CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Banking sector plays an important role in the economic development of the country. In this context, commercial banks are very prominent dealing with process of changing the available resources in the need of sectors. It is the intermediary between the deficit and the surplus of financial resources. Financial system contains two components via: depository financial institutions and non-depository financial institutions. Commercial Banks, Development Banks, saving and loan association, and credit union are the example of depository financial institutions whereas Employee Provident Fund, Finance Company and Insurance Companies are the example of non-depository financial institutions. All the economic activities are directly or indirectly channeled through these banks. People keep their surplus money as deposits in the banks and hence banks provide such funds to finance the industrial activities in the form of loans and advances.

Financial institutions play an important role in the proper functioning of an economy. These institutions act as an intermediary between the individuals who lend and those who borrow. These institutions accept deposits and provide loans and advances to those who are in need. They make the flow of investment easier. Therefore, we cannot deny the role a bank plays in developing an economy. It pulls the funds scattered in the economy and mobilizes them to the productive sectors. Their main objective is collecting the idle funds, mobilizing them into productive sectors and causing an overall economic development. Thus, the bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society as a whole.

Development of a nation depends upon various sectors viz: trade, industry, agriculture etc. Hence, to develop these sectors a continuous and adequate supply of resources is required. In developing countries, especially like ours, there is always a dearth of capital. The government cannot contribute to the economic development all alone. Nevertheless, the private sector also cannot reinforce due to low per capita income and higher propensity to consume of the people. Hence, due to low income, saving is low which on the other hand results in low capital formation. Thus, investment is one of the vital aspects in the improvement of the economic condition of a country.

In general, investment means to pay out money to get more. It is the sacrifice of current dollar for future dollar. It is geared by two factors: time and risk. The sacrifice takes place in the present, is certain while the reward comes later, and is generally uncertain. Investment policy ensures efficient allocation of funds to achieve the overall objectives. A distinction is often made between investments and saving. Saving is defined as foregone consumption; investment to restrict to real investment of the sort that Increases national output in future. Thus, investment is only possible where there are adequate savings. They are interrelated and go hand in hand.

The Commercial Bank Act, 2031 B.S of Nepal has stated, " A Commercial bank means banks which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions".

The profit of a bank largely depends upon the lending practices and policies and investments opportunities in different sectors. The greater the credit created by the bank the higher will be its profitability. Bank receives funds from various sources like share capital, reserve funds, retained earnings, bank borrowing, deposits and other liabilities. These

funds cannot be kept idle, they have to be invested in assets like cash and bank balance, money at call or short notice, investments, bills purchased and discount, loans and advances, fixed assets and deferred expenses. It is because the bank has to repay some liabilities on demand, it also has to give interest on deposits made by its customers and even the shareholders seek maximum return. Therefore, the funds received by the bank should be invested in such a way that they will be readily available to repay and distribute the returns. Hence, the bank should have enough liquidity and profitability with all the safety measures. In gist, a right balance should be kept between safety liquidation and profitability. Investment policy provides banks with several inputs through which they can handle their investment operations efficiently assuring maximum return with minimum exposure to risks. Thus, a sound lending and investment policy is necessary in order to uplift the economic condition of a country. Furthermore, considering the importance of lending to the individuals, business community and the society as a whole, it is imperative that the bank meticulously plan its credit operations.

1.1.1 Origin and Development of Commercial Bank

In the country, the development of banking is relatively recent. The record of banking system in Nepal gives detail account of mixture of slow and steady evolution in the financial and global economy of Nepalese life. Involvement of property owners, rich merchants, shopkeepers and other moneylenders has acted as fence to institutional credit in presence of unorganized money market.

Though the establishment of banking industry was very recent, some basic bank operations were in practice even in ancient times. In Nepalese Chronicle, it was recorded that the new era known as Nepal Sambat was introduced by Shankhadhar, a Sudra merchant of Kantipur in 879or 880 A.D. after having paid all the outstanding debts in thecountry. In 8th

century, Gunakama Dev had borrowed money to rebuild the Kathmandu valley. Similarly, in 11th century, during Malla regime there was evidence of professional moneylenders and bankers. During the regime of Jayasthiti Malla, caste system was introduced based on profession. Tankadhari were such caste, who used to provide loans and used to perform exchange trades. It is further believed that money-lending business, particularly for financing the foreign trade with Tibet became quite popular during the reign of Mallas. However, in the absence of any regulatory measures, the unscrupulous moneylenders were known to have charged exorbitant rates of interest and other extra dues on loans and advances.

The establishment of the "Tejarath Sdda" during the Year 1877 A.D. was fully subscribed by the government of Kathmandu valley, which played a vital role in the banking system. It helped the public by providing credit facilities at a very low rate of 5 percent. It provided credit especially on collateral of gold and silver. It ran successfully for four decades. Hence, the establishment of Tejarath Adda could be regarded as the foundation stone of banking in Nepal. An institutional banking system came into existence only in the 19th century with the establishment of Nepal Bank Ltd. in 1937 A.D. under "Nepal Bank act,1937".

After the establishment of Nepal Bank Ltd. in 1937, on the long run Commercial Bank Act was felt, accordingly, it was enacted in 1974 A.D. Hence, the door for opening commercial banks was opened to the private sector with the establishment of NABIL Bank in 1985 A.D. Since then, many commercial banks have been established. In order to promote banking sectors; Nepal government adopted open economic policies and allowed the entry of foreign bank on joint venture basis with a maximum of 50% equity shareholders. NEBIL Bank Ltd was the pioneer bank to set up

under such arrangement in Nepal. The arrangement was followed by the establishment of other commercial banks.

1.1.2 Functions of Commercial Banks in Nepal

The function of commercial bank can hardly be defined. The prime function is to collect scattered idle money from general public as deposits and charge a certain amount of interest by lending the fund to trade and industries. It also provides other banking services and assistances to its customer, e.g. agency banking services, transfer of fund, discounting bill of exchange, exchange foreign currencies, overdraft facilities, letter of credit facilities, underwriting of securities, etc.

Major Functions of Commercial Bank are as follows:-

1. Accepting Deposit
    a. Current Account.
    b. Saving Account
    c. Fixed Deposit
2. Advancing Loan
3. Agency Services
4. Miscellaneous Services

The additional functions of bank are as follows:-

- Assurance of traveler's cheque
- Sage deposit locker service
- Collection of trade information
- Financial advisory service
- Credit creation

1.2 Profile of Concerned Bank

In this sector, the profiles of concerned banks have been discussed. These profiles are related to the establishment, objectives, capital structure of the concerned banks and the facilities granted by them.

NABIL Bank Limited (NABIL)

Nepal Arab Bank Limited NABIL (now renamed as Nabil), the first joint venture bank of Nepal was established in 1984 A.D. under the Company Act, 1964 A.D. It is a joint venture bank\ with the Dubai Bank Limited owned 50% equity partner which was transferred to Emirates Bank International Limited Dubai (EBIL). Later in EBIL sold its entire stock to National Bank Limited Bangladesh (NBL).

The bank has been functioning with a total network of 48 branches across the country. There are 18 branches in Kathmandu and out of valley 30 branches. NABIL provides a full range of commercial banking services through its 47 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. It is the only bank having its presence at Tribhuvan International Airport.

The success of NABIL is a milestone in the banking history of Nepal as it paved the way for the establishment of many commercial banks and financial institutions. NABIL has a high prestige in the market for its highly personalized services to the customers. It is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal. It is Customer oriented, Result oriented, Innovative, Synergistic and Professional (C.R.I.S.P). "The Banker", the publication of the Financial Times, London, has honored the NABIL as "Bank of the year 2004" and it is a matter of prestige to be a leading bank of the country.

The Bank's Mission

The Bank's mission is to become preferred provider of quality financial service in the country. The mission of the Bank; customer focused,Result oriented , Inovation , Synergistic and professional. NABIL believe that the mission will be accomplished only by satisfying these two improtant components with the Customer at focus. The Bank always strives positioning itself in the hearts and minds of the customers. The bank's Promise To always be " your Bank at your Service".

The Bank's objective

NABIL was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective. NABIL, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sectors, represents a milestone in the banks history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

Present Capital Structure of NABIL

The present capital structure of NABIL. Authorized capital, of NABIL is Rs 1,600 million, whereas issued capital and paid up capital both are Rs 1449124000 the share ownership of NABIL 50 % of shares is owned by local owners. Among this ownership, 6.15% of share is owned by financial institutions and 10%of share is owned by organized Institution, 3.85% of share is owned by others and 30% of shares are owned by general public. Remaining50% of shares is owned by foreign Ownership.

Facilities Granted by NABIL

Various facilities (products & services) have been provided by NABIL. It provides loan as bills discounting facility under suppliers' credit, Import/Export loan, and Hire purchase. Project finance, Consortium /

Syndication loan, Mortgage loan, Loan against deposit and Govt. Securities, Housing finance, Auto finance, NABIL property, and Personal finance. It receives deposits as Current, Call, Time, Normal savings, and Provident fund, Retirement fund. Similarly, it is also serving for Trade finance, Remittance facilities, cards & ATMs, E-Banking; Clean bills etc. others facilities are U.S. VISA fee, Safe deposit locker, Balance certificate and Advance Payment Certificate.

Himalayan Bank Limited (HBL)

Himalayan Bank Limited is one of the leading private sector banks of Nepal. The bank was incorporated in 1992 by a few eminent individuals of Nepal in partnership with the Employment Provident Fund and Habib Bank Limited, Pakistan. Himalayan Bank has been established in such a time, when the country's economic sector was quite progressing. The bank commenced it's operation in January 1993. Himalayan Bank is also the first commercial bank of Nepal with most of shares held by the private sector of Nepal. Beside commercial banking services, the bank also offers industrial and merchant banking service.

Himalayan Bank has been known throughout Nepal for its innovative approaches to sale/ merchandise products and customer services such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme, ATMs and Tele-banking. ATMs and Tele-banking were the first customer services products, which were first introduced by Himalayan Bank.

The Bank's Vision:

Himalayan Bank Limited holds of a vision to become a Leading Bank of the country by providing premium products and service to the customers, thus ensuring attractive and substantial returns to the stakeholders of the Bank.

The Bank's Mission:

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

The Bank's Objective:

To become the Bank of first choice is the main objective of the Bank. **Present Capital Structure of HBL** Authorized capital, of HBL is Rs 3000 Million, where as issued capital and paid up capital both are Rs 1,600,000,000 respectively. Share Ownership of HBL The local owner's covers 80% of total shares is HBL. Among this ownership, 14% of share is owned by financial institutions, 51% shares are owned by others entities and 15 % of shares are owned by general public. Remaining 20 % of shares are owned by foreign Institutions.

Facilities Granted by HBL

HBL is providing loan/credit facilities such as overdraft loans, demand loans, time loans, trust, receipt loan, fixed term, project financing, revolving cash credit, packing credit, post shipment, personal loan, loan against fixed deposit, counter guarantee, letter of credit (sight/issuance), bid bond, performance bond, advance payment guarantee, hire purchase loan, housing loan, flexi (subidha loan). It receives deposits as current, normal savings, call, fixed term, accidental death insurance, and PSA scheme. Other facilities provided by HBL are funds transfer, HBL credit card facilities, letter of credit service, SMS banking, etc.

1.3 Focus of the Study

Banking sector plays an important role in the economic development of a nation. Without banking, the development of the nation is a mere thought. It is regarded as the heart of financial system. People invest their earnings with a hope of getting good return on their investment. Nevertheless, due to certain circumstances they loose their hard earnings. Therefore, in order to make the right decision we have to have a sound investment policy. The study focuses on evaluating the deposit utilization of the banks in terms of loans and advances and investments and its contribution in the profitability of the bank.

The main focus of the study is to make a comparative study of Himalayan Bank Ltd and NABIL Bank Ltd regarding financial performance in term of liquidity, asset management, profitability and risk. It also focuses on fund mobilization and investment policy.

1.4 Statement of the Problem

Today is the day of competition in each field of business and in banking sector also. There are 31 banks in operation in Nepal up to end of 2010 and some banks are going to start in near future The fast growth of such organization has contributed the prorate increment in collection deposits and their investment. They collect adequate amount from the mass, however they could not find or locate new investment sectors required to mobilize their funds on the changing context of Nepal. Only few commercial banks are getting regular profits. Most of them are unable to satisfy their shareholders and customers in earning profit and ensuring their safe deposit. Some banks are incurring clients or adequate deposits but they cannot find profitable sectors or opportunities to invest the deposit collections. They have always feared with high degree of risk and uncertainty.

There are various problems in resource mobilization by financial institution in Nepal. The most important problem is poor investment climate prevailing in Nepal due to heavy regulatory procedure, uncertain government policy, NRB's stringent directives, unsecured social environment etc. Lack of sound investment policy is another reason for a commercial bank not to properly utilizing its deposits that is making loan and advances or lending for a profitable project. This condition may lead the commercial bank to the position of liquidation.

Commercial banks invest their funds in limited areas to achieve highest amount of profit. They are found to be more interested in investment in less risky and highly liquid sectors like in T-Bills, development bonds and retail and consumer lending. There are obvious hesitations to invest on long term project and in venture capital investment. So, many of them follow conservative and un-efficiency investment policy. As with everything in Nepal, every commercial bank has an investment in the same sectors. They are in consumer lending, tourism, garments and in trading sector. They are the major sector. But given the current situation of the country, it is not up to them to decide which sector they want to go into. The main factor for success of any organization is the security situation. Once the security situation stabilizes, then only commercial bank consider rationally as to where they should to invest and grow. So, security problem is the burning problem for every commercial bank to invest their fund in our any sector.

Many of Nepalese commercial banks have not formulated their investment policy in an organized manner. Majority of them mainly rely upon instruction and guideline of Nepal Rastra Bank. They don't have clear view towards investment policy. Furthermore, the implementation of policy formulation and absence of strong commitments towards its proper implementation has caused many problems to commercial banks.

The compared problems specially related to investment functions of the commercial banks have been presented briefly as under:

1. Is Himalayan Bank's investment policy more effective and efficient then that NABIL?
2. Is Himalayan Bank's investment Strategy successful to utilize its available fund in comparison to the NABIL?
3. Are they maintaining sufficient liquidity, profitability and risk position?
4. What is the relationship of investment on loan and advances with total deposit and total net profit?

1.5 Objectives of the Study

The objectives of the study are as follows.

1. To analyze the investment policy of HBL and NABIL.
2. To analyze the utilization of available fund of HBL and NABIL
3. To examine the financial performance of HBL and NABIL in term of liquidity, Assets management, profitability and risk.
4. To analyze the relationship between deposits, loan and advances, investment, net profit and compare them between HBL and NABIL.

1.6 Significance/Importance of the Study

In Nepal, there is less availability of research and articles in investment policy of commercial bank. As investment is the backbone of development of the country and commercial banks have great contribution in the economic growth, this study will try to highlight investment policy of commercial banks.

This study will be summarizing, sensible and precious to the people having interest in the investment policy of HBL and NABIL bank. This will be beneficial for bank management, shareholders and customers. Furthermore, this will be useful for teacher and students related to the accountancy and

finance. In conclusion, the importance of the study focuses at following points:

- It will be helpful for commercial banks and financial institutions.
- It will provide required information and data to required persons,

Readers, shareholders, decision makers, traders, investors, general public, etc.

- It will be valuable property for decision making.
- This study can also be used as reference for future research.

1.7 Limitation of the Study

1. The study deals with only two commercial banks (HBL and NABIL.
2. This is mainly based on secondary data (published annual reports of commercial banks), journals, newspapers, magazines etc and unpublished thesis.
3. Out of the numerous affecting factors, this study concentrates only on those factors, which are related with investment policy, and available in the form required for analyzing the different issues.
4. The study cannot cover all the dimensions of the subject and cannot penetrate the depth.
5. The study covers only 5 years data, beginning from 2005/06 to 2009/10.

1.8 Organization of the Study

This study has been divided into five chapters, which are as follows:

Chapter I: Introduction

This chapter includes background of the study, focus of the study, statement of problem, objective of the study, significance/ importance of the study and limitation of the study.

Chapter II: Review of Literature

It deals with conceptual/ theoretical review and review of related studies.

Chapter III: Research Methodology

It includes research design, population and sample, sources of data, data collection techniques, data analysis tools, limitation of methodology and review of related studies.

Chapter IV: Data Presentation and Analysis

It tries to analyze and evaluate data through various tools and interprets major findings of the study.

Chapter V: Summary, Conclusion and Recommendations

This chapter summarizes the study, presents conclusions and recommendations.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature is an essential part of all studies. It helps the researcher to develop a thorough understanding previous research works that relates the present study. This chapter is concerned with review of literature relevant to the investment policy of commercial theoretical framework form which hypothesis can be developed for testing. Therefore, this chapter has its own importance in this study. This chapter is categorized into conceptual review, review of legislative provisions, review of thesis and review of articles.

2.1 Conceptual Review

This chapter focuses to discuss briefly about the theoretical concept of the investment and its relation with other subject matter in relation to banks. This chapter is further divided into different parts as below:

2.1.1 Investment

Investment means employing money to generate more money in the future. It is the use of capital to create more money, through more risk-oriented ventures designed to result in capital gains. Investment is the forfeit of current rupees for future rupees. The forfeit takes place in the present, and is certain .The reward comes later and is uncertain. Hence there are three elements in investment which are return, risk and time.

Investment, in its broad sense, means the sacrifice of current Rupees(dollars) and resources for the sake of future Rupees(dollars) and resources. In another words it is commitment of money resources that are expected to generate additional money and resources in the future. Such commitment takes place in the present and is certain to occur but the reward comes in the future and always remains uncertain. Therefore, every investment entails some degree of risk .An investment is a commitment of

funds made in the expectation of some positive rate of return (*Francis and Jack Clark, 1990*). Likewise, an investment is simply deferred consumption: instead of spending today, we choose to wait because we wish to have more to spend latter (*Corrado and Jordon, 2002*). In the same way, the sacrifice of current dollars for future dollars is termed as investment. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain.

From these definitions, it is clear that investment is simply the conversion of money into claims on money and use of fund for productive and income earning assets. It is the employment of funds with the target of achieving additional income or value in the future. It involves saving of resources from current consumption in the hope that some benefits will accrue in the future.

2.1.2 Policy

A policy is a plan of action to guide decisions and actions. It is the course of action to obtain objectives. Policy means rules and regulations set by organization. Policy determines the type of internal and external information resources. Policies in short can be understood as political management, financial and administrative mechanisms arranged to reach explicit goals.

2.1.3 Investment Policy

Investment policy can be defined as the action plan by which its funds are distribute on different type of assets with good profitability on the one hand and provide maximum safety and security on other hand. Investment policy is the cornerstone of the investment process. Without it, investors have no appropriate context in which t *Bexley* (1987), expresses his views as, investment policy fixes responsibilities for the investment disposition of the banks assets in terms of allocating funds for investment and loan and

establishing responsibility for day to day management of those assets. make decisions.

Commercial bank should consider the national interest followed by borrower's interest and the interest of the bank itself before investing to the borrowers (*Clemens, 1963*). To further pursue his view, bank lending must be for such purposes of the borrowers that are in keeping with the national policy and bank's overall investment policy. A bank's overall investment should be basically of short term characters, well spread, repayable on demand profitable and well inadequate security.

2.1.4 Investment Environment

The investment environment refers to all internal and external forces, which have a bearing on the functioning of investment decisions. It encompasses the kinds of marketable securities that exist and where and how they are bought and sold through the broker's network and financial intermediaries. Thus, the investment environment is a combination of securities, markets and intermediaries. Any securities transaction conducted without using broker is directly illegal in accordance with rules and regulation. Security is a piece of paper representing the investor's rights to certain prospects of property and the conditions under which he or she may exercise those rights. It serves as evidence of property rights. It may be transferred to another investor. The term "security" refers to a claim to receive prospective future benefits under certain conditions.

Security markets are mechanisms created to facilitate the exchange o f financial assets. It brings the buyers and sellers together. On the basis of securities traded, security market can be classified into primary and secondary market. On the basis of life-span of securities, it can be divided into money market and capital market.

Financial intermediaries are organization that issue financial claims against themselves and use the proceeds to purchase primarily the financial assets of others. They actively participate as both suppliers and demanders of funs. They include savings and loanassociations, savings banks, credit unions, life insurance companies, mutual funds, pension funds, etc.

2.1.5 Characteristics of Good Investment Policy

The income and profit of the bank depends upon lending procedure, policy and investment of its fund in different securities. The greater the credit created by the bank, the higher will be the profitability, in choosing specific investment; investors need define ideas regarding a number of features that their portfolios should possess. Their features should be consistent with the investors' general objectives and should afford them. Some characteristics of sound lending and investment policies from which many successful investors compound their selection policies are as follows:

1. Liquidity

Liquidity means the capacity of the bank to pay cash against deposits. People deposit money at the bank in different account with confidence that the bank will repay their money when they need. To maintain such confidence, the bank must be prepared with sufficient degree of liquidity of its assets. To maintain an acceptable degree of loan quality and liquidity, a bank must have an adequate policy of loan liquidation.

2. Profitability

Investor should invest their fund where they earn maximum profit. The profit of banks mainly depends on the interest rate, volume of loan, time period and nature of investment in different securities.

3. Safety and Security

The investor should never invest its funds in those securities, which are subject to too much depreciation and fluctuations because a little difference may cause a great loss. It must not invest into businessman who may be bankrupt at once and who may earn millions in a minute also. The investor should accept that type of securities, which are commercial, durable, marketable and high market prices.

4. Stability

An investor must consider stability of monetary income and stability of the purchasing power of income. However, emphasis on income stability may not always be consistent with other investment principles. If the income stability is stressed, capital growth and diversification will be limited.

5. Diversification

One of the acceptable methods of reducing risk is by diversification, a basic and important rule of any investment policy. The bank should not invest all his funds in only one area. To minimize risk, a bank must diversify its investment in different sectors. Diversification helps to sustain loss to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies.

2.1.6 Commercial Banks and Their Investment Policy

The term "bank" derives from the Latin "bancus", which refers to the bench on which the banker would keep its money and records. Some person traces its origin to the Italian word "banca", which means a bench for keeping, lending and exchanging of money. A bank is one who in the ordinary course of his business receives money which he pays by honoring cheques of persons from whom or whose account receives (*Hampton, 2001*).

Shakespeare (2001) in his book "Banking and Insurance Management" has classified banks as:

1. Central Bank
2. Commercial Bank
3. Agricultural Bank
4. Industrial Bank
5. Exchange Bank
6. Savings Ban
7. Co-operative Bank
8. Merchant Bank
9. Mutual Bank
10. Pension Funds
11. Housing Bank.
12. Equipment Bank

Commercial banks are those banks which perform all kinds of banking functions as accepting deposits, advancing loans, credit creation, and agency function. They provide short term, medium term and long term and long term loans to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit, etc. Commercial banks are institutions which provide services such as accepting deposits and giving business loans. They are one of the vital aspects of banking sector, which deal in the process of channel zing the available resources in the needed sectors.

As per the commercial Bank Act 2031 BS, "A commercial bank means the bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions." Commercial banks bring into being the most important ingredient of the money supply, demand deposits through the creation of credit in the form of loan and investments *(Crosse, 1963).*

Commercial banks deal with other people's money. They have to find ways of keeping their liquid assets so that they could meet demands of their customers. Their motive is wealth maximization and giving maximum benefit to its shareholders. In the anxiety to make profit, the bank cannot afford to lock up their funds in assets, which are not easily

releasable. The depositors must be to understand the bank is fully solvent. The depositors' confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The Banker has to keep adequate cash for this purpose. Cash is an idle asset and bankers cannot afford to keep a large possession of his assets in the form of cash, Cash brings in no income to the bank. Therefore, the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity.

Commercial banks are profit making organization. A bank established without the aim of gaining the profit is the central bank. Other banks are inspired with the object of earning profit and helping the economic development. They should have the ability to use the policy of banking investment to implement it much more carefully otherwise a bank may be unsuccessful in its goal.

Without investment, a bank can't gain profit. Therefore, after the establishments of bank it collects deposits. It also collects capital by selling its shares. Thus, a great capital is collected in the bank. It is not better to keep such capital fund inactive. The bank should able to clear the policy of its investment by making deep study. Every commercial bank has an investment policy. The basic factors that will determine the objectives of a bank's investment policy are its income and liquidity needs and management's willingness to trade liquidity for greater income opportunities and vice versa, which means accepting greater or less risk. A bank that has a portfolio of high quality loans and relatively stable deposits can assume more risk. It might be preferable for the bank to pursue an aggressive lending policy. The higher risk in the loan portfolio would be countered with a very liquid investment portfolio. One of the acceptable methods of reducing risk is by diversification, a basic and important rule of any investment. The investment process includes following steps:

1. Setting investment objectives
2. Performing security analysis
3. Constructing a portfolio
4. Revision of portfolio
5. Evaluation portfolio evaluation

Banks have developed format, written lending policies in recent years. They provide guidance for lending officers by establishing a greater degree of uniformity in lending practices.

Emphasizing the importance of investment policy, lending is the essence of commercial banking; consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management (*Crosse, 1963*), Crosse further adds, the formulation of sound lending policies for all banks should have adequate and careful consideration over community needs, sizes of loan portfolio, character of loan, credit worthiness of borrower and asset pledged to security borrowing, interest rate policy. The investment policy of a bank should be reviewed occasionally and Modified as economic conditions change. It should be reviewed when developments occurring within or outside the bank dictate.

2.2 Review of Legislative Provisions

In this section, the review of legislative framework under which the commercial banks are operating has been discussed. All the commercial banks have to conform to the legislative provisions specified in the "*Commercial Bank Act 2031*" and the rules and regulations formulated to facilitate the smooth running of commercial banks.

Some of the important rules and regulations affecting the investment policy of commercial banks that have been directed by Nepal Rastra Bank are discussed below.

NRB Rules Regarding Fund Mobilization of Commercial Banks

NRB may establish a legal framework by formulating various rules and regulation to mobilize bank's deposit in different sectors. These directives have direct and indirect impact while making decision in terms of investment and credit to priority sector, deprived sector, CRR, loan loss provision, capital adequacy ratio, interest spread, productive sector investment. The main provisions, established by NRB in the form of prudential norms in relevant area are briefly discussed below:

i. Provision For Investment in Priority and Deprived Sector

NRB has taken a policy of gradual phasing out of the priority sector lending requirement since 2003/04. According to the provision, investment in shares of the rural development bank by commercial banks, which used to be counted for the priority sector lending only is now to be included under the deprived sector lending.

Commercial banks in Nepal are required to earmark a portion of their loan portfolio to priority lending (agricultures, cottage industry, services), which includes 0.25% to 3% to the deprives sector (poor population). Under this obligations, commercial lend, or provide wholesale funds or equity to microfinance providers serving the poor.

Recently, the priority lending was set at 12% of the loan portfolio. It is now being phased out ending completely in 2007/08 while the 3% deprived sector requirement will stay in place, and therefore loan and investment in microfinance with it.

ii. Cash Reserve Requirement (CRR)

Commercial banks shall maintain liquid assets (also called cash reserve) to ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at any time and to inject the confidence in depositors regarding the safety of their deposited funds.

Since the past few years, the bank had adopted the medium term policy to gradually decrease the CRR, as an instrument to reduce the operating cost and narrow the interest rate differentials, to 3 %. However, considering the inflationary pressure in the economy, the CRR has been kept unchanged at 5.5 % that will be revised downwards given the favorable situation. To absorb/inject liquidity, open market instruments such as sale auction, repurchase auction and reverse repurchase auction will be continued.

iii. Loan Classification and Loss Provision

Loan can be classified into performing and non-performing loans. As per directives of NRB, bank and financial institutions (BFIS) classify their loans and advances into pass loan, sub-standard loan, doubtful loan and loss loan. Pass loans are performing loans. Any loan and advances classifies as sub-standard, doubtful and loss are considered as NPL. Pass loan has duration up to 3 months. Sub-standard has duration of 3 months to 6 months. Doubtful loan has the duration up to 1 year. Loss loan has duration of more than1year.

Furthermore, NRB has directed commercial banks to maintain certain reserves as loan loss provision (LLP) as given in Table 2.1:

Table 2.1: Loan Provision

Loan classification	Duration	LLP
Pass	Up to 3 months from maturity	1 %
Sub-Standard	3-6 months from maturity	25 %
Doubtful	6 months-1 year from the maturity	50%
Loss	Above 1 year of maturity	100%

iv. Directives to Raise Capital Funds

According to current provisions, a minimum paid up capital of Rs. 1 billion is required for the establishment of a new national level commercial bank. The existing national level commercial banks are required to increase their paid up capital gradually to Rs. 1 billion by the end of mid July 2009. For this purpose, all commercial banks are appropriating some amount from their profit to 'capital adjustment fund'. Accordingly, some commercial banks may maintain Rs 1 billion paid up capital by the end of mid-July 2010 or make adjustment in above stated fund. Commercial banks are free to decide on any of these options and may go for combination of these two. However, those banks increasing paid up capital through fund are required to maintain a minimum paid up capital of Rs.500 million. Following measures will be initiated for those banks, which fail to make provisions of capital requirement as stated above:

a. Distribution of dividend will be banned.
b. Branch expansion will not be allowed.
c. A limit on deposit mobilization will be imposed.
d. Single obligor limit relating to loans to an individual and a company will be reduces.
e. Any other actions can be initiated.

NRB is in the process of implementing BASEL II from 2007. Accordingly, required capital adequacy (CAR) will be decided according to BASEL provision. Unless a higher minimum ratio has been set by Nepal

Rastra Bank for an individual bank through a review process, every bank shall maintain at all times, the capital requirement set out below:

a. Core capital of not less than 6 per cent of total risk weighted exposure

b. A total capital fund of not less than 10 per cent of its total risk weighted exposure.

2.3 Review of Related Articles

In this section, attempt has been made to review some relevant articles in different economic/finance journals. The World Bank Bulletins, dissertation papers, magazines, newspapers and other related literature. *Source: NRB Directive 2/061/062; Clause 1 and 8.1*

Bajracharya (1995) in his article, "*Monetary Policy and Deposit Mobilization in Nepal*," has concluded that mobilization of domestic savings is one of the prime objectives of the monetary policy in Nepal. Commercial banks and financial intermediary for accepting deposit of private sector and providing credit to the investor in different sectors of the economy. He further adds that the public deposit is the major source of credit and investment of the commercial bank in Nepal.

Pyakural (1997) in his article, "*Workshop on Banking and National Development*" has written the present changing context of the economy call for a substantial revitalization of the resources. How much they have gained over the years depends chiefly on how far they have been able to utilize their resources in an efficient manner. Therefore, the task of utilization of resources is as much crucial as the mobilization .Therefore, the task of utilization of resources is as much crucial as the mobilization. The under utilization of resources not only result in loss of income by also goes further to discourage the collection of deposits. Thus, in his article he has emphasized on proper utilization of mobilized resources and profitability increment.

Shrestha (1998) in her article, "*Lending Operation of Commercial Banks of Nepal and its impact on GDP*", has presented with the objectives to make an analysis of contribution of commercial banks lending to the gross domestic product (GDP) of Nepal. Thus, in conclusion, she has accepted the hypothesis i.e. there has been positive impact on GDP. She has accepted that there has been positive impact by the lending of commercial banks in various sectors of economy, except service sector investment.

Sharma (2003) in his article, "*Banking the Future on Competition*," writes, 'Nepali financial sector (especially the banking sector) has undergone drastic changes in the past one and half decades. One of the most important achievements as a result of the growth in the number of commercial banks in the past liberalization period is in the area of domestic saving. Quantitative growth of the banking sector has positively contributed in raising domestic banking savings.

He further adds post liberalization era competition has forced commercial banks to broaden their lending portfolio that has resulted in the expansion of loan extension from the trading sector to the industrial sector. He adds increasing credit flow to both trading and industrial sector and canalize domestic savings into capital investments towards which the contribution of the banking sector cannot be questioned, will ultimately bolster the country's rate of economic growth. In addition, the sector has actually done more than just providing mere safety to small investor's capital.

He has also highlighted that majority of CBs are being established and have operation in urban areas only. He has added that private banks have mushroomed only in urban areas where large volume of banking transaction and activities are possible. According to him, banks are tempted to invest without proper credit approval and on personal guarantee, whose

negative side effects would show true colors only after four or five years. The CBs are also charging higher interest rates on lending.

Shrestha (2004), Director of NRB, presented an article, "*Modus Operandi of Risk Appraisal in Bank Lending*." His article endeavors to highlight some of the basic issue pertaining to the aspect of credit appraisal, in respect of domestic bank lending. He has written that the tradeoff between risk and return is one of the prime concerns of any investment decision, whether long or short term, as the effective risk management is central to good banking. With more deregulation setting in, evaluation of risk appraisal is assuming more importance. According to him, absolute quantitative credit deposit ratio has no relevance if the assets are not performing ones. Hence, He has, felt that appraisal techniques of bank lending in competitive areas has to be more attuned towards risk evaluation.

He further suggests, "Effective credit risk management allow a bank to reduce risks and potential NPAS. Once banks understand their risks and their costs, they will be able to determine their most profitable business and, thus, price products according to the risks. Therefore, the banks must have and explicit credit-risk strategy supported by organizational changes, risk-measurement techniques and fresh credit processes and system." He has given five crucial areas that credit-risk management should focus on:

- Credit sanctioning and monitoring process.
- Approach to collateral.
- Credit risks arid from new business opportunities.
- Credit exposures relative to capital or total advances.
- Concentration on correlated risk factors.

2.4 Review of Related Thesis

Various students regarding the various aspects of commercial banks as financial performance, lending policy, investment policy, resources mobilization policy, resources mobilization and capital structure have concluded several thesis works. Some of them, as supposed to be relevant for the study as prescribed below:

Bohara (1996) in his thesis, "*A Comparative Study on the Financial Performance of Nepal Arab Bank Ltd. and Nepal Indosuez Bank Ltd.*" has made endeavor to examine the comparative financial performance of NABIL and NIBL in terms of liquidity, activity, profitability along with other parameters. He has concluded that bank performance cannot be judged solely in terms of profits, as it may have earned profit maintaining adequate liquidity and safety position. But it should also be evaluated on the ground of the contribution, it has made to the community, government and national economy .This means, the bank should come forward with national priority tasks. The tasks are possible when they expand branches, more, employment opportunities, services tom more customers, developing skills and expertise in local staff satisfactions on profit earning and exchange of autonomy provided by them.

Mahato (1999) in his thesis paper, "*A Comparative Study of the Financial Performance of NABIL AND NIBL*," concludes that NABIL pays more attention towards the attainment of national objectives through participation in the task of economic development wit h liberal attitude towards the government and being more responsive to the national priorities like branch expansion, more employment opportunities and more resource mobilization. So, from the point of view of shareholders and government, NABIL is performing much better then NIBL. He has recommended all the commercial banks to increase portion of equity capital in their capital structure, control operating costs, increase

liquidity as per the new regulation of NRB, meet social responsibility, investment in productive sectors.

Thapa (2002) in her thesis," *A Comparative Study on Investment Policy of NBBL*) and other JVBS has compared investment policy of NBBL with NABIL and NGBL. She concludes that NBBL is in a weak position regarding its on balance as well as off balance sheet activities. Profitability position of NBBL is comparatively worse than that of NABIL and NGBL. She adds that NBBL has good deposit collection enough liquidity but it has made negligible amount of investment in Government securities. She further adds that the position of NBBL in regard to utilization of fund to earn profit is not better in comparison to NABIL and NGBL.

Khadka (2003) in his thesis, "*A Study on Investment Policy of NABIL in Comparison to their Joint Venture Banks of Nepal*", has compared investment policy of NABIL with other joint ventures banks NGBL. The main objective of the study was to evaluate the liquidity, asset management, efficiency, profitability and risk position.

Khadka has found that liquidity position of NABIL is worse than that of NGBL and NIBL. NABIL has more portion current assets as loan and advances but less portion as investment on government securities. NABIL is less successful in on balance sheet operations as well as well as off-balance sheet operations that of NGBL and NIBL. NIBL is more successful in deposit mobilization but fails to maintain high growth rate of profit in compare to BGBL and NIBL.

He has strongly recommended NABIL to utilize its risks assets and shareholders fund to gain highest profit margin and reduce its expenses and collect cheaper fund for more profitability. He has recommended investing its fund in different sectors of investment and administering various

deposits schemes to collect fund such as cumulative deposit scheme, price bonds scheme, gift cheques scheme, etc. He has recommended adopting liberal lending policy however he has not explained his idea of liberal lending policy.

Shrestha (2004) in her thesis, "*Investment Analysis of Commercial Banks*", has compared investment policy of HBL and NSBIL. She concludes that % of HBL's investment is extremely higher than NSBIL. Both banks have invested on Govt. Securities but HBL has invested in NRB bonds as well as in other productive sectors. NSBIL is better than HBL from liquidity point of view. HBL has higher profitability position tan NSBIL. HBL is exposed to more risk than NSBIL. He further adds that HBL has maintained higher growth rate in net profit in comparison to NSBIL.

Joshi (2005), conducted a study on "*Investment Policy of Commercial Banks in Nepal: A Comparative Study of Everest Bank Limited with NABIL Bank Limited and Bank of Kathmandu*." The secondary data were used to conduct the study. The research findings of the study were: The liquidity position of the EBL was better than NABIL and BOK. EBL had the highest cash and bank balance to total deposits and cash and bank balance to current assets ratio. Nabil had the lowest liquidity position. EBL had good deposit collection and made enough investment on Government Securities, but it maintained a moderate investment policy on loans and advances.

From the analysis of assets management or activity ratio, it was concluded that EBL was average, or in between NABIL and BOK. The total investment of EBL was in-between the other two banks. In the study, loans and advances to total deposit were higher in BOK, but total investment to total deposit was higher in NABIL. Investment on shares and

debentures to total working fund ratio was higher in BOK. However, the coefficient of variation was higher in EBL. Analysis of profitability, total interest earned to total outside assets of EBL is lowest at all. However, overall analysis of profitability ratios showed that EBL was an average in comparison to other compared banks i.e., NABIL and BOK. From the viewpoint of risk ratio, EBL had higher capital risk ratio, but average of credit risk ratio of NABIL and BOK.

Lamichhanne (2006) in her thesis, "*Investment policy in Nepal: A comparative study of ADB with NBBL and HBL Ltd*.", has compared investment policy of Agriculture Development Bank with NBBL and HBL. She concludes that risk in banking sector trends to be concentrated in the loan portfolio, when bank gets into serious financial trouble its problem usually spring from significant amounts of loan that have become un- collectible due to mismanagement, illegal manipulation of loan, Misguided lending policy or unexpected economic downturn. Therefore, the banks investment policy must be such that it is sound and prudent in order to protect public funds. She has found that the liquidity position of ADB is comparatively better than that of HBL and NBBL. The asset management of ADB is good as compared to HBL and NBBL. She recommends the ADB should focus on the collection of expired loans and advances to reduce the loan loss ratio.

2.5 Research Gap

Investment in different sectors is made on the basis of the directives and instructions of Nepal Rastra Bank as well as the investment policy and guidelines of the concerned commercial bank itself. Commercial banks should follow these directives and circulars. Furthermore, their own investment guidelines and policies should be in line with NRB directives and circulars. Therefore, the up to date study over the change of time frame has been a major concern for the researcher, concerned organization as well

as the banking industry as a whole. This study covers the more recent financial data, NRB guidelines and instructions than those of studies previously conducted.

Portfolio management is the major part of the bank's investment policy and it is the major concern of stakeholders to know the portfolio behaviors of the bank. To reduce the default risk of credit, there should be the optimum diversification of loan and advance. This study puts its effort to find out the proportion to total loan and advances of the bank disbursed to different sectors of economy and analysis the diversification of its investment.

Not much more research study has been conducted in this topic. A very few study based on only one bank has been conducted before 2003, but this study is based on comparative analysis of two joint venture listed commercial banks namely NABIL and HBL up to the financial year 2009/10. So, this research work is very much centered to identify responsible causes, to analyze them and recommend improvement measures for the betterment of the banks under study and to analyze the investment position of the two leading banks.

CHAPTER - III

RESEARCH METHODOLOGY

This chapter contains the discussion about the methods and processes that has been used for the study and analysis of the investment strategy of NABIL and HBL. It includes, research design, and sources of data, population and sample and methods of data analysis.

3.1 Research Design

Descriptive and analytical research design have been used to achieve the objective of this study.

Descriptive research refers to the type of research question, design, and data analysis that will be applied to given topic descriptive statistical tell what is while inferential statistics try to determine cause and effect. Descriptive research involves gathering data that describe events and them organizes, tabulates, depicts, and descriptive the data collection. In this research can be either quantitative or qualitative. Descriptive studies report summary data such as measures of central tendency including the mean, variance, percentage and correlation between variables. But in analytical research micro analysis and evaluation of available data and information. Descriptive techniques have been applied to evaluate investment performance of NABIL and Compare it with HBL as well as some statistical and financial tools have been adopted to examine facts. Descriptive cum analytical research design have been used in this study.

3.2 Sources of Data

This study is conducted on the basis of secondary data. The data required for the analysis are directly obtained from the Balance Sheet, Profit and Loss account, and annual reports of concerned banks and publications of NRB. Supplementary data and information are collected from number of institutions like SEBON, NEPSE, ministry of finance, budget speech of

different fiscal year, economic survey, etc. Likewise various data and information are collected from the economic journals, magazines and other published and unpublished reports.

3.3 Population and Sample

There are altogether 31 commercial banks functioning all over the country and most of their stocks are traded actively in the stock market. The population is presented in Table 3.1.

Table 3.1: List of Licensed Commercial Banks in Nepal

S.N.	Name of Commercial Bank	Operation Date (A.D.)
1	Nepal Bank Ltd.	1937/11/15
2	Rastriya Banijya Bank	1966/01/23
3	Agriculture Development Bank Ltd.	1968/01/02
4	Nabil Bank Ltd.	1984/07/16
5	Nepal Investment Bank Ltd.	1986/02/27
6	Standard Chartered Bank Nepal Ltd.	1987/01/30
7	Himalayan Bank Ltd.	1993/01/18
8	Nepal SBI Bank Ltd.	1993/07/07
9	Nepal Bangladesh Bank Ltd.	1994/06/05
10	Everest Bank Ltd.	1994/10/18
11	Bank of Katmandu Ltd.	1995/03/12
12	Nepal Credit and Commerce Bank Ltd.	1996/10/14
13	Lumbini Bank Ltd.	1998/07/17
14	Nepal industrial &Commercial Bank Ltd.	1998/07/21
15	Machhapuchhre Bank Ltd.	2000/10/03
16	Kumari Bank Ltd.	2001/04/03
17	Laxmi Bank Ltd.	2002/04/03
18	Siddhartha Bank Ltd.	2002/12/24
19	Global Bank Ltd.	2007/01/02
20	Citizens Bank International Ltd.	2007/06/21
21	Prime Commercial Bank Ltd.	2007/09/24
22	Sunrise Bank Ltd.	2007/10/12
23	Bank of Asia Nepal Ltd.	2007/10/12
24	Development Credit Bank Ltd.(DCBL)	2008/05/25
25	NMB Bank Ltd.	2008/06/05
26	Kist Bank Ltd.	2009/05/07
27	Janta Bank Ltd.	2010/04/05
28	Mega Bank Nepal Ltd.	2010/07/23
29	Commerz and Trust Bank Nepal Ltd.	2010/09/20
30	Civil Bank Ltd.	2010/11/26
31	Centuri Commercial Bank Ltd.	2011/03/10

Source: Nepal Rastra Bank

From the above bank, NABIL Bank Ltd. and Himalayan Bank Ltd. are selected purposely as sample for the study.

3.4 Methods of Data Analysis

In this study, various financial and statistical tools have been used. The various tools are presented as follows:

3.4.1 Financial Tools

Financial tools are used to examine to examine the financial strength and weakness of bank. The analysis of the financial position of any firm to examine its performance is known as financial analysis. It is the process of evaluating the position of a firm by establishing relationship with various components parts of the financial statements. Financial analysis is the process of identifying the financial strength and weakness of a firm by properly establishing the relationship between the items of balance sheet and profit and loss account *(Pandey, 1999)*.

1. Ratio Analysis

Ratio is the mathematical relationship between two accounting figures. Ratio analysis is the main tools of financial statement analysis. Ratio means the numerical or quantitative relationship between two items or variables. It can be expressed as percentage, fraction or a stated comparison between two numbers (*Pandey, 1999)*. Hence, ratio analysis is the calculation and interpretation of financial ratios to assess the forms performance and status. Qualitative judgment can be done with the help of ratio analysis. In this study, some of the relevant financial ratios are used. They are presented into three broad groupings.

I. Financial Policy Measures

A. Liquidity ratios

II. Operating Efficiency Measures

A. Asset management ratios (Activity or performing ratios)

III. Performance Measures

A. Profitability ratios

B. Risk ratios

C. Growth ratios

D. Capital adequacy ratios

I. Financial Policy Measures

A. Liquidity Ratios

Liquidity simply means short-run solvency of a firm. It reflects the short term financial strength of banks. Liquidity means the ability of a firm to satisfy its short term obligation. It is the measurement of speed with which a bank's assets can be converted into cash to meet deposits withdrawal and other current obligations. The certain percentage of deposit should be kept in bank in the form of cash .It the bank will keep greater deposit in cash, it losses the opportunity cost. Similarly, if bank keeps low amount in deposit, it could not be able to pay depositors on time. Liquidity can be measured in following ways.

i. Current Ratio

It measures short-term debt paying ability of a bank. It measures the availability of current liabilities. It is computed by dividing current assets by current liabilities. Current assets consists of cash in hand, cash at bank, short term marketable securities, bills receivable, sundry debtors, prepaid expenses, inventory and accrued income. Current liabilities consist of bills payable, sundry creditors, short-term loan, income tax draft.

Mathematically,

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

Current ratio is considered to be satisfactory one when 2:1. Higher current ratio indicates that the firm is in liquid and has ability to pay its current obligation in time. On the other hand, lower current ratio represents that liquidity position is not good and the bank will face difficulty in payment of current obligation.

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

This ratio also known as cash reserve ratio shows the percentage of deposit maintained as liquid assets. This ratio is maintained to meet any unexpected demands of the depositors. A higher ratio represents a greater ability to meet any unexpected demand of the depositors. If the bank is not able to maintain adequate amount of deposit it cannot operate day to day transactions. Keeping idle cash is not desirable as it blocks the capita. Therefore, this ratio is designed to measure the bank's ability to meet the immediate obligation. It is calculated by dividing cash and bank balance by total deposits.

Mathematically,

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

iii. Cash and Bank Balance to Current Assets Ratio

This ratio shows the percentage of readily available fund with the bank. It measures the proportion of the most liquid assets among the current assets of bank. Higher ratio shows the bank ability to meet demand for cash. It is calculated by dividing cash and bank balance by current assets.

Mathematically,

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

iv. Investment on Government Securities to Total Deposit Ratio

Government security is a risk free security. The banks instead of keeping their funds idle, invest in various government securities i.e. treasury bills

and development bonds which are liquid in nature as they can be traded any time. This ratio measures how much of the total deposit is utilized in investing in government securities. It is calculated as dividing investment in government securities by total deposit.

Mathematically,

$$\text{Government Securities to Total Deposit Ratio} = \frac{\text{Government Securities}}{\text{Total Deposits}}$$

II. Operating Efficiency Measures

A. Assets Management Ratios/Activity or Performing Ratios

Asset management or activity ratio measures the effectiveness of the bank's investment decision and the utilization of its resources. It indicates the speed with which assets are being converted or turnover. The greater the rate of turnover or conversion, the more efficient is the management or utilization of assets. Here, some of these ratios are computed to assess the bank's efficiency in utilization of available assets in following ways:

i. Loan and Advances to Total Deposit Ratio

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

Mathematically,

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

ii. Total Investment to Total Deposit Ratio

Investment implies the utilization of firm's deposit on investment in government securities, shares, debentures and bonds of other companies and bank. It can be computed by dividing total investment by total deposit.

Mathematically,

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

iii. Loan and Advances to Working Fund Ratio

Loan and advances is the major component in the total working fund, which indicates the ability of bank to canalize its deposits in the form of loan and advances to earn high return. This ratio is calculated by dividing loan and advances by total working fund. Total working fund includes all assets of on balance sheet items i.e. current assets, net fixed assets, loan for development banks and other miscellaneous assets but excludes off balance sheet items such as Letter of Credit, Letter of Guarantee, etc.

Mathematically,

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

iv. Investment on Government Securities to Total Working Fund Ratio

This ratio shows bank's investment on government securities in comparison to the total working fund. It is computed by dividing investment on government securities by total working fund. Mathematically,

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

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

This ratio shows the bank's investment in shares and debentures in comparison to the total working fund and calculated by dividing investment in shares and debentures by total working fund.

Mathematically,

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

vi. Performing Loan Loss Provision

Performing loan is a loan which had due up to 90 days. This ratio shows how much the banks are successful in utilizing their assets for the purpose of profit generation. Higher ratio indicates efficiency in utilizing the good loans.

Mathematically,

$$\text{Performing Loan Loss Provision} = \frac{\text{Performing Loan}}{\text{Total Loan}} \times 100\%$$

vii. Non Performing Loan Loss Provision

Loan is said to be non-performing with the due date of more than 90 days. Non- performing loan consists of substandard loan, doubtful loans and bad loans. Higher non- performing loan ratio indicates worse management of assets. If the ratio is low, it indicates a favorable credit management position.

Mathematically,

$$\text{Non Performing Loan Loss Provision} = \frac{\text{Non-Performing Loan}}{\text{Total Loan}} \times 100\%$$

viii. Loan Loss Provision Ratio

This ratio depicts how much provision a bank has to create for its loan provided. It is the ability of the management to have sufficient provision for the non-performing loans. Higher the rate, better is the financial position and vice versa.

Mathematically,

$$\text{Loan Loss Provision Ratio} = \frac{\text{Total Loan Provision}}{\text{Non-Performing Loan}} \times 100\%$$

III. Performance Measures

A. Profitability Ratios

Profitability ratio is calculated to measure the efficiency of operation of a firm in terms of profit. It is the indicator of the financial performance of

any institution. This implies that higher the profitability ratio better the financial performance of bank. Profitability ratio can be calculated through following ways.

i. Return on Loan and Advance Ratio

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

Mathematically,

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

ii. Return on Total Working Fund Ratio (ROA)

This ratio, also known as return on assets measures the overall profitability of all working funds i.e. total assets. It is computed by dividing net profit (loss) by total working fund.

Mathematically,

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

iii. Return on Equity Ratio (ROE)

This ratio measures how efficiently the banks have used the funds of owners. It is calculated by dividing Net profit by total equity capital. Total capital includes shareholder's reserve including P/L A/C and share capital i.e. Ordinary share and preference share capital.

Mathematically,

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

iv. Total Interest Earned to Total Asset Ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of assets. It is computed by dividing total interest earned by total assets.

Mathematically,

$$\text{Return on Equity} = \frac{\text{Total Interest Earned}}{\text{Total Assets}}$$

v. Total Interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest to total asset. Higher ratio implies better performance of the bank in terms of interest earning on its total working fund. This ratio is calculated by dividing total interest earned by total working fund.

Mathematically,

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

B. Risk Ratios

Risk taking is the prime business of bank's investment management. The possibility of risk makes bank's investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So, the bank has to have idea of the level of risk that ultimately influences the bank's investment policy.

i. Credit Risk Ratio

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. This is expressed as the percentage of loan and advances to total assets. It helps to check the probability of loan non-repayment loan or the possibility of loan to go into defaults. Risk of non-repayment loan is known as credit risk.

Mathematically,

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

ii. Capital Risk Ratio

Capital risk ratio measures banks ability to attract deposit and interbank funds. It also determines the level of profit, a bank can earn. The capital risk is directly related to return on equity. Higher the ratios, higher will be the capital risks. It is computed by dividing total share capital to risk-weighted assets. Risk- weighted asset is the minimum amount of capital that is required within banks and other institutions, based on a percentage of the assets, weighted by risk. It is the total of all assets held by the bank which are weighted for credit risk according to a formula determined by the regular (Central bank). It includes the sum of on- balance sheet and off-balance sheet items.

Mathematically,

$$\text{Capital Risk Ratio} = \frac{\text{Share Capital}}{\text{Risk Weighted Assets}}$$

C. Growth Ratio

Growth rates of total deposits, loan & advances, total investment and profit are calculated to analyze and examine the expansion and growth of the bank.

Mathematically,

$$D_n = D_o\ (1 + g)^n$$

Here, D_n = Total amount in n^{th} year

D_o= Total amount in n^{th} initial year

g = Growth rate

n= period

D. Capital Adequacy Ratios (CAR)

Capital adequacy ratio is the measure of the amounts of a bank's capital expressed as a percentage of its risk weighted credit exposures. It is the ratio which determines the capacity of the bank in terms of meeting the time liabilities and other risk. CAR protects depositors there by maintaining confidence in the banking system. The investment of the commercial banks has deep impact in the capital. Therefore, the commercial banks have to maintain the investment policy in such a way that it should also be helpful in maintaining the adequate capital as specified by NRB. Capital fund of bank should be based on the measurement of risks associated with the assets of the bank, the minimum capital fund required to be maintained is based on the risk weighted assets, the bank need to maintain its assets so as to minimize total risk weighted assets or to increase the capital by issuing shares, debentures or generating more and more profit. So, capital adequacy policy of bank also has effect on investment portfolio.

Mathematically,

$$\text{Total Capital Adequacy Ratio} = \frac{\text{Core Capital+Supplementary Capita}}{\text{Total Risk Weighted Assets}}$$

$$\text{Core Capital Adequacy Ratio} = \frac{\text{Core Capital}}{\text{Total Risk Weighted Assets}}$$

The capital adequacy norm has been set on the basis of total risk weighted assets. As all the credit/advances and investments are the assets of the bank, the banks need to take extra care while making an investment decision. The assets discussed are on-balance sheet as well as off-balance sheet.

On the basis of the types of risks, the assets are classified into four buckets by assigning weight of 0%, 20%, 50% and 100% risk. The highly secured assets weight 0% risk and highly on secured assets weigh100% risk. So, if the bank has the tendency of investing in 0% risk weighted asset then the total risk weighted asset will be low and hence the minimum capital

require to be maintained can be easily met. But if the bank takes the risk and invests heavily in 100% risk weighted assets then the total risk weighted asset will be high and hence the bank will have to increase its capital by different means so as to meet the minimum required capital as prescribed by NRB.

Common Size Analysis

Financial performance of a company can be traced by the preparation of comparative statement. Changes in items of balance sheet and income statement can be shown by relative or proportional changes. They are shown by recording percentages calculated in relation to some common base in special columns. In case of income statement, sales figure is assumed to be common base (equal to 100) and all other items are expressed as percentage sales. Similarly, the balance sheet items are expressed as percentages of total assets or total liabilities. The financial statements prepared in terms of common base percentages are called common-size analysis. This kind of analysis is also called vertical analysis.

3.4.2 Statistical Tools

After the collection, organization and the presentation of data, the next step is to analyze the data. On this study, various statistical tools like trend analysis, standard deviation, coefficient of variance, coefficient of correlation analysis, etc. have been used to analyze this data. Statistical tool or appropriate technique of analysis depends upon the nature of the data and the purpose of the enquiry. The following tools are used in the analysis of the financial position of the bank:

1 Arithmetic Mean (Average)

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

$$\bar{x} = \frac{\sum x}{n}$$

Where: $\bar{x}$ = Arithmetic mean

N = Number of observations

$\sum x$ = Sum of observation

2. Standard Deviation (S.D)

The measurement of the scatter-ness of the mass of figures in a series about an average is known as dispersion. The standard deviation measures the absolute dispersion. Standard deviation, usually denoted by the letter σ (sigma: the Greek alphabet) was firs suggested by Karl Pearson as a measure of dispersion. It is defined as the positive square root of the arithmetic mean of the squares of the deviations of the given observations from arithmetic mean as is given by:

$$\sigma = \sqrt{\frac{1}{x}\sum(x - \bar{x})^2}$$

Where,

$\bar{x} = \frac{1}{n}\sum x$ is the arithmetic mean of the given values.

3. Coefficient of Variance (CV)

Standard deviation is only an absolute measure of dispersion, depending upon the units of measurement. The relative measure of dispersion based on standard deviation is called the coefficient of standard *(Gupta, 1993).*

It is given by: $CV = \frac{\sigma}{\bar{x}} \times 100\%$

For comparing the variability of two distributions, CV is computed of each distribution. A distribution with smaller CV is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the other and vice versa.

4. Trend Analyses (Least Square Method)

A widely and most commonly used method to describe the trend is the

method of least square. Under this, a trend line is fitted to the data satisfying the conditions. It is used to describe the trend of any variable whether it increases or decreases with the passage of time.

The trend line between the two variables x and y is represented by:

$Y_C = a+bx$

Where,

$$a = \frac{\sum Y}{n} \quad \text{and} \quad b = \frac{\sum xY}{\sum x2}$$

Here, yc is used to designate the trend value to distinguish the actual value. The x variable represents the time, 'a' refers to the y-intercept or value of y_C

when x=o and 'b' is the slope of the trend line. For the trend analysis of different banks, the following heads have been considered:

i. Total Deposit Analysis

ii. Investment Analysis

iii. Loan & advances

iv. Net Profit

5. Karl Pearson's Coefficient of Correlation (r)

One of the widely used mathematical methods of calculating relationship between two variables is the Karl Pearson's correlation coefficient. It is denoted by 'r' and is defined by:

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

Where,

$X = x - \bar{x}$

$Y = y - \bar{y}$

The value of 'r' always lies between (-1) and (+1), and (r=+1) denotes the perfect positive correlation between the two variables and (r=-1) denotes the negative correlation between the two variables.

Probable Error (P.Er)

It is the measure of testing the reliability of the calculated value of **'r'.** If r be calculated value of r from a sample of n pair of observations, then PE is defined by,

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

If the value of **'r'** is less than **6 PE (r<6P.Er),** it is insignificant; perhaps there is no evidence of correlation. If 'r' is greater than **6 PE (r>6P.Er),** then, it is significant. The probable error of correlation coefficient is used to determine the limits with in which the population correlation coefficient lies. Limits for population correlation coefficient are **r+PEr**.

Calculations of Correlation Coefficient are As Follows

a. Coefficient of correlation between deposit and loan & advances.

b. Coefficient of correlation between deposit and total investment

c. Coefficient of correlation between deposit and net profit.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

This chapter is concerned with the data presentation and analysis relating to different variables using both financial and statistical tools explained in research methodology. The purpose is to analyze the objectives set in the first chapter. For this data are presented, compared and analyzed with the help of different tools. Like wise major finding of the study are also presented. Following financial and statistical related to the investment management and fund mobilization are studied evaluated and analyze the performance of NABIL and HBL.

A. Financial analysis

It includes liquidity ratios, assets management ratios, profitability ratios, risk ratios, growth ratio, capital adequacy ratios and common size analysis.

B. Statistical analysis

It includes trend analysis and Karl Pearson's coefficient of correlation analysis.

A. Result of financial analysis

4.1 Liquidity Ratio

Liquidity simply means short-run solvency of a firm. It reflects the short term financial strength of banks. Liquidity means the ability of a firm to satisfy its short term obligation. It is the measurement of speed with which a bank's assets can be converted into cash to meet deposits withdrawal and other current obligations. The certain percentage of deposit should be kept in bank in the form of cash .It the bank will keep greater deposit in cash, it losses the opportunity cost. Similarly, if bank keeps low amount in deposit, it could not be able to pay depositors on time. Liquidity can be measured in following ways.

4.1.1 Current ratio

It measures short-term debt paying ability of a bank. It measures the availability of current liabilities. It is computed by dividing current assets by current liabilities. Current assets consists of cash in hand, cash at bank, short term marketable securities, bills receivable, sundry debtors, prepaid expenses, inventory and accrued income. Current liabilities consist of bills payable, sundry creditors, short-term loan, income tax draft.

Mathematically,

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

Current ratio is considered to be satisfactory one when 2:1. Higher current ratio indicates that the firm is in liquid and has ability to pay its current obligation in time. On the other hand, lower current ratio represents that liquidity position is not good and the bank will face difficulty in payment of current obligation.

The higher is the current ratio, the greater the margin of safety. The current ratio of NABIL & HBL has been shown in the table 4.1.

Table 4.1: Current ratio of NABIL & HBL

Fiscal Year	NABIL	HBL
2005/06	1.1077	1.0420
2006/07	1.0702	1.0622
2007/08	1.0530	1.0807
2008/09	1.0606	1.0599
2009/10	1.0632	1.0605
Mean	1.0709	1.0611
SD	0.0192	0.0122
CV	1.795 %	1.155 %

The table 4.1 shows that the mean of current ratio of NABIL and HBL are less than standard ratio i.e. 2:1. The mean current ratio of NABIL is higher than that of HBL. The coefficient of variance of NABIL is 1.795, which is greater than that of HBL i.e. 1.155. Here both banks have less CV which denotes that they are more stable.

4.1.2 Cash and bank balance to total deposit ratio

This ratio also known as cash reserve ratio shows the percentage of deposit maintained as liquid assets. This ratio is maintained to meet any unexpected demands of the depositors. A higher ratio represents a greater ability to meet any unexpected demand of the depositors. If the bank is not able to maintain adequate amount of deposit it cannot operate day to day transactions. Keeping idle cash is not desirable as it blocks the capita. Therefore, this ratio is designed to measure the bank's ability to meet the immediate obligation. It is calculated by dividing cash and bank balance by total deposits.

Mathematically,

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

The cash and bank balance to total deposit ratio of the two banks has been shown in table 4.2. This ratio measures the percentage of most liquid fond with the bank to make immediate payment.

Table 4.2: Cash and bank balance to total deposit ratio

Fiscal Year	NABIL	HBL
2005/06	0.0326	0.0648
2006/07	0.0599	0.0585
2007/08	0.0837	0.0455
2008/09	0.0903	0.0879
2009/10	0.0302	0.1028
Mean	0.0593	0.0719
SD	0.0249	0.0207
CV	42.07 %	28.76 %

Presently, NRB has prescribed CRR of 5.5 %. In the table 4.2 both banks have maintained above NRB. According the table mean CRR of NABIL is 5.93 % which is less than that of HBL i.e. 7.19 %. In the FY 2009/10, CRR of HBL is 10.28 % which is greater than CRR of NABIL. i.e. 3.02 %. This table shows HBL's solvency position is higher than NABIL.

4.1.3 Cash and bank balance to current assets ratio

This ratio shows the percentage of readily available fund with the bank. It measures the proportion of the most liquid assets among the current assets of bank. Higher ratio shows the bank ability to meet demand for cash. It is calculated by dividing cash and bank balance by current assets.

Mathematically,

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

The cash and bank balance to current assets ratio of both banks from FY 2005/06 to 2009/10 are shown in table 4.3.it shows the mean cash and bank balance to current assets ratio of NABIL is lower than that of HBL.

Table 4.3 indicates that the ratio of NABIL is the highest during FY 2008/09 which is 7.8 % similarly HBL has also the highest ratio during FY 2009/10 i.e. 9.28 %. The coefficient of Variance of NABL is higher than that of HBL. This table shows that they have capacity to manage the deposit with drawl from the customers.

Table 4.3: Cash and bank balance to current assets ratio

Fiscal Year	NABIL	HBL
2005/06	0.0279	0.0595
2006/07	0.0518	0.0533
2007/08	0.0731	0.0408
2008/09	0.0780	0.0794
2009/10	0.0273	0.0928
Mean	0.0516	0.0651
SD	0.0215	0.0186

CV	41.65 %	28.57 %

4.1.4 Investment on government securities to total deposit ratio

Government security is a risk free security. The banks instead of keeping their funds idle, invest in various government securities i.e. treasury bills and development bonds which are liquid in nature as they can be traded any time. This ratio measures how much of the total deposit is utilized in investing in government securities. It is calculated as dividing investment in government securities by total deposit.

Mathematically,

$$\text{Government Securities to Total Deposit Ratio} = \frac{\text{Government Securities}}{\text{Total Deposits}}$$

Investment on government securities to total deposit ratio reflects that out of total deposit, how much percentage of it has been occupied by the investment on government securities. Table 4.4 represents the ratio between investment on government securities and total deposit.

Table 4.4: Investment on government securities to total deposit ratio

Fiscal Year	NABIL	HBL
2005/06	0.1189	0.1942
2006/07	0.2060	0.2147
2007/08	0.1456	0.2346
2008/09	0.0992	0.1214
2009/10	0.1711	0.1187
Mean	0.1482	0.1767
SD	0.0377	0.0480
CV	25.49 %	27.17 %

Tale 4.4 indicates that HBL has higher amount of deposit on government securities than NABIL in average. It also shows that the investment trend of NABIL is fluctuating where as the trend followed by HBL is in initial Year

it is increasing rate but fiscal year 2008/09 after it is decreasing rate. The CV of NABIL and HBL are 25.49 % and 27.17 % respectively.

4.2 Assets management ratio

Asset management or activity ratio measures the effectiveness of the bank's investment decision and the utilization of its resources. It indicates the speed with which assets are being converted or turnover. The greater the rate of turnover or conversion, the more efficient is the management or utilization of assets. Assets management ratio also knows as activity ratio indicates the speed with which assets are being converted or turnover.

4.2.1 Loan and Advances to Total Deposit Ratio

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

Mathematically,

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

The ratios between loan and advances to total deposits of NABIL and HBL are shown in table 4.5 it indicates the engaged amount of total deposit on loan and advances for the profit generation.

Table 4.5: Loan and Advances to Total Deposit Ratio

Fiscal Year	NABIL	HBL
2005/06	0.6864	0.5950
2006/07	0.6813	0.5921
2007/08	0.6818	0.6337
2008/09	0.7497	0.7152
2009/10	0.7117	0.7743
Mean	0.7022	0.6620
SD	0.0262	0.0715

CV	3.74 %	10.81 %

Table 4.5 reveals that the mean loan and advances to total deposit ratio of NABIL is higher than that of HBL. The CV of HBL is higher than that of NABIL. The ratio of NABI is more stable than that of HBL. The ratio of NABIL is highest in FY 2008/09 i.e. 74.97 % where as that of HBL is the highest in FY 2009/10 i.e. 77.43 %. During FY 2009/10 the ratio of NABIL and HBL are 0.7117 and 0.7743 respectively.

4.2.2 Total Investment to Total Deposit Ratio

Investment implies the utilization of firm's deposit on investment in government securities, shares, debentures and bonds of other companies and bank. It can be computed by dividing total investment by total deposit.

Mathematically,

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

Total investment to total deposit ratio of NABIL and HBL from FY 2005/06 to 2009/10 are given in the table 4.6.

Table 4.6: Total Investment to Total Deposit Ratio

Fiscal Year	NABIL	HBL
2005/06	0.3195	0.4110
2006/07	0.3832	0.3934
2007/08	0.3114	0.4189
2008/09	0.2899	0.2511
2009/10	0.2946	0.2245
Mean	0.3197	0.3398
SD	0.0335	0.0841
CV	10.48 %	24.75 %

Table 4.6 shows that mean total investment to total deposit of HBL is higher than NABIL. The ratio of NABIL increased from FY 2005//06 to 2006/07 and has decreased in FY 2007/08 to 2009/10. Its mean ratio is 31.97 % and

CV is 10.48 %. The ratio of HBL has shown the fluctuation between 22.45 % and 41.10 % in last Five years. Its mean ratio is 33.98 % and CV is 24.75 %. The CV of both banks shows that they are more deviation.

4.2.3 Loan and Advance to Working Fund Ratio

Loan and advances is the major component in the total working fund, which indicates the ability of bank to canalize its deposits in the form of loan and advances to earn high return. This ratio is calculated by dividing loan and advances by total working fund. Total working fund includes all assets of on balance sheet items i.e. current assets, net fixed assets, loan for development banks and other miscellaneous assets but excludes off balance sheet items such as Letter of Credit, Letter of Guarantee, etc.

Mathematically,

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

It reflects the extent to which the commercial banks are successful in mobilizing their asset on loans and advances for generation of income.

Table 4.7: Loan and Advances to Working Fund Ratio

Fiscal Year	NABIL	HBL
2005/06	0.5853	0.5164
2006/07	0.5760	0.5185
2007/08	0.5798	0.5475
2008/09	0.6382	0.6372
2009/10	0.6334	0.6640
Mean	0.6025	0.5767
SD	0.0273	0.0619
CV	4.54 %	10.73 %

According to the table 4.7, the mean loan and advances to working fund ratio of NABIL is greater than that of HBL. The ratio of HBL is in increasing trend from FY 2005/06 to 2009/10 and has increased to 66.40 %.

NABIL has fluctuating ratio between 57.60 % and 63.82 %. The CV of NABIL and HBL are 4.54 % and 10.73 % respectively.

4.2.4 Investment on Government securities to Total Working Fund Ratio

This ratio shows bank's investment on government securities in comparison to the total working fund. It is computed by dividing investment on government securities by total working fund.

Mathematically,

Investment on Government Securities to Total Working Fund Ratio =

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

Table 4.8 shows the level of investment of working fund on government securities. It represents the ratio between investments on government securities and working fund of HBL i.e. 15.32 % is greater than that of NABIL which has the mean ratio of 12.72 %.

Table 4.8: Investment on Government Securities to Total Working Fund Ratio

Fiscal Year	NABIL	HBL
2005/06	0.1014	0.1685
2006/07	0.1741	0.1880
2007/08	0.1238	0.2027
2008/09	0.0845	0.1052
2009/10	0.1523	0.1018
Mean	0.1272	0.1532
SD	0.0326	0.0421
CV	25.66 %	27.44 %

Since the investment of government securities of both banks ratio are fluctuating. The ratio of NABIL is lower than of HBL. CV of NABIL and HBL are 25.66 % and 27.44 % respectively.

4.2.5 Investment on Shares and Debentures to Total Working Fund Ratio

This ratio shows the bank's investment in shares and debentures in comparison to the total working fund and calculated by dividing investment in shares and debentures by total working fund.

Mathematically,

Investment on Shares and Debentures to Total Working Fund Ratio=

$$\frac{\text{Shares and Debentures}}{\text{Total Working Fund Ratio}}$$

Nowadays commercial banks invest their fund not only on government securities, but also invest on the shares and debenture of other different types of companies. Table 4.9 shows the level on investment of working fund on shares and debentures of other banks and companies.

Table 4.9: Investment on Share and Debentures to Total Working Fund Ratio

Fiscal Year	NABIL	HBL
2005/06	0.0046	0.0013
2006/07	0.0103	0.0021
2007/08	0.0086	0.0024
2008/09	0.0081	0.0023
2009/10	0.0066	0.0018
Mean	0.0076	0.0020
SD	0.0019	0.0004
CV	25.20 %	20.05 %

Since, NABIL has been investing larger amount of money on shares and debentures since FY 2005/06 than HBL. The mean ratio between investment on shares debentures and working fund of NABIL is greater than of HBL. The CV of NABIL is comparatively higher than HBL. It means the

distribution of NABIL is more variable. According to the FY 2009/10 the ratio of NABIL and HBL are 0.66 % and 0.18 % respectively.

4.2.6 Performing Loan Loss Provision

Performing loan is a loan which had due up to 90 days. This ratio shows how much the banks are successful in utilizing their assets for the purpose of profit generation. Higher ratio indicates efficiency in utilizing the good loans.

Mathematically,

$$\text{Performing Loan Loss Provision} = \frac{\text{Performing Loan}}{\text{Total Loan}} \times 100\%$$

Table 4.10: Performing Loan Loss Provision

Fiscal Year	NABIL	HBL
2005/06	0.9862	0.9340
2006/07	0.9887	0.9640
2007/08	0.9926	0.9763
2008/09	0.9916	0.9784
2009/10	0.9853	0.9648
Mean	0.9889	0.9635
SD	0.0029	0.0158
CV	0.29 %	1.64 %

Table 4.10 shows the performing loan loss provision of NABIL and HBL. From table 4.10 it is cleared that NABIL has higher ratio than HBL. It indicates that NABIL has proper utilization of asset on good loans.

However, it we analyze the ratio. NABIL is maintaining the ratio in the increase manner. This shows positive impact on the banks performance efficiency in utilizing the good loans. The mean ratio of NABIL is 98.89 % while that of HBL is 96.35 %. The CV of NABIL and HBL are 0.29 and 1.64 respectively.

4.2.7 Non Performing Loan Loss Provision

Loan is said to be non-performing with the due date of more than 90 days. Non- performing loan consists of substandard loan, doubtful loans and bad loans. Higher non- performing loan ratio indicates worse management of assets. If the ratio is low, it indicates a favorable credit management position.

Mathematically,

$$\text{Non Performing Loan Loss Provision} = \frac{\text{Non-Performing Loan}}{\text{Total Loan}} \times 100\%$$

Table 4.11 shows that NABIL and HBL both has decreasing trend in the ratio which shows good utilization of their loan and proper management of assets.

Table 4.11: Non Performing Loan Loss provision

Fiscal Year	NABIL	HBL
2005/06	0.0100	0.0660
2006/07	0.0119	0.0360
2007/08	0.0074	0.0236
2008/09	0.0080	0.0216
2009/10	0.0147	0.0352
Mean	0.0104	0.0364
SD	0.0026	0.0158
CV	25.68 %	43.53 %

Higher ratio indicates worse management of assets. This table indicates NABIL has lower ratio than HBL, showing better utilization of loan. The mean ratio of NABIL is 1.04 % while that of HBL is 3.64 %. The CV of NABIL and HBL are 25.68 and 43.53 respectively.

4.2.8 Loan Loss Provision Ratio

This ratio depicts how much provision a bank has to create for its loan provided. It is the ability of the management to have sufficient provision for the non-performing loans. Higher the rate, better is the financial position and vice versa.

Mathematically,

$$\text{Loan Loss Provision Ratio} = \frac{\text{Total Loan Provision}}{\text{Non-Performing Loan}} \times 100\%$$

Table 4.12: Loan Loss Provision Ratio

Fiscal Year	NABIL	HBL
2005/06	1.9454	1.0759
2006/07	2.0056	1.2402
2007/08	2.0072	1.4297
2008/09	1.8258	1.3176
2009/10	1.5679	1.1151
Mean	1.9584	1.2357
SD	0.2868	0.1299
CV	14.64 %	10.57 %

4.3 Profitability Ratio

Profitability ratio is calculated to measure the efficiency of operation of a firm in terms of profit. It is the indicator of the financial performance of any institution. This implies that higher the profitability ratio better the financial performance of bank. Profitability ratio can be calculated through following ways.

4.3.1 Return on Loan and Advance Ratio

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

Mathematically,

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

Return on loan and advance ratio measures the earning capacity of a commercial bank on its mobilized fund based on loan and advance.

Table 4.13: Return on Loan and Advance Ratio

Fiscal Year	NABIL	HBL
2005/06	0.0478	0.0290
2006/07	0.1423	0.0276
2007/08	0.0342	0.0315
2008/09	0.0368	0.0295
2009/10	0.0345	0.0175
Mean	0.0391	0.0270
SD	0.0052	0.0049
CV	13.35 %	18.21 %

Table 4.13 signifies that the ratio of NABIL is much better than HBL. The ratio of NABL and HBL are 0.0345 and 0.0175 respectively in the FY 2009/10. The ratios of both banks are fluctuating over five year study period flow ever the CV of HBL is higher than NABIL.

4.3.2 Return on Total Working Fund Ratio (ROA)

This ratio, also known as return on assets measures the overall profitability of all working funds i.e. total assets. It is computed by dividing net profit (loss) by total working fund.

Mathematically,

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

This ratio measures the overall profitability secured by total working fund. Table 4.14 indicates that the mean ratio of NABIL is better than of HBL. Hence it is cleared that NABIL has better profitability in terms of total working fund than that of HBL.

Table 4.14: Return on Total Working Fund Ratio (ROA)

Fiscal Year	NABIL	HBL
2005/06	0.0280	0.0150
2006/07	0.0244	0.0143
2007/08	0.0199	0.0172
2008/09	0.0235	0.0188
2009/10	0.0218	0.0116

Mean	0.0235	0.0154
SD	0.00270	0.0025
CV	11.55 %	16.08 %

The mean return on working fund of NABIL and HBL are 0.0235 and 0.0154 respectively. The CV of HBL is higher than NABIL, which clears that the ratios are more variable than the ratios of NABIL.

4.3.3 Return on Equity Ratio (ROE)

This ratio measures how efficiently the banks have used the funds of owners. It is calculated by dividing Net profit by total equity capital. Total capital includes shareholder's reserve including P/L A/C and share capital i.e. Ordinary share and preference share capital.

Mathematically,

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

It measures the effectiveness of funds mobilization. Table 4.15 clarifies that the mean ratio f NABIL is 31.97 % while the mean ratio of HBL is 22.61 %. It means the return on equity of NABIL is higher than that of HBL. That indicates NABIL is more effective in fund mobilization than HBL over the 5 Year of study period.

Table 4.15: Return on Equity Ratio (ROE)

Fiscal Year	NABIL	HBL
2005/06	0.3387	0.2588
2006/07	0.3276	0.2292
2007/08	0.3061	0.2531
2008/09	0.3223	0.2413
2009/10	0.2970	0.1480
Mean	0.3197	0.2261
SD	0.0156	0.0403
CV	4.88 %	17.84 %

The ratio of NABIL and HBL are 29.70 % and 14.80 % during FY 2009/10. The ratio of NABIL indicates that they are more uniform than ratio of HBL during the study period as CV of NABIL and HBL are 4.88 and 17.84 respectively.

4.3.4 Total Interest Earned to Total Assets Ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of assets. It is computed by dividing total interest earned by total assets.

Mathematically,

$$\text{Return on Equity} = \frac{\text{Total Interest Earned}}{\text{Total Assets}}$$

It means the interest earning capacity of the bank through the efficient utilization of assets. Table 4.16 reveals that the mean ratio between total interest earned to total assets of NABIL is 6.22 % and that of HBL is 5.91 %.

Table 4.16 indicates that CV of NABIL and HBL are 13.42 and 12.50 which are slightly different.

Table 4.16: Total Interest Earning to Total Assets Ratio

Fiscal Year	NABIL	HBL
2005/06	0.0586	0.0552
2006/07	0.0582	0.0529
2007/08	0.0532	0.0542
2008/09	0.0637	0.0595
2009/10	0.0776	0.0737
Mean	0.0622	0.0591
SD	0.0083	0.0076
CV	13.42 %	12.90 %

4.3.5 Total Interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentage of interest to total asset.

Higher ratio implies better performance of the bank in terms of interest earning on its total working fund. This ratio is calculated by dividing total interest earned by total working fund.

Mathematically,

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

This ratio finds out the percentage of interest from total working fund which indicates the performance of the bank. According to table 4.17 the mean ratio between total interests to total working fund of NABIL and HBL are 6.18 % and 5.77 % respectively where as CV of NABIL and HBL are 13.96 and 12.85 respectively. During FY 2009/10, the mean ratio of NABIL is 7.76 % and of HBL is 7.18 %.

Table 4.17: Total Interest Earned to Total Working Fund Ratio

Fiscal Year	NABIL	HBL
2005/06	0.0577	0.0533
2006/07	0.0574	0.0517
2007/08	0.0527	0.0532
2008/09	0.0638	0.0584
2009/10	0.0776	0.0718
Mean	0.0618	0.0577
SD	0.0086	0.0074
CV	13.96 %	12.85 %

4.4 Risk Ratio

Risk taking is the prime business of bank's investment management. The possibility of risk makes bank's investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So, the bank has to have idea of the level of risk that ultimately influences the bank's investment policy.

4.4.1 Credit Risk Ratio

Credit risk ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. This is expressed as the percentage of loan and advances to total assets. It helps to check the probability of loan non-repayment loan or the possibility of loan to go into defaults. Risk of non-repayment loan is known as credit risk.

Mathematically,

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

It is expressed as the percentage of total loan and advances to total assets. Table 4.18 shows that the mean credit ratio of NABIL is 60.71 % which is higher than that of HBL i.e. 59.08 %.

Table 4.18: Credit Risk Ratio

Fiscal Year	NABIL	HBL
2005/06	0.5947	0.5350
2006/07	0.5835	0.5308
2007/08	0.5859	0.5578
2008/09	0.6382	0.6488
2009/10	0.6334	0.6818
Mean	0.6071	0.5908
SD	0.0237	0.0623
CV	3.91 %	10.55 %

But CV of NABIL is also lower than HBL. The ratio of NABIL and HBL are 63.34 % and 68.18 % respectively during FY 2009/10. This concludes that NABIL has higher credit risk in comparison with HBL.

4.4.2 Capital Risk Ratio

Capital risk ratio measures banks ability to attract deposit and interbank funds. It also determines the level of profit, a bank can earn. The capital risk is directly related to return on equity. Higher the ratios, higher will be the

capital risks. It is computed by dividing total share capital to risk-weighted assets. Risk- weighted asset is the minimum amount of capital that is required within banks and other institutions, based on a percentage of the assets, weighted by risk. It is the total of all assets held by the bank which are weighted for credit risk according to a formula determined by the regular (Central bank). It includes the sum of on- balance sheet and off-balance sheet items.

Mathematically,

$$\text{Capital Risk Ratio} = \frac{\text{Share Capital}}{\text{Risk Weighted Assets}}$$

Table 4.19 provides the capital risk ratio of NABIL and HBL during the 5 years of study period. The mean ratio of NABIL and HBL are 2.94 % and 3.94 % respectively. The CV of NABIL is higher than HBL i.e. 14.37 % and 6.76 % respectively.

Table 4.19: Capital Risk Ratio

Fiscal Year	NABIL	HBL
2005/06	0.0290	0.0388
2006/07	0.256	0.0370
2007/08	0.255	0.0395
2008/09	0.297	0.0373
2009/10	0.0371	0.0444
Mean	0.0294	0.0394
SD	0.0042	0.0026
CV	14.37 %	6.76 %

4.5 Growth Ratio

Growth rates of total deposits, loan & advances, total investment and profit are calculated to analyze and examine the expansion and growth of the bank.

Mathematically,

$D_n = D_o\ (1 + g)^n$

Here, D_n = Total amount in n^{th} year

D_o= Total amount in n^{th} initial year

g = Growth rate

n= period

The average growth rates of deposits loan and advances, total investment and net profit of NABIL and HBL during the five years of study period are presented by table nos.20, 21, 22, and 23 respectively.

4.5.1 Growth Ratio of Total Deposits

Table 4.20 and figure 4.1 indicate the expansion of total deposits of NABIL and HBL. It indicates that the total deposits of NABIL has been increasing since FY2005/06 and has reached to Rs. 46411million during FY 2009/10. It is the lowest in to Rs. 34681 million during last FY. Its average growth rate during five years of the study period is 24.67%.

Table 4.20: Growth Ratio of Total Deposits

(Rs. In millions)

FY → / Bank ↓	2005/06	2006/07	2007/08	2008/09	2009/10	Average growth
NABIL	19347	23342	31915	37348	46411	24.67%
HBL	26491	30078	31843	34681	37611	9.19%

HBL has been increasing trend of total deposits since 2005/06 and has reached 9.19 % average growth ratio. Here it is clearly seen that deposits of NABIL is increasing rapidly than that of HBL.

Figure 4.1: Growth Ratio of Total Deposit

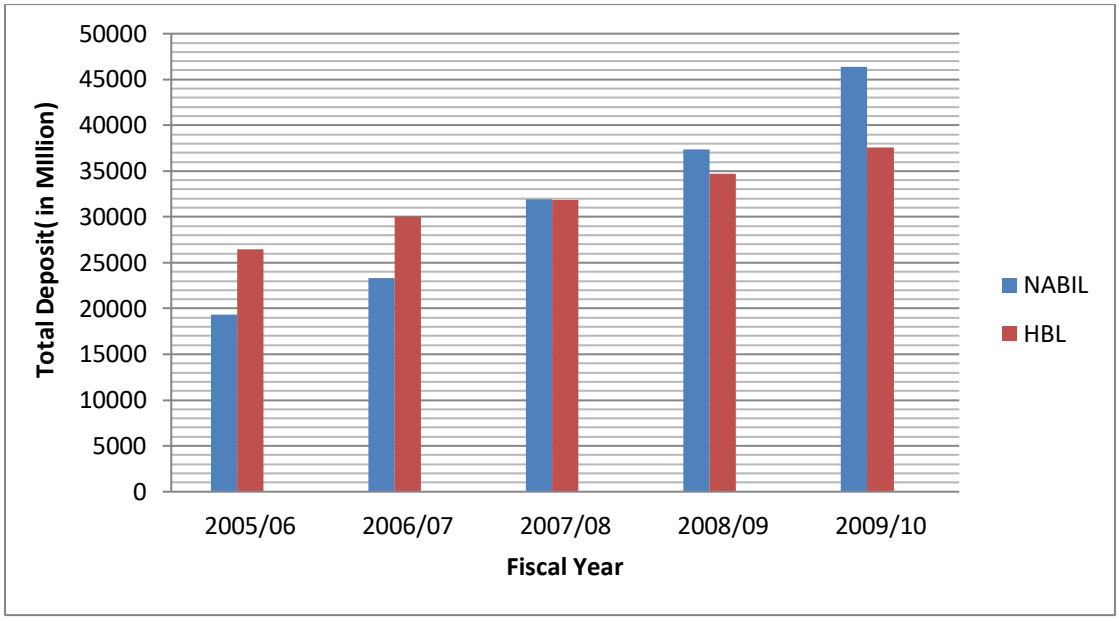


Figure 4.1 reveals that, the total deposit of NBL has higher than NABIL from FY 2005/06 to FY 2006/07 slightly different in FY 2007/08 however; NABIL has shown higher total deposit in FY 2008/09 to FY 2009/10.

4.5.2 Growth Ratio of Loan and Advances

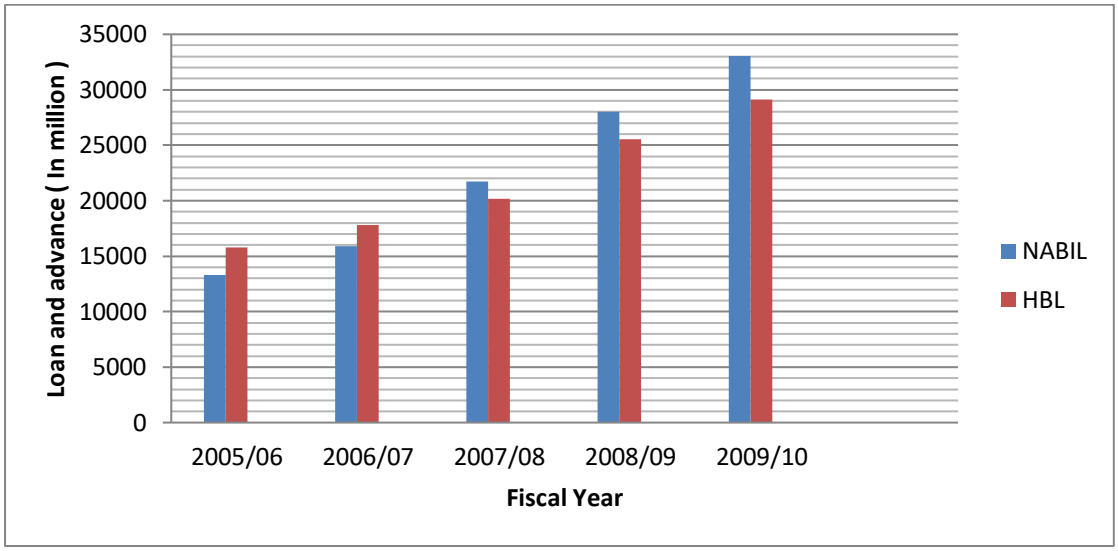
Loan and advances is the major which indicates the ability bank to utilize its deposits in the form of loan and advances to earn high return. Table 4.21 shows the growth rate of loan and advances of NABIL and HBL. It reveals the loan and advances of NABIL has been increasing since FY 2005/06 and has reached to Rs 33031 million during FY 2009/10. Its average growth ratio of loan and advances is 25.81 %.

Table 4.21: Growth Ratio of Loan and Advances

FY / Bank	2005/06	2006/07	2007/08	2008/09	2009/10	Average growth
NABIL	13279	15903	21759	27999	33031	25.81%
HBL	15762	17793	20179	25519	29124	16.72%

Similarly, the loan and advances of HBL has risen from Rs. 15762 to 29124 million during the five years of the study period. Its average growth ratio is 16.72 %.

Figure 4.2: Loan and advance of NABIL and HBL



4.5.3 Growth Ratio of Total Investment

Table 4.22 and figure 4.3 indicate the growth rate of investment of NABIL and HBL on the basis of this table. The total investment of NABIL has been increasing trend of since FY 2005/06 to 2009/10. But HBL has increasing in FY 2005/06 to 2007/08. After that FY 2008/09 to 2009/10 it has been decreasing trend.

Table 4.22: Growth Ratio of Total Investment

FY / Bank	2005/06	2006/07	2007/08	2008/09	2009/10	Average growth
NABIL	6181	8945	9939	10826	13671	22.76%
HBL	10889	11823	13340	8710	8445	-4.08%

NABIL has the highest investment in the FY 2009/10 and the lowest in the FY 2005/06. Similarly, HBL has the highest investment in the FY 2007/08 and the lowest n the FY 2009/10. The average growth ratio of NABIL is 22.76% but HBL has negative growth rate -4.08 % due to low investment amount in FY 2009/10.

Figure 4.3: Total Investment of NABIL and HBL

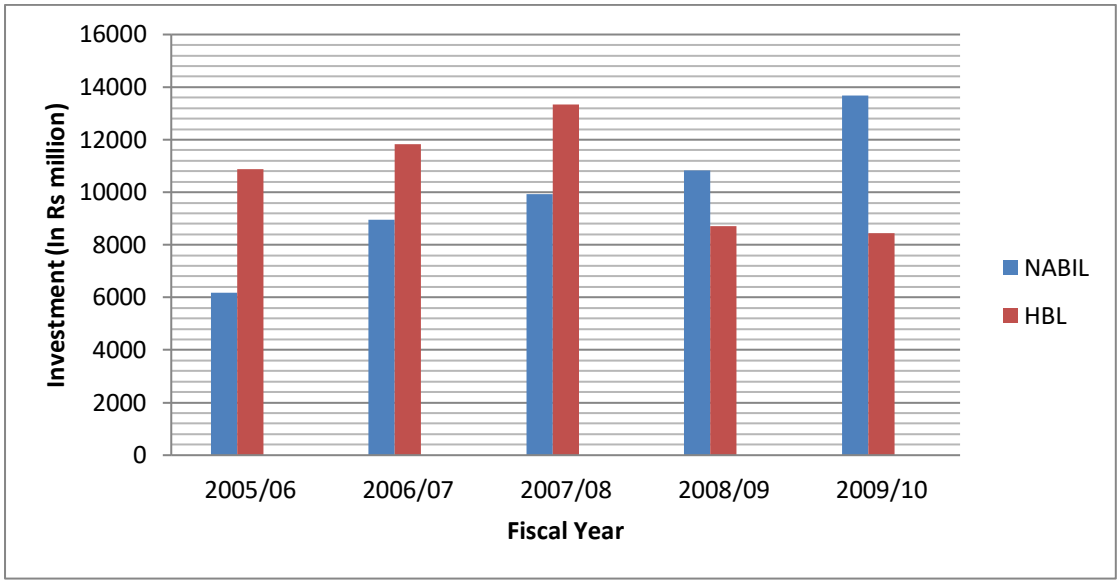


Figure 4.3 also provides information about total investment of NABIL and HBL. This figure shows that there is quiet difference between total investment of NABIL and HBL during FY 2005/06. However, NABIL has higher investment in FY 2009/10.

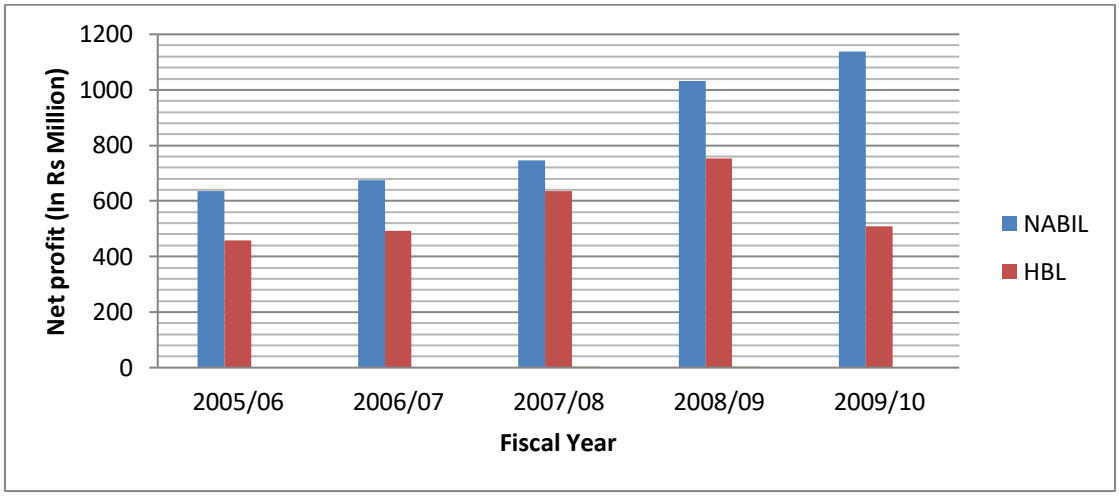
4.5.4 Growth Ratio of Net Profit

Table 4.23 indicates the growth rate of net profit of both banks. It s cleared from this table that net profit of NABIL is better than of HBL in each Year. During FY 2009/10 the net profit of NABIL is 1139 million and that f HBL is 509 million. In sote of this the average growth rate of NABIL is 16.37 % and that of HBL is 5.73 %. It clarifies that NABIL has better net profit than HBL has achieved.HBL has decreased in FY 2009/10. The net profits of NABIL and HBL are also given by figure 4.4

Table 4.23: Growth Rate of Net Profit

FY → / Bank ↓	2005/06	2006/07	2007/08	2008/09	2009/10	Average growth
NABIL	635	674	746	1031	1139	16.37%
HBL	457	492	636	753	509	5.73%

Figure 4.4: Net Profit of NABIL and HBL



4.6 Capital Adequacy Ratio

4.6.1 Capital Fund

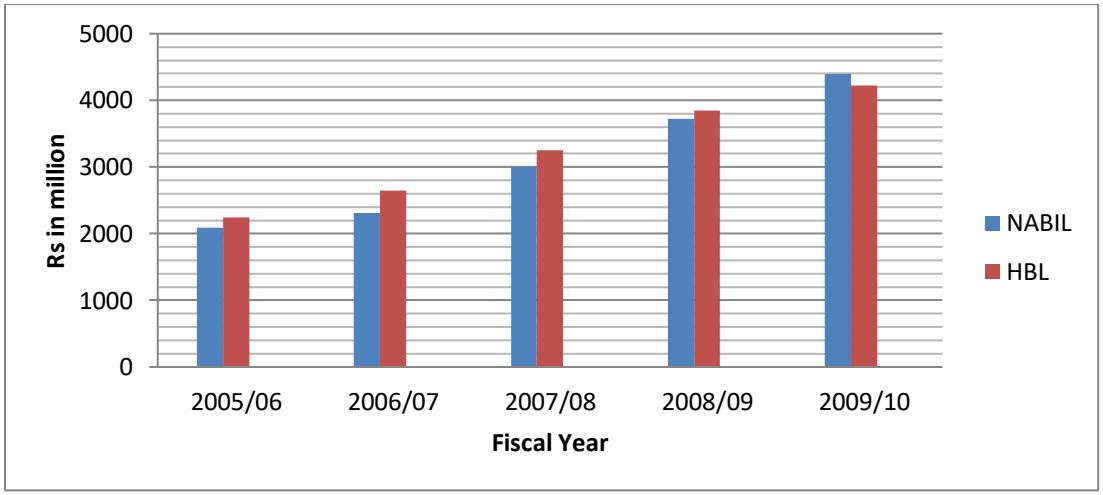
Both banks have been increasing its capital so as to abide the direction of NRB. Table 4.24 grants the capital fund of NABIL and HBL over 5 Years. It is cleared the banks have been using necessary tools to boost the capital. Total capital of NABIL is increasing each Year and reached to 4390 million in FY 2009/10. Likewise total capital of HBL is also increasing and reached to Rs 4218 million in FY 2009/10. The cumulative profit and current year's profit of both bank are also increasing in remarkable trend which also constitutes the major element in the capital growth.

Table 4.24: Capital Fund

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Core capital	1831	1992	2363	3044	3668
	Supplementary capital	259	314	635	682	722
	Total capital	2089	2307	2998	3727	4390
HBL	Core capital	1722	2104	2469	3074	3414
	Supplementary capital	521	547	783	770	804
	Total capital	2243	2651	3253	3845	4218

The NABIL has also issued bond and created bond redemption reserve. Issuance of bond has increased the supplementary capital while bond redemption reserve has been increasing the core capital. Likewise general reserve and capital adjustment reserve are also increasing and capital adjust reserved are also increasing. The supplementary capital of the bank has been showing increasing since FY 2005/06 to 2009/10. Similarly in HBL has also increased from Rs 521 million to Rs 804 million FY 2009/10. It has been understandable by figure 4.5 also. It also indicates total capital of HBL is higher than that of NABIL as paid up capital of HBL.

Figure 4.5: Total Capital Fund



4.7 Common Size Analysis

Comparative study of financial statement of NABIL and HBL can be done with the help of table 4.26, 4.27, 4.28 and 4.29. Table 4.26 and table 4.27 shows common size balance sheet of NABIL and HBL respectively. Similarly, table 4.28 indicates common size income statement of NABIL and table 4.29 reveals that of HBL.

4.7.1 Common size balance sheet of NABIL

Table 4.26 represents common size balance sheet of NABIL. Share capital of NABIL is fluctuating between 1.8 % of total liabilities and it reached to

3.46 % during FY 2009/10. Deposit percentage is the highest during TY 2009/10 i.e. 88.99 %

Table 4.26: Common size balance sheet of NABIL

(In Percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Liabilities					
Share capital	2.2	1.8	1.86	3.30	3.89
Reserve and surplus	6.2	5.7	4.71	3.83	3.46
Debenture and bond	-	-	0.6	0.68	0.58
Borrowing	0.8	3.3	3.7	3.83	0.14
Deposits	86.6	85.6	85.95	85.14	88.99
Bills payable	0.4	0.3	0.64	1.06	0.82
Proposed dividend	1.9	1.9	1.18	0.78	0.83
Income tax liabilities	0.2	-	0.10	0.18	0.05
Other liabilities	1.7	1.4	1.26	1.20	1.24
Total	100	100	100	100	100
Assets					
Cash and bank balance	2.8	5.1	7.19	7.69	2.69
Money at call and short notice	7.8	2.1	5.25	1.26	5.98
Investment	27.7	32.8	26.76	24.68	26.21
Loan, advances & bills purchased	57.9	57.1	57.54	62.89	61.88
Fixed assets	1.4	1.1	1.61	1.51	1.49
Other assets	2.4	1.8	1.63	1.97	1.75
Total	100	100	100	100	100

The percentage of cash and bank balance is gradually increasing if FY 2008/09.but FY 2009/10 it is decreased i.e. 2.69 %. According to the table, investment has been decreasing its investment in govt. securities is decreasing while investment in share and debentures is increasing.

Loan advances and bills purchased have been showing fluctuating condition. The percentage of loan and advance is gradually increasing and occupies higher percentage 62.89 % of total assets during FY 2008/09.

4.7.2 Common Size Balance Sheet of HBL

Table 4.27 indicates common size balance sheet of HBL. It shows the share capital is increasing since FY 2005/06 to 2009/10. Reserve and surplus is increasing in FY 2005/06 to 2008/09 but FY 2009/10. It is decreased i.e. 3.37 %. Deposit covers 89.9 % of total liabilities during FY 2005/06 and cover 88.05 % during 2009/10. It is the highest during FY 2005/06 i.e. 89.9 %. Bills payable cover 0.51% in FY 2009/10 of total liabilities.

In context of assets side, the percentage of cash and bank balance is fluctuating between 4.0% and 9.05 %. During FY 2009/10 it occupies 9.05 %. of total assets. Money at call and short notice occupies 0.72 % during 2009/10. According to the table, investment has been decreasing trend. It cover the highest percent during FY 2005/06, which is 37.0 % of total assets. During 2009/10, it covers 19.77 %. Similarly, loan advance and bill purchased has been increasing since FY 2005/06 to 2009/10. FY 2005/06 i.e. 49.7 % and 2009/10, during study period.

Table 4.27: Common Size Balance Sheet of HBL

(in percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Liabilities					
Share capital	2.6	2.4	2.8	3.09	4.68
Reserve and surplus	3.4	3.9	4.1	4.84	3.37
Borrowing	1.7	1.8	2.6	1.27	1.17
Deposits	89.9	89.6	88.02	88.18	88.05
Bills payable	0.2	0.27	0.28	0.08	0.51
Proposed dividend	0.8	0.4	0.73	0.41	0.44
Income tax liabilities	-	0.04	0.05	0.03	-
Other liabilities	2.3	1.59	1.36	2.1	1.78
Total	100	100	100	100	100
Assets					
Cash and bank balance	5.8	5.2	4.00	7.75	9.05
Money at call and short notice	3.4	5.1	1.43	2.98	0.72
Investment	37.0	35.3	36.87	22.15	19.77
Loan, advances & bills purchased	49.7	50.7	53.89	63.04	65.50
Fixed assets	1.8	1.7	2.20	2.42	2.49
Other assets	2.3	2.0	1.78	1.66	2.47
Total	100	100	100	100	100

4.7.3 Common Size Income Statement of NABIL

Interest income is considered as common base for the comparatively study and is equal to 100 percent in common size income statement. Table 4.28 indicates common size income statement of NABIL. Here commission and discount, exchange income, operating non operating income and income from extra ordinary activities are added, where as interest expenses, employed expenses, operating and non operating expenses, exchange loss, provision for losses, expenses from extra ordinary activities and provision for staff bonus and tax deducted.

Table 4.28: Common Size Income Statement of NABIL

(In Percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Interest Income	100	100	100	100	100
Interest expenses	27.3	34.9	38.30	41.21	48.42
Net interest income	72.7	65.1	61.69	58.79	51.58
Commission and discount	10.5	9.5	7.88	6.40	5.31
Other operating income	6.3	5.5	4.90	5.14	4.2
Exchange income	14.1	13.2	9.90	9.01	7.19
Total operating income	103.7	93.3	84.38	79.34	68.28
Employees expenses	16.8	15.1	13.24	12.15	9.07
Other operating expenses	13.9	11.8	11.16	9.47	8.25
Exchange loss	-	-	-	-	-
Provision for possible losses	0.3	0.9	3.23	1.61	8.79
Operating profit	72.7	65.5	56.74	56.11	42.17
Non-operating income/losses	0.1	0.3	1.21	0.07	0.15
Provision for possible losses write back	0.6	0.6	0.55	0.39	0.99
Profit from regular activities	73.4	66.4	58.51	56.58	43.31
Income/expenses from extra ordinary activities	2.0	2.5	2.02	1.54	0.84
Profit from all activities	75.4	68.9	60.53	58.11	44.15
Provision for staff bonus	6.8	6.2	5.51	5.28	4.00
Provision for income tax	20.1	20.2	17.28	15.97	12.00
Net profit/loss	48.5	42.50	37.69	36.85	28.15

As depicted in table 4.28, the net profit percentage of NABIL from FY 2005/06 to 2009/10 are 48.5 %, 42.5 %, 37.69 %, 36.85 %, and 28.15%, respectively. FY 2005/06 shows the highest percentage of net profit, where as FY 2009/10 shows the lowest percentage. Net interest income covers 72.7%, during FY 2005/06 and covers 51.58% on FY 2009/10. Total

operating income is 68.28%, during FY 2009/10. Similarly operating profit of this year i.e. 2009/10 is 42.17% likewise; profit from regular activities is 43.31% and profit before provision for staff and tax is 44.15% and net profit is 28.15%.

4.7.4 Common Size Income Statement of HBL

Table 4.29 indicates common size income statement of HBL. Table 4.29 shows that HBL has the highest net profit during FY 2007/08 and has the lowest during the FY 2009/10. Net profit covers 28.1%, 27.7%, 32.33%, 32.11% and 16.16% of the interest income from FY 2005/06 to 2009/10 respectively. During FY 2005/06 net profit is 28.1% and during FY 2009/10 it is 16.16% of interest income. During the this FY the net interest income is 50.65%, total operating income is 68.5%, operating profit is 18.39%, profit from regular activities is 27.22%, profit before provision for staff and income tax is 26.396% and net profit is 16.16%.

Table 4.29: Common Size Income Statement of HBL

(In percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Interest Income	100	100	100	100	100
Interest expenses	39.9	43.2	41.95	39.92	49.35
Net interest income	60.1	56.8	58.04	60.08	50.65
Commission and discount	10.2	10.8	10.34	12.13	8.57
Other operating income	3.2	2.3	3.17	1.96	3.56
Exchange income	12.2	8.5	9.77	10.67	5.72
Total operating income	85.6	78.4	81.31	84.84	68.5
Employees expenses	14.3	15.3	15.63	15.41	13.18
Other operating expenses	20.2	19.2	16.75	16.99	14.96
Exchange loss	-	-	-	-	-
Provision for possible losses	8.9	5.1	2.95	8.5	21.98
Operating profit	42.2	38.8	45.97	43.94	18.39
Non-operating income/losses	3.4	0.2	0.45	0.17	0.38
Provision for possible losses write back	-	23.2	9.36	6.4	8.45

Profit from regular activities	43.3	62.2	55.80	50.51	27.22
Income/expenses from extra ordinary activities	0.1	17.7	2.65	0.42	-0.83
Profit from all activities	45.4	44.5	53.10	50.09	26.39
Provision for staff bonus	4.1	4.1	4.83	4.57	2.38
Provision for income tax	13.2	12.7	15.93	13.41	7.84
Net profit/loss	28.1	27.7	32.33	32.11	16.16

B. Result of Statistical Tool

After the collection, organization and the presentation of data, the next step is to analyze the data. On this study, various statistical tools like trend analysis, standard deviation, coefficient of variance, coefficient of correlation analysis, etc. have been used to analyze this data. Statistical tool or appropriate technique of analysis depends upon the nature of the data and the purpose of the enquiry. The following tools are used in the analysis of the financial position of the bank:

4.8 Trend Analysis (Least Square Method)

For the trend analysis of different banks, trend analysis of total deposit, loan and advances, total investment and net profit have been considered.

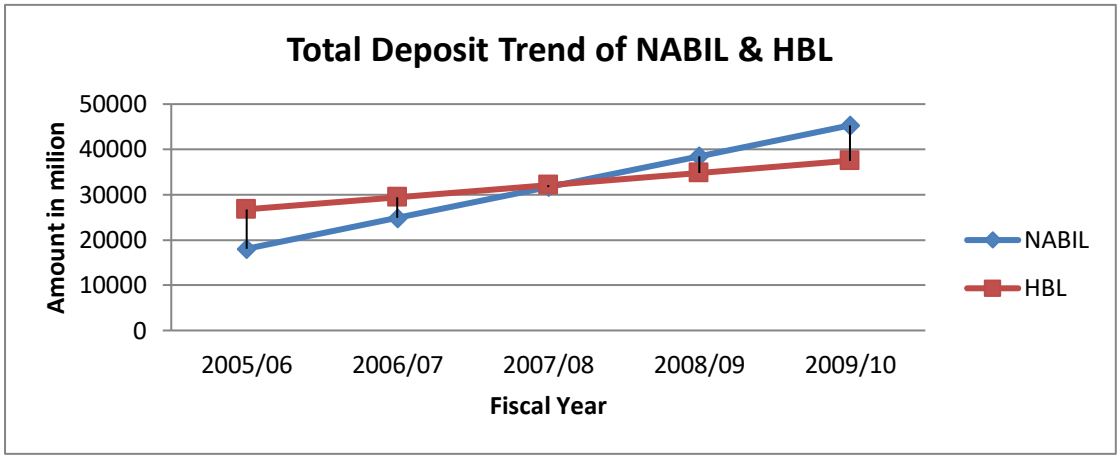
4.8.1 Trend Analysis of Total Deposit

Table 4.30 and figure 4.6 shows the trend analysis of total deposit of NABIL and HBL during the study period. From the table, it is cleared that total deposit of NABIL and HBL are in increasing trend. It indicated that NABIL's total deposit in comparison with HBL is lower.

Table 4.30: Trend Analysis of Total Deposit

FY → / Bank ↓	2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	18046	24859	31672	38486	45299
HBL	26760	29448	32135	34822	37509

Figure 4.6: Trend Analysis of Total Deposit



From the figure, it is proved that total deposit of HBL is greater than NABIL; the trend line of HBL has more slope than that of NABIL. It means increasing deposit rate of HBL is higher than NABIL. However both banks trend lines are intersected in FY 2007/08. During the study period total deposit of NABIL are lower than that of HBL up to FY 2007/08. The trend line of NABIL is higher than that of HBL after FY 2007/08.

4.8.2 Trend Analysis of Loan and Advances

Table 4.31 indicates the trend of loan and advances of both banks. It is cleared that both banks have increasing trend during the five years of the study period.

Table 4.31: Trend Analysis of Loan and Advances

FY → / Bank ↓	2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	12074	17234	22394	27554	32714
HBL	14785	18230	21675	25120	28565

Figure 4.7: Trend Analysis of Loan and Advances

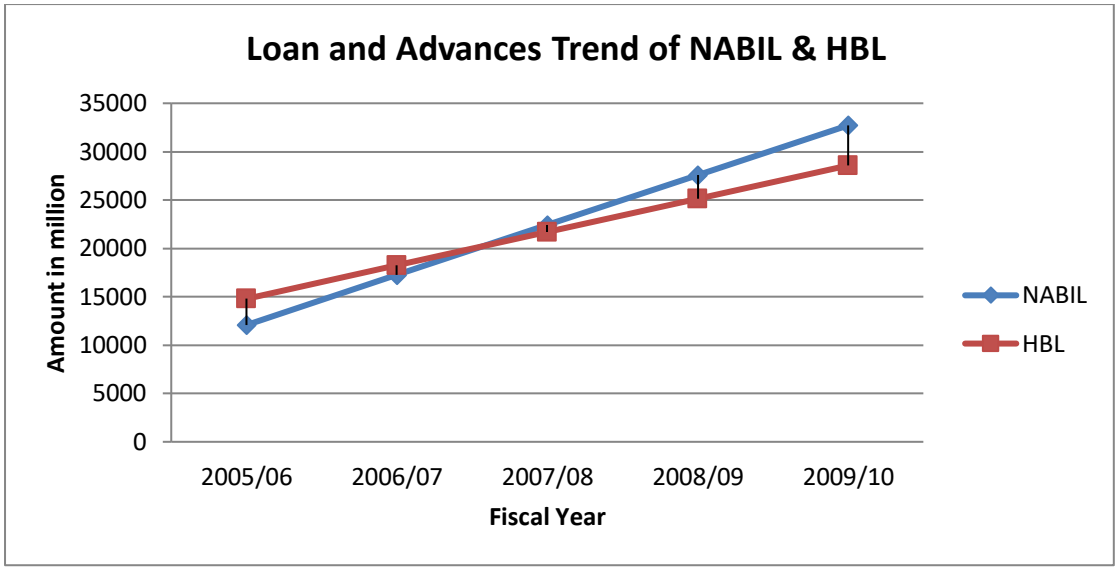


Figure 4.7 shows increment in loan and advances of both banks with the passage of time. During this study period loan and advance of NABIL is lower than that of HBL up to FY 2006/07. This figure shows that both banks trend lines are intersected in FY 2007/08. The trend line of NABIL is higher than that of HBL after FY 2007/08.

4.8.3 Trend Analysis of Investment

Table 4.32 indicates the trend of investment of both banks. The investment trend of NABIL is in increasing trend but HBL is in decreasing trend since FY 2005/06 to 2009/10. Increment rate of investment of NABIL is quiet higher than that of HBL are rising upward.

Table 4.32: Trend analysis of investment

FY → / Bank ↓	2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	6540	8226	9912	11599	13285
HBL	12242	11442	10641	9841	9041

Figure 4.8: Trend Analysis of Investment

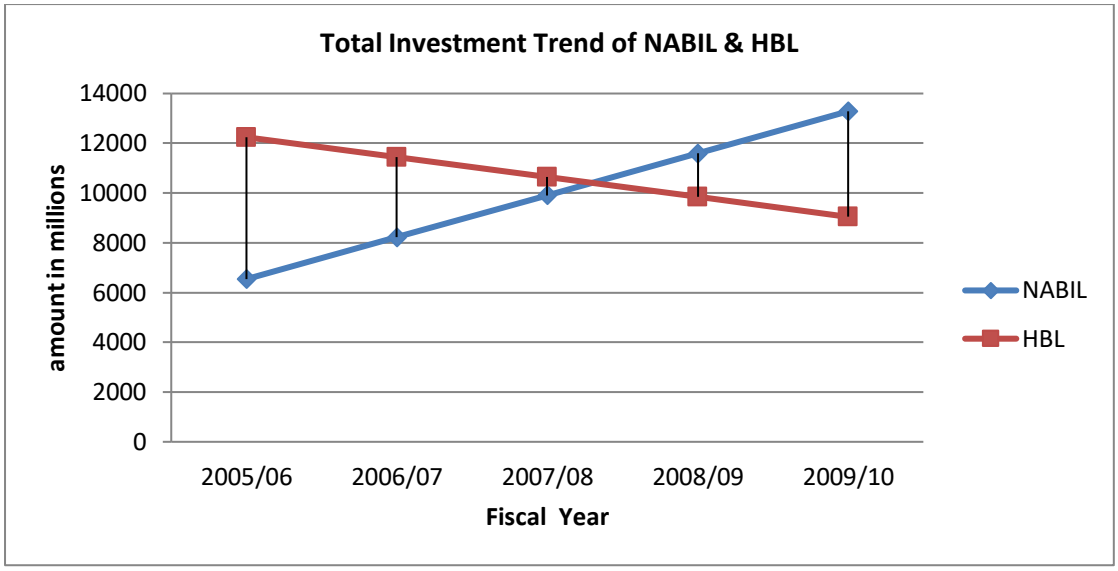


Figure 4.8 also shows the investment trend of both banks. During this study period. Investment of NABIL is lower than that of HBL up to FY 2007/08. This figure shows that both banks trend line are intersected in FY 2007/08. The trend line of NABIL is higher than that of HBL after FY 2007/08.

4.8.4 Trend Analysis of Net Profit

Table 4.33 gives glimpse of net profit trend of NABIL and HBL. It represents the net profit trend of both banks which are increasing each Year. Net profit of NABIL is higher than that of HBL. Here net profit of NABIL is increasing rapidly than that of HBL.

Table 4.33: Trend Analysis of Net Profit

FY / Bank	2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	572	709	845	982	1118
HBL	496	533	569	606	642

Figure 4.9: Trend Analysis of Net Profit

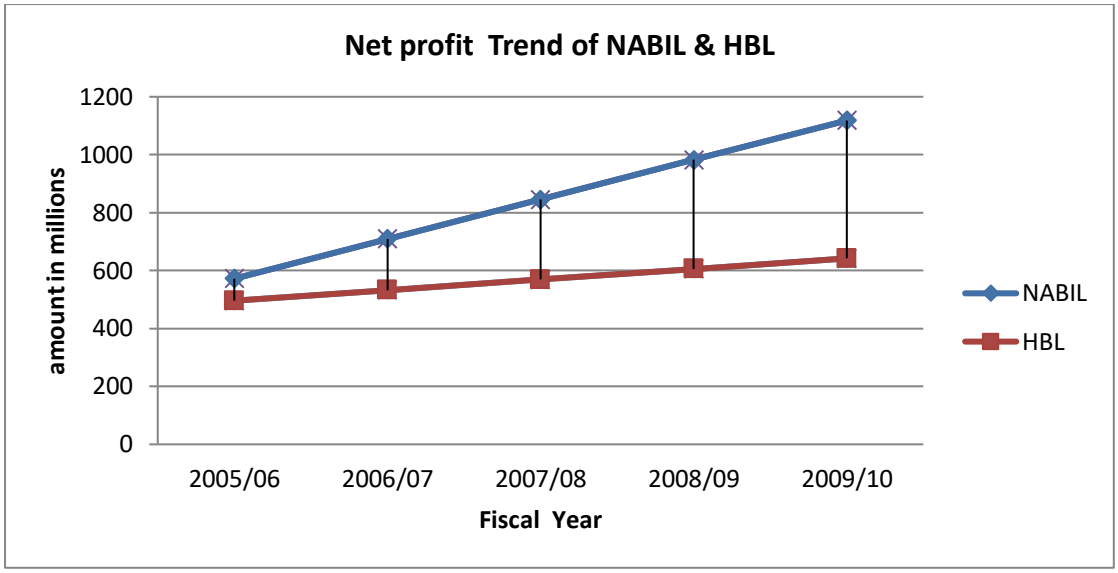


Figure 4.9 is also drawn to make the above table clear. It shows that the net profit trend line of NABIL is higher than that of HBL The angle of elevation of NABIL is also higher than that of elevation of HBL. It indicates that NABIL is securing larger amount of profit and showing better utilization of various resources concerned with the profit.

4.9 Karl Pearson's Coefficient of Correlation (r)

It measures the degree of association between the two variables. i.e. one depended and other independent. This analysis interpretations and identifies the relationship between two or more variables. Under this topic this study tries to find out relationship between following variables.

1. Coefficient of correlation between deposit and loan and advances.
2. Coefficient of correlation between deposit and total investment.
3. Coefficient of correlation between deposit and Net profit.

4.9.1 Coefficient of correlation between deposit and loan and advances

The Coefficient of correlation between deposit and loan and advances measures the degree of relationship between them. In this study deposit is taken as independent variable (X) and loan and advances is taken as dependent variable (Y). The main objective of calculating "r" between them

is to justify. Whether deposit are significantly used as loan and advances or not. Table 4.34 shows the value of r, P.Er and 6 P.Er between total deposit and loan and advances of NABIL and HBL.

Table 4.34: Coefficient of correlation between deposit and loan and advances

Evaluation criterions					
Bank	**r**	**r^2**	**P.Er**	**6 P.Er**	**Remarks**
NABIL	0.9949	0.9899	0.003	0.018	r>6P.Er
HBL	0.9795	0.9594	0.0122	0.0732	r> 6P.Er

In the table 4.34 the coefficient of correlation (r) between deposit and loan and advances of NABIL is 0.9949 which indicates that there is highly positive relationship. Similarly coefficient of determination (r^2) is 0.9899 that reveals 98.99% of variation of the dependent variable has been explained by the independent variables. Similarly the coefficient of correlation (r) between deposit and loan and advances of HBL is 0.9795 which indicates that there is positive relationship. Similarly coefficient of determination (r^2) is 0.9594 that reveals 95.94% of variation of loan and advances (dependent) and deposits (independent). Here, the value of "r" of both banks are greater than 6 times P.Er (r>6P.Er), so there is significant relationship between deposit and loan and advances. From this analysis it can be concluded that both banks are successful in mobilizing their deposit as loan and advances. NABIL has the highest value of "r" that indicates the better position in comparison with HBL.

4.9.2 Coefficient of correlation between deposit and total investment

Coefficient of correlation between deposit and total investment measures the degree of relationship between them. In this study deposit is taken as independent variable (X) and investment is taken as dependent variable (Y). the main objective of calculating "r" between them is to justify whether deposits are significantly used as investment or not. Table 4.35 shows the

value of "r" P.Er and 6 P.Er between total deposit and investment of NABIL and HBL.

Table 4.35: Coefficient of correlation between deposit and total investment

Evaluation criterions					
Bank	**r**	**r^2**	**P.Er**	**6 P.Er**	**Remarks**
NABIL	0.3059	0.0936	0.2734	1.6404	r<6P.Er
HBL	-0.6086	0.3704	0.1899	1.1394	r< 6P.Er

According to table 4.35, the value of "r" of NABIL is 0.3059 which shows positive correlation between deposit and investment. The coefficient of determination is 0.0936 which indicates 9.36% of dependency of investment on deposit. Here, r<6P.Er which means there is in significant relationship between deposit and investment.

Similarly, the value of "r" of HBL is -0.6086 that means negative correlation between two variables. The coefficient of determination indicates only 37.04% of dependency of investment on deposit. Here, r<6P.Er , which means there is not significant relationship between deposit and investment. In ther words there is no evidence of correlation. From this analysis, it can be concluded that the coefficient of correlation of HBL is lower than that of NABIL. The relationship in case of NABLIL and HBL is not significant and gives lower percentage of dependency.

4.9.3 Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit measures the degree of relationship between deposit and net profit. In this study deposit is taken as independent variable (X) and net profit is taken as dependent variable (Y). The main objective of Calculating "r" between them is to confirm whether deposits are significantly used as net profit or not. Table

4.36 shows the value of "r" P. Er and 6Per between total deposits and net profit of NABIL and HBL.

Table 4.36: Coefficient of Correlation between Deposit and Net Profit

Evaluation criterions					
Bank	**r**	**r^2**	**P.Er**	**6 P.Er**	**Remarks**
NABIL	0.9565	0.9148	0.0257	0.1542	r>6P.Er
HBL	0.4326	0.1871	0.2452	1.4712	r< 6P.Er

In table 4.36, the value of "r" of NABIL is 0.9565 which indicates a positive relationship between deposits and net profit. The coefficient of determinants is 0.9148, hich shows 91.48% of the variation of net profit has been explained by the deposit. Here, r>6P.Er. this states that there exists a significant relationship between two variables. Similarly the coefficient of correlation of HBL is 0.4326 which denotes a positive relationship between dependent and independent variables. The coefficient of determinants of HBL is 0.1871. This indicates that 18.71% of the variation of the dependent variable has been explained by the independent variable. Here r<6P.Er which means there is insignificant relationship between total deposit and net profit from this analysis, it can be concluded that correlation coefficient of NABIL is higher than HBL. The value of "r^{-2}" in case of NABIL shows higher percentage of dependency and incase HBL, it shows lower percentage of dependency. NABIL shows significant relationship and HBL shows insignificant between total deposit and net profit.

4.10 Major Findings of the Study

4.10.1 Finding from Liquidity Ratios Analysis

- The current assets of NABIL and HBL have exceeded current liabilities in average. The mean of current ratio of NABIL and HBL are less than standard ratio i.e. 2:1. The average ratio of NABIL and HBL are 1.0709:1 and 1.0611:1 respectively during the study period. The mean current ratio of NABIL is higher than HBL. The coefficient of variance of NABIL is 1.795 which is greater than of HBL i.e. 1.155.
- The cash and bank balance to total deposit ratio measures the percentage of most liquid fund with the bank to make immediate payment. NRB has prescribed CRR of 5.5%. Both banks have maintained above NRB. The mean ratio of NABIL is 5.93% which is less than that of HBL i.e. 7.19%. in the FY 2009/10 CRR of HBL is 10.28 % which is greater than CRR of NABIL i.e. 3.02%. This ratio shows HBL's solvency is higher than NABIL. Similarly CV of HBL is lower i.e. 28.76% showing more stability than NABIL which is 42.07%. so HBL should increased its liquidity position as it maintain any unexpected demand of the depositors.
- The cash and bank balance to current assets ratio shows the bank ability to meet the demand of cash. The average ratio of NABIL i.e. 5.16% is lower than HBL which has 6.51%. The CV of NABIL and HBL are 41.65% and 28.57% respectively. It indicates the HBL has better position in maintained its cash and bank balance to meet its daily requirement than NABIL to make the payment on customer's deposits withdrawal.
- The main ratio of HBL has higher than the ratio of NABIL. It indicates that HBL has higher amount of deposit investment on government securities than NABIL in average. The CV of NABIL and HBL are 25.49% and 27.17% respectively.

4.10.2 Finding from Assets Management Ratio Analysis

- Loan and advances to total deposit mean ratio of NABIL and HBL are 70.22% and 66.20% respectively. Higher ratio implies the better utilization of total deposit. The CV of NABIL and HBL are 3.74% and 10.81% respectively.
- Total investment to total deposit mean ratio of HBL is higher than NABIL. The ratio of NABIL increased from FY 2005/06 to 2006/07 and has decreased in FY 2007/08 to 2009/10. Its mean ratio is 31.97% and CV is 10.48%. The ratio of HBL has shown the fluctuation between 22.45% and 41.10%. in the last Five years its mean ratio is 33.98% and CV is 24.75%.
- The mean ratio of loan and advances to total working fund of NABIL is 60.25% and the CV is 4.54% which shows that the ratios are consistent over the study period. Similarly, the ratio of HBL is 57.67 % and the CV is 10.73%. This shows that NABIL has higher return than HBL as loan and advances in the most risky and most productive assets of the bank.
- Investment on government securities to total working fund ratio shows the proportion of risk free assets of bank. Investment on government securities is the risk free investment for the commercial banks. The ratio of NABIL and HBL the investment on government securities is fluctuating trend during the study periods. The mean ratio of NABIL is 12.72% which is lower than that of HBL i.e. 15.32% the CV of NABIL and HBL are 25.66% and 27.44% respectively.
- NABIL has been investing larger amount of money on share and debenture since FY 2005/06 than HBL. The mean ratio between investment on share and debenture to working fund of NABIL (0.76%)) is greater than of (0.2%). The CV of NABIL 25.20% is comparatively higher than HBL 20.05%. It means the distribution of NABIL is more variable. So HBL has invested very less percentage of total working fund into share and debentures of other companies than NABIL.
- Performing loan loss provision indicates the success of banks in utilizing their assets for the generating profit. Performing loan loss provision of

NABIL and HBL are 98.89% and 96.35%. Here, HABIL has higher ratio than HBL. It indicates that NABIL has proper utilization of assets on good loans than HBL. The CV of NABIL and HBL are 0.29% and 1.64% respectively.

- Higher non performing loan loss provision ratio indicates worse management of assets here indicates NABIL has lower ratio than HBL. Showing better utilization of loan. The mean ratio of NABIL is 1.04% while that of HBL is 3.64%. The CV of NABIL and HBL are 25.68% and 43.53 respectively.
- Loan loss provision ratio illustrates the amount of provision a bank has to create for its loan and advance. Higher loan loss provision ratio is beneficial to the bank. Analysis indicates that the mean ratio of MABIL is higher than that f HBL. The mean ratios are 1.9584% and 1.2357% respectively. The CV of NABIL is 14.64% is higher than HBL 10.51%.

4.10.3 Finding from Profitability Ratios Analysis

- Return on loan and advances indicate the earning on mobilized fund based on loan on loan and advances. The ratio of NABIL is much better than HBL. The ratio of NABIL and HBL are 3.45% and 1.75% respectively in the FY 2009/10. The ratios of both banks are fluctuating over five year study period. However the CV of HBL is higher than NABIL i.e. 18.21 % and 13.35% respectively.
- Return on working fund or return on assets measures the over all profitability of all ratio of HBL is lower than NABIL in average because of lower HBL's net profit. The mean ROA of NABIL and HBL are 2.35% and 1.54%. The CV of NABIL 11.55% is lower than that of HBL is 16.08%.
- Return on equity indicates the efficiency of utilization of owner's fund by banks. According to the analysis, mean ROE of NABIL (31.97%) is higher than that of HBL (22.61%). The ratio of NABIL indicates that

they are more uniform than ratio of HBL during the study period as CV of NABIL and HBL are 4.88% and 17.84%.

- Total interest to total asset ratio measures the earning capacity ratio of the bank through assets the average ratio of NABIL and HBL are 6.22% and 5.91% respectively. CV of NABIL is more consistent than HBL as CV of NABIL is 13.42 and that of HBL is 12.90% which are slightly different.
- Total interest earned to total working fund ratio measures the percentage of interest earned over total working fund. Total working fund includes all asset of on balance sheet items. Total interest to total working fund of NABIL and HBL are 6.18% and 5.77% respectively. Whereas CV of NABIL and HBL are 13.96% and 12.85% respectively it is shown that higher the risk higher the return and vice-versa.

4.10.4 Finding from the Risk Ratios Analysis

- Credit risk ratio indicates the possibility that loan will not be repaid. The credit risk ratio of both NABIL and HBL has the increasing trend. The mean credit risk ratio during the study period of NABIL and HBL are 60.71% and 59.08%. the CV of HBL is variable with 10.55%and the CV of NABIL seems to be consistent with 3.91%.
- Capital risk ratio of the NABIL and HBL are fluctuation trend. The mean ratio of capital risk ratio of NABIL is 2.94% with CV14.37%. The mean ratio of HBL is 3.94% having 6.76% having 6.76% CV According to the analysis; the mean ratio of NABIL is lower than that of HBL. Its ratios are more variable than HBL.

4.10.5 Findings from Growth Ratio Analysis

- The analysis of growth ratios of total deposits shows that total deposit of NABIL is increasing with the average growth of 24.67% during the five years study period. Similarly, the total deposit of HBL is also increasing each year with the average growth rate of 9.19%.

- The analysis of growth ratio of loan and advances indicates that loan and advance of NABIL is increasing and reaches to 33031 million in FY 2009/10. It has average growth rate of 25.81% while the loan and advance of HBL is in increasing trend with average growth rate of 16.72%.
- The analysis of growth of total investment reveals that total investments of NABIL Banks are increasing trend since FY2005/06 to 2009/10. The HBL bank has been increasing in FY 2007/08 after that it would be decreased. The average growth of total investment of NABIL and HBL are 22.76% and -4.08%.
- The analysis of growth of total net profit indicates that net profit of NABIL is increasing since FFY 2005/06 to 2009/10; its average rate is 16.37%. Similarly HBL the net profit is increasing till FY 2008/09 after that it has decreased in FY 2009/10 with average growth rate of 5.73%.

4.10.6 Finding from Capital adequacy Ratio

- Both NABIL and HBL are increasing total capital fund over the study period to reach the target given by NRB. The capital fund of bank is largely depending upon share capital. The reserve funds and profit of the bank also plays the vital role in the formation of the capital, it indicates that of NABIL as paid up capital of HBL

4.10.7 Findings from Common Size Analysis

- Common size analysis is the comparative study of balance sheet and income statement of the both bank. Total assets, total liabilities and interest earned are considered as common base for this comparative study. According to common size balance sheet analysis, share capital of NABIL covers 2.2%, 1.8%, 1.86%, 3.30%, and 3.89% of total liabilities respectively from FY 2005/06 to 2009/10, while HBL covers 2.6%, 2.4%, 2.8%, 3.09% and 4.68%. Similarly, deposit of NABIL occupies 86.6%, 85.6%, 85.95%, 85.14% and 88.99% respectively from total

liabilities where as HBL has 89.9%, 89.6%, 88.02%, 88.18% and 88.05% respectively from total liabilities during study period.

- NABIL has cash and bank balance 2.8%, 5.1%, 7.19%, 7.69% and 2.69% of total assets and HBL has 5.8%, 5.2%, 4%, 7.75% and 9.05% during the study period. Money at call and short notice of NABIL covers 7.8% during FY 2005/06 and 5.98% during FY 2009/10. Money at call and short notice of HBL are 3.4% and 0.72% during FY 2005/06 and 2009/10 respectively. Likewise, investment of NABIL 27.7% during FY 2005/06 and 26.21% during FY 2009/10. From total assets where as that of HBL are 37% and 19.77%. as loan and advance and bills purchase shows the largest amount of total assets. It covers 57.9%, 57.1%, 57.54%, 62.89%, and 61.88% of NABIL's total assets from FY 2005/06 to 2009/10 respectively. Loan and advances of HBL from FY 2005/06 to 2009/10 are 49.7%, 50.7%, 53.89%, 63.04% and 65.50% respectively.
- According to the common size income statement analysis, interest income of bank is taken as 100%. Net profit of NABIL during FY 2005/06 to 2009/10 is 48.5%, 42.5%, 37.69%, 36.85% and 28.15%. it clearly indicates that net profit of NABIL has decreasing trend since FY 2005/06 to 2009/10. Net interest of HBL from the analysis of common size income statement from FY 200506 to 2009/10 are 60.1%, 56.8%, 58.04%, 60.08% and 50.65%. net profit of HBL during the Five year's study period are 28.1% 27.7%, 32.33%, 32.11% and 16.16% of total interest earned. The analysis indicates that HBL has the highest profit during FY 2007/08 and the lowest during FY 2009/10. HBL has fluctuation trend on net interest income and net profit. According to the common size income statement net profit percentage of NABIL is excessively higher than that of HBL.

4.10.8 Finding from Trend Analysis

- From the trend analysis of total deposit, loan and advances, investment and net profit of NABIL and HBL. It is cleared that total deposit, loan

and advances and net profit they are in increasing trend in NABIL and HBL. Investment of NABIL is in increasing trend and investment of HBL is decreasing trend. The trend line of Net profit of NABIL is higher than that of HBL. Hence NABIL and HBL both banks are able to increase the profitability of the banks as their funds collection and utilization are increasing. Banks are adopting the proper policy to increase the profit of the organization, so the investment policy of the banks in terms of optimum utilization of their resource to generate optimum return is good.

4.10.9 Findings from the Correlation Coefficient Analysis

- The correlation coefficient between total deposits and loan and advance shows that the correlation "r" between deposits and loan and advances of NABIL is 0.9949 and probable error multiplied by six is found to be 0.018. Similarly, correlation of coefficient between deposit and loan and advances of HBL is 0.9795 and six times P.Er is 0.0732 since r>6P.Er of both banks. It is significant and there is correlation between total deposit and loan and advance in NABIL and HBL correlation (r) is positive near to 1. So there is positive correlation between total deposit and loan and advances during the study period. It means the increase or decrease of total deposit of the bank. Highly affects the loan and advances.
- The correlation coefficient between total deposit and total investment shows that the correlation coefficient (r) between total deposits and total investment of NABIL and HBL are 0.3059 and -0.6086 respectively. Probable error multiplied by six are found to be 1.6404 and 1.1394 since r< 6P.Er, there is insignificant relation ship. However correlation of NABIL is Positive and correlation of HBL is Negative.
- The correlation coefficient (r) between deposit and net profit of NABIL is 0.9565 and probable error multiplied by six found to be 0.1542 since r>P.Er. it is significant. There is high degree of correlation between deposit and net profit. Similarly, the correlation coefficient between

deposit and net profit of HBL is 0.4326 and six times probable error is 1.4712 since r<P.Er, there is insignificant relation ship between deposit and net profit. Both banks have positive correlation coefficient.

CHAPTER - V

SUMMARY CONCLUSION AND RECOMMENDATION

This chapter is concerned with the major conclusions and recommendation on the basis of the major findings of the study derived from the analysis of investment policy of NABIL and HBL.

5.1 Summary

Economic development depends upon capital formation and its proper utilization. Financial institutions collect scattered saving of the country and invest them into the most desirable and high yielding sectors of the economy to fuel the process of economic development. Commercial banks are major financial institutions. Which occupy an important place in the framework of every economy because they provide capital for the development of industry, trade and business and other resources banks play a vital role in the economic development of the country. They render various services to their customers which automatically facilitate their economic and their social life . Every bank formulates an investment policy statement in order to define the objectives of bank's liquidity management and investment portfolio.

Investment refers to the conversion of money into clams on money and use of fund for productive assets. It includes the savings of resources for future benefits. In terms of banking investment, it means purchasing stock, bonds, share, treasury bills etc The features of investment decisions are profit, risk, speculation and wealth. Good investment policy ensures maximum amount of investment amount of investment to all sectors with proper utilization.

Investment management of a bank is guided by the investment policy adapted by the bank. The investment policy of bank helps the investment operation of the bank to the efficient and profitable by minimizing the risk. A healthy development of any bank depends upon its investment policy. A sound investment policy of a bank is such that its fund are distributed on

different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and banks other hand . There are five principles of sound lending policy i.e. liquidity, profitability, safety and security, stability and diversification.

Investment policy provides guidelines to handle their investment operation smoothly ensuring maximum return with minimum exposure towards risk. Main investment of the bank is lending its collected fund in different sector of economy. Lending affects the bank's profitability and liquidity, so it is one of the crucial decisions for the commercial banks. The major source of income of a bank is interest income from loans and investment. Loan and advances provides by commercial banks have to follow their policies to utilize their funds.

In current scenario there is a very high competition in banking sector in Nepal but investment alternatives are decreasing due to political instability, insurgency, etc. Banks have to face many problems to survive in this type of environment. Bank have to follow sound investment policy for a purposeful, safe and profitable investment. Development of trade, industry and business in the mail ground of banks to conduct its activities and fulfill its profit making objectives. The sound investment policy helps all the banks to make profitable investment which in turn also helps to develop the economic condition of the country.

The basic objectives of this study are to evaluate the investment policy adopted by NABIL and HBL and suggest measures to improve the investment policy of the banks. The study is mainly based on secondary data from FY2005/06 to 2009/10. The data had been obtained from the annual reports and financial statements, various published reports and past period master's degree thesis related to this topic. Various financial and statistical tools are applied in this study to analyze and interpret the data and

information. Under financial analysis, liquidity ratio, asset management ratio, profitability ratio, risk ratio, growth rate and common size analysis have been used. Under statistical analysis, trend analysis and coefficient of correlation analysis have been used.

5.2 conclusions

The conclusions of the major findings of the research have been discussed below.

1. The study shows that current ratio of both NABIL and HBL is consistent, but still below the standard. NABIL has higher ability that of HBL on the basis of current ratio. This study shows that HBL has better position in maintaining cash reserve ratio. Cash and bank balance to current asset ratio and investment on government securities to total deposit ratio than NABIL.
2. The assets management of NABIL is better than that of HBL. The loan and advances to total working fond ratio, investment on shares and debentures to working fund, performing loan los provision of NABIL are higher than HBL. But investment on government securities to total working fund, total investment to total deposit ratio of HBL are higher than NABIL.
3. The profitability ratio of NABIL is somewhat better than that of HBL. Return on loan and advances ratio, return on total working fund ratio, return on equity, total interest earned to total asset ratio and total interest to working fund of NABIL are higher than that of HBL. Thus it indicates NABIL is more efficient in function of bank in terms of profit than HBL.
4. Credit risk of NABIL is higher than the comparison of HBL. Similarly capital risk of HBL is higher than NABIL. Capital ratio of NABIL is more variable than the ratio of HBL over the research period. It shows NABIL has less consistency of the degree of risk than HBL.
5. The deposit of both bank (NABIL and HBL) have been increasing since FY 2005/06 to FY 2009/10. Loan and advances of both banks have been

increasing. Total investment of NABIL bank has been increasing but total investment of HBL has been increasing till FY 2007/08. After that HBC has been decreasing. Net profit of both bank have been increasing since FY 2005/06. But HBL has been decreasing in FY 2009/10. Comparing of two banks, it is cleared that the study of growth rate of NABIL is better than the growth rate of HBL.

6. NABIL and HBL both are successful in achieving the CAR prescribed by NRB over the 5 Years study period. Both banks are successful in achieving core capital adequacy ratio. Hence, total capital of both banks is increasing each year.
7. According to the common size balance sheet percentage of capital and liabilities, such as reserve and surplus, bills payable and undistributed dividend and percentage of assets of NABIL are higher than HBL. According to the common size income statement, the percentage of net profit of NABIL is higher than that of HBL. It indicates that NABIL has been successful to adopt the appropriate investment policy which increases the profitability of the bank.
8. Both NABIL and HBL have positive trend in total deposit, loan and advance and net profit. Investment of NABIL has been increasing trend but investment of HBL has been decreasing trend since FY 2005/06 to 2009/10. The banks have also been able to increase their profitability. Therefore it can be concluded that the banks have been adopting a good investment policy.
9. Since correlation coefficient (r) between total deposit and loan and advances are positive nearer to 1 and r>6P.Er of both banks. It is significance and there is positive correlation between total deposit and loan and advances in NABIL and HBL. It means the increase or decrease of total deposit of the bank highly affects the loan and advances.
10. The correlation coefficient (r) between deposit and total investment of NABIL is positive and HBL is negative correlation. Since r< 6P.Er of

both bank. It is insignificant and there is no correlation between total deposit and total investment.

11. The correlation coefficient between total deposit and net profit of NABIL and HBL are positive correlated. Since r>6P.Er of NABIL, there is significant relationship between total deposit and net profit. Similarly r<6P.Er of HBL. It is insignificant there is no correlation between total deposit and net profit.

5.3 Recommendations

On the basis of analysis, findings and gaps of the study, following recommendation can be advanced to overcome weakness, inefficiency and to revitalize and improve present fund mobilization and investment policy of NABIL and HBL.

1. According to the study, the current ratio of NABIL and HBL are below standard i.e. 2.1. The liquidity position affects external and internal factors such as prevalent investment situations, central bank requirements, the growth position of the financial market, lending policies, management capabilities, strategic planning and fund flow situation. The bank should maintain enough liquidity assets to pay short-term obligations. Hence, both banks should increase the current assets or try to lower the current liabilities to improve its liquidity position.
2. The cash reserve ratio (CRR) 0f both fluctuating and some fiscal year CRR below the standard rate as NRB has prescribed CRR of 5.5%. Hence, both banks should increase cash and bank balance or try to maintain its standard.
3. Investment on Govt. securities of NABIL is low as compare to HBL. Govt. securities are risk free investments. Hence, NABIL is recommended to increase the investment in gob. Securities, which helps to utilize funds into income generating assets as well as minimizes risk. The investment on 0% risky assets such as Treasury bills reduces total risk weighted assets.

4. The position of assets management ratio of NABIL is better than HBL. However NABIL should try to maintain consistency of asset management ratio since it is less consistent than HBL.
5. Deposit money must be utilized as loan and advances to get success in competitive banking environment. The largest item of the bank in assets side is loan and advances. It has been found that the average loan and advances to total deposit ratio of NABIL is higher than HBL. It means HBL has not properly used their existing deposit as loan and advances. So, HBL is recommended to follow liberal lending policy and invest more percentage amount of total deposit in loan and advances. Liberal lending policy helps a bank to make the efficient utilization of its deposits.
6. The non performing loan to total loan and advances ratio of HBL and NABIL bank maintained its standard level. It should be less than 5% to be graded as internationally 'A' grade commercial bank. Therefore, the management of banks should give attention to manage the NPA within the satisfactory level.
7. Bank can gain more profit if it can reduce its NPA as non performing loan decrease net profit of the bank. According to the finding from the study, HBL has larger amount of nonperforming loan than NABIL. Thus, net profit of HBL is also lower than NABIL. Therefore, HBL should have its due attention to work out a suitable mechanism through which the default loans can be realized.
8. Regarding NPA, HBL should focus on the collection of expired loans and advances to reduce the loan loss ratio. The policy of HBL should ensure rapid identification of delinquent loans, immediate contact with the borrowers and continual follow up until a loan is recovered, the recovery of loan is the most challenging job to bank. Therefore, the bank must be very careful in formulating a sound credit collection policy.
9. Profit is very important for the survival and stability of any organization. The average ratio of return on loan and advances, return on total working

fund return on equity and total interest earned to total assets of HBL are lower than that of NABIL. This may be due to the focus of HBL on low return areas. HBL should look for other areas of investment with higher return so that it can earn return sufficient enough for its survival, stability and long-term sustainability.

10. Credit risk of both banks is higher. It measures the possibility that loan will go into default. Loan default in commercial bank is the result of various factors such as lack of the necessary skills for the project appraisal, political influences, improper collateral evaluation, irregular supervision and lack of entrepreneurial attitude, the proper inspection of the documents presented is the most for preventing any critical conditions in the future. Political backing is highly prevailing in each and every sectors of Nepalese investment. Commercial banks should always keep a distance from these influences.
11. Immediate increase of the capital in very short term can be difficult for any commercial banks, issuing new share, bonus share or right share and issuing debentures takes a long time, as the prior approval of NRB has to be obtained. Therefore, to maintain the adequate capital, the only option left with the bank is to manage the assets to reduce and increasing the investment in government securities can help to maintain the adequate capital.
12. NABIL and HBL need to adopt innovative approach for marketing in the light of growing competition in the banking sector. The business of the bank should be customer oriented. They should strengthen and activate their marketing function, as it is an effective tool to attract and retain the customers. For this purpose, the bank should formulate new strategies of serving customers in a more convenient and satisfactory way by optimally utilizing the modern technology and offering new facilities to the customers at competitive price.
13. The existing unstable political situation, inflation and recession directly affect economic sectors such as hotel and tourism, manufacturing and

trading sector. Banks are investing more funds in land and housing. Probably it will be more risky for banks so banks should create new investing sector to mobilize deposit.

14. Both the banks have invested nominal percentage of its funds in shares and debentures of other companies. They are recommended to invest more in shares and debentures of financial and non financial companies across different sectors to encourage overall economic development of the country.
15. NRB has directed the banks to extend a certain percentage of loan and advances to the deprived sector. Both the banks are recommended to adhere of the directives issued by NRB and invest in these sectors. NRB should also speed up its supervision and monitoring in this regard.

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APPENDICES

Appendix -1
Current Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Current Assets	22545	26967	36535	43206	51371
	Current Liabilities	20353	25196	34695	40737	48317
	Ratio	1.1077	1.0702	1.0530	1.0606	1.0632
HBL	Current Assets	28858	32945	35449	38378	41656
	Current Liabilities	27694	31013	32802	36210	39278
	Ratio	1.0420	1.0622	1.0807	1.0599	1.0605

Appendix -2
Cash and Bank Balance to Total Deposit Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Cash & Bank balance	630	1399	2671	3372	1400
	Total Deposit	19347	23342	31915	37348	46410
	Ratio	0.0326	0.0599	0.0837	0.0903	0.0302
HBL	Cash & Bank balance	1717	1757	1448	3048	3866
	Total Deposit	26491	30048	31843	34681	37611
	Ratio	0.0648	0.0585	0.0455	0.0879	0.1028

Appendix -3
Cash and Bank Balance to Current Assets Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Cash and Bank Balance	630	1399	2671	3372	1400
	Current Assets	22545	26967	36535	43206	51371
	Ratio	0.0279	0.0518	0.0731	0.0780	0.0273
HBL	Cash and Bank Balance	1717	1757	1448	3048	3866
	Current Assets	28858	32945	35449	38368	41656
	Ratio	0.0595	0.0533	0.0408	0.0794	0.0928

Appendix -4
Investment in Govt. Securities to Total Deposit Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Govt. Securities	2301	4804	4647	3706	7941
	Total Deposit	19347	23342	31915	37348	464010
	Ratio	0.1189	0.2060	0.1456	0.0922	0.1711
HBL	Govt. Securities	5144	6454	7472	4212	4465
	Total Deposit	26491	30048	31843	34681	37611
	Ratio	0.1942	0.2147	0.2346	0.1214	0.1187

Appendix -5
Loan and Advances to Total Deposit Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Loan and Advances	13279	15903	21759	27999	33031
	Total Deposit	19347	23342	31915	37348	46410
	Ratio	0.6864	0.6813	0.6818	0.7497	0.7117
HBL	Loan and Advances	15762	17793	20179	25519	29124
	Total Deposit	26491	30048	31843	34681	37611
	Ratio	0.5950	0.5921	0.6337	0.7152	0.7743

Appendix -6
Total Investment to Total Deposit Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Total Investment	6181	8945	9939	10826	13671
	Total Deposit	19347	23342	31915	37348	46410
	Ratio	0.3195	0.3832	0.3114	0.2899	0.2946
HBL	Total Investment	10889	11823	13340	8710	8445
	Total Deposit	26491	30048	31843	34681	37611
	Ratio	0.4110	0.3934	0.4189	0.2511	0.2245

Appendix -7
Loan and Advances to Total Working Fund Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Loan and Advances	13279	15903	21759	27999	33031
	Total Working Fund	22688	27611	37526	43867	52150
	Ratio	0.5853	0.5760	0.5798	0.6382	0.6334
HBL	Loan and Advances	15762	17793	20179	25519	29124
	Total Working Fund	30525	34315	36857	40046	43860
	Ratio	0.5164	0.5185	0.5475	0.6372	0.6640

Appendix -8
Investment in Govt. Securities to Total Working Fund Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Govt. Securities	2301	4804	4647	3706	7941
	Total Working Fund	22688	27611	37526	43867	52150
	Ratio	0.1014	0.1741	0.1238	0.0845	0.1523
HBL	Govt. Securities	5144	6454	7472	4212	4465
	Total Working Fund	30525	34315	36857	40046	43860
	Ratio	0.1685	0.1880	0.2027	0.1052	0.1018

Appendix -9
Investment in Share and Debenture to Total Working Fund Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Share and Debenture	104	286	323	355	347
	Total Working Fund	22688	27611	37526	43867	52150
	Ratio	0.0046	0.0103	0.0086	0.0081	0.0066
HBL	Share and Debenture	39	73	89	94	79

	Total Working Fund	30525	34315	36857	40046	43860
	Ratio	0.0013	0.0021	0.0024	0.0023	0.0018

Appendix -10
Performing Loan Loss Proving

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Performing Loan	13096	15724	21598	27774	32545
	Loan and Advances	13279	15903	21759	27999	33031
	Ratio	0.9862	0.9887	0.9926	0.9919	0.9853
HBL	Performing Loan	14721	17152	19702	24968	28099
	Loan and Advances	15762	17793	20179	25519	29124
	Ratio	0.9340	0.9640	0.9763	0.9784	0.9648

Appendix -11
Non Performing Loan Loss Provision

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Non Performing Loan	183	178	161	224	486
	Loan and Advances	13279	15903	21759	27999	33031
	Ratio	0.0100	0.0119	0.0074	0.0080	0.0147
HBL	Non Performing Loan	1041	641	477	551	1025
	Loan and Advances	15762	17793	20179	25519	29124
	Ratio	0.0660	0.0360	0.0236	0.0216	0.0352

Appendix -12
Loan Loss Provision Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Loan Loss Provision	356	357	394	409	762
	Non Performing Loan	183	178	161	224	486
	Ratio	1.9454	2.0056	2.4472	1.8258	1.5679
HBL		1120	795	682	726	1143
	Non Performing Loan	1041	641	477	551	1025
	Ratio	1.0759	1.2402	1.4297	1.3176	1.1151

Appendix -13
Return on Loan and Advances

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Net profit After tax	635	674	746	1031	1139
	Loan and Advances	13279	15903	21759	27999	33031
	Ratio	0.0478	0.0423	0.0342	0.0368	0.0345
HBL	Net profit After tax	457	492	636	753	509
	Loan and Advances	15762	17793	20179	25519	29124
	Ratio	0.0290	0.0276	0.0315	0.0295	0.0175

Appendix -14
Return on Total Working Fund

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Net profit After tax	635	674	746	1031	1139
	Total Working Fund	22688	27611	37526	43867	52150
	Ratio	0.0280	0.0244	0.0199	0.0235	0.0218
HBL	Net profit After tax	457	492	636	753	509
	Total Working Fund	30525	34315	36857	40046	43860
	Ratio	0.0150	0.01433	0.0172	0.0188	0.0116

Appendix -15
Return on Equity

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Net profit After tax	635	674	746	1031	1139
	Total Equity	1875	2057	2437	3130	3835
	Ratio	0.3387	0.3276	0.3061	0.3293	0.2970
HBL	Net profit After tax	457	492	636	753	509
	Total Equity	1766	2146	2513	3120	3439
	Ratio	0.2588	0.2292	0.2531	0.2413	0.1480

Appendix -16
Total Interest Earned to Total Assets Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Total Interest Earned	1309	1587	1978	2798	4048
	Total Assets	22330	27253	37133	43867	52150
	Ratio	0.0586	0.05823	0.0532	0.0637	0.0776
HBL	Total Interest Earned	1626	1775	1963	2342	3149
	Total Assets	29460	33519	36175	39330	42717
	Ratio	0.0552	0.0529	0.0542	0.0595	0.0737

Appendix -17
Total Interest Earned to Total Working Fund Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Total Interest Earned	1309	1587	1978	2798	4048
	Total Working Fund	22688	27611	37526	43867	52150
	Ratio	0.0577	0.0574	0.0527	0.0638	0.0776
HBL	Total Interest Earned	1626	1775	1963	2342	3149
	Total Working Fund	30525	34315	36857	40046	43860
	Ratio	0.0533	0.0517	0.0532	0.0584	0.0718

Appendix -18
Credit Risk Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Loan and Advances	13279	15903	21759	27999	33031
	Total Assets	22330	27253	37133	43867	52150
	Ratio	0.5947	0.5835	0.5859	0.6382	0.6334
HBL	Loan and Advances	15762	17793	20179	25519	29124
	Total Assets	29460	33519	36175	39330	42717
	Ratio	0.5350	0.5308	0.5578	0.6488	0.6818

Appendix -19
Credit Risk Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Share Capital	492	492	689	966	1449
	Risk Weighted Assets	16976	19167	27010	32500	39016
	Ratio	0.0290	0.0256	0.0255	0.0297	0.0371
HBL	Share Capital	772	810	1013	1216	1600
	Risk Weighted Assets	19918	21889	25624	32629	36049
	Ratio	0.0388	0.0370	0.0395	0.0373	0.0444

Appendix-20(A)

Growth Rate

Growth Rate Can be calculated as; $D_n = D_o\ (1+g)^n$

Here, D_n = Total amount in n^{th} year

D_o = Total amount in initial year

g = growth rate

n = Period

Growth Rate of Total Deposit of NABIL

$D_1 = D_{2005/06}$ = 19347

$D_2 = D_{2006/07}$ = 23342

$D_3 = D_{2007/08}$ = 31915

$D_4 = D_{2008/09}$ = 37348

$D_5 = D_{2009/10}$ = 46411

Now, $D_2 = D_1\ (1+g)^n$

$23342 = 19347\ (1+g)^1$

g = 20.65%

$D_3 = D_2\ (1+g)^n$

$31975 = 23342\ (1+g)^1$

g = 36.73%

$D_4 = D_3\ (1+g)^n$

$37348 = 31915\ (1+g)^1$

g = 17.02%

$D_5 = D_4\ (1+g)^n$

$46411 = 37348\ (1+g)^1$

g = 24.27%

Average growth rate = $\frac{20.65\%+36.73\%+17.02\%+24.27\%}{4}$ = 24.67%

Growth Rate of Total Deposit of HBL

$D_1 = D_{2005/06}$ = 26491

$D_2 = D_{2006/07}$ = 30048
$D_3 = D_{2007/08}$ = 31843
$D_4 = D_{2008/09}$ = 34684
$D_5 = D_{2009/10}$ = 37611

$D_2 = D_1 (1+g)^n$
30048 = 26491 $(1+g)^1$
g = 13.43%

$D_3 = D_2 (1+g)^n$
31843 = 30048 $(1+g)^1$
g = 5.97%

$D_4 = D_3 (1+g)^n$
34681 = 31843 $(1+g)^1$
g = 8.91%

$D_5 = D_4 (1+g)^n$
37611 = 34681 $(1+g)^1$
g = 8.45%

Average growth rate = $\frac{13.43\%+5.97\%+8.91\%+8.45\%}{4}$ = 9.19%

Appendix-20(B)

Growth Rate of Loan and Advances of NABIL

$D_1 = D_{2005/06}$ = 13279
$D_2 = D_{2006/07}$ = 15903
$D_3 = D_{2007/08}$ = 21759
$D_4 = D_{2008/09}$ = 27999
$D_5 = D_{2009/10}$ = 33031

Now, $D_2 = D_1 (1+g)^n$
15903 = 13279 $(1+g)^1$
g = 19.76%

$D_3 = D_2 (1+g)^n$
21759 = 15903 $(1+g)^1$
g = 36.82%

$D_4 = D_3 (1+g)^n$
27999 = 21759 $(1+g)^1$
g = 28.68%

$D_5 = D_4 (1+g)^n$
33031 = 27999 $(1+g)^1$
g = 17.97%

Average growth rate = $\frac{19.76\%+36.82\%+28.68\%+17.97\%}{4}$ = 25.81%

Growth Rate of Loan and Advances of HBL

$D_1 = D_{2005/06}$ = 15762
$D_2 = D_{2006/07}$ = 17793
$D_3 = D_{2007/08}$ = 20179
$D_4 = D_{2008/09}$ = 25519
$D_5 = D_{2009/10}$ = 29124

Now, $D_2 = D_1 (1+g)^n$

$17793 = 15762 (1+g)^1$

$g = 12.88\%$

$D_3 = D_2 (1+g)^n$

$20179 = 17793 (1+g)^1$

$g = 13.41\%$

$D_4 = D_3 (1+g)^n$

$25519 = 20179 (1+g)^1$

$g = 26.46\%$

$D_5 = D_4 (1+g)^n$

$29124 = 25519 (1+g)^1$

$g = 14.13\%$

Average growth rate = $\frac{12.88\%+13.41\%+26.46\%+14.13\%}{4} = 16.72\%$

Appendix-20(C)

Growth Rate of Investment of NABIL

$D_1 = D_{2005/06} = 6181$

$D_2 = D_{2006/07} = 8945$

$D_3 = D_{2007/08} = 9939$

$D_4 = D_{2008/09} = 10826$

$D_5 = D_{2009/10} = 13671$

Now, $D_2 = D_1 (1+g)^n$

$8945 = 61819 (1+g)^1$

$g = 44.72\%$

$D_3 = D_2 (1+g)^n$

$9939 = 8945 (1+g)^1$

$g = 11.11\%$

$D_4 = D_3 (1+g)^n$

$10826 = 9939 (1+g)^1$

$g = 8.92\%$

$D_5 = D_4 (1+g)^n$

$13671 = 10826 (1+g)^1$

$g = 26.28\%$

Average growth rate = $\frac{44.72\%+11.11\%+8.92\%+26.28\%}{4} = 22.76\%$

Growth Rate of Investment of HBL

$D_1 = D_{2005/06} = 10889$

$D_2 = D_{2006/07} = 11823$

$D_3 = D_{2007/08} = 13340$

$D_4 = D_{2008/09} = 8710$

$D_5 = D_{2009/10} = 8445$

Now, $D_2 = D_1 (1+g)^n$

$11823 = 10889 (1+g)^1$

$g = 8.58\%$

$D_3 = D_2 (1+g)^n$

$13.340 = 11823\ (1+g)^{1}$
$g = 12.83\%$

$D_4 = D_3\ (1+g)^{n}$
$8710 = 13340\ (1+g)^{1}$
$g = -34.71\%$

$D_5 = D_4\ (1+g)^{n}$
$8445 = 8710\ (1+g)^{1}$
$g = -3.04\%$

Average growth rate = $\frac{8.58\%+12.83\%-34.31\%-3.04\%}{4} = -4.08\%$

ssAppendix-20(D)

Growth Rate of Net Profit of NABIL

$D_1 = D_{2005/06}$ = 6 35
$D_2 = D_{2006/07}$ = 674
$D_3 = D_{2007/08}$ = 746
$D_4 = D_{2008/09}$ = 1031
$D_5 = D_{2009/10}$ = 1139

Now, $D_2 = D_1\ (1+g)^{n}$
$674 = 635\ (1+g)^{1}$
$g = 6.14\%$

$D_3 = D_2\ (1+g)^{n}$
$746 = 674\ (1+g)^{1}$
$g = 10.68\%$

$D_4 = D_3\ (1+g)^{n}$
$1031 = 746\ (1+g)^{1}$
$g = 38.20\%$

$D_5 = D_4\ (1+g)^{n}$
$1139 = 1031\ (1+g)^{1}$
$g = 10.47\%$

Average growth rate = $\frac{6.14\%+10.68\%+38.20\%+10.47\%}{4} = 16.37\%$

Growth Rate of Net Profit of HBL

$D_1 = D_{2005/06}$ = 457
$D_2 = D_{2006/07}$ = 492
$D_3 = D_{2007/08}$ = 636
$D_4 = D_{2008/09}$ = 753
$D_5 = D_{2009/10}$ = 509

Now, $D_2 = D_1\ (1+g)^{n}$
$492 = 457\ (1+g)^{1}$
$g = 7.66\%$

$D_3 = D_2\ (1+g)^{n}$
$636 = 492\ (1+g)^{1}$
$g = 29.27\%$

$D_4 = D_3\ (1+g)^{n}$
$753 = 636\ (1+g)^{1}$

g = 18.39%

$D_5 = D_4 (1+g)^n$
509 = 753 $(1+g)^1$
g = -32.40%

Average growth rate = $\frac{7.66\%+29.27\%+18.39\%-32.40\%}{4} = 5.73\%$

Appendix-21
Capital Adequacy Ratio

(Rs in million)

Fiscal Year		2005/06	2006/07	2007/08	2008/09	2009/10
NABIL	Core Capital	1831	1992	2363	3044	3668
	Supplementary Capital	259	314	635	682	722
	Total Capital	2089	2307	2998	3727	4390
	Risk Weighted Assets	16976	19167	27010	34816	41822
	CAR(Core)	10.7844	10.3928	8.75	8.74	8.77
	CAR(Total)	12.3072	12.0392	11.10	10.70	10.50
HBL	Core Capital	1722	2104	2469	3074	3414
	Supplementary Capital	521	547	783	770	804
	Total Capital	2243	2651	3253	3845	4218
	Risk Weighted Assets	19918	21889	25624	32628	39357
	CAR(Core)	8.6450	9.612	9.64	8.81	8.67
	CAR(Total)	11.2602	12.1111	12.70	11.02	10.72

Appendix-22(A)
Balance Sheet of NABIL

(Rs in million)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Liabilities					
Share capital	492	492	689	1449	2029
Reserve & surplus	1383	1565	1748	1682	1806
Debenture & bond	-	-	240	300	300
Borrowing	173	883	1360	1681	75
Deposit	19347	23342	31915	37348	46411
Bills payable	93	84	238	463	425
Proposed dividend	435	509	437	338	435
Income tax liabilities	35	-	39	80	25
Other Liabilities	372	378	466	526	645
Total	22330	27253	37132	43867	52151
Assets					
Cash and bank balance	630	1399	2670	3372	1400
Money at call and short notice	1735	564	1953	553	3118
Investments	6181	8945	9940	10826	13671
Loan, advance and bills purchase	12923	15546	21365	27590	32269
Fixed assets	318	287	598	661	780
Other assets	543	512	606	865	913
Total	22330	27253	37132	43867	52151

Common Size Balance Sheet of NABIL

(In Percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Liabilities					
Share capital	2.2	1.8	1.86	3.30	3.89
Reserve & surplus	6.2	5.7	4.71	3.83	3.46
Debenture & bond	-	-	0.6	0.68	0.58
Borrowing	0.8	3.3	3.7	3.83	0.14
Deposit	86.6	85.6	85.95	85.14	88.91
Bills payable	0.4	0.3	0.64	1.06	0.82
Proposed dividend	1.9	1.9	1.18	0.78	0.83
Income tax liabilities	0.2	-	0.10	0.18	0.05
Other Liabilities	1.7	1.4	1.26	1.20	1.24
Total	100	100	100	100	100
Assets					
Cash and bank balance	2.8	5.1	7.19	7.69	2.69
Money at call and short notice	7.8	2.1	5.25	1.26	5.98
Investments	27.7	32.8	26.76	24.68	26.21
Loan, advance and bills purchase	57.9	57.1	57.54	62.89	61.88
Fixed assets	1.4	1.1	1.61	1.51	1.49
Other assets	2.4	1.8	1.63	1.97	1.75
Total	100	100	100	100	100

Balance Sheet of HBL

(Rs in million)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Liabilities					
Share capital	772	811	1013	1216	2000
Reserve & surplus	994	1336	1499	1904	1439
Borrowing	505	596	943	500	500
Deposit	26491	30048	31842	34682	37611
Bills payable	73	91	103	32	216
Proposed dividend	238	131	263	162	190
Income tax liabilities	-	12	19	10	-
Other Liabilities	387	494	492	824	761
Total	29460	33519	36175	39330	42717
Assets					
Cash and bank balance	1717	1757	1447	3048	3866
Money at call and short notice	1005	1710	519	1171	309
Investments	100889	11823	13340	8711	8445
Loan, advance and bills purchase	14643	16998	19498	24793	27981
Fixed assets	541	574	796	952	1062
Other assets	665	657	645	655	1054
Total	29460	33519	36175	39330	42717

Common Size Balance Sheet of HBL

(In Percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Capital Liabilities					
Share capital	2.6	2.4	2.8	3.09	4.68
Reserve & surplus	3.4	3.9	4.1	4.84	3.37
Borrowing	1.7	1.8	2.6	1.27	1.17
Deposit	89.9	89.6	88.02	88.18	88.05
Bills payable	0.2	0.27	0.28	0.08	0.51
Proposed dividend	0.8	0.4	0.73	0.41	0.44
Income tax liabilities	-	0.04	0.05	0.03	-
Other Liabilities	2.3	1.59	1.36	2.1	1.78
Total	100	100	100	100	100
Assets					
Cash and bank balance	5.8	5.2	4.00	7.75	9.05
Money at call and short notice	3.4	5.1	1.43	2.98	0.72
Investments	37.0	35.3	36.87	22.15	19.77
Loan, advance and bills purchase	49.7	50.7	53.89	63.04	65.50
Fixed assets	1.8	1.7	2.20	2.42	2.49
Other assets	2.3	2.0	1.78	1.66	2.47
Total	100	100	100	100	100

Appendix-22(B)
Income Statement of NABIL

(Rs in million)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Interest income	1309	1587	1979	2798	4048
Interest expenses	347	555	758	1153	1960
Net interest income	**952**	**1032**	**1221**	**1645**	**2088**
Commission and Dis.	138	151	156	179	215
Other operating income	83	87	97	144	170
Exchange income	185	210	196	252	291
Total operating income	**1358**	**1480**	**1670**	**2220**	**2764**
Employees expenses	220	240	262	340	367
Other operating expenses	182	188	221	265	334
Exchange loss	-	-	-	-	-
Provision for possible losses	4	14	64	45	356
Operating profit	**952**	**1038**	**1123**	**1570**	**1707**
Non operating income/loss	1	5	24	2	6
Provision for possible losses write back	8	11	11	11	40
Profit from regular activities	**961**	**1054**	**1158**	**1583**	**1753**
Income/expenses from extra ordinary activities	26	40	40	43	34
Profit from all activities	**987**	**1094**	**1198**	**1626**	**1787**
Provision for staff bonus	89	99	109	148	162
Provision for income tax	263	321	342	447	486
Net profit/loss	**635**	**674**	**746**	**1031**	**1139**

Common Size Income Statement of NABIL

(in Percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Interest income	150	100	100	100	100
Interest expenses	27.3	34.9	38.30	41.21	48.42
Net interest income	**72.7**	**65.1**	**61.69**	**58.79**	**51.58**
Commission and Dis.	10.5	9.5	7.88	6.4	5.31
Other operating income	6.3	5.5	4.9	5.14	4.2
Exchange income	14.1	13.2	9.90	9.01	7.19
Total operating income	**103.7**	**93.3**	**84.38**	**79.34**	**68.28**
Employees expenses	16.8	15.1	13.24	12.15	9.07
Other operating expenses	13.9	11.8	11.16	9.47	8.25
Exchange loss	-	-	-	-	-
Provision for possible losses	0.3	0.9	3.23	1.61	8.79
Operating profit	**72.7**	**65.5**	**56.84**	**56.11**	**42.17**
Non operating income/loss	0.1	0.3	1.21	0.07	0.15
Provision for possible losses write back	0.6	0.6	0.55	0.39	0.99
Profit from regular activities	**73.4**	**66.4**	**58.51**	**56.58**	**43.31**
Income/expenses from extra ordinary activities	2.0	2.5	2.02	1.54	0.84
Profit from all activities	**75.4**	**68.9**	**60.53**	**58.11**	**44.15**
Provision for staff bonus	6.8	6.2	5.51	5.28	4.00
Provision for income tax	20.1	20.2	17.28	15.97	12.00
Net profit/loss	**48.5**	**42.5**	**37.69**	**36.85**	**28.15**

Income Statement of HBL

(Rs in million)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Interest income	1626	1775	1964	2342	3149
Interest expenses	649	767	824	935	1554
Net interest income	**977**	**1008**	**1140**	**1407**	**1595**
Commission and Dis.	165	193	203	284	270
Other operating income	52	40	62	46	112
Exchange income	198	152	192	250	180
Total operating income	**1392**	**1393**	**1597**	**1988**	**21587**
Employees expenses	234	272	307	361	415
Other operating expenses	329	342	329	398	471
Exchange loss	-	-	-	-	-
Provision for possible losses	145	90	58	199	692
Operating profit	**684**	**689**	**903**	**1030**	**579**
Non operating income/loss	1	3	9	4	12
Provision for possible losses write back	56	413	184	150	266
Profit from regular activities	**741**	**1105**	**1096**	**1184**	**8567**
Income/expenses from extra ordinary activities	2	315	52	-10	-26
Profit from all activities	**738**	**790**	**1043**	**1174**	**831**
Provision for staff bonus	66	72	95	107	75
Provision for income tax	215	226	313	314	247
Net profit/loss	**457**	**492**	**635**	**753**	**509**

Common Size Income Statement of HBL

(Rs in percentage)

Fiscal Year	2005/06	2006/07	2007/08	2008/09	2009/10
Interest income	100	100	100	100	100
Interest expenses	39.9	43.2	41.95	39.92	49.35
Net interest income	**60.1**	**56.8**	**58.04**	**60.08**	**50.65**
Commission and Dis.	10.2	10.8	10.34	12.13	8.57
Other operating income	3.2	2.3	3.17	1.96	3.56
Exchange income	12.2	8.5	9.77	10.67	5.72
Total operating income	**85.6**	**78.4**	**81.31**	**84.84**	**68.5**
Employees expenses	14.3	15.3	15.63	15.41	13.18
Other operating expenses	20.2	19.2	16.75	16.99	14.96
Exchange loss	-	-	-	-	-
Provision for possible losses	8.9	5.1	2.95	8.5	21.39
Operating profit	**42.2**	**38.8**	**45.97**	**43.94**	**18.39**
Non operating income/loss	3.4	0.2	0.45	0.17	0.38
Provision for possible losses write back	-	23.2	9.36	6.4	8.45
Profit from regular activities	**43.3**	**62.2**	**55.8**	**50.51**	**27.22**
Income/expenses from extra ordinary activities	0.1	17.7	2.65	0.42	-0.83
Profit from all activities	**45.4**	**44.5**	**53.10**	**50.09**	**26.39**
Provision for staff bonus	4.1	4.1	4.83	4.57	2.38
Provision for income tax	13.2	12.7	15.93	13.41	7.84
Net profit/loss	**28.1**	**27.7**	**32.33**	**32.11**	**16.16**

Appendix-23(A)
Trend values of Total Deposit of NABIL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	19347	-2	4	-38694	18046
2006/07	23342	-1	1	-23342	24859
2007/08	31915	0	0	0	31672
2008/09	37348	1	1	37348	38486
2009/10	46410	2	4	92820	45299
	∑Y=158362	∑X=0	∑ X^2=10	∑XY=68132	

Here,

$$a = \frac{\sum Y}{n} = \frac{158362}{5} = 31672.4$$

$$b = \frac{\sum XY}{\sum x^2} = \frac{68132}{10} = 6813.2$$

Trend values of Total Deposit of HBL

(Rs in million)

Fiscal Year (t)	**Total Deposit(Y)**	**X=t-2007/08**	**X^2**	**XY**	**Yc=a+bx**
2005/06	26491	-2	4	-52982	26760
2006/07	30048	-1	1	-30048	29448
2007/08	31843	0	0	0	32135
2008/09	34681	1	1	34681	34822
2009/10	37611	2	4	75222	37509
	∑Y=160674	∑X=0	∑ X^2=10	∑XY=26873	

Here,

$a = \frac{\sum Y}{n} = \frac{160674}{5} = 32134.8$

$b = \frac{\sum XY}{\sum x^2} = \frac{26873}{10} = 2687.3$

Appendix-23(B)

Trend values of Loan and Advances of NABIL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	13279	-2	4	-26558	12074
2006/07	15903	-1	1	-15903	17234
2007/08	21759	0	0	0	22394
2008/09	27999	1	1	27999	27554
2009/10	33031	2	4	66062	32714
	∑Y=111971	∑X=0	∑ X^2=10	∑XY=51600	

Here,

$a = \frac{\sum Y}{n} = \frac{111971}{5} = 22394.2$

$b = \frac{\sum XY}{\sum x^2} = \frac{51600}{10} = 5160$

Trend values of Loan and Advances of HBL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	15762	-2	4	-31524	14785
2006/07	17793	-1	1	-17793	18230
2007/08	20179	0	0	0	21675
2008/09	25519	1	1	25519	25120
2009/10	29124	2	4	58248	28565
	∑Y=108377	∑X=0	∑ X^2=10	∑XY=34450	

Here,

$a = \frac{\sum Y}{n} = \frac{108377}{5} = 21675.4$

$b = \frac{\sum XY}{\sum x^2} = \frac{34450}{10} = 3445$

Appendix-23(C)

Trend values of Investment of NABIL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	6181	-2	4	-12362	6540
2006/07	8945	-1	1	-8945	8226
2007/08	9939	0	0	0	9912
2008/09	10826	1	1	10826	11599
2009/10	13671	2	4	27342	13285
	∑Y=49562	∑X=0	∑ X^2=10	∑XY=16861	

Here,

$a = \frac{\sum Y}{n} = \frac{49562}{5} = 9912.4$

$b = \frac{\sum XY}{\sum x^2} = \frac{16861}{10} = 1686.1$

Trend values of Investment of HBL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	10889	-2	4	-21778	12242
2006/07	11823	-1	1	-11823	11442
2007/08	13340	0	0	0	10641
2008/09	8710	1	1	8710	9841
2009/10	8445	2	4	16890	9041
	∑Y=53207	∑X=0	∑ X^2=10	∑XY=-8001	

Here,

$a = \frac{\sum Y}{n} = \frac{53207}{5} = 10641.4$

$b = \frac{\sum XY}{\sum x^2} = \frac{-8001}{10} = -800.1$

Appendix-23(D)

Trend values of Net Profit of NABIL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	635	-2	4	-1270	572
2006/07	674	-1	1	-674	709
2007/08	746	0	0	0	845
2008/09	1031	1	1	1031	982
2009/10	1139	2	4	2278	1118
	∑Y=4225	∑X=0	∑ X^2=10	∑XY=1365	

Here,

$a = \frac{\sum Y}{n} = \frac{4225}{5} = 845$

$b = \frac{\sum XY}{\sum x^2} = \frac{1365}{10} = 136.5$

Trend values of Net Profit of HBL

(Rs in million)

Fiscal Year (t)	Total Deposit(Y)	X= t-2007/08	X^2	XY	Yc=a+bx
2005/06	457	-2	4	-914	496
2006/07	492	-1	1	-492	533
2007/08	636	0	0	0	569
2008/09	753	1	1	753	606
2009/10	509	2	4	1018	642
	∑Y=2847	∑X=0	∑ X^2=10	∑XY= 365	

Here,

$a = \frac{\sum Y}{n} = \frac{2847}{5} = 569.4$

$b = \frac{\sum XY}{\sum x^2} = \frac{365}{10} = 36.5$

Appendix-24(A)

Coefficient of Correlation between Deposit and Loan and Advances of NABIL

(Rs in million)

Fiscal year (t)	Deposit (x)	Loan &advances(Y)	x= x -$\bar{x}$	y= Y -$\bar{y}$	x^2	y^2	xy
2005/06	19347	13279	-12325	-9115	151905625	83083225	112342375
2006/07	23342	15903	-8330	-6491	69388900	42133081	54070030
2007/08	31915	21759	242	-635	58564	403225	-153670
2008/09	37348	27999	5676	5605	32216976	31416025	31813980
2009/10	46410	33031	14737	10636	217179169	113124496	156742732
	∑x=158362	∑y=111971	∑x=0	∑y=0	$\sum x^2$= 470749234	$\sum y^2$= 270160052	∑xy= 354815447

Here,

$\bar{x} = \frac{\sum X}{n} = \frac{158362}{5} = 31672.4$

$\bar{y} = \frac{\sum Y}{n} = \frac{111971}{5} = 22394.2$

$\sum x^2 = 470749234$

$\sum y^2 = 270160052$

$\sum xy = 354815447$

Now,

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

$r = \frac{354815447}{\sqrt{470749234}\sqrt{270160052}} = 0.9949$

$r^2 = 0.9899$

Probable Error (P.Er),

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

$= 0.6745 \times \frac{1-0.9899}{\sqrt{5}}$

P.Er = 0.0030466

Coefficient of Correlation between Deposit and Loan and Advances of HBL

(Rs in million)

Fiscal year (t)	Deposit (x)	Loan &advances(Y)	x= x -$\bar{x}$	y= Y -$\bar{y}$	x^2	y^2	xy
2005/06	26491	15762	-5644	-5913	31854736	34963569	33372972
2006/07	30048	17793	-2086	-3882	4351396	15069924	8097852
2007/08	31843	20179	-292	-1496	85264	2238016	436832
2008/09	34681	25519	2546	3843	6482116	14768649	9784278
2009/10	37611	29124	5476	7448	29986576	55472704	40785248

	∑x=160674	∑y=108377	∑x=0	∑y=0	$\sum x^2$=72760088	$\sum y^2$=122512862	∑xy=92477182

Here,

$\bar{x} = \frac{\sum X}{n} = \frac{160674}{5} = 32134.8$

$\bar{y} = \frac{\sum Y}{n} = \frac{108377}{5} = 21675.4$

$\sum x^2 = 72760088$

$\sum y^2 = 122512862$

$\sum xy = 92477182$

Now,

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

$r = \frac{92477182}{\sqrt{72760088}\sqrt{122512862}} = 0.979483$

$r^2 = 0.959387$

Probable Error (P.Er),

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

$= 0.6745 \times \frac{1-0.959387}{\sqrt{5}}$

P.Er = 0.01225

Appendix-24(B)

Coefficient of Correlation between Deposit and Investment of NABIL

(Rs in million)

Fiscal year (t)	Deposit (x)	Investment (Y)	x= x -$\bar{x}$	y= Y -$\bar{y}$	x^2	y^2	xy
2005/06	19347	6181	-12325	-3731	151905625	13920361	45984575
2006/07	23342	8945	-8330	-967	69388900	935089	8055110
2007/08	31915	9939	242	27	58564	729	6534
2008/09	37348	10826	5676	913	32216976	833569	5182188
2009/10	46410	13671	14737	3758	217179169	14122564	55381646
	∑x=158362	∑y=49562	∑x=0	∑y=0	$\sum x^2$=470749234	$\sum y^2$=29812312	∑xy=114610053

Here,

$\bar{x} = \frac{\sum X}{n} = \frac{158362}{5} = 31672.4$

$\bar{y} = \frac{\sum Y}{n} = \frac{49562}{5} = 9912.4$

$\sum x^2 = 470749234$

$\sum y^2 = 29812312$

$\sum xy = 114610053$

Now,

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

$r = \frac{114610053}{\sqrt{470749234}\sqrt{29812312}} = 0.305935$

$r^2 = 0.093596$

Probable Error (P.Er),

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

= $0.6745 \times \frac{1-0.093596}{\sqrt{5}}$

P.Er = 0.27341

Coefficient of Correlation between Deposit and Investment of HBL

(Rs in million)

Fiscal year (t)	Deposit (x)	Investment (Y)	x= x -$\bar{x}$	y= Y -$\bar{y}$	x^2	y^2	xy
2005/06	26491	10889	-5644	247	31854736	61009	-1394068
2006/07	30048	11823	-2086	1182	4355569	1397124	-2466834
2007/08	31843	13340	-292	2698	84681	7279204	-785118
2008/09	34681	8710	2546	-1931	6482116	3728761	-4916326
2009/10	37611	8445	5476	-2196	29986576	4822416	-12025296
	∑x=160674	∑y=53207	∑x=0	∑y=0	$\sum x^2$= 72763678	$\sum y^2$= 17288514	∑xy= -21587642

Here,

$\bar{x} = \frac{\sum X}{n} = \frac{160674}{5} = 32134.8$

$\bar{y} = \frac{\sum Y}{n} = \frac{53207}{5} = 10641.4$

$\sum x^2 = 72763678$

$\sum y^2 = 17288514$

$\sum xy = -21587642$

Now,

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

$r = \frac{-21587642}{\sqrt{72763678}\sqrt{17288514}} = -0.60865$

$r^2 = 0.37045$

Probable Error (P.Er),

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

= $0.6745 \times \frac{1-0.37045}{\sqrt{5}}$

P.Er = 0.189900

Appendix-24 (C)

Coefficient of Correlation between Deposit and Net Profit

(Rs in million)

Fiscal year (t)	Deposit (x)	Net Profit (Y)	x= x -$\bar{x}$	y= Y -$\bar{y}$	x^2	y^2	xy
2005/06	19347	635	-12325	-210	151905625	44100	2588250
2006/07	23342	674	-8330	-171	69388900	29241	1424430
2007/08	31915	746	242	-99	58564	9801	-23958
2008/09	37348	1031	5676	186	32216976	34596	1055736
2009/10	46410	1139	14737	294	217179169	86436	4332678
	∑x=158362	∑y=4225	∑x=0	∑y=0	$\sum x^2$= 470749234	$\sum y^2$= 204174	∑xy= 9377136

Here,

$\bar{x} = \frac{\sum X}{n} = \frac{158362}{5} = 31672.4$

$\bar{y} = \frac{\sum Y}{n} = \frac{4225}{5} = 845$

$\sum x^2 = 470749234$

$\sum y^2 = 204174$

$\sum xy = 9377136$

Now,

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

$r = \frac{9377136}{\sqrt{470749234}\sqrt{204174}} = 0.956478$

$r^2 = 0.914851$

Probable Error (P.Er),

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

$= 0.6745 \times \frac{1-0.914851}{\sqrt{5}}$

P.Er = 0.025684

Coefficient of Correlation between Deposit and Net profit of HBL

(Rs in million)

Fiscal year (t)	Deposit (x)	Investment (Y)	x= x -$\bar{x}$	y= Y -$\bar{y}$	x^2	y^2	xy
2005/06	26491	457	-5644	-112	31854736	12544	632128
2006/07	30048	492	-2086	-77	4355569	5929	160699
2007/08	31843	636	-292	67	84681	4489	-19497
2008/09	34681	753	2546	183	6482116	33489	465918
2009/10	37611	509	5476	-61	29986576	3721	-334036
	∑x=160674	∑y=2847	∑x=0	∑y=0	$\sum x^2$= 72763678	$\sum y^2$= 60172	∑xy= 905212

Here,

$\bar{x} = \frac{\sum X}{n} = \frac{160674}{5} = 32134.8$

$\bar{y} = \frac{\sum Y}{n} = \frac{2847}{5} = 569.4$

$\sum x^2 = 72763678$

$\sum y^2 = 60172$

$\sum xy = 905212$

Now,

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

$r = \frac{905212}{\sqrt{72763678}\sqrt{60172}} = 0.432609$

$r^2 = 0.187151$

Probable Error (P.Er),

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

$= 0.6745 \times \frac{1-0.187151}{\sqrt{5}}$

P.Er = 0.245192