

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

The prosperity of the country depends upon the economic condition of a country. There are many countries whose economic conditions are very high with high per capita income while there are such countries whose economic condition are very low with low per capita income. These countries are turn to life their economic condition as far as possible; with per capita income of US \$ 300 per annum. Nepal is ranking in the poorest and leas developed countries in the world with nearly half of its population living below the poverty line.

Before 1990's Nepal was economically stabled due to it's internal peace which gives rise to new business and Industries. But this condition going on decreasing due to internal mis-cooperation and unfair environment. The economically stability become affected after 1995 to 2002. Economic condition of the country going on commitment between Maoist and government the economic activities are slightly going on improving. This conditions will be improved more better after the interim constitution election and the political unbalanced will be stopped. The political stability and perfect economic position compelled multinational companies to invest in Nepalese market. For the development of a country the financial sector is a vast field with comprises of banks, co-operatives societies, insurance companies, finance companies security exchange, foreign exchange markets etc. This institutes collects idle and scattered money form general public and finally invest in different sectors of nation economy.

The modern economy demands different types of financial Services. A single Institution cannot fulfill the services demanded by the customers. So, different

types of Banks are emerged in the banking Industry specializing different functional areas. The developing economic market shows the needs of commercial Banking system for those who have surplus to deposit and who needed money to invest. Banking business includes cash deposit, loan provide, remitting money, exchange foreign currency, transaction of letter of credit, providing guarantee to businessmen etc.

Banks occupies quite important role in this modern age as the financial support for the needy people like:- industries trades, business and for the individual. Bank plays vital role in the economic development of the nation and uplift the living standard of the people of the country. Integrated and sustainable development is possible only when competitive banking services reaches each and every remote corner of the nation and people. Due to banking facilities the idle money an scared money change into huge and big which helps to form large capital. Capital formation leads to increased in the size of national input an output, income and employment, problem of Inflation, balance of payment, help to make economy free from the burden of foreign debts etc. It helps to make economy self sustainable. It shows that capital is the backbone for the development of the country. To make country development, the country must have adequate capital. If there is enough capital available, it can be profitable sectors which promotes economic growth and contributes to a nation's Wealth (The World Bank encyclopedia 1966:232).

Due to low income, there is fewer saving. People spend all the money in consumption of daily needs. Thus, people have no idea about the deposits and investment due to lack of income as well as lack of education. To encourage saving, earning must be adjusted firstly. Secondly, bank lends the funds to needy people and Industries to earn profit. All such investment helps to raise a nations

standard of living. Bank can use the amount at right places at the right time through right medium.

Nepal is under developed country. About 38% of total population of Nepal is steeped in absolute poverty line. As a result Nepalese people per capita income is about \$ 300 which is very low. These all because of lack of effective and trained human resources, lack of advance technology and there are others many reasons for it. Through proper plan and strategy, capital and technology we must utilize our internal recourses to uplift economic development. But available resources in our country, investment, technology etc cannot be perfectly supported for this. For economic development financial sectors must be strong. To make financial sectors strong, banks, finance companies, co-operatives etc must be established in each & every places of a country. It shows that financial institution become one of the bases for the measuring of economic development. Recognizing the true facts of developing the country. Nepal cannot ignore the importance of commercial banks. So, Nepal government adopts economy liberalization policy. This policy helps to increase the number of banks and emerged the touch combination of banks. At present there are 24 banks, 79 finance companies, 5 rural development banks, other development banks and other micro finance companies (Feb 21, 2008/11 Gorkhaparta).

The history of Commercial banking is starting after the establishment of Nepal Bank Limited in 1994 B.S. It was the first bank started with organized banking system in Nepal. It performs all the banking transaction of Banks as well as function of central bank before 2013. Later on, Nepal Rastra Bank was established in 2013 to make banking system more scientific, systematic and dynamic during that time. As time passes, the needed of commercial banks are increased. As a result Rastriya Baniija Bank was established in 2022 B.S. It helps to make noticeable progress in the banking and economic sectors of Nepal. NRB has opened to foreign commercial banks to operate in Nepal. As a result Nepal Arab

Bank Ltd newly known as Nabil Bank Ltd was established in 2041 under the Commercial Bank 2031. Then, numbers of banks are increasing day by day. Presently there are 21 commercial banks which are operated now a day.

Today, the banking industry can be compared with the international standard in terms of their functioning and operations and system are operating now a day. As a result Nepalese banks are being awarded a “Bank of the year” from London. This increment includes both challenges and opportunities to commercial banks. The competition level goes on increasing due to increase of commercial banks which have both negative and positive affects.

List of Licensed Commercial Banks

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

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

1.2 Corporate Profile of NIBL

Nepal, Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world.

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

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

-) A group of companies holding 50% of the capital.
-) Rastriya Banijya Bank holding 15% of the Capital.
-) Rastriya Beema Sansthan holding the same percentage.
-) The remaining 20% being hold by the General Public (which means that NIBL is a Company listed on the Nepal Stock Exchange).

We believe that NIBL, which is managed by a team of experience bankers and professionals having proven track record, can offer you're what you're looking for. We are sure that your choice of a bank will be guided among other things by its reliability and professionalism.

1.3 Corporate Profile of HBL

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.

Legacy of Himalayan lives on in an institution that's known through out Nepal for its innovative approaches to merchandising and customer service. Products such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme Besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following our lead by introducing similar products and services. Therefore, we stand for the innovations that we bring about in this country to help our Customers besides modernizing the banking sectors. With the highest deposits base and loan portfolio amongst private sectors banks and extending guarantees to correspondent banks covering exposure of other local banks under our credit standing with foreign correspondent banks, we believe we obviously lead the banking sector of Nepal. The most recent rating of HBL by Bankers' Almanac as country's number 1 Bank easily confirms our claim.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Banks has made substantial investment. This has helped the Bank provide services like 'Any Branch Banking Facility', Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new product and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Customer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services. HBL also has a

dedicated offsite 'Disaster Recovery Management System'. Looking at the number of Nepalese workers abroad and their need for normal money transfer channel; HBL has developed exclusive and proprietary online money transfer software – Himal Remit TM. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customer's needs and wants stand first.

1.4 Focus of the Study

For the rapid development of the economy there should be proper utilization of resources. To mobilize the resources, the banking sectors plays a vital role on collecting and utilizing of Idle and small scattered saving of the people. But the interest rate is being decreased due to high idle money in the bank which main reasons is internal conflict of Nepal.

This study is mainly focused on the optimum portfolio between deposits and investment practices of NIBL compare to HBL. It is focus on the problems of deposit collection, deposit mobilization and proper utilization of NIBL. It consist market hare of NIBL interims of deposits, deposits and investment growth rate of NIBL. Deposit mix of NIBL and investment areas of NIBL. It deals with efficiency of NIBL & economic development of the country by making a survey of deposit and credit of NIBL compare with NBL. Our main focus of the study is whether NIBL is able to utilize the scattered resources and efficiently mobilizing them. This study also focuses on investment problems their management, their remedies and developing the new investment area and sectors, which can again boost the Nepalese economy.

1.5. Objectives of the Study

The primary objective of this study is to develop an action plan and overall strategy for managing the deposits and investment of NIBL & HBL comparatively. It's main objectives of the study is to find out the ways of utilizing surplus deposits funds. It also examines relationship between total deposit and total investment of NIBL and HBL.com.

The specific objectives of the study can be illustrated below:-

-) To examine and analyze the various deposits services offered by NIBL & HBL.
-) To analyze the investment position.
-) To study the strength and flows for the existing deposits policy and relationships of deposits and investment of NIBL & HBL.
-) Identification of various interest rates.
-) To analyze the deposit fund position of these tow Banks (NIBL & HBL).
-) To provide suggestion for the improvement on the basis of findings.

1.6 Statement of Problem

The numbers of commercial banks are being established in response to the economic liberalization policies of the government. But these institutions have centralized in major cities focusing the activities among the industrialists, traders and entrepreneurs. More than 50% of people lived in village or rural area where they are not familiar with banking services. Banks have been facing the considerable pressure to lower the lending rates, which affects the profitability adversely. The commercial banks are competing for limited opportunities narrow clientele base etc. There are hardly any other opportunities available for short term investment. Due to high disturbances in business market of Nepal the internal rate ore fluctuated at a higher rate. These are great problems that banks are facing now a day. So, they are investing only those opportunities which the collaterals are

valued high by misusing the personal relation with banks employee in turns makes bank's loan unsecured. Repayment of loan is very low due to lack of strict law and regulation.

The level of liquidity is rising rapidly which means huge amount is idle and return is very low as a result the banks provide low interest rate to its depositors. As a result banks provide loan on customer services like hire purchase, making building etc. While taking loan the legal procedures are being long as well as unsatisfactory. Centralized banking, limited investment legal environment etc are facing by commercial banks now a day.

1.7 Scope of the Study

Simply, the study is important to know how banks are utilizing their deposits. The study helps to know deposit collection and its investment performance of these two banks (i.e. NIBL and HBL). It is important to policy makers and academic professionals to formulate policies and plans on the basis of performances of the bank. It is important to comparatively study of future plan of these two banks. It is important of the investors, customers loan takers, competitions, personnel of the banks, dealer market to take various decision. It includes deposit collection and investment practices of NIBL & HBL. So, it helps to reveal the financial position of these banks. It also helps to forecast the trends and formulate policies and strategies of these banks. It identifies the area where changes and improvement to complete in the market. Significance to student and various groups those having interested in banking sectors. This study will help to increase the knowledge regarding deposit and investment practices of NIBL & HBL.

1.8 Limitations of the Study

Most of the part of the study is based on the secondary data, so it may contain reporting errors. Only tow commercial banks are analyzed as examples in the

study Nepal IBL & HBL. It covers past & present state of commercial bank in Nepal & it does not have any projection about the future. The data and information are very limited for the study. The main limitations are time constraint, limited data, lack of research experience and lack of recent information. It includes the deposit sector i.e. current, saving and fixed deposit and its investment on various sectors are examined. It is concerned only deposit collection & investment of NIBL & HBL comparatively. The study done for the five year period of time i.e. from FY 2060 – 2065, therefore a complete analysis is not possible.

1.9. Organization of the Study

The whole study is mainly divided into five different chapters:

Chapter I Introduction

Chapter II Review of Literature

Chapter III Research methodology

Chapter IV Presentation and analysis of data

Chapter V Summary of findings, conclusion and Recommendation

Chapter I is the introduction chapter. It includes Background of the study, Focus of the study, Statement of problem, objectives of the study, significance/ importance of the study and importance of the study.

Chapter II deals with review of literatures, which includes Conceptual/theoretical review, and Review of related studies.

Chapter III is Research methodology which includes Research design, population and sample sources of data, data collection technique and data analysis tools.

Chapter IV deals with the various analysis and interpretations of data like, analysis of sources and uses of fund of commercial banks, analysis of deposits, loan &

advances and investments of NIBL, analysis of deposit, loan & advances of NIBL with HBL, Financial and statistical analysis and analysis of primary data. It also shows major findings of the study.

Chapter V includes summary and conclusions of the study. It also deals with recommendation suggested.

The list of Bibliography and Appendices are given at the last of references.

CHAPTER II

REVIEW OF LITERATURE

Simply, review of literature means to re-view the past experience or experiments or research done by researchers. Under this topic the past researchers thesis, articles, books, newspaper etc are reviewed past experiences or researchers will help us to collect important knowledge o information to support the research. Research can not be can deduce by sole idea. The review of literature provides the foundation for developing a comprehensive theoretical framework form which hypothesis can be developed for tasting. The literature survey also minimizes the risk of perusing the dead ends in research. The main purpose of reviewing the literature is to develop some expertise in one's are to see what new contributions can be made and to receive some ideas for developing a research design.

In this section review of literature to know what other has done related to deposit and investment practices. Only the relevant literatures have been reviewed. Every possible effort has been made to grab the knowledge and information that is available. This chapter helps to take adequate feedback top broaden the information bas and inputs to my study. It includes the review of previous studies, articles or other related studies to present the real frame work of the study. Analyzing and presenting this chapter under following sub-chapter:-

1. Conceptual / Theoretical / Review
2. Review of related studies.

Conceptual / Theoretical / Review

Under this heading the concept of bank and banking transactions are describes

2.1 Concept of Bank

The word “Bank” is derived from Italian word “BANCA” which means a bench for money changer so, such business was given a name “BANCO” and from this name the word “bank” has been derived. Before the middle ages a few knowledge of banking was known. There is no unanimity among the economists about the origin of the bank.

Simply an institution established by law which deals with money and credit is called Bank. An institution involved in monetary transaction is called Bank. It has a significant role in the development of the country. It facilitates the growth of trade and industry of national economy. A bank is a business organization that receives and holds deposits of funds from others and makes loans or credits and transfers funds by written order of depositors. Bank is that development of trade, commerce, industry which are the prime requirements for the achievement of economic, social and political goals of any country.

2.2 History of Banking in Nepal

The history of banking in Nepal is only 60 years during the Lichchhavi period; “Gosthies” was established under the permission of Royal order. During the Malla period “Tankadhari” to deal in depositing and tending of money and ornaments was established. “The Badha”, who still work in lending and depositing the ornaments, was also prevalent at that period. During the period of King Ram Saha, the need of an organized banking system was felt. As a result the government institutionalized credit houses for the first time known as “Tejarath aada” during the tenure of the Prime Minister Ranoddip Singh.

But true organized banking started was started after the establishment of Nepal Bank Ltd. On Kartik 1994 B.S. as the first commercial bank under Nepalese Banking Law and Nepal Bank Act in B.S. 1994 which was formulated by Nepal

Industrial Board. It is acts as central & commercial Bank. In 2013 B.S. Nepal Rastra Bank was established as the central bank of the bank under direct Nepal Rastra Bank act 2013 B.S and its aim to supervise currency and develop the banking institution in Nepal. Then, Rastriya Banijya Bank was established in 2022 B.S. under Rastriya Banijya Bank Act 2021. Then, Nepal Rastra Bank adopted Liberal policy. Joint Venture Bank was then established collaboration with Nepalese people. As a result Nepal Arab Bank (Nabil Bank Ltd.), the first joint venture bank form private sector is established and recently there are 25 Commercial Bank in Nepal. They are:- NBL, RBB, ADB, NABIL Bank, NIBL, NBBL, SCBNL, HBL Nepal, Siddhartha Bank, Sunrise Bank, Global Bank, Citizen Bank, Bank of Asia, Prime Bank and MBL.

2.3 Concept of Commercial Bank

In general, commercial bank are that financial institutions, which deals in accepting deposits and providing loan against securities. C.B. also provide technical and administrative assistance to trade, industries an business enterprises. Commercial Banks are those banks that pool together the saving of people and industries and arrange for their productive use. Commercial banks are restricted to invest their funds in corporate securities. Apart form financing, they also render services like collection of bills and cheques, safe keeping of values financial advising etc. a commercial banks is one which exchanges money, accepts deposits, grant loans and performs commercial banking functions. They also purchase and discount bills of exchange, promissory notes, exchange foreign currency etc.

Central bank is the bank of the bank. So it directs and controls all the banks whose existence is in the country. In Nepal, Nepal Rastra Bank is the central bank of the country. All the commercial bank performs their functions under rules, regulation and the directives provided by the Nepal Rastra Bank. Commercial bank act as a link between are the institutions which help to utilize national resources i.e.

financial resources, human resources and natural resources in the best possible manner by encouraging and initiating these resources to be utilized. On the one hand it solves the problem of unemployment and on the other hand it utilizes the best possible manner for the economic development.

Like as other developing country, Nepal has been facing the problem of acceleration the pace of economic development. It shows that the role of Central Bank in the country is crucial. The Central Bank system is still in its infant stage. But its importance has been fully realized and these banks are being oriented towards the best suited for the overall economic development. Industrial, Agricultural, trade and commercial sector of Nepal are still in a stage of infancy. It depends upon the effectiveness of the C.B. Inadequacy of capital for the establishment of modern industries has become a serious problem of the economic development of Nepal. Many economic problems such as inflation, evaluation of money trade, trade deficit, budget deficit etc are the major economic barriers in our country. The improvement of the operation of commercial banks and the future of country is greatly determined by the active role played by the commercial banks.

2.4 Function of Commercial Banks

Commercial banks are most important type of financial institutions of the nation. Traditional functions of commercial banks are only concerned with acceptance deposits and providing loan. But modern banks work for overall development of trade, commerce, services and agriculture. The banking is expanding with quality and quantity. Recent innovation in banking include credit cards, POS services, lock box banking, factor leasing locker, SMS banking, e-banking etc. the main mission of commercial banking is mobilization saving is making investments of the development of a country. In a country like Nepal, the role of commercial bank is unmeasurable. Thus the function of banks can be described below:

-) Commercial bank accepts the deposits from the public or institution which have surplus funds. Mainly there are current, saving and fixed account in which bank accept deposit. Bank provides certain percentage of interest who deposit on the bank.
-) Commercial banks provide loan to needy people, company and institution against security. Bank grant loans in the form of overdraft, credit loan, and short term loan, long term loan etc.
-) A bank performs number of services on behalf of the customers. The following services rendering by the bank:-
- Dealing with foreign exchange business
 - Serving as an agent or middle man.
 - Issue letter of credit, bank's notes, travelers cheques etc.
 - Purchase and sales of securities, remit money etc.
 - Locker facility, SMS banking, e-banking etc.
 - Bank guarantee in foreign business
-) Commercial banks create credit. To earn profit Bank invests its money on various sectors. It grant loan to costumer.

Modern banking includes other different function which banks are providing now a day. We can pay telephone bills, electricity bills with the help of banks, hire purchase, ATM facilities, Debts cards, credit cards etc. are modern banking function which are getting form C.B. now a days. Thus commercial banking functions are expanding days by day due to development of technology and people's demand.

2.5 Concept of Investment

Banks are such type of institutions which deals with money. Bank is the good circulation of credit fluctuate flow of credit and decisions harm the whole economy and het banks as well. To collect fund effectively and its well utilization is the vey challenging task for the banks. The decision of an investment of fund may be the question of life and death for the bank. Thus investment is the most vast and different is the most vast and different parts of banking system.

In general sense, investment means to lend money on productive sectors. It is very short incomplete means of investment. Investment means to trade or lend money for the expected stream of payment of benefits that will exceed the current outlay by an amount that will compensate the investor for the time. The funds are committed of the expected changes in prices during the period and for the uncertainty involved in expected future cash flow. So, investment is the most important function of C.B. It is the long term commitment. It is very challenging task for C.B. So, bank has to be very cautions while investing their funds in various sections.

According to Jack Clark Fracis, “An Investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk, it requires a present certain sacrifice for a future uncertain benefit”.

According to James B Bexley, “An Investment policy fixes responsibilities for the investment disposition of the banks assets in terms of allocating funds for investment and loan and establishing for day to day management of the those assets”.

2.6 Concept of Deposit

In general sense, deposit means the amount deposit in current, saving an fixed account of a bank. People, businessmen, the industrialist and other individuals and

institutions can deposit money in the Bank. Such amount is the main sources of capital of the C.B. Bank advance such amount as loan and investment in various sectors to earn profits. The deposit policy is the essential policy for its existence. The growth of banks depends primarily upon the growth of its deposits. Usually bank accepts three types of deposits. They are currently saving and fixed deposits. Therefore, accepting deposits by bank is the oldest functions of banks. People deposit money for different for different period of time. The interest rate is varied according to the time. The money borrows for longer period certainly bear high interest & Vice versa.

A bank accepts deposits in three forms:-

-) Current Account:
-) Saving Account
-) Fixed period A/c or Fixed account

2.7 Review of Articles:-

Many Resources has analyzed under this heading. Efforts has been made to examine and review some of the related articles published in different economic journals, bulletin, dissertation, papers, magazines, newspaper and other related books.

Mr. Krishna Bahadur Manandhar has presented a short glimpse on Investment, Monetary policy, Deposit mobilization and increasement of banking sectors published by National newspapers. The Gorkhapatra dated September 11 2008. His stressed that as a central banker he was very happy towards deposit and its mobilization rate of commercial Banks. He added commercial Banks has increased its deposits up to 432 Arab 52 Crores which was 51% of Gross Domestic Product (GDP). Banking sectors with deposit and its mobilization are increase which directly impact on financial markets of Nepal. He added beside

these factors, the liquidity level of Commercial Banks is also in satisfactory level. As a result, establishment of financial sector are in creasing day by day which is positive sign of economic development in the country.

Mr. Sujit Mundal, CEO, of Standard Chartered Bank Nepal Ltd. In his articles, “It is profit or wealth maximization” published in New Business Age September 2006, 30, he explained capital market allocated through saving. As the principle of maximization of shareholder’s wealth provides a rationale of guide of running a business and for the efficient allocation of resources in society we use it as our assumed objectives considering low financial decisions should be made. The purpose of capital market is to allocate saving efficiently into an economy form ultimate savers to ultimate users of fund who invests in real assets. If saving is to channel to the most promising investment opportunity a rational economic criterion must govern their flow. By and large the allocation of savings in an economy occurs on the basis of expected risk & return. A company will attract capital only when its investment opportunities justify the use of that capital in the overall economy.

Low rate of interest affects negatively in saving mobilization, flexibility of capital, effective utilization of capital resources, and high interest rate affects investment.

Less spread shows the ability of financial institutions. But it is necessary to keep appropriate spread level for financial instructions to maintain them qualifies in this sector.

In Rameshwori Pant’s view in her articles that management of internal loan affected by the interest rate directly. Interest rate structure helps government to take decision regarding loans. It also decides about the level of investment, which can invest by the investors. In the case of perfect money and capital market

interest rate declared by the supply of money, which can be invest, and its demand from private sector to government sector. But in developing countries interest rate must be higher because of government's high demand for capital (Rameshwori Pant, Management of interest loan and economic stability, (RRB Samachar, Baishak 14, 2054).

Dr. Manohar K. Shrestha mentioned that, “ The main point to the considered in interest rate reform is that such change in interest rate provides a fair distribution of fixed deposits according to their length and amount. This kind of information, if extended to other items, would be a good bare for analysis of banks liquidity. Although the relief that high interest rate tends to avoid capital flights to India, yet the actual fact is that increases in interest rate of government securities has compelled banks to raise interest rate on deposits and there by making lending to productive sectors costly. Thus, it is advisable to lower interest on government securities enjoying tax advantage to that there will be better effect on deposit and lending rates” (Dr. Manohar K. Shrestha, Commercial Banks comparative performance evaluation, Kosh July October 1990).

Mr. Ruby Joshi, the chief officer of Nepal Rastra Bank States that the ability to save and incentives to save are the tow major determinants of savings. The incentives to save, as reflected in Nepal Rastra Banks real interest rate policy can be structured for with profit. It is highly probable that further increase in the growth rte of financials savings can materialize it a flexible policy is pursued to keep real interest rate at a positive level. But eventually deposit expansion is to be bounded constrained by the low saving ability of the people as indicated by stagnant per capital GCP over the post decode. For a sustained growth of deposits or of overall saving rate what is needed more is to increase their income level of the people in order therefore to make saving mobilization strategy effective and successful po0licy measures should be taken considering two aspects of the

strategy. In short run, policy should focus on the appropriate steps to tap savings with in the existing banking framework while the long run measures should be adopted with a view to raise the investment rate and making it more productive.

Mr. Bhagat Bista, in his research paper, “Nepalma Adhunik Banking Byabastha” has made an attempt to highlight some of the important indicators, which have contributed to the efficiency and performance of joint venture banks in the field of commercial banks. He has concluded that the establishment of joint venture banks a decade ago marks beginning of modern banking era in Nepal. The joint venture banks have brought in many new banking techniques such as computerization, hypothecation, consortium finance and modern fee based activities into the economy. These are indeed significant milestones in the financial development process to the economy. (Bista, 1991).

H. Robert Heller mentioned, “Capital markets may be analyzed in terms of the supply of and demand for loan able funds. As higher interest rates are offered, people will forego present consumption and offer their funds in capital markets, leading to an upward sloping supply of loan able funds curve. The quantity of loan able funds (LF) demanded increases as the process of capital in the form of interest to be paid falls, resulting in a downward sloping demand for loan able funds. (H. Robert Heller, 1977, International Monetary Economics)

According to H.D. Crosse “When funds are plentiful, market rate generally tends to decline, banks seek loan more aggressively, and therefore lower their rates induce marginal borrower to come into the market. When funds are scarce, banks raise their rates and some potential borrowers may differ the use of credit or seek it elsewhere.”

2.8 Review of Different Thesis

The Thesis conducted by Roy on entitled “An Investment analysis of Rastriya Banijya bank” has tried to analyze relationship of loan and advances and total investments with total deposits and to compare it with that of Nepal Banijya Bank and to compare loan and advance, total investment, total deposit and net profit of Rastriya Banijya Bank and compare it with of Nepal Bank Ltd. That study was based on secondary data covering 5 year from FY 1992/93 to 1996/97. The research used most of financial tools and co-efficient of co-relation, multiple regression analysis, least square, standard deviation and co-efficient of variation (C.V) as statistical tools.

The writer has found that Rastriya Banijya Bank has good deposit collection, loan and advances and small investment in government securities. It's also found that profitability position of Rastriya Banijya Bank is worth Rastriya Banijya Bank needs immediate steps to increase its profitability. It also further found that RBB has more low quality of loan and advances.

The researcher has recommended that RBB should enhance its investment in securities. Small amount investment in securities of good company brings better income that large amount investment in securities of worse companies. So, RBB need to conduct proper pre-analysis before such investment. He also recommended that RBB should decrease loan loss by decreasing its poor quality of loan and advances. It needs to revise credit collection policy. He further suggested that RBB decreases interest expenses an unnecessary fixed assets expense and administration expenses should be controlled. Moreover RBB should enhance it off balance sheet operation, remittance in order to increase its earnings.

This thesis conducted by Chandra Shahi entitled, “A case study of deposit collected and interest rate provided by NBL” with the objectives. As such the study discusses here about NBL and among its various deposits accounts, current

deposit account, fixed deposits account and saving deposit account has been discusses. The bank has accumulated idle saving form different reasons of the country and deposited them under various accounts providing certain rate of interest. So as to mobilized them for the promotion of different sector of the country like agriculture, industry and trade etc.

The main objectives of the study are the deposit collected and interest rate provided by NBL with the help of collected data. To achieve the above objectives, the specific objectives are generated.

-) To show the deposit of the bank
-) To show the different interest rate of the deposit
-) To show the impact of the fluctuation on interest rate of deposit collected by the NBL
-) To show the present status and progress of the bank

The study conducted by Prajun Shrestha 2000/02 entitled. “Comparative analysis of financial performance of the selected commercial bank”. The main objectives of the Mr. Prajun Shrestha was to compare financial performance of selected commercial bank of Nepal at macro level. So, with the help of descriptive con analytical research design the study was completed and the executive summary of the story is listed below:-

The operating profit of SCBNL was found to be in highest position through out the reviewed period, followed by NABIL in second position.

NBBL had highest return on shareholders fund, followed by SCBNL.

Nabil had the highest shareholder fund, followed by SCBNL

Uttam Raj Pant, in his thesis paper. "A study of commercial banks deposits and its utilization; has made an attempt to highlight the discrepancy between research collection and resource collection and its utilization. He concluded that commercial bank failure in resource utilization is due to their leading confined for short term only. So, he recommended that, commercial banks should give emphasis also earn long term leading for better utilization of the deposits.

Rameshwori Pandey mentioned in her Thesis that is about the study of money supply, level prices and interest rate structure, that interest rate is a main link between money supply and the price level. As the prices of commodities cannot remain constant so as the interest or price of saving so is a subject to change. The main factors that include the interest rate structure of Nepal are the demand and supply of credit, money supply, price level, balance of trade rise and fall off agricultural production etc.

Mr. Kishor K.C. traced in his thesis that the liquidity of interest rate highly affects the deposit and lending position. The relation of interest rate and deposits shows that interest elasticity is greater than unity. If the rate of interest increases in deposits, then the time deposit increases in greater level. In the same way credit is related with the loan rate of interest. It is known that the relationship between loan rates of interest and credit flows negative, if the loan rate is high the credit flow decreases and if the loan rate is low the credit flow increases. So, deposits and loan depend upon the interest rate. It is one of the important factors, which determines the deposit and loan amount. If interest rate only taken by keeping other variable constant we will get that the institutional rate is the important explanatory variable to influence the volume of deposits in Nepal.

Mr. Nerendra Bahadur Rajbhandari viewed that "Interest rate policy deserve a vital role in the management of bank funds. It is the best tool to mobilize savings and

channelize them to desired channels. It is possible because the interest rates are sensitive to changes in deposits and credit occurs only due to the change in interest rates. There are many other variables to affects the volume of deposits and credits of the banks. The inflation rate, the trade condition, the policy legs of State Corporation, a seasonal variations in some loans, the monopoly of banks, the non-development of money markets, the lending policy of the banks, the tax rate, the margin rate and so on may affect the policy on interest rate as well as the credit deposit operation of the banks.”

The following NRB’s directives relating to interest rate were issued for the commercial banks effectives form February 14, 2001.
Written from regularly and compulsory, and publish in the new media within every three moths and immediately in case change.

The commercial banks could offer interest rate more than published interest rate by 50 basic points on the basis of negotiation with the customers for the deposits of two hundred million and 100 basis points for the deposits more than Rs. two hundred million.

Over the published lending rates for all types of loans, the banks couldn’t make the adjustment up to 50 basis points on the basis of negotiation with the customer.

While publishing any deposits rates or any lending rates except the provision on above (b) and (c), the commercial banks were not allowed to mention the term “could be determine on the basis of negotiations.” If interest rates are determined against these directives, penalty equivalent to an amount arising, such increased or lowered rate of interest should be imposed.

The difference between the interest provided and interest charged (Spread rate) should not be more than 5%. The difference is calculated on the basis of the weighted interest provided and the weighted interest charged.

N.M. Pradhan, in his thesis paper, "A study on investment policy of Nepal Arab bank Ltd. Has emphasized that there is a greater relationship between deposits and loan and advances. In his six year period study i.e. from 1972 to 1977, he concluded that though loan and advances as well as deposits are in increasing trend, their increase is not in a proportionate manner. His recommendation was to grant loan and advances without its lengthy process. He has suggested enhancing banking transaction up to rural of the sector of the kingdom.

Mrs. Ramala Bhattarai in her thesis paper entitled, "Leading Policy of Commercial Banks in Nepal. "She has concluded that efficient utilization of resources is more important than collection of the same. Lower investment means lower capital.

Mrs. Shiba Raj Laudhari in his study " A Study on investment policy of Nepal Indosuez bank ltd. (NIBL) I comparison to Nepal SBI bank ltd." Concluded, NIBL has maintained both current ratio and cash reserve ratio better than NSBI. But its cash and bank Balance, investment on government securities and loan and advance in comparison to current assets are lower than that of NSBI. He also found that deposit utilization of NIBL is less effective than NSBI. Further, NSBI has invested lesser amount on government securities and shares and debenture than that of NSBI.NIBL did, not only a better performance but (i) in return on total assets and loan and advance, and (ii) interest earning it paid lower interest amount to working fund. And the growth ratios of total deposit loan and advance total investment and net profit of NIBL is less than that of NSBI.

Mr. Laudhari recommended to NIBL to pay proper insights towards cash reserved ratio to make it stronger and to mobilize the excessive fund in a profitable sector. It has to put out hand investing on government securities because they have low return and search for more profitability sector. NIBL is highly recommended to synchronize between deposit collection and investment even though they are investing in different activities NIBL id to be more liberal in providing the loan and advance and get the better result. Further the large the covered area the stronger the portfolio and the bigger the amount of advance become (Ladhari, 2001).

M/s. Thapa, on her study, “A comparative study on investment policy of Nepal Bangladesh Bank Limited and other joint venture banks shows the major objective were to evaluate the liquidity, assets management efficiency, profitability and risk position of NB Bank in comparison to NABIL and NGBL, to analyze the relationship between loan and advances and total investment with other financial variables of sample banks. To examine the fund mobilization and investment policy of NB Bank through off-balance sheet and on-balance sheet activities in comparison to the other two banks. To study the various risk in investment and to analyze the deposit utilization trend and its projection for improving the investment policy of NB bank on the basis of the finding of the analysis.

M/s Thapa has found that the liquidity position of NB bank is comparatively better than that of NABIL and NGBL. It has the highest cash and bank balance to total deposit, cash and bank balance to current assets ratio. It has good deposit collection, is has made enough loan and advances and total investment with respect to growth rate of total deposit and net profit of sample banks. To evaluate trend of deposit utilization toward total investment and loan and advances and its projection for five years. To perform empirical study on the customers’ views and ideas regarding the existing services and adopted investment policy of the joint

venture banks and to provide suggestions and recommendation on the basis of the study.

Mr. Tuladhar on his study found that on the basis of primary data concludes on a well-known fact that most of part of nation is surrounded by the rural areas; it is quite hard to think about the development of the country without spreading banking facilities among these areas. Further, on the basis of secondary data, the liquidity ration of NGBL has maintained successful in its on-balance sheet operation. But in the case of off-balance sheet operation, NGBL is advance than NABIL and HBL. It predicts that NGBL has successfully maintained and managed its assets towards different income generating activities. He further explain, that in the case of profitability ratio NGBL is in higher profitability position than NABIL and HBL as well as it provide interest to the customers for different activities is highly consistent. The growth ratio of net profit of NGBL seemed to be more satisfactory than NABIL but in the case of HBL is seemed to be very high. Mr. Tuladhar further found that in the case of significance difference on loan and advances to total deposit ratio, total investment to total deposit ratio, mean ratio, mean of total OBS operation to loan and advanced ratios, means of investment on government securities to current ratios, means of loan and advance to total deposits ratio in between NGBL with NABIL and HBL respectively. But there is no significant difference of mean of total interest earned to total outside assets was found in between NGBL with NABIL and HBL respectively. In the case of coefficient of correlation, there is negative correlation between NGBL and NABIL but positive correlation between NGBL and HBL in respect to deposit and total investments. In case of loan & advances to total deposit ratios increasing trends are found for NGBL and NABIL. But in case of HBL, it is decreasing trend. And in case of total investment to total deposit ratios both NGBL and NABIL used to ignore investment, as trend seemed to be decreasing (Tuladhar, 2000).

2.9 Research Gap

There is a certain gap bet the present research and the past research. Previous research can due fed generally on comparative financial analysis of two banks in some cases, there was also found the comparative financial analysis of maximum of four banks without any ranting criteria. These analyses expresses all, items in the statement in the form of amount the previous researches did not disc lose the practical comparative analysis which is practiced by the commercial banks. Thus to full fill this gap the present research is conducted. It covers top two is from the sides of deposit and loan. This analysis is based on expressing all items in the statement as a percentage. It is modern approach to evaluate to performance analysis.

Most impartment point to remember about performance analysis is that every financial measure should be compacted across time and across over same line of companies to be meaningful. Bank as a service organization, only few financial ratios would be sufficient to compare the performance however different sources and different analysis use different lines or combination of financial ratio analysis prior research analysis. 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 approaches to financial analysis in which comparable group approach and include consideration of economic and strategic factors where feasible. Those the research will be an interest to a wide range of it's stale holders and other govt. regulatory interests. This may be probably the first effect to performance devaluation of top two commercial banks in systematic manner.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

In this lesson, the method techniques and mathematical tools used on the study will be described. In the last two chapters, background of the commercial JVB's has already been streamlined and reviews of literature with possible reviews of relevant ideas, theories and finding have also been discovered. As a result, researcher felt very comfortable to come to the choices of research methodology. "Research methodology refers to the various sequential step to adopt by studying a by a researcher in studying a problem with certain objectives in view."

In other words, research methodology describes the method and proves applied in the entire aspect of the study. This study basically helps to conclude the deposit and investment problems position of NIBL and NBL the leading banks of Nepal and recommended the useful and meaningful points, so that all concerned can achieve something form this study. To accomplish the goal the study follows the research methodology described in this chapter.

3.2 Research Design

This study is combination of both historical and descriptive research in that it has worked on past data and descriptive findings as well. It has gathered individuals' independents points of view regarding return on deposit and common stocks. Their opinions are summarized collectively. Besides, the relations and variations among the returns on deposit and common stocks of the sample banks and finance companies are tried to explore. A trend in deposit collection by banks and finance companies is found \out along with all these risks borne by the companies under consideration is compared with at risk of the market. "A research design is the arrangement of condition for collection and analysis of data in manner that aims to

combine relevance to the research purpose with economy in procedure”. Research design is the plan, structure and strategy of investigation conceived so as to obtain to research question and to control variances. It is the arrangement of condition for collection and analysis of data. To achieve the objectives of the study, descriptive and analytical research design has been used. Some financial and statistical tools have applied to examine facts and descriptive techniques have been adopted to evaluate deposits and Investment of NIBL and HBL.

3.3 Population and Sample

Only those banks are finance companies with have issued shares to public and listed in NPSE are chosen. These institutions are in operation for more than five years. This study companies two commercial banks.

The population is as follows:

List of Licensed Commercial Banks

| S.N. | Commercial Banks |
|------|----------------------------------|
| 1. | Nepal Bank Ltd. |
| 2. | Rastriya Banijya Bank |
| 3. | Nabil Bank |
| 4. | Nepal Investment Bank Ltd. |
| 5. | Standard Chartered Bank |
| 6. | Himalayan Bank Ltd. |
| 7. | Nepal Bangladesh Bank |
| 8. | Nepal SBI Bank Ltd. |
| 9. | Everest Bank Ltd. |
| 10. | Bank of Kathmandu Ltd. |
| 11. | Nepal Credit and Commercial Bank |
| 12. | Lumbini Bank Ltd. |

| | |
|-----|---|
| 13. | Nepal Industrial and Commercial Bank Ltd. |
| 14 | Machhapuchhre Bank Ltd. |
| 15. | Kumari Bank Ltd |
| 16. | Laxmi Bank Ltd. |
| 17. | Siddhartha Bank Ltd |
| 18 | Agricultural Development Bank Ltd. |
| 19 | Global Bank Ltd. |
| 20 | Citizen Bank Ltd. |
| 21 | Prime Bank Ltd. |
| 22 | Sunrise Bank Ltd. |
| 23 | Bank of Asia Nepal Ltd. |
| 24 | NMB Bank Ltd. |
| 25 | Development Credit Bank Ltd. |

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

The sample to be selected calculated industry averages are as follows

- a. Nepal Investment Bank Limited
- b. Himalayan Bank Limited

3.4 Sources of Data

This study is conducted on the basis of primary and secondary data. The data relating to the investment, deposit, loan & advances and profit are directly obtained from the balance sheet and profit and loss account of concerned banks annual reports, supplementary data and information are collect form number of institutions and regulating authorities like Nepal Rastra Bank, Security exchange board, Nepal Stock Exchange Ltd, Ministry of Finance, Budget speech of different fiscal years, commission. All the secondary data complied processed and tabulated in the time series as per the need and objective. In other judge the reliability of

data provided by the banks and other sources, they were complied with the annual reports of auditors. Formal and informal talks to the concerned data of the departments of the banks were also helpful to obtain the additional information of the related problem. Similarly various data and information are collected from the economic journals, periodicals, bulletins, magazines and other published and unpublished reports and documents from various sectors. This study is based on data of years. The concerned banks and finances companies have provided the interest rates offered by them. At the same time the websites of those institutions were surfed to get the required data. The pages annual reports and minutes of the sample institutions are also turned over to know the dividend offered and totals deposits collected each year. Besides these secondary data, for primary information like opinions of individuals, questionnaires were prepared and distributed to various persons who fit into the above category. Thus, the study is based on both primary and secondary data.

3.5 Data Analysis and Tools

This study focuses on the relation between the return on common stocks and its market price as well as deposit interest rate and investment practices adopted basically by Nepal Investment Bank and Himalayan Bank Ltd. The trend of deposit collection rates of banks and finance companies is proved by the time series methods. The variations and comparisons are tested by T-test, F-test and Anova Table. Because of limited time and resources, simple analytical statistical tool such as graph, percentage Karl Pearson's coefficient of correlation and the method of least square are adopted in this study. Similarly, some strong accounting tools such as ratio analytical also have been used for financial analysis. The various evaluated results obtained through financial, accounting and statistical tools are tabulated under different headings. Then they are compared with each other to interpret the result.

3.6.1 Financial

Ratio Analysis

Ratio analysis is the calculation and interpretation of financial ratio to assets the firm's performance and status. It is the relationship between two accounting figures expressed in mathematically.

“Ratio analysis is the main tool financial statement analysis .Ratio means the numerical of quantities relationship between numbers”.

Financial ratio is the mathematically relationship between two accounting figures. “Ratio analysis is used to compare a firm' financial and status that firms of to itself overtime”. From the help of ratio analysis the quantities judgment can be done regarding financial performance of a firm.

A. Liquidity Ratio

The ability of a firm to meet obligation in the short – term is known as liquidity. It is measured by the speed with which a bank's assets can be converted in to cash to meet deposit withdrawals and other current obligations. There are various ratios liquidity ratio, which are calculated as follows:

i) Cash ratio bank balance to total deposit ratio

Cash ratio is computed by dividing cash and bank balance by total deposit. This can be stated as:

$$\frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

Cash and bank balance includes cash on hand, foreign cash on hand cheque and other cash items, balance with domestic bank and balance held aboard. The total

deposit consists of current deposit, saving deposit, fixed deposits, money at call and short notice and other deposits.

iii. Investment on Government Securities to Current Assets

Investment on Government securities includes treasury bills, development bonds, saving bonds etc. This ratio can be computed by dividing investment on government securities by current assets. This can be stated as:

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

iv. Loan and Advances to Current Assets

This ratio can be computed by dividing loans and advances by current assets. This can be mentioned as:

$$\frac{\text{Loan and Advance}}{\text{Current Assets}}$$

This numerator consists of loan, advances, cash credit, local and foreign bills purchased and discounted.

B. Assets Management Ratio (Activity Ratio)

This ratio measures how efficiently the bank managers the resources as its command. The following ratios used under this assets management ratio.

i. Total Investment to Total Deposit Ratio

This ratio can be calculated by dividing total investment by total deposit, it can be mentioned as:

$$\frac{\text{Total Investment}}{\text{Total Deposit}}$$

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

ii. Loan and Advances to Total Working Fund

This ratio is calculated by dividing loan and advances by total working fund. This ratio can be stated as:

$$\frac{\text{Loan and Advances}}{\text{Total Deposit}}$$

iii. Loan and Advances to Total Working Fund

This ratio is calculated by dividing loan and advances by total working fund. This can be stated as:

$$\frac{\text{Loan and Advances}}{\text{Total Working Funds}}$$

The denominator includes all assets of On-balance sheet items, In other word, this includes current assets, net fixed assets, loan for development banks and other miscellaneous assets but excludes Off-balance sheet items like letter of credit, letter of guarantee etc.

iv. Investment of Government Securities to Total Working Fund Ratio

This ratio is calculated by dividing investment on government securities by total working fund. This can be stated as:

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

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

This ratio can be compute by dividing investment on shares and debenture by total working fund, this can be stated as:

$$\frac{\text{Investmetn on Share and Debenture}}{\text{Total Working Fund}}$$

The numerator includes investment on debentures, bonds and shares of other companies.

vi. Total Off-balance Sheet (OBS) Operation to Loan and Advance Ratio

This ratio is calculated by total OBS Operation by loan and advances. This can be stated as:

$$\frac{\text{Total OBS Operation}}{\text{Loan and Advance}}$$

This numerator gives the indication that these transaction/operations are not included or part of balance sheet items or liabilities. It includes letter of credit, letter of guarantee documents negotiate under reserve (DNUR), Capital commitments. Commitments on foreign currency purchase contracts, claimed at bank but not accepted and other such transactions.

C. Profitability Ratio

Profitability ratios are very helpful to measure the overall efficiency of operations of a firm. It is a true indicator of the financial performance of any institution. It is notable that higher the profitability ratio is better the financial performance and vice versa. Profitability position can be viewed in different ways.

i. Return on Loan and Advances Ratio

The ratio is calculated by dividing net profit by loan and advances. This can be stated as:

$$\frac{\text{Net Profit}}{\text{Loan and Advance}}$$

D. Growth Ratio

Growth ratios are directly related to the fund mobilization and investment management of a commercial bank. Growth ratios represent how well the commercial bank is maintaining its economical bank is maintaining its economic position.

TO examine and analyzed following growth ratios calculated in this study.

- i. Growth Ratio of Total Deposits
- ii. Growth Ratio of Loan and Advances
- iii. Growth Ratio of Total Investment

3.6.2 Statistical Tools

Some important statistical tools are used to achieve the objective of this study. In this study statistical tools such as correlation coefficient analysis, standard deviation, and coefficient of variance, Regression Analysis and Hypothesis testing have been used. The basic analyses are written in point below.

- a. Co-efficient of Correlation between different variables
- b. Regression Analysis
- c. T-Test

A. Co-efficient of Correlation Analysis and Regression Analysis

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

- i. Co-efficient of correlation between deposit and loan and advances.
- ii. Co-efficient of correlation between deposit and total investment.

This tool analyzes the relationship between these variables and helps the banks to make appropriate policy regarding deposit collection, fund utilization (Loan and Advances and investment) and maximization of profit.

Following statistics were calculated for calculating beta:

$$\text{Covariance } (R, R_m) = \frac{\sum [R - \bar{R}][R_m - \bar{R}_m]}{n}$$

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum (R - \bar{R})^2}{n}}$$

$$\text{Variance} = \sigma^2$$

$$\text{Beta } (\beta) = \frac{\text{Cov}(R, R_m)}{\text{Var}R_m}$$

Where,

R= return of the company

\bar{R} = expected return or mean return of the company

\bar{R}_m = expected market return

$$\text{Net Worth Per Share} = \frac{\text{Total Assets} - (\text{Total Liabilities} - \text{Share Capital})}{\text{No. of Share Outstanding}}$$

The simple correlation Coefficient is calculated using the formula

$$r = \frac{\sum xy}{N\sigma_x\sigma_y} \quad \text{or,} \quad r = \frac{\text{Cov}(xy)}{\sigma_x\sigma_y}$$

Where,

r= coefficient of correlation

$$x = X - \bar{X}$$

$$y = Y - \bar{Y}$$

n= number of pairs of values of variable X and variable Y

σ_x = Standard deviation of X variables

σ_y = Standard deviation of Y variables

The value of correlation coefficient is interpreted in the following ways:

1. If value of r= 1, then there is perfect positive correlation i.e. the two variables move together.
2. If value of r= -1, then there is perfect negative correlation i.e. the two variables move together.
3. If value of r =0, then there is no relationship between the two variables i.e. the movement of one does not affect the other.

The hypothesis was tested using T-test, X²-test and Anova Table. The test statistics are calculated in the following ways.

$$\text{Test Static, } t = \frac{\bar{X}_1 - \bar{X}_2}{\frac{s}{\sqrt{s^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

\bar{X}_1 = Mean of sample X_1

\bar{X}_2 = Mean of different sample X_2

S=unbiased estimate of sample standard deviation S^2 is given by,

$$S^2 = \frac{1}{n_1+n_2-2} [\sum(x_1 - \bar{x}_1)^2 + (x_2 - \bar{x}_2)^2]$$

n_1 = number of samples X_1

n_2 = number of samples X_2

Test Statistic, $F = \frac{S_1^2}{S_2^2}$ if $S_1 > S_2$ vice versa if $S_2 > S_1$

Where,

$$s_1^2 = \frac{1}{n_1-1} \sum (X_1 - \bar{X}_1)^2 = \frac{n_1}{n_1-1} s_1^2$$

$$s_2^2 = \frac{1}{n_2-1} \sum (X_2 - \bar{X}_2)^2 = \frac{n_2}{n_2-1} s_2^2$$

$$s_1^2 = \frac{1}{n_1} \sum (X_1 - \bar{X}_1)^2 = \text{actual sample variance}$$

$$s_2^2 = \frac{1}{n_2} \sum (X_2 - \bar{X}_2)^2 = \text{actual sample variance}$$

$$\text{Test Statistic, } \chi^2 = \sum \frac{(O-E)^2}{E}$$

Where,

O= observed or actual frequencies

E= expected or theoretical frequencies.

Level of significance $\alpha = 0.05$ is fixed

The decisions are made as below: if computed value of test statistics is less than the tabulated value null hypothesis is accepted, otherwise the alternative hypothesis is accepted.

3.6 Hypothesis

This hypothesis will test the difference between the variance of net worth per share and closing market price of common stocks at the end of each fiscal year.

Null Hypothesis (H_0): There is no significance between the variance of net worth per share over five fiscal years and the variance of closing market price at the end of each fiscal year.

$$\sigma_1 \neq \sigma_2$$

Hypothesis 2

This hypothesis is to test the significance of the regression line of market of common stocks as Y on Dividend as X.

Null Hypothesis (H_0): The regression line of Y on X is not significant.

Alternative Hypothesis (H_1): The regression line of Y on X is significant.

Hypothesis 3

This hypothesis will test whether the banks have collected more deposits and loan and investment practices.

Null Hypothesis (H_0): $\mu_1 = \mu_2$ i.e. the deposits collected by banks in past five years are equal.

Alternative Hypothesis (H_1) : $\mu_1 > \mu_2$ i.e. the deposits collected by banks are greater than the deposits collected in past five years.

Hypothesis 4

This hypothesis will test whether ratio of the deposit interest rate to return on common stocks of banks.

Null Hypothesis (H_0): There is no significance in ratio of deposit interest rate to return on common stocks of banks and that of finance companies i.e. the ratio of deposit interest rate and return on common stocks of banks.

Alternative Hypothesis (H_1): There is significant difference in ratio of deposit interest rate to return on common stocks of banks and that of finance companies i.e. the ratio of deposit interest rate to return common stock of banks.

Hypothesis 5

The hypothesis below test the variance of deposit interest rate and market price of common stocks between and loan and investment practices of these two banks.

Hypothesis 5.1

Null Hypothesis (H_0): The mean deposit interest rates of banks i.e. AFCL, LFCL and GFCL are equal for past five years

i.e.

$$\mu_1 = \mu_2 = \mu_3$$

Alternative Hypothesis (H_1): The mean deposit interest rates of AFCL, LFCL and GFCL are not equal for past five years

i.e.

$$\mu_1 \neq \mu_2 \neq \mu_3$$

Hypothesis 5.2

Null Hypothesis (H_0): There is no significance difference in the interest rates of finance companies i.e. AFCL, LFCL and GFCL and that of banks i.e. NABIL, NIBL and NBBL for past five years i.e. the mean deposit interest rate of these two banks is equal to the mean deposit interest rate of these banks i.e. $\mu_1 = \mu_2$

Alternative Hypothesis (H_1): There is significance difference in the interest rates of banks i.e. AFCL, LFCL and GFCL and that of banks i.e. NABIL, NIBL and NBBL for past five years i.e. the mean deposit interest rate of these two companies is equal to the mean deposit interest rate of these banks i.e.

$$\mu_1 \neq \mu_2$$

Hypothesis 5.3

Null Hypothesis (H_0): The variation of deposit interest rates among the two banks is more as the variation among banks or the interest rates of these banks have same variance. i.e. $\sigma_1^2 = \sigma_2^2$

Null Hypothesis (H_1): The variation of deposit interest rates among the two banks is not same as the variation among banks or the interest rates of banks have same variance. i.e. $\sigma_1^2 \neq \sigma_2^2$

Hypothesis 5.4

Null Hypothesis (H_0): There is no significance difference in the common stock market prices, among the two banks within 12 months of five consecutive fiscal years.

Hypothesis 5.5

Null Hypothesis (H_0): There is significant difference in the common stock market prices, among the two sample banks and within 12 months of five consecutive fiscal years.

Alternative Hypothesis (H_0): There is no significant difference in the common stock market prices, among the three sample banks and within 12 months of five consecutive fiscal years.

Chapter IV

PRESENTATION AND DATA ANALYSIS

This section of the study compiles the collected data of the deposit and investment analysis, rational analysis and interpretation of these data helps in reaching a sound conclusion. In this chapter the analysis parts are presented in detail. Different financial and statistical analysis which are related to the deposit collected and investment practices are studied to evaluate and to analyze the overall performance of NIBL & HBL comparatively. A heading wise presentation of the data and analyzing and interpreting these with the help of the charts, percentage change etc has been done accordingly. Different financial and statistical analysis related to deposit mobilization is carried out and their results are presented in this chapter.

4.1 Deposit Position of NIBL and HBL:-

The main objectives of a commercial bank are to safeguard the money of depositors and mobilize this deposit into different sectors. Deposits are the main source of resources to meet growing demand of financial existence. The existence of commercial banks depends upon the mobilization of deposits so, it is very important that commercial banks' deposit policy is the essential policy for its existence. For deposits, banks and financial intermediaries are big too. So, NIBL and HBL try to mobilize as much as its deposit to earn much benefit.

The following table shows the situation of these two commercial banks with relation to deposit collection.

Table No. 4.1
Deposit position of NIBL & HBL

(Rs. In Million)

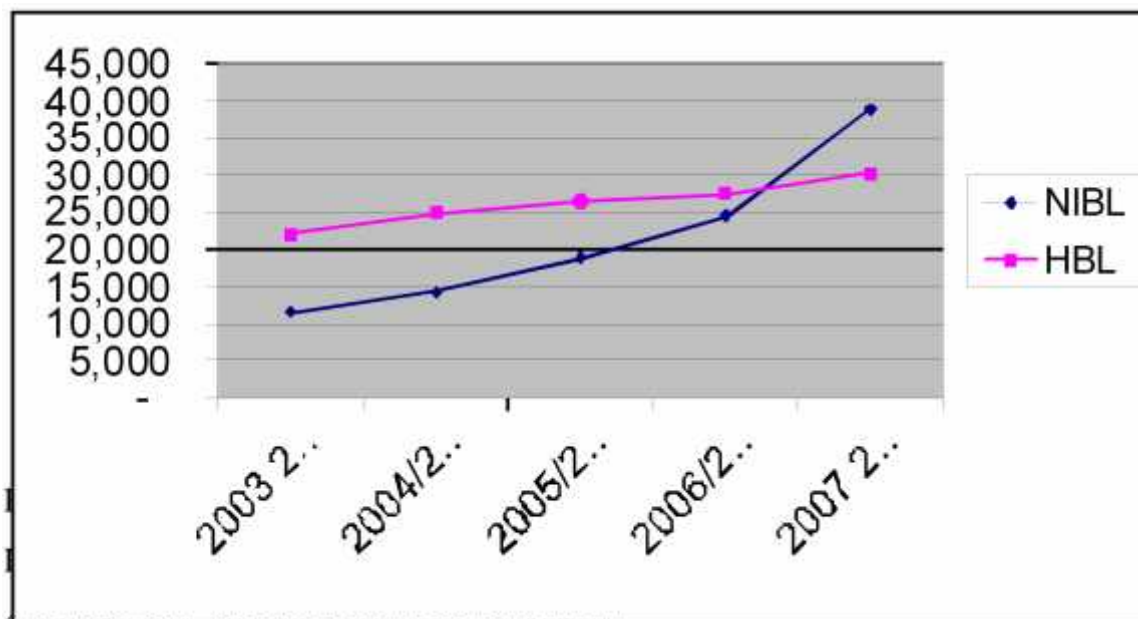
| Year | Deposit | |
|-------------|----------------|------------|
| | NIBL | HBL |
| 2003/2004 | 11,525.00 | 22,010.33 |
| 2004/2005 | 14,254.57 | 24,814.01 |
| 2005/2006 | 18,927.31 | 26,490.85 |
| 2006/2007 | 24,488.86 | 27,538.65 |
| 2007/2008 | 38,914.36 | 30,209.95 |

Source: - Various Year Annual Report.

From the above table no 4.1, it is obvious that both NIBL and HBL's deposit collection are increased simultaneously. But the deposit collection of NIBL is consistently highly increased rather than HBL but increased rate are highly zigzag in both NIBL and HBL means not continuously increased at certain rate.

Graph No. 4.1

Graph of Deposit Collection of NIBL and HBL



The amount of Loan and advances is called total credit. Simply, banks provides loan by accepting different collateral. The interest rates of loan are maintained according to the liquidity and investment level of the bank with nature, low interest rate attracts people to take loan in different productive sectors.

Table No. 4.2
Loan and Advances of NIBL and HBL

(Rs. In Million)

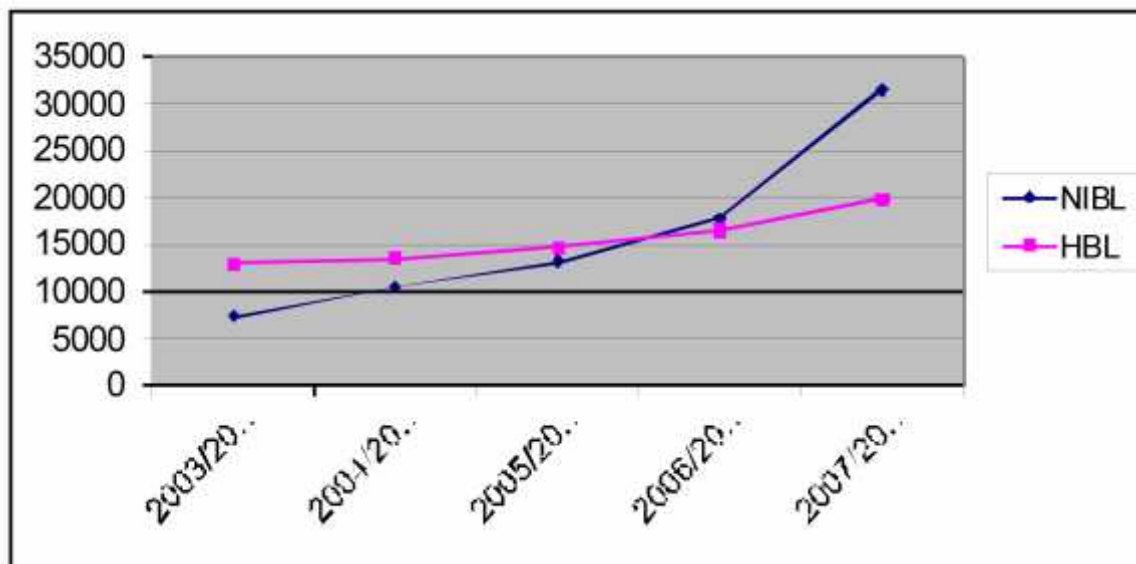
| Year | Deposit | |
|-------------|----------------|------------|
| | NIBL | HBL |
| 2003/2004 | 7338.00 | 12919.63 |
| 2004/2005 | 10453.164 | 13451.171 |
| 2005/2006 | 13178.152 | 14642.559 |
| 2006/2007 | 17769.100 | 16488.65 |
| 2007/2008 | 31537.366 | 19847.18 |

Source: - Various Year Annual Report.

From the above table 4.2, it is cleared that loan and advances of both NIBL and HBL are increased. The increasing rate is not at fixed rate in both banks. If we take only amount of loan, NIBL has higher amount in the fiscal year 2007/08 i.e. 31,537.366 million than in 2006/2007 i.e. 17769.100 million.

Graph No. 4.2

Graph of Loan and advances of NIBL and HBL



Above graph 4.2 shows that the amount of loan and advances of NIBL and HBL are increasing year after year which sign positive prosperity of these two banks.

4.3 Credit Deposit Ratio:-

Credit and Deposit are the major two functions of commercial banks. Simply, credit deposit ratio is used to find out the effective utilization of available resources of the bank. The relationship between credit and deposit shows the efficiency, ability and idle resources of commercial bank. The ration of credit and deposit declares by the effective utilization of collected resources. Simply increase of deposit lead to increase in credit. Thus, prosperity of any commercial bank are depends upon the rate of deposit and credit.

Table No. 4.3

Credit Deposit Ratio of NIBL and HBL

| Years | Total Deposit | | Total Credit | | Credit deposit ratio | |
|---------|---------------|-----------|--------------|----------|----------------------|--------|
| | NIBL | HBL | NIBL | HBL | NIBL | HBL |
| 2003/04 | 11525.00 | 22010.33 | 7338.00 | 12919.63 | 63.67% | 58.70% |
| 2004/05 | 14254.574 | 24814.011 | 10453.16 | 13451.17 | 73.33% | 59.21% |
| 2005/06 | 18927.306 | 26490.850 | 13178.15 | 14642.56 | 69.62% | 55.27% |
| 2006/07 | 24488.856 | 27538.65 | 17769.10 | 16488.65 | 72.56% | 59.87% |
| 2007/08 | 38914.364 | 30209.95 | 31537.36 | 19847.18 | 81.04% | 65.70% |

From the above table, we can analyze the ratio of credit with respect to the deposit. Credit deposit ratio of NIBL is high form 2003/04 to 2007/08 than HBL. It shows that maximum deposits are mobilized by NIBL. Gradually increment of credit deposit ratio of HBL shows that bank mobilized its maximum deposit in different productive sectors.

4.4 Financial Ratio Analysis

Ratio analysis is a technique and interpretation of financial statement through mathematical expression. It may be defined as the mathematical expression of the relationship between two accounting figures. To evaluate the different performances of figures of different account is termed as ratio analysis. In short ratio analysis can be defined an analysis of financial statements with the help of ratios. Ratio analysis is an important technique of financial analysis. The data given in financial statements are meaningless and they are unable to communicate anything from the analytic view point. One has to work very hard in digging out the required information.

4.4.1 Liquidity Ratio

Liquidity ratios measure the ability of the firm to meet its short term obligations. This is also called solvency ratio or working capital ratio. It is the relative proportion of current assets to current liabilities. Under liquidity ratios, the following ratios are examined.

4.4.1.1 NRB Balance to total Deposit.

NRB has made the commercial banks to deposit certain fund of the commercial banks in the central bank which is changing time to time as the demand of the time.

The ratio is calculated as under: -

NRB balance to total deposit = $\text{NRB Balance} / \text{Total Deposit}$

Total deposit = Current + saving + Fixed + Other

Table No. 4.4

Calculation of Mean, S.D and C.V of NRB balance to total deposit ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 4.73 | 7.39 |
| 2004/05 | 5.47 | 6.46 |
| 2005/06 | 8.06 | 4.14 |
| 2006/07 | 5.64 | 4.62 |
| 2007/08 | 4.68 | 4.62 |
| Mean | 5.71 | 5.45 |
| S.D | 1.04 | 1.40 |
| C.V | 18.21% | 25.69% |

(Source: Annex – 01)

From the above table no. 4.4 shows the ratio of NIBL and HBL are obtained from the annex 01. Though this table it is analyzed the short term obligation of the firm. It reveals that average ratio of the balance with NRB to total deposit of NIBL and HBL are 5.71% and 5.45% respectively. Average ratio of NIBL is higher than HBL. But the C.V. of HBL is higher than NIBL. It indicates that ratio of Balance with NRB to total deposits of NIBL had higher fluctuation in comparison to HBL.

4.4.2 Activity Ratio:

Activity ratio is also called assets management ratio. It measures the efficiency of the bank to manage its assets in profitable and satisfactory manner. A commercial bank must manage its assets in properly to earn high return. Following ratios are studied in this chapter.

4.4.2.1 Loan and Advances to total Deposit

This ratio helps to identify the C.B. are succeed in mobilization their assets on loan and advances to get income or return or not. A high ratio indicates better mobilization of deposit on loan and advances and vice-versa. It also indicates properties of C.B.

Simply, it is calculated:

Loan and Advances to total deposit = Loan and advances / Total Deposit

Table No. 4.5

Calculation of Mean, S.D & C.V of Loan and Advances of total deposit

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 63.67 | 58.70 |
| 2004/05 | 73.33 | 54.21 |
| 2005/06 | 69.62 | 55.27 |
| 2006/07 | 72.56 | 59.87 |
| 2007/08 | 81.04 | 65.70 |
| Total | 360.22 | 293.75 |
| Mean | 72.04% | 58.75% |
| S.D | 6.30 | 4.53 |
| C.V | 8.745% | 7.71% |

(Source: - Annex – 02)

From the above table no. 4.5, the average loan and advances of NIBL is 72.04 and HBL is 58.75%. From the above table no. 4.5, the average loan and advances of NIBL is 72.04 and HBL is 58.75% which shows that maximum deposit of NIBL is mobilized as Loan and Advances to different sectors than HBL. It also shows that NIBL taking making risk through granting maximum loan than HBL.

4.4.2.2 Investment to total Deposit

It is measured to identify that the banks are able to mobilize their deposit on investment in various securities. It also indicates that high ratio is successful mobilizing in various securities.

Mathematically,

Investment to total deposit ratio = Total Investment / Total Deposit

Table No. 4.6

Calculation of Mean, S.D and C.V of Investment to total deposit ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 33.51 | 59.43 |
| 2004/05 | 27.30 | 53.38 |
| 2005/06 | 29.61 | 63.75 |
| 2006/07 | 28.07 | 64.61 |
| 2007/08 | 16.62 | 40.67 |
| Total | 135.11 | 281.84 |
| Mean | 27.02% | 56.37% |
| S.D | 6.29 | 9.89 |
| C.V | 23.28 | 17.17 |

(Source: - Annex – 03)

From the above table no. 4.6, the average investment to total deposit of HBL is 56.37% and NIBL is 27.02 which indicate that HBL has invested its deposit in different sectors than NIBL. HBL does not mobilize its fund as loan higher than investment. HBL does not want to take maximum risk through granting loan than NIBL.

4.4.3 Capital Adequacy Ratio:

The ratio has been one of the most controversial ratios. Excess capital decrease the profitability where as the less capital is the symbol of a weak capital structure. So, banks must maintain adequate capital directives given by NRB. Following ratios are calculated under capital adequacy ratio.

4.4.3.1 Total Capital to Total Deposit ratio:

Capital to total deposit ratio shows the relationship between capital and total deposit.

Mathematically,

(Share capital)

Capital to Total Deposit Ratio = Total Capital / Total Deposit

Table No. 4.7

Calculation of Mean, S.D & C.V of total capital to total deposit ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 2.56 | 2.44 |
| 2004/05 | 4.12 | 2.16 |
| 2005/06 | 4.23 | 2.95 |
| 2006/07 | 4.92 | 2.94 |
| 2007/08 | 3.93 | 2.68 |
| Total | 19.76 | 13.17 |
| Mean | 3.95 | 2.63 |
| S.D | 0.86 | 0.34 |
| C.V | 21.77% | 12.93% |

(Source: - Annex – 04)

Above table no: 4.7 shows the relationship between capital and total deposit of NIBL & HBL. Average ratio of NIBL is high i.e. 3.95 than HBL i.e. 2.63 which shows that higher capital is maintained by NIBL with respect to its deposit than HBL.

4.4.3.2 Total Capital to Total Credit Ratio

Capital to total credit ratio shows the relationship between total capital and total credit. It shows how much capital is raised by the banks in respect to the credit.

Mathematically,

Capital to total credit ratio = Total Capital / Total Credit

Table No. 4.8

Calculation of Mean, S.D, C.V of Total Capital to Total Credit Ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 4.02 | 4.15 |
| 2004/05 | 5.62 | 3.99 |
| 2005/06 | 6.08 | 5.27 |
| 2006/07 | 6.78 | 4.92 |
| 2007/08 | 3.82 | 4.10 |
| Total | 26.32 | 22.43 |
| Mean | 5.26 | 4.49 |
| S.D | 1.65 | 0.57 |
| C.V | 31.37% | 12.69% |

(Source: - Annex – 05)

Above table no. 4.8 shows the relationship between total capital with response to its loan and advances. The average ratio of NIBL is higher (i.e. 5.26) than HBL

(i.e. 4.49) which shows that NIBL maintained higher capital or raised high capital in respect with its credit or loan and advances than HBL.

4.4.3.3 Capital to total Assets Ratio

Capital to total assets ratio measures the relationship between capital and assets. It is calculated as follows:

Mathematically,

$$\text{Capital to Total Assets} = \text{Total Capital} / \text{Total Assets}$$

Table No. 4.9

Calculation of Mean, S.D and C.V of capital to Total Assets ratio

| Year | NIBL | HBL |
|---------|--------|--------|
| 2003/04 | 2.23 | 2.16 |
| 2004/05 | 3.61 | 1.93 |
| 2005/06 | 3.76 | 2.82 |
| 2006/07 | 4.36 | 2.75 |
| 2007/08 | 2.53 | 2.20 |
| Total | 16.49 | 11.86 |
| Mean | 3.30 | 2.37 |
| S.D | 0.90 | 0.39 |
| C.V | 27.27% | 16.46% |

(Source: - Annex – 06)

Above table no. 4.9 shows the relationship between capital and total assets. NIBL have higher mean (i.e. 16.49) than HBL (i.e. 11.86). It shows that NIBL raised higher capital form its assets than HBL. Higher capital is maintained by its own assets by NIBL than HBL.

4.4.4 Profitability Ratio

Profitability ratio measures the overall banking operation of the company in regards to the profit. It is determined by the banks to find out their profit earning capacity on various kinds of deposits. Simply, if the profit ratio is high, the efficiency of bank will be high. Following ratios are calculated in this ratio.

4.4.4.1 Return on Working Fund Ratio

It measures the relationship between the working fund and profit of the bank. Hence working fund includes those entire funds which are used for mobilizing to earn profit.

Return on Total Working Fund = Net Profit / Total Working Fund

Total working fund = deposit + borrowings

Table No. 5.0

Calculation of Mean, S.D and C.V of Return on Working Fund Ratio

| Year | NIBL | HBL |
|---------|--------|--------|
| 2003/04 | 1.28 | 1.16 |
| 2004/05 | 1.59 | 1.22 |
| 2005/06 | 1.85 | 1.71 |
| 2006/07 | 2.05 | 1.78 |
| 2007/08 | 1.74 | 3.02 |
| Total | 8.51 | 8.89 |
| Mean | 1.70 | 1.78 |
| S.D | 0.29 | 0.75 |
| C.V | 17.06% | 42.13% |

(Source: - Annex – 07)

Above table no. 5.0 shows the relationship between return and working fund. Here, the average ratio of NIBL (i.e. 1.78) where as NIBL is 1.70, HBL ratios is higher than NIBL. It shows that HBL's return is higher than NIBL with respect to its working fund. HBL has mobilized its fund in higher return area than NIBL. It shows HBL's prosperity in respect with profit than NIBL.

4.4.4.2 Net profit to loan and advances ratio

Net profit to loan and advances measures the earning capacity of commercial bank as its deposit mobilized on loan and advances, higher the ratio, greater will be return and vice-versa.

Simply,

Net profit to loan and advances = Net Profit / Loan and Advances

Table No. 5.1

Calculation of Mean, S.D and C.V of Net profit to Loan and Advances Ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 2.08 | 2.04 |
| 2004/05 | 2.22 | 2.29 |
| 2005/06 | 2.66 | 3.12 |
| 2006/07 | 2.82 | 2.98 |
| 2007/08 | 2.15 | 4.60 |
| Total | 11.93 | 15.03 |
| Mean | 2.39 | 3.01 |
| S.D | 0.36 | 1.00 |
| C.V | 15.06% | 33.22% |

(Source: - Annex – 08)

Above table no. 5.1 shows the ratio of net profit which is earned through mobilizing its deposit as loan and advances. The average mean of HBL is higher (i.e. 3.01 > 2.39) than NIBL which shows that HBL's earning capacity is high. HBL's return through loan and advances are high comparing with NIBL. The earning capacity of HBL is higher than NIBL.

4.4.5 Risk ratio

A bank raise capital accepts deposit and finally grant loan. These entire process come a long with the risk. As a result, a bank must consider the risk associated with it. Higher the ratio, higher will be profit and vice-versa.

Following ratios are calculated

4.4.5.1 Capital Risk ratio

It is relationship between share capital and loan and advances. A bank must maintain adequate capital in the relation to the nature and condition of its assets, its deposit liabilities and other corporate responsibilities.

Capital Risk Ratio = Share Capital / Risk Weights Assets

Risk Weights Assets = Loan and Advances

Table No. 5.2

Calculation of Mean, S.D and C.V of Capital Risk Ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 4.02 | 4.15 |
| 2004/05 | 5.62 | 3.99 |
| 2005/06 | 6.08 | 5.27 |
| 2006/07 | 6.78 | 4.92 |
| 2007/08 | 3.82 | 4.10 |
| Total | 26.32 | 22.43 |
| Mean | 5.26 | 4.49 |

| | | |
|-----|--------|--------|
| S.D | 1.30 | 0.57 |
| C.V | 24.71% | 12.69% |

(Source: - Annex – 09)

Above table no. 5.2 shows the relation between share capital and loan and advances. The average ration of NIBL is higher than HBL (i.e. 5.26 > 4.49) which shows that more capital is obtained by NIBL through its loan and advances. In other ways, it shows mobilizing its deposit as loan and advances and its returned are maximized to its capital higher by NIBL than HBL.

4.4.5.2 Credit Risk Ratio:

It is related to total loan and advances and total assets. It is very essential for a bank to inspect the project i.e. risk of non payment of loan before making investment on them but the main factor which investing is its risk and the risk behind making investment or granting loan in measured by credit risk ratio.

Simply,

Credit Risk Ratio = Total Loan & Advances / Total Assets

Table No. 5.3

Calculation of Mean, S.D and C.V of Credit Risk Ratio

| Year | NIBL | HBL |
|-------------|-------------|------------|
| 2003/04 | 55.36 | 52.06 |
| 2004/05 | 64.23 | 48.31 |
| 2005/06 | 61.78 | 53.40 |
| 2006/07 | 64.40 | 56.00 |
| 2007/08 | 66.30 | 53.91 |
| Total | 312.07 | 263.68 |
| Mean | 62.41 | 52.74 |

| | | |
|-----|-------|-------|
| S.D | 4.26 | 2.85 |
| C.V | 6.85% | 5.40% |

(Source: - Annex – 10)

Above table no. 5.3 shows relationship between total loan and advances and total assets. The average credit ratio of NIBL is higher than HBL (62.41 > 52.74). It shows that NIBL granted its maximum assets as a loan and advances. Indirectly, NIBL has taken higher risk in mobilizing its deposit into loan and advances. HBL has strict in mobilizing its deposit into loan and advances. As a result, HBL has lower risk than NIBL.

4.4.6 Growth Ratio

Growth ratio is directly related to the deposit mobilization of commercial Bank. It denotes that how the banks are preserving their economic or financial position through mobilizing its deposit into difference sectors.

Mathematically, Growth ratio is calculated as follows:-

$$D_n = D^0 (1 + g)^{n-1}$$

Where,

D_n = Deposit amount for n periods

D_0 = Current deposit amount

n = Number of years observed

g = growth rate during the period

4.4.6.1 Growth Ration of total deposit

Table No. 5.4
Growth ratio of Total Deposit

| Fiscal Year | | | | | | Growth Rate % |
|-------------|---------|---------|---------|---------|---------|---------------------|
| Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | |
| | | | | | | |

| | | | | | | |
|------|-----------|----------|----------|----------|----------|--------|
| NIBL | 11525 | 14254.57 | 18927.31 | 24488.86 | 38914.36 | 35.56% |
| HBL | 222010.33 | 24814.01 | 26490.85 | 27538.65 | 30209.95 | 8.24% |

(Annex – 11)

Above table no. 5.4 shows the growth ratio of NIBL & HBL which indicates that NIBL has higher growth rate i.e. (35.56% > 8.24%) than HBL. It shows that NIBL collects higher deposit than HBL, the deposit collection of NIBL is better than HBL. But the trends of deposit collection of both NIBL & HBL are in increasing trends years after years.

4.4.6.2 Growth ratio of Loan and Advances:

Table No. 5.5

Growth ratio of Loan and Advances

| Banks | Fiscal Year | | | | | Growth Rate % |
|-------|-------------|----------|----------|----------|----------|---------------|
| | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | |
| NIBL | 7338.00 | 10453.16 | 13118.15 | 17769.10 | 31537.36 | 44% |
| HBL | 12919.63 | 13451.17 | 14642.56 | 16488.65 | 19847.18 | 11.33% |

(Annex – 12)

From the above table no. 5.5 shows their growth rate of Loan and Advances of NIBL & HBL are 44% and 11.33% respectively. NIBL have higher growth rate than HBL (i.e. 44% > 11.33%). It shows that NIBL has mobilized its deposit as loan and advances than HBL. NIBL has taken higher risk due to its mobilization deposit as loan and advances. But the increasing trend in loan and advances are continuing year after year of these two banks.

4.4.6.3 Growth ratio of total investment

Table No. 5.6
Growth ratio of total investment

| Banks | Fiscal Year | | | | | Growth Rate % |
|-------|-------------|----------|----------|----------|----------|---------------|
| | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | |
| NIBL | 3862.00 | 3934.00 | 5603.00 | 6874.02 | 6467.97 | 14% |
| HBL | 9292.10 | 11692.34 | 16889.03 | 17793.72 | 12287.45 | 7.19% |

(Annex – 13)

From the above table no. 5.6 shows the growth rate of total investment of NIBL & HBL are 14% & 7.19% respectively. NIBL have higher growth rate than HBL (14% > 7.19%). It shows that NIBL has invested its deposit.

4.5.1.1 Coefficient of correlation between total deposit and Loan and Advances

Total deposit and loan and advances are very important liabilities and assets of the banks. Deposits are mobilized as the loan and advances. The relationship between deposit and loan and must be optimum to get higher profit. In this analysis, total deposit as independent variable (X) and Loan and Advances is dependent Variable (Y).

Table No. 5.7
Co-relation coefficient between total deposits and Loan and Advances

| NAME | r | r ² |
|------|--------|----------------|
| NIBL | 0.9372 | 0.8783 |

| | | |
|-----|--------|--------|
| HBL | 0.9976 | 0.9951 |
|-----|--------|--------|

(Annex-14)

From the above no. 5.7 we can find the correlation coefficient between deposits and loan and advances of NIBL and HBL are 0.9976 and 0.9372 respectively. It shows that the positive between these two variable i.e. deposits and loan and advances of these two banks.

By considering co-efficient of determination (r^2), the Value of r^2 is case of NIBL & 0.8783 incase of NBL. The value of r^2 of NIBL is 0.9951 which mean 99.51% of loan and advances decision is determined by deposit and only 0.49% loan and advances depend upon other variables. The value of r^2 of HBL is 0.8783 which means that 87.83 loan and advances is determined by deposit and only 12.17% loan and advances depend upon other variable. Above the figures indicates that there are significant relationship between deposit and loan and advances.

4.5.2 Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms on the basis of tendencies in the dependent variables in the past periods. The future trend is forecasted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variables are repeated in the future or the past events affects the future events significantly.

The future trend is forecasted by using the following formula

$$y = a + bx$$

Where,

y = the dependent variable.

a = the origin i.e. the arithmetic mean.

b = the slope coefficient i.e. rate of exchange

x = the independent variable

4.5.2.1 Trend Analysis of Deposit

Deposit includes current, saving, fixed and other deposit (call deposit + other) under this topic an effort has been made to calculate the trend values to total deposit of NIBL & HBL for 5 years and forecast for next five years.

Table No. 5.8

Trend Analysis of Total Deposit

| Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 |
|-------|----------|----------|----------|----------|----------|
| NIBL | 41115.92 | 47617.22 | 54118.52 | 60619.82 | 67121.12 |
| HBL | 31949.84 | 33862.20 | 35774.56 | 37686.92 | 39599.28 |

| Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 |
|-------|----------|----------|----------|----------|----------|
| NIBL | 8609.42 | 15110.72 | 21612.02 | 28113.32 | 34614.62 |
| HBL | 22387.28 | 24299.64 | 26212.76 | 28125.12 | 30087.48 |

(Annex-15)

4.6 General directives of NRB related with investment and loan and advances.

4.6.1 Loan loss provision

-) Performing good loans 1%
(all good loan and over due for over 90 days)
-) Non performing loan
-) Sub-standard
(Loan over due by more than 3 months up to six months 25%)
-) Doubtful
(Loan over due by more than 6 months up to 1 year 50%)
-) Bad loan
(Loan overdue by more than 1 years 100%)

4.6.2 Single obligor limit

-) Bank should be invest their fund in funded sectors only 25% of core capital.

-) Bank should be their fund in non-funded sectors only 50% of core capital.

4.6.3 Lending policies directed by NRB

-) Productive sector loan 40%
-) Priority sector loans
 - 2060/61 - 6%
 - 2061/62 - 4%
 - 2062/63 - 2%
-) Deprived sector loan 0.25% to 3 %

Lending

-) Direct lending :- (agriculture, cottage and small industries, service sectors)
-) Indirect lending:- (NGS's, micro credit, rural financing)

4.6.4 Cash reserve ratio

-) Bank should be maintained 5% of total deposit as CRR to meet short term obligation
-) Investment policy directed by NRB
-) Investment policy and procedures should be prepare and implemented by BOD
-) Investment on corporate and debenture should not be exceed to 10%
-) 20% of company with financial interest is allowed but it should be deducted form CG calculation.
-) Half yearly review of investment portfolio through dirversification in investment
-) Obtain approval of compliance to investment policy by internal auditor
-) Obtain approval of management with in 1 month
-) Submitted approval, document and decisions made in the regard to NRB.

4.7 Major Findings

4.7.1 Deposit Mobilization

From the deposit collecting loan and advance the investments of the banks. It is clear that the deposit collections of NIBL & HBL are increasing year after year. Similarly, the investments and loan and advances of banks are increasing every year. The increasing percentage of NIBL and HBL are fluctuating during the study period. NIBL & HBL are more attracted to utilizing its resource on investment and also. It can be said that NIBL & HBL are taking more interest towards less risky investment.

4.7.2 Financial Ratio Analysis

1. Liquidity Ratio:

-) From the study of NRB Balance with total deposit ratio it is found that the average ratio (mean ratio) of was higher than bank. It indicates that strong liquidity position than bank.
-) Overall analysis of this ratio, it has found that NIBL and HBL banks are following the direction given by NRB in respect to the liquidity position. They are strong enough form the liquidity element.

2. Activity Ratio:

-) Credit to total deposit ratios of NIBL and HBL in fluctuating trend NIBL ratio since to be more variable than HBL. It shows that NIBL has been successful in mobilizing funds than HBL.
-) Investment to total deposit ratio of HBL is higher than NIBL which has more consistent investment.

3. Capital Adequacy Ratio

-) Capital to total deposit ration reveals that NIBL has higher ration than HBL and both banks have slightly fluctuation in total capital. It also indicates that capital maintained by NIBL was more consistent compare to HBL.
-) Capital to total credit and capital to total assets reveals that NIBL has higher ratio than HBL. It indicates that NIBL was more consistent compare to HBL. Both banks have fluctuated ratio in different year.

4. Profitability Ratio:

-) Return on working fund reveals that the average ratio of HBL has higher than NIBL and it was able to earn more profit by HBL than NIBL. It also shows that net profit levels of HBL are more consistent than NIBL.
-) Return on loan and advances reveals that HBL has higher the average ratio and it was able to earn more profit on loan and advances than NIBL. Similarly, the earning net profit levels of HBL were more consistent compare to the NIBL.

5. Growth Ratio:

-) Growth ratio of total deposit, total investment loan and advances and net profit of NIBL is greater than HBL. Comparing these four elements is shows that overall performance of NIBL is better in comparison to HBL. HBL's deposit, investment, loan and advances and net profit are also on increasing trend.

6. Risk Ratio:

-) Capital risk ratio reveals that NIBL has higher the average ratio HBL has lower capital risk ratio. Its shows that the profit earning levels by HBL was more consistent compare to NIBL.
-) Credit risk ration reveals that NIBL has the average ration and it was able to avoid default of non payment of HBL is lower. It shows that the non-performing assets in total loan and advances levels by NIBL were more consistent compare to the HBL bank.

7. Correlation Co-efficient

-) Correlation coefficient between total deposit and loan and advances found that it sis highly positive correlation of NIBL & HBL which indicate that increase in deposit will increase in loan and advances. This study also

suggests that independent variable that is loan and advances is highly dependent to the deposit. Therefore, it is significant relationship between total deposits and loan and advances of both banks.

8. Trend Analysis:

-) The deposits of both banks are in increasing trend. The total deposit collection of NIBL is greater than HBL.
-) Loan and advances of both banks are also increasing trend. NIBL remained higher volume of credit out flow than HBL.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATION

In this chapter, summarizes that whole study, draw the major conclusions and forwards the recommendations on the basis of major findings are presented.

5.1 Summary:

There are five chapter included in this research, first chapter include that background of the study, statements of the problems, objectives of the study and limitations of the study. There are four objectives of the study. The main objectives of the study are to see the financial position of NIBL and HBL to analyze the trends of deposits mobilization of every topic and forecast the trend values of deposit, loan and advances and investment for next five years. There are many limitations of the study such as the study is depends on secondary data.

In the second chapter, it includes the review of literature this chapter focuses on the conceptual review, review of related study, review of articles, review of thesis and review of rule provision.

In the third chapter, the study is mainly bases on secondary sources. All data are taken form concerned banks annual report, literature publication, balance sheet profit and loss account, previous thesis report, different websites, related booklets, journals and articles. After collecting the data from the different sources, it is analyzed by using financial tools and statistical tools. This research is based on the secondary data.

In the forth chapter analysis the data and result represented clearly and simultaneously using tables and trend lines. In summary following results are obtaining by the analysis of data.

Deposit of the commercial banks is very important variable. The contribution of the deposit to the net profit also higher in the banks record as found in this research. The collection of the deposit is must taken by the commercial bank as

the major functions relations to the others. To increase profit or deposit is the most important function of the commercial bank.

Only increment of deposit does not give any returns to the bank. A bank must have sound investment policy for the mobilization of the available fund as deposit. A deposit is that liabilities of the commercial banks which is returnable in demand at any time. So, sound investment policy has appeared to be very necessary to the commercial bank. A commercial bank mainly focuses on its two function i.e. collection of deposit through various schemes and granting those amount as loan to the clients by providing various facilities.

In the study, both NIBL and HBL have increased its deposit and loan and advances year after year. The increasing rate percentages are not serially but it is on zigzag order. The increasing rate is varying in both banks. It signed that both banks are in prosperity stage and buying to be better year after year.

According to capital adequacy ratio, NIBL is stronger than HBL. In the capital adequacy ratio shows the availability of its working fund as capital.

In case of profitability ratio, over all profitability ratio of HBL is better than NIBL. The earning capacity of bank is measuring by profitability ratio. It also measured the overall performance of the banks.

In case of risk ratio, the risk ratio of HBL is less than NIBL. So, the HBL bank is less risky than NIBL.

Similarly, in case of the growth ratio of NIBL is higher that HBL. Karl Pearson's correlation analysis helped conclude the fact that NIBL was capable of exploiting its resources by utilizing them in more effectively and efficiently in productive sectors. Trend analysis of all ratios and trend value forecast of total deposits, loan and advances and investment.

In general sense, we can summarize that both NIBL & HBL are on the way of prosperity and general overall performance of these two banks are good and way towards better.

5.2 Conclusion

In conclusion it can be said that commercial banks should have optimum policy to collect the deposit in various accounts. Deposit is the major organ of commercial bank to live in the industry. Higher the deposit higher will be chance of the mobilization of working fund and profit there to. Banks should not invest their fund haphazardly. This should be careful while advancing loan because loan is the blood circulation of commercial banks for survival. If commercial banks doesn't apply sound investment policy its will be in great trouble in future to collect it in time hence the possibility of bankruptcy there to. Banks should invest their funds in various portfolios after the deep study of the project to be safe form being bankruptcy. If banks concentrate the investment in few organizations there is a high chance of default risk. Deposit collection and loan mobilization are two major functions of commercial banks. So, banks must be careful in these two functions.

Diversification is indeed need to all business houses but it has seen immense important to commercial banks. Diversification of investment is very much important to commercial banks than other business houses because bank use the money of other people for the benefit of its own. And lastly, it is obvious that the banks are important for the economic development of the country. It helps in the capital formation to the country which is the most important element for the economic growth of the country. In overall, it can be concluded that commercial banks life is totally dependent upon the deposit collection policy and the optimum deposit mobilization procedure.

5.3 Recommendations

5.3.1 Recommendations to Nepal Investment Bank Ltd.

NIBL has mobilized its maximum deposit on loan and advances which is very risky for the bank. It is suggested that NIBL has to mobilize its deposit as an investment sector also.

5.3.2 Recommendations to Himalayan Bank Ltd.

-) HBL is not successful to mobilize its total deposit on loan and advances. HBL has mobilized its maximum deposit in investment sectors which is not risky. It is suggested that increase in mobilization on loan and advances helps to earn more profit.

-) Growth ratio of total deposit and loan and advances of HBL is lower than NIBL. Hence, it is recommended to HBL. The bank should increase the ratio of deposit and loan and advances.

5.3.3 General statement Recommendations

-) NRB liberal policy has left the banking sector with a limited scope of options for the rescheduling of the bad loans. Considering these banks must be formulated its future strategies.
-) Portfolio condition of the banks should be regularly revised time to time.
-) Commercial banks must be providing their services in the remote are not deprived people.
-) Commercial banks are not willing to deal in small loans so that there is gap which needs to be fulfilled.
-) Lastly, sample banks are suggested to support the social welfare event to promote the business.

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Annex

Annex – 01

NRB balance to total deposit ratio of NIBL

| Year | NRB Deposit | Total Deposit | Ratio (in percentage) |
|-------------|--------------------|----------------------|------------------------------|
| 2003/04 | 545.62 | 11525.00 | 4.73 |
| 3004/05 | 780.24 | 14254.57 | 5.47 |
| 2005/06 | 1526.07 | 18924.57 | 8.06 |
| 2006/07 | 1381.35 | 24488.86 | 5.64 |
| 2007/08 | 1820.00 | 38914.36 | 4.68 |

NRB balance to Total Deposit Ratio of HBL

| Year | NRB Deposit | Total Deposit | Ratio (in percentage) |
|-------------|--------------------|----------------------|------------------------------|
| 2003/04 | 1626.00 | 22010.33 | 7.39 |
| 3004/05 | 1604.10 | 24814.011 | 6.46 |
| 2005/06 | 1096.25 | 26490.85 | 4.14 |

| | | | |
|---------|---------|----------|------|
| 2006/07 | 1272.54 | 27538.65 | 4.62 |
| 2007/08 | 1396.72 | 30290.95 | 4.62 |

Annex – 02

Land and Advances (Credit) to Total Deposit Ratio of NIBL

| Year | Loan & Advances | Total Deposit | Ratio (in percentage) |
|-------------|----------------------------|----------------------|------------------------------|
| 2003/04 | 7338.00 | 11525.00 | 63.67 |
| 3004/05 | 10453.26 | 14254.574 | 73.33 |
| 2005/06 | 13178.15 | 18927.306 | 69.62 |
| 2006/07 | 17769.10 | 24488.856 | 72.56 |

| | | | |
|---------|----------|-----------|-------|
| 2007/08 | 31537.36 | 38914.364 | 81.04 |
|---------|----------|-----------|-------|

Loan and Advances to Total Deposit Ratio of HBL

| Year | Loan & Advances | Total Deposit | Ratio (in percentage) |
|-------------|----------------------------|----------------------|------------------------------|
| 2003/04 | 12919.63 | 22010.33 | 58.70 |
| 3004/05 | 13451.17 | 24814.011 | 59.21 |
| 2005/06 | 14642.56 | 26490.850 | 55.27 |
| 2006/07 | 16488.65 | 27538.65 | 59.87 |
| 2007/08 | 19847.18 | 30209.95 | 65.70 |

Annex – 03

Investment to Total Deposit Ratio of NIBL

| Year | Total Investment | Total Deposit | Ratio (in percentage) |
|-------------|-------------------------|----------------------|------------------------------|
| 2003/04 | 3862.00 | 11525.00 | 33.52 |
| 3004/05 | 3934.00 | 14254.574 | 27.30 |
| 2005/06 | 5603.00 | 18927.306 | 29.61 |
| 2006/07 | 6874.02 | 24488.856 | 28.07 |
| 2007/08 | 6467.97 | 38914.364 | 16.62 |

Investment to Total Deposit Ratio of HBL

| Year | Total Investment | Total Deposit | Ratio (in percentage) |
|-------------|-------------------------|----------------------|------------------------------|
| 2003/04 | 9292.10 | 22010.33 | 59.43 |
| 3004/05 | 11692.34 | 24814.011 | 53.38 |
| 2005/06 | 16889.03 | 26490.850 | 63.75 |
| 2006/07 | 17793.72 | 27538.65 | 64.61 |
| 2007/08 | 12287.45 | 30209.95 | 40.67 |

Annex – 04

Total Capital to Total Deposit Ratio of NIBL

| Year | Total Capital | Total Deposit | Ratio (in percentage) |
|-------------|----------------------|----------------------|------------------------------|
| 2003/04 | 295.29 | 11525.00 | 2.56 |
| 3004/05 | 587.74 | 14254.574 | 4.12 |
| 2005/06 | 801.35 | 18927.306 | 4.23 |
| 2006/07 | 1203.92 | 24488.856 | 4.92 |
| 2007/08 | 1203.92 | 38914.364 | 3.93 |

Total Capital to Total Deposit Ratio of HBL

| Year | Total Capital | Total Deposit | Ratio (in percentage) |
|-------------|----------------------|----------------------|------------------------------|
| 2003/04 | 536.30 | 22010.33 | 2.44 |
| 3004/05 | 536.30 | 24814.011 | 2.16 |
| 2005/06 | 772.20 | 26490.850 | 2.95 |
| 2006/07 | 810.81 | 27538.65 | 2.94 |
| 2007/08 | 810.81 | 30209.95 | 2.68 |

Annex – 05

Total Capital to Total Deposit Ratio of NIBL

| Year | Total Capital | Loan & Advances | Ratio (in percentage) |
|-------------|----------------------|----------------------------|------------------------------|
| 2003/04 | 295.29 | 7338.00 | 4.02 |
| 3004/05 | 587.74 | 10453.16 | 5.62 |
| 2005/06 | 801.35 | 13178.15 | 6.08 |
| 2006/07 | 1203.92 | 17769.10 | 6.78 |
| 2007/08 | 1203.92 | 31537.37 | 3.82 |

Total Capital to Total Deposit Ratio of HBL

| Year | Total Capital | Loan & Advances | Ratio (in percentage) |
|-------------|----------------------|----------------------------|------------------------------|
| 2003/04 | 536.30 | 12919.63 | 4.15 |
| 3004/05 | 536.30 | 13451.171 | 3.99 |
| 2005/06 | 772.20 | 14642.559 | 5.27 |
| 2006/07 | 810.81 | 16488.65 | 4.92 |
| 2007/08 | 810.81 | 19847.18 | 4.10 |

Annex – 06

Capital to Total Assets Ratio of NIBL

| Year | Total Capital | Total Assets | Ratio (in percentage) |
|-------------|----------------------|---------------------|------------------------------|
| 2003/04 | 295.29 | 13255.50 | 2.23 |
| 3004/05 | 587.74 | 16274.06 | 3.61 |
| 2005/06 | 801.35 | 21330.00 | 3.76 |
| 2006/07 | 1203.92 | 27591.00 | 4.36 |
| 2007/08 | 1203.92 | 47566.23 | 2.53 |

Capital to Total Assets Ratio of HBL

| Year | Total Capital | Total Assets | Ratio (in percentage) |
|-------------|----------------------|---------------------|------------------------------|
| 2003/04 | 536.30 | 24817.37 | 2.16 |
| 3004/05 | 536.30 | 27844.69 | 1.93 |
| 2005/06 | 772.20 | 27418.16 | 2.82 |
| 2006/07 | 810.81 | 29460.39 | 2.75 |
| 2007/08 | 810.81 | 36818.02 | 2.20 |

Annex – 07

Return on Working Fund Ratio of NIBL

| Year | Net Profit | Total Working Fund | Ratio (in percentage) |
|-------------|-------------------|---------------------------|------------------------------|
| 2003/04 | 152.67 | 11886.50 | 1.28 |
| 3004/05 | 232.15 | 14604.57 | 1.59 |
| 2005/06 | 350.53 | 18927.31 | 1.85 |
| 2006/07 | 501.40 | 24488.86 | 2.05 |
| 2007/08 | 679.00 | 38914.36 | 1.74 |

Return on Working Fund Ratio of HBL

| Year | Net Profit | Total Working Fund | Ratio (in percentage) |
|-------------|-------------------|---------------------------|------------------------------|
| 2003/04 | 263.05 | 22669.34 | 1.16 |
| 3004/05 | 308.28 | 25320.06 | 1.22 |
| 2005/06 | 457.46 | 26726.82 | 1.71 |
| 2006/07 | 491.82 | 27683.27 | 1.78 |
| 2007/08 | 914.03 | 30240.16 | 3.02 |

Annex – 08

Net Profit to Loan and Advances Ratio of NIBL

| Year | Net Profit | Loan & Advances | Ratio (in percentage) |
|-------------|-------------------|----------------------------|------------------------------|
| 2003/04 | 152.67 | 7338.00 | 2.08 |
| 3004/05 | 232.15 | 10453.16 | 2.22 |
| 2005/06 | 350.53 | 13118.15 | 2.66 |
| 2006/07 | 501.40 | 17769.10 | 2.82 |
| 2007/08 | 679.00 | 31537.37 | 2.15 |

Net Profit to Loan and Advances Ratio of HBL

| Year | Net Profit | Loan & Advances | Ratio (in percentage) |
|-------------|-------------------|----------------------------|------------------------------|
| 2003/04 | 263.05 | 12919.63 | 2.04 |
| 3004/05 | 308.28 | 13451.17 | 2.29 |
| 2005/06 | 457.46 | 14642.56 | 3.12 |
| 2006/07 | 491.82 | 16488.65 | 2.98 |
| 2007/08 | 914.03 | 19847.18 | 4.60 |

Annex – 09

Capital Risk Ratio of NIBL

| Year | Net Profit | Loan & Advances | Ratio (in percentage) |
|-------------|-------------------|----------------------------|------------------------------|
| 2003/04 | 295.29 | 7338.00 | 4.02 |
| 3004/05 | 587.74 | 10453.16 | 5.62 |
| 2005/06 | 801.35 | 13118.15 | 6.08 |
| 2006/07 | 1203.92 | 17769.10 | 6.78 |
| 2007/08 | 1203.92 | 31537.37 | 3.82 |

Capital Risk Ratio of HBL

| Year | Net Profit | Loan & Advances | Ratio (in percentage) |
|-------------|-------------------|----------------------------|------------------------------|
| 2003/04 | 536.30 | 12919.63 | 4.15 |
| 3004/05 | 536.30 | 13451.17 | 3.99 |
| 2005/06 | 772.20 | 14642.56 | 5.27 |
| 2006/07 | 810.81 | 16488.65 | 4.92 |
| 2007/08 | 810.81 | 19847.18 | 4.10 |

Annex – 10

Credit Risk Ratio of NIBL

| Year | Loan & Advances | Total Assets | Ratio (in percentage) |
|-------------|----------------------------|---------------------|------------------------------|
| 2003/04 | 12919.63 | 13255.50 | 55.36 |
| 3004/05 | 13451.17 | 16274.06 | 64.23 |
| 2005/06 | 14642.56 | 21330.00 | 61.78 |
| 2006/07 | 16488.65 | 27591.00 | 64.40 |
| 2007/08 | 19847.18 | 47566.23 | 66.30 |

Credit Risk Ratio of NIBL

| Year | Loan & Advances | Total Assets | Ratio (in percentage) |
|-------------|----------------------------|---------------------|------------------------------|
| 2003/04 | 12919.63 | 24817.37 | 52.06 |
| 3004/05 | 13451.17 | 27844.69 | 48.31 |
| 2005/06 | 14642.56 | 27418.16 | 53.40 |
| 2006/07 | 16488.65 | 29460.39 | 56.00 |
| 2007/08 | 19847.18 | 36818.02 | 53.91 |

Annex – 11

Calculation of growth of total deposit

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 38914.36 = 11.525 (1 + g)^{5-1}$$

$$\text{or, } 38914.36 / 11.525 = (1 + g)^4$$

$$\text{or, } 3.3765 = (1 + g)^4$$

$$\text{or, } (1 + g)^4 = 3.3765$$

$$\text{or, } (1 + g) = (3.3765)^{1/4}$$

$$\text{or, } (1 + g) = (3.3765)^{1/4}$$

$$\text{or, } 1 + g = 1.3556$$

$$\text{or, } g = 0.3556 \text{ i.e. } 35.56\%$$

Similarly,

For HBL,

$$30209.95 = 22010.33 (1 + g)^{5-1}$$

$$\text{or, } 30209.95 / 22010.33 = (1 + g)^4$$

$$\text{or, } (1 + g)^4 = 1.3725$$

$$\text{or, } 1 + g = (1.3725)^{1/4}$$

$$\text{or, } 1 + g = 1.0824$$

or, $g = 0.0824$ or 8.24%

or, $g = 8.24\%$

Annex – 12

Calculation of Growth Ratio of Loan and Advances

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 31537.36 = 7338.00 (1 + g)^4$$

$$\text{or, } 31537.36 / 7338.00 = (1 + g)^4$$

$$\text{or, } 4.2978 = (1 + g)^4$$

$$\text{or, } 1 + g = (4.2978)^{1/4}$$

$$\text{or, } g = 0.44 \text{ or } 44\%$$

$$\text{or, } g = 44\%$$

Similarly,

For HBL,

$$19847.18 = 12919.63 (1 + g)^{5-1}$$

$$\text{or, } 19847.18 / 12919.63 = (1 + g)^4$$

$$\text{or, } 1.5362 = (1 + g)^4$$

$$\text{or, } 1 + g = (1.5362)^{1/4}$$

$$\text{or, } 1 + g = 1.1133$$

$$\text{or, } g = 0.1133 \text{ or } 11.33\%$$

$$\text{i.e. } g = 11.33\%$$

Annex – 13

Calculation of Growth Ratio of Total Investment

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 6467.97 = 3862.00 (1 + g)^{5-1}$$

$$\text{or, } 6467.97 / 3862.00 = (1 + g)^4$$

$$\text{or, } (1.67)^{1/4} = 1 + g$$

$$\text{or, } 1.1376 = 1 + g$$

$$\text{or, } g = 0.14 \text{ or } 14\%$$

Similarly,

For HBL,

$$12287.45 = 9292.10 (1 + g)^{5-1}$$

$$\text{or, } 12287.45 / 9292.10 = (1 + g)^4$$

$$\text{or, } (1.32) = (1 + g)$$

$$\text{or, } 1.0719 = 1 + g$$

$$\text{or, } g = 0.0719 \text{ or } 7.19\%$$

Annex – 14

Calculation of Growth Ratio of Net Profit

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 679.00 = 152.67 (1 + g)^{5-1}$$

$$\text{or, } 679.00 / 152.67 = (1 + g)^4$$

$$\text{or, } (4.4475)^{1/4} = 1 + g$$

$$\text{or, } 1.4522 = 1 + g$$

$$\text{or, } g = 0.4522 \text{ or } 45.22\%$$

$$\text{or, } g = 45.22\%$$

Similarly,

For HBL

$$914.03 = 263.05 (1 + g)^{5-1}$$

$$\text{or, } 914.03 / 263.05 = (1 + g)^4$$

$$\text{or, } 3.4747 = (1 + g)^4$$

$$\text{or, } 1 + g = (3.4747)^{1/4}$$

$$\text{or, } 1 + g = 1.3653$$

$$\text{or, } g = 36.53\%$$

Annex – 15

Calculation of correlation co-efficient and co-efficient of determination (r^2) of total deposit to loan and advances of NIBL

| Total Deposit (X) | Loan and Advances (Y) | X^2 | Y^2 | X x Y |
|----------------------|-----------------------|--------------------------|--------------------------|-------------------------|
| 11.525 | 73.38 | 13282.56 | 5384.62 | 8457.05 |
| 142.54 | 104.53 | 20317.65 | 10926.52 | 14899.71 |
| 189.27 | 131.78 | 35823.13 | 17365.97 | 24942.00 |
| 244.89 | 177.69 | 59971.11 | 31573.74 | 43514.50 |
| 38.914 | 315.38 | 151429.94 | 99464.54 | 122726.97 |
| $\Sigma X = 1081.09$ | $\Sigma Y = 802.76$ | $\Sigma X^2 = 280824.39$ | $\Sigma Y^2 = 164715.39$ | $\Sigma XY = 214540.13$ |

Here,

r =

Calculation of co-relation coefficient and coefficient of determinant (r^2) of total deposit to loan and advance of HBL

| Total Deposit (X) | Loan and Advances (Y) | X² | Y² | X x Y |
|--------------------------|------------------------------|--------------------------|--------------------------|-------------------------|
| 220.10 | 129.20 | 48444.01 | 16692.64 | 28436.925 |
| 248.14 | 134.51 | 61573.46 | 18092.94 | 33377.31 |
| 264.91 | 146.43 | 70177.31 | 21441.74 | 38790.77 |
| 275.39 | 164.89 | 75839.65 | 27188.71 | 45409.06 |
| 302.10 | 198.47 | 91264.41 | 39390.34 | 59957.79 |
| $\Sigma X = 1310.64$ | $\Sigma Y = 773.50$ | $\Sigma X^2 = 347298.84$ | $\Sigma Y^2 = 122806.38$ | $\Sigma XY = 205971.85$ |

Sister yaha formula cha

Ani Hisab pani

Annex – 16

Trend Analysis of Total Deposit of NIBL

| Year | Deposit (Y) | X | X ² | XY |
|-------|----------------------|--------------|-----------------|----------------------|
| 2004 | 11525.00 | -2 | 4 | -23050.00 |
| 2005 | 14254.57 | -1 | 1 | -14254.57 |
| 2006 | 18924.57 | 0 | 0 | 0 |
| 2007 | 24488.86 | 1 | 1 | 24488.86 |
| 2008 | 38914.36 | 2 | 4 | 77828.72 |
| Total | $\sum Y = 10811.010$ | $\sum X = 0$ | $\sum X^2 = 10$ | $\sum XY = 65013.01$ |

Trend Analysis of Total Deposit of HBL

| Year | Deposit (X) | X | X² | XY |
|-------------|----------------------|--------------|----------------------|----------------------|
| 2004 | 22010.33 | -2 | 4 | -44020.66 |
| 2005 | 24814.011 | -1 | 1 | -24814.01 |
| 2006 | 26490.85 | 0 | 0 | 0 |
| 2007 | 27538.65 | 1 | 1 | 27538.65 |
| 2008 | 30290.95 | 2 | 4 | 60419.90 |
| Total | $\sum X = 131063.79$ | $\sum X = 0$ | $\sum X^2 = 10$ | $\sum XY = 19123.88$ |

Trend Analysis of Loan and Advances of NIBL for 5 years

| Year | Deposit (X) | X | X ² | XY |
|-------|-----------------------|----------------|-------------------|------------------------|
| 2004 | 7338.00 | -2 | 4 | -14676 |
| 2005 | 10453.26 | -1 | 1 | -10453.16 |
| 2006 | 13178.15 | 0 | 0 | 0 |
| 2007 | 17769.10 | 1 | 1 | 17769.10 |
| 2008 | 31537.36 | 2 | 4 | 63074.72 |
| Total | $\Sigma X = 80275.36$ | $\Sigma X = 0$ | $\Sigma X^2 = 10$ | $\Sigma XY = 55714.66$ |

Trend Analysis of Loan and Advances of HBL for 5 years

| Year | Deposit (Y) | X | X ² | XY |
|-------|-----------------------|----------------|-------------------|------------------------|
| 2004 | 12919.63 | -2 | 4 | -25839.26 |
| 2005 | 13451.17 | -1 | 1 | -13451.17 |
| 2006 | 14642.56 | 0 | 0 | 0 |
| 2007 | 16488.65 | 1 | 1 | 16488.65 |
| 2008 | 19847.18 | 2 | 4 | 39694.36 |
| Total | $\Sigma Y = 77349.19$ | $\Sigma X = 0$ | $\Sigma X^2 = 10$ | $\Sigma XY = 16892.58$ |

Annex – 11

Calculation of Growth of Total Deposit

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 38914.36 = 11.525 (1 + g)^{5-1}$$

$$\text{or, } 38914.36 / 11.525 = (1 + g)^4$$

$$\text{or, } 3.3765 = (1 + g)^4$$

$$\text{or, } (1 + g)^4 = 3.3765$$

$$\text{or, } (1 + g) = (3.3765)^{1/4}$$

$$\text{or, } (1 + g) = (3.3765)^{1/4}$$

$$\text{or, } 1 + g = 1.3556$$

$$\text{or, } g = 0.3556 \text{ i.e. } 35.56\%$$

Similarly,

For HBL,

$$30209.95 = 22010.33 (1 + g)^{5-1}$$

$$\text{or, } 30209.95 / 22010.33 = (1 + g)^4$$

$$\text{or, } (1 + g)^4 = 1.3725$$

$$\text{or, } 1 + g = (1.3725)^{1/4}$$

$$\text{or, } 1 + g = 1.0824$$

$$\text{or, } g = 0.0824 \text{ or } 8.24\%$$

or, $g = 8.24\%$

Annex – 12

Calculation of Growth Ratio of Loan and Advances

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 31537.36 = 7338.00 (1 + g)^4$$

$$\text{or, } 31537.36 / 7338.00 = (1 + g)^4$$

$$\text{or, } 4.2978 = (1 + g)^4$$

$$\text{or, } 1 + g = (4.2978)^{1/4}$$

$$\text{or, } g = 0.44 \text{ or } 44\%$$

$$\text{or, } g = 44\%$$

Similarly,

For HBL,

$$19847.18 = 12919.63 (1 + g)^{5-1}$$

$$\text{or, } 19847.18 / 12919.63 = (1 + g)^4$$

$$\text{or, } 1.5362 = (1 + g)^4$$

$$\text{or, } 1 + g = (1.5362)^{1/4}$$

$$\text{or, } 1 + g = 1.1133$$

$$\text{or, } g = 0.1133 \text{ or } 11.33\%$$

$$\text{i.e. } g = 11.33\%$$

Annex – 13

Calculation of Growth Ratio of Total Investment

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 6467.97 = 3862.00 (1 + g)^{5-1}$$

$$\text{or, } 6467.97 / 3862.00 = (1 + g)^4$$

$$\text{or, } (1.67)^{1/4} = 1 + g$$

$$\text{or, } 1.1376 = 1 + g$$

$$\text{or, } g = 0.14 \text{ or } 14\%$$

Similarly,

For HBL,

$$12287.45 = 9292.10 (1 + g)^{5-1}$$

$$\text{or, } 12287.45 / 9292.10 = (1 + g)^4$$

$$\text{or, } (1.32) = (1 + g)$$

$$\text{or, } 1.0719 = 1 + g$$

$$\text{or, } g = 0.0719 \text{ or } 7.19\%$$

Annex – 14

Calculation of Growth Ratio of Net Profit

For NIBL,

$$D_n = D_0 (1 + g)^{n-1}$$

$$\text{or, } 679.00 = 152.67 (1 + g)^{5-1}$$

$$\text{or, } 679.00 / 152.67 = (1 + g)^4$$

$$\text{or, } (4.4475)^{1/4} = 1 + g$$

$$\text{or, } 1.4522 = 1 + g$$

$$\text{or, } g = 0.4522 \text{ or } 45.22\%$$

$$\text{or, } g = 45.22\%$$

Similarly,

For HBL

$$914.03 = 263.05 (1 + g)^{5-1}$$

$$\text{or, } 914.03 / 263.05 = (1 + g)^4$$

$$\text{or, } 3.4747 = (1 + g)^4$$

$$\text{or, } 1 + g = (3.4747)^{1/4}$$

$$\text{or, } 1 + g = 1.3653$$

$$\text{or, } g = 36.53\%$$

Annex – 15

Calculation of correlation co-efficient and co-efficient of determination (r^2) of total deposit to loan and advances of NIBL

| Total Deposit (X) | Loan and Advances (Y) | X ² | Y ² | X x Y |
|----------------------|-----------------------|--------------------------|--------------------------|-------------------------|
| 11.525 | 73.38 | 13282.56 | 5384.62 | 8457.05 |
| 142.54 | 104.53 | 20317.65 | 10926.52 | 14899.71 |
| 189.27 | 131.78 | 35823.13 | 17365.97 | 24942.00 |
| 244.89 | 177.69 | 59971.11 | 31573.74 | 43514.50 |
| 38.914 | 315.38 | 151429.94 | 99464.54 | 122726.97 |
| $\Sigma X = 1081.09$ | $\Sigma Y = 802.76$ | $\Sigma X^2 = 280824.39$ | $\Sigma Y^2 = 164715.39$ | $\Sigma XY = 214540.13$ |

Here,

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

$$= \frac{5 \times 214540.23 - 1081.09 \times 802.76}{\sqrt{5 \times 280824.39 - (1081.09)^2} \sqrt{5 \times 164715.39 - (802.76)^2}}$$

$$= \frac{204845.36}{\sqrt{235366.36} \sqrt{179153.33}}$$

$$= \frac{204845.36}{205347.62} = 0.9976$$

Co-efficient of determinant

$$r^2 = (r)^2$$

$$r^2 = (0.9976)^2$$

$$r^2 = 0.9951$$

Calculation of co-relation coefficient and coefficient of determinant (r^2) of total deposit to loan and advance of HBL

| Total Deposit (X) | Loan and Advances (Y) | X ² | Y ² | X x Y |
|----------------------|-----------------------|--------------------------|--------------------------|-------------------------|
| 220.10 | 129.20 | 48444.01 | 16692.64 | 28436.925 |
| 248.14 | 134.51 | 61573.46 | 18092.94 | 33377.31 |
| 264.91 | 146.43 | 70177.31 | 21441.74 | 38790.77 |
| 275.39 | 164.89 | 75839.65 | 27188.71 | 45409.06 |
| 302.10 | 198.47 | 91264.41 | 39390.34 | 59957.79 |
| $\Sigma X = 1310.64$ | $\Sigma Y = 773.50$ | $\Sigma X^2 = 347298.84$ | $\Sigma Y^2 = 122806.38$ | $\Sigma XY = 205971.85$ |

Here,

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

$$= \frac{5 \times 205971.85 - 1310.64 \times 773.50}{\sqrt{5 \times 347298.84 - (1310.64)^2} \sqrt{5 \times 122806.38 - (773.50)^2}}$$

$$= \frac{16079.19}{\sqrt{18716.84} \sqrt{15727.75}}$$

$$= \frac{16079.19}{136.81 \times 125.41} = \frac{16079.19}{17157.34} = 0.9372$$

Co-efficient of determinant

$$r^2 = (r)^2$$

$$r^2 = (0.9372)^2$$

$$r^2 = 0.8783$$

Annex – 16

Trend Analysis of Total Deposit of NIBL

| Year | Deposit (Y) | X | X² | XY |
|-------------|------------------------|----------------|----------------------|------------------------|
| 2004 | 11525.00 | -2 | 4 | -23050.00 |
| 2005 | 14254.57 | -1 | 1 | -14254.57 |
| 2006 | 18924.57 | 0 | 0 | 0 |
| 2007 | 24488.86 | 1 | 1 | 24488.86 |
| 2008 | 38914.36 | 2 | 4 | 77828.72 |
| Total | $\Sigma Y = 10811.010$ | $\Sigma X = 0$ | $\Sigma X^2 = 10$ | $\Sigma XY = 65013.01$ |

Here, $\Sigma X = 0$

$$a = \frac{\Sigma Y}{N} = \frac{108110.10}{5} = 21622.02$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{65013.01}{10} = 6501.30$$

Hence, trend line equation

$$y = a + bx$$

$$y = 21612.02 + 6501 \times 30X$$

For 2004, $y = 21612.02 + 6501.30 \times (-2) = 8609.42$

For 2005, $y = 21612.02 + 6501.30 \times (-1) = 1511.072$

For 2006, $y = 21612.02 + 6501.30 \times (0) = 21612.02$

For 2007, $y = 21612.02 + 6501.30 \times 1 = 28113.32$

For 2008, $y = 21612.02 + 6501.30 \times 2 = 34614.62$

For 2009, $y = 21612.02 + 6501.30 \times 3 = 41115.92$

For 20010, $y = 21612.02 + 6501.30 \times 4 = 47617.22$

For 20011, $y = 21612.02 + 6501.30 \times 5 = 54118.52$

For 20012, $y = 21612.02 + 6501.30 \times 6 = 60619.82$

For 20013, $y = 21612.02 + 6501.30 \times 7 = 67121.12$

Trend Analysis of Total Deposit of HBL

| Year | Deposit (X) | X | X ² | XY |
|-------|------------------------|----------------|-------------------|------------------------|
| 2004 | 22010.33 | -2 | 4 | -44020.66 |
| 2005 | 24814.011 | -1 | 1 | -24814.01 |
| 2006 | 26490.85 | 0 | 0 | 0 |
| 2007 | 27538.65 | 1 | 1 | 27538.65 |
| 2008 | 30290.95 | 2 | 4 | 60419.90 |
| Total | $\Sigma X = 131063.79$ | $\Sigma X = 0$ | $\Sigma X^2 = 10$ | $\Sigma XY = 19123.88$ |

Here, $\Sigma X = 0$

$$a = \frac{\Sigma Y}{N} = \frac{131063.79}{5} = 26212.76$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{19123.88}{10} = 1912.39$$

Hence, trend line equation,

$$y = a + bx$$

$$y = 26212.76 + 1912.39X$$

For 2004, $y = 26212.76 + 1912.36 \times (-2) = 22387.28$

For 2005, $y = 26212.76 + 1912.36 \times (-1) = 24299.64$

For 2006, $y = 26212.76 + 1912.36 \times (0) = 26212.76$

For 2007, $y = 26212.76 + 1912.36 \times 1 = 28125.12$

For 2008, $y = 26212.76 + 1912.36 \times 2 = 30037.48$

For 2009, $y = 26212.76 + 1912.36 \times 3 = 31949.84$

For 20010, $y = 26212.76 + 1912.36 \times 4 = 33862.20$

For 20011, $y = 26212.76 + 1912.36 \times 5 = 35774.56$

For 20012, $y = 26212.76 + 1912.36 \times 6 = 37686.92$

For 20013, $y = 26212.76 + 1912.36 \times 7 = 39599.28$

Trend Analysis of Loan and Advances of NIBL for 5 years

| Year | Deposit (X) | X | X ² | XY |
|-------|---------------------|--------------|-----------------|----------------------|
| 2004 | 7338.00 | -2 | 4 | -14676 |
| 2005 | 10453.26 | -1 | 1 | -10453.16 |
| 2006 | 13178.15 | 0 | 0 | 0 |
| 2007 | 17769.10 | 1 | 1 | 17769.10 |
| 2008 | 31537.36 | 2 | 4 | 63074.72 |
| Total | $\sum X = 80275.36$ | $\sum X = 0$ | $\sum X^2 = 10$ | $\sum XY = 55714.66$ |

Here, $\sum X = 0$

$$a = \frac{\sum Y}{N} = \frac{80275.77}{5} = 16055.15$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{55714.66}{10} = 5571.47$$

Hence, trend line equation,

$$y = a + bx$$

$$y = 16055.15 + 5571.47X$$

For 2004, $y = 16055.15 + 5571.47 \times (-2) = 4912.21$

For 2005, $y = 16055.15 + 5571.47 \times (-1) = 10483.68$

For 2006, $y = 16055.15 + 5571.47 \times (0) = 16055.15$

For 2007, $y = 16055.15 + 5571.47 \times 1 = 21626.62$

For 2008, $y = 16055.15 + 5571.47 \times 2 = 27198.09$

For 2009, $y = 16055.15 + 5571.47 \times 3 = 32769.56$

For 2010, $y = 16055.15 + 5571.47 \times 4 = 38341.03$

For 2011, $y = 16055.15 + 5571.47 \times 5 = 43912.50$

For 2012, $y = 16055.15 + 5571.47 \times 6 = 49483.97$

For 2013, $y = 16055.15 + 5571.47 \times 7 = 55055.44$

Trend Analysis of Loan and Advances of HBL for 5 years

| Year | Deposit (Y) | X | X ² | XY |
|-------|---------------|--------|----------------------|----------------|
| 2004 | 12919.63 | -2 | 4 | -25839.26 |
| 2005 | 13451.17 | -1 | 1 | -13451.17 |
| 2006 | 14642.56 | 0 | 0 | 0 |
| 2007 | 16488.65 | 1 | 1 | 16488.65 |
| 2008 | 19847.18 | 2 | 4 | 39694.36 |
| Total | ΣY = 77349.19 | ΣX = 0 | ΣX ² = 10 | ΣXY = 16892.58 |

Here, ΣX = 0

$$a = \frac{\sum Y}{N} = \frac{77349.19}{5} = 15469.84$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{16892.58}{10} = 1689.26$$

Hence, trend line equation,

$$y = a + bx$$

$$y = 15469.89 + 1689.26X$$

For 2004, $y = 15469.89 + 1689.26 \times (-2) = 12091.32$

For 2005, $y = 15469.89 + 1689.26 \times (-1) = 13780.58$

For 2006, $y = 15469.89 + 1689.26 \times (0) = 15469.84$

For 2007, $y = 15469.89 + 1689.26 \times 1 = 17159.10$

For 2008, $y = 15469.89 + 1689.26 \times 2 = 18848.36$

For 2009, $y = 15469.89 + 1689.26 \times 3 = 20537.62$

For 2010, $y = 15469.89 + 1689.26 \times 4 = 22226.88$

For 2011, $y = 15469.89 + 1689.26 \times 5 = 23916.14$

For 2012, $y = 15469.89 + 1689.26 \times 6 = 25605.40$

For 2013, $y = 15469.89 + 1689.26 \times 7 = 27294.66$