

# **CHAPTER - I**

## **INTRODUCTION**

### **1.1 Background of the Study**

Banking sector plays an important role in the economic development of the country. Commercial Banks are one of the vital aspects of this sector, which deals in the process of canalizing the available resources in the needed 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 and Finance Companies (in Nepalese context) are the example of depository financial institutions whereas Employee Provident Fund, Development Banks, 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 pools 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 879 or 880 A.D. after having paid all the outstanding debts in the country. In 8<sup>th</sup> century, Gunakama Dev had borrowed money to rebuild the Kathmandu valley. Similarly, in 11<sup>th</sup> 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 Adda” 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 19<sup>th</sup> 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:-

- ) Assurances 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 chapter, it has been discussed about the profiles of concerned banks. These profiles are related to the establishment, objectives, capital structure and facilities granted by the concerned banks.

### **NABIL Bank Limited (NABIL)**

NABIL is newly named of pervious Arab Bank Limited NABIL, the first joint venture bank of Nepal was established in 1984 A.D. under the company Act, 1964 A.D. It is joint venture 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 36 branches across the country. There are 13 branches in Kathmandu at Kantipath, Kamalidi ,Balaju ,New Road, Jorpati, Thamel, Maharajgunj ,kuleshwor ,Maitidevi ,chabhil and Credit Card Counter at Tribhuvan International Airport & Thamel. It has branches in Birgunj, Parsa, Biratnagar, Itahari, Butwal, Rupandehi, Pokhara, Dang, Bhairawaha, Nepalgunj, Dharan, Narayangadh,Lalitpur,Bhaktapur Baglung, Tulsipur, Ghorahi, Dhagadhi, Mahendranagar, Damak and Birtamod.

NABIL provides a full range of commercial banking services through its 15 points of representation across the kingdom and over 190 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 honoured the NABIL as “Bank of the year 2004” and it is a matter of prestige to be a leading bank of the country.

### **Mission Statement**

To be the “Bank of 1<sup>st</sup> Choice”

### **Values**

Customer Focused, **Result oriented**, **Innovative**, **Synergistic** and **Professional**

### **Promise**

To always be “Your Bank at Your Service”

### **Present Capital Structure of NABIL**

Table 1.1 shows the present capital structure of NABIL. Authorized capital, of NABIL is Rs1, 600 million, whereas issued capital and paid up capital both are Rs965,747,000

**Table 1.1**

#### **Present Capital Structure of NABIL**

<b>Particular</b>	<b>Amount</b>
<b>Share Capital</b>	
) Authorized capital: 16000000 ordinary share of Rs.100each	Rs.1,600.000,000
) Issued Capital: 9657470 ordinary share of Rs.100each	Rs.965,747,000
) Paid up Capital; 9657470 ordinary share of Rs.100each	Rs. 965,747,000

## Share Ownership of NABIL

Figure 1.1

### Share Ownership of NABIL

Table 1.1 and figure 1.2 show 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 11.08% of share is owned by others entities, 2.77% of share is owned by individual and 30% of shares are owned by general public. Remaining 50% of shares is owned by foreign bank.

Table 1.2

### Share ownership of NABIL

Share ownership	Percentage	Percentage
1. Local ownership		50%
1.1 Nepal Government	-	
1.2 Commercial Banks	-	
1.3 Financial Institutions	6.15%	
1.4 Organized Institutions	11.08%	
1.5 General Public	30%	
1.6 Individual	2.77%	
1.7 Others	-	
2. Foreign ownership		50%
<b>Total</b>		100%

### **Facilities Granted by NABIL**

Various facilities (products & services) have been provided by NABIL. It provides loan as Bills discounting facility under supplier's 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 the large and 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 that period of time, when the country's economic sectors was in boom the bank commenced its 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.

### **Mission Statement**

To become the preferred provider of quality financial services in the country

### **Vision**

To become a leading Bank of the country by providing premium products & services



## Objectives

To become the bank of first choice

### Present Capital Structure of HBL

Table 1.3 shows an idea about the present capital structure of HBL. Authorized capital, of NABIL is Rs2,000 Million, whereas issued capital and paid up capital both are and Rs.1, 216,215,000 respectively.

**Table 1.3**  
**Present Capital Structure of HBL**

Particular	Amount
Share Capital	
) Authorized capital:20,000,000ordinary share of Rs.100each	Rs.2,000,000,000
) Issued Capital:12162150 ordinary share of Rs.100each	Rs. 1, 216,215,000
) Paid up Capital: 12162150ordinary share of Rs.100each	Rs .1, 216,215,000

### Share Ownership of HBL

Table 1.4 and figure 1.2 indicate that 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.

**Table 1.4**  
**Share Ownership of HBL**

Share ownership	Percentage	Percentage
1. Local ownership		80%
1.1 Nepal Government	-	
1.2 Commercial Banks	-	
1.3 Financial Institutions	14%	
1.4 Organized Institutions	51%	
1.5 General Public	15%	
1.6 Others	-	
2. Foreign ownership		20%
<b>Total</b>		<b>100%</b>

**Figure 1.2**  
**Share Ownership of HBL**

**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 26 banks in operation in Nepal up to end of 2009 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:

- a. Is Himalayan Bank's investment policy more effective and efficient then that NABIL?
- b. Is Himalayan Bank's investment Strategy successful to utilize its available fund in comparison to the NABIL?
- c. Are they maintaining sufficient liquidity, profitability and risk position?
- d. 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, asset management, profitability and risk.
4. To analyze the relationship between deposit, 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) and data related to other commercial banks have not been accounted.
2. This is mostly 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 7 years data, beginning from 2002/03 to 2008/09.

## **1.8 Research Methodology**

### **1. Introduction**

The study focuses on the investment policy of NABIL and HBL. The main objective of the study is to highlight the investment policy of NABIL and HBL. The methodology consists of research design, data collection procedure, data processing procedure and techniques of analysis.

### **2. Research Design**

Research design will be basically the comparative study of investment analysis of NABIL and HBL. Analytical and descriptive approaches are used to evaluate the investment policy of these banks.

### **3. Data Collection Procedure**

The study is mainly based on secondary data. The required data are collected from website of concerned banks. The annual data and bulletin are main sources of data. Data are tabulated since past seven fiscal years up to fiscal year 2008/2009.

### **4. Techniques of Analysis**

For presentation and interpretation of data, some tools have been used. These tools include financial and statistical tools. Similarly, other techniques such as graph, pie-chart, table, etc. are also used to analyze the data.

## **1.9 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, create conclusions and recommends suggestion

## **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 resoures.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 later (*Corrado and Jordon, 2002*).

Similarly investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns (*Gitman and Joehnk, 1990*). 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 to make decisions.

*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.

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 of 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 funds. They include savings and loan

associations, 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 honouring 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      | 4. Industrial Bank |
| 2. Commercial Bank   | 5. Exchange Bank   |
| 3. Agricultural Bank | 6. Savings Bank    |
| 7. Co-operative Bank | 10. Pension Funds  |
| 8. Merchant Bank     | 11. Housing Bank   |
| 9. Mutual 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 channelizing 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 2002/003. 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 than 1 year.

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%

*Source: NRB Directive 2/061/062; Clause 1 and 8.1*



#### **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 2009 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.

**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 an 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:

- i. Credit sanctioning and monitoring process.
- ii. Approach to collateral.
- iii. Credit risks arising from new business opportunities.
- iv. Credit exposures relative to capital or total advances.
- v. Concentration on correlated risk factors.

**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 but 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.

**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.

**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** (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.

#### **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 to 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 with 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 than 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.

**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 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 NGBL 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.

**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.

**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 than 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.

**Lamichhane** (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 tends 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 uncollectible 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.

**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 was 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. In 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.

**Sapkota** (2006), in his thesis, "*A study of Investment Policy of Joint Venture Commercial bank*", has compared investment policy of NABIL and SCBBL. He finds that cash and bank balance of SCBBL with respect to current assets is higher than NABIL. He concludes that it shows greater capacity of SCBBL to meet its customer's requirement but that does not mean that NABIL cannot meet its daily requirements. SCBBL has invested more portions of its current assets and total working fund in govt. securities than NABIL, where as NABIL has invested more of its fund to other productive sectors. NABIL has been more successful in mobilizing its deposits and working fund as loan and advances and achieving higher profits in comparison to SCBBL. He adds that NABIL has invested more of its funds in purchasing shares and debentures of other companies than SCBBL. He further adds that liquidity risk and credit risk of SCBBL is comparatively lower than NABIL. NABIL has more exposure to risk than SCBBL.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

Research methodology is the study of methods used in different disciplines. 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 general introduction, research design, and sources of data, population and sample and methods of data analysis.

#### **3.1 General Introduction**

In research methodology, different types of research and their principles, process, methods, techniques and tools are studied. This study helps to conclude the real position of NABIL and HBL.

#### **3.2 Research Design**

Research design serves as a framework for the study, guiding the collection and analysis of the data, the research instruments to be utilized, and the sampling plan to be followed. Kerlinger (1986) describes a research design as the plan, structure and strategy of investigation conceives so as to obtain answers to research questions and to control variance. Descriptive cum analytical research design have been used in this study.

#### **3.3 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.



### 3.4 Population and Sample

There are altogether 26 commercial banks functioning all over the country and most of their stocks are traded actively in the stock market. The populations are presented by Table 3.1.

**Table 3.1**

S.N.	Name of Commercial Bank	Estd. Date(B.S.)
1	Nepal Bank Ltd.	1994/07/30
2	Rastriya Banijya Bank	2022/10/10
3	NABIL Bank Ltd.	2041/03/29
4	Nepal Investment Bank Ltd.	2042/11/16
5	Standard Chartered Bank Nepal Ltd.	2043/10/16
6	Himalayan Bank Ltd.	2049/10/05
7	Nepal SBI Bank Ltd.	2050/03/23
8	Nepal Bangladesh Bank Ltd.	2050/02/23
9	Everest Bank Ltd.	2051/07/01
10	Bank of Kathmandu Ltd.	2051/11/28
11	Nepal Credit & Commerce Bank Ltd.	2053/06/28
12	Lumbini Bank Ltd.	2055/04/01
13	Nepal Industrial & Commercial Bank Ltd.	2055/04/05
14	Machhapuchhre Bank Ltd.	2057/06/17
15	Kumari Bank Ltd.	2056/08/24
16	Laxmi Bank Ltd.	2058/06/11
17	Siddhartha Bank Ltd.	2058/06/12
18	Global Bank Ltd.	2063/10/01
19	Citizens Bank International Ltd.	2064/01/07
20	Citi Commercial Bank	2064/03/12
21	Prime Bank Ltd.	2064/06/11
22	Bank of Asia Ltd.	2064/07/5
23	Sunrise Bank Ltd.	2054/06/26
24	Development Credit Bank Ltd.	2057/10/19
25	NMB Bank Ltd.	2053/09/11
26	Kist Bank Ltd.	2066/01/24

*Source: Nepal Rastra Bank*

From these populations, **NABIL Bank Ltd.** and **Himalayan Bank Ltd.** are selected as sample for the study.

### **3.5 Methods of Data Analysis**

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

#### **3.5.1 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 judgement 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,

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

## **I. 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 Advances 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  $n^{\text{th}}$  year

$D_o$  = Total amount in  $n^{\text{th}}$  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,

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

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

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 weigh 100% 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.

### **3.5.2 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  
 $X$  = Sum of observations

### 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  $\sigma$  (sigma: the Greek alphabet) was first 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:

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

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 Analysis (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,

$$a = \frac{\sum y}{n} \quad \text{and} \quad b = \frac{\sum xy}{\sum x^2}$$

Here,  $y_c$  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  $x=0$  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 within which the population correlation coefficient lies. Limits for population correlation coefficient are **r + P.Er**.

### **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 of the study. Likewise major findings of the study are also presented.

Following financial and statistical tools related to the investment management and fund mobilization are studied to evaluated and analyze the performance of NABIL and HBL.

#### **A. Financial Analysis**

It includes liquidity ratios, asset management ratios, profitability ratios, risk ratios, growth ratios, 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 Ratios**

##### **4.1.1 Current Ratio**

The higher is the current ratio, the greater the margin of safety. The current ratio of NABIL and HBL has been shown in Table 4.1. 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 1.56, which is greater than that of HBL i.e.1.12. Here, both banks have less C.V which denotes that they are more stable.

**Table 4.1**  
**Current Ratio of NABIL and HBL**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	1.0762	1.0544
2003/04	1.0813	1.0607
2004/05	1.0625	1.0604
2005/06	1.1077	1.0420
2006/07	1.0702	1.0622
2007/08	1.0530	1.0807
2008/09	1.0606	1.0747
<b>Mean</b>	1.0730	1.0622
<b>S.D</b>	0.0168	0.0118
<b>C.V.</b>	1.56	1.12

*Source: Appendix 1*

#### **4.1.2 Cash and Bank Balance to Total Deposit Ratio (CRR)**

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 fund with the bank to make immediate payment.

**Table 4.2**  
**Cash and Bank Balance to Total Deposit Ratio**

<b>Fiscal year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0851	0.0942
2003/04	0.0687	0.0909
2004/05	0.0383	0.0812
2005/06	0.0326	0.0648
2006/07	0.0599	0.0585
2007/08	0.0837	0.0455
2008/09	0.0903	0.0879
<b>Mean</b>	0.0655	0.0747
<b>S.D</b>	0.0214	0.0172
<b>C.V.</b>	32.60	23.03

*Source: Appendix 2*



Presently, NRB has prescribed CRR of 5.5%. In the Table 4.2, both banks have maintained above NRB. According to the table, mean CRR of NABIL is 6.55% which is less than that of HBL i.e.7.47% In the F.Y.2008/09; CRR of NABIL is 9.03% which is greater than CCR of HBL i.e.8.79% the. This table shows, NABIL’s solvency position is higher than HBL.

#### 4.1.3 Cash and Bank Balance to Current Assets Ratio

The cash and bank balance to current assets ratio of both banks form F.Y.2002/2003 to 2008/09 are shown in Table 4.3. It shows the mean cash & 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 F.Y. 2008/09 which is 7.84% Similarly, HBL has also the highest ratio during same year i.e. 7.94% The coefficient of variance of NABIL is higher than that of HBL. This table shows that they have capacity to manage the deposit withdrawal from the Customers.

**Table 4.3**  
**Cash and Bank Balance to Current Assets Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0703	0.0857
2003/04	0.0592	0.0819
2004/05	0.0341	0.0732
2005/06	0.0279	0.0595
2006/07	0.0518	0.0533
2007/08	0.0731	0.0408
2008/09	0.0784	0.0794
<b>Mean</b>	0.0564	0.0677
<b>S.D</b>	0.0181	0.0155
<b>C.V.</b>	32.01	22.96

*Source: Appendix 3*

#### 4.1.4 Investment on Government Securities to Total Deposit Ratio

Investment on government securities on total deposit ratio reflects that out of total deposits, 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**

<b>Fiscal year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.2669	0.1904
2003/04	0.2601	0.1559
2004/05	0.1654	0.2204
2005/06	0.1189	0.1942
2006/07	0.2060	0.2147
2007/08	0.1456	0.2346
2008/09	0.0992	0.1214
<b>Mean</b>	0.1803	0.1902
<b>s.d</b>	0.0612	0.0366
<b>C.V.</b>	34.00	19.27

*Source: Appendix 4*

Table 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 decreasing whereas the trend followed by HBL is fluctuating. The C.V of NABIL and HBL are 34.00 and 19.27 respectively.

#### **4.2 Asset Management Ratios**

Assets management ratio also known as activity ratio indicates the speed with which assets are being converted or turnover.

##### **4.2.1 Loan and Advances to Total Deposit Ratio**

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

**Table 4.5**  
**Loan and Advances to Total Deposit Ratio**

<b>Fiscal year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.6034	0.5163
2003/04	0.6055	0.5870
2004/05	0.7505	0.5421
2005/06	0.6864	0.5950
2006/07	0.6813	0.5921
2007/08	0.6818	0.6337
2008/09	0.7497	0.7152
<b>Mean</b>	0.6798	0.5974
<b>s.d</b>	0.0551	0.0597
<b>C.V.</b>	8.11	10.00

*Source: Appendix 5*

Table 4.5 reveals that the mean loans and advances to total deposit ratio of NABIL is higher than that of HBL. The C.V of HBL is also higher than that of NABIL. The ratio of NABIL is more stable than that of HBL. The ratio of NABIL was the highest in F.Y 2004/05 i.e.75.05% whereas that of HBL was the highest in F.Y 2008/09. During F.Y. 2008/09, the ratios of NABIL and HBL are 0.7497 and 0.7152 respectively.

#### **4.2.2 Total Investment to Total Deposit Ratio**

Total investment to total deposit ratio of NABIL and HBL from F.Y. 2002/03 to 2008/09 is given in the Table 4.6.

**Table 4.6**  
**Total Investment to Total Deposit Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.4485	0.4844
2003/04	0.4133	0.4222
2004/05	0.2927	0.4712
2005/06	0.3195	0.4110
2006/07	0.3822	0.3934
2007/08	0.3114	0.4189
2008/09	0.2899	0.2511
<b>Mean</b>	0.3511	0.4074

<b>S.D</b>	0.0586	0.0707
<b>C.V.</b>	16.70	17.35

Source: Appendix 6

Table 4.6 shows that mean total investment to total deposit of NABIL is higher than HBL. The ratio of NABIL decreased from F.Y. 2002/03 to 2004/05 and again increased in F.Y. 2005/06 & F.Y. 2006/07 and has decreased in F.Y. 2008/07 to 28.99%. Its mean ratio is 35.11 % & C.V. is 16.70. The ratio of HBL has shown the fluctuation between 25.11% and 48.44%. In last seven years. Its mean ratio is 40.74% and C.V. is 17.35. The C.V of both banks shows that they are less stable.

#### 4.2.3 Loan and Advances to Working Fund Ratio

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

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 F.Y. 2003/04 to 2008/09 and has increased to 63.72%. NABIL has fluctuating ratio between 47.96% & 63.23%.

**Table 4.7**

#### **Loan and Advances to Working Fund Ratio**

Fiscal Year	NABIL	HBL
2002/03	0.4796	0.5106
2003/04	0.4998	0.5021
2004/05	0.6238	0.4659
2005/06	0.5853	0.5164
2006/07	0.5766	0.5185
2007/08	0.5798	0.5475
2008/09	0.6323	0.6372
<b>Mean</b>	0.5681	0.5326
<b>S.D</b>	0.0537	0.0494
<b>C.V.</b>	9.46	9.27

Source: Appendix 7

#### 4.2.4 Investment on Government Securities to Total Working Fund Ratio

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. 19.81% is greater than that of NABIL which has the ratio of 14.96%.

**Table 4.8**

**Investment on Government Securities to Total Working Fund Ratio**

<b>Fiscal year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.2121	0.1883
2003/04	0.2147	0.1334
2004/05	0.1375	0.1895
2005/06	0.1014	0.1685
2006/07	0.1741	0.1880
2007/08	0.1238	0.2027
2008/09	0.0839	0.1052
<b>Mean</b>	0.1496	0.1981
<b>S.D</b>	0.0481	0.0431
<b>C.V.</b>	32.14	21.75

*Source: Appendix 8*

Since, the investment of NABIL on government securities is decreasing; the ratio is in decreasing trend. During F.Y 2008/09, the ratio of NABIL is lower than of HBL. C.V of NABIL and HBL are 32.21% and 21.75% respectively.

**4.2.5 Investment on Shares and Debentures to 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 of investment of working fund on shares and debentures of other banks and companies.

**Table 4.9**

**Investment on Shares and Debentures to Total Working Fund Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0013	0.0016
2003/04	0.0013	0.0013
2004/05	0.0251	0.0014
2005/06	0.0046	0.0013

2006/07	0.0103	0.0021
2007/08	0.0086	0.0024
2008/09	0.0080	0.0023
<b>Mean</b>	0.0085	0.0018
<b>S.D</b>	0.0075	0.0004
<b>C.V.</b>	89.15	25.19

*Source: Appendix 9*

Since, NABIL has been investing larger amount of money on shares and debentures since F.Y 2004/05 than HBL, the mean ratio between investment on shares debentures and working fund of NABIL is greater than of HBL. The C.V of NABIL is comparatively higher than HBL. It means the distribution of NABIL is more variable. According to the F.Y 2008/09, the ratio of NABIL and HBL are 0.80% and 0.23% respectively.

#### **4.2.6 Performing Loan Loss Provision**

Table 4.10 shows the performing loan loss provision of NABIL and HBL. Form Table 16, it is cleared that NABIL has higher ratio than HBL. It indicates that NABIL has proper utilization of assets on good loans.

**Table 4.10**  
**Performing Loan Loss Provision**

<b>Fiscal year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.9445	0.8992
2003/04	0.9664	0.9112
2004/05	0.9868	0.9256
2005/06	0.9862	0.9340
2006/07	0.9887	0.9630
2007/08	0.9926	0.9763
2008/09	0.9919	0.9784
<b>Mean</b>	0.9796	0.9411
<b>S.D</b>	0.0163	0.0294
<b>C.V.</b>	1.67	3.12

*Source: Appendix 10*

However, if we analyze the ratio, NABIL is maintaining the ratio in the increase manner. This shows positive impact on the banks performance as higher performing loan loss provision ratio indicates efficiency in utilizing the good loans. The mean ratio of NABIL

is 97.96% while that of HBL is 94.11%. The C.V of NABIL and HBL are 1.67 and 3.12 respectively.

#### 4.2.7 Non Performing Loan Loss Provision

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**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0555	0.1008
2003/04	0.0336	0.0888
2004/05	0.0132	0.0744
2005/06	0.0138	0.0660
2006/07	0.0119	0.0360
2007/08	0.0074	0.0236
2008/09	0.0080	0.0215
<b>Mean</b>	0.0204	0.0587
<b>S.D</b>	0.0164	0.0295
<b>C.V.</b>	80.35	50.30

*Source: Appendix 11*

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 2.04% while that of HBL is 5.87%. The C.V of NABIL and HBL are 80.35 and 50.30 respectively.

#### 4.2.8 Loan Loss Provision Ratio

This ratio illustrates the amount of provision of a bank has to create for its loan and advance. Higher loan loss provision ratio is favorable to the bank. Table 4.12 indicates that the mean ratio of NABIL is higher than that of HBL. The mean ratios are 1.8229 and 1.1006 respectively. The C.V of NABIL is higher than HBL. However, both banks have shown increasing ratio, which is better.

**Table 4.12**  
**Loan Loss Provision Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
--------------------	--------------	------------



2002/03	0.7956	0.7713
2003/04	1.2509	0.8439
2004/05	2.4897	1.0260
2005/06	1.9454	1.0759
2006/07	2.0056	1.2402
2007/08	2.4472	1.4297
2008/09	1.8258	1.3176
<b>Mean</b>	1.8229	1.1006
<b>S.D</b>	0.5688	0.2253
<b>C.V.</b>	31.21	20.47

*Source: Appendix 12*

### 4.3 Profitability Ratio

#### 4.3.1 Return on Loan and Advances Ratio

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

**Table 4.13**  
**Return on Loan and Advances Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0513	0.0195
2003/04	0.0532	0.0204
2004/05	0.0475	0.0229
2005/06	0.0478	0.0290
2006/07	0.0423	0.0276
2007/08	0.0342	0.0315
2008/09	0.0368	0.0295
<b>Mean</b>	0.0447	0.0258
<b>S.D</b>	0.0067	0.0044
<b>C.V.</b>	14.92	17.16

*Source: Appendix 13*

Table 4.13 signifies that the ratio of NABIL is much better than HBL. The ratio of NABIL and HBL are 0.0368 and 0.0295 respectively in the F.Y 2008/09. The ratios of both banks are fluctuating over seven years study period. However the C.V of HBL is higher than NABIL.

#### **4.3.2 Return on Total Working Fund Ratio (ROA)**

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)**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0246	0.0100
2003/04	0.0266	0.0102
2004/05	0.0296	0.0107
2005/06	0.0280	0.0150
2006/07	0.0244	0.0143
2007/08	0.0199	0.0172
2008/09	0.0232	0.0188
<b>Mean</b>	0.0252	0.0137
<b>S.D</b>	0.0030	0.0033
<b>C.V.</b>	11.84	23.85

*Source: Appendix 14*

The mean return on working fund of NABIL and HBL are 0.0252 and 0.0137 respectively. The C.V 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)**

It measures the effectiveness of funds mobilization. Table 4.15 clarifies that the mean ratio of NABIL is 32.75% while the mean ratio is 22.92 %. 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 7 years of study period.

**Table 4.15**  
**Return on Equity Ratio (ROE)**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.3166	0.1994
2003/04	0.3070	0.1986
2004/05	0.3136	0.1997
2005/06	0.3387	0.2588
2006/07	0.3276	0.2292
2007/08	0.3601	0.2531
2008/09	0.3293	0.2413

<b>Mean</b>	0.3275	0.2257
<b>S.D</b>	0.0165	0.0245
<b>C.V.</b>	5.06	10.85

*Source: Appendix 15*

The ratios of NABIL and HBL are 32.93 % and 24.13% during F.Y 2008/09. The ratio of NABIL indicates that they are more uniform than ratio of HBL during the study period as C.V of NABIL and HBL are 5.06 and 10.85.

#### **4.3.4 Total Interest Earned to Total Asset Ratio**

It measures the interest earning capacity of the bank through the efficient utilization of assets. Table 4.16 reveals that the mean ratio between total interests earned to total assets of NABIL is 5.96% and that of HBL is 5.36%.

Table 4.16 indicates that C.V of NABIL and HBL are 5.43 and 5.37 which are slightly different.

**Table 4.16**  
**Total Interest Earned to Total Asset Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0615	0.0514
2003/04	0.0598	0.0503
2004/05	0.0626	0.0519
2005/06	0.0586	0.0552
2006/07	0.0582	0.0529
2007/08	0.0532	0.0542
2008/09	0.0637	0.0596
<b>Mean</b>	0.0596	0.0536
<b>S.D</b>	0.0032	0.0028
<b>C.V.</b>	5.43	5.37

*Source: Appendix 16*

#### **4.3.5 Total Interest Earned to Total Working Fund Ratio**

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 5.87% and 5.31% respectively where as

C.V of NABIL and HBL are 5.26 And 6.07 respectively. During F.Y 2008/09, the mean ratio of NABIL is 6.33% and of HBL 5.84%.

**Table 4.17****Total Interests Earned to Total Working Fund Ratio**

<b>Fiscal year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0602	0.0565
2003/04	0.0586	0.0484
2004/05	0.0609	0.0501
2005/06	0.0577	0.0533
2006/07	0.0574	0.0517
2007/08	0.0527	0.0532
2008/09	0.0633	0.0584
<b>Mean</b>	0.0587	0.0531
<b>S.D</b>	0.0031	0.0032
<b>C.V.</b>	5.26	6.07

*Source: Appendix 17*

**4.4 Risk Ratios****4.4.1 Credit Risk Ratio**

It is expressed as the percentage of total loan & advances to total assets. Table 4.18 shows that the mean Credit risk ratio of NABIL is 57.77% which is higher than that of HBL i.e. 53.45%

**Table 4.18****Credit Risk Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.4899	0.4644
2003/04	0.5105	0.5217
2004/05	0.6415	0.4831
2005/06	0.5947	0.5350
2006/07	0.5835	0.5308
2007/08	0.5859	0.5578
2008/09	0.6382	0.6490
<b>Mean</b>	0.5777	0.5345
<b>S.D</b>	0.0539	0.0552
<b>C.V.</b>	9.33	10.34

*Source: Appendix 18*

But, C.V of NABIL is also lower than HBL. The ratio of NABIL and HBL are 63.82% and 64.90% respectively during F.Y 2008/09. This concludes that NABIL has higher credit risk in comparison with HBL.

#### 4.4.2 Capital Risk Ratio

Table 4.19 provides the capital risk ratio of NABIL and HBL during the 7 year of study period. It shows that NABIL has higher capital risk ratio than HBL from F.Y 2002/03 to F.Y 2003/ 04. Where as HBL has higher capital risk ratio than NABIL from F.Y 2004/05 to F.Y 2008/09. NABIL has ratio of decreasing trend whereas HBL has ratio of increasing trend. The mean ratio of NABIL and HBL are 3.28% and 3.55% respectively.

**Table 4.19**  
**Capital Risk Ratio**

<b>Fiscal Year</b>	<b>NABIL</b>	<b>HBL</b>
2002/03	0.0441	0.0292
2003/04	0.0414	0.0318
2004/05	0.0347	0.0351
2005/06	0.0290	0.0388
2006/07	0.0256	0.0370
2007/08	0.0255	0.0395
2008/09	0.0297	0.0372
<b>Mean</b>	0.0328	0.0355
<b>S.D</b>	0.0069	0.0035
<b>C.V.</b>	21.04	9.84

*Source: Appendix 19*

#### 4.5 Growth Ratio

The average growth rates of deposits, loan & advances, total investment and net profit of NABIL and HBL during the seven years of study period are presented by Table Nos. 26, 27, 28 and 29 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 F.Y 2002/03 and has reached to Rs37348 million during F.Y 2008/09. It was the lowest in to Rs34681 million

during last F.Y. It has the F.Y 2002/03 and the highest in F.Y 2008/9. Its average growth rate during seven years of study period is 19.95%.



**Table 4.20**  
**Growth Ratio of Total Deposits**

(Rs. in million)

<b>F.Y. Bank</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>Average Growth</b>
<b>NABIL</b>	13448	14119	14587	19347	23342	31915	37348	<b>19.19%</b>
<b>HBL</b>	21007	22010	24814	26814	30048	31843	34681	<b>9.76%</b>

*Source: Appendix 20 – A*

HBL has been increasing trend of total deposits since 2002/03 and has reached 9.76% 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 Deposits**

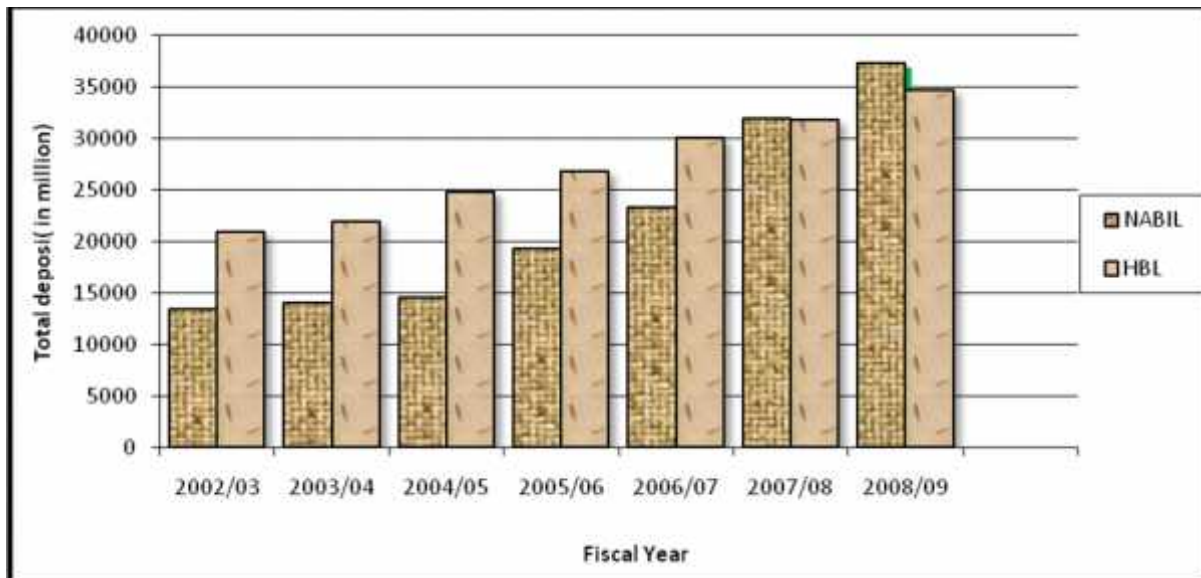


Figure 4.1 reveals that, the total deposit of HBL was higher than NABIL from F.Y 2002/03 to F.Y2006/07, slightly different in F.Y 2007/08. However, NABIL has shown higher total deposit in F.Y 2008/09.

#### 4.5.2 Growth Ratio of Loan and Advances

Loan and advances is the major which indicates the ability of 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 F.Y 2002/03 and has reached to Rs27999 million during F.Y 2008/09. Its average growth ratio of loan and advances is 23.32 %.

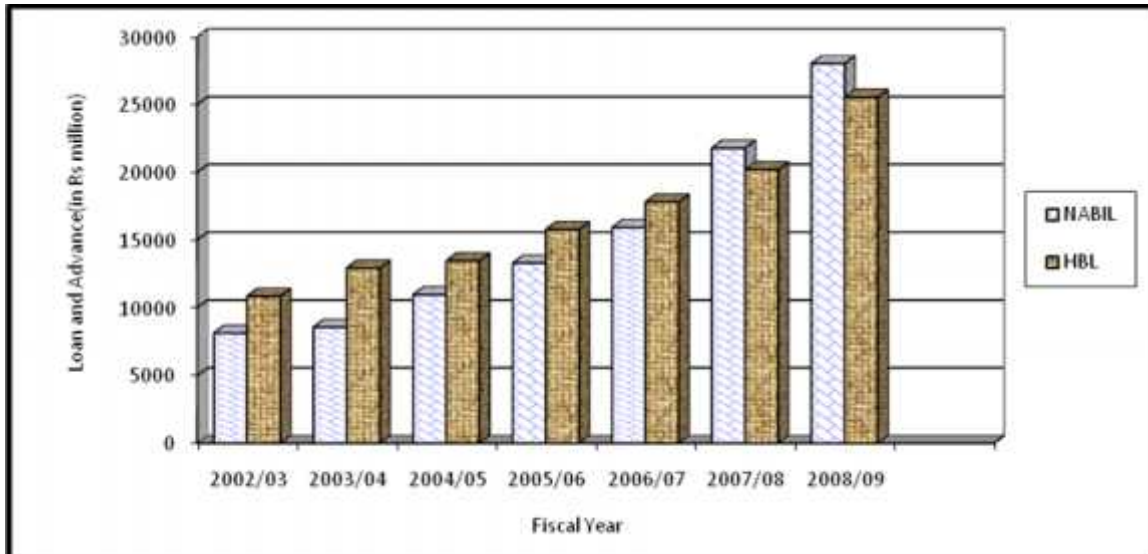
**Table 4.21**  
**Growth Ratio of Loan and Advances**

F.Y. Bank	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Average growth
NABIL	8114	8549	10947	13279	15903	21759	27999	23.32%
HBL	10845	12919	13451	15762	17793	20179	25519	15.54%

*Source: Appendix 20 – B*

Similarly, the loan and advances of HBL have risen from Rs10845 to Rs25519 million during the seven years of study period. Its average growth ratio is 15.54 %.

**Figure 4.2**  
**Loan and Advances 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 investments of both banks have been fluctuating

**Table 4.22**  
**Growth Ratio of Total Investment**

<b>F.Y.</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>Average Growth</b>
<b>Bank</b>								<b>Growth</b>
<b>NABIL</b>	6031	5836	4270	6181	8945	9939	10826	<b>13.223%</b>
<b>HBL</b>	10175	9292	11692	10889	11823	13340	8710	<b>-50.16%</b>

*Source: Appendix 20 – C*

NABIL has the highest investment in the F.Y. 2008/09 and the lowest in the F.Y 2004/05. Similarly, HBL has the highest investment in the F.Y 2006/07 and the lowest in the F.Y 2008/09. The average growth ratio of NABIL is 13.22% but HBL has negative growth rate (-50.16%) due to low investment amount in F.Y 2008/09.

**Figure 4.3**  
**Total Investment of NABIL and HBL**

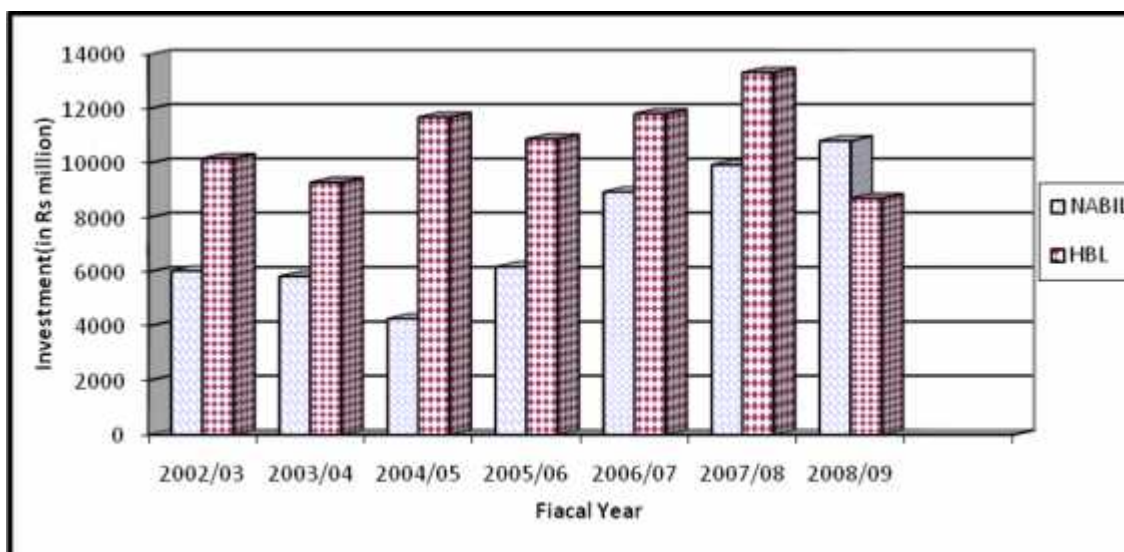


Figure 4.3 also provides information about total investment of NABIL and HBL. This figure shows that there is quiet difference between total investment of NABIL and HBL during F.Y 2004/05. However, NABIL has higher investment in F.Y 2008/09.

#### **4.5.4 Growth Ratio of Net Profit**

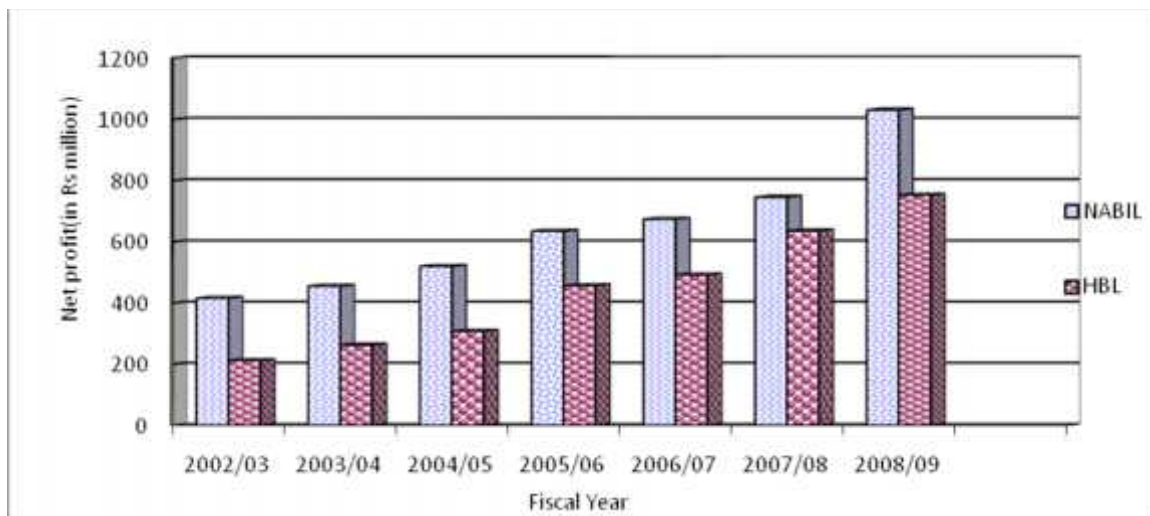
Table 4.23 indicates the growth rate of Net profit of both banks. It is cleared from this Table that net profit of NABIL is better than of HBL in each year. During F.Y 2008/09 the net profit of NABIL is 1031 million and that of HBL is 755 million. In spite of this, the average growth rate of HBL is 16.80 % and that of NABIL is 24.14%. It clarifies that NABIL has better net profit than HBL has achieved. But HBL has higher growth rate than NABIL. It indicates NABIL is showing better performance for ahead net profit in future. However, both banks are getting success to raise the net profit since F.Y 2002/03. The Net profits of NABIL and HBL are also given by Figure 4.4.

**Table 4.23**  
**Growth Rate of Net Profit**

<b>F.Y.</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>Average Growth</b>
<b>Bank</b>								
<b>NABIL</b>	416	455	520	635	674	746	1031	<b>16.80%</b>
<b>HBL</b>	212	263	308	457	492	636	755	<b>24.14%</b>

*Source: Appendix 20 – D*

**Figure 4.4**  
**Net Profits 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 7 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 Rs3727 million in F.Y 2008/09. Likewise, total capital of HBL is also increasing and reached to Rs3074 million in F.Y 2008/09. The cumulative profit and current year's profit of both banks are also increasing in remarkable trend which also constitutes the major element in the capital growth.

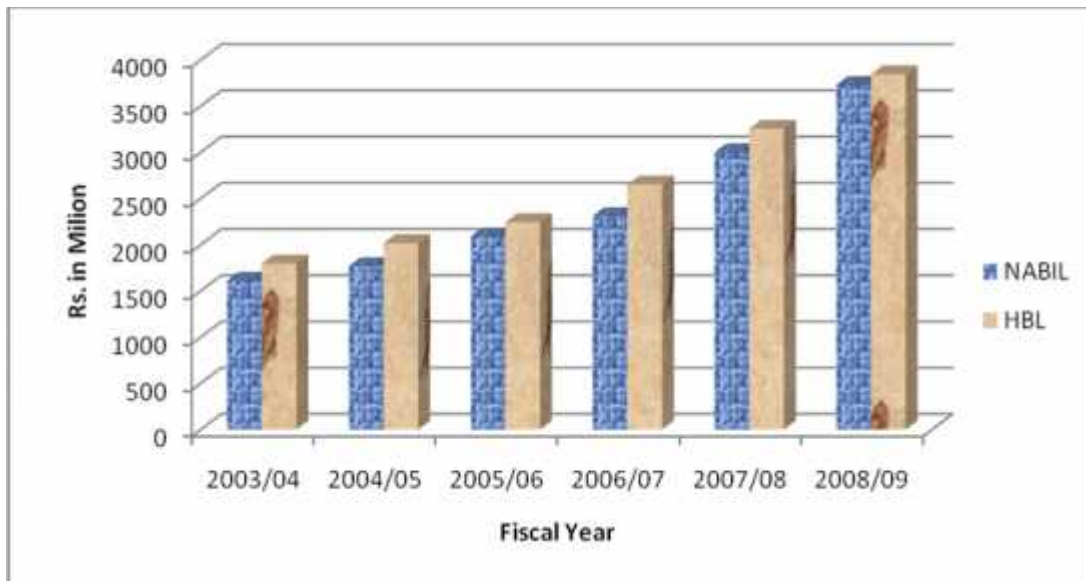
**Table 4.24**  
**Capital Fund**

Fiscal year		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Core Capital</b>	1439	1611	1831	1992	2363	3044
	<b>Supplementary Capital</b>	170	156	259	314	635	682
	<b>Total Capital</b>	1609	1766	2089	2307	2998	3727
<b>HBL</b>	<b>Core capital</b>	1297	1526	1772	2104	2469	3074
	<b>Supplementary Capital</b>	499	491	521	547	783	770
	<b>Total Capital</b>	1796	2017	2243	2651	3253	3845

*Source: Appendix 21*

The HBL 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. But the supplementary capital of the bank has been showing fluctuating. It is decreased from Rs170 million to Rs156 till F.Y 2004/05 in NABIL and again is increased in F.Y 2008/09 to Rs682 million similarly, in HBL it is decreased from Rs499 million to Rs 491 million till F.Y 2004/05 and again is increased to Rs770 million F.Y 2008/09. 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 Funds**



#### 4.6.2 Capital Adequacy Position

Table 4.25 gives the overview of capital adequacy position of NABIL and HBL and compares the position with the minimum required total capital and core capital prescribed by NRB. NABIL is successful in maintaining the required CAR. But it is also shown that the CAR of NABIL is in a decreasing state. This is the result of decreasing core capital as well as supplementary capital. However, total capital fund of this bank is still higher than ratio prescribed by the NRB by 3.06%, 3.56%, 1.44%, 1.31%, 1.04%, 0.10% and 0.70% from the fiscal years 2002/2003 to 2007/2008 respectively. But it is not able to maintain the fiscal year 2008/09 by 0.30%. Even though the core capital of the bank was good enough, it was the supplementary capital, which made the bank suffer from the low capital adequacy ratio. Likewise, the core capital fund is higher by 7.1%, 6.62%, 5.85%, 5.24%, 4.90%, 2.75% and 2.74% from 2002/2003 to 2008/2009 respectively. HBL was successful in maintaining the required total capital for the fiscal years 2002/03, 2003/04, 2004/04, 2005/06, 2006/2007, 2007/08 and 2008/09 by 0.93%, 0.65%, 0.01%, 0.26%, 1.11%, 1.70% and 0.02% respectively.

**Table 4.25**  
**Capital Adequacy Position**

Fiscal year	Minimum total Capital fund required	NABIL	NABIL	HBL	HBL
		Total capital fund (%)	Capital fund Excess/(short)	Total capital fund (%)	Capital fund Excess/(short)
2002/03	9.00%	13.06%	3.06%	10.93%	0.93%
2003/04	10.00%	13.56%	3.56%	10.65%	0.65%
2004/05	11.00%	12.44%	1.44%	11.01%	0.01%
2005/06	11.00%	12.31%	1.31%	11.26%	0.26%
2006/07	11.00%	12.04%	1.04%	12.11%	1.11%
2007/08	11.00%	11.10%	0.10%	12.70%	1.70%
2008/09	11.00%	10.70%	0.30%	11.02%	0.02%
Fiscal year	Minimum core Capital fund required	Total core capital fund (%)	Core capital fund Excess/(short)	Total core capital fund (%)	Core capital fund Excess/(short)
2002/03	4.50%	11.46%	7.1%	7.07%	2.57%
2003/04	5.50%	12.12%	6.62%	7.69%	2.19%
2004/05	5.50%	11.35%	5.85%	8.33%	2.83%
2005/06	6.00%	10.74%	4.74%	8.65%	2.65%
2006/07	6.00%	10.40%	4.90%	9.61%	3.61%
2007/08	6.00%	8.75%	2.75%	9.64%	3.64%
2008/09	6.00%	8.74%	2.74%	8.81%	2.81%

*Source: NRB Directives Appendix 21*

The supplementary capital is reduced due to the reduction in the loss provision. NRB have directed commercial banks to include the loss provision of good loans only in the calculation of supplementary capital, Therefore, the decrease in it is not good for the bank for two reason. Firstly decrease in the loan loss provision of good loans means turning of good loans into substandard, doubtful and bad loans. Secondly, the decrease in its has caused the inadequacy of the capital of the bank.

Table 4.25 also shows that CAR of NABIL is higher than that of HBL in both cases i.e. total capital fund and core capital fund. Hence, NABIL is maintaining better capital adequacy ratio in terms of total capital fund and core capital fund than HBL.





#### 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 show common size balance sheet of NABIL and HBL respectively. Similarly, Table 4.28 indicate 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% to 3% during the study period. During F.Y.2000/2001, reserve and surplus covers 5.0% of total liabilities and it reached to 4.9% during F.Y.2008/09. Deposit percentage is the highest during

**Table 4.26**  
**Common Size Balance Sheet of NABIL**

(In Percentage)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<u>Capital liabilities</u>							
Share capital	3.0	2.9	2.9	2.2	1.8	1.8	2.2
Reserves Surplus	5.0	5.9	6.8	6.2	5.7	4.7	4.9
Borrowings	5.8	1.4	0.1	0.8	3.3	4.3	4.5
Deposits	81.2	84.3	84.9	86.6	85.6	85.95	85.14
Bills payable	0.7	1.0	0.7	0.5	0.3	0.64	1.05
Proposed & undisturbed dividend	***	***	***	1.9	1.9	1.18	0.82
Income tax liabilities	***	***	***	0.2	***	0.10	0.18
Other liabilities	4.4	4.4	4.7	1.6	1.4	1.25	0.46
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<u>Assets</u>							
Cash & bank balance	6.9	5.8	3.3	2.8	5.1	7.19	7.68
Money at call & short notice	4.0	5.5	5.1	7.8	2.1	5.25	1.26
investments	36.4	34.9	24.8	27.7	32.8	26.76	24.68
Lone, advance and bill purchased	46.8	48.9	61.6	57.9	57.1	57.54	62.89
Fixed assets	1.5	2.0	2.1	1.4	1.1	1.61	1.51

Others assets	4.3	2.9	3.2	2.4	1.8	1.63	1.97
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

*Source: Appendix 22- A*

F.Y.2004/05 i.e.86.6% and it covers 85.14% of total liabilities during F.Y.2008/09.

The percentage of cash and balance is gradually increasing and reached to 7.68% during F.Y. 2008/09. Accounting to the table, investment has been decreasing. Its investment in govt. securities is decreasing while investment in shares and debentures is increasing.

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

#### **4.7.2 Common Size Balance of HBL**

Table 4.27 indicates common size balance sheet of HBL.

It shows the share capital is increasing. Reserves and surplus is increasing and reached to 4.48%.It is reached up to 2.4 % of total liabilities. Deposit covers 89.8% of total liabilities during F.Y.2002/03 and covers 88.2% during 2008/09.It is the highest during F.Y.2005/06 i.e.89.8%.Bills payable covers 0.29% of total liabilities.

In context of assets side, the percentage of cash and bank balance is fluctuating between 4.0% and 8.5%. During F.Y. 2008/09, it occupies 7.75% of total assets. Money at call and short notice occupies 2.98% during 2008/09. It is the highest on F.Y. 2002/03 and the lowest on 2005/06. According to the table, investment has been fluctuating. It covers the highest percent during F.Y. 2002/03, which is 43.6% of total assets. During 2008/09, it covers 22.15%. Similarly, Loan, advances and bill purchased has been showing variability. The fluctuation is 44.6% to 63.05% during the study period.

**Table 4.27**  
**Common Size Balance Sheet of HBL**

(In Percentage)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<u>Capital liabilities</u>							
Share capital	1.8	2.2	2.3	2.6	2.4	2.8	3.09
Reserves Surplus	2.7	3.2	3.2	3.4	3.9	4.1	4.84
Borrowings	2.8	2.7	1.8	1.7	1.8	2.6	1.27
Deposits	89.8	88.9	89.1	89.9	89.6	88.02	88.20
Bills payable	0.2	0.3	0.2	0.2	0.27	0.28	0.29
Proposed & undisturbed dividend	***	***	***	0.8	0.4	0.73	0.41
Income tax liabilities	***	***	***	***	0.04	0.05	0.02
Other liabilities	2.5	2.8	3.3	2.3	1.59	1.36	1.86
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<u>Assets</u>							
Cash & bank balance	8.5	8.1	7.2	5.8	5.2	4.00	7.75
Money at call & short notice	0.6	1.5	1.6	3.4	5.1	1.43	2.98
investments	43.6	37.5	42.2	37.0	35.3	36.87	22.15
Lone, advance and bill purchased	42.8	48.5	44.6	49.7	50.7	53.89	63.05
Fixed assets	1.0	0.9	1.1	1.8	1.7	2.20	2.42
Others assets	3.5	3.4	3.5	2.3	2.0	1.78	1.64
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

*Source: Appendix 22-A*

### **4.7.3 Common Size Income Statement of NABIL**

Interest Income is considered as common base for the comparative study and is equal to 100% in common size income statement. Table 4.28 indicates common size income statement of NABIL. Here, Commission and discount, exchange income

**Table 4.28**  
**Common Size Income Statement of NABIL**

(In percentage)

Fiscal year	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Interest income	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Interest expenses	31.1	28.2	22.8	27.3	34.9	38.30	41.21
<b>Net interest income</b>	<b>68.9</b>	<b>71.8</b>	<b>77.2</b>	<b>72.7</b>	<b>65.1</b>	<b>61.69</b>	<b>58.79</b>
Commission& Discount	14.1	13.6	12.1	10.5	9.5	7.88	6.40
Other operating income	8.5	9.3	6.7	6.3	5.5	4.90	5.14
Exchange income	14.1	15.7	17.3	14.1	13.2	9.90	9.01
<b>Total operating income</b>	<b>105.7</b>	<b>110.3</b>	<b>113.4</b>	<b>103.7</b>	<b>93.3</b>	<b>84.38</b>	<b>79.34</b>
Employees Expenses	20.7	18.1	18.6	16.8	15.1	13.24	12.15
Other operating expenses	16.3	15.1	17.8	13.9	11.8	11.16	9.47
Exchange loss	***	***	***	***	***	***	***
Provision for possible losses	***	0.1	0.4	0.3	0.9	3.23	1.61
<b>Operating profit</b>	<b>68.7</b>	<b>77.0</b>	<b>76.6</b>	<b>72.7</b>	<b>65.5</b>	<b>56.74</b>	<b>56.11</b>
Non-operating income/loss	***	***	***	0.1	0.3	1.21	0.07
Provision for possible losses write back	-5.1	-8.2	-2.9	0.6	0.6	0.55	0.39
<b>Profit from regular activities</b>	<b>63.6</b>	<b>68.9</b>	<b>73.7</b>	<b>73.4</b>	<b>66.4</b>	<b>58.51</b>	<b>56.58</b>
Income/(expenses) from extra-ordinary activities	3.3	3.9	5.2	2.0	2.5	2.02	1.54
<b>Profit from all activities</b>	<b>66.9</b>	<b>72.8</b>	<b>78.9</b>	<b>75.4</b>	<b>68.9</b>	<b>60.53</b>	<b>58.11</b>
Provision for staff Bonus	6.5	7.2	7.9	6.8	6.2	5.51	5.28
Provision for Income tax	19.5	20.2	22.4	20.1	20.2	17.28	15.97
<b>Net profit / Loss</b>	<b>40.9</b>	<b>45.4</b>	<b>48.7</b>	<b>48.5</b>	<b>42.5</b>	<b>37.69</b>	<b>36.85</b>

*Source: Appendix 22- B*

Operating and non operating income, and income from extraordinary activities are added, whereas, interest expenses, employees' expenses, operating and non operating expenses, exchange loss, provision for losses, expenses from extra-ordinary activities, and provision for staff bonus and tax are deducted.

As depicted in Table 4.28, the net profit percentage of NABIL from F. 2002/03 to F.Y. 2008/09 are 40.9%, 45.4%, 48.7%, 48.5% 42.5%, 37.69% and 36.85% respectively. F.Y. 2004/05 shows the highest percentage of Net profit, where as F.Y 2008/09 shows the

lowest percentage. Net interest income covers 68.9% during F.Y 2002/03 and covers 58.79% on F.Y. 2008/09. Total operating income is 79.34% during F.Y. 2008/09. Similarly, operating profit of this year is 56.11% Likewise; profit from regular activities is 56.58% and profit before provision for staff and tax is 28.11%.

#### 4.7.4 Common Size Income Statement of HBL

Table 4.29 indicates common size income statement of HBL. Table 35 shows that HBL has the highest net profit during F.Y.2008/09 and has the lowest during the F.Y.2002/03. Net profit covers 17.7%, 21.1%, 21.3%, 28.1% , 27.5%,32.33% and 32.15% of the interest income from F.Y.2002/03 to F.Y.2008/08 respectively. During F.Y.2002/03 net profit is 17.7% and during F.Y.2008/09, it is 27.5% of interest income. During the this F.Y. the net interest income is 60.07%, total operating income is 84.88%, operating profit is 49.53%, profit from regular activities is 50.46%, profit before provision for staff and income tax is 50.04% and Net profit is 32.15%.

**Table 4.29**  
**Common Size Income Statement of HBL**

Fiscal year	(In percentage)						
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Interest income	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Interest expenses	46.1	39.5	38.9	39.9	43.2	41.95	39.92
<b>Net interest income</b>	<b>53.9</b>	<b>60.5</b>	<b>61.1</b>	<b>60.1</b>	<b>56.8</b>	<b>58.04</b>	<b>60.07</b>
Commission and Discount	8.6	10.0	9.2	10.2	10.8	10.34	12.13
Other operating income	***	***	***	3.2	2.3	3.17	1.96
Exchange income	9.2	9.0	9.5	12.2	8.5	9.77	10.67
<b>Total operating income</b>	<b>71.6</b>	<b>79.5</b>	<b>79.8</b>	<b>85.6</b>	<b>78.4</b>	<b>81.31</b>	<b>84.88</b>
Employees Expenses	10.0	12.3	12.4	14.3	15.3	15.63	15.41
Other operating expenses	14.7	16.9	19.2	20.2	19.2	16.75	16.99
Exchange loss	***	***	***	***	***	***	***
Provision for possible losses	16.9	14.9	10.2	8.9	5.1	2.95	2.90
<b>Operating profit</b>	<b>30.0</b>	<b>35.3</b>	<b>38.1</b>	<b>42.2</b>	<b>38.8</b>	<b>45.97</b>	<b>49.53</b>
Non operating income /loss	0.8	-0.6	-0.8	3.4	0.2	0.45	0.12
Provision for possible losses write back	***	***	***	***	23.2	9.36	0.81
<b>Profit from regular activities</b>	<b>30.8</b>	<b>34.8</b>	<b>37.3</b>	<b>43.3</b>	<b>62.2</b>	<b>55.80</b>	<b>50.46</b>
Income/ (expenses) from extra-ordinary activities	2.5	2.7	2.8	0.1	17.7	2.65	0.42

<b>Profit from all activities</b>	<b>33.3</b>	<b>37.5</b>	<b>40.1</b>	<b>45.4</b>	<b>44.5</b>	<b>53.10</b>	<b>50.04</b>
Provision for staff Bonus	3.3	3.7	4.0	4.1	4.1	4.83	4.52
Provision for Income tax	12.3	12.7	14.8	13.2	12.7	15.93	13.36
<b>Net profit /Loss</b>	<b>17.7</b>	<b>21.1</b>	<b>21.3</b>	<b>28.1</b>	<b>27.7</b>	<b>32.33</b>	<b>32.15</b>

*Source: Appendix22-B*

## **B. Result of Statistical Tools**

### **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 show the trend analysis of total deposit of NABIL and HBL during the study period. From the Table, it is cleared that the total deposit of NABIL and HBL are in increasing trend. It indicates that NABIL's total deposit in comparison with HBL is lower.

**Table 4.30**  
**Trend Analysis of Total Deposit**

<b>F.Y.</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<b>Bank</b>							
<b>NABIL</b>	9581	13725	17870	22015	26159	30304	34448
<b>HBL</b>	20208	22562	24916	27270	29624	31978	34332

*Source: Appendix 23 – A*

**Figure 4.6**  
**Trend Analysis of Total Deposit**  
**Total Deposit TREND of NABIL& HBL**

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 F.Y.2008/09.

#### **4.8.2 Trend Analysis of Loan & Advances**

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

**Table 4.31**

#### **Trend Analysis of Loan & Advances**

<b>F.Y.</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<b>Bank</b>							
<b>NABIL</b>	5468	8719	11970	15221	18472	21723	24974
<b>HBL</b>	9903	12148	14393	16638	18883	21128	23373

*Source: Appendix 23 – B*

**Figure 4.7**

#### **Trend Analysis of Loan & Advances Loan & Advances Trend of NABIL & HBL**



Figure 4.7 shows increment in loan & advances of both banks with the passage of time. During this study period, loan & advances of NABIL are lower than that of HBL up to F.Y. 2006/07. This figure shows that both banks trend lines are intersected in F.Y.2006/07 .The trend line of NABIL is higher than that of HBL after F.Y. 2006/07. The angle of elevation of NABIL trend line higher than HBL.

### 4.8.3 Trend Analysis of Investment

Table 4.32 indicates the trend of investment of both banks. The investment trend of NABIL and HBL are in increasing path. Both are rising upward. In comparison, the increment rate of investment of NABIL is quiet higher than that of HBL are rising upward. In comparison, the increment rate of investment of NABIL is quiet higher than that of HBL

**Table 4.32**  
**Trend Analysis of Investment**

<b>F.Y.</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<b>Bank</b>							
<b>NABIL</b>	4513	5486	6459	7432	8405	9378	10351
<b>HBL</b>	10437	10573	10709	10845	10981	11117	11253

*Source: Appendix 23 – C*

**Figure 4.8**  
**Trend Analysis of Investment**  
**Total Investment Trend of NABIL & HBL**

Figure 4.8 also shows the investment trend of both banks. However up warding speed of trend line of NABIL is higher than HBL, it is cleared that the investment trend line of HBL is higher than NABIL.

#### 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**

<b>F.Y.</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<b>Bank</b>							
<b>NABIL</b>	363	455	547	639	731	823	915
<b>HBL</b>	172	263	354	445	536	627	718

*Source: Appendix 23 – D*

**Figure 4.9**

#### **Trend Analysis of Net Profit**

#### **Net Profit Trend of NABIL & HBL**

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 Person's Coefficient of Correlation (r)

It measures the degree of association between the two variables i.e. one dependent and other independent. This analysis interprets 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 & 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 & Advances

The coefficient of correlation between deposit and loan & advances measures the degree of relationship between them. In this study, deposit is taken as independent variable (x) and loan & advances is taken as dependent variable (y). The main objective of calculating 'r' between them is to justify whether deposits are significantly used as loan and advances or not. Table 38 shows the value of 'r', P.Er and 6P.Er between total deposits and loan & advances of NABIL and HBL.

**Table 4.34**  
**Coefficient of Correlation Between Deposit and Loan & Advances**

<b>Evaluation Criteria</b>					
<b>Banks</b>	<b>R</b>	<b>r<sup>2</sup></b>	<b>P.Er</b>	<b>6P.Er</b>	<b>Remarks</b>
NABIL	0.9923	0.9847	0.0039	0.0234	r >6P.Er
HBL	0.9709	0.9428	0.0146	0.0876	r >6P.Er

*Source: Appendix 24 – A*

In the table 4.34, the coefficient of correlation (r) between deposit and loan & advances of NABIL is 0.9923 which indicates that there is positive relationship. Similarly, coefficient of determination (r<sup>2</sup>) is 0.9847 that reveals 98.47% of variation of the dependent variable has been explained by the independent variable.

Similarly, the coefficient of correlation ( $r$ ) between deposit and loan & advances of HBL is 0.9709 which indicates that there is positive relationship. Similarly, coefficient of determination ( $r^2$ ) is 0.9428 that reveals 94.28% of variation of loan & advances (dependent) and deposits (independent).

Here, the values of ' $r$ ' of both banks are greater than 6 times P.Er ( $r > 6 \text{ P.Er}$ ), so there is significant relationship between deposits and loan & advances.

From this analysis, it can be concluded that both banks are successful in mobilizing their deposit as loan & 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

The 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 41 shows the value of ' $r$ ', P.Er and 6P.Er between total deposits and investment of NABIL and HBL.

**Table 4.35**  
**Coefficient of Correlation Between Deposit and Total Investment**

<b>Evaluation Criteria</b>					
Banks	<b>R</b>	<b><math>r^2</math></b>	<b>P.Er</b>	<b>6P.Er</b>	<b>Remarks</b>
NABIL	0.9385	0.8808	0.0304	0.1824	$r > 6\text{P.Er}$
HBL	0.1743	0.0304	0.2472	1.4832	$r < 6\text{P.Er}$

*Source: Appendix 24 – B*

According to Table 4.35, the value of ' $r$ ' of NABIL is 0.9385 which shows positive correlation between deposit and investment. The coefficient of determination is 0.8808 which indicates 88.08% of dependency of investment on deposit. Here, ' $r$ '  $>$  6P.Er, which means there is significant relationship between deposit and investment. Similarly, the

value of 'r' of HBL is 0.1743 that means low degree of positive correlation between two variables. The coefficient of determination indicates only 3.04% of dependency of investment on deposit. Here, 'r' < 6P.Er, which means there is not significant relationship between deposit and investment. In other 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. In case of NABIL, the relationship between deposit and investment is highly insignificant and has higher percentage of dependency. The relationship in case of 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 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 intention 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 6P.Er between total deposits and net profit of NABIL and HBL.

**Table 4.36**  
**Coefficient of Correlation Between Deposit and Net Profit**

<b>Evaluation Criteria</b>					
Banks	r	r <sup>2</sup>	P.Er	6P.Er	Remarks
NABIL	0.9587	0.9190	0.0206	0.1560	r > 6P.Er
HBL	0.9824	0.9651	0.0089	0.0534	r > 6P.Er

*Source: Appendix 24 – C*

In Table 4.36, the 'r' of NABIL is 0.9587, which indicates a positive relationship between deposits and net profit. The coefficient of determinants is 0.9190, which shows 91.90% 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.

The coefficient of correlation of HBL is 0.9824 which denotes a positive relationship between dependent and independent variables. The coefficient of determinants of HBL is 0.9651. This indicates that 96.51% of the variation of the dependent variable has been explained by the independent variable. Here,  $r > 6 P.Er$ , which means there is significant relationship between total deposit and net profit.

From this analysis, it can be concluded that correlation coefficient of NABIL is lower than HBL. The value of  $r^2$  in case of NABIL shows lower percentage of dependency and in case HBL, It shows higher percentage of dependency. NABIL shows significant relationship and HBL shows significant between total deposit and net profit.

#### **4.10 Major Findings of the Study**

The prior chapters have discussed and discovered the facts for the various parts of the study. Analytical part, which is the heart of the study, makes an analysis of various aspects of the investment policy of NABIL and HBL by using some of financial and statistical tools. The most vital task is to enlist finding issues and give suggestions for further improvement. This would be meaningful to the top management of the bank to initiate action and achieve the desire result. The main objectives of the study are to point errors and mistakes, to correct them and to give directions for further growth and improvement.

The main findings of the study are derived on the basis of financial data analysis of NABIL and HBL are presented below:

##### **4.10.1 Findings from Liquidity Ratios Analysis**

The current assets of NABIL and HBL have exceeded current liabilities in average. The average ratios of NABIL and HBL are 1.0730:1 and 1.0622:1 respectively during the study period. The coefficient of variation (C.V.) between the ratios of NABIL and HBL are 1.56 and 1.12, which means the current ratios during the study period are more uniform. Both current liabilities and C.V of NABIL is higher than HBL. In general, the current ratio analysis shows that both banks are able to meet their short-term obligations. However, NABIL has higher ability than HBL.

The cash & bank balance to total deposits ratio of NABIL is increasing. However, HBL has fluctuating trend. The mean ratios of NABIL and HBL are 6.55% and 7.47% respectively. Considering the inflationary pressure in the economy, NRB has prescribed CRR of 5.5%. In the F.Y 2008/09 CRR of NABIL has 9.03% whereas HBL has 8.79% which gives positive impact. This ratio indicates that NABIL's solvency position is higher than HBL. Similarly, C.V of HBL is lower i.e. 23.03% showing more stability than NABIL which is 32.60%. So, HBL should increase its liquidity position as it maintains any unexpected demand of the depositors.

The cash & bank balance to current assets ratio shows the bank ability to meet the demand of cash. The average ratio of NABIL i.e. 5.64% is lower than HBL which has 6.77%. The C.V of NABIL and HBL are 32.01% and 22.96% respectively. It indicates the HBL has better position in maintaining its cash and bank balance to meet its daily requirement than NABIL to make the payments on customers' deposits withdrawal. On the basis of C.V the ratio of HBL is less variable than NABIL.

The investment on government securities to total deposit ratio of NABIL is decreasing whereas HBL has the fluctuating ratio. The mean ratio of NABIL is 18.03 % which is less than the ratio of HBL which has 19.02%. The C.V of NABIL and HBL are 34.00% and 19.27% respectively, which clears that the ratio of NABIL is more variable than HBL. According to the NRB directives, there is no restriction for the commercial banks to invest in the government securities. Hence, investment in government securities of both banks can be regarded as healthy.

#### **4.10.2 Findings from Assets Management Ratio Analysis**

Loan & advances to total deposit mean ratio of NABIL and HBL are 67.98% and 59.74% respectively. Higher ratio implies the better utilization of total deposits. The C.V of NABIL and HBL are 8.11% and 10.00% respectively. Thus, the ratio of HBL is less uniform. Loan and advances is the banks' most risky asset. High level of risk is not



desirable for commercial banks as the default in loans can increase the loan loss provision and hence decrease the profit.

The investment to total deposit ratios of NABIL has decreased from F.Y 2002/03 to F.Y 2004/05 and has increased in F.Y 2006/07 to 38.22% and again decreased in F.Y 2008/09 up to 28.99%. Similarly, the ratio of HBL is in fluctuating trend during the study period. The mean ratio of investment to total deposit of NABIL is 35.11% which is lower than that of HBL which has the mean ratio of 40.74%. The C.V of NABIL and HBL are 16.70% and 17.35%, which shows that the ratios are less consistent. The figures suggest that the bank has mobilized about one-third in average of its total deposits in government securities and shares and debentures.

The mean ratio of loan and advances to total working fund of NABIL is 56.81% and the C.V between is 9.46, which shows that the ratios are consistent over the study period. Similarly, the ratio of HBL is 53.26% and the C.V is 9.27. This shows that NABIL has higher risks and eventually yields higher return than HBL as loan and advances is 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 is in decreasing trend since the investment on Government securities is decreasing. The mean ratio of NABIL is 14.96% which is lower than that of HBL i.e. 19.81 %. The ratio of HBL is in fluctuating trend during the study period. The C.V of NABIL and HBL are 32.14% and 21.75% respectively. Analysis shows that the both banks have mobilized about less than one fifth of fund on risk free sector.

NABIL has been investing larger amount of money on shares and debentures since F.Y 2004/05 than HBL. The mean ratio between investment on shares & debentures and working fund of NABIL (0.85%) is greater than of (0.18%). The C.V of NABIL (89.15) is comparatively higher than HBL (25.19). It means the distribution of NABIL is more

variable. So, HBL has invested very less percentage of total working fund into shares and debentures of other companies than NABIL.

Performing loan loss provision indicates the success of banks in utilizing their assets for the generation of profit. Performing loan loss provision of NABIL and HBL are 97.96% and 94.11%. Hence, NABIL has higher ratio than HBL. It indicates that NABIL has proper utilization of assets on good loans than HBL. The C.V of NABIL and HBL are 1.67 and 3.12 respectively.

Higher non performing loan loss provision ratio indicates worse management of assets. NABIL and HBL both have decreasing trend in the ratio which shows good utilization of their loan and proper management of assets. Analysis indicates that NABIL (2.04%) has lower ratio than HBL (5.87%) in average, showing better utilization of loan than HBL. The C.V of NABIL and HBL are 80.35 and 50.30 respectively. It means the ratio of NABIL is more variable.

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 NABIL is higher than that of HBL. The mean ratios are 1.8229 and 1.1006 respectively. The C.V of NABIL (31.21) is higher than HBL (20.47). However, both banks have shown increasing ratio, which is better.

#### **4.10.3 Findings from Profitability Ratios Analysis**

Return on loan and advance indicates the earning on mobilized fund based on loan advances. Loan and advances are highest yielding assets of the bank with highest risks. The average ratio of NABIL and HBL are 4.47% and 2.58% respectively. Thus, it shows that NABIL has efficiently employed its resources in terms of loan and advances than HBL in average. Although, the loan and advances of HBL is increasing, the return on loan and advance ratio is lower than NABIL due to the Net profit. From analysis, it is found that C.V of NABIL and HBL are 14.92 and 17.16. That means the ratios of both banks are variable.

Return on working fund or return on assets measures the overall profitability of all working funds. Return on total working fund ratio of HBL is lower than NABIL in average because of lower HBL's Net profit. The mean ROA of NABIL and HBL are 2.52% and 1.37%. The C.V of NABIL (11.84) is lower than that of HBL (23.85).

Return on equity indicates the efficiency of utilization of owners' fund by banks. According to the analysis, mean ROE of NABIL (32.75%) is higher than that of HBL (22.57 %). The ratio of NABIL indicates that they are more uniform than ratio of HBL during the study period as C.V of NABIL and HBL are 2.06 and 10.85.

Total interest earned to total asset ratio measures the earning capacity ratio of the bank through assets. The average ratio of NABIL and HBL are 5.96 % and 5.36 % respectively. C.V of NABIL is more consistent than HBL as C.V of NABIL is 5.43 and that of HBL is 5.37.

Total interest 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 5.87 % and 5.31% respectively whereas C.V of NABIL and HBL are 5.26 and 6.07 respectively. Thus, NABIL has shown better performance than in terms of interest earning on its total working fund.

#### **4.10.4 Findings from the Risk and 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 fluctuating trend. The mean credit risk ratio during the study period of NABIL and HBL are 57.77 % and 53.45 %. The C.V of HBL is variable with 10.34 and the C.V of NABIL seems to be consistent with 9.33.

Capital risk ratio of the NABIL is in fluctuating trend while that of HBL is increasing. The mean ratio of capital risk ratio of HBL is 3.28% with C.V 21.04. The mean ratio of

HBL is 3.55% having 9.84 C.V. 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 19.19% during the seven years study period. Similarly, the total deposit of HBL is increasing each year with the average growth rate of 9.76%.

The analysis of growth ratio loan and advances indicates that loan and advance of NABIL is increasing and reaches to 15903 million. It has average growth rate of 23.32%. While the loan and advance of HBL is in increasing trend with average growth rate of 15.54%.

The analysis of growth of total investment reveals that total investments of both banks are in fluctuating trend. The investment of NABIL is fluctuating between 4270 million and 10826 million. Meanwhile the investment of HBL is fluctuating between 8710 million and 11823 million. The average growth of total investment of NABIL and HBL are 13.22% and -50.16%.

The analysis of growth of total net profit indicates that net profit of NABIL is increasing since F.Y 2002/03. Its average rate is 16.80%. Similarly HBL the net profit of HBL is in increasing trend with average growth rate of 24.14%.

#### **4.10.6 Findings 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. NABIL got success to meet the CAE prescribed by NRB. HBL was successful in maintaining the required total capital for the fiscal years 2002/03, 2003/04, 2004/04, 2005/06, 2006/2007, 2007/08 and 2008/09 by 0.93%, 0.656%, 1.01%,

1.26%, 2.11%, 2.70% and 1.02% respectively. NABIL has higher adequacy ratio than HBL. Even though the core capital of the bank was good enough, it was the supplementary capital, which made bank suffer from the low capital adequacy ratio. The decrease in the loan loss provision was the main reason behind the decrease of supplementary capital.

#### **4.10.7 Findings from Common Size Analysis**

Common size analysis is the comparative study of balance sheet and income statement of the bank. Total assets, total liabilities and interest earned are considered as common base for this comparative analysis. According to common size balance sheet analysis, share capital of NABIL covers 3.0%, 2.9 %, 2.9%, 2.9%, 2.2%, 1.8%, 1.8% and 2.2% of total liabilities respectively from F.Y 2002/03 to F.Y 2008/09. While HBL covers 1.8%, 2.2%, 2.3%, 2.6%, 2.4%, 2.8% and 3.09%. Similarly, deposit of NABIL occupies 81.2 %, 84.3 %, 84.9 %, 86.6%, 85.6%, 85.95% and 85.14% respectively from total liabilities whereas HBL has 89.9%, 88.1%, 89.1%, 89.9%, 89.6%, 88.02% and 88.20% during study period.

NABIL has Cash & Bank Balance 6.9 %, 5.8 %, 3.3 %, 2.8 %, 5.1%, 7.19% and 7.68 % of total assets and HBL has 8.5%, 8.1%, 7.2%, 5.8%, 5.2%, 4.0% and 7.75% during the study period. Money at call and Short notice of NABIL covers 4.0%, during F.Y 2002/03 and 1.26% during F.Y 2008/09. Money at call and Short notice of HBL are 0.6 % and 2.98% during F.Y 2002/03 and F.Y 2008/09 respectively. Likewise, investment of NABIL shares 36.4 % during F.Y 2002/03 and 24.68% during F.Y 2008/09 from total assets where as that of HBL are 43.6% and 22.15%. As loan, advances and bills purchased shares the largest amount of total assets, it covers 46.8%, 48.9%, 61.6%, 57.95%, 57.1%, 57.54% and 62.89% of NABIL's total assets from F.Y 2002/03 to 2008/09 respectively. Loan and advances of HBL from F.Y 2002/03 to F.Y 2008/09 are 42.8%, 48.5%, 44.6%, 49.7%, 50.7%, 53.89% and 63.05% respectively.

According to the common size income statement analysis, interest income of bank is taken as hundred percentages. Net interest incomes of NABIL during F.Y 2002/03 to F.Y 2008/09 are 68.9%, 71.8%, 77.2%, 72.7%, 65.1%, 61.69% and 58.79%. It clearly

indicates that income of NABIL has increased significantly till F.Y 2004/05 while it has decreased from F.Y 2005/06. Analysis shows that Net profit of NABIL has increased from F.Y 2002/03 to F.Y 2004/05. Then after it is decreasing. NABIL has the highest percentage of net profit during F.Y 2004/05 and the lowest during F.Y 2008/09 over total interest income.

Net interests of HBL from the analysis of common size income statement from F.Y 2002/03 to F.Y 2008/09 are 53.9%, 60.5%, 61.1%, 30.1%, 56.8%, 58.04 and 60.07%. Net profits of HBL during the seven years study period are 17.7%, 21.1%, 21.3%, 28.1%, 27.7%, 32.33% and 32.15% of total interest earned. The analysis indicates that HBL has the highest net profit during F.Y 2007/08 and the lowest during F.Y 2002/03. HBL has fluctuation trend on net profit. According to the common size income statement, net profit percentage of NABIL is excessively higher than that of HBL.

#### **4.10.8 Findings 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 they are in increasing trend. The trends of total deposit and total investment of HBL are higher than that of NABIL. They are rising rapidly with higher slope. Where as the trend of loan and advances and net profit are higher than HBL. Hence, NABIL and HBL both banks are able to increase the profitability of the banks as their fund 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 & advances of NABIL is 0.9923 and probable error multiplied by six is found to be 0.0234 Similarly, correlation of coefficient between

deposits and loan & advances of HBL is 0.9709 and six times P.Er is 0.0879 Since  $r > 6P.Er$  of both banks, it is significant and there is correlation between total deposit and loan advance in NABIL & HBL correlation( $r$ ) is positive and near to 1. So, there is positive correlation between total deposits and loan & advances during the study period. It means the increase or decrease of total deposit of the bank highly affects the loan & 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 0.9395 and 0.1743 respectively. Probable errors multiplied by six are found to be 0.1824 and 1.4832 since  $r > 6P.Er$  of NABIL, it has significant relationship between deposit and investment. However,  $r < 6P.Er$  of HBL, there is insignificant relationship. There is no correlation between total deposit and investment. However correlations of both banks are positive.

The correlation coefficient ( $r$ ) between deposit and net profit of NABIL is .09587 and probable error multiplied by six found to be 0.1560 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 0.9824 and six times probable error is 0.0534 Since  $r > 6 P.Er$ , there is significant relationship between deposit and bet profit. Both banks have positive correlation coefficient.

## **CHAPTER - V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

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 savings 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 resource 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 claims 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, shares, 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 be 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 on the 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 investments. Loan and advances provided by commercial banks are the major statements for Nepalese commercial banks. So, 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. so banks have to face many problems to survive in this type of environment. Every bank is following sound investment policy for a purposeful, safe and profitable investment. Development of trade, industry and business is the main 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 objective of this study is to evaluate the investment policy adopted by NABIL and HBL and to suggest measures to improve the investment policy of the banks. The study is mainly based on secondary data from F.Y.2002/2003 to 2008/2009. 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 than 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 asset management of NABIL is better than that of HBL. The loan and advances to total deposit ratio, loan and advances to working fund ratio, ratio and investment on shares and debenture to working fund ratio 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. Loan loss provisions of NABIL is good enough as compared to that of HBL.
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 earned to total asset ratio and total interest earned to working fund of NABIL are higher than that of HBL. Thus, it indicates NABIL is more efficient in function of a bank in terms of profit than HBL.
4. Credit risk of NABIL is higher in 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 deposits of both banks (NABIL and HBL) have been increasing since F. Y. 2002/03. Loan and advances of both banks have been increasing. Total investment of both banks has shown fluctuated. Investment growth rate of HBL becomes negative due to low investment amount in F. Y. 2008/09. Net profits both banks have been increasing since last few years. Due to the increase in deposits, investment in loan and advances and other sectors have also been increasing every year. At the same time, net profit of the bank is also increasing. While comparing

two banks, it is cleared from the study that growth rate of HBL is better than the growth rate of NABIL.

6. NABIL and HBL were successful in achieving the CAR prescribed by NRB over the 7- years study period. Both banks were 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 share capital, reserves 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 quite 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, investment and net profit. However, slope of trend lines of HBL is higher than that of NABIL with respect to total deposit and total investment whereas slope of trend line with respect to loan and advance and net profit of NABIL is higher than that of HBL. 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 deposits and loan and advances are positive, nearer to 1 and  $r > 6p$ .Er of both banks, it is significant and there is positive correlation between total deposits and loan and loan and advance 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 and HBL are positive. Therefore, both banks have positive correlation coefficient between deposit and total investment. Since  $r > 6p$ .Er of NABIL, it is significant relationship between total deposit and total investment. However  $r < 6p$ .Er of HBL, it is insignificant and there is no correlation between total deposit.
11. The correlation coefficient between total deposit and net profit of NABIL and HBL are 0.9587 and 0.9190 respectively. Hence, total deposit and net profit of both banks are highly positive correlated. Since  $r > 6p$ .Er of NABIL, there is significant

relationship between total deposit and net profit. Similarly  $r > p$ . Er of HBL, it has also significant relationship.

### **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) of both is 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 govt. 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 is higher than 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 form 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 a 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 asset 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 must 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 and recession directly affects 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 NBR and invest more in these sectors. NBR should also speed up its supervision and monitoring in this regard.

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## APPENDICES

### Appendix - 1

#### Current Ratio

(Rs. million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Current Assets</b>	16288	16385	16385	22545	26967	36535	43206
	<b>Current Liabilities</b>	15135	15153	15421	20353	25196	34695	40737
	<b>Ratio</b>	1.0762	1.0813	1.0625	1.1077	1.0702	1.0530	1.0606
<b>HBL</b>	<b>Current Assets</b>	23091	24428	27509	28858	32945	35449	38368
	<b>Current Liabilities</b>	21900	23031	25943	27694	31013	32802	35700
	<b>Ratio</b>	1.0544	1.0607	1.0604	1.0420	1.0622	1.0807	1.0747

### Appendix - 2

#### Cash and Bank Balance to Total Deposit Ratio

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Cash &amp; Bank balance</b>	1145	970	559	630	1399	2671	3372
	<b>Total Deposit</b>	13448	14119	14587	19347	23342	31915	37348
	<b>Ratio</b>	0.0687	0.0851	0.0383	0.0326	0.0599	0.0837	0.0903
<b>HBL</b>	<b>Cash &amp; Bank balance</b>	1997	2001	2014	1717	1757	1448	3048
	<b>Total Deposit</b>	21007	22010	24814	26491	30048	31843	34681
	<b>Ratio</b>	0.0942	0.0909	0.0812	0.0648	0.0585	0.0455	0.0879

### Appendix - 3

#### Cash and Bank Balance to Current Assets Ratio

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Cash and Bank balance</b>	1145	970	559	630	1399	2671	3372
	<b>Current Assets</b>	16288	16385	16385	22545	26967	36535	43206
	<b>Ratio</b>	0.0703	0.0592	0.0341	0.0279	0.0518	0.0731	0.0784
<b>HBL</b>	<b>Cash and Bank balance</b>	1997	2001	2014	1717	1757	1448	3048
	<b>Current Assets</b>	23091	24428	27509	28858	32945	35449	38368

	<b>Ratio</b>	0.0857	0.0819	0.0732	0.0595	0.0533	0.0408	0.0794
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**Appendix - 4**

**Investment in Govt. Securities to Total Deposit Ratio**

(Rs. in million)

Fiscal Year		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL	Govt. Securities	3673	2413	2301	4804	4647	3706
	Total Deposit	14119	14587	19347	23342	31915	37348
	Ratio	0.2601	0.1654	0.1189	0.2060	0.1456	0.0992
HBL	Govt. Securities	3432	5470	5144	6454	7472	4212
	Total Deposit	22010	24814	26491	30048	31843	34681
	Ratio	0.1559	0.2204	0.1942	0.2147	0.2346	0.1214

**Appendix - 5**

**Loan and Advances to total Deposit Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL	Loan and Advances	8114	8549	10947	13279	15903	21759	27999
	Total Deposit	13448	14119	14587	19347	23342	31915	37348
	Ratio	0.6034	0.6055	0.7505	0.6864	0.68413	0.6818	0.7497
HBL	Loan and Advances	10845	12919	13451	15762	17793	20179	25519
	Total Deposit	21007	22010	24814	26491	30048	31843	34681
	Ratio	0.5163	0.5870	0.5421	0.5950	0.5921	0.6337	0.7152

**Appendix - 6**

**Total Investment to Total Deposit Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL	Total Investment	6031	5836	4270	6181	8945	9939	10826
	Total Deposit	13448	14119	15587	19347	23342	31915	37348
	Ratio	0.4485	0.4133	0.2927	0.3195	0.3832	0.3114	0.2899
HBL	Total Investment	10175	9292	11692	10889	11823	13340	8710
	Total Deposit	21007	22010	24814	26491	30048	31843	34681
	Ratio	0.4844	0.4222	0.4212	0.4110	0.3934	0.4189	0.2511



**Appendix- 7**

**Loan and Advances to Total Working Fund Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Loan and Advances</b>	8114	8549	10947	13279	15903	21759	27999
	<b>Total Working Fund</b>	16920	17104	17549	22688	27611	37526	44276
	<b>Ratio</b>	0.4796	0.4998	0.6238	0.5853	0.5760	0.5798	0.6323
<b>HBL</b>	<b>Loan and Advances</b>	10845	12919	13451	15762	17793	20179	25519
	<b>Total Working Fund</b>	21240	25730	28871	30525	34315	36857	40046
	<b>Ratio</b>	0.5106	0.5021	0.4659	0.5164	0.5185	0.5475	0.6372

**Appendix - 8**

**Investment in Govt. Securities to Total Working Fund Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Govt. Securities</b>	3589	3673	2413	2301	4808	4647	3706
	<b>Total Working Fund</b>	16920	17104	17549	22688	27611	37526	44176
	<b>Ratio</b>	0.2121	0.2147	0.1375	0.1014	0.1741	0.1238	0.0839
<b>HBL</b>	<b>Govt. Securities</b>	3999	3432	5470	5144	6454	7472	4212
	<b>Total Working Fund</b>	21240	25730	28871	30525	34315	36857	40046
	<b>Ratio</b>	0.1883	0.1334	0.1895	0.1685	0.1880	0.2027	0.1052

**Appendix - 9**

**Investment in Shares and Debentures to Total Working Fund Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Shares and Debentures</b>	22	22	440	104	286	323	355
	<b>Total Working Fund</b>	16920	17104	17549	22688	27611	37526	44176
	<b>Ratio</b>	0.0013	0.0013	0.0251	0.0046	0.0103	0.0086	0.0080
<b>HBL</b>	<b>Shares and Debentures</b>	34	34	40	39	73	89	94
	<b>Total Working Fund</b>	21240	25730	28871	30525	34315	36857	40046
	<b>Ratio</b>	0.0016	0.0013	0.0014	0.0013	0.0021	0.0024	0.0023





**Appendix - 10**

**Performing Loan Loss Provision**

(Rs. in million)

Fiscal Year		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Performing Loan</b>	8262	10802	13096	15724	21598	27774
	<b>Loan and Advances</b>	8549	10947	13279	15903	21759	27999
	<b>Ratio</b>	0.9664	0.9868	0.9862	0.9887	0.9926	0.9919
<b>HBL</b>	<b>Performing Loan</b>	11772	12450	14721	17152	19702	24968
	<b>Loan and Advances</b>	12919	13451	15762	17793	20179	25519
	<b>Ratio</b>	0.9112	0.9256	0.9340	0.963	0.9763	0.9784

**Appendix - 11**

**Nonperforming Loan Loss Provision**

(Rs. in million)

Fiscal Year		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Nonperforming Loan</b>	287	145	183	178	161	224
	<b>Loan and Advances</b>	8549	10947	13279	15903	21759	27999
	<b>Ratio</b>	0.0336	0.0138	0.0100	0.0119	0.0074	0.0080
<b>HBL</b>	<b>Non Performing Loan</b>	1147	1001	1041	641	477	551
	<b>Loan and Advances</b>	12919	13451	15762	17793	20179	25519
	<b>Ratio</b>	0.0888	0.0744	0.0660	0.0360	0.0236	0.0215

**Appendix- 12**

**Loan Loss Provision Ratio**

(Rs. in million)

Fiscal Year		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>L loan provision</b>	359	361	356	357	394	409
	<b>Non Performing Loan</b>	287	145	183	178	161	224
	<b>Ratio</b>	0.1509	2.4897	1.9454	2.0056	2.4472	1.8258
<b>HBL</b>	<b>Loan provision</b>	968	1027	1120	795	682	726
	<b>Nonperforming Loan</b>	1147	1001	1041	641	477	551
	<b>Ratio</b>	0.8439	1.0260	1.0759	1.2402	1.4297	1.3176

### Appendix - 13

#### Return on Loan and Advances

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL	Net Profit after Tax	416	455	520	635	674	746	1031
	Loan and Advances	8114	8549	10947	13279	15903	21759	27999
	Ratio	0.0513	0.0532	0.0457	0.0478	0.0423	0.0342	0.0368
HBL	Net profit after Tax	212	263	308	457	492	636	753
	Loan and Advances	10845	12919	13451	15762	17793	20179	25519
	Ratio	0.0195	0.0204	0.0229	0.0290	0.0276	0.0315	0.0295

### Appendix - 14

#### Return on Total Working Fund

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL	Net Profit after Tax	416	455	520	635	674	746	1031
	Total Working Fund	16920	17104	17549	22688	27611	37526	44276
	Ratio	0.0246	0.0266	0.0296	0.0280	0.0244	0.0199	0.0232
HBL	Net Profit after Tax	212	263	308	457	492	636	753
	Total Working fund	21240	25730	28871	30525	34315	36857	40046
	Ratio	0.0100	0.0102	0.0107	0.0150	0.01433	0.0172	0.0188

### Appendix - 15

#### Return on Equity

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL	Net Profit after Tax	416	455	520	635	674	746	1031
	Total Equity	1314	1482	1658	1875	2057	2437	3130
	Ratio	0.3166	0.3070	0.3136	0.3387	0.3276	0.3061	0.3293
HBL	Net Profit after Tax	212	263	308	457	492	636	753
	Total Equity	1063	1324	1542	1766	2146	2513	3120

	<b>Ratio</b>	0.1994	0.1986	0.1997	0.2588	0.2292	0.2531	0.2413
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**Appendix - 16**

**Total Interest Earned to Total Asset Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Total Interest Earned</b>	1018	1002	1068	1309	1587	1978	2798
	<b>Total Asset</b>	16563	16745	17064	22330	27253	37133	43867
	<b>Ratio</b>	0.0615	0.0598	0.0626	0.0586	0.05823	0.0532	0.0637
<b>HBL</b>	<b>Total Interest Earned</b>	1201	1246	1446	1626	1775	1963	2342
	<b>Total Asset</b>	23355	24762	27845	29460	33519	36175	39320
	<b>Ratio</b>	0.0514	0.0503	0.0519	0.0552	0.0529	0.0542	0.0596

**Appendix - 17**

**Total Interest Earned to Total Working Fund Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Total Interest Earned</b>	1018	1002	1068	1309	1587	1978	2798
	<b>Total Working Fund</b>	16920	17104	17594	22688	27611	37526	44176
	<b>Ratio</b>	0.0620	0.0586	0.0609	0.0577	0.0574	0.0527	0.0633
<b>HBL</b>	<b>Total Interest Earned</b>	1201	1246	1446	1626	1775	1963	2342
	<b>Total Working Fund</b>	21240	25730	28871	30525	34315	36857	40046
	<b>Ratio</b>	0.0565	0.0484	0.0501	0.0533	0.0517	0.0532	0.0584

**Appendix - 18**

**Credit Risk Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<b>NABIL</b>	<b>Loan and Advances</b>	8114	8549	10947	13279	15903	21759	27999
	<b>Total Asset</b>	16563	16745	17064	22330	27253	37133	43867
	<b>Ratio</b>	0.4899	0.5105	0.6415	0.5947	0.5835	0.5859	0.6382
<b>HBL</b>	<b>Loan and Advances</b>	10845	12919	13451	15762	17793	20179	25519
	<b>Total Asset</b>	23355	24762	27845	29460	33519	36175	39320
	<b>Ratio</b>	0.4644	0.5217	0.4831	0.5350	0.5308	0.5578	0.6490

**Appendix - 19**  
**Capital Risk Ratio**

(Rs. in million)

Fiscal Year		2002/03	2003/04	2004/05	2005/06	2005/07	2007/08	2008/09
<b>NABIL</b>	<b>Share capital</b>	492	492	492	492	492	689	966
	<b>Risk weighted Assets</b>	11146	11872	14193	16976	19167	27010	32500
	<b>Ratio</b>	0.0441	0.0414	0.0347	0.0290	0.0256	0.0255	0.0297
<b>HBL</b>	<b>Share capital</b>	429	536	644	772	810	1013	1216
	<b>Risk weighted Asset</b>	14681	16861	18322	19918	21889	25624	32628
	<b>Ratio</b>	0.0292	0.0318	0.0351	0.0388	0.0370	0.0395	0.0372

## Appendix 20–A Growth Rate

Growth rate can be calculated as:  $D_n = D_o(1+g)^n$

Here,  $D_n$  = Total amount in nth year

$D_o$  = Total amount in initial year

$g$  = Growth Rate

$n$  = Period

### Growth Rate of Total Deposit of NABIL

$$D1 = D_{2002/03} = 13448$$

$$D2 = D_{2003/04} = 14119$$

$$D3 = D_{2004/05} = 14587$$

$$D4 = D_{2005/06} = 19347$$

$$D5 = D_{2006/07} = 23342$$

$$D6 = D_{2007/08} = 31915$$

$$D7 = D_{2008/09} = 37348$$

Now,

$$D2 = D1(1+g)^n$$

$$D3 = D2(1+g)^n$$

$$D4 = D3(1+g)^n$$

$$14119 = 13448 (1+g)^1$$

$$14587 = 14119(1+g)^1$$

$$19347 = 14587(1+g)^1$$

$$\therefore g = 4.99\%$$

$$\therefore g = -3.31\%$$

$$\therefore g = 32.63\%$$

$$D5 = D4(1+g)^n$$

$$D6 = D5 (1+g)^n$$

$$D7 = D6(1+g)^n$$

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

$$31915 = 23342(1+g)^1$$

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

$$\therefore g = 20.65\%$$

$$\therefore g = 36.73\%$$

$$\therefore g = 17.02\%$$

$$\text{Average growth rate} = \frac{4.99\% + 3.11\% + 32.63\% + 20.65\% + 36.73\% + 17.02\%}{6} = 19.19\%$$

### Growth Rate of Total Deposit of HBL

$$D1 = D_{2002/03} = 21007$$

$$D2 = D_{2003/04} = 22010$$

$$D3 = D_{2004/05} = 24814$$

$$D4 = D_{2005/06} = 26491$$

$$D5 = D_{2006/07} = 30048$$

$$D6 = D_{2007/08} = 31843$$

$$D7 = D_{2008/09} = 34681$$

$$D2 = D1 (1+g)^n$$

$$D3 = D2 (1+g)^n$$

$$D4 = D3(1+g)^n$$

$$22010 = 21007 (1+g)^1$$

$$24814 = 22010 (1+g)^1$$

$$26491 = 24814 (1+g)^1$$

$$\therefore g = 7.77\%$$

$$\therefore g = 12.76\%$$

$$\therefore g = 9.76\%$$

$$D5 = D4(1+g)^n$$

$$D6 = D5 (1+g)^n$$

$$D7 = D6(1+g)^n$$

$$30048 = 26491 (1+g)^1$$

$$31813 = 30048(1+g)^1$$

$$34681 = 31843(1+g)^1$$

$$\therefore g=13.42\%$$

$$\therefore g=5.97\%$$

$$\therefore g=8.91\%$$

$$\text{Average growth rate} = \frac{7.77\% + 12.76\% + 9.76\% + 13.42\% + 5.97\% + 8.92\%}{6} = 9.76\%$$

### Appendix 20-B

#### Growth Rate of Lone & Advance of NABIL

$$D1=D_{2002/03}=8114$$

$$D2=D_{2003/04}=8549$$

$$D3=D_{2004/05}=10947$$

$$D4= D_{2005/06}=13279$$

$$D5= D_{2006/07}=15903$$

$$D6=D_{2007/08}= 21759$$

$$D7=D_{2008/09}=27999$$

Now,

$$D2=D1(1+g)^n$$

$$D3=D1(1+g)^n$$

$$D4=D3(1+g)^n$$

$$8549=8114 (1+g)^1$$

$$10947 =8549 (1+g)^1$$

$$13279=10947 (1+g)^1$$

$$\therefore g=5.36\%$$

$$\therefore g=28.05\%$$

$$\therefore g=21.30\%$$

$$D5=D4(1+g)^n$$

$$D6=D5 (1+g)^n$$

$$D7=D6(1+g)^n$$

$$15903=13279 (1+g)^1$$

$$21759=15903(1+g)^1$$

$$27999=21759(1+g)^1$$

$$\therefore g=19.76\%$$

$$\therefore g=36.82\%$$

$$\therefore g=28.67\%$$

$$\text{Average growth rate} = \frac{5.36\% + 28.05\% + 21.30\% + 19.76\% + 36.82\% + 28.67\%}{6} = 23.32\%$$

#### Growth Rate of Lone & Advance of HBL

$$D1=D_{2002/03}=10845$$

$$D2=D_{2003/04}=12919$$

$$D3=D_{2004/05}=13451$$

$$D4= D_{2005/06}=15762$$

$$D5= D_{2006/07}=17793$$

$$D6=D_{2007/08}=20179$$

$$D7=D_{2008/09}=25519$$

Now,

$$D2=D1(1+g)^n$$

$$D3=D2(1+g)^n$$

$$D4=D3(1+g)^n$$

$$12919=10845 (1+g)$$

$$13451=12919 (1+g)^1$$

$$15762=13451 (1+g)^1$$

$$\therefore g=19.12\%$$

$$\therefore g=4.18\%$$

$$\therefore g=17.18\%$$

$$\begin{array}{lll}
D_5=D_4(1+g)^n & D_6=D_5(1+g)^n & D_7=D_6(1+g)^n \\
17793=15762 (1+g)^1 & 20179=17793 (1+g)^1 & 25519=20179 (1+g)^1 \\
\therefore g=12.88\% & \therefore g=13.41\% & \therefore g=26.46\%
\end{array}$$

$$\text{Average growth rate} = \frac{19.12\% + 4.18\% + 17.18\% + 12.88\% + 13.41\% + 26.46\%}{6} = 15.54\%$$

### Appendix 20–C

#### Growth Rate of Investment of NABIL

$$\begin{array}{llll}
D_1=D_{2002/03}=6031 & D_2=D_{2003/04}=5836 & D_3=D_{2004/05}=4270 & D_4= \\
D_{2005/06}=6181 & D_5= D_{2006/07}=8945 & D_6=D_{2007/08}= 9939 & \\
D_7=D_{2008/09}=10826 & & & 
\end{array}$$

Now,

$$\begin{array}{lll}
D_2=D_1(1+g)^n & D_3=D_2(1+g)^n & D_4=D_3(1+g)^n \\
5836=6031 (1+g)^1 & 4270 =5836 (1+g)^1 & 6181=4270 (1+g)^1 \\
\therefore g=-3.23\% & \therefore g=-26.83\% & \therefore g=44.75\%
\end{array}$$

$$\begin{array}{lll}
D_5=D_4(1+g)^n & D_6=D_5(1+g)^n & D_7=D_6(1+g)^n \\
8945=6181 (1+g)^1 & 9939=8945(1+g)^1 & 10826=9939 (1+g)^1 \\
\therefore g=44.71\% & \therefore g=11.11\% & \therefore g=8.92\%
\end{array}$$

$$\text{Average growth rate} = \frac{-3.23\% - 26.83\% + 44.75\% + 44.71\% + 11.11\% + 8.92\%}{6} = 13.22\%$$

#### Growth Rate of Investment of HBL

$$\begin{array}{llll}
D_1=D_{2002/03}=10175 & D_2=D_{2003/04}=9292 & D_3=D_{2004/05}=11692 & D_4= \\
D_{2005/06}=10889 & D_5= D_{2006/07}=11823 & D_6=D_{2007/08}= 13340 & \\
D_7=D_{2008/09}=8710 & & & 
\end{array}$$

Now,

$$\begin{array}{lll}
D_2=D_1(1+g)^n & D_3=D_2(1+g)^n & D_4=D_3(1+g)^n \\
9292=10175 (1+g)^1 & 11692 =9292 (1+g)^1 & 10889=11692 (1+g)^1
\end{array}$$



$$\therefore g = -8.68\%$$

$$\therefore g = 25.83\%$$

$$\therefore g = -6.87\%$$

$$D5 = D4(1+g)^n$$

$$D6 = D5(1+g)^n$$

$$D7 = D6(1+g)^n$$

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

$$13340 = 11823(1+g)^1$$

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

$$\therefore g = 8.57\%$$

$$\therefore g = 12.83\%$$

$$\therefore g = -34.70\%$$

$$\text{Average growth rate} = \frac{-8.68\% + 25.83\% - 6.87\% + 8.57\% + 12.83\% - 34.70\%}{6} = -50.16\%$$

### Appendix 20-D

#### Growth Rate of Net Profit of NABIL

$$D1 = D_{2002/03} = 416$$

$$D2 = D_{2003/04} = 455$$

$$D3 = D_{2004/05} = 520$$

$$D4 =$$

$$D_{2005/06} = 635$$

$$D5 = D_{2006/07} = 674$$

$$D6 = D_{2007/08} = 746$$

$$D7 = D_{2008/09} = 1031$$

Now,

$$D2 = D1(1+g)^n$$

$$D3 = D2(1+g)^n$$

$$D4 = D3(1+g)^n$$

$$455 = 416 (1+g)^1$$

$$520 = 455 (1+g)^1$$

$$635 = 520 (1+g)^1$$

$$\therefore g = 9.38\%$$

$$\therefore g = 14.29\%$$

$$\therefore g = 22.12\%$$

$$D5 = D4(1+g)^n$$

$$D6 = D5(1+g)^n$$

$$D7 = D6(1+g)^n$$

$$674 = 635 (1+g)^1$$

$$746 = 674(1+g)^1$$

$$1030 = 746(1+g)^1$$

$$\therefore g = 6.14\%$$

$$\therefore g = 10.68\%$$

$$\therefore g = 38.20\%$$

$$\text{Average growth rate} = \frac{9.38\% + 14.29\% + 22.12\% + 6.14\% + 10.68\% + 38.20\%}{6} = 16.80\%$$

#### Growth Rate of Net Profit of HBL

$$D1 = D_{2002/03} = 212$$

$$D2 = D_{2003/04} = 263$$

$$D3 = D_{2004/05} = 308$$

$$D4 =$$

$$D_{2005/06} = 457$$

$$D5 = D_{2006/07} = 492$$

$$D6 = D_{2007/08} = 636$$

$$D7 = D_{2008/09} = 753$$

Now,

$$D2=D1(1+g)^n$$

$$263=212 (1+g)^1$$

$$\therefore g=24.06\%$$

$$D3=D2(1+g)^n$$

$$308=263 (1+g)^1$$

$$\therefore g=17.11\%$$

$$D4=D3(1+g)^n$$

$$457=308 (1+g)^1$$

$$\therefore g=48.38\%$$

$$D5=D4(1+g)^n$$

$$492=457 (1+g)^1$$

$$\therefore g=7.65\%$$

$$D6=D5(1+g)^n$$

$$636=492(1+g)^1$$

$$\therefore g=29.26\%$$

$$D7=D6(1+g)^n$$

$$753=636(1+g)^1$$

$$\therefore g=18.39\%$$

$$\text{Average growth rate} = \frac{24.06\%+17.11\%+48.38\%+7.65\%+29.26\%+18.39\%}{6} = 24.14\%$$

### Appendix 21 Capital Adequacy Ratio

(Rs. in million)

Fiscal year		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
N A B I L	<b>Core capital</b>	1277	1439	1611	1831	1992	2363	3044
	<b>supplementary capital</b>	173	170	156	259	314	635	682
	<b>Total capital</b>	1455	1609	1766	2089	2307	2998	3727
	<b>Risk weighted assets</b>	11146	11872	14193	16976	19167	27010	32500
	<b>CAR (core)</b>	11.4559	12.1248	11.3475	10.7844	10.3928	8.75	8.74
	<b>CAR (Total)</b>	13.0552	13.5564	12.4432	12.3072	12.0392	11.10	10.70
H B L	<b>Core capital</b>	1039	1297	1526	1722	2104	2469	3074
	<b>Supplementary capital</b>	566	499	491	521	547	783	770
	<b>Total capital</b>	1604	1796	2017	2243	2651	3253	3845
	<b>Risk weighted assets</b>	14681	16861	18322	19918	21889	25624	32628
	<b>CAR (core)</b>	7.0744	7.6948	8.3277	8.6450	9.612	9.64	8.81
	<b>CAR (Total)</b>	10.9268	10.6533	11.0091	11.2602	12.1111	12.70	11.02

### Appendix 22-A Balance sheet of NABIL

(Rs. in million)

Fiscal year	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
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<u>Capital liabilities</u>							
Share capital	492	492	492	492	492	689	966
Reserves Surplus	823	990	1166	1383	1565	1748	2164
Borrowings	961	230	17	173	883	1360	1681
Debentures & Bonds	***	***	***	***	***	240	300
Deposits	13448	14119	14587	19347	23342	31915	37348
Bills payable	109	173	120	93	84	238	463
Proposed & undisturbed dividend	***	***	***	435	509	437	361
Income tax liabilities	***	***	***	35	***	39	80
Other liabilities	730	741	805	372	378	466	203
<b>Total</b>	<b>16563</b>	<b>16745</b>	<b>17187</b>	<b>22330</b>	<b>27253</b>	<b>37132</b>	<b>43867</b>
<u>Assets</u>							
Cash & bank balance	1145	970	559	630	1399	2670	3371
Money at call & short notice	670	919	868	1735	564	1952	553
investments	6031	5836	4270	6181	8945	9940	10826
Lone, advance and bill purchased	7756	8190	10586	12923	15546	21365	27590
Fixed assets	252	338	361	318	287	598	661
Others assets	709	792	543	543	512	606	865
<b>Total</b>	<b>16563</b>	<b>16745</b>	<b>17187</b>	<b>22330</b>	<b>27253</b>	<b>37132</b>	<b>43864</b>

**Common Size Balance Sheet of NABIL**

(in percentage)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<u>Capital liabilities</u>							
Share capital	3.0	2.9	2.9	2.2	1.8	1.8	2.2
Reserves Surplus	5.0	5.9	6.8	6.2	5.7	4.7	4.9
Borrowings	5.8	1.4	0.1	0.8	3.3	4.3	4.5
Deposits	81.2	84.3	84.9	86.6	85.6	85.95	85.14
Bills payable	0.7	1.0	0.7	0.5	0.3	0.64	1.05
Proposed & undisturbed dividend	***	***	***	1.9	1.9	1.18	0.82
Income tax liabilities	***	***	***	0.2	***	0.10	0.18
Other liabilities	4.4	4.4	4.7	1.6	1.4	1.25	0.46
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<u>Assets</u>							
Cash & bank balance	6.9	5.8	3.3	2.8	5.1	7.19	7.68
Money at call & short notice	4.0	5.5	5.1	7.8	2.1	5.25	1.26
investments	36.4	34.9	24.8	27.7	32.8	26.76	24.68
Lone, advance and bill purchased	46.8	48.9	61.6	57.9	57.1	57.54	62.89
Fixed assets	1.5	2.0	2.1	1.4	1.1	1.61	1.51
Others assets	4.3	2.9	3.2	2.4	1.8	1.63	1.97
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

### Balance sheet of HBL

(Rs. in million)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<u>Capital liabilities</u>							
Share capital	429	536	644	772	811	1013	1216
Reserves Surplus	634	788	898	994	1336	1499	1904
Borrowings	646	659	506	505	596	943	500
Deposits	21007	22010	24814	26491	30048	31842	34681
Bills payable	47	64	68	73	91	103	113
Proposed & undisturbed dividend	***	***	***	238	131	263	162
Income tax liabilities	***	***	***	***	12	19	10
Other liabilities	592	704	914	387	494	492	733
<b>Total</b>	<b>23355</b>	<b>24761</b>	<b>27844</b>	<b>29460</b>	<b>33519</b>	<b>36175</b>	<b>39320</b>
<u>Assets</u>							
Cash & bank balance	1979	2001	2014	1717	1757	1447	3048
Money at call & short notice	1514	369	441	1005	1710	519	1171
investments	10175	9292	11692	100889	11823	13340	8711
Lone, advance and bill purchased	10002	12021	12425	14643	16998	19498	24793
Fixed assets	230	230	296	541	574	796	952
Others assets	818	848	976	665	657	645	644
<b>Total</b>	<b>23355</b>	<b>24761</b>	<b>27844</b>	<b>29460</b>	<b>33519</b>	<b>36175</b>	<b>39320</b>

### Balance Sheet of HBL

(in percentage)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
<u>Capital liabilities</u>							
Share capital	1.8	2.2	2.3	2.6	2.4	2.8	3.09
Reserves Surplus	2.7	3.2	3.2	3.4	3.9	4.1	4.84
Borrowings	2.8	2.7	1.8	1.7	1.8	2.6	1.27
Deposits	89.9	88.9	89.1	89.9	89.6	88.02	88.20
Bills payable	0.2	0.3	0.2	0.2	0.27	0.28	0.29
Proposed & undisturbed dividend	***	***	***	0.8	0.4	0.73	0.41
Income tax liabilities	***	***	***	***	0.04	0.05	0.02
Other liabilities	2.5	2.8	3.3	2.3	1.59	1.36	1.86
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<u>Assets</u>							
Cash & bank balance	8.5	8.1	7.2	5.8	5.2	4.00	7.75
Money at call & short notice	0.6	1.5	1.6	3.4	5.1	1.43	2.98
investments	43.6	37.5	42.2	37.0	35.3	36.87	22.15
Lone, advance and bill purchased	42.8	48.5	44.6	49.7	50.7	53.89	63.05
Fixed assets	1.0	0.9	1.1	1.8	1.7	2.20	2.42

Others assets	3.5	3.4	3.5	2.3	2.0	1.78	1.64
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

## Appendix 22-B

### Income statement of NABIL

(Rs. in million)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
Interest income	1018	1002	1068	1309	1587	1979	2798
Interest expenses	317	283	243	347	555	758	1153
<b>Net interest income</b>	<b>701</b>	<b>719</b>	<b>825</b>	<b>952</b>	<b>1032</b>	<b>1221</b>	<b>1645</b>
Commission& Discount	144	136	139	138	151	156	179
Other operating income	87	93	72	83	87	97	144
Exchange income	144	157	185	185	210	196	252
<b>Total operating income</b>	<b>1076</b>	<b>1105</b>	<b>1211</b>	<b>1358</b>	<b>1480</b>	<b>1670</b>	<b>2220</b>
Employees Expenses	211	181	199	220	240	262	340
Other operating expenses	166	151	190	182	188	221	265
Exchange loss	***	***	***	***	***	***	***
Provision for possible losses	***	1	4	4	14	64	45
<b>Operating profit</b>	<b>699</b>	<b>772</b>	<b>818</b>	<b>952</b>	<b>1038</b>	<b>1123</b>	<b>1570</b>
Non operating income/loss	***	***	***	1	5	24	2
Provision for possible losses write back	-52	-82	-31	8	11	11	11
<b>Profit from regular activities</b>	<b>647</b>	<b>690</b>	<b>787</b>	<b>961</b>	<b>1054</b>	<b>1158</b>	<b>1583</b>
Income/(expenses) from extra-ordinary activities	34	39	56	26	40	40	43
<b>Profit from all activities</b>	<b>681</b>	<b>729</b>	<b>843</b>	<b>987</b>	<b>1094</b>	<b>1198</b>	<b>1626</b>
Provision for staff Bonus	66	72	84	89	99	109	148
Provision for Income tax	199	202	239	263	321	342	447
<b>Net profit / Loss</b>	<b>416</b>	<b>455</b>	<b>520</b>	<b>635</b>	<b>674</b>	<b>746</b>	<b>1031</b>

### Common Size Income Statement of NABIL

(In percentage)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
Interest income	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Interest expenses	31.1	28.2	22.8	27.3	34.9	38.30	41.21
<b>Net interest income</b>	<b>68.9</b>	<b>71.8</b>	<b>77.2</b>	<b>72.7</b>	<b>65.1</b>	<b>61.69</b>	<b>58.79</b>
Commission& Discount	14.1	13.6	12.1	10.5	9.5	7.88	6.40
Other operating income	8.5	9.3	6.7	6.3	5.5	4.90	5.14
Exchange income	14.1	15.7	17.3	14.1	13.2	9.90	9.01
<b>Total operating income</b>	<b>105.7</b>	<b>110.3</b>	<b>113.4</b>	<b>103.7</b>	<b>93.3</b>	<b>84.38</b>	<b>79.34</b>
Employees Expenses	20.7	18.1	18.6	16.8	15.1	13.24	12.15
Other operating expenses	16.3	15.1	17.8	13.9	11.8	11.16	9.47
Exchange loss	***	***	***	***	***	***	***
Provision for possible losses	***	0.1	0.4	0.3	0.9	3.23	1.61
<b>Operating profit</b>	<b>68.7</b>	<b>77.0</b>	<b>76.6</b>	<b>72.7</b>	<b>65.5</b>	<b>56.74</b>	<b>56.11</b>
Nonoperating income/loss	***	***	***	0.1	0.3	1.21	0.07
Provision for possible losses write back	-5.1	-8.2	-2.9	0.6	0.6	0.55	0.39
<b>Profit from regular activities</b>	<b>63.6</b>	<b>68.9</b>	<b>73.7</b>	<b>73.4</b>	<b>66.4</b>	<b>58.51</b>	<b>56.58</b>
Income/(expenses) from extra-ordinary activities	3.3	3.9	5.2	2.0	2.5	2.02	1.54
<b>Profit from all activities</b>	<b>66.9</b>	<b>72.8</b>	<b>78.9</b>	<b>75.4</b>	<b>68.9</b>	<b>60.53</b>	<b>58.11</b>
Provision for staff Bonus	6.5	7.2	7.9	6.8	6.2	5.51	5.28
Provision for Income tax	19.5	20.2	22.4	20.1	20.2	17.28	15.97
<b>Net profit / Loss</b>	<b>40.9</b>	<b>45.4</b>	<b>48.7</b>	<b>48.5</b>	<b>42.5</b>	<b>37.69</b>	<b>36.85</b>

## Income Statement of HBL

(Rs. in million)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
Interest income	1201	1246	1446	1626	1775	1964	2342
Interest expenses	554	492	562	649	767	824	935
<b>Net interest income</b>	<b>647</b>	<b>754</b>	<b>774</b>	<b>977</b>	<b>1008</b>	<b>1140</b>	<b>1407</b>
Commission& Discount	103	124	133	165	193	203	284
Other operating income	***	***	***	52	40	62	46
Exchange income	110	112	137	198	152	192	250
<b>Total operating income</b>	<b>860</b>	<b>990</b>	<b>1154</b>	<b>1392</b>	<b>1393</b>	<b>1597</b>	<b>1988</b>
Employees Expenses	120	153	179	234	272	307	361
Other operating expenses	177	211	277	329	342	329	398
Exchange loss	***	***	***	***	***	****	***
Provision for possible losses	203	186	147	145	90	58	68
<b>Operating profit</b>	<b>360</b>	<b>440</b>	<b>551</b>	<b>684</b>	<b>689</b>	<b>903</b>	<b>1160</b>
Nonoperating income/loss	10	-7	12	1	3	9	3
Provision for possible losses write back	***	***	***	56	413	184	19
<b>Profit from regular activities</b>	<b>370</b>	<b>433</b>	<b>539</b>	<b>741</b>	<b>1105</b>	<b>1096</b>	<b>1182</b>
Income/(expenses) from extra-ordinary activities	30	34	41	2	315	52	10
<b>Profit from all activities</b>	<b>400</b>	<b>467</b>	<b>580</b>	<b>738</b>	<b>790</b>	<b>1043</b>	<b>1172</b>
Provision for staff Bonus	40	46	58	66	72	95	106
Provision for Income tax	148	158	214	215	226	313	313
<b>Net profit / Loss</b>	<b>212</b>	<b>263</b>	<b>308</b>	<b>457</b>	<b>492</b>	<b>635</b>	<b>753</b>



## Common Size Income Statement of HBL

(In percentage)

<b>Fiscal year</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
Interest income	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Interest expenses	46.1	39.5	38.9	39.9	43.2	41.95	39.92
<b>Net interest income</b>	<b>53.9</b>	<b>60.5</b>	<b>61.1</b>	<b>60.1</b>	<b>56.8</b>	<b>58.04</b>	<b>60.07</b>
Commission and Discount	8.6	10.0	9.2	10.2	10.8	10.34	12.13
Other operating income	***	***	***	3.2	2.3	3.17	1.96
Exchange income	9.2	9.0	9.5	12.2	8.5	9.77	10.67
<b>Total operating income</b>	<b>71.6</b>	<b>79.5</b>	<b>79.8</b>	<b>85.6</b>	<b>78.4</b>	<b>81.31</b>	<b>84.88</b>
Employees Expenses	10.0	12.3	12.4	14.3	15.3	15.63	15.41
Other operating expenses	14.7	16.9	19.2	20.2	19.2	16.75	16.99
Exchange loss	***	***	***	***	***	***	***
Provision for possible losses	16.9	14.9	10.2	8.9	5.1	2.95	2.90
<b>Operating profit</b>	<b>30.0</b>	<b>35.3</b>	<b>38.1</b>	<b>42.2</b>	<b>38.8</b>	<b>45.97</b>	<b>49.53</b>
Non operating income / loss	0.8	-0.6	-0.8	3.4	0.2	0.45	0.12
Provision for possible losses write back	***	***	***	***	23.2	9.36	0.81
<b>Profit from regular activities</b>	<b>30.8</b>	<b>34.8</b>	<b>37.3</b>	<b>43.3</b>	<b>62.2</b>	<b>55.80</b>	<b>50.46</b>
Income/ (expenses) from extra-ordinary activities	2.5	2.7	2.8	0.1	17.7	2.65	0.42
<b>Profit from all activities</b>	<b>33.3</b>	<b>37.5</b>	<b>40.1</b>	<b>45.4</b>	<b>44.5</b>	<b>53.10</b>	<b>50.04</b>
Provision for staff Bonus	3.3	3.7	4.0	4.1	4.1	4.83	4.52
Provision for Income tax	12.3	12.7	14.8	13.2	12.7	15.93	13.36
<b>Net profit /Loss</b>	<b>17.7</b>	<b>21.1</b>	<b>21.3</b>	<b>28.1</b>	<b>27.7</b>	<b>32.33</b>	<b>32.15</b>



### Appendix 23 – A

#### Trend Values of Total Deposit of NABIL

(Rs in million)

Fiscal Year (t)	Total deposit (y)	x=t- 2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	13448	-3	9	-40344	9581
2003/04	14119	-2	4	-28238	13725
2004/05	14587	-1	1	-14587	17870
2005/06	19347	0	0	0	22015
2006/07	23342	1	1	23342	26159
2007/08	31915	2	4	63830	30304
2008/09	37348	3	9	112044	34448
	y=116188	x=0	x <sup>2</sup> =28	xy=31330	

Here,

$$a = \frac{\sum y}{n} = \frac{116188}{7} = 22015$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{31330}{28} = 1118.93$$

#### Trend Values of Total Deposit of HBL

(Rs in million)

Fiscal Year (t)	Total deposit (y)	x=t- 2005/06	x <sup>2</sup>	xy	y <sub>c</sub> =a+bx
2002/03	21007	-3	9	-63021	20208
2003/04	22010	-2	4	-44020	22562
2004/05	24814	-1	1	-24814	24916
2005/06	26491	0	0	0	27270
2006/07	30048	1	1	30048	29624
2007/08	31843	2	4	63686	31978
2008/09	34681	3	9	104043	34332
	y=190894	x=0	x <sup>2</sup> =28	xy=65922	

Here,

$$a = \frac{\sum y}{n} = \frac{190894}{7} = 27270$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{65922}{28} = 2354$$

### Appendix 23 – B

#### Trend Values of Lone & Advances of NABIL

(Rs in million)

Fiscal Year (t)	Lone & Advances (y)	x=t-2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	8114	-3	9	-24342	5468
2003/04	8549	-2	4	-17098	8719
2004/05	10947	-1	1	-10947	11970
2005/06	13279	0	0	0	15221
2006/07	15903	1	1	15903	18472
2007/08	21759	2	4	43519	21723
2008/09	27999	3	9	83997	24974
	y=106550	x=0	x <sup>2</sup> =28	xy=91032	

Here,

$$a = \frac{\sum y}{n} = \frac{106550}{7} = 15221$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{91032}{28} = 3251$$

#### Trend Values of Lone & Advances of HBL

(Rs in million)

Fiscal Year (t)	Lone & Advances (y)	x=t-2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	10845	-3	9	-32535	9903
2003/04	12919	-2	4	-25838	12148
2004/05	13451	-1	1	-13451	14393
2005/06	15762	0	0	0	16638
2006/07	17793	1	1	17793	18883
2007/08	20179	2	4	40358	21128
2008/09	25519	3	9	76557	23373
	y=25519	x=0	x <sup>2</sup> =28	xy=62884	

Here,

$$a = \frac{\sum y}{n} = \frac{116468}{7} = 1663$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{62884}{28} = 2245$$

### Appendix 23 – C

#### Trend Values of Investment of NABIL

(Rs in million)

Fiscal Year (t)	Investment (y)	x=t- 2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	6031	-3	9	-18093	4513
2003/04	5836	-2	4	-11672	5486
2004/05	4270	-1	1	-4270	6459
2005/06	6181	0	0	0	7432
2006/07	8945	1	1	8945	8405
2007/08	9939	2	4	19878	9378
2008/09	10826	3	9	32478	10351
	y=52028	x=0	x <sup>2</sup> =28	xy=27266	

Here,

$$a = \frac{\sum y}{n} = \frac{52028}{7} = 7432$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{27266}{28} = 973$$

#### Trend Values of Investment of HBL

(Rs in million)

Fiscal Year (t)	Investment (y)	x=t- 2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	10175	-3	9	-30525	10437
2003/04	9292	-2	4	-18584	10573
2004/05	11692	-1	1	-11692	10709
2005/06	10889	0	0	0	10845
2006/07	11823	1	1	11823	10981
2007/08	13340	2	4	26680	1117

<b>2008/09</b>	8710	3	9	26130	11253
	y=75921	x=0	x <sup>2</sup> =28	xy=3832	

Here,

$$a = \frac{\sum y}{n} = \frac{75921}{7} = 10845$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{3832}{28} = 136$$

### Appendix 23 – D

#### Trend Values of Net Profit of NABIL

(Rs in million)

Fiscal Year (t)	Net Profit (y)	x=t- 2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	416	-3	9	-1248	363
2003/04	455	-2	4	-910	455
2004/05	520	-1	1	-520	547
2005/06	635	0	0	0	639
2006/07	674	1	1	674	731
2007/08	746	2	4	1492	823
2008/09	1031	3	9	3093	915
	y=4477	x=0	x <sup>2</sup> =28	xy=2581	

Here,

$$a = \frac{\sum y}{n} = \frac{4477}{7} = 639$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{2581}{28} = 92$$

#### Trend Values of Net Profit of HBL

(Rs in million)

Fiscal Year (t)	Net Profit (y)	x=t- 2005/06	x <sup>2</sup>	xy	Y <sub>c</sub> =a+bx
2002/03	212	-3	9	-636	172
2003/04	263	-2	4	-526	263
2004/05	308	-1	1	-308	354
2005/06	457	0	0	0	445
2006/07	492	1	1	492	536
2007/08	636	2	4	1272	627
2008/09	753	3	9	2259	718
	y=3121	x=0	x <sup>2</sup> =28	xy=2553	

Here,

$$a = \frac{\sum y}{n} = \frac{3121}{7} = 445$$

$$b = \frac{\sum xy}{\sum x^2} = \frac{2553}{28} = 91$$



### Appendix 24 – A

#### Coefficient of Correlation between Deposit and Loan & Advances of NABIL

(Rs. In million)

Fiscal Year (t)	Deposit (x)	Loan & Advance (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	$x^2$	$y^2$	xy
<b>2002/03</b>	13448	8114	-8567	-7107	73393489	50509449	60885669
<b>2003/04</b>	14119	8549	-7896	-6672	62346816	44515584	52682112
<b>2004/05</b>	14587	10947	-7428	-4274	55175184	18267076	31747272
<b>2005/06</b>	19347	13279	-2668	-1942	7118224	3771364	5181256
<b>2006/07</b>	23342	15903	1327	682	1760929	465124	905014
<b>2007/08</b>	31915	21759	9900	6538	98010000	41745444	64726200
<b>2008/09</b>	37348	27999	15333	12778	235100889	163277284	195925074
	x=154106	y=106550	0	0	x <sup>2</sup> =532905531	y <sup>2</sup> =323551325	xy=412052597

Here,

$$\bar{x} = \frac{\sum x}{n} = \frac{154106}{7} = 22015$$

$$\bar{y} = \frac{\sum y}{n} = \frac{106550}{7} = 15221$$

$$x^2 = 532905531$$

$$y^2 = 323551325$$

$$xy = 412052597$$

Now,

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

$$r = \frac{412052597}{\sqrt{532905531} \times \sqrt{323551325}}$$

$$r = 0.9923$$

$$r^2 = 0.9847$$

Probable error (P.Er),

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

$$P.Er=0.6745 \times \frac{1-0.9847}{\sqrt{7}}$$

$$P.Er=0.0039109$$

### Coefficient of Correlation between Deposit and Loan & Advances of HBL

(Rs. In million)

Fiscal Year(t)	Deposit (x)	Loan & Advance (y)	X= x - $\bar{x}$	Y=y- $\bar{y}$	x <sup>2</sup>	y <sup>2</sup>	xy
<b>2002/03</b>	21007	10845	-6263	-5793	39225169	33558849	36281559
<b>2003/04</b>	22010	12919	-5260	-3719	27667600	13830961	19561940
<b>2004/05</b>	24814	13451	-2456	-3187	6031936	10156969	7827272
<b>2005/06</b>	26491	15762	-779	-876	606841	767376	682404
<b>2006/07</b>	30048	17793	2777	1154	7711729	1331716	3204658
<b>2007/08</b>	31843	20179	4572	3540	20903184	12531600	16184880
<b>2008/09</b>	34681	25519	7410	8880	54908100	78854400	65800800
	x= 1980894	y= 116468	0	0	x <sup>2</sup> = 157054559	y <sup>2</sup> = 151031871	xy= 149543513

Here,

$$\bar{x} = \frac{\sum x}{n} = \frac{1980894}{7} = 282984.857$$

$$\bar{y} = \frac{\sum y}{n} = \frac{116468}{7} = 16638.2857$$

$$x^2 = 157054559$$

$$y^2 = 151031871$$

$$xy = 149543513$$

Now,

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

$$r = \frac{149543513}{\sqrt{157054559} \times \sqrt{151031871}}$$

$$r = 0.970974$$

$$r^2 = 0.942792$$

Probable error (P.Er),

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

$$P.Er=0.6745 \times \frac{1-0.9728}{\sqrt{7}}$$

$$P.Er=0.01458$$

### 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 <sup>2</sup>	y <sup>2</sup>	xy
2002/03	13448	6031	-8567	-1401	73393489	1962801	12002367
2003/04	14119	5836	-7896	-1596	62346816	2547216	12602016
2004/05	14587	4270	-7428	-3162	55175184	9998244	23487336
2005/06	19347	6181	-2668	-1251	7118224	1565001	3337668
2006/07	23342	8945	1327	1512	1760929	2286144	2006424
2007/08	31915	9939	9900	2506	98010000	6280036	24809400
2008/09	37348	10826	15333	3395	235100889	11512449	52024869
	x= 154106	y= 52028	0	0	x <sup>2</sup> = 532905531	y <sup>2</sup> = 36151891	xy= 130270080

Here,

$$\bar{x} = \frac{\sum x}{n} = \frac{154106}{7} = 22015$$

$$\bar{y} = \frac{\sum y}{n} = \frac{52028}{7} = 7432$$

$$x^2 = 532905531$$

$$y^2 = 36151891$$

$$xy = 130270080$$

Now,

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

$$r = \frac{130270080}{\sqrt{532905531 \times 36151891}}$$

$$r = 0.938542$$

$$r^2 = 0.880862$$

Probable error (P.Er),

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

$$P.Er = 0.6745 \times \frac{1-0.880862}{\sqrt{7}}$$

$$P.Er = 0.03037$$

### 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
2002/03	21007	10175	-6263	-670	39225169	448900	4196210
2003/04	22010	9292	-5260	-1553	27667600	2411809	8168780
2004/05	24814	11692	-2456	846	6031936	715716	-2077776
2005/06	26491	10889	-779	43	606841	1849	-33497
2006/07	30048	11823	2777	977	7711729	954529	2713129
2007/08	31843	13340	4572	2494	20903184	6220036	11402568
2008/09	34681	8710	7410	-2135	54908100	4558225	-15820350
	x = 1980894	y = 75921	0	0	x <sup>2</sup> = 157054559	y <sup>2</sup> = 15311064	xy = 8549064

Here,

$$\bar{x} = \frac{\sum x}{n} = \frac{1980894}{7} = 282984.857$$

$$\bar{y} = \frac{\sum y}{n} = \frac{75921}{7} = 10845.857$$

$$x^2 = 157054559$$

$$y^2 = 15311064$$

$$xy = 8549064$$

Now,

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

$$r = \frac{8549064}{\sqrt{157054559 \times 115311064}}$$

$$r = 0.174337$$

$$r^2 = 0.03039$$

Probable error (P.Er),

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

$$P.Er = 0.6745 \times \frac{1-0.03039}{\sqrt{7}}$$

$$P.Er = 0.2472$$

### Appendix 24 – C

#### Coefficient of Correlation between Deposit and Net Profit of NABIL

(Rs. In million)

Fiscal Year(t)	Deposit (x)	Net Profit (y)	X= x - $\bar{x}$	Y= y - $\bar{y}$	x <sup>2</sup>	y <sup>2</sup>	xy
2002/03	13448	416	-8567	-223	73393489	49729	1910441
2003/04	14119	455	-7896	-184	62346816	33856	1452864
2004/05	14587	520	-7428	-119	55175184	14161	883932
2005/06	19347	653	-2668	-5	7118224	25	13340
2006/07	23342	674	1327	34	1760929	1156	45118
2007/08	31915	746	9900	106	98010000	11236	1049400
2008/09	37348	1031	15333	391	235100889	152881	5995203
	x= 154106	y= 4477	0	0	x <sup>2</sup> = 532905531	y <sup>2</sup> = 263044	xy= 11350298

Here,

$$\bar{x} = \frac{\sum x}{n} = \frac{154106}{7} = 22015$$

$$\bar{y} = \frac{\sum y}{n} = \frac{4477}{7} = 639$$

$$x^2 = 532905531$$

$$y^2 = 263044$$

$$xy=11350298$$

Now,

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

$$r = \frac{11350298}{\sqrt{53290553} \times 263044}$$

$$r = 0.958667$$

$$r^2 = 0.9190$$

Probable error (P.Er),

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

$$P.Er = 0.6745 \times \frac{1-0.9190}{\sqrt{7}}$$

$$P.Er = 0.020639$$

### Coefficient of Correlation between Deposit and Net Profit of HBL

(Rs. In million)

Fiscal Year(t)	Deposit (x)	Net Profit (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	$x^2$	$y^2$	xy
2002/03	21007	212	-6263	-233	39225169	54289	1459279
2003/04	22010	263	-5260	-182	27667600	33124	957320
2004/05	24814	308	-2456	-137	6031936	18769	336472
2005/06	26491	457	-779	11	606841	121	-8569
2006/07	30048	492	2777	46	7711729	2116	127742
2007/08	31843	636	4572	190	20903184	36100	868680
2008/09	34681	753	7410	307	54908100	94249	2274870
	x = 1980894	y = 3121	0	0	x <sup>2</sup> = 157054559	y <sup>2</sup> = 238768	xy = 6015794

Here,

$$\bar{x} = \frac{\sum x}{n} = \frac{1980894}{7} = 282984.857$$

$$\bar{y} = \frac{\sum y}{n} = \frac{3121}{7} = 445.857$$

$$x^2 = 157054559$$

$$y^2=238768$$

$$xy=6015794$$

Now,

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

$$r = \frac{6015794}{\sqrt{157054559} \times 238768}$$

$$r = 0.98238$$

$$r^2 = 0.96507$$

Probable error (P.Er),

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

$$P.Er = 0.6745 \times \frac{1-0.96507}{\sqrt{7}}$$

$$P.Er = 0.0089$$