the deposits for FY 2010/11 are Rs. 44,911,765,902.20; Rs. 49,820,086,316.40 & Rs. 19,022,587,724.30 respectively and for FY 2011/12 are Rs. 50,828,546,563.80; Rs. 57,316,440,386 & Rs. 21,479,095,285.60 respectively.

On comparing three banks, average investment and rate of the increase in total investment both appeared higher in NIBL. It means performing assets will increase in higher rate in NIBL for forecasted periods if past trend continues.

4.4.4 Trend Analysis of Net Worth

Table 4.41

Least Square Trend Equation & Its Determinant of Net Worth

Bank	a	b	Yc = a + bX
NABIL	2,230,807,780.80	351,091,128	2,230,807,780.80 + 351,091,128X
NIBL	2,213,672,600	672,668,000	2,213,672,600 + 672,668,000X
HBL	1,066,566,600	248,908,500	1,066,566,600 + 248,908,500X

(See: Appendix 2.4)

In above Table 4.41, average rate of increase in the amount of net worth in NABIL, NIBL & HBL were Rs 351,091,128; Rs 672,668,000 & Rs 248,908,500 respectively per year. Hence, the trend equations of net worth is, Yc=2,230,807,780.80 + 351,091,128X; Yc=2,213,672,600 + 672,668,000X & Yc=1,066,566,600 + 248,908,500X respectively.From the trend above equation, the forecasted values of the deposits for FY 2010/11 is Rs. 3,284,081,164.80; Rs. 4,231,676,600 & Rs. 1,813,292,100 respectively and for FY 2011/12 is Rs. 3,635,172,292.80; Rs. 4,904,344,600 & Rs. 2,062,200,600 respectively.

On observing the past trend, both average and rate of increase of net worth seems higher in NIBL. Therefore, net worth of NIBL will increase of net worth seems higher speed for forecasted periods if past trend continues.

4.4.5 Trend Analysis of Net Profit

Table 4.42

Least Square Trend Equation & Its Determinant of Net Profit

Bank	a	b	Yc = a + bX
NABIL	721,371,524.80	113,308,407.10	721,371,524.80 + 113,308,407.10X
NIBL	536,286,590.20	168,313,905.10	536,286,590.20 + 168,313,905.10X
HBL	185,862,127.40	55,382,717.40	185,862,127.40 + 55,382,717.40X

(See: Appendix 2.5)

Table 4.42 explores that net profit of all banks showed increasing trend. Therefore, trend equations of net profit are, Yc=721,371,524.80 + 113,308,407.10X; Yc=536,286,590.20 + 168,313,905.10X & Yc=185,862,127.40 + 55,382,717.40X respectively. From the trend above equation, the forecasted values of the deposits for FY 2010/11 are Rs. 1,061,296,746.10; Rs. 1,041,228,305.50 & Rs. 352,010,279.60 respectively and for FY 2011/12 is Rs. 1,174,605,153.20; Rs. 1,209,542,210.60 & Rs. 407,392,997 respectively.

Between two banks, average of the net profit appeared higher in NABIL but rate of increase is higher in NIBL. It means net profit will increase in higher rate in NIBL for forecasted periods if the past trend continues.

4.5 Major Findings

Major findings of this study during the period of five years in NABIL, NIBL and HBL from the analysis are summarizes as:

a) Ratio analysis

Ratio analysis is one of the important financial tools to analyze the financial performance. The study mainly focused on the ratio analysis. For the analysis purpose each ratios are analyzed by calculating means and C.V of the ratio of three sampled banks.

i. Liquidity Position

The analysis of liquidity position of these three banks have shows different position. If we study, quick ratio, cash and Bank balance to short-term deposit ratio, cash and bank balance to total deposits ratio, NRB balance to current and saving deposit ratio and NRB balance to fixed deposit ratio describes that HBL has more short-term assets under reserves than NIBL and NABIL. So, its liquidity position is higher in. In summary, the three banks liquidity position (except current ratio and quick ratio which lies under the standard of 2:1 and 1:1 respectively) is good and in comparison HBL has better liquidity position. But NABIL has to improve the liquidity position as compared to HBL & NIBL.

At the CV Analysis, quick ratio, NRB balance to Fixed deposits ratio and NRB balance to saving and current deposits seems more variation in the ratio of HBL than NABIL & NIBL because it has more CV whereas other remaining ratio like current ratio, cash & bank balance to current asset ratio, cash & bank balance to total deposit ratio seems more variation in the ratio of NABIL.

ii. Efficiency Position

The conclusions exacted about turnover position of these three banks are differing from each other. First two ratios i.e. Loans and advances to total deposits and Loans and advances to saving deposits ratio shows better turnover in HBL and remaining i.e. Loans and advances to fixed deposits ratio shows better activity position in NABIL. In comparison to HBL & NIBL, NABIL is success in utilization its depositors' fund in investment. In other words, NABIL utilizes its income generating assets more efficiently than HBL & NIBL.

If we looks at the CV analysis, loans & advances to total deposit and saving deposit & investment to total deposit ratio indicates there is more uniform in utilization of its resources in HBL and the ratios i.e. loan and advance to fixed deposit ratio show less uniform. Similarly, loans and advances to saving deposit ratio indicates there is more consistence in utilization of its resources in NABIL due to low CV. Likewise, CV analysis of three banks in term of loans and advances to total deposits, loans and advances to saving deposits & loans and advances to fixed deposit ratio differ significantly.

iii. Profitability Position

The analysis of profitability of three banks with the help of profitability ratios have drawn different conclusion. Some ratios show the earning position and profit position of NABIL is better and effective than NIBL & HBL and after NABIL, NIBL is better than HBL. In term of ROA & ROE within these last five years is better profitable in NABIL than two banks. In summary, expenses of NABIL is higher, its profit making capacity also efficiency as compared to HBL & NIBL.

iv. Capital Structure Position

The analysis of capital structure ratios of debt-equity ratio and debt assets ratio is higher in NIBL. Likewise, Interest coverage ratio of NABIL is higher which indicates that it has better debt servicing capacity than two banks. Debt-equity ratio and interest coverage ratio are greater variation in NABIL than two banks whereas debt-asset ratio is less uniform. This analysis shows NABIL seems more levered than HBL & NIBL.

v. Capital Adequacy Position

In this adequacy ratios, NABIL and HBL show the more successful to maintain sufficient capital than that of NIBL. Net worth to total deposits ratio and net worth to total assets ratio in HBL is greater than two banks. But net worth to total credit ratios is greater in NABIL which indicated NABIL is more successful to build up confidence among creditors and it has used significantly larger extent of net worth to creation. There is greater variation of ratios from mean in NABIL in net worth to total deposit ratio and net worth to total assets and net worth to total credit ratio.

vi. Assets Quality Position

Assets quality contained by the banks with the help of asset quality ratio gives fixed result. Loan Loss coverage ratio, loan loss provision to total income and loan loss provision to total deposit ratio all are greater in HBL but NABIL has greater in accrued interest to total interest income. It indicates that major portion of loan is risky in HBL. In summary, loans and advances granted by the HBL are riskier than two banks. Similarly, Loan Loss coverage ratio, loan loss provision to total income and loan loss provision to total deposit ratios are more consistence in

NIBL than that of HBL & NABIL but in accrued interest to total interest income ratio has less uniform in HBL at CV analysis

vii. Other Financial Position

- Greater EPS in NABIL shows that earning on per share basis is higher in NABIL. EPS greatly varied from mean in NIBL than NABIL & HBL.
- Higher P/E ratios in NABIL than in NIBL & HBL indicate greater expectation of market toward the achievement of firm. In the same way, NABIL has greater variability from mean than two banks.
- Higher mean ratio and greater variation of MVPS to BVPS ratio in NABIL signifies strong management and organization in NABIL than in NIBL & HBL.

b) Income and Expenditure Analysis

In summary, we can clarify the operating income is highly contributed by interest income and similarly the operating expenses is highly contributed by interest expenses from above analysis of operating income and operating expenditure of these three banks. In the total operating income, average proportion of interest income is higher in HBL than that of two banks whereas average proportion of commission & discount is higher in NIBL and average proportion of Foreign exchange fluctuating income & average proportion of operating income is higher in NABIL. If we look at operating expenses, the average proportion of interest expenses and average proportion of office operation expenses is higher in HBL & NIBL respectively and average proportion staff expenses and average proportion of staff bonus provision is higher in NABIL.

Finally if we concentrate in operating profit or loss analysis, NABIL is better position in earning operating profit than that of NIBL & HBL and NIBL than that of HBL in an average. If we analysis year by year the operating profit earned by NABIL and NIBL has better than that of HBL by large amount.

c) Correlation Analysis

In correlation analysis, Karl Pearson's coefficient of correlation is used and also calculated the probable error of them. Total deposit and loan & advances, total deposit & net profit, Loans

and advances & net profit, Performing assets & Net profit all are positively correlated at significant level in NABIL, NIBL and HBL, where rxy >6PE(r), but the relation between EPS & MVPS gives no result because rxy<6PE(r) which means negative or insignificant to all three banks.

d) Trend Analysis

In trend analysis, least squared trend analysis is analyzed by calculating the parameters ***a*** and ***b***. Total deposits, loans and advances, Performing Assets , Net worth and Net profit shows increasing trend in all three banks. Average amount of Total deposits, Loan & advances, Performing assets and Net worth are higher in NIBL than NABIL & HBL. Similarly, in terms of net profit, average amount is higher in NABIL and speed of increment rate is higher in NIBL.

CHAPTER V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONDS

5.1 Summary

Banks play an important role in the economic growth of a country. Banking, when properly organized, aids and facilitates the growth of trade and industry. The issue of development always rests upon the mobilization of resources. Banks function of lending ensures required volume of capital to resources mobilization. In the modern economy, banks are to be considered not as dealers in money but as the leaders of development. "Banks are not just the storehouse of the country's wealth but are the reservoirs of resources necessary for economic development. Bank renders valuable services to trade and industry. The banks help in the uniform development of the different regions in the country. The problem of the study on the issues related to the comparative strength & weakness of NABIL Bank Ltd, NIBL & HBL Bank Ltd. Thus, this study is strived to find the answer of the following question:

- What is the comparative position of the three banks in term of liquidity, profitability, turnover, leverage and capital adequacy?
- Is there any difference in financial performance between these three banks?
- What is the relation between the major financial indicators and the future trend of them in the three banks?
- How sound the operational result in relation their profitability?
- What is the overall financial status of NABIL Bank, NIBL & HBL Bank running their business?

More specifically, the following are the objective of the study:

- To determine the liquidity, profitability, leverage, efficiency of capital adequacy position of NABIL Bank, NIBL & HBL Bank.
- To analyze the comparative financial position of these three banks.
- To examine the trend of financial performance of three banks.

- To explore the relationship of financial performance of three commercial banks.

It has identified the problem and set objectives to solve problems about financial performance of sampled commercial bank i.e. NABIL Bank Limited, Nepal Investment Bank Limited & Himalayan bank Limited. To make this study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to under take this study more precisely.

The study aims to analyze and compare the financial performance of NABIL Bank, NIBL & HBL Bank. For the purpose it needs to review of literatures on the concern area. There are several studies have been already done from which the researches can make clear ideas and concepts. What is other opinion and concepts? What is the outcome of others researches? What has done and written? These all and other related questions are reviewed in this chapter, which is the guideline and inputs of the study. This chapter has been organized into three headings i.e. conceptual framework, review of related articles and review of different masters' theses.

Research methodology has been described in third chapter, which is a way to solve the problems with the help of various tools and techniques. This chapter includes the various financial as well as statistical tools to analyze the data in order to come to the decisions. This chapter includes the research design, population and sample data collection procedure, data period covered and method of analysis. These studies is mainly conducted on the basis of secondary data collected from annual reports of concern banks, financial statement, etc. and authorized web site of three sampled banks and NRB.

The presentation and analysis of data has been made comparative analytical and their interpretation has done in chapter four by applying the wide varieties of methodology as stated in chapter three. It includes the various financial and statistical tools. In case of financial tools ratio analysis and income & expenditure analysis is done. Ratio analysis includes liquidity, turnover, profitability, solvency, capital adequacy, asset quality & other indicators. Other indicators consist of EPS, PE ratio and MPS. Various statistical tools such as arithmetic mean, standard deviation, coefficient of correlation and trend analysis have been applied to fulfill the objectives of this study. The analysis has been done mainly through secondary. The major

findings of the study are also included in the final section of the presentation and analysis chapter.

Financial performance as part of the financial management in the main indicators of the success or failure of the firm (i.e. Banks) so, the financial performance analysis can be considered as the heart of financial decision the growth and development of the firm is directly influences by the financial policies of their firm. There are different persons / institutions that are affects by the financial decision of the firm, stakeholder such as owners, managers, creditors, tax authorities etc are directly interrelated in the final information analysis of the bank's position.

Therefore, the study has been conducted to evaluate the financial performance of NABIL Bank Limited, Nepal Investment Bank Limited (NIBL) and Himalayan Bank Limited (HBL) and to find out their strength and weakness. The main objective of the study is an analysis of financial performance of the private Sectors commercial banks which are fully managed and ownership of Nepalese entrepreneur. To fulfill this objective and other specific objectives as described in Chapter one, an appropriate research methodology has been adopted which includes financial tools- ratio analysis, income and expenditure analysis and statistical tools-mean, S.D; C.V, correlation coefficient, trend analysis have been used. The major study consists of liquidity, turnover, profitability, capital structure, capital adequacy and assets quality position. Under these main ratios, their mean, Coefficient of Variation are analyzed. In order to test the relationship between various components of financial indicates Karl Person's correlation coefficient 'r' is calculated and analyzed.

The necessary data are derived from the balance sheets and profit and loss accounts of NABIL, NIBL and HBL for the period of five years from FY 2004/05 to FY 2008/09. Chapter-V includes the summary of major findings, conclusions and recommendations.

5.2 Conclusions

After analyzing the data in chapter four, the conclusion is that the financial performance of such types of commercial bank is improved year by year. In other words, all private sector banks which are under Nepalese Management are being run efficiently and doing well.

As of FY 2008/09, private sector commercial banks accepts more than Rs 200 billion in deposits and utilized Rs 155 billion through loans and advances with gross credit deposit ratio of nearly 80%. So, the market growth can be attributed to private sectors commercial banks of the country. If we compared the main financial indicators of sampled banks for example total deposit and loan and advances ratio in FY 2007/08 and FY 2008/09 are 68.18% & 74.97% in NABIL bank and 79.91% & 78.86% in NIBL & 87.62% and 89.32% in HBL.

In commercial banks, the liquidity portion affects external and internal factors such as saving for investment situation, internal banks requirement, the lending policies, management capability, prevailing interest rate etc. Liquidity and profitability trend move opposite direction as they have negative correlation. To meet the liquidity needs, the banks need cash reserves, which are not earning assets. Profit on the other hand derived from loans and advance. So from the point of view of profitability the three banks are at the satisfactory level but they are poor liquidity position especially current and quick ratios, which are below the prescribe standard. In summary, financial performance of sample banks are seemed satisfactory. In comparison, profitability, turnover position, capital structure, and other indicators (EPS, P/E ratio and MVPS to BVPS) are better than in NABIL as compared to NIBL & HBL whereas capital adequacy and assets quality ratio is better in HBL than NABIL & NIBL. In totality, NABIL bank is better as compared to NIBL & HBL because NABIL is less risky than two banks and it is successful to attract the investor and have strong management. In other word NABIL bank investing in less risky sector. Total operating income and financial indicators between the three sampled banks do not differ significantly except the net working capital, leverage and Capital adequacy position.

5.3 Recommendations

The private financial institutions can survive if they earn better net profit. With an objective to maximize the economic profit banks compete in the industry. It is applicable to both domestically run and joint venture banks. Their profit depends on how much customers they can attract in a competitive way. Both types of banks can increase their clients if they have good management team, efficient technology, and good public relations. In the light of above

facts and figures, the objective of present study is to find out to what extent these banks have succeeded in realizing the stated objectives. Such in depth study will provide the basis for evaluating financial success or failure and also suggest suitable measures to improve their operating financial performance of NABIL, NIBL and HBL are listed below:

i) These three banks could not maintain the conventional standard of liquidity and quick ratios. It indicates the poor liquidity position in these banks especially in NABIL & NIBL. It may create the problem of working capital if they need to pay the short-term obligation at demand. With the delay in payment of liabilities of banks may lose their goodwill and may have the problem in winning the confidence of current depositors and short term lenders. So, the three banks are recommended to maintain the adequate net working capital.

ii) Government Securities such as Treasury bills, Development bonds, saving certificates etc. are risk free investment alternatives because they are free of default risk as well as liquidity risk and can be easily sold in the market. In this study, it has found that tree sampled banks have made some amount of fund in Government securities. But NABIL, NIBL & HBL are recommended to invest more funds in Government securities instead of keeping them idle.

iii) From the above analysis, NIBL is maintaining more amount as money at call and short notice than HBL & NABIL. So, NIBL is recommended to decrease its amount to call by increasing loan and advances. Similarly, it is also recommended to these three banks to hold its amount in form of cash and cash equivalent items only to extent of requirement. Through it is difficult to find exactly the suitable liquidity ratio; estimation can be done on the basis of past experience, nature of depositors, situation of financial market and nature of competition.

iv) The bank must collect more funds from current deposits, compared to other interest bearing deposits. The banks must located and explore new technique and facilities for collection. There should be continuous flow of financial information among various

groups of employees. The goal and objective of banks should be carefully communicated to lower level of management.

v) All the three banks have maintained NRB Balance total deposit ratio remarkable higher than standard prescribed by NRB. The fund tied in NRB balance cannot yield a good return. So these banks are suggested to lower this ratio and invest the surplus fund in other current assets such as loans and advances, bill purchase discount & money at call and short notice. The banks have employed a considerably greater portion of debt in their capitals. Therefore they should be aware of possible risk that may arise due to slackness in the business activities. In this regard NIBL & HBL should adopt suitable measures so as to check the risk factors.

vi) Turnover of fund raised from outsiders appeared less satisfactory in NIBL than NABIL & HBL. So NIBL has to allocate the deposits in Income generating sectors. It will be better for these three banks to open the branches in other cities & rural areas in order to find the more profitable opportunities.

vii) Capital adequacy position of NIBL seems less satisfactory than that of two banks. So NIBL needs to raise its net worth. It will be better for the banks to distribute the stock dividend rather than the cash dividend.

viii) The imbalance between the operating income and operating expenses has made banks less profitable. In our analysis, the operating income operating expenses of NIBL is higher and lower in HBL. So, from the view of operating profit in the NABIL is better than NIBL &HBL in average and NIBL is better than HBL in average. So every commercial bank should increase the operating income and cut down the unnecessary expenses by using modern banking technology, computer networking, expert and well trained personnel. Introducing the latest and sophisticated banking system, developing the high motivational strength in management and increasing turnovers etc are some of techniques to improve and increase the gap between income and expenses.

ix) A systematic approach of financial performance analysis should be made annually. This would considerably contribute to increase the financial strength of banks. The banks should have debt analysis of their financial strength and weakness. It should try to come out its weakness by using its strength aspect. The financial performance of these sampled banks is at the satisfactory level. The best is yet to come.

x) Relation between the major components of income generating assets i.e. performing assets and net profit are highly positive in these three sampled banks but relation between income generating assets and major sources of fund i.e. total deposits is poor in HBL, due to newly bank as compared to these two banks. HBL is recommended to invest its fund in the secured and profitable sector, which generates high profit.

xi) Political instability directly affects the economic sector such as hotels & tourism, manufacturing & trading sector. Bank loan & advances is decreasing in this sector. So, banks should give priority to these sectors as well as banks should create new investing sector to mobilize deposit.

xii) Different systematic, modern & statistical tools should be used for the upcoming thesis in order to find out the actual financial performance of concern bank as clearly as previously. A sampled must be taken more than three banks to gain the knowledge and comparative analysis of sampled banks.

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Appendix-1

1.1 (A) Calculation of Correlation Coefficient between Total Deposit and Loan and advances of Nabil

Rs in Million

Year	Total Deposit (X)	X^2	Loan & Advance (Y)	Y^2	XY
2004/05	14,586.61	212,769,162.12	10,946.74	119,831,050.95	159,675,772.44
2005/06	19,347.40	374,321,848.07	13,278.78	176,326,051.40	256,909,893.59
2006/07	23,342.29	544,862,269.02	15,903.02	252,906,172.34	371,212,918.57
2007/08	31,915.05	1,018,570,225.01	21,759.46	473,474,099.49	694,454,188.59
2008/09	37,348.27	1,394,893,271.99	27,999.01	783,944,560.98	1,045,714,585.21
	ΣX = 126,539.61	**ΣX^2 = 3,545,416,776.21**	**ΣY = 89,887.01**	**ΣY^2 = 1,806,481,935.17**	**ΣXY = 2,527,967,358.41**

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

$$= \frac{5 \times 2,527,967,358.41 - 126,539.61 \times 89,887.01}{\sqrt{5 \times 3,545,416,776.21 - (126,539.61)^2}\ \sqrt{5 \times 1,806,481,935.17 - (89,887.01)^2}}$$

$$= \frac{12,639,836,792.05 - 11,374,267,569.08}{\sqrt{17,727,083,881.05 - 16,012,272,898.95}\ \sqrt{9,032,409,675.83 - 8,079,675,106.06}}$$

$$= \frac{1,265,569,222.97}{\sqrt{1,714,810,982.10}\ \sqrt{952,734,569.77}}$$

$$= \frac{1,265,569,222.97}{41,410.28 \times 30,866.40}$$

$$= \frac{1,265,569,222.97}{1,278,186,098.84}$$

$$= 0.9901$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1-(0.9901)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1-0.9804}{2.24}$$

$$= \frac{0.6745 \times 0.0196}{2.24}$$

$$= \frac{0.0133}{2.24}$$

$$= 0.0059$$

And, 6PE(r) = 6 x 0.0059

= 0.0355

B) Calculation of Correlation Coefficient between Total Deposit and Loan and Advances of NIBL

Rs in Million

Year	Total Deposit (X)	X^2	Loan & Advance (Y)	Y^2	XY
2004/05	14,254.57	203,192,879.92	10,453.16	109,268,637.61	149,005,399.77
2005/06	18,927.31	358,242,912.42	13,178.15	173,663,690.14	249,426,915.42
2006/07	24,488.86	599,704,068.19	17,769.10	315,740,914.81	435,144,931.15
2007/08	34,451.73	1,186,921,424.38	27,529.31	757,862,633.78	948,432,072.83
2008/09	46,698.10	2180712544	36,827.16	1356239714	1719758400
	ΣX = 138,820.56	**ΣX^2 = 4,528,773,828.52**	**ΣY = 105,756.88**	**ΣY^2 = 2,712,775,590.00**	**ΣXY = 3,501,767,719.57**

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

$$= \frac{5 \times 3,501,767,719.57 - 138,820.56 \times 105,756.88}{\sqrt{5 \times 4,528,773,828.52 - (138,820.56)^2}\ \sqrt{5 \times 2,712,775,590.00 - (105,756.88)^2}}$$

$$= \frac{17,508,838,597.83 - 14,681,229,655.79}{\sqrt{22,643,869,142.58 - 19,271,148,434.00}\ \sqrt{13,563,877,950.02 - 11,184,517,878.85}}$$

$$= \frac{2,827,608,942.05}{\sqrt{3,372,720,708.59}\ \sqrt{2,379,360,071.17}}$$

$$= \frac{2,827,608,942.05}{58,075.13 \times 48,778.68}$$

$$= \frac{2,827,608,942.05}{2,832,828,442.61}$$

$$= 0.9982$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9982)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9963}{2.24}$$

$$= \frac{0.0025}{2.24}$$

$$= 0.0011$$

And, 6PE(r) = 6 x 0.0011
= 0.0067

C) Calculation of Correlation Coefficient between Total Deposit and Loan and Advances of HBL

Rs in Million

Year	Total Deposit (X)	X^2	Loan & Advance (Y)	Y^2	XY
2004/05	6,241.38	38,954,799.34	4,909.36	24,101,766.52	30,641,140.29
2005/06	8,765.95	76,841,896.93	6,902.12	47,639,315.71	60,503,680.78
2006/07	10,068.23	101,369,275.47	9,128.65	83,332,232.57	91,909,346.85
2007/08	13,084.69	171,209,112.40	11,465.33	131,453,883.73	150,020,341.14
2008/09	15,579.93	242,734,218.80	13,915.85	193,650,881.22	216,807,968.89
	ΣX = 53,740.18	**ΣX^2 = 631,109,302.94**	**ΣY = 46,321.31**	**ΣY^2 = 480,178,079.75**	**ΣXY = 549,882,477.95**

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

$$= \frac{5 \times 549{,}882{,}477.95 - 53{,}740.18 \times 46{,}321.31}{\sqrt{5 \times 631{,}109{,}302.94 - (53{,}740.18)^2}\ \sqrt{5 \times 480{,}178{,}079.75 - (46{,}321.31)^2}}$$

$$= \frac{2{,}749{,}412{,}389.74 - 2{,}489{,}315{,}644.72}{\sqrt{3{,}155{,}546{,}514.72 - 2{,}888{,}006{,}946.43}\ \sqrt{2{,}400{,}890{,}398.73 - 2{,}145{,}663{,}945.40}}$$

$$= \frac{260{,}096{,}745.02}{\sqrt{267{,}539{,}568.29}\ \sqrt{255{,}226{,}453.33}}$$

$$= \frac{260{,}096{,}745.02}{16{,}356.64 \times 15{,}975.81}$$

$$= \frac{260{,}096{,}745.02}{261{,}310{,}495.66}$$

$$= 0.9954$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9954)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9907}{2.24}$$

$$= 0.6745 \times \frac{0.0093}{2.24}$$

$$= \frac{0.0063}{2.24}$$

$$= 0.0028$$

And, 6PE(r) = 6 x 0.0028
= 0.0167

1.1(A) Calculation of Correlation Coefficient between Total Deposit and Net Profit of Nabil

					Rs in Million
Year	**Total Deposit (X)**	**X^2**	**Net profit (Y)**	**Y^2**	**XY**
2004/05	14,586.61	212,769,162.12	520.11	270,518.57	7,586,699.55
2005/06	19,347.40	374,321,848.07	635.26	403,557.81	12,290,667.38
2006/07	23,342.29	544,862,269.02	673.96	454,222.08	15,731,766.40
2007/08	31,915.05	1,018,570,225.01	746.47	557,214.48	23,823,561.30
2008/09	37,348.27	1,394,893,271.99	1,031.05	1,063,064.10	38,507,933.78
	ΣX = 126,539.61	**ΣX^2 = 3,545,416,776.21**	**ΣY = 3,606.85**	**ΣY^2 = 2,748,577.04**	**ΣXY = 97,940,628.42**

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

$$= \frac{5 \times 97,940,628.42 - 126,539.61 \times 3,606.85}{\sqrt{5 \times 3,545,416,776.21 - (126,539.61)^2}\ \sqrt{5 \times 2,748,577.04 - (3,606.85)^2}}$$

$$= \frac{489,703,142.12 - 456,409,898.49}{\sqrt{17,727,083,881.05 - 16,012,272,898.95}\ \sqrt{13,742,885.20 - 13,009,395.78}}$$

$$= \frac{33,293,243.63}{\sqrt{1,714,810,982.10}\ \sqrt{733,489.43}}$$

$$= \frac{33,293,243.63}{41,410.28 \times 856.44}$$

$$= \frac{33,293,243.63}{35,465,415.88}$$

$$= 0.9388$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9388)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.8813}{2.24}$$

$$= \frac{0.6745 \times 0.1187}{2.24}$$

$$= \frac{0.0801}{2.24}$$

$$= 0.0358$$

And, 6PE(r) = 6 x 0.0358

= 0.2145

B) Calculation of Correlation Coefficient between Total Deposit and Net Profit of NIBL

Rs in Million

Year	Total Deposit (X)	X^2	Net profit (Y)	Y^2	XY
2004/05	14,254.57	203,192,879.92	232.15	53,892.23	3,309,156.59
2005/06	18,927.31	358,242,912.42	350.54	122,875.49	6,634,702.14
2006/07	24,488.86	599,704,068.19	501.40	251,400.96	12,278,687.91
2007/08	34,451.73	1,186,921,424.38	696.73	485,435.48	24,003,619.96
2008/09	46,698.10	2,180,712,543.61	900.62	811,116.38	42,057,242.82
	ΣX = 138,820.56	**ΣX^2 = 4,528,773,828.52**	**ΣY = 2,681.43**	**ΣY^2 = 1,724,720.54**	**ΣXY = 88,283,409.42**

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

$$= \frac{5 \times 88,283,409.42 - 138,820.56 \times 2,681.43}{\sqrt{5 \times 4,528,773,828.52 - (138,820.56)^2}\ \sqrt{5 \times 1,724,720.54 - (2,681.439)^2}}$$

$$= \frac{441,417,047.09 - 372,238,174.85}{\sqrt{22,643,869,142.58 - 19,271,148,434.00}\ \sqrt{8,623,602.69 - 7,190,088.30}}$$

$$= \frac{69,178,872.24}{\sqrt{3,372,720,708.59}\ \sqrt{1,433,514.40}}$$

$$= \frac{69,178,872.24}{58,075.13 \times 1,197.29}$$

$$= \frac{69,178,872.24}{69,533,040.25}$$

$$= 0.9949$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9949)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9898}{2.24}$$

$$= \frac{0.6745 \times 0.0102}{2.24}$$

$$= \frac{0.0069}{2.24}$$

$$= 0.0031$$

And, $6PE(r) = 6 \times 0.0031$

$$= 0.0184$$

C) Calculation of Correlation Coefficient between Total Deposit and Net Profit of HBL

Rs in Million

Year	Total Deposit (X)	X^2	Net profit (Y)	Y^2	XY
2004/05	6,241.38	38,954,799.34	113.76	12,940.43	709,994.20
2005/06	8,765.95	76,841,896.93	96.59	9,329.24	846,685.68
2006/07	10,068.23	101,369,275.47	158.48	25,114.33	1,595,562.91
2007/08	13,084.69	171,209,112.40	243.06	59,077.19	3,180,338.58
2008/09	15,579.93	242,734,218.80	317.43	100,761.80	4,945,537.18
	ΣX = 53,740.18	**ΣX^2 = 631,109,302.94**	**ΣY = 929.31**	**ΣY^2 = 207,222.99**	**ΣXY = 11,278,118.54**

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

$$= \frac{5 \times 11,278,118.54 - 53,740.18 \times 929.31}{\sqrt{5 \times 631,109,302.94 - (53,740.18)^2}\ \sqrt{5 \times 207,222.99 - (929.31)^2}}$$

$$= \frac{56,390,592.70 - 49,941,125.46}{\sqrt{3,155,546,514.72 - 2,888,006,946.43}\ \sqrt{1,036,114.96 - 863,611.50}}$$

$$= \frac{6,449,467.25}{\sqrt{267,539,568.29}\ \sqrt{172,503.46}}$$

$$= \frac{6,449,467.25}{16,356.64 \times 415.34}$$

$$= \frac{6,449,467.25}{6,793,489.53}$$

$$= 0.9494$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9494)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9013}{2.24}$$

$$= 0.6745 \times \frac{0.0987}{2.24}$$

$$= \frac{0.0666}{2.24}$$

$$= 0.0297$$

And, 6PE(r) = 6 x 0.0297
= 0.1783

1.3 (A) Calculation of Correlation Coefficient between Net Profit and Loan and Advances of Nabil

Rs in Million

Year	Net profit (X)	X^2	Loan & Advance (Y)	Y^2	XY
2004/05	520.11	270,518.57	10,946.74	119,831,050.95	5,693,551.17
2005/06	635.26	403,557.81	13,278.78	176,326,051.40	8,435,505.61
2006/07	673.96	454,222.08	15,903.02	252,906,172.34	10,718,002.06
2007/08	746.47	557,214.48	21,759.46	473,474,099.49	16,242,740.59
2008/09	1,031.05	1,063,064.10	27,999.01	783,944,560.98	28,868,379.26
	ΣX = 3,606.85	**ΣX^2 = 2,748,577.04**	**ΣY = 89,887.01**	**ΣY^2 = 1,806,481,935.17**	**ΣXY = 69,958,178.68**

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

$$= \frac{5 \times 69,958,178.68 - 3,606.85 \times 89,887.01}{\sqrt{5 \times 2,748,577.04 - (3,606.85)^2}\ \sqrt{5 \times 1,806,481,935.17 - (89,887.01)^2}}$$

$$= \frac{349,790,893.41 - 324,209,332.39}{\sqrt{13,742,885.20 - 13,009,395.78}\ \sqrt{9,032,409,675.83 - 8,079,675,106.06}}$$

$$= \frac{25,581,561.02}{\sqrt{733,489.43}\ \sqrt{952,734,569.77}}$$

$$= \frac{25,581,561.02}{856.44 \times 30,866.40}$$

$$= \frac{25,581,561.02}{26,435,217.67}$$

$$= 0.9677$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9677)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9365}{2.24}$$

$$= \frac{0.6745 \times 0.0635}{2.24}$$

$$= \frac{0.0429}{2.24}$$

$$= 0.0191$$

And, 6PE(r) = 6 x 0.0191
= 0.1148

(B) Calculation of Correlation Coefficient between Net Profit and Loan and Advances of NIBL

Rs in Million

Year	Net profit (X)	X^2	Loan & Advance (Y)	Y^2	XY
2004/05	232.15	53,892.23	10,453.16	109,268,637.61	2,426,670.66
2005/06	350.54	122,875.49	13,178.15	173,663,690.14	4,619,416.69
2006/07	501.40	251,400.96	17,769.10	315,740,914.81	8,909,408.97
2007/08	696.73	485,435.48	27,529.31	757,862,633.78	19,180,547.73
2008/09	900.62	811,116.38	36,827.16	1,356,239,713.67	33,167,276.84
	ΣX = 2,681.43	**ΣX^2= 1,724,720.54**	**ΣY = 105,756.88**	**ΣY^2 = 2,712,775,590.00**	**ΣXY = 68,303,320.89**

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

$$= \frac{5 \times 68,303,320.89 - 2,681.43 \times 105,756.88}{\sqrt{5 \times 1,724,720.54 - (2,681.43)^2}\ \sqrt{5 \times 2,712,775,590 - (105,756.88)^2}}$$

$$= \frac{341,516,604.47 - 283,580,096.45}{\sqrt{8,623,602.69 - 7,190,088.30}\ \sqrt{13,563,877,950.02 - 11,184,517,878.85}}$$

$$= \frac{57,936,508.02}{\sqrt{1,433,514.40}\ \sqrt{2,379,360,071.17}}$$

$$= \frac{57,936,508.02}{1,197.29 \times 48,778.68}$$

$$= \frac{57,936,508.02}{58,402,456.40}$$

$$= 0.9920$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9920)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9841}{2.24}$$

$$= \frac{0.6745 \times 0.0159}{2.24}$$

$$= \frac{0.0107}{2.24}$$

$$= 0.0048$$

And, 6PE(r) = 6 x 0.0048

= 0.0287

(C) Calculation of Correlation Coefficient between Net Profit and Loan and Advances of HBL

Rs in Million

Year	Net profit (X)	X^2	Loan & Advance (Y)	Y^2	XY
2004/05	113.76	12,940.43	4,909.36	24,101,766.52	558,468.59
2005/06	96.59	9,329.24	6,902.12	47,639,315.71	666,662.35
2006/07	158.48	25,114.33	9,128.65	83,332,232.57	1,446,662.65
2007/08	243.06	59,077.19	11,465.33	131,453,883.73	2,786,741.15
2008/09	317.43	100,761.80	13,915.85	193,650,881.22	4,417,308.27
	ΣX = 929.31	**ΣX^2 = 207,222.99**	**ΣY = 46,321.31**	**ΣY^2 = 480,178,079.75**	**ΣXY = 9,875,843.01**

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

$$= \frac{5 \times 9{,}875{,}843.01 - 929.31 \times 46{,}321.31}{\sqrt{5 \times 207{,}222.99 - (929.31)^2}\ \sqrt{5 \times 480{,}178{,}079.75 - (46{,}321.31)^2}}$$

$$= \frac{49{,}379{,}215.04 - 43{,}046{,}719.49}{\sqrt{1{,}036{,}114.96 - 863{,}611.50}\ \sqrt{2{,}400{,}890{,}398.73 - 2{,}145{,}663{,}945.40}}$$

$$= \frac{6{,}332{,}495.55}{\sqrt{172{,}503.46}\ \sqrt{255{,}226{,}453.33}}$$

$$= \frac{6{,}332{,}495.55}{415.34 \times 15{,}975.81}$$

$$= \frac{6{,}332{,}495.55}{6{,}635{,}318.01}$$

$$= 0.9544$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9544)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9108}{2.24}$$

$$= 0.6745 \times \frac{0.0892}{2.24}$$

$$= \frac{0.0602}{2.24}$$

$$= 0.0269$$

And, 6PE(r) = 6 x 0.0269

= 0.1611

1.4(A) Calculation of Correlation Coefficient between Performing Assets and Net Profit of Nabil

Rs in Million

Year	Performing Assets (X)	X^2	Net profit (Y)	Y^2	XY
2004/05	16,084.82	258,721,530.94	520.11	270,518.57	8,365,941.63
2005/06	21,194.34	449,200,132.81	635.26	403,557.81	13,463,960.09
2006/07	25,422.87	646,322,064.81	673.96	454,222.08	17,133,994.10
2007/08	33,678.38	1,134,233,481.49	746.47	557,214.48	25,139,835.20
2008/09	39,426.71	1,554,465,461.42	1,031.05	1,063,064.10	40,650,909.35
	ΣX = 135,807.12	**ΣX^2 = 4,042,942,671.48**	**ΣY = 3,606.85**	**ΣY^2 = 2,748,577.04**	**ΣXY = 104,754,640.36**

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

$$= \frac{5 \times 104,754,640.36 - 135,807.12 \times 3,606.85}{\sqrt{5 \times 4,042,942,671.48 - (135,807.12)^2}\ \sqrt{5 \times 2,748,577.04 - (3,606.85)^2}}$$

$$= \frac{523,773,201.80 - 489,836,464.82}{\sqrt{20,214,713,357.41 - 18,443,574,657.54}\ \sqrt{13,742,885.20 - 13,009,395.78}}$$

$$= \frac{33,936,736.98}{\sqrt{1,771,138,699.87}\ \sqrt{733,489.43}}$$

$$= \frac{33,936,736.98}{42,084.90 \times 856.44}$$

$$= \frac{33,936,736.98}{36,043,189.50}$$

$$= 0.9416$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9416)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.8865}{2.24}$$

$$= \frac{0.6745 \times 0.1135}{2.24}$$

$$= \frac{0.0765}{2.24}$$

$$= 0.0342$$

And, 6PE(r) = 6 x 0.0342
= 0.2050

(B) Calculation of Correlation Coefficient between Performing Assets and Net Profit of NIBL

Rs in Million

Year	Performing Assets (X)	X^2	Net profit (Y)	Y^2	XY
2004/05	14,527.35	211,043,985.19	232.15	53,892.23	3,372,481.42
2005/06	18,851.02	355,360,955.04	350.54	122,875.49	6,607,961.15
2006/07	24,637.75	607,018,725.06	501.40	251,400.96	12,353,343.21
2007/08	34,408.73	1,183,960,700.21	696.73	485,435.48	23,973,663.27
2008/09	44,230.27	1,956,316,784.27	900.62	811,116.38	39,834,665.77
	ΣX= 136,655.12	**ΣX^2 = 4,313,701,149.78**	**ΣY = 2,681.43**	**ΣY^2 = 1,724,720.54**	**ΣXY = 86,142,114.81**

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

$$= \frac{5 \times 86,142,114.81 - 136,655.12 \times 2,681.43}{\sqrt{5 \times 4,313,701,149.78 - (136,655.12)^2}\ \sqrt{5 \times 1,724,720.54 - (2,681.43)^2}}$$

$$= \frac{430,710,574.07 - 366,431,693.09}{\sqrt{21,568,505,748.88 - 18,674,622,642.15}\ \sqrt{8,623,602.69 - 7,190,088.30}}$$

$$= \frac{64,278,880.98}{\sqrt{2,893,883,106.73}\ \sqrt{1,433,514.40}}$$

$$= \frac{64,278,880.98}{53,794.82 \times 1,197.29}$$

$$= \frac{64,278,880.98}{64,408,253.29}$$

$$= 0.9980$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9980)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.9960}{2.24}$$

$$= \frac{0.6745 \times 0.0040}{2.24}$$

$$= \frac{0.0027}{2.24}$$

$$= 0.0012$$

And, 6PE(r) = 6 x 0.0012
= 0.0073

(C) Calculation of Correlation Coefficient between Performing Assets and Net Profit of HBL

Rs in Million

Year	Performing Assets (X)	X^2	Net profit (Y)	Y^2	XY
2004/05	6,759.96	45,697,059.20	113.76	12,940.43	768,986.01
2005/06	9,735.55	94,780,972.74	96.59	9,329.24	940,337.50
2006/07	10,891.14	118,616,908.72	158.48	25,114.33	1,725,973.25
2007/08	13,936.80	194,234,449.99	243.06	59,077.19	3,387,451.22
2008/09	16,941.87	287,026,959.10	317.43	100,761.80	5,377,857.79
	ΣX = 58,265.32	**ΣX^2 = 740,356,349.75**	**ΣY = 929.31**	**ΣY^2 = 207,222.99**	**ΣXY = 12,200,605.77**

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

$$= \frac{5 \times 12{,}200{,}605.77 - 58{,}265.32 \times 929.31}{\sqrt{5 \times 740{,}356{,}349.75 - (58{,}265.32)^2}\ \sqrt{5 \times 207{,}222.99 - (929.31)^2}}$$

$$= \frac{61{,}003{,}028.87 - 54{,}146{,}372.52}{\sqrt{3{,}701{,}781{,}748.74 - 3{,}394{,}847{,}864.29}\ \sqrt{1{,}036{,}114.96 - 863{,}611.50}}$$

$$= \frac{6{,}856{,}656.35}{\sqrt{306{,}933{,}884.44}\ \sqrt{172{,}503.46}}$$

$$= \frac{6{,}856{,}656.35}{17{,}519.53 \times 415.34}$$

$$= \frac{6{,}856{,}656.35}{7{,}276{,}479.62}$$

$$= 0.9423$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.9423)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.8879}{2.24}$$

$$= 0.6745 \times \frac{0.1121}{2.24}$$

$$= \frac{0.0756}{2.24}$$

$$= 0.0337$$

And, 6PE(r) = 6 x 0.0337

= 0.2025

1.5 (A) Calculation of Correlation Coefficient between EPS and MPS of Nabil

Year	MPS (X)	X^2	EPS (Y)	Y^2	XY
2004/05	1,505	2,265,025	105	11,025	158,025
2005/06	2,240	5,017,600	129	16,641	288,960
2006/07	5,050	25,502,500	137	18,769	691,850
2007/08	5,275	27,825,625	108	11,664	569,700
2008/09	4,899	24,000,201	107	11,449	524,193
	ΣX = 18,969	**ΣX^2 =84,610,951**	**ΣY =586**	**ΣY^2 = 69,548**	**ΣXY =2,232,728**

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

$$= \frac{5 \times 2,232,728 - 18,969 \times 586}{\sqrt{5 \times 84,610,951 - (18,969)^2}\ \sqrt{5 \times 69,548 - (586)^2}}$$

$$= \frac{11,163,640 - 11,115,834}{\sqrt{423,054,755 - 359,822,961}\ \sqrt{347,740 - 343,396}}$$

$$= \frac{47,806}{\sqrt{63,231,794}\ \sqrt{4,344}}$$

$$= \frac{47,806}{7,951.84 \times 65.91}$$

$$= \frac{47,806}{524,098.19}$$

$$= 0.0912$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.0912)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.0083}{2.24}$$

$$= 0.6745 \times \frac{0.9917}{2.24}$$

$$= \frac{0.6689}{2.24}$$

$$= 0.2986$$

And, 6PE(r) = 6 x 0.2986
= 1.7917

(B) Calculation of Correlation Coefficient between EPS and MPS of NIBL

Year	MPS (X)	X^2	EPS (Y)	Y^2	XY
2004/05	800	640,000	40	1,600	32,000
2005/06	1,260	1,587,600	59	3,481	74,340
2006/07	1,729	2,989,441	63	3,969	108,927
2007/08	2,450	6,002,500	58	3,364	142,100
2008/09	1,388	1,926,544	37	1,369	51,356
	ΣX = 7,627	**ΣX^2 = 13,146,085**	**ΣY = 257**	**ΣY^2 = 13,783**	**ΣXY = 408,723**

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

$$= \frac{5 \times 408,723 - 7,627 \times 257}{\sqrt{5 \times 13,146,085 - (7,627)^2}\ \sqrt{5 \times 13,783 - (257)^2}}$$

$$= \frac{2,043,615 - 1,960,139}{\sqrt{65,730,425.00 - 58,171,129}\ \sqrt{68,915 - 66,049}}$$

$$= \frac{83,476}{\sqrt{7,559,296}\ \sqrt{2,866}}$$

$$= \frac{83,476}{2,749.42 \times 53.54}$$

$$= \frac{83,476}{147,190.16}$$

$$= 0.5671$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.5671)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.3216}{2.24}$$

$$= 0.6745 \times \frac{0.6784}{2.24}$$

$$= \frac{0.4576}{2.24}$$

$$= 0.2043$$

And, 6PE(r) = 6 x 0.2043

= 1.2256

(C) Calculation of Correlation Coefficient between EPS and MPS of HBL

Year	MPS (X)	X^2	EPS (Y)	Y^2	XY
2004/05	366	133,956	23	529	8,418
2005/06	496	246,016	16	256	7,936
2006/07	950	902,500	24	576	22,800
2007/08	1,284	1,648,656	26	676	33,384
2008/09	1,126	1,267,876	28	784	31,528
	ΣX = 4,222	**ΣX^2 = 4,199,004**	**ΣY = 117**	**ΣY^2 = 2,821**	**ΣXY = 104,066**

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

$$= \frac{5 \times 104{,}066 - 4{,}222 \times 117}{\sqrt{5 \times 4{,}199{,}004 - (4{,}222)^2}\ \sqrt{5 \times 2{,}821 - (117)^2}}$$

$$= \frac{520{,}330 - 493{,}974}{\sqrt{20{,}995{,}020 - 17{,}825{,}284}\ \sqrt{14{,}105 - 13{,}689}}$$

$$= \frac{26{,}356}{\sqrt{3{,}169{,}736}\ \sqrt{416}}$$

$$= \frac{26{,}356}{1{,}780.38 \times 20.40}$$

$$= \frac{26{,}356}{36{,}312.67}$$

$$= 0.7258$$

Probable Error of Correlation Coefficient PE(r)

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

$$= 0.6745 \times \frac{1 - (0.7258)^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{1 - 0.5268}{2.24}$$

$$= 0.6745 \times \frac{0.4732}{2.24}$$

$$= \frac{0.3192}{2.24}$$

$$= 0.1425$$

And, 6PE(r) = 6 x 0.1425
= 0.8549

Appendix-2

2.1 Calculation of Least Square Trend Value of Total Deposits

Year	X (Year 06/07)	X^2	Nabil		NIBL		HBL	
			Y_1	XY_1	Y_2	XY_2	Y_3	XY_3
2004/05	-2	4	14,586,608,707	-29,173,217,414	14,254,573,663	-28,509,147,326	6,241,378,160	-12,482,756,320
2005/06	-1	1	19,347,399,440	-19,347,399,440	18,927,305,974	-18,927,305,974	8,765,950,638	-8,765,950,638
2006/07	0	0	23,342,285,327	0	24,488,855,696	0	10,068,230,869	0
2007/08	1	1	31,915,047,467	31,915,047,467	34,451,726,191	34,451,726,191	13,084,688,672	13,084,688,672
2008/09	2	4	37,348,255,840	74,696,511,680	46,698,100,065	93,396,200,130	15,579,930,904	31,159,861,808
∑	**0**	**10**	**126,539,596,781**	**58,090,942,293**	**138,820,561,589**	**80,411,473,021**	**53,740,179,243**	**22,995,843,522**

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{126,539,596,781}{5} = 25,307,919,356.20 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{58,090,942,293}{10} = 5,809,094,229.30$$

NIBL

$$a = \frac{\sum Y_2}{N} = \frac{138,820,561,589}{5} = 27,764,112,317.80 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{80,411,473,021}{10} = 8,041,147,302.10$$

HBL

$$a = \frac{\sum Y_3}{N} = \frac{53,740,179,243}{5} = 10,748,035,848.60 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{22,995,843,522}{10} = 2,299,584,352.20$$

2.2 Calculation of Least Square Trend Value of Loan and Advances

Year	X (Year 06/07)	X^2	Nabil		NIBL		HBL	
			Y_1	XY_1	Y_2	XY_2	Y_3	XY_3
2004/05	-2	4	10,946,736,577	-21,893,473,154	10,453,163,997	-20,906,327,994	4,909,355,200	-9,818,710,400
2005/06	-1	1	13,278,782,259	-13,278,782,259	13,178,151,824	-13,178,151,824	6,902,123,944	-6,902,123,944
2006/07	0	0	15,903,023,765	0	17,769,099,903	0	9,128,649,206	0
2007/08	1	1	21,759,460,334	21,759,460,334	27,529,304,736	27,529,304,736	11,465,334,005	11,465,334,005
2008/09	2	4	27,999,012,071	55,998,024,142	36,827,157,409	73,654,314,818	13,915,850,035	27,831,700,070
∑	**0**	**10**	**89,887,015,006**	**42,585,229,063**	**105,756,877,869**	**67,099,139,736**	**46,321,312,390**	**22,576,199,731**

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{89,887,015,006}{5} = 17,977,403,001.20 \qquad b = \frac{\sum XY_1}{\sum X^2} = \frac{42,585,229,063}{10} = 4,258,522,906.30$$

NIBL

$$a = \frac{\sum Y_2}{N} = \frac{105,756,877,869}{5} = 21,151,375,573.80 \qquad b = \frac{\sum XY_2}{\sum X^2} = \frac{67,099,139,736}{10} = 6,709,913,973.60$$

HBL

$$a = \frac{\sum Y_3}{N} = \frac{46,321,312,390}{5} = 9,264,262,478 \qquad b = \frac{\sum XY_3}{\sum X^2} = \frac{22,576,199,731}{10} = 2,257,619,973.10$$

2.3 Calculation of Least Square Trend Value of Performing Assets

Year	X (Year 06/07)	X^2	Nabil		NIBL		HBL	
			Y_1	XY_1	Y_2	XY_2	Y_3	XY_3
2004/05	-2	4	16,084,823,062	-32169646124	14,527,352,705	-29054705410	6,759,959,789	-13519919578
2005/06	-1	1	21,194,342,310	-21,194,342,310	18,851,020,473	-18,851,020,473	9,735,551,571	-9,735,551,571
2006/07	0	0	25,422,865,069	0	24,637,749,890	0	10,891,139,300	0
2007/08	1	1	33,678,383,242	33,678,383,242	34,408,728,361	34,408,728,361	13,936,802,322	13,936,802,322
2008/09	2	4	39,426,705,904	78,853,411,808	44,230,269,109	88,460,538,218	16,941,872,220	33,883,744,440
∑	**0**	**10**	**135,807,119,587**	**59,167,806,616**	**136,655,120,538**	**74,963,540,696**	**58,265,325,202**	**24,565,075,613**

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{135,807,119,587}{5} = 27,161,423,917.40 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{59,167,806,616}{10} = 5,916,780,661.60$$

NIBL

$$a = \frac{\sum Y_2}{N} = \frac{136,655,120,538}{5} = 27,331,024,107.60 \quad b = \frac{\sum XY_2}{\sum X^2} = \frac{74,963,540,696}{10} = 7,496,354,069.60$$

HBL

$$a = \frac{\sum Y_3}{N} = \frac{58,265,325,202}{5} = 11,653,065,040.40 \quad b = \frac{\sum XY_3}{\sum X^2} = \frac{24,565,075,613}{10} = 2,456,507,561.30$$

2.4 Calculation of Least Square Trend Value of Net Worth

Year	X (Year 06/07)	X^2	Nabil		NIBL		HBL	
			Y_1	XY_1	Y_2	XY_2	Y_3	XY_3
2004/05	-2	4	1,656,875,328	-3,313,750,656	1,180,173,000	-2,360,346,000	684,194,000	-1,368,388,000
2005/06	-1	1	1,873,203,264	-1,873,203,264	1,415,440,000	-1,415,440,000	766,462,000	-766,462,000
2006/07	0	0	2,055,115,392	0	1,878,124,000	0	918,496,000	0
2007/08	1	1	2,439,824,640	2,439,824,640	2,686,786,000	2,686,786,000	1,303,427,000	1,303,427,000
2008/09	2	4	3,129,020,280	6,258,040,560	3,907,840,000	7,815,680,000	1,660,254,000	3,320,508,000
∑	**0**	**10**	**11,154,038,904**	**3,510,911,280**	**11,068,363,000**	**6,726,680,000**	**5,332,833,000**	**2,489,085,000**

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{11,154,038,904}{5} = 2,230,807,780.80 \quad b = \frac{\sum XY_1}{\sum X^2} = \frac{3,510,911,280}{10} = 351,091,128$$

NIBL

$$a = \frac{\sum Y_2}{N} = \frac{11,068,363,000}{5} = 2,213,672,600 \qquad b = \frac{\sum XY_2}{\sum X^2} = \frac{6,726,680,000}{10} = 672,668,000$$

HBL

$$a = \frac{\sum Y_3}{N} = \frac{5,332,833,000}{5} = 1,066,566,600 \qquad b = \frac{\sum XY_3}{\sum X^2} = \frac{2,489,085,000}{10} = 248,908,500$$

2.5 Calculation of Least Square Trend Value of Net Profit

Year	X (Year 06/07)	X^2	Nabil		NIBL		HBL	
			Y_1	XY_1	Y_2	XY_2	Y_3	XY_3
2004/05	-2	4	520,114,085	-1040,228,170	232,147,098	-464,294,196	113,755,734	-227,511,468
2005/06	-1	1	635,262,349	-635,262,349	350,536,413	-350,536,413	96,587,674	-96,587,674
2006/07	0	0	673,959,698	0	501,398,852	0	158,475,051	0
2007/08	1	1	746,468,394	746,468,394	696,731,516	696,731,516	243,058,040	243,058,040
2008/09	2	4	1,031,053,098	2,062,106,196	900,619,072	1,801,238,144	317,434,138	634,868,276
∑	**0**	**10**	**3,606,857,624**	**1,133,084,071**	**2,681,432,951**	**1,683,139,051**	**929,310,637**	**553,827,174**

NABIL

$$a = \frac{\sum Y_1}{N} = \frac{3,606,857,624}{5} = 721,371,524.80 \qquad b = \frac{\sum XY_1}{\sum X^2} = \frac{1,133,084,071}{10} = 113,308,407.10$$

NIBL

$$a = \frac{\sum Y_2}{N} = \frac{2,681,432,951}{5} = 536,286,590.20 \qquad b = \frac{\sum XY_2}{\sum X^2} = \frac{1,683,139,051}{10} = 168,313,905.10$$

HBL

$$a = \frac{\sum Y_3}{N} = \frac{929,310,637}{5} = 185,862,127.40 \qquad b = \frac{\sum XY_3}{\sum X^2} = \frac{553,827,174}{10} = 55,382,717.40$$