

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

Finance is the means by which the funds are obtained and the methods by which these funds are managed and collected. Finance can be defined as art and science of managing money. (Adhikari and sherstha, 2063, p.1) The management of money means the acquisition and spending or investing money. Finance is concerned with the process, institution, markets and investments involved in the transfer of money among the individuals, businesses and government.

It is obvious that economic development is impossible without the development of different sectors like agriculture, industry, trade etc. of the country. Banking sector plays an important role in the economic development of country. So there should not be any misunderstanding to the development of commercial bank. Considerable debate exists on the relationship between the financial system and economic growth. Historically, economists have focused on the banks and other related institution. Many scholars emphasize the critical importance of banking system in economic growth. They show that the level of financial intermediation is a good predictor of long-run rates of economic growth, capital accumulation and productivity improvements (Levine and Fervos, 1998:537).

Banking system in Nepal was started before the Rana ruling system. The gold smith used to give the money to people against the collateral of gold, silver and precious metals. At the prime minister ship of Ranoddip Singh the "Tejarath Addha" was established as the first of banking. For a long time it tendered a good service to government employees as well as general public but the concept of modern banking institution in Nepal was introduced when the first commercial bank, the Nepal Bank Limited was established in 1994 B.S. under the Nepal Bank Act 1993 B.S. during the time of Prime Minister Juddha Sumsher Rana. The development of financial sector is the outcomes of government's liberalization policy. In Nepal, banking activities were started after the establishment of Nepal Bank Limited. Nepal Rastra Bank was established in 2013 B.S. as a central Bank of Nepal to regulate the banking activities and monetary policy. After the establishment of Nepal Rastriya

Bank, Rastriya Banijya Bank was established in 2022 B.S. under the full ownership of HMG/N. The Commercial Bank Act 2031 B.S. was amended in 2041 B.S. The only two banks Nepal Bank Ltd and Rastriya Banijya Bank were in operation before the 2041 B.S. This Act removed the entry barriers placed on Commercial Banks. Consequently, the door was open to joint venture banks and private sector to start the banking business. The Nepal Arab Bank Ltd.(Presently known as Nabil Bank Ltd) was established in 2041 B.S. as a first joint venture bank under the ownership of private sector. Nepal Investment Bank Ltd., Standard Chartered Bank Ltd. and Himalayan Bank Ltd were established in 2042 B.S., 2043 B.S. and 2049 B.S. respectively. The private sector was encouraged to undertake the banking insurance and other financial activities. The immediate impact of this policy was on number of joint venture commercial banks that emerged in the following years. By the end of the year 2065 there are 25 Commercial Banks in operation in Nepal.

In every organization, capital is very essential factors to open and run smoothly. The past trend of entering into a joint venture with a foreign bank is gradually vanishing (disappearing) and most of the new banks are indigenous. Now there is no need to look up to a foreign equity holder to guide towards new technology and new products. The banks in Nepal have very unique characteristics. From the ownership point of view, the commercial banks in Nepal can be broadly classified into two categories; Public Banks and private Banks.

Banks are financial institutions that need huge capital to carryout financial transaction. A bank cannot be imagined without sufficient capital. The total sum of equity capital and borrowed capital is called capital structure. A Bank collects capital by issuing ordinary equity shares, which are banks owned capital. In a banking sector, the capital collected by issuing the banks shares is called share capital. Bank collects capital from other sources is called borrowed capital. Adequacy and inadequacy of bank capital directly affects the banking transaction. The adequacy of bank capital is most important aspect of bank. The bank should remove the inadequacy of bank capital through the medium of collecting of share capital and borrowed capital. The defects caused by the bank capital, doesn't lead the bank forwards.

Capital is the major crucial factor for the development of the nation. Due to least developed country, domestic capital formation is very difficult task for Nepal. The banks are not ignored to develop and spread industry, to boost the trade and

commercial activities and to generate employment. Banks are essential financial institutions in an economy. They are the principal source of credit that provides short-term working capital for business and long-term business loans for new plants and equipment. The commercial bank is simply a business corporation organized for the purpose of maximizing the value of shareholder's wealth invested in the bank at an accepted level of risk. Banks also generate income by providing other services for which they charge fees and commissions. Meanwhile, banks have also entered into financial advisory services, foreign trading, processing and investments.

Capital can be acquired issuing debt, preferred stock, common stock and using retained earnings. The combination of such components of capital is called capital structure that differs from company to company. It should pay fixed charges for debt capital as interest periodically. After the payment of fixed interest from company's earnings, balances are available to equity shareholders, out of which certain dividends are declared. In this way, interest on debt capital decreases earnings available to equity shareholders. Equity shareholders can earn total amount of profit if there is no presence of debt capital in capital structure.

Long-term debt is the least costly source of financing because interest on debt is tax-deductible and creditors or debenture holders consider debt as a relatively less risky investment and require lower return. Debt provides flexibility in the financial structure of the corporation. The company can issue debt or repay whenever required to make financial structure flexible. Creditors and debenture holders have no interference in business operation because they are not entitled to vote. The company can enjoy tax saving on interest expense.

Profit is one of the measurements of operating efficiency of organization that depends on capital structure. Optimal capital structure is such structure of capital that maximizes the value of the firm and minimizes the overall cost of capital. That's why optimal capital structure can add direct value on shareholder's profitability through the cheaper overall cost of capital. Capital structure involves selecting the capital structure that maximizes EPS over the expected EBIT. Optimal capital structure can be defined in terms of risk and return because different sources of capital consist of different risks and returns. The optimal capital structure is the one that trades off between risks and returns which maximizes the price of stock. Here a brief introduction to Himalayan Bank Ltd and Nepal Investment Bank Ltd. are presented.

- A. Himalayan Bank Ltd. was incorporated in 1992 by the distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. It is the first commercial bank of Nepal with maximum share holding by the Nepalese private sector. Besides commercial activities, the bank also offers industrial and merchant banking. It has now Rs. 100,00,00,000 authorized capital, Rs. 81,08,10,000 issued capital and Rs. 81,08,10,000 paid up capital. The bank at present has 6 branches in Kathmandu Valley. Besides, it has 16 branches outside Kathmandu Valley. The bank is also operating a counter in the premise of the Royal Palace. The Bank has a very aggressive plan of establishing more branches in different parts of the kingdom in near future.
- B. Nepal Investment Bank Ltd (NIBL), previously Nepal Indosuez Bank Ltd, was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was credit Agricole Indosuez , a subsidiary of one the largest banking group in the world. It has now RS 2,000,000,000 authority capital, RS 1,203,915,400 issued capital and 1,203,915,400 paid up capital.
- The bank at present has 7 branches in Kathmandu Valley. Besides, it has 11 branches outside kathmandu Valley. It's has also a very aggressive plan of establishing more branches in different parts of the kingdom in near future.

## **1.2 Focus of the study**

The role of banking industry is increasing in these days. Without modern banking system, the development of the country is only a dream. Capital is most important factor from beginning of the business organization. The success of every industry depends upon the proper composition of debt/equity in capital structure, which helps to generate the high return and to maintain long term solvency position.

Investors invest their in the business organization as an ownership capital or debt capital with expectation of getting favorable profit in the future. Without proper capital utilization, it fails to meet their expectation and damage the image and creditworthiness of the organization and leads to fall the market value. This thesis is focused on analysis of capital structure management between of Himalayan Bank

Ltd and Nepal Investment Bank Ltd., finding true facts and recommendation for corrective measures pointing out the problems.

This study is based on the secondary data provided by the particular concerned banks, which focus to evaluate the capital structure to test the impact of the capital structure on profitability. Debt to equity ratio and capital adequacy ratio that affects the profitability or not is the main concentrates issues on the thesis. This study mainly focuses on the capital structure management of the two banks.

### **1.3 Statement of problem**

Due to increasing number of commercial banks in day by day, the banking industry has to face growing competition environment. So, most of the commercial banks are being operated in a very bad condition due to the inadequate capital management. Source of them, banks are suffering from lack of knowledge for proper utilization of their resources. In this new economic environment, there is less protection, subsidy and monopoly of market. So the business firm can take advantages through appropriate capital structure decisions because long run profitability depends upon its capital structure besides other factor. Higher debt to equity ratio is risky for the company through high leverage has its own advantage. On the other hand, an appropriate balance of debt and owner's equity is essential to avoid financial risk. So, highly levered capital structure with insufficient return represents the week financial aspect of the banks.

The study of capital structure for banking business is very essential since the business is operated with outsider's funds. Under new policy of commercial banks, NRB directed all the commercial bank to increase the capital to Rs. 2 billion by mid July 2009 through minimum 10% paid-up-capital increment every year effective from mid May 2002. Therefore, the banks are being highly sensitive business. NRB reform their policy from time to time in favors of depositors and owners of the company. So, this study traced out the problem under inefficiency and weakness based on the capital structure management of these two commercial banks in Nepal viz. Himalayan Bank Ltd. and Investment Bank Ltd. Such as;

1. What is the trend of paid-up-capital between HBL and NIBL in past five years?
2. How far the banks are able to serve the debt?
3. What are the ratio of debt capital and equity capital?
4. How the banks are managing their core capital adequacy, supplementary capital adequacy and total capital adequacy on the sampled banks with reference to NRB Directives?
5. How efficiently these banks are able to earn the profit?

#### **1.4 Objective of the study**

The main objective of the study is to maximize the comparative analysis of capital structure management between two well-known Nepalese competitive banks viz. Himalayan Bank Ltd. and Everest Bank Ltd. This study also helps to find and suggest the ways of improving the performance. More specially, the major objectives of the study are given below;

1. To analyze the trend of paid-up-capital between HBL and NIBL.
2. To analyze the debt servicing capacity between HBL and NIBL.
3. To examine the ratio of debt and equity capital.
4. To measure the core capital adequacy ratio, supplementary capital adequacy ratio and capital adequacy ratio of sampled banks.
5. To evaluate the profitability position and to provide suggestion and recommendation for their improvement.

#### **1.5 Significance of the study**

Research itself is very important because it aims to gain knowledge and to add the new literature in existing field. This study, first attempts to identify capital components mix in the banking industry and their contributions towards profitability. Thus, outcomes of the study help to suggest the effective measure which banking sectors can follow to convert the bad capital into good capital structure. It aims to help the policymakers. It also provides literature to the researchers who want to carryout further research in the same avenues. So, the financial institutions, holding lenders and owners are more concerned with the firm's

long-term financial strength. In this study, capital structure helps to indicate and to follow the appropriate mix of debt and owner's equity in the banking industry. This study helps also the researchers, creditors, investors and stockholders to analyze and provide signaling information about the organization. Therefore, an important effort has been contributed to the comparative case study about the capital structure between HBL and NIBL.

## **1.6 Limitation of the study**

This research study has been conducted with certain limitation and boundaries that researcher may not try to go across.

1. This study is concerned only with the capital structure management of two banks.
2. The study only two banks viz. HBL and NIBL.
3. The study covers only 5 years period from the FY 2002/03 to 2006/07.
4. The study is based on secondary data collected from banks and their websites.

## **1.7 Organization of the study**

This study is organized into five chapters. Each chapter is denoted to the some aspect of the study. The rational behind this kind of organizations is to follow a simple research methodology approaches. The contents of the study for chapters are briefly mentioned below;

The first chapter deals with introduction, which includes general background, statement of the problem, objective of the study, significance of the study, limitation of the study and organization of the study.

Second chapter deals with the review of available literature. It includes conceptual review and research in related studies.

Third chapter explains the research methodology used in the study, which includes research design, population and sample, nature & source of data, data collection procedures, data processing & analysis and data analysis tools and techniques as well as limitation of methodology.

Fourth chapter deals with the presentation and analysis of data, which includes the presentation & analysis of data and major finding of the study with the helps of various financial & statistical tools and techniques.

Finally, fifth chapter discusses the summary of main findings, conclusions and recommendations of the study, which are the important aspect to solve the problems associated to the present analysis, and offers recommendation for the further improvement in future.



# **CHAPTER II**

## **REVIEW OF LITERATURE**

Conceptual frameworks is a most important part of every study, without knowing the clear concept on the subject matter the study may not go through right way. Therefore, the review of literature is taken as very important essential part, which works as a cornerstone of the study. This chapter focuses on the review of relevant theoretical literatures & previous related studies. It provides the guidelines for further study, which helps to avoid the unnecessary duplication in research work. This chapter is divided into two parts-theoretical review and research review. Theoretical review includes definitions and summary of different books & authors and research review includes the review of article published in different journals and other relevant unpublished past studies.

### **2.1 Conceptual Review**

This sub-chapter represents the theoretical aspect of the study. As this research study deals with comparative study between two banks viz. Himalayan Bank Limited & Everest Bank Limited on capital structure management, here it is utmost necessary to mention the conceptual thoughts behind it.

#### **2.1.1 Concept of commercial banking industry**

Banks are Business firm; Like Frisbee Manufacturer, fast food chains and text book publishers. Bankers buy input, message them a bit, burn a little incense, say the magic works and out pop some out put from the oven. If there luck holds, they can sell the finished product for more than its costs to buy the raw materials in the first place.

For banker, the raw material is money. they buy it at long counter they set up in the store, then rush around to the other side of the counter, sit down behind a huge desk (a little out of breath), and sell it as soon as they can to some one else. If they are really good at their business, sometimes they can even sell it back to the same person they bought it from.

About the only way we can tell whether bankers are buying money or selling it is to observe whether they are standing up or sitting down. For some unknown reasons, probably an inherited trait, bankers always stand up when they buy money (take your deposit) but invariably sit down when they sell it (make loan or buy security)(S.Ritter Lawrence & Sliper William,104).

Commercial banks are those financial institutions, which deal in accepting deposits from persons and institutions and giving loans against securities. They provide working capital needs of trade, industry and even to agriculture sectors. Moreover commercial banks also provide technical and administrative assistance to industries, traders and business enterprises.

"Commercial banks deal with other people's money. They have to find ways of keeping their assets liquid so that could meet the demands of their customers. In this anxiety to make profit, the bank cannot afford to lock up their funds in assets, which are not easily reasonable. The depositors must be made to understand that the bank is fully solvent. The depositor's 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 the 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"(M.Radhaswamy, S.V.Vasudevan, 1979).

Commercial Bank Act 2031 B.S. of Nepal has defined that "A commercial bank is one which exchanges money, deposits money, accepts deposits, grants loans and performs commercial banking functions and which is not a bank meant for cooperative, agriculture, industries or for such specific purpose"(Ministry of Law and Justice,2031 B.S.;4).

Under the commercial bank Act.2031.B.S., the commercial banks are those banks, which provide short and long term debts whenever necessary for trade and commerce. They accept deposits from the public, and grant loans in different forms. They purchase and discount the bill for exchange, promissory notes, and exchange foreign currency. "The business of commercial bank is primarily to hold deposits and make loans and investments with the objects of security profits for its primary motive is profit, other considerations are secondary"(Shankespeare Vaidya,1999;27).

Commercial banks are the heart of the financial system. They hold the deposits of many persons, government establishment, and business units. They make fund available through their lending and investing activities to borrowers, individuals, and business firms. And service from their producers to customers and the financial activities of the government. They provide a large portion of the medium of exchange and they are medial through which monetary policy is affected. These facts shows that the commercial banking system of the nations is important for the functioning of the economy"(Reed Cotter & Gil Smith, 1976).

A commercial bank mobilize its deposits and other funds to profitable, secured and marketable sector so that it can earn hand-some profit as well as it should be secured and can be converted into cash whenever needed. Obviously, a firm that is being considered for commercial loans must be analyzed to find out why the firm needs money, how much money the firm needs and when it will be able to repay the loan. Credit policy provides the bank several inputs through which they can handle their credit operation efficiently ensuring the maximum return with minimum exposure to risk, which ultimately leads the bank to path of success.

The American institute of banking has laid down the four major function of the commercial bank such as receiving and handling deposits, handling payments for its clients making loan and investments and creating money by extension of credit.(Principle of Bank Operation, 1972;345)

Meanwhile, under the free enterprises system like USA, the interest of the nation as well as that of the individual stockholders are supposed to be best served by vigorously profit seeking. But profit cannot be a sole objective of an enterprise and it should not be evaluated just on the ground of the profit earned. Neither the bank not the community will be best served if the banker unreasonably sacrifices the safety of his fund or liquidity of his bank is an effort to increase income.(Principle of Bank Operation,1972;149)

### **2.1.2 Functions of Commercial Banks**

Commercial bank represents the largest group of depository institution measured by assets size. Nature of business and the structure of the industry have change drastically in last decades; the role and the importance of commercial banks have been rapidly are also commonly known in all industrialized countries. They perform functions similar those of saving institutions and credit unions. They accept

deposits and make loans. According to American Institute of Banking (1972:345), the major four function of commercial banks are receiving payments, handling payments, making loan & investment and creating money by extension of credit. Similarly, (Upadhyaya & Tiwari, 1980:89) have argued that there are three major functions of commercial bank. Which are; primary function (accept deposits, provide loans & credit), agency functions ( sales and purchase of securities, working as an agent & trustee of a customer, transfer of funds, provide financial information), general functions (safe custody of valuable assets, issue of credit instruments, dealing with foreign exchange, provide trade information & statistics ).

The spread between the prices received by banks on the funds lent and the price paid by them on the funds mobilized is one of the crucial factors which determine the viability of banking operations, Commercial banks in Nepal provide the following main banking functions;

**Accepting Deposits:** Commercial bank accept deposits from individual, partnership firms & corporations and also from center government and local governments (Shrestha and Bhandari, 2004:154). Accepting deposit is the major function of a commercial bank and the banker used to charge commission for keeping the money in its custody when the banking was known as developing institutions. In these days, a bank accepts mainly three types of deposits from its customers saving deposits on which the bank pays interest relatively at low rate to the depositor customer. Depositors are allowed to withdraw their money by cheque, up to limited amount during a prescribed time period by bank. Similarly, another form of deposit is current account on which bank does not pay interest but charges certain amount instead of providing service to its customer. Business mans and traders keep their deposits in current accounts known as demand Deposits. They can withdraw any amount available in their current account by cheque without notice. Likewise, a bank accept fixed or time deposits from saver who do not need money for a stipulated from 6 months to longer periods ranging up to 10 years or more, which are encouraged to keep it in fixed deposits account because there is always the maximum limit of the interest rate on fixed deposit. Fixed depositors customer relatively receives higher interest rate due to carry a fixed maturity & a stipulated interest rate but may be of any denomination, maturity and yield agreed upon by the bank and its depositors. Large negotiable CDs that may be traded in the open market in million of rupees that bank use to raise money their most well to do customers

(Rose, 2002: 119). Nepalese banks provide 7.25 to 8.50 percent interest on 1-year deposit and 7.50 to 9 percent on 2-years and in above only fixed deposit receipt is given as an evidence of deposit.

**providing loan:** Another primary functions, of commercial banks are to advance loans to its customers. A bank lends a certain percentage of the cash lying in deposits at a higher interest rate than it pays on such deposits. This is how it earns profits and carries on long run sustaining the business smoothly. The banks advance loans can be mentioned in the following ways;

- ) **Cash Credit:** cash credit advancing loans is the collateral based loans to businessman or traders against certain specified securities. The amount of the loan is credited to the current account of borrower. In case of new customer, a loan account is opened and borrower can withdraw money through cheque according to their requirements but pays interest on the full amount.
- ) **Call Loans:** These are very short-term loans advanced to the bill bankers for not more than fifteen days. They are advanced against first class bills or securities. Such loans can be recalled at a very short notice, they can also be renewed in normal time.
- ) **Overdraft:** A bank allows the borrower to over draw his current account up to a sum equal to the loan sanctioned. Bank provides the overdraft facility up to a specific amount to the businesspersons. However, bank charges interest only on the overdrawn account.
- ) **Discounting Bills of Exchange:** Banks purchase bills of exchange offer discounting, i.e. charging rate of interest for the time to maturity, if the holder wants its proceeds before maturity. Bank is reimbursed by the accepting on maturity. It deposits the amount of the bill in the current account of the bill holder after deducting its rate of interest for the period of the loan not more 90 days.

Banks charge interest on any loans, which are usually higher than those offered on other deposits. Since the banks in Nepal are now free to fix interest rates, the rate of interest on both deposits and loans varies from bank to bank.

**Credit Creation:** Credit creation is one of the most important functions of commercial banks. Commercial banks become able to grant more loan than it has own capacity. Thus, such credit creation activities fulfill the supply of money that

eventually helps to promote trade and industry in the country ( Shrestha, 2052:106-107). Bankers are dealers of money who deals other people's money. i.e. banks accept deposits in the different forms and advance loans on credit to customers. The bank usually synchronizes the withdrawals and deposits from their experiences. It opens a current account in his name and allows him to withdraw by cheques, thus the granted loan again deposited in to the bank. Advances loan on credit to customers however open current account in their name maintaining small cash in reserve and allows him to withdraw the required sum by cheques. This process is continued to other customers also. Because there are numerous transitions have taken place. Therefore, the loans make of increase in the total amount of deposits. In other words, loans by banks create deposits or credit deposit of credit is credited by banks.

**Financing Foreign Trade:** A commercial banks finance foreign trade of its customer by accepting foreign bills of exchange and collection them from foreign banks. It also transacts other foreign exchange business buying and selling of foreign currency.

**Agency Services:** A bank acts as an agent of its customers while collecting and paying cheque, bills of exchange, drafts dividends etc. It also buys and sells shares, securities, debentures etc. for its customers. Further, it pays subscriptions, insurance premium, utilities bills and other similar charges on behalf of its clients. It also acts as a trustee and executor of the property will of its customer. Moreover, the bank acts as consultants to its clients for these services, the bank charges a normal fee while it renders other fee of charge.

**Other Miscellaneous Services:** Besides these functions, Bank also act as custodian of valuables of the customers by providing locker facility where they can keep their jewelry and valuable documents. It issues various forms of credit instruments, such cheque, drafts and traveler cheque etc., which facilitate transactions. It renders underwriting services to companies and helps in the collection of funds from the public. Finally, it provides statistics on money market and business trends of the economy.

### **2.1.3 Introduction to Bank Capital Management**

Banks are the financial institutions that need capital to carryout financial transaction. A bank cannot be imagined without capital. So, any legal person or

company and institutions need capital to conduct business. Bank capital has different natures, which are considered very importantly. The nature of the structure of total capital that is required for any business is called capital structure. In the other word, the sum of equity capital and the borrowed capital is called capital structure. In business, issuing different types of securities can accumulate necessary capital. The management of company know as to, what sorts of and how many securities is to be issued for the collection of total capital, how many shares and debentures are to be issued. It is the fact of that capital collection denotes the composition of loan and shares, which is needed for any company or firm. Bank capital is subject to detailed regulatory requirements that attempt to ensure adequate capital to absorb normal levels of operating losses. In so doing, depositors are protected as well as the deposit insurer ( Gup & Kolari, 2005:343).

Money is needed to establish and operate a bank is called bank capital. "It is not possible to establish and operate a bank without capital." In this way, the amount received by the bank from different sources to establish the bank, to operate the banking system is called bank capital. Funds subscribed and paid by stockholders representing ownership in a bank. Regulatory capital also includes debt components and loss reserves (Koch and Macdonald, 2004:466). Only the structure of capital for the establishment of bank are described, it is clear that is necessary to establish and operate a bank is known bank capital.

The meaning of the capital varies in different place, situation and the circumstances. Amount invested by any person for business and industry is called capital. The money contributed by the properties to an organization to enable it to functions; thus share capital is the amount provided by way of shares and the loan capital is the amount provided by way of loans. However, the capital of the properties of the companies not only consists of the share and loan capital, it also includes retained profit, which accrues to the holders of the ordinary shares. Share capital is necessary to establish any bank. At first, authorized capital is introduced in share capital. From the authorized capital, the company attempts to collect certain portion immediately. The shares holders may pay only partial amounts an issued capital. Such capital is called paid-up-capital. Hence, the NRB has ultimate power or right to decide how much capital is needed for a bank and non-bank financial institutions.

### 2.1.3.1 Sources of Bank capital

Banks collect capital from different sources i.e. capital is collected by issuing shares or by taking loans from the fundamentals of main sources of bank capital. In other words, the capital can be classified into equity capital of bank and the borrowed capital of bank. The capital collected by issuing the bank's shares is called share capital. The bank need not return the amount collected from the shareholder in any form until the bank is dissolved.

#### A) **Equity Capital of Bank:**

Total equity capital equals the sum of common stock, surplus, undivided profits and capital reserves and net unrealized holding gains (losses) on available-for-sale securities, cumulative foreign currency translation adjustments and perpetual preferred stock (Koch and Macdonald, 2004: 472-473). Owned or equity capital of a bank comprises of the amounts raised from the following sources (Bhandari, 2003:213-217):-

**Ordinary share:** A bank accepts to take share capital as its strongest and the most believable source. A bank is a public limited company. The persons of the institutions, who want to form a bank, by taking some shares, by signing, necessary documents after getting the permission from the NRB, go to the office of the company register to have it registered. The persons or the institutions are called the promoters. Then the company may again call out the public people to buy the rest portion of the shares. By accomplishing certain legal process, the bank collects the cash by selling the shares to the public. In this way, the bank gets the largest part of the bank capital from the promoter shareholders and the ordinary shareholders.

**Preference share:-** Preference share means the share, which gets preference over the ordinary share, while distributing the dividend and in dissolving the bank. But in Nepal the banks can't issue preference share except in special condition. The banks can collect capital by issuing preference share if the NRB gives the permission.

**Bonus share:** Bonus share means, the share issued by capitalizing the saving fund of reserve fund from the profitability of company and issuing as additional share to the shareholders and that word also denotes growth in the paid-up price of share by capitalizing the reserve or saving fund. Giving the certificate of bonus shares to its shareholders, a bank keeps the cash fund in it.



**Retained Earnings:** The bank gets income by investing in different sector because the objective of the bank is to gain profit. The banks invest its capital in the productive, profitable industry and business. The bank gains more or less income from it in a fiscal year, amount earned (retained) in such a way is too considered as sources of bank capital.

**Reserve funds:** In the course of banking transactions, the bank keeps some parts of its capital in the reserve fund. The ratio of this amount is based on the legal rules and regulations. The bank must keep some part of its income in the reserve fund. The bank invests the amount kept in such fund, in liquid sector and gains some income.

**Undistributed Dividend:** A bank earns profit. Such profit may be a lot or little. After it gains the profit, the bank performs the task of distributing the dividend. But the bank, to keep its financial condition strong, does not distribute the entire dividend share. It distributes some of the part of the dividend to the shareholders and keeps rest of the dividend in the bank and again invests it, for which the bank should complete necessary legal process.

#### **B) Borrowed Capital Of Bank:**

In addition to above-mentioned sources the bank collects capital from other source too, the capital collected in such way called borrowed or loan capital. Following types of sources can be described under the loan capital;

**Sale of Debenture:** The debenture means debenture bond issued by the company against pledge or guarantee of its assets. The commercial banks are considered the public limited companies because they are registered under the company Act 2053 (1996), Commercial Bank Act 2031 (1974) and the Nepal Rastra Bank Act 2058 (2002). If it feels the necessity of capital, it can collect capital by issuing debenture.

**All Types of Deposits:** A bank accepts all sorts of deposits from the person organization and institutions who opens account with it. The amount collected in current, saving and fixed account is called borrowed capital. The amount is deposited in the above given three accounts as deposits. The bank provides certain interest to the depositors of saving and fixed accounts. The amount deposited in bank as deposits is called bank capital. It is a reliable and strong source of bank capital.

**Loan From the Central Bank:** The NRB is the central bank is our country. This bank is the most powerful and supreme bank. To obey the policy and instruction

given by it is the legal duty of others banks. So, the central bank provides the loan to the commercial banks in need.

**Loan From the Financial Institutions:** In the time of need, a bank can take debt from a financial institution. The financial institutions too provide loan. Thus, the loan amount taken by the bank from the financial institutions as loan too.

**Loan From the Commercial Bank:** The commercial bank can obtain the debt with or without internal contract. Thus, during the economic crisis, the commercial banks solve the problem by taking the loan borrowed as internally.

**Loan From the Central Office and Branch Office:** If the central office of a bank needs the cash amount it can take loan from its branch offices. Similarly if the branch offices are in need of loan they can take loan (cash amount) from the central offices. Branch offices of a bank can take loan from are another, known as temporary sources of loan capital.

### 2.1.3.2 Uses of functions of Bank Capital

Any task is not performing without any cause. Similarly in a bank, capital is collected for specific purpose, many reasons behind it. Naturally the banks are established with the concept of gaining profit. The function of bank capital is thus to reduce the risk. It does so in three basic ways; it provides a cushion to absorb unexpected operating losses, to provide ready access to financial markets and to be a source of fund and it constrains growth and limits risk taking (Koch and Macdonald, 2004:48). The bank should gain profit for its administrative expenditure as well as for its shareholders. It is not possible without the collection of capital. Therefore, the following reasons for collecting bank capital or the functions of the bank capital are as follows ( Bhandari, 2003:217):-

**1. Payment of All types of Deposits:** The most important function of bank capital is to make cash payment to its customers. At any times, the customers, may ask the payment of the amount deposited in current, saving & fixed accounts in the bank. Thus, the bank should be able to give the amount, which is asked, if the bank can't give the payment, the trust of public upon the bank may decrease, and there will be bad effect upon banking transaction. The bank needs to keep necessary quantity of capital to pay the amount of deposits with its interest to its customers.

**2. Administrative Expenses:** A bank has to make more or less transactions. It needs the capital to bear such expenses. The administrative function of the bank can't be

run without capital, which are incurred for salary, allowance, advertising expenses, stationary, rent, insurance, donation, commission expenses, income tax and other charges.

**3. Maintenance of Cash Reserve Ratio:** The capital is necessary to maintain cash reserve ratio. A bank has to deposit certain amount in the NRB by opening an account. To fulfill this obligation capital is a must. Commercial banks have to deposit nearly 7% amount stock in the NRB as a cash reserve. The commercial bank should obey such provision. Even though, commercial banks can't gain benefit immediately, when there is economic crisis, it gives a great help. The ratio of deposit deposited in the NRB by the commercial bank, which is a compulsory legal provision.

**4. Purchase of Fixed Assets:** To establish a bank, a house and land is needed. It needs a great amount of capital to buy furniture, vehicles including computers and raw materials concerned with the bank. These materials are compulsory for operation of a bank. The bank has to open branches and sub branches and it needs the fixed assets, without capital such things are impossible to do.

**5. For investment in Joint Venture:** A bank should move its investment in a rapid speed to manage itself more effectively. Sometimes it wants to invest in the profitable sectors. It can make such investment by joining with many persons and institutions. The bank should require capital for such investment too.

**6. Providing Loan:** Capital is required to a great extent to provide loan. Among the function of bank capital, providing loans is the most important function. Specially, a bank provides the following loan in the following sectors; today, of the various types of the loan the bank provides, the loan provided in business sector keeps a special importance. In fact, still there is a tradition to provide loan by a bank though taking gold, silver, diamond, and similar important things and ornaments as securities. Bank capital fund is used to provide loan in the priority sectors. According to the policy and instruction of government and the NRB, such loan is invested with the objective of giving economic contribution to the all round economic development of the country.

**7. For Transfer of Fund:** The transfer of fund may be both national and foreign. Some part of the bank capital is used for transfer of fund. The major means for the work of transfer of fund the bank draft, postal transfer, telegraphic transfer etc.

**8. For Investments In First Class Securities:** Such first class securities are government bonds, development bonds, treasury bills etc. the bank goes on increasing liquidity by investing into such securities. Because, it can solve unprecedented problem by selling it in the market at the time of needs.

**9. For Miscellaneous Expenses:** In addition to above mentions, other use of bank capital mentioned below: to distribute the dividend to the shareholders, to bear the loss of banking property in purchasing and selling, to bear the expenses in repairing the house (building), machine and furniture etc. to pay the interest of the loan taken from other institutions, to keep the reserve fund. Thus, the use of the bank capital is very important, necessary and wide. In fact, by investing bank capital, a bank can gain more and more profit.

### **2.1.3.3 Bank Capital Adequacy System**

Capital refers principally to funds contributed by the bank's owners, consisting mainly of stocks, reserves and those earnings that are retained in the bank (Rose, 2002: 475). According to the accounting definition, capital equals the cumulative value of assets minus cumulative value of liabilities and represents ownership interest in a firm. In banking, the regulatory concept of bank capital differs substantially from accounting capital. Specially, regulators include certain forms of debts and loss reserves when measuring capital adequacy (Koch and Macdonald, 2004: 471). Capital is a source of financial support to protect an institution against unexpected losses, and therefore, it is a key contributor to the safety and soundness of the bank. Banks must meet minimum capital requirements before they can be chartered, and they must hold at least the minimum required level of capital throughout their corporate life. The Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991, which is created a link is commonly known as Prompt Corrective Action (PCA) and aims to resolve banking problems early and at the least cost to the bank insurance fund. PCA has classified as (Koch and Macdonald, 2004: 474-475):-

- J Tier 1 (Core) Capital, must equal or exceed 4% of total risk-weighted assets.
- J Tier 2 (Supplementary) Capital, total of Tier 2 is limited to 100% of tier 1.
- J Total capital (tier 1+ tier 2), must equal or exceed 8% of total risk-weighted assets.

Adequacy and inadequacy of bank capital directly affects the banking transaction. The adequacy of bank capital must important aspect of bank. If there is inadequacy of capital, the bank should take step for the adequacy of capital as per legal requirement. The bank should remove the inadequacy of bank capital through the medium of collecting of ownership and borrowed capital. To have the ownership over capital is most for the bank. It creates many opportunities. The bank should reduce the amount of the borrowed capital as far as possible. It is not good for a bank to collect borrowed capital. Also, it is not good for it to have crisis of capital. If the bank can't maintain the adequate capital, it, may give birth to many defects. The defects caused by the bank capital, doesn't lead the bank forwards. Therefore, special attention should be given to the adequacy system of the bank capital, if there is scarcity of capital in a bank, Bank's economic aspect can't be regarded capable and healthy. The adequacy of the bank capital is necessary for the following functions ( Bhandari, 2003: 223):-

**1. For the payment of All Types of Deposits:** Adequacy of bank capital is necessary for a bank, to give the payment of the amount of all types of deposits to its customers. Hence the adequacy of bank capital is needed to gain trust from its customers.

**2. To meet the demand of all types of Cash Reserve Funds:** A bank should deposit the amount in different types of funds, in the NRB and in its own bank. The commercial bank should deposit cash in such funds. This is a legal obligation, which is created in to ways. One obligation occurs by the provision of law and another obligation takes place due to circulars, policy and directives issued by the NRB.

**3. Investments for Banking Transaction and Business:** With the lack of an adequate bank capital, the bank can't meet daily administrative expenditure and the investment in different sectors to gain profit. A bank can't be operated, unless it performs both of these functions. Directly, the above-mentioned functions affects to the adequacy of bank capital.

Advantages of adequacy of bank capital and disadvantages of inadequacy of bank capital are mentioned as follows:-

If the bank has an adequate capital, people trust upon such bank. Such bank becomes successful to gain the trust of all sectors. It can invest into any sector at any time from which the bank get success to gain a lot of profit. It can invest in priority sectors, in any big project, it can move ahead with its investments. The bank does

not need to take loan, and does not have to pay interest. The bank doesn't face problem to collect the capital. There will be not possibility of liquidation of bank.

If there is inadequacy of bank capital, the bank can't get the trust from any other area. It's respect and reputation remains in endanger (put in danger). The bank should take loan from other different areas and it needs to pay interest. The bank can't invest its will whatever it likes. It is not possible to gain profit without investment. The bank can't give the payment to amount deposited with it. The bank can't solve any crisis of financial rise and fall that occurs upon it.

#### **2.1.3.4 NRB Directives Related to Capital Adequacy**

The total capital fund is the sum of core capital and supplementary capital. According to the NRB, unified directives for bank & non-bank FIs issue number E.Pra.Ni.No.1/063/64 (Ashar 2064 B.S). The core capital (tier1) includes paid-up capital, share premium irredeemable preference share, general reserve fund, accumulated profit of loss, capital redemption reserve, capital adjustment fund and other free reserve. Amount of goodwill, amount invested in the financial instruments issued by an organized institution excess to the limit of specified by NRB, amount invested in financial instruments issued by the organized institutions having their own financial interest, and fictitious assets if any exists are deducted for the purpose of calculating core capital. The supplementary capital (Tier 2) includes general loan loss provision, asset revaluation reserve, hybrid capital instruments, subordinated term loan exchange equalization reserve, excess loan loss provision, and investment adjustment reserve (for format of total capital fund and NRB standard see appendix 5).

On the basis of risk-weighted assets, effective from FY 2062/63 every commercial bank should maintain the prescribed proportion of minimum capital funds as below:

- ) A core capital of 6 % of total risk-weighted assets.
- ) A supplementary capital is not more than core capital fund.
- ) A total capital fund of 12 % of its total weighted assets.

Also, NRB has directed all the commercial, if capital base is inadequate, the board of directors will have to recommend for its capital enhancement plan and program and submit them to NRB within 35 days for is approval. If capital fund is

inadequate, dividend and bonus distribution will not be allowed, as per the new regulations.

### **2.1.3.5 Regarding Paid-up capital Requirements**

- ) To establish a new commercial bank of national level, the paid-up capital of such bank must be at Rs. 2 billion.
- ) Banks that are already in operation are required to enhance their capital level to Rs. 2 billion by the end of Ashad 2070 B.S. through constant paid-up capital increment each year, the end of Ashad 2064 being the base year.

### **2.1.4 Concept of Capital Structure**

The term financial structure refers to the composition of all sources and fund to invest in business. Thus, it represents the entire capital and liability side of the balance sheet. On the other hand, the term capital structure is used in restrictive sense. It refers to the composition of long-term sources of finance such as preference capital, debenture, long-term debt and equity capital including reserve surpluses (i.e. retained earning and exclude short-term debt). Thus capital structure is a part of financial structure. Capital structure is about analysis of the capital composition of the company. "Capital structure is the permanent financing of the firm, represented by long-term debt, preferred stock and common stock but excluding all short-term credit. Thus a firm's capital structure is only a part its financial structure I.e. common stock, capital surplus and accumulated retained earning" (Weston and Brigham, 1989: 666). Capital structure or the capitalization of the firm is the permanent financing represented by the long-term debt, preferred stock and shareholders equity. Thus, a firm's capital structure is only a part of its financial structure (Weston and Copeland, 1992: 565). The term capital structure is used to represent the proportionate relationship between debt and equity. The market value of share may be affected by the capital structure decision (Pandey, 1995: 573).

A financial manager must strive to obtain the best financing mix or optimum capital structure for his/her firm. The firm's capital structure is optimum when the market value of share is maximized. The used of debt affects the return and risk of shareholder. this will increase the return on equity but also the risk at the market value per share will be maximized and the firm's capital structure would be optimum (Pandey, 1995: 663). Both debt and equity are used in most large

corporations. The choice of the amount of debt and equity is made after a comparison of certain characteristics of each kind of security, of internal factors related to the firm's operation, and external factor that can affect the firm's (Hampton, 1986: 42). The choice of debt and equity largely depends on the three factors such as cost, risk and control. The cost of capital is the required rate of return for the firm. The risk ness of a firm alters with the change in debt-equity mix and so on earning and maintaining control can be favorable whenever capital structure decisions are made.

### **2.1.5 Optimal Capital Structure**

An optimal capital structure would be obtained at the combination of debt and equity that maximize the total value of the firm, (value of debt plus value of stock) or minimize the WACC (pandey, 1995: 675). Capital structure decision affects the value of firm, earning per share and cost of capital. The objectives of the company are always related to maximizing the value of firm, earning per share and minimizing the overall cost of capita. To achieve this objective, company should make the appropriate composition of capital structure, which is also known as optimal capital structure.

Optimal capital structure can be defined as that mix of debt and equity, which will maximize the market value of the firm. If such as optimal does exits, it maximizes the value of the company and hence the wealth of its owners maximizes. It minimizes the company's cost of capital, which in turn increases its abilities to find new wealth creating investing opportunities (Ezra, 1969). The optimal capital structure is the one that strikes the optimal balance between risks and returns and thereby maximizes the value of the firm, earning per share, and minimizes the weighted average or overall cost of capital. Therefore, the firm should determine appropriate capital structure, to achieve its targeted objective of maximizing the shareholder's wealth. "Although, it is theoretically possible to determine the optimal capital structure, as a practical manner we can not estimate this structure with precision" (Weston and Brigham, 1989: 719).

### **2.1.5 Capital Structure Theories**

The theory of capital structure is closely related to the firm's cost of capital. About optimal capital structure, many debates are found in financial structure.



Argument between those who believe there is an optimal capital structure for each firm and those believe no such an optimal capital structure began late 1950's and there is yet no resolution of the conflict. Modigliani and Miller logically asserts that the value of firm or cost of capital is independent of capital structure decision of the firm. On the other hand, traditionalists view the value of the firm or cost of capital is affected by capital structure change. In order to understand how firms should adhere the optimal capital structure decision, it is important to know some views about capital structure theories. In this regard some basic assumptions are necessary to know that are following:

- ) There are no corporate or personal income taxes and no bankruptcy cost.
- ) The ratio of debt to equity for a firm is changed by issuing debt to repurchase stock or issuing stock to pay off debt. In other words a change in capital structure is effected immediately. In this regard, we assume no transaction cost
- ) The firm has a policy of paying 100% of its earnings in dividend. Thus, we abstract from the dividend decision.
- ) The expected value of the subject probability distribution of expected future operating earnings for each company are the same for all investor in the market.
- ) Expected values of the probability distributions of expected operating earnings for all future periods are the same as present operating earnings.
- ) Besides these assumptions, the following symbols related to capital structure theories are used

$B$  = Total market value of debt

$S$  = Total market value of stock

$V$  = Total market value of firm ( $B+S$ )

$K_e$  = Equity capitalization rate

$K_i$  = Cost of debt/ yield on debt

$K_o$  = Overall capitalization rate

$I$  = Total amount of interest

EBIT = Earning before interest & taxes or Net operating income

In respect of capital structure decision, different views have been expressed by financial wizards. These views can be categorized into four important theories;

- (I) Net Income Approach
- (II) Net Operating Income Approach
- (III) Traditional Approach
- (IV) Modigliani – Miller Approach

**(I) Net Income Approach:** Net Income Approach focuses the increase in total valuation of the firm through the reduction in the cost of capital leading to an increase in the degree of leverage. It is also known as dependent hypothesis of capital structure. The essence of this approach is that the firm can reduce its cost of capital by using debt. "The approach is based on the crucial assumption that the use of debt does not change the risk perception of the investors. Consequently, the interest rate on debt ( $K_i$ ) and equity capitalization rate ( $K_e$ ) remains constant to debt" (I.M. Pandey, 1996:28).

"The emphasis is on EBIT is measure how the degree of leverage brings change in valuation of the firm. Assuming a constant equity capitalization rate, increase in cheaper debt funds lowers the weighted average cost of capital and there by rising the value of the firm and the increasing in debt may not increasingly risky" (M.K. Shrestha, 1985:49)

**The crucial assumptions of NI approach are:**

- (I) The use of debt does not change the risk perceptions of investors; as a result, the equity capitalization rate and the debt capitalization rate remain constant with change in leverage.
- (II) The debt capitalization rate is less than equity capitalization rate (i.e.  $K_d < K_e$ ).

(III) The corporate income tax does not exist.

"Therefore as the firm increasing its leverage by increasing its level of debt relative to equity, the overall cost of capital declines. The importance of this levered overall cost of capital is that it increase the value of firm "(M.K.shrestha)

Overall cost of capital can be expressed by following formula :

$$\text{Overall Cost of Capital} = \frac{\text{Net Operating Income}}{\text{Total Value of the Firm}}$$

$$\text{or} = \frac{\text{EBIT}}{V}$$

Another formula for 'Ko' is ;  $K_o = K_e - (K_e - K_i) B/v$

As per assumption of NI approach  $k_e$  and  $k_i$  are constant and  $K_i$  is less than  $K_e$ . Therefore,  $K_o$  will decrease as  $B/V$ . Also  $K_e = K_o$  when  $B/V = 0$ .

This approach is graphically show in the following figure.

Fig. 1

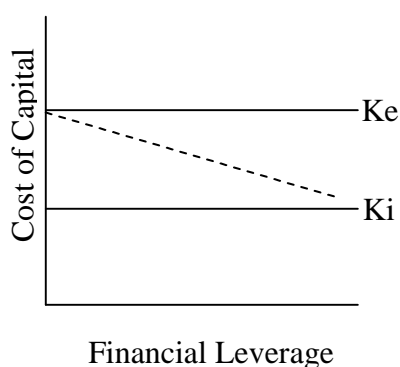


Fig. 2

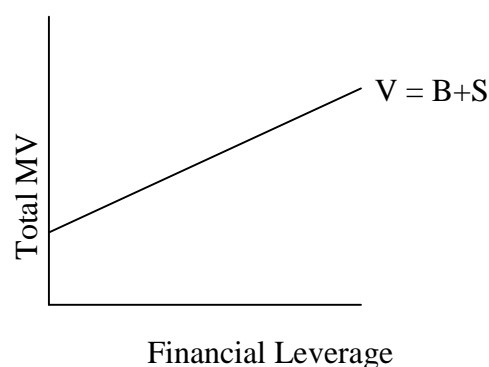


Fig. Net Income Approach (Cost)

Fig. Net Income Approach (Value)

Figure 1 and 2 shows that under the NI approach the overall cost of capital ( $K_o$ ) will decline and value of firm increase with leverage. The optimal capital structure would occur at the point, where the value of the firm is maximum and overall cost of capital is minimum. That will have the maximum value of the lowest cost of capital when it is all debt financed or has as much debt as possible. If the firm is unleveled the overall cost of capital will be just equal to the equity capitalization rate (i.e.  $K_o = K_e$ ).

## II Net Operating Income Approach (NOI)

The second behavioral approach to capital structure is the Net Operating Income Approach, which is slightly different from the NI approach. It is an independent hypothesis of capital structure decision of the firm is irrelevant. Any change in leverage will not lead to any change in the total value of the firm & market price of share, as the overall cost of capital is independent of the degree of leverage (M.Y. Khan & P.K. Jain, 1992:495). The NOI approach assumes that the equity holders feel higher degree of financial risk and demand higher rate of return for higher debt to equity ratio. Further more, this approach says that the cost of equity increases with the level of debt, and the higher cost of equity offsets the benefit of cheaper debt financing consequently no effect at all on  $K_o$ , in another word, overall capitalization rate ' $K_o$ ' as well as the cost of debt ' $K_i$ ' remain constant regardless of the degree of leverage.

The critical assumptions of NOI approach are (I.M. Pandey, 1999: 681)

- (i) The market capitalizes the value of the firm as a whole. Thus the split between debt and equity is not important.
- (ii) The market uses an overall capitalization rate,  $K_o$  to capitalize the Net Operating Income;  $K_o$  depends on the business risk. If the business risk is assumed to remain unchanged ' $K_o$ ' is a constant.
- (iii) The use of less costly debt funds increases the risk of shareholders. This causes the equity capitalization rate to increase. Thus the advantage of debt is offset exactly by the increase in the equity capitalization rate,  $K_e$ .
- (iv) The debt capitalization rate,  $K_o$  is constant.
- (v) The corporate income taxes do not exist.

"Under NOI approach the capital structure selected is a more detail since the value of firm is independent of the firm's capital structure. If the firm increases its use of financial leverage by employing more debt this is directly offset by an increase in the cost of capital". (M.K. Shrestha)

It can express by following figures:

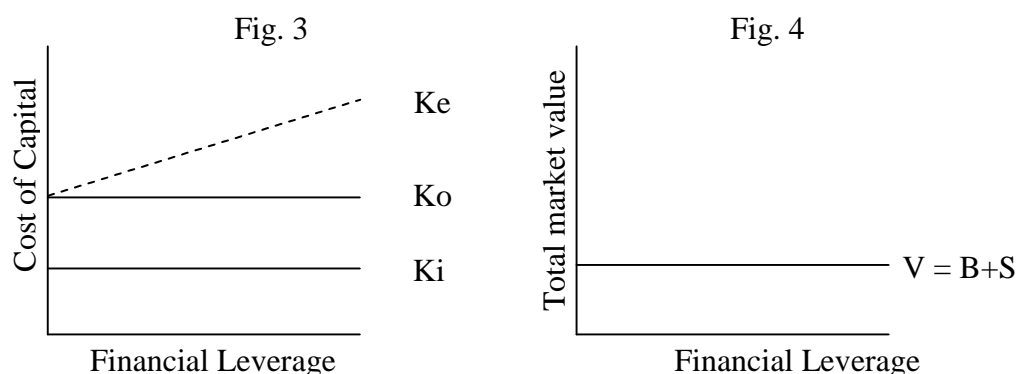


Fig. Net Operating Income Approach (Cost) Fig. Net Operating Income Approach (Value)

The figure 3 and 4 show that ' $k_o$ ' and ' $k_i$ ' are constant ' $k_e$ ' is increasing. While ' $k_e$ ' is in increasing position but value of firm will constant with leverage. "At the extreme degree of financial leverage hidden cost becomes very high, hence the firm cost of capital and its market value are not influenced by the use of additional cheap debt fund" (Gitman and Pinches: 791).

Which can be expressed as:

$$K_e = K_o + (K_o - K_d) D/S$$

Thus this approach suggests that there is not any optimal capital structure.

### III Traditional Approach

In this theory, "the value of the firm is determined by adding the market value of the firm's debt to the market value of its equity. Once market value has been determined by the overall cost of capital or overall capitalization rate, can be found" (Lawrence J. Gitman: 42 to 43).

It is also known as an intermediate approach, it comprises between net income approach & net operating income approach. From this view, we know that the value of firm can be judicious mix of debt and stock of the firm. "The cost of capital decline with leverage because debt capital is cheaper than equity capital within reasonable, or acceptable, limit of debt. The statement that debt funds are cheaper than equity fund carries the clear implication that the cost of debt plus the increased cost of equity, together on a weighted basic, will be less than the cost of equity which existed on equity before debt financing" (Alexander Barger, 1963:11)

At last we know that from traditional approach, overall cost of capital will decrease with the use of debt financing. From traditional approach, the manners in

which the overall cost of capital reacts to changes in capital structure can be divided into three stage are given below.

### **Stage-1**

In this stage, the cost of  $K_e$ , remain constant or less slightly with debt. But when it increases, it does not increase fact enough to offset the advantage of low cost of debt.  $K_d$ , remains constant or rises negligibly. Since the market views the use of debt as a reasonable policy. As a result, the value of the firm 'v' increase or the overall cost of capital,  $K_o = X/V$

so,  $K_o = K_e (S/V) + K_d (B/V)$ , falls with increase leverage.

### **Stage-2**

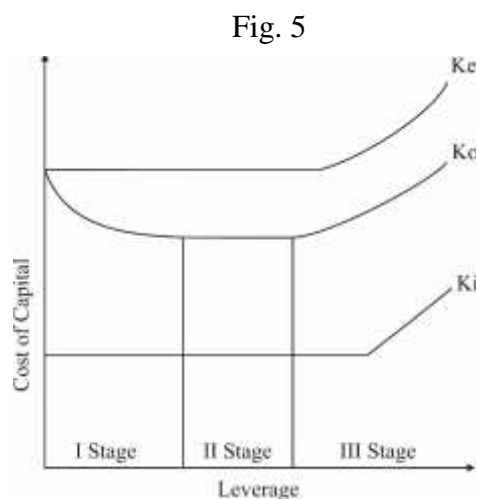
In this stage, the firm has reached a certain degree of leverage increases in leverage have a negligible effect on the value, or the cost of capital of the firm. This is so because the increases in the cost of equity due to the added financial risk offset the advantage of low cost of debt. Within that range of at the specific print, the value of the firm will be maximum or the overall cost of capital will minimum" (I.M. Panday, 633).

### **Stage-3**

In this stage, after the acceptable degree of leverage, the market value of the firm decreases with leverage or the overall cost of capital increases with leverage. This happens because, the cost of debt and equity will tend to rise as a result of increasing the degree of financial risk that will make to increase in the overall cost of capital by more than to offset the advantage of low cost debt. Thus in third stage, the market value of the firm will show depressing tendency.

The overall effect of these three stages is to suggest that the cost of capital is a function of leverage. First it declines with leverage and after reaching a minimum point or range it status rising. The minimum point defines the optimal capital

structure. This fact is graphically shown in figures:



*Fig: The cost of Capital Behaviour (Traditional View-a Variation)*

Under such a situation, there is a precise point at which the cost of capital would occur at that optimum degree of leverage, at which marginal cost of debt is equal to the overall cost of capital.

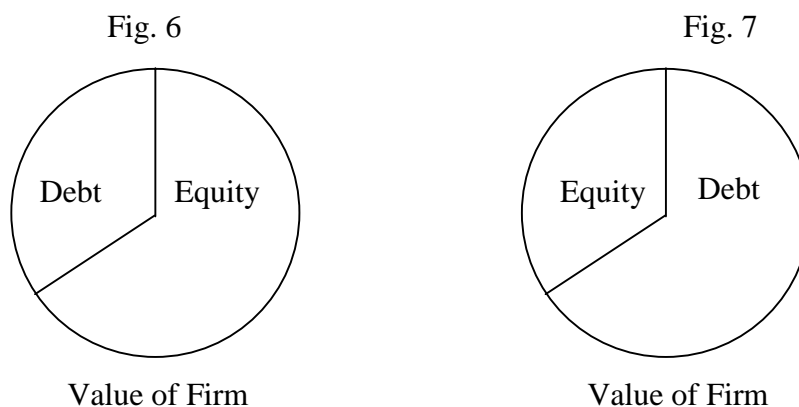
(V) **Modigliani – Miller Approach (M-M approach)**

Modigliani & Miller (MM) in their original position advocate that the relationship between leverage and the cost of capital is explained by net operating income approach. They make a formidable attack on the traditional position by offering behavioral justification for having the cost of capital,  $K_o$ , remain constant throughout all degree of leverage (James C. Van Horn, 2000 :255).

The crucial assumptions of M-M proposition are;

1. Capital markets are perfect. Information is costless and readily available to all investors. There are no transaction costs, and all securities are divisible. Investors are assumed to be rational and to behave accordingly.
2. The average expected future operating earnings of a firm are represented by subjective random variables. It is assumed that the expected values of the probability distribution of all investors are the same. The MM – illustration implies that the expected value of the probability distribution of expected operating earnings for all future periods are the same as present operating earnings.

3. Firm can be categorized into "equivalent return" classes. All firms within a class have the same degree of business risk. As we shall see that later this assumption is not essential for their proof.
4. The absence of corporate income taxes is assumed. M-M removes this assumption later.



*Fig: Illustration of Capital Structure Irrelevancy*

Simply put, M-M proposition is based of the idea that of matter how you divide up the capital structure of a firm among debt, equity, and other claims, there is conservation of investment value (John Burr Williams, 1938: 72 to 73). That is, because the total investment value of a corporation depends on its underlying profitability and risk, it is invariant with respect to relative changes in the firm's financial capitalization. Thus, the total pie does not change as it divided into debt, equity and other securities. The sum of the parts must equal the whole; so regardless of financing mix; the total value of the firm stays the same, according to mm. The idea is illustrated with the two pies in figure. Different mixes of debt and equity do not alter the size of the pie-total values stays the same

The support for this position rests on the idea that investors are able to substitute personal for corporate leverage, thereby replicating any capital structure the firm might undertake. Because the firm is unable to do something for its stockholders (leverage) that they cannot do for themselves, capital structure changes are not a thing of value in the perfect capital market world that M-M assumes. Therefore, two firms alike in every respect expect capital structure must have the same total value. If not, arbitrage will be possible, and its occurrence will cause the two firms to sell in the market at the same total value.



## **2.2 Research Review**

In these days, information highway or the internet has become to the most powerful accessible medium to gain information in any subject matter. In the study period different books, journals and articles have been consulted. The study has been also used PERI database, which is available in Western Regional Library of Prithivi Narayan Campus. The research studies and work papers carried out by different scholars within various geographical region including dissertations conducted by Nepalese scholars are also reviewed in this section, which are related with the bank capital management of commercial bank and or the area of the study. The review of relevant articles publish in different journals are available on-line on International Network for the Availability of Scientific Publication(INASF) where database has been reviewed and presented.

### **2.2.1 Review of the Related Articles**

Calem and Rob (1996) carried out a study on " The Impact of Capital-Based Regulation on Bank Risk-Taking: A Dynamic Model". In this paper, they attempt a dynamic modeling of the moral hazard problem and how, it might be affected by various regulatory instruments. The model considers banks that operate in a multi period setting with the objective of maximizing the discounted value of their profits. A bank assumed to operate in a multi-period setting; the bank's capital may fluctuate over time depending on the realized returns on loans, as well the bank's portfolio choices. thus, they consider the dynamic of bank portfolio choice and the behavior of well capitalized as well as undercapitalized banks. A severely undercapitalized bank typically takes on maximal risk in an effort to improve its capital position, even if the risky asset provides a lower expected return than the safe asset. This result suggests that moral hazard is serious problem among banks near to insolvency; thus it provides a formal rationale for the prompt corrective action (PCA) provisions of FDCIA.

Davis and Lee (1997) conducted a study on "A practical Approach to Capital Structure for Banks". In this article, American's bank's attention to capital structure is reflected in their high level of stock repurchases in recent years. The most important difference comes from regulation. Since the implementation by FDCIA of risk based capital guidelines in the early 1990s, the capital ratio of U.S. banks have increased substantially. In fact, most U.S. banks today carry

considerably more capital than is required by the regulators. This tendency to exceed regulatory capital levels is especially pronounced for smaller institutions, which can in turn be explained by the riskier profile of smaller banks they also have a much greater degree of co-variance among their riskier assets. This article recommends using a quantitative economic approach to generate a lower bound on the amount of necessary capital. This estimate can then be translated into a target capital structure by taking account of a variety of practical, qualitative considerations, including bank's preference to maintain capital levels that provides a comfortable margin above bank regulators' "well capitalized" levels. Although such considerations will vary in importance from one bank to another, they will generally include management's risk tolerance, regulatory constraints, market pressures, the bank's prospects and investment plants, and ,for larger banks, rating agency requirement.

Pradhan (2003) has conducted the study on "Role of Saving Investment and Capital Formation in Economic Development: A case of Nepal". The purpose of this paper has been to investigate the role and impact of saving, investment and capital formation on economic development. The macro economic variables are introduced vide an extension of the econometric model various regression models. This paper has been based on secondary data only. The necessary data on saving, investment, capital formation and gross domestic product has been collected for the period of 1974/75 to 2000/01 at current price and in real terms with the entire study period divided into different sub periods. The result presented in this paper suggest that all cases, GDP is significantly associated with saving, investment and capital formation both at current prices and in real terms. The results of the empirical analysis led to three important conclusions; saving, investment and capital formation have positive impact on economic development, the current values and past values of saving, investment and capital formation have positive impact on economic development but the current values have the largest impact, there is a strong role played by saving and capital formation on economic development while weak role played by investment.

Abor (2005) has conducted a study on " The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana". this paper seeks to investigate the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange ( GSE) during a five-year period. Regression analysis is used in the estimation of functions relating the ROE with measures of capital

structure. The results reveal a significantly positive relation between the ratio of short-term debt to total assets and ROE. However, a negative relationship between the ratio of long-term debt to total assets and ROE was found. With regard to the relationship between total debt and return rates, the results show a significantly positive association between the ratio of total debt to total assets and return on equity. The research suggests that profitable firms depend more on debt as their main financing option. In the Ghanaian case, a high proportion (85 percent) of the debt is represented in short-term debt.

Gho (2005) has carried out a study on "Intellectual capital performance of commercial banks in Malaysia". This paper measured the intellectual capital performance of commercial banks in Malaysia for the period 2001 to 2003, using efficiency coefficient called VAIC<sup>TM</sup> developed by Ante Public 1997 (VAIC<sup>TM</sup> is a trademark of public & International Education Center Inc.). The model of data required to calculate human capital, structural capital and capital employed efficiencies were obtained from annual reports. As a whole, all banks have relatively higher human capital efficiency than structural and capital efficiencies. Domestic banks were generally less efficient compared to foreign banks. Hong Leong Bank, Public Bank and Southern Bank was the top three efficient domestic banks based on VAIC<sup>TM</sup> assessment, while Scotia Bank is the most efficient foreign bank. Public Bank and EON Bank have consistently showed improvement in efficiency in the three years. In view of the findings that seven out of ten domestic banks did not show improvements in efficiency following the consolidation exercise requires an urgent attention and remedial actions. This study failed to study all foreign banks operating in Malaysia. The findings allowed banks benchmark themselves based on the level of efficiency rankings, to establish priorities and develop strategic plans, which will in turn enhance their future performance. The findings also could help stakeholders and investors assess the value creating potential of banks; and policy makers to formulate and implement policies for establishment of a resilient banking sector. This study also demonstrated that foreign banks were the more efficient banks. However in terms of value created, domestic banks created more value added than foreign banks. Only Hong Leong Bank, Maybank, Public Bank and EON Bank showed improvement in efficiency, while the other six banks are still struggling with redundant resources. Being the first study to review bank performance based on

intellectual capital, this paper will be a good source of reference for future study on Malaysian banking sector.

Abeyssekera (2007) has examined the "Intellectual Capital Reporting between a Developing and Developed Nation". This paper aims to examine the patterns of intellectual capital reporting (ICR) of large listed firms in a developing nation, Sri Lanka. The aim of this study is to highlight the difference in ICR practice between developing and developed nations. The paper begins by examining each of the top 30 firms by market capitalization listed on the Colombo stock exchange in 1998/1999 and 1999/2000. Using the content analysis method, it reviews the annual report of these firms to determine the types of intellectual capital (IC) items reported in Sri Lanka. It then compares these findings with a similar study undertaken in Australia during the same period. The findings in this paper highlight the need for a uniform ICR definition and a reporting framework that provides comparative and consistent reporting under the auspices of a regulatory body. ICR differences were identified between Sri Lankan and Australian firms, and it is argued that these differences can be attributed to economic, social and political factors. This paper highlights important policy issues for Australia, Sri Lanka and other nations. These issues are even more pertinent in the light of the gradual international adoption of the International Financial Reporting Standards (IFRSs), formulated by the International Accounting Standards Board (IASB). Most papers on intellectual capital reporting have focused on firms in developed countries. This paper offers insight into comparative reporting practices between a developed and a developing country.

### **2.1.2 Review of Master's Dissertations**

This Section is concerned with the previous research works done by different scholars. So, it includes the review of dissertations submitted by research pioneers in the field of commercial bank. Several thesis works have been conducted by various researchers regarding different aspects of commercial bank such as capital structure, financial performance, investment policy, interest rate structure, and resource mobilization. Except from the findings of some of these research works are presented which are relevant for this study.

Joshi (1993) has conducted a study on "Commercial banks of Nepal with special reference to financial analysis of Rastriya Banijya Bank". The objective of

this study was to provide conceptual framework of commercial banks and to analyze & interpret these financial variables of Rastriya Banijya Bank (RBB) on qualitative and quantitative performance. The study was based on the financial data of FYs 2042 B.S. through 2046 B.S. (1989 to 1993). He has used various financial ratios like current liquidity, funded debt to total capitalization and funded debt to equity in this study. He had drawn the conclusion that performance of RBB was not satisfactory during the study period. Further, he concluded that bank had not been managed in true professional approach but had managed in bureaucratic approach to sustain with political environment rather than commercial environment.

Gurung (1995) has conducted a research on "Financial study of joint venture banks in Nepal". The objective of this study was to examine the financial strengths and weakness of Nepal Grindlays Bank Ltd. (NGBL) and Nepal Indosuez Bank Ltd. (NIBL). The study has covered the period of seven fiscal years i.e. FY 1986/87 through FY 1992/93. In this study, he has used financial ratios viz., current, activity, profitability, capital structure and statistical tools viz., Karl Pearson's coefficient of correlation. The researcher has on the basis of different financial indicators; found that performance of NGBL is better than that of NIBL.

Pathak (1999) has conducted a study on "Capital Structure and profitability: A comparative case study between Nepal Indosuez bank Ltd. and Nepal grindlays Bank Ltd.", has found that both banks are highly leveraged of capital structure and suggested that the banks are required to maintain improved capital structure by increasing equity base i.e. issuing more capital expanding general reserve and retaining more earning. Both banks having geared up capital structure position and in sufficient return representing weak aspect of these two banks are suggested to use the resources into the most profitable sector.

Ghimire (1999) carried out a comparative study on capital structure and cost of capital of trading, manufacturing and financial sector of Nepal. The main objective of the study was to analyze the effect of capital structure on cost of capital in the context of Nepal. Multiple regression equation was used to examine the relationship between cost of capital and leverage with other explanatory variables (i.e. leverage, growth, and earnings) in banking and financial sector. But he failed to establish the relationship between cost of capital and capital structure because all the coefficients were found statistically insignificant. Although, he concluded that the capital structure is the determinant of the cost of capital or the study does not

support the M-M's hypothesis. And, Capital structure directly affects the cost of capital in Nepalese trading and manufacturing and financial sector.

Pandey (1999) conducted a study on capital structure of Standard Chartered bank Ltd. and Nepal Bangladesh Bank Ltd. General Objective of the study was to analyze the capital structure of SCB Ltd. and NB Bank Ltd. she found that the higher percentage of total debt in financing the assets in both the banks and they are operated with higher degree of financial risks during the study period. In the study, she found that the higher percentage of total debt in raising the assets in both the banks and they are operated with higher degree of financial risks during the study period. Further she found that, the increasing trend of deposits, credit portfolios and profitability position over the last five years of study. Finally, she concluded that the outsider's claim in total assets of the bank is higher than that of owner's. She stressed that the banking sector in Nepal is somehow doing well, even though it has to face a number of hurdle during the study period.

Khadka (2004) has conducted a study on "Analysis of risk and return on selected Nepalese commercial banks listed in NEPSE". The main objective of the study is to measure systematic and unsystematic risk of commercial banks. The study has covered 6 years period and used expected return, coefficient of variation, standard deviation market model, beta coefficient to calculate the risk and return of commercial banks. The major findings of the study, based on the coefficient of variation, which measures risk / unit of the stock individually, Standard Chartered Bank Nepal Ltd. has the lowest coefficient of variation ( 1.89) and NABIL Bank has highest one (3.35). The total systematic risk has related due to the individual shares and correlation coefficient with the market portfolio. The residual risk or unsystematic risk is company specific rather than market pervasive. Through the shares of commercial banks in Nepal is heavily a trade in NEPSE, none of the share price is correctly priced.

Sharma (2006) has conducted a research on "Capital structure of selected commercial banks in Nepal". The objective of the study was to analyze the proportion of total debt and equity capital as well as the supplementary capital adequacy of the commercial banks. The study was based on the financial data of the five years i.e. 2056 B.S. to 2060 B.S. In that study, financial and statistical tools were used to study the capital structure of commercial banks. In financial tools, Capital adequacy ratio, core capital adequacy ratio, supplementary capital ratio, total

debt to equity ratio, interest coverage ratio were used. On the other hand, average, standard deviation, coefficient of variation, least square trend analysis was used in statistical tools. Through his study he brought out the conclusion that the banks are using the higher proportion of total debt in their total financing and the outsiders have invested more in total assets of the banks are compared to owners. Moreover, the Nepalese commercial banks are highly levered and they are taking higher advantage of leverage in owning total assets as a result there is lower margin of safety to the outsiders in these institutions. Furthermore, he drew the conclusion that the supplementary capital of the banks is sufficient or adequate. However, the banks are trying to decrease the contribution of supplementary capital in capital adequacy due to declining tendency of the ratio.

There are various studies have been conducted in the past on intellectual capital, financial performance, investment policy, capital structure as well as dividend policy of commercial banks. this study is also assumed as an emerging aspect in commercial banking sectors in these days.

# **CHAPTER III**

## **RESEARCH METHODOLOGY**

This chapter provides the overall framework or plan for the collection, presentation and analysis of data required to fulfill the objective of the study. Research methodology is the way to solve systematically about the research problem (Kothari, 1990: 39). It also specifies the method and procedure for acquiring the information needed to solve the research problem. This chapter includes research design, population & sample, nature & sources of data, method of data collection, data analysis tools and limitation of methodology. So, research methodology is a sequential procedure and methods to be adopted in a systematic study. To achieve the objective for the study, following proper methodology should be adopted (Kothari, 1992: 17).

### **3.1 Research Design**

Research design is outline, plan and strategy of investigator to obtain answer to research question and to control variance. It is a proper framework procedure technique that helps to do research in any field at a minimum cost and time successfully manner. So, it includes analytical, descriptive and evaluate study of the collected data. The related data with topics are collected through financial statement of the bank and other available source. Here, different financial and statistical tools are applied to examine the facts about the bank capital and sustainable profitability management.

### **3.2 Population and Sample**

For the purpose of this study commercial banks are taken as population. Till may, 2009 there are all together commercial banks established in Nepal. Out of which 3 banks are public and 22 banks are private sector banks. But being this comparative study, HBL and NIBL are selected as a sample for this study. For this sampling purpose convenience sampling method is used.



### **3.3 Nature and Sources of Data**

The study is based on secondary data. For the purpose of the study, the annual reports of HBL and NIBL are used as the major sources of data. Besides the annual reports of these two banks required data and information is collected from the following sources.

- ) NRB reports and bulletins and its website.
- ) Various publications dealing in the subject matters of the study.
- ) Various articles published in journals, etc.
- ) Various research report and Dissertations.
- ) Nepal Stock Exchange report.

Formal and informal talks with the senior staff of the company were also helpful to obtain the information of the related problem.

### **3.4 Data Collection Procedures**

Basically, the study is based on secondary data. For the purpose of study, annual reports, balance sheet, and other relevant data of the respective banks are used as major source of data. In addition to this, NRB publications are collected from the website of NRB. Other supplementary information, literature review are collected from Western Regional Library Pokhara, Central Library T.U., Central Library P.U., Public Library Pokhara, different journals, magazines as well as published and unpublished reports documented by the concern authorities.

### **3.5 Data processing and Analysis.**

First of all, necessary data were extracted from the published documents and audited financial statements were recorded in master sheet manually. Then, data were entered into the spreadsheet to workout the financial ratios and prepare the necessary figure. Finally, different ratios were workout with the help of computer programs like MS-Word, MS-Excel, Corel-Draw and SPSS.

### **3.6 Data Analysis Tools and Techniques**

In this study, financial and statistical tools have been used for data analysis, according to the pattern of data available to meet the objective of the study. Data have been transferred from raw form to meaningful information and presented in

tables and figures as required. Then the results are properly interpreted. The collected data have been organized, processed and analyzed using financial and statistical tools as described in the following section. As mentioned earlier, this study is confined to the comparative analysis of capital structure management of two commercial banks. To obtain the objective, the collected data are computed and analyzed using the financial and statistical tools.

### **3.6.1 Financial Tools**

To make rational interpretations, keeping with the objectives of the study, various analytical financial tools have been used in the study, which is mentioned below:

#### **I. Total Debt to Equity Ratio**

The debt to equity ratio indicates the relationship between debt and equity capital. It is used appraise the capital structure of a bank. It measures the relative claim or contribution of creditors and owners against the bank's assets of financing. Debt to equity ratio can be determined in different ways. For the purpose of this study following model is used:

$$\text{D/E Ratio} = \frac{\text{Total Debt}}{\text{Total Equity Capital}} \times 100$$

Where,

D/E Ratio = debt to equity ratio

Total debt = long-term debts + current liabilities

Total equity capital = [(share capital + share premium + general reserve + accumulated profit + other free reserves)] – fictitious assets if any

#### **II. Interest Coverage Ratio**

Interest coverage ratio is another tool to appraise the capital structure of levered bank, which is determined by dividing EBIT to Interest charges. It reflects the debt servicing capacity of a firm. Thus the ratio is used to analyze the debt servicing capacity of the banks. Following is the expression of interest coverage ratio:

$$\text{ICR} = \frac{\text{EBIT}}{\text{Interest Charges}}$$

Where,

ICR = interest coverage ratio

EBIT = earning before interest and taxes.

### III. Core Capital Adequacy Ratio

Core capital adequacy ratio shows the relationship between the total core capital or internal sources and total risk adjusted assets. It is used to measure the adequacy of core capital and financial soundness from very close angle. It is calculated by using the following model.

$$\text{CCAR} = \frac{\text{Core Capital}}{\text{Total Risk Adjusted Assets}} \times 100$$

Where,

CCAR = core capital adequacy ratio

Core capital = Paid-up-capital + share premium + non-redeemable preference share + general reserve + cumulative profit.

### IV. Supplementary Capital Adequacy Ratio

Supplementary capital adequacy ratio is the extraction of numerical relationship between supplementary capital and total risk adjusted assets of a bank. It measures the proportion of supplementary capital in total risk adjusted assets. Further mere, it shows the absolute contribution of supplementary capital in capital adequacy of the banks and determined by using the given model;

$$\text{SCAR} = \frac{\text{Supplementary Capital}}{\text{Total Risk Adjusted Assets}} \times 100$$

Where,

SCAR = supplementary capital adequacy ratio

Supplementary capital = loan loss provision + exchange equalization reserve + hybrid capital instrument + unsecured sub-ordinate term debt + interest rate fluctuation fund + other free reserves.

## V. Capital Adequacy Ratio

Capital adequacy ratio is the numerical relationship between total capital fund and total risk adjusted assets. It measures the adequacy of capital and financial soundness of a bank. Capital adequacy ratio is used to measure the adequacy of capital in the banks. It is worked out by using the following model.

$$\text{CAR} = \frac{\text{Total Capital Fund}}{\text{Total Risk Adjusted}} \times 100$$

Where,

CAR = capital adequacy ratio

Total capital fund = core capital + supplementary capital

Total risk adjusted assets = on-balance sheet risk adjusted assets + off-balance sheet risk adjusted assets.

## VI. Total Expenses to Total Income Ratio

The total expenses to total incomes ratio is the expression of the numerical relationship between total expenses and total incomes of the company. It measures the proportion of total expenses in total revenues. A low or decreasing ratio of expenses to total revenues indicates that a firm is operating efficiently. The increasing ratio of expenses to total revenues will negatively affect profitability of the firm. Following is the expression of total expenses to total revenues ratio.

$$\text{Total Expenses to Total Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Income}} \times 100$$

Where,

Total expenses = operating expenses + non-operating expenses + provision for staff bonus + provision for taxation.

Total incomes = operating incomes + non-operating incomes + write-back of provision for possible loss.

## VII. Return on Equity (ROE)

The return on equity indicates the relationship between net profits after taxes to total equity capital. It is a measure of the rate of return to the firm's shareholder's

investment. It approximates the net benefit that the stockholders have received from investing their capital in the financial firm( i.e. placing their funds at risk in the hope of earning a suitable profit). Higher ratio is the more favorable for the shareholders, which represents the sound management and efficient mobilization of the owner's equity.

For the purpose of the study following model is used to determine the return on equity ratio.

$$\text{Return on Equity} = \frac{\text{Net Profit After Taxes}}{\text{Total Equity Capital}} \times 100$$

Where,

Total equity capital = paid-up capital + reserves funds and surplus.

### **VIII. Return on Assets (ROA)**

Return on assets expresses the relationship between net income and total assets. It measures the return on all the firm's assets after interest & taxes. It is primarily an indicator of managerial efficiency; it indicates how the management of the firm capable for converting the institution's assets into net earnings and increasing ratio is favorable. It is calculated by using the following model.

$$\text{Return on Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}} \times 100$$

### **IX. Net Interest Margin**

Net interest margin is the expression of numerical relationship between net interest income and net earning assets of a firm. Earning assets are loans and investment on securities made by company for generating interest or fee income. The ratio measures how large a spread between interest revenues and interest costs. Management has the pursuit of the cheapest sources of financing. For the purpose of the study following model is used to determine net interest margin.

$$\text{Net Interest Margin} = \frac{\text{Net Interest Income}}{\text{Net Earning Assets}} \times 100$$

Where,

Net interest income = interest income- interest expenses

Net earning assets = investment on securities + loans and advance

#### X. **Price Earning Ratio**

P/E ratio, or, MPPS divided by EPS, shows how much investors are willing to pay per rupee of reported profits. P/E ratio is higher for firms with high growth prospectus. Low or decreasing price earning ratio can reflect inefficient in terms of profitability of earning & growth. It is calculated by using the following model;

$$\text{Price Earning Ratio} = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}}$$

If the liquidity, assets management, debt management and profitability ratios all look good, then, P/E ratio will be higher and stock price will probably be as high as can be expected.

### 3.6.2 **Statistical Tools**

Besides financial tools as mentioned above, statistical tools are also used to verify the relationship between the variables and to identify the difference between the variables of one bank to another. In which, average, standard deviation, coefficient of variation, correlation coefficient and probable error are used in this study.

#### I. **Average**

In this study, a simple arithmetic average has been used to find out the average value of different financial ratio of sampled domestic commercial banks. The average is expressed as;

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

Where,

$\bar{x}$  = mean of the values

$\sum$  = symbol for summation

n = number of observation

## II. Standard Deviation

In this study, standard deviation has been employed to know the dispersion of different ratio of sampled domestic commercial banks in absolute term. Standard deviation is determined in the following way;

$$\text{S.D.}(\dagger) = \sqrt{\frac{(x \bar{Z} x)^2}{n}}$$

## III. The Coefficient of Variation

The coefficient of variation is the ratio of the standard deviation of a distribution to the mean of that distribution. It is a measure of relative risk. The coefficient of variation is the measure of dispersion, comparable across distribution to the mean expressed in percent. In this study, C.V. is calculated in order to know and compare the variability of observed data between the two banks (HBL & NIBL). Lower C.V. indicates lower level of risk i.e. more consistency of data.

$$\text{C.V.} = \frac{\dagger}{x} | 100$$

## IV. Least Square Trend Analysis

Least square trend analysis is used to find out the trend of ratios. The general equation used for linear trend is given below;

$$\hat{Y} = a + bX$$

Where,

$\hat{Y}$  = dependent variables

X = independent variable (coded time in year.)

a = y- intercept

b = slope

In the above model,

### **3.7 Limitation of the Methodology**

Every research has own limitation, this study also has been the following limitations.

1. The major portion of analysis and interpretations has been done on the basis of the available secondary data and information. So, the consistency of finding and analysis are dependent upon the reliability of secondary data. The data analysis depends upon the models. To fulfill the objectives of the study, specific model are only employed in such manner.
2. Convenience sampling method is adopted to draw the sample, which is not free from criticism. Only two banks are taken. as sample. Therefore the study may not be able to present in the whole scenario.
3. For the study, the period has been taken from FY 2003/04 to 2007/08.



## **CHAPTER - IV**

### **DATA ANALYSIS AND PRESENTATION**

This chapter deals with the presentation and analysis of data collected from different sources annual report of associated banks and complied data from NRB. As stated in the basic objective of this case study has been already highlighted in the first chapter, analytical and evaluated research methodology has been implemented and an effort has been contributed to analyze the comparative case study on capital structure management between Himalayan Bank Limited and Investment Bank Ltd.

#### **4.1 Data Presentation and Analysis**

In this section, as mentioned earlier in the research mentioned earlier in the research methodology to obtain the objective, following evaluative components are presented in the table and figure as below;

##### **4.1.1 Financial Leverage (Debt) Management Ratio**

Debt management ratio measurement extent to which firm is using debt financing and degree of safety afforded to creditors where following analysis are made;

###### **4.1.1.1 Analysis of Paid-up Capital**

A part of issued capital that is actually paid by the owners of a bank is called paid-up capital. It is classified under core capital to measure the capital adequacy. Paid-up capital includes the paid-up amount of ordinary shares, bonus shares and the amount of non-redeemable preference shares. It provides an assurance to the depositors and outsiders that the bank continues to run even in the time of financial crisis and adversity. It increases the credit worthiness of the banks.

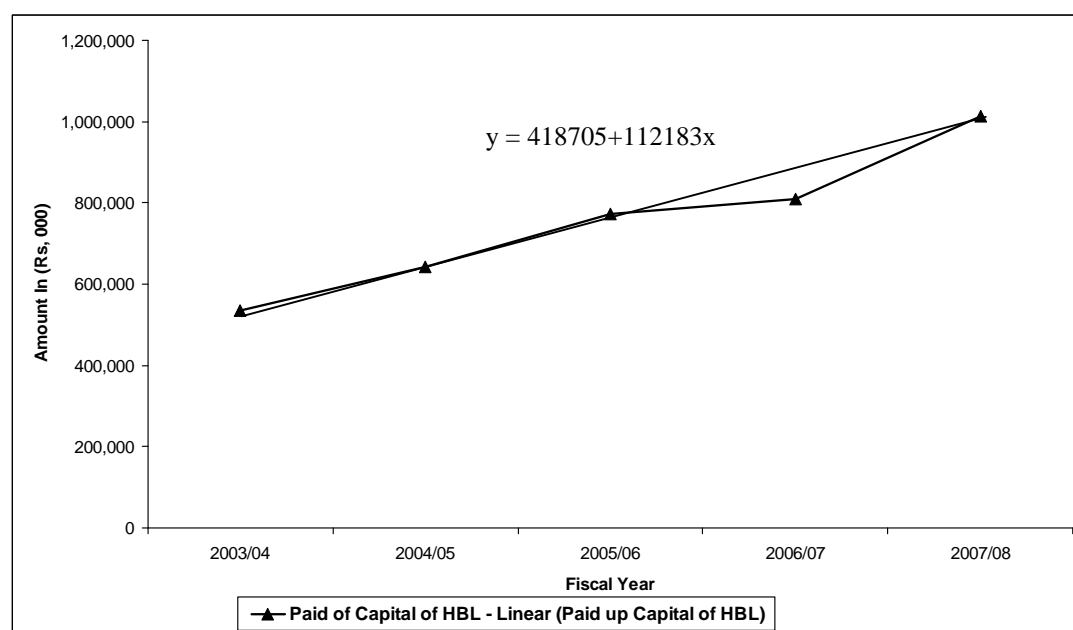
**Table 4.1**  
**Paid-up Capital**

FY Banks	2003/04	2004/05	2005/06	2006/07	2007/08	Average	SD	CV
HBL	536,250	643,500	772,200	810,810	1,013,513	755,254.60	180,638.80	23.92
NIBL	295,290	587,740	590,586	801,353	1,203,915	695,776.801	336,332.16	48.34

*Source: Worked out in appendix 5 (A & B)*

Table 4.1 presents the amount of paid-up capital of HBL and NIBL for the period from FY 2003/4 to 2007/8. In the table, the figures are presented, as the amount of paid-up capital of HBL is increasing trend from the base year of the study period up to the final year of the study period. And NIBL is also increasing trend from the base year up to the final year of the study period. The average paid-up capital is Rs. 755,254.60 and Rs. 695,776.80 of HBL and NIBL respectively. The variation and relative term are Rs. 180,638.80 and 23.92% of HBL and that of NIBL are Rs. 336,332.16 and 48.34% respectively. The higher value of CV indicates the greater dispersion on paid-up capital.

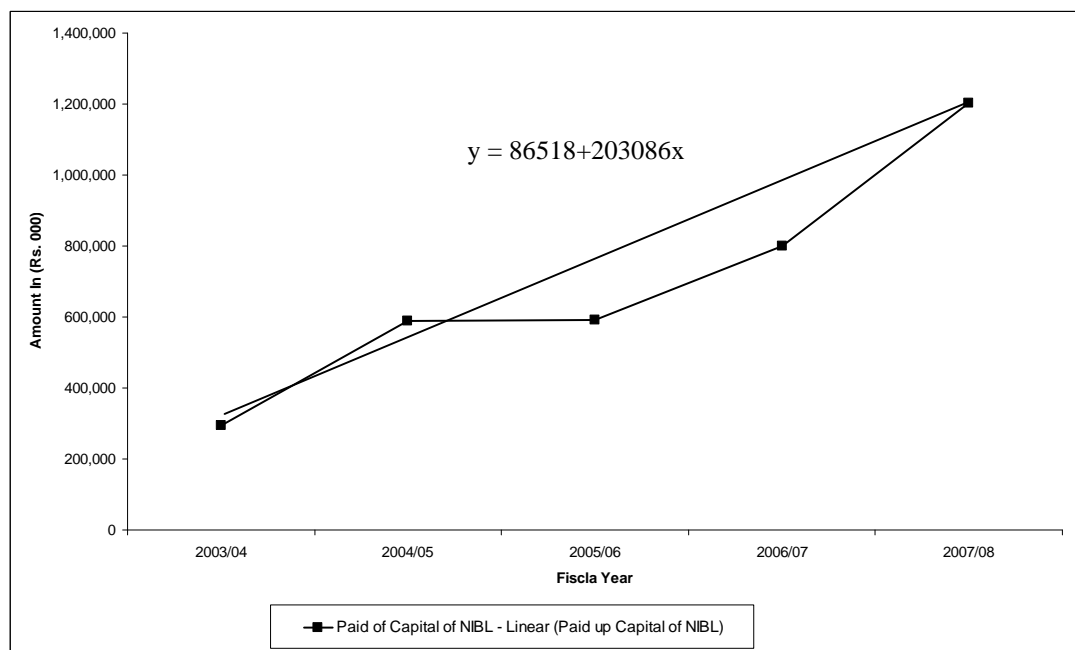
**Figure 4.1: Trend Analysis of Paid-up capital of HBL**



Similarly, the amount of paid-up capital of HBL is mentioned in the figure 4.1, which reflects the amount of paid-up capital Rs. 536,250/-, Rs. 643,500/-, Rs. 772,200/-, Rs. 810,810/-, Rs. 1,013,513 thousands in FY 2003/04 to Fy 2007/08 respectively. Further more, it shows the trend line of paid-up capital over the study period with actual values. As shown in figure 4.1, the actual line shows the paid-up

capital of HBL is increasing trend on average over the study period. Here, increasing paid-up capital of HBL indicates the high risk in absolute measure of standard deviation, relative measure of CV and average paid-up capital values are 180,638.80, 23.92% and Rs. 755,254.6 respectively. Such increment in investing of paid-up capital may reflects of expecting high return by taking high risk as well as to follow-up the directions given by NRB.

**Figure 4.2: Trend Analysis of Paid-up capital of NIBL**



Likewise, the amount of paid-up capital of NIBL is mentioned in the figure 4.2 which reflects the amount of paid-up capital Rs. 195,290/-, Rs. 587,740/-, Rs. 590,586/-, Rs. 801,353/-, Rs. 1,203,915/- thousands in FY 2003/04 to 2007/08 respectively. Further more, it shows the trend line of paid-up capital over the study period with actual values. As shown in- figure 4.2, the actual line shows the paid-up capital of IBL is increasing trend on average over the study period. Here, increasing paid-up capital of NIBL, indicates the high risk in absolute measure of standard deviation, relative measure of CV and average paid-up capital value are 336,332.16, 48.34% and Rs. 695,776.80 respectively.

Under the new policy, NRB directed to all commercial banks to increases the paid-up capital Rs. 2 billion by mid July 2009 through minimum 10% paid-up capital increment every year effective from mid-May 2002. The banks are required to increase their capital to provide the assurance to outsider and to meet the banking activities in global environment. In such condition figure 4.1 and 4.2 shows the

increasing slope of the trend line of paid-up capital indicates that the NRB directives are followed by both banks where paid-up capital increment rate averages are 17.25% and 42.10% respectively. [i.e.  $(1013512.50/536,250)^{1/4}-1$ ] and  $[(1203915.40/295,290)^{1/4}-1]$ .

#### **4.1.1.2 Analysis of Total Debt to Equity Ratio**

D/E ratio or total debt divided by total equity capital, is a financial tool to evaluate the capital (or financial structure) of a firm. The ratio shows the relative contribution of creditors (outsider's claims) and owners of a bank in its financing. It also reflects the relative claims of creditors and shareholders against the assets of a bank. D/E ratio has important implications from the viewpoint of creditors, owners and the firm itself. The creditor prefers a low ratio because of it gives sufficient protection against losses in all the time, more specifically, in the event of liquidation. Similarly, the owners prefer a high D/E ratio because the higher use of debt magnifies their earnings and protection from the dilution of control over the firm, which is the golden chance for owners to maximize the value and return by taking the advantage of leverage. Likewise, high D/E ratio is a bad news for outsiders because of the higher risk in their investment and lower margin of safety.

Higher D/E ratio indicates that the outsiders have invested more in the firm than the owners. Thus, creditors will lose more than the owners in the times of financial distress. On the other side, a low D/E ratio shows the lower contribution of outsiders to the total financing of a firm. It reflects that the firm is unable to take the advantage associated with the financial leverage.

In this regard of capital structure, D/E ratio is widely used to measure the relative proportion of total debt and equity. The amount of debt with deposit is highly greater than equity of both banks during the study period due to the greater amount of deposits under different accounts such as; current account, saving account and fixed account. As shown in table 4.2, the debt (with deposit) to equity ratio of HBL is decreasing over the study period. The average debt (with deposit) to equity ratio, absolute measure of standard deviation and relative measure of CB are 1559.04%, 175.629% and 11.19 respectively.

**Table 4.2 Debt to Equity Capital Ratio (In Percent)**

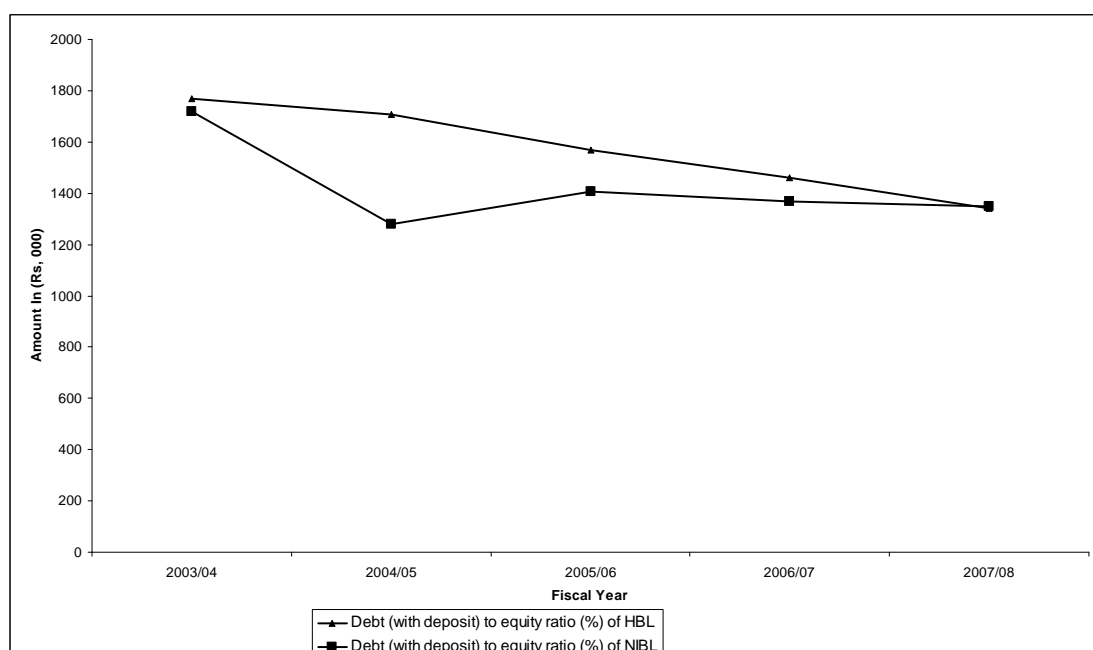
<b>Banks/FY</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
<b><u>HBL</u></b>								
Debt capital with deposit (Rs. In '000)	23,437,859	26,302,949	27,694,215	31,372,642	33,662,540			
Debt capital without deposit (Rs. In' 000)	1,427,526	1,488,937	1,203,363	1,324,224	1,819,751			
Equity Capital (Rs. In' 000)	1,324,166	1,541,746	1,766,176	2,146,500	2,512,992			
Debt (with deposit) to equity ratio (%)	1770.01	1706.05	1568.03	1461.57	1339.54	1569.04	170.91	11.19
Debt (without deposit) to equity ratio (%)	107.81	96.57	68.13	61.69	72.41	81.332	19.83	24.38
<b><u>NIBL</u></b>								
Debt capital with deposit (Rs. In '000)	12,526,448	15,093,891	19,914,698	25,712,721	36,186,520			
Debt capital without deposit (Rs. In '000)	1,001,768	839,317	987,392	1,223,865	1,734,794			
Equity capital (Rs. In '000)	729,048	1,180,173	1,415,440	1,878,123	2,686,786			
Debt (with deposit) to equity ratio (%)	1718.19	1278.96	1406.96	1369.06	1346.83	1424	175.63	12
Debt (without deposit) to equity ratio (%)	137.41	71.12	69.76	65.16	64.57	81.60	31.33	38.39

Source: Work our in appendix 5 (A &amp; B)

The debt (with deposit) to equity ratio of IBL is decreasing from base year up to FY 2004/05, thereafter it increases to 1406.965 in FY 2005/06 and 1369.06% in FY 2006/07 and decrease ratio of 1346.83% in FY 2007/08. But the average debtwith deposit) to equity ratio absolute and relative measures are as 1424%, 175.63% and 12% respectively.

Likewise, the debt (without deposit) to equity ratio of HBL is decreasing from the base year up to the FY 2006/07 and increase ratio of 72.41% on FY 2007/08. The average debt (without deposit) to equity ratio, absolute measures of standard deviation and relative measure of CV are 81.322%, 19.83% and 24.32% respectively. The debt (without deposit) to equity ratio of IBL is decreasing over the study period. The average debt (without deposit) to equity ratio, absolute and relative measures are 81.60%, 31.33% and 38.39% respectively.

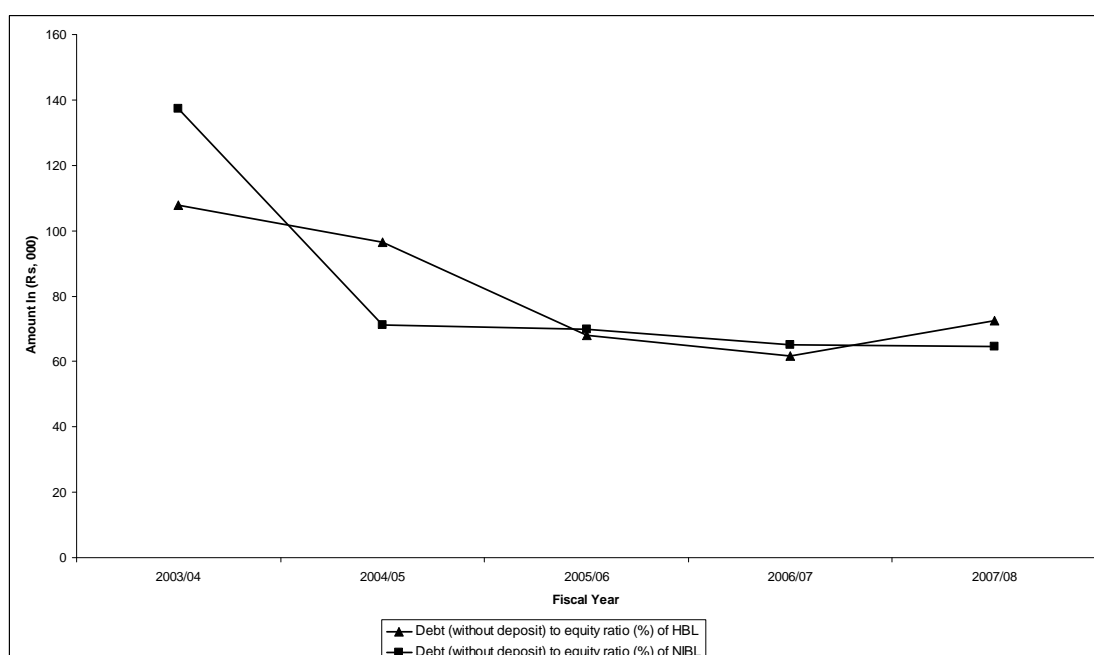
**Figure 4.3 (a): Debt (with deposit) to Equity Ratio**



Similarly, the debt (with deposit) to equity ratio of HBL and IBL shows in the figure 4.3 (a), which are 1770.01%, 1706.05%, 1568.03%, 1461.57%, 1339.54% and 1718.19%, 1278.96%, 1406.96%, 1369.06%, 1346.83% over the study period respectively. It can be clear that the D/E ratio of HBL is moving upwards to downwards over the study period. Similarly, in the case of IBL, the debt (with deposit) to equity ratio is very high in base year and it declines in FY 2004/05 and it is moving up in the FY 2005/06 and it declines slowly from FY 2006/07 to FY 2007/08.

The increasing D/E ratio indicates that the higher growth in total debt than equity capital and vice-versa. Debt (with deposit) to equity ratio of HBL is higher than IBL in term of average by 145.04% (i.e. 1569.04%, 1424%) due to large amount in deposit. A high D/E ratio means the higher contribution of creditors (deposit holders) in total financing and in total assets than owners. Thus the creditors are investing more in total financing of HBL than IBL over the study period. The variation in absolute and relative terms of HBL are 170.92% and 11.19% which are less than 175.63% and 12% of NIBL respectively, which indicates HBL has more consistency in comparison of NIBL.

**Figure 4.3 (b): Debt (without deposit) to Equity Ratio**



The debt (without deposit) to equity ratio is fluctuating over the study period in both banks. The debt (without deposit) to equity ratio of HBL and IBL shows in the figure 4.3 (b), which are 107.81%, 96.57%, 68.13%, 61.69%, 72.41% and 137.41%, 71.12%, 69.76%, 65.16%, 64.57% over the study period respectively. It can be clear that the debt (without deposit) to equity ratio of HBL is slightly fluctuating trend, it is moving down from the base year up to the FY 2006/07 and it increase in the final year of the study period. Similarly, in case of NIBL the debt (without deposit) to equity moving down over the study period.

Likewise, low D/E ratio is good news for outsiders because of the lower risk in their investment and higher margin of safety. Debt (without deposit) to equity ratio of IBL is higher than HBL in terms of average by 0.278 [81.60%-81.322%] thus the

creditors are investing more in total financing of NIBL than HBL over the study period. Higher ratio indicates more risky to the outsiders, claim of IBL than in HBL. The variation in absolute and relative terms of IBL are 31.33% and 38.39% which are greater than 11.5% and 14.01% of HBL respectively which indicates HBL has seems more consistency in comparison of NIBL.

#### 4.1.1.3 Analysis of Debt Servicing Capacity

Interest coverage ratio (ICR) is used to analyze the debt serving capacity of bank is calculated dividing EBIT by interest charges to be paid. The ratio shows the numbers of times the interest charges are covered by the earning that are normally available for payment. Specially, the ICR of six to seven times is desired for most of the industry lines. But the generalization is not appropriate for the banking industry of banking of different nature of banking sectors. It is difficult to set benchmark of ICR.

However the higher ratio is desired from the view point of outsiders and other. The larger ICR shows the greater ability of the firm to handle the fixed charges and more assurance for payment of interest to the creditors; lower value of the ICR indicates the lower debt servicing capacity. A high ratio reflects the unused debt capacity or the firm is missing the opportunity to take the advantage of financial leverage. Similarly, a low ratio is an alert signal that the firm is using excessive debt and does not have the capacity to service the debt properly.

**Table 4.3: Interest Coverage Ratio (In Times)**

<b>FY Banks</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
<b>HBL</b>	1.85	2.08	1.95	1.80	1.98	1.93	0.110	5.70
<b>NIBL</b>	1.70	1.92	2.01	1.96	1.92	1.90	0.119	6.26

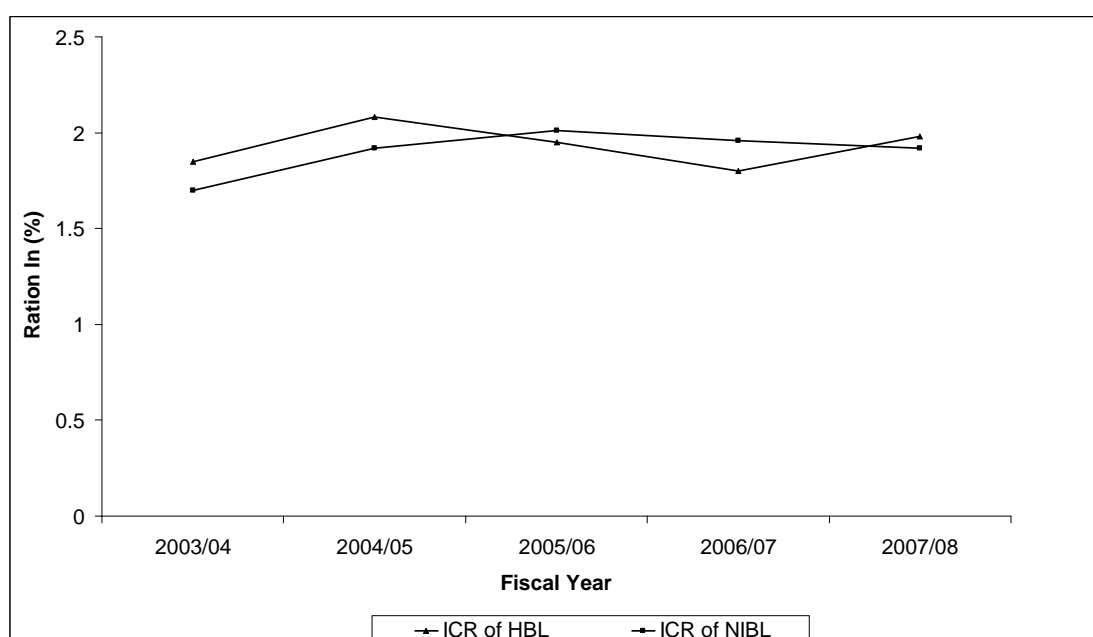
Source: Work our in appendix 5 (A & B)

Table 4.3 presents the period from HBL and IBL for the period from FY 2003/04 to 2007/08. The figure presented in the table reveal that the ICR of HBL is changing alternatively over the study period. The ICR of HBL is increasing trend for 1<sup>st</sup> and 2<sup>nd</sup> year, and it decreases of 1.95 in FY 2006/07. But, again it increases of 1.98 times in FY 2007/08. HBL has an average ratio of 1.93 times, absolute measure of 0.110% and relative measure of 5.70%, Similarly, ICR of NIBL have also increasing trend from base year up to FY 2006/07. But again it increase of 1.98 times in FY 2007/08. HBL has an average ratio of 1.93 times, absolute measure of 0.110% and



relative measure of 5.70%. Similarly, ICR of NIBL have also increasing trend from base year up to FY 2005/06 and it decreases of 1.96 times in FY 2006/07 and 1.92 times in FY 2007/08. An average of 1.90 times, absolute measure of 0.119% and relative measure of 6.26%. Both banks are seemed to be conscious to have sufficient EBIT to be able to service the debt.

**Figure 4.4: Interest Coverage Ratio**



As shown in the figure, ICR of both banks has found in fluctuating trend has found in fluctuating trend over the study period. By comparing the average value standard deviation and CV, HBL has found satisfactory and look good due to higher average ICR (i.e. 1.93>1.90), low standard deviation (i.e. 0.110%<0.199) and low CV (i.e. 5.70%<6.26%), which indicates more consistency for the management of ICR.

#### 4.1.2 Capital Adequacy Ratio

Financial strength is measure by capital adequacy of B and FI's. It provides a cushion against the risk of failure, adequacy capital reduces firm's risk to support is risks assets in accordance with the risk-weighted capital ratio framework. NRB determines the capital adequacy ratio of all banks and non-bank financial institutions in Nepal. NRB concerned with this because some financial Institutions do not hold enough capital and have increased capital requirements. If the firm holds more capital, they can more easily absorb potential losses and are more likely to survive. Moreover it reduces the likelihood of failure. The firm with higher capital ratio is therefore assigned a higher capital adequacy rating.

#### 4.2.1.1 Analysis of Core Capital Adequacy Ratio

CCR, or core capital divided by total risk adjusted assets, which measures the adequacy of internal sources or shareholders funds to support the banking activities. It reflects the financial strength and soundness of a bank. Core capital is the primary capital, also known as the Tier 1 capital. It includes the paid-up equity capital, share premium, dividend equalization fund, capital adjustment reserve, non-redeemable preference share, general reserve, accumulated profit and loss amount and good will deductible if any (Baral, 2005, P. 26). In this way it is the amount of shareholders fund. It gives an assurance to the outsiders for smooth operation of a financial company even in the time of economic crisis. Core capital adequacy ratio is to total risk adjusted assets ratio, which measures the adequacy of internal sources or shareholder's funds to support the financing activities. (Baral, 2005, P. 43)

Higher value of the ratio above the NRB standard shows the adequacy of internal source and higher security to creditors and depositors and visa-versa. NRB has provided the minimum standard of CCAR in order to stabilize the capital and assets of banks. They are required to maintain the CCAR of 5.5%, 5.5%, 6% m 5.5% and 6% in the FY 2003/04 to 2007/08 respectively.

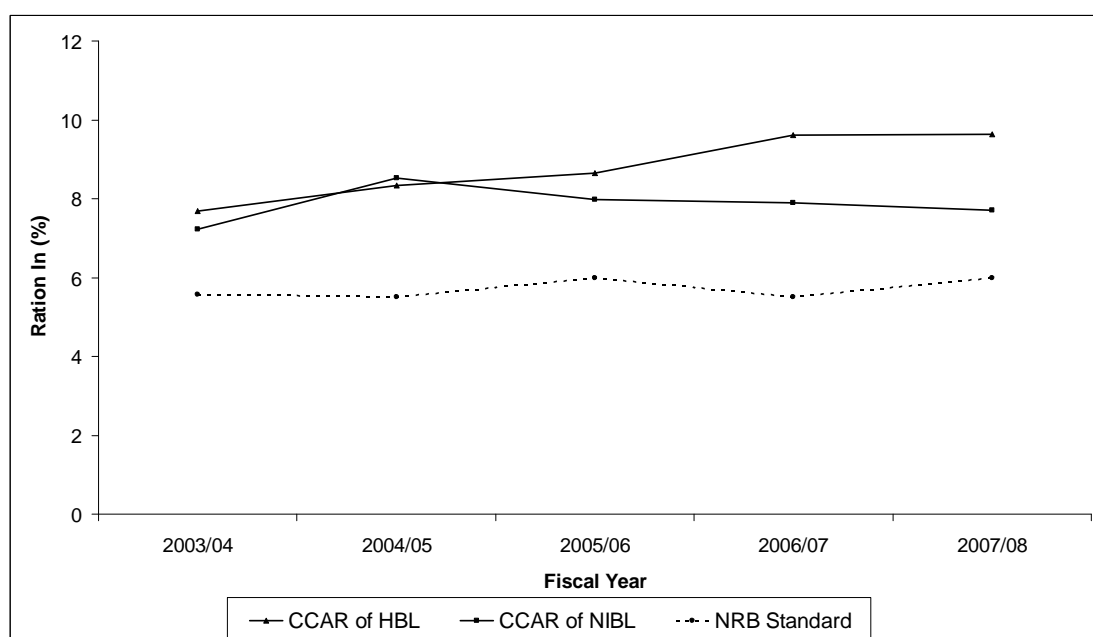
**Table 4.4: Core Capital Adequacy Ratio (In percent)**

<b>FY Particulars</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
CCAR of HBL	7.69	8.33	8.65	9.61	9.64	8.784	0.842	9.59
CCAR of NIBL	7.22	8.52	7.97	7.90	7.71	7.864	0.469	5.96
NRB Standard	5.58	5.5	6	5.5	6			
CCAR Excess (Shortage) in HBL	2.19	2.83	2.65	4.11	3.64			
CCAR Excess (shortage) in NIBL	1.72	3.02	1.97	2.4	1.71			

Source: Worked out in appendix 6 (A & B)

The data given in the table 4.4, exhibits that CCAR of HBL is minimum of 7.69% in FY 2003/04 and maximum of 9.64% in FY 2007/08 with average of 8.78%. The ratios are 7.69%, 8.33%, 8.65%, 9.61% and 9.64% in FY 2003/04 to 2007/08 respectively. And an absolute measure in standard deviation of 0.842% and relative measure in CV of 9.59%. Similarly, CCAR of NIBL is minimum of 7.22% in FY 2003/04 and maximum of 8.52% in FY 2004/05 with an average ratio of 7.864%. The actual ratios are 7.22%, 8.52%, 7.97%, 7.90% and 7.71% in FY 2003/04 to 2007/08 respectively. And an absolute measure in standard deviation of 0.469% and relative measure in CV of 5.96%.

**Figure 4.5: Comparing Core Capital Adequacy Ratio with NRB Standard**



The observed value of CCAR of HBL and NIBL is clearly shown with NRB standard in figure 4.5. In which the CCAR of HBL and NIBL compares with the NRB standard. As compared to NRB standard the CCAR of HBL and NIBL are excess throughout the study period. Moreover, it is clearly shown that the banks have met the NRB standard in all fiscal year. It indicates that the both banks are applying adequacy amount of inter source with significant CCAR throughout the study period.

Although, the CCAR of HBL is continuously increasing trend over the study period. So that, the absolute risk measure of standard deviation of 0.842% and relative measure in CV of 9.59% represents the more favorable and consistency for smooth operation of the bank and in the management of CCAR. In the case of NIBL is fluctuating trend over the study period having the absolute measure of standard deviation of 0.469% and relative measure of CV of 5.96%.

#### 4.1.2.2 Analysis of Supplementary Capital Adequacy Ratio

Supplementary capital is the secondary capital, also known as Tier II capital. Supplementary capital means the amount of capital that are transferred in free reserve and collected by using the hybrid instruments, General Loan Loss provision, Exchange Equalization Reserve, Interest spread Reserve, Assets Revaluation Reserve, Interest spread Reserve, Subordinate term and other free Reserve (Baral, 2005, P. 43). It indicates the contribution of supplementary capital in capital adequacy ratio of a bank.

A high value of SCAR means the higher proportion of supplementary capital in total risk adjusted assets and large portion of supplementary. Capital in capital adequacy ratio and vice-versa. As per NRB unified directive for B and FI'S fixed out the maximum limit of supplementary capital ratio, it can be indicate that in the capital adequacy ratio is not more than CCAR of respective banks in each year.

Table 4.5 presents the SCAR of HBL and NIBL during the study period of last five years and minimum requirement of supplementary capital standard set by NRB.

**Table 4.5: Supplementary Capital Adequacy Ratio (In percent)**

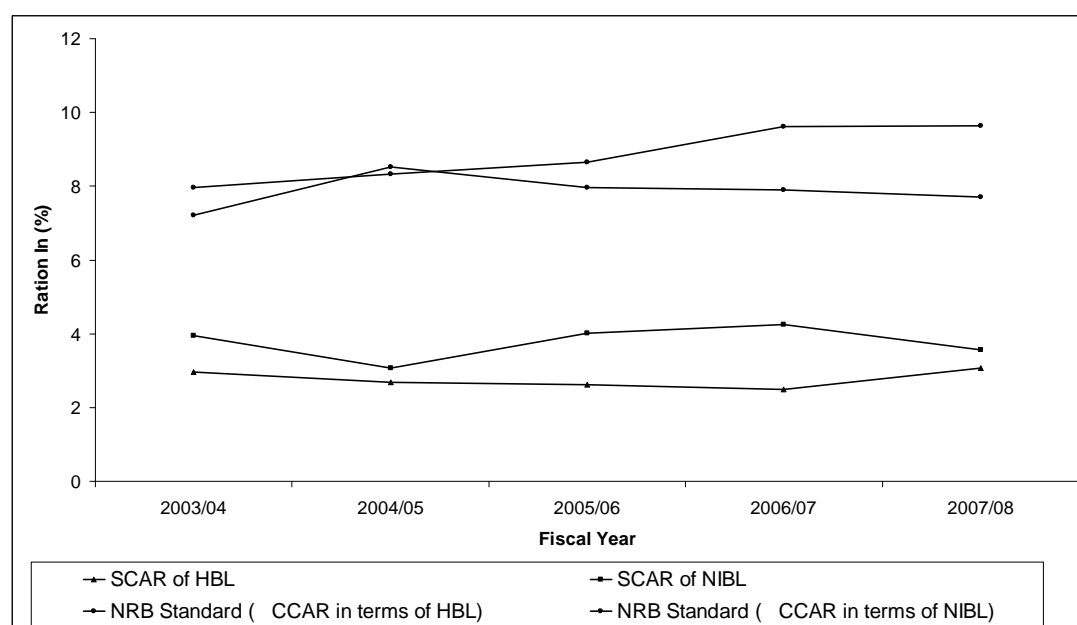
<b>FY Particulars</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
SCAR of HBL	2.96	2.68	2.62	2.50	3.06	2.76	0.24	8.8
SCAR of NIBL	3.96	3.06	4.01	4.26	3.57	3.77	0.47	12.47
NRB Standard (CCAR in terms of HBL)	7.96	8.33	8.65	9.61	9.64			
NRB Standard (CCAR in terms of NIBL)	7.22	8.52	7.97	7.90	7.71			
NRB Standard excess (shortage) in HBL	5	5.65	6.03	7.11	6.58			
NRB Standard excess (shortage) in NIBL	3.26	5.46	3.96	3.64	4.14			

Source: Work our in appendix 6 (A & B)

The data presented in the table 4.5 shows the SCAR of HBL and NIBL are 2.96%, 2.68%, 2.62%, 2.50%, 3.06% and 3.96%, 3.06%, 4.01%, 4.26%, 3.57% in FY 2003/04 to 2007/08 respectively. The SCAR of HBL is decreasing trend from the base year of the study period up the FY 2006/07 and again increasing SCAR of 3.06% in FY 2007/08./ In the case of NIBL, the SCAR is slowly fluctuating over the study period.

The observed values of SCAR of BOKL and MBL are shown with NRB standard in figure 4.6. In the figure 4.6, it is clearly shown that the both banks HBL and NIBL have maintained the SCAR as per the NRB standard during the study period. It indicates that the both company is running with the adequate capital in all year during the study period.

**Figure 4.6: Comparing Supplementary Capital Adequacy Ratio with NRB Standard**



In addition, HBL has 0.24% risk on absolute measure and 8.68% in relative measure of CV. Thus, lower level of CV indicates more consistency of bank operation. But, NIBL has 0.47% risk on absolute measure and 12.47% in relative measure of CV, more CV indicates less consistency for smooth operation of the bank in terms of management of SCAR in comparison of HBL.

#### 4.1.2.3 Analysis of Capital Adequacy Ratio

The total capital is the sum of Tier I capital and Tier II capital, which represents the total amount invested by the shareholder, creditors and the amount

collected from the various free reserves maintain by the bank. CAR measure the adequacy of capital and financial soundness of a bank. CAR of a bank above than the NRB standard indicates the sound and strong financial position, higher securing to depositors and adequacy in capital. Similarly, CAR below than minimum requirement of NRB shows that the lower in its internal sources, comparatively weak position financially and lower level of security to depositors and lower level of security to depositors. NRB has set the standard of CAR as 11%, 11%, 11%, 12% and 12% in the FY 2003/04, 2004/05, 2005/06, 2006/07 and 2007/08 respectively.

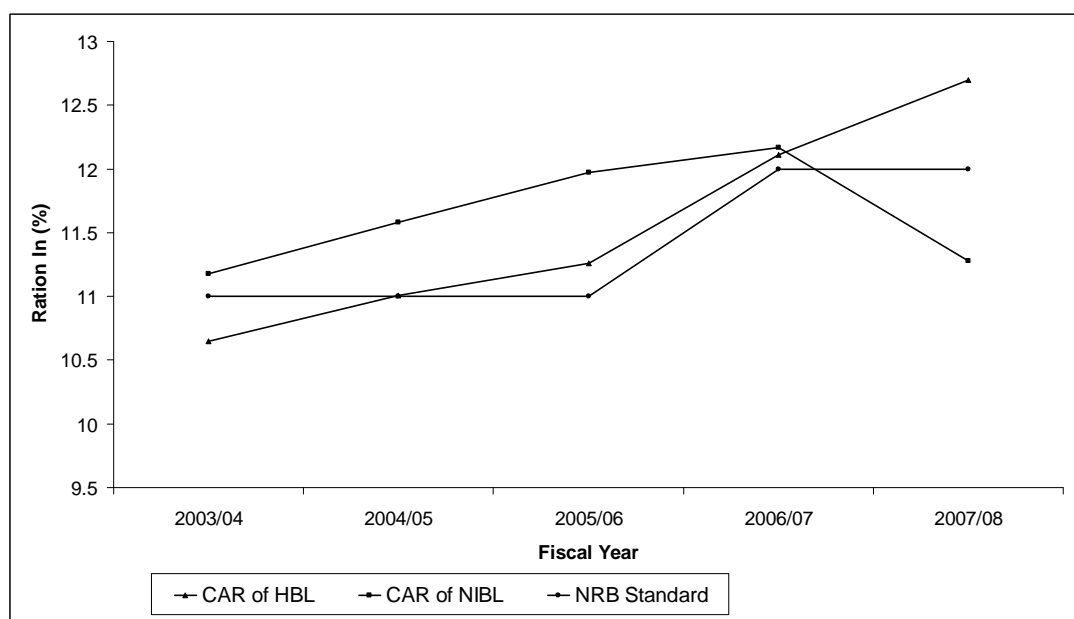
**Table 4.6: Capital Adequacy Ratio (In percent)**

<b>FY Particulars</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
CAR of HBL	10.65	11.01	11.26	12.11	12.70	11.546	0.84	7.28
CAR of NIBL	11.18	11.58	11.97	12.17	11.28	11.636	0.43	3.68
NRB Standard	11	11	11	12	12			
NRB Standard CAR Excess/shortage in HBL	(0.35)	0.01	0.26	0.11	0.70			
NRB Standard CAR Excess/shortage in NIBL	0.18	0.58	0.97	0.17	(0.72)			

Source: Work our in appendix 6 (A & B)

Table 4.6 clearly shows the observed values of HBL and NIBL during the study period and minimum requirement of CAR set by NRB. In this table, CAR of HBL and NIBL are 10.65%, 11.01%, 11.26%, 12.11%, 12.70%, and 11.18%, 11.58%, 11.97%, 12.17%, 11.28% in the FY 2003/04 to 2007/08 respectively. In the case of HBL, CAR is not maintain the NRB standard in FY 2003/04 and other four years CAR with in NRB standard. And, the CAR of NIBL are within NRB standard in started four years and FY 2007/08 CAR is not with in NRB standard. The observed values of capital ratios are shown with NRB standard in fig. 4.7.

**Figure 4.7: Comparing Capital Adequacy Ratio with NRB Standard**



In the figure 4.7, as shown value of CAR of HBL and NIBL. In the case of HBL have met NRB standard in each Fiscal Year except in FY 2003/04 and in case of NIBL, the figure exhibits that the bank met NRB standard except in FY 2007/08 over the study period.

### 4.1.3 Profitability Ratio

Profitability ratio shows the combined effects of liquidity, assets and debt management on operating results. It measures the earnings of the company by employed return ratios. Profitability is the major yardstick of the business, where the efficiency of the management is reflected upon the volume of profit for their smooth operation. Profitability of these two banks (HBL and NIBL) is analyzed on behalf of the long-term financial healthiness profitability depends upon earnings and expenditures. Minimization of expenditure and maximization of return is the major aspect of profitability to sustain the business smoothly.

#### 4.1.3.1 Total Expenses to Total Income Ratio

Profitability depends upon the earning and expenditure. The ratio of total expense to total income is used as a proxy measure of the quality of management. So the management always tried to maximizing earning and minimizing the expenses. Generally, commercial bank earned incomes from interest on loans and advance, commissions, fees and discounts and other miscellaneous income. Likewise, the

major components of expenses of banks are interest on deposits, staff salary, provision for bonus, allowances, provident fund and other operating expenses like rent, water and electricity, fuel expenses and other operation expenses and other expenses as loss on sale of assets, loss on sale of investments, provision for possible losses and provision for income tax etc.

A low level of expenditure in productive activities may reflect an efficient of management. So a low or decreasing ratio of expenses to total income indicates efficient profitability of the banks and vice-versa. Table 4.7 presents the total expenses to total incomes ratio of HBL and NIBL during the study period.

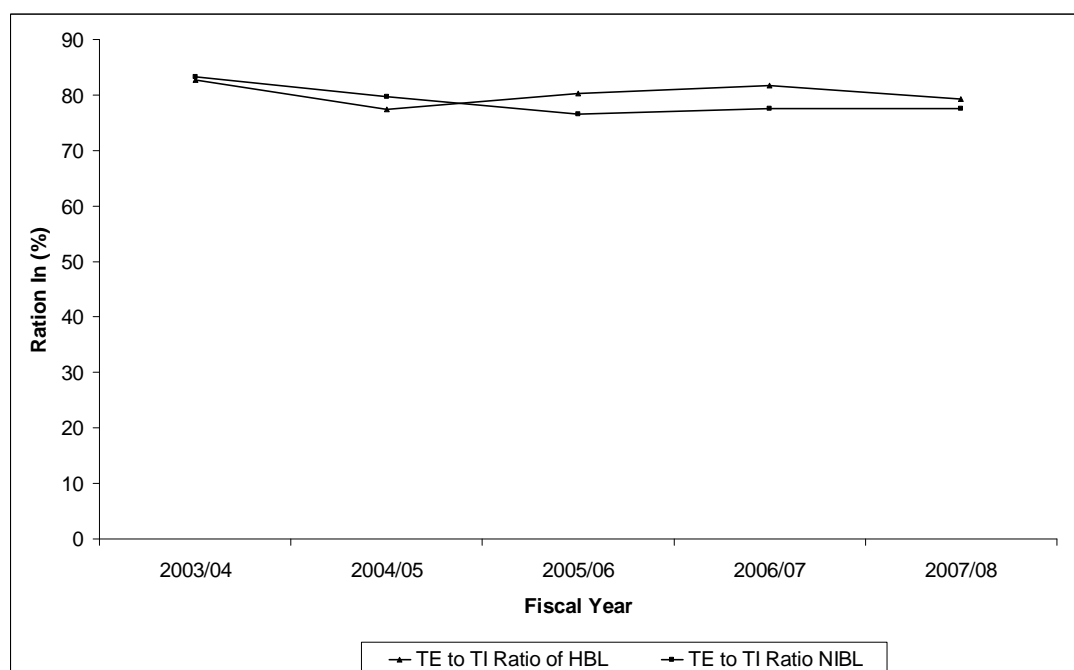
**Table 4.7: Total Expenses to Total Income Ratio (In percent)**

<b>FY Particulars</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
<b>HBL</b>	82.69	77.48	80.25	81.75	79.25	80.284	2.05	2.56
<b>NIBL</b>	83.29	79.74	76.58	77.52	77.53	78.932	2.70	3.42

**Source:** Worked out in appendix 5 (A & B)

The data shown in the table 4.7 exhibits that the ratio of total expenses to total income of HBL and NIBL. The observed values of HBL and NIBL are fluctuating trend over the study period. The maximum ratio of HBL of 82.69% in FY 2003/04 and minimum ratio of 77.48% in FY 2004/05 with average ratio of 80.284% risk in absolute measure of 2.05% and relative measure on CV of 2.56%. Similarly, the observed values of NIBL are in decreasing trend from FY 2003/04 to FY 2005/06 and again increasing trend up to over the study period. But the maximum ratio of 83.29% in FY 2003/04 and minimum ratio of 76.58% in FY 2005/06 with average ratio of 78.932% risk in absolute measure of 2.70% and relative measure on CV of 3.42%.



**Figure 4.8: Total Expenses to Total Income Ratio**

The observed value of total expenses to total income ratio of HBL and NIBL is shown in the figure 4.8, which indicates the values are fluctuating trend over the study period. The lower level of CV, 2.56% in HBL indicates more consistent and uniformity. But the higher level of relative measure of CV, 3.42% in NIBL indicates not consistent and non-uniformity.

#### 4.1.3.2 Return on Equity (ROE)

ROE is the one of the profitability ratio that the relationship between the net income and total equity capital. It measures how efficiently the owner's funds have been utilized by the bank and judge weather the bank has earned a satisfactory return for its equity shareholders or not. Higher ratio indicates the more efficiency of management on using shareholders fund and firm's ability of generating profit per rupee of their funds. Table 4.8 presents the ROE of HBL and NIBL for the period between FY 2003/04 to 2007/08.

**Table 4.8: Return on Equity Ratio (In percent)**

FY Particulars	2003/04	2004/05	2005/06	2006/07	2007/08	Average	SD	CV
ROE of HBL	20.62	25.65	22.86	18.40	20.07	21.52	2.81	13.04
ROE of NIBL	20.94	19.67	24.01	23.14	22.15	21.98	1.73	7.85

**Source:** Worked out in appendix in 5 (A & B)

The figure presented in the table reveals that ROE of HBL has increased for first two years and has decreased third and fourth years and again increased in the final year of the study period. The highest ratio is 25.65% in FY 2004/05 and the lowest ratio of 18.40% in FY 2006/07 of HBL. The average ratio of HBL is 21.52% absolute measure of standard deviation is 2.81% and relative measure of CV 13.04%.

Similarly, ROE of NIBL has been decreasing trend for first two years and has increased in the third year and again decreased for last two years. The minimum ratio is 19.67% in FY 2004/05 and maximum of 24.01 in FY 2005/06 of NIBL. The average ratio of NIBL is 21.98% absolute measure on standard deviation is 1.73% and relative measure on CV is 7.85%. The higher level of CV, 13.04% in HBL indicates non consistent and non-uniformity. But the lower level of CV 7.85% in NIBL indicates more consistent and uniformity than HBL.

**Figure 4.9: Return on Equity (ROE)**

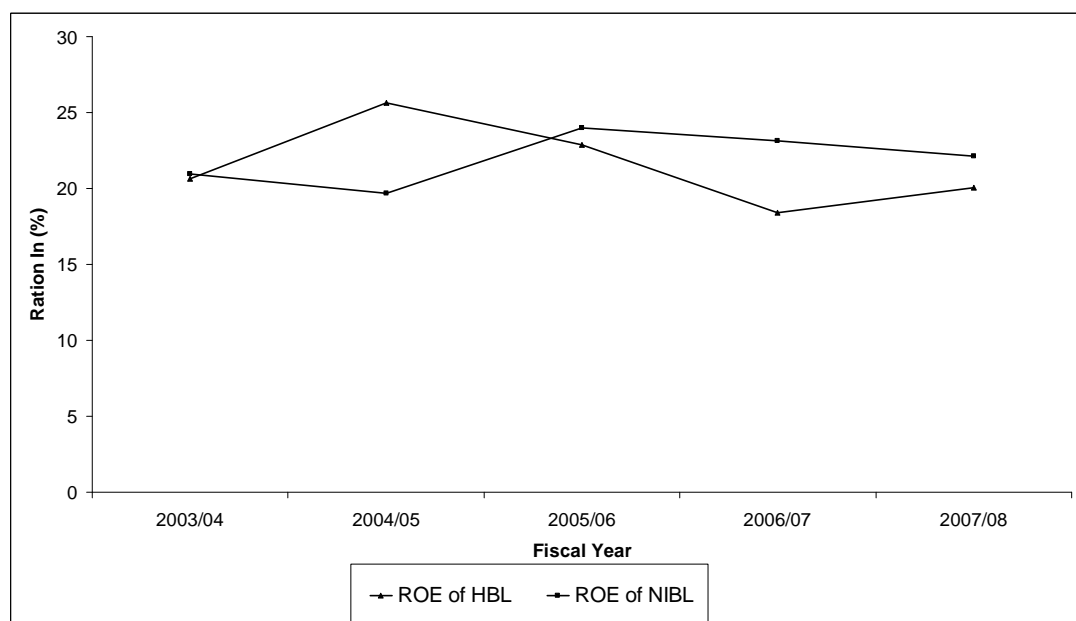


Figure 4.9 shows the observed value of ROE of HBL and NIBL during the study period. It reflects the ROE of both banks are fluctuating trend. Comparatively, the ROE of NIBL seems favorable and consistency being higher level of average return, lower level of absolute and relative risk.

#### 4.1.3.3 Return on Assets (ROA)

ROA measures the profitability of banks that explains the return on all financial resources invested in the banks assets are satisfactory or not. ROA is a useful measure of how well a manager is doing the job because it indicates how well banks assets are being used to generate profit. The ratio explains net income for each unit of assets, indicates overall effectiveness of management in generating profits with its available assets. From the viewpoint of judging operational efficiency, the return on total assets is more useful measure.

The higher ratio indicates the higher efficiency in utilizing its overall resources and vice-versa. The bank has to each satisfactory return on assets for its survival. Table 4.9 exhibits the ROA of HBL and NIBL for the period between FY 2003/04 to 2007/08.

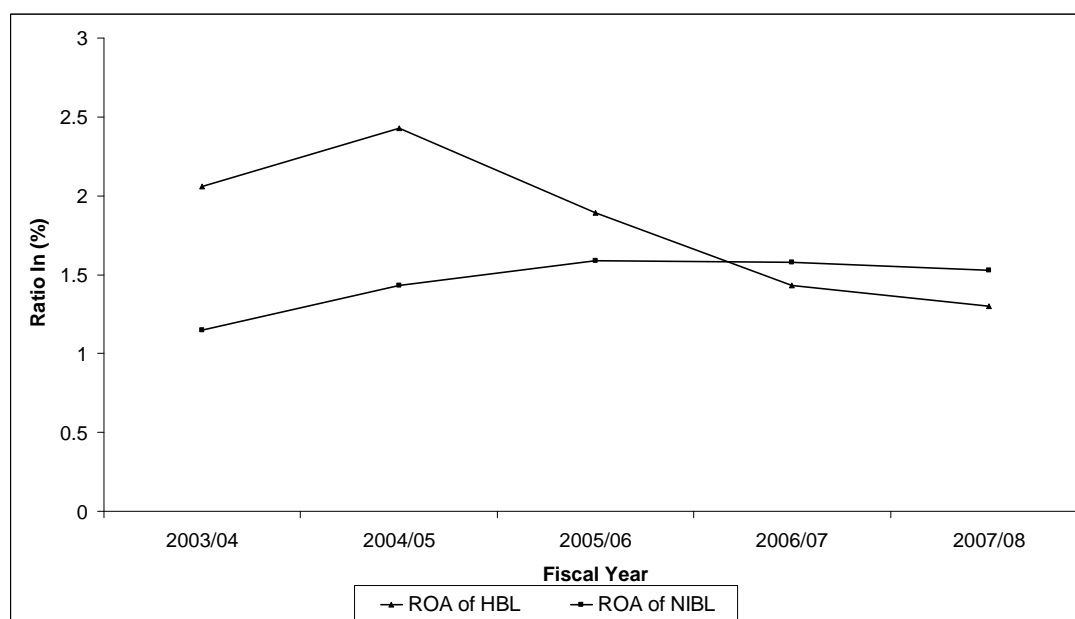
**Table 4.9: Return in Assets Ratio (In percent)**

<b>FY Particulars</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>Average</b>	<b>SD</b>	<b>CV</b>
<b>ROA of HBL</b>	2.06	2.43	1.89	1.43	1.30	1.822	0.46	25.25
<b>ROA of NIBL</b>	1.15	1.43	1.59	1.58	1.53	1.46	0.18	12.33

**Source:** Worked out in appendix 5 (A & B)

The figure presented in the table 4.9 reveal that the ROA of HBL has increased trend first two years and has decreased in the last three years over the study period with average return of 1.822% absolute measure on standard deviation of 0.46% and relative measure on CV 25.25% indicates less consistency on the ratio of HBL. Similarly, the ratio of NIBL has also increased trend for first three years and has decreased for last two years over the study period with average return ratio of 1.46% absolute measure on standard deviation of 0.18% and relative measure on CV of 12.33% which indicates more consistency on the ratio with comparing to NIBL.

Figure 4.10 shows the observed ratios of HBL and NIBL during study period. It is clearly shows that the ratio of HBL and NIBL has fluctuating trend with comparing the previous years in study period. The ratios of HBL are 2.06%, 2.43%, 1.89%, 1.43%, 1.30% and the ratio of NIBL are 1.15%, 1.43%, 1.59%, 1.58%, 1.53% between the FY 2003/04 to FY 2007/08 respectively.

**Figure 4.10:**

Comparatively, HBL has higher average return on total assets ratio than NIBL. On the basis of CV the ratio of NIBL seems to be more consistent than because of lower CV of NIBL than HBL (i.e. 12.33% < 25.25%).

#### 4.1.3.4 Net Interest Margin (NIM)

The difference between interest income and interest expenses is called net interest income. And, net earning assets is the total sum of investment of government securities and loan and advances. Thus, the NIM is the ratio of net interest income as percentage of net earning assets. Management of assets and liabilities is affected by the spread between the interest earned on the banks assets and the interest cost on its liabilities. This ratios is examined to measure the profitability of these earning assets. A high margin reflects the better efficiency in utilizing the resource in interest generating sections and vice-versa. That is low level of net earning assets, low interest expenses and high interest revenues will increase the NIM and vice-versa. NIM of HBL and NIBL are presented in the table 4.10.

**Table 4.10: Net Interest Margin (In percent)**

FY Particulars	2003/04	2004/05	2005/06	2006/07	2007/08	Average	SD	CV
NIM of HBL	3.55	3.67	3.83	3.50	3.47	3.60	0.15	4.17
NIM of NIBL	3.69	3.79	3.71	3.78	3.55	3.70	0.10	2.70

Source: Work our in appendix 5 (A & B)

The data presented in table 4.10 exhibits the NIM of HBL and NIBL between the FY 2003/04 to 2007/08. The figure presented in the table reveals that

the NIM of both banks have fluctuating trend. The NIM of HBL and NIBL are observed as 3.55%, 3.67%, 3.83%, 3.50%, 3.47% and 3.69%, 3.79%, 3.71%, 3.78%, 3.55% during the study period respectively. In the case of HBL, the maximum NIM of 3.83% in FY 2005/06 and the minimum NIM of 3.47% in FY 2007/08. The average ratio of 3.60%, absolute measure on standard deviation of 0.15% and relative measure on C.V. of 4.17%, Likewise, in the case of NIBL, the maximum ratio of 3.79% in FY 2004/05 and minimum ratio of 3.55% in FY 2007/08. The average ratio of 3.70% risk on standard deviation of 0.10% and relative measure on CV of 2.70%, which reflects the low level of risk and more consistency in the NIM ratio than HBL.

**Figure 4.11: Net Interest Margin**

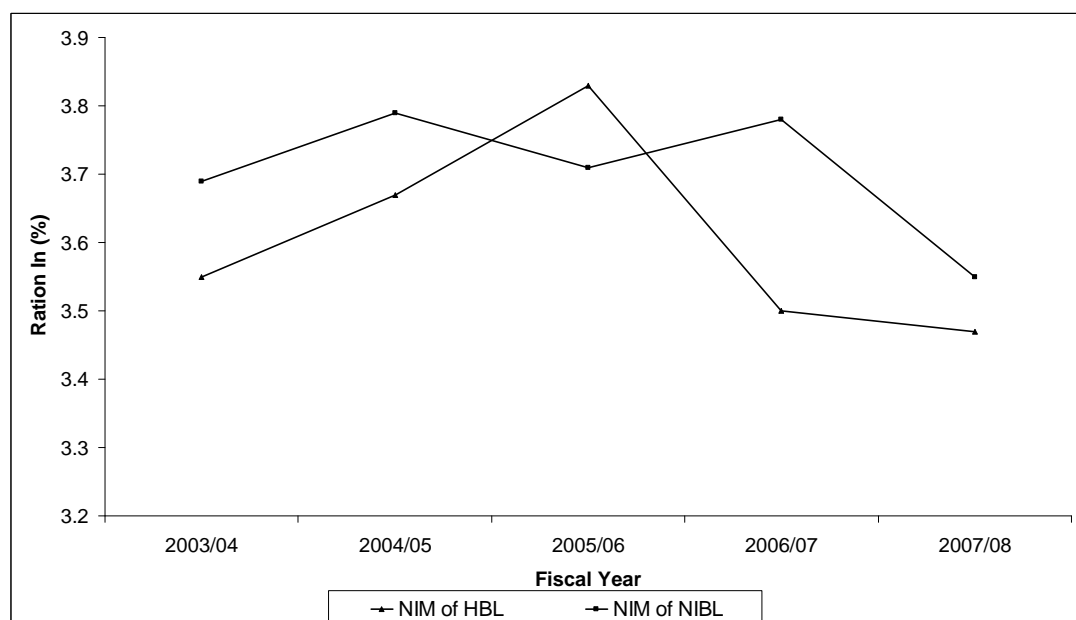


Figure 4.11 shows the observed NIM ratio of HBL and NIBL during the study period. It shows the ratio of both banks have fluctuating trend. Comparatively, the average ratio of NIBL is higher than HBL. It shows the higher rate of return on net earning assets. Similarly, lower level of risk 0.10% and relative measure on CV of 2.70% indicates NIBL seems more consistency in terms of these ratios during the study period.

#### 4.1.3.5 Price Earning Ratio (P/E Ratio)

The P/E ratio is the measurement tools of profitability on market stability basis. It can be obtained MPPS divided by EPS. It reflects, in times, the price currently paid by market for each rupee of reported EPS. It is used to evaluate the banks performance by the investor. Higher P/E ratio indicates that the bank growth capacity of earning has been increased but the lower level of P/E ratio indicates that the earnings are not likely to be raised. The table 4.11, show the observed value of P/E ratio of HBL and NIBL.

**Table 4.11: Price Earning Ratio (In times)**

FY Particulars	2003/04	2004/05	2005/06	2006/07	2007/08	Average	SD	CV
P/E ratio of HBL	1.96	1.63	1.91	2.05	2	1.91	0.16	8.37
P/E ratio of NIBL	1.93	2.53	1.74	1.84	2.02	2.01	0.31	15.35

Source: Work our in appendix 5 (A & B)

Table 4.11 present the P/E ratio of HBL and NIBL for the period between 2003/04 to 2007/08. The presented figure shows the P/E ratio of HBL and NIBL are as 1.96, 1.63, 1.91, 2.05, 2, 1.91, 2.05 and 1.93, 2.53, 1.74, 1.84, 2.04 times in FY 2003/04 to 2007/08 respectively. Maximum P/E ratio of HBL 2.05 times in the FY 2006/07 and minimum of 1.63 times in the FY 2004/05. Likewise, maximum P/E ratio of NIBL of 2.53 times in FY 2004/05 and minimum of 1.74 times in FY 2005/06. On average, P/E ratio of HBL is less than that of NIBL i.e. 1.91 times and 2.01 times respectively.

**Figure 4.12: Price Earning Ratio**

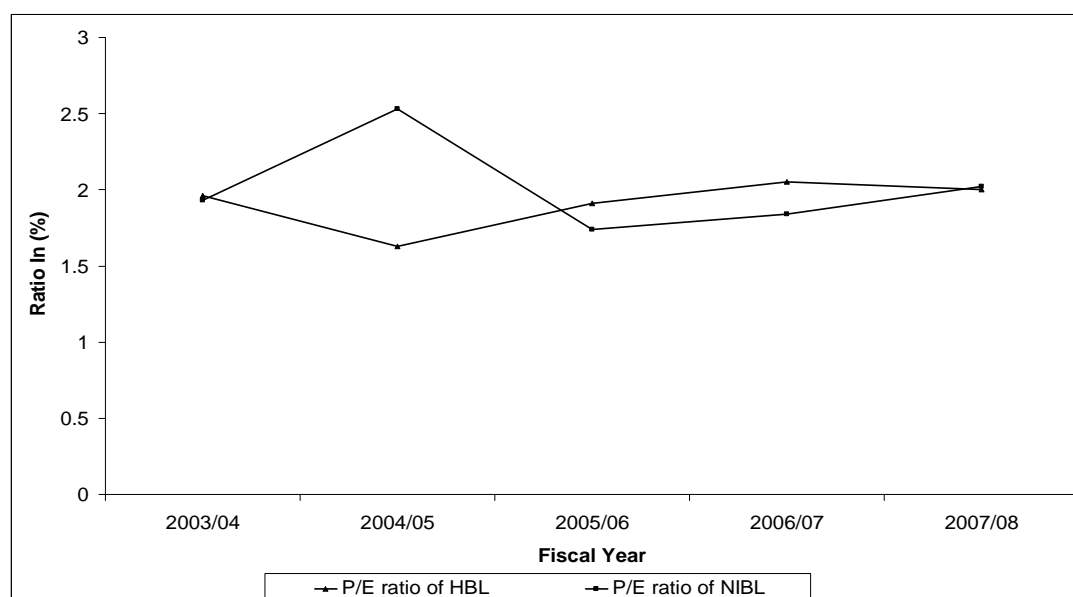


Figure 4.12 presents the P/E ratio of HBL and NIBL during the study period. It has been clearly shown that the P/E ratios of both banks are fluctuating trend. Comparatively, the average P/E ratio of NIBL has been found higher than that of the HBL, which reflects that the NIBL has better performance per growth in earning than that of HBL.

### **Major Findings of the study**

The major findings of the study on capital structure management of comparative study between HBL and NIBL are as follows:

- 4.2.1** The paid-up capital of both banks are increased an average rate of 17.25% 42.10% per annum of HBL and NIBL respectively. It indicates that the increasing slope of the trend line of paid-up capital, the NRB directives are followed by both banks.
- 4.2.2** ICR of both banks is fluctuating over the study period. HBL has higher debt servicing capacity on average with lower level of standard deviation and lower CV indicates more consistency in terms of ICR.
- 4.2.3** The D.E ratio of both banks is fluctuating over the study period. The debt (with deposit) to equity ratio of HBL is quite higher than NIBL in terms of average by 145.04%, it implies that the higher contribution of outsider's claim in total financing and in total assets than the owner. Comparatively, HBL has higher ratio than NIBL in each year with higher mean, lower S.E. and lower CV than NIBL. It indicates that HBL is more consistent and more uniformity in terms of ratio. Similarly, debt (without deposit) to equity ratio of HBL and NIBL are 81.32% and 81.60%, it indicates that the creditors are investing equal to total financing of both banks over the review period lower level of S.D. and CV indicates that the HBL seems more consistent in comparison of NIBL in terms o debt (without deposit) to equity ratio.
- 4.2.4** The CCAR of both banks is slightly fluctuating over the study period. Although, the CCAR is above the NRB standard that is the CCAR is adequate and sufficient on both banks. It also provides a protection and security to creditors and depositors, implies financial soundness of the bank.
- 4.2.5** The SCAR of HBL ranges from 2.50% in FY 2006/07 to 3.06% in FY 2007/08. But the SCAR of NIBL is maximum of 4.26% in FY 2006/07 and minimum of 3.06 in FY 2004/05 which represents that the ratio is fluctuating over the study period. The SCAR is within the limit of NRB standard as

prescribed by NRB, which should as prescribed by NRB, which should not be more than CCAR of the respective banks.

- 4.2.6** The total CAR of both banks is slightly increasing trend over the review period. Although, NIBL has lower level of risk in terms of relative measure, indicates more consistency between the ratios. However, throughout the review period, the total CAR of both banks is above the NRB standard except FY 2007/08 of NIBL. In this year, the CAR difference is negative, so, NIBL CAR is not with in NRB standard only in FY 2007/08. Which indicates that the financial position of the sampled banks is sound and strong.
- 4.2.7** The total expenses to total income of HBL is maximum in FY 2003/04 with 82.69% and minimum in FY 2004/05 with 77.48%. Similarly, the ratio of NIBL is maximum in FY 2003/04 with 83.29% and minimum in FY 2005/06 with 76.58%. The lower level of relative measure on CV of HBL (i.e.  $2.56\% < 3.42$ ) indicates more consistency in the ratio.
- 4.2.8** The ROE of HBL is minimum 18.40% in FY 2006/07 and maximum of 25.65% in 2004/05. But, the ROE of NIBL is minimum 19.67% in FY 2004/05 and maximum of 23.14% in FY 2006/07. The higher average ratio of NIBL (i.e.  $21.52\% < 21.98\%$ ) and lower level of relative measure on CV (i.e.  $13.04\% > 7.85\%$ ), indicates more consistency in the ratio of NIBL than HBL. So, the HBL has found more efficiency to utilize shareholders fund to generate more profit than HBL.
- 4.2.9** The ROA of both banks has been fluctuated over the review period. Throughout the study period, the ROA of NIBL is most preferable due to lower level of absolute and relative measure than that of HBL. NIBL seems efficient to utilize its resources in the most profitable project as compared to HBL.
- 4.2.10** The NIM of both banks has been fluctuated over the review period. The average NIM ratio of NIBL has been found higher than that of HBL (i.e.  $3.60\% < 3.70\%$ ). Therefore, NIBL seems to be more efficient in utilizing its assets in interest generating purpose in terms of lower level of standard deviation and CV as compared to HBL.
- 4.2.11** The P/E ratio of both banks has been fluctuating over the study period, the maximum of 2.05 times in FY 2006/07 and minimum of 1.63 times in FY 2004/05 of HBL and that of 2.53 times in 2004/05, 1.74 times in FY 2005/06 of NIBL. Relative measure on CV of HBL is lower than NIBL, which indicates more consistency in the ratio.



## **CHAPTER - V**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This chapter includes three aspects of the study summary, conclusion and recommendations. The first summarizing the whole study, the second draws the conclusion and the last one forwards the recommendations.

#### **5.1 Summary**

The study has been conducted with the objective to analyze comparatively study of capital structure management between Himalayan Bank Ltd. and Nepal Investment Bank Ltd. over the five years study period from FY 2003/04 to FY 2007/08 following a descriptive and analytical research design. The study is based on the secondary data, such as; complied annual report from NRB, annual report and financial statements of the respective banks and their websites are used as major sources of data. In this case study, various financial and statistical tools have been used to get the meaningful result and to meet the research objectives. The main objectives of the study is to examine the core capital adequacy, supplementary capital adequacy as well as D/E ratio, debt servicing capacity, to evaluate the profitability position and to provide suggestion and recommendation for their improvement. The study has analyzed capital structure. Capital adequacy and profitability position between two well known banks vig, HBL and NIBL during the five year period from FY 2003/04 to FY 2007/08. Various materials are received journals, articles, dissertations, published books to clear the research works. The conceptual reviews are concept of commercial banking industry, functions of commercial banks, bank capital management; sources & uses capital adequacy system structure theories. Besides these review of related articles and review of unpublished master's dissertations are carried out under research review.

The study is completed based on the secondary data. For the study purpose, Himalayan Bank Limited and Nepal Investment Limited were chooses as a study unit applying convenience sampling as technique out of 25 commercial banks in Nepal. The research methodology is followed to achieve the objectives of the study,

which relates with research design nature and sources of data, population and sample data processing and methods of analysis. Financial tools (ratio analysis) and statistical tools (average, standard deviation, coefficient of variation, coefficient of determinant, probable error) have been used according to requirement achieve the objectives.

The analysis has been made to compare the banks ratio with NRB standard. The paid-up capital of both banks has been increased during the study period. The D/E ratio and ICR of both banks are fluctuating trend. The core capital adequacy ratio and total capital adequacy ratio of both banks are above the NRB standard, which shows the protection and security to creditors and depositors as well as financial soundness of the bank. The supplementary capital adequacy ratio of both banks is within the limit as per the NRB standard over the review periods. So, the banks are running with adequate capital with sound and strong financial positions. The total expenses to total income ratio of both banks are fluctuating trend and the ROE and ROA of the both banks are also in fluctuating trend. The average ROE of NIBL is higher than HBL and the average ROA of HBL is higher than NIBL. NIM of both banks is in fluctuating trend but which shows better management of assets and liabilities during the study period. The price earning ratio of both banks is fluctuating.

## **5.2 Conclusions**

Based on the findings, following conclusion have drawn by analyzing the comparatively study of capital structure management between HBL and NIBL.

- 5.2.1** The increasing trend of paid-up capital as explained by the linear trend analysis shows the paid-up capital for both banks is increasing which indicates that the banks are trying to abide the NRB regulation in the regard of paid-up capital.
- 5.2.2** The increasing ICR of both banks indicate that the earning stream and interest expenses stream and interest expenses are consistence over the study period. Comparatively HBL is even more consistent in terms of lower level of CV.
- 5.2.3** The analyzed debt (with deposit) to equity ratio of HBL and NIBL is decreasing in each year except in FY 2005/06 of NIBL. Debt (without

deposit) to equity ratio of HBL seems more favorable due to lower risk in their investment and higher margin of safety.

- 5.2.4** CCAR of both banks is above the NRB standard over the review period. It reveals that the bank have adequately maintained its internal sources and indicates financially sound and strong, strictly followed by NRB standard.
- 5.2.5** SCAR of the both banks is within the NRB norms during the review period. It indicates that the banks are running with the adequate capital over the study period and has strictly followed by NRB directives.
- 5.2.6** Similarly, CAR reveals that the both banks are running with the adequacy capital and the capital fund of the banks is sound and sufficient to meet the banking operation as per the NRB standard except the NIBL in FY 2007/08. This finding also concludes that NRB seems successful to regulate and monitor the capital of the banks except the NIBL in FY 2007/08. In addition, it implies that the banks have held the adequate capital to support their risk-adjusted assets.
- 5.2.7** The total expenses to total income ratio is fluctuating trend of the both banks. But in terms of lower level of relative measure of CV indicates more consistency of HBL in terms of ratios.
- 5.2.8** The ROE is in fluctuating trend in each of both banks over the study period. Comparatively, NIBL has found more efficiency to utilize shareholder's fund to generate more profit than HBL due to higher level of average ratio and lower level of CV.
- 5.2.9** The ROA of both banks is fluctuating trend. But in lower level of absolute and relative measures, NIBL seems more efficient to utilize its resources in the most profitable project as compared than HBL.
- 5.2.10** NIM of both banks is fluctuating. The NIBL seems to be more efficient in utilizing assets in interest generating purpose in terms of higher average, lover CV and lower standard as compared to MBL.
- 5.2.11** The P/E ratio is fluctuating of the both banks over the review period but lower relative measures on CV of HBL indicates more consistency in the P/E ratio than NIBL.

### **5.3 Recommendation**

There are many recommendations for the management of both banks. But due to the time constraints and limitations of the thesis only major recommendation are mentioned as below.

- 5.3.1** The capital structure [i.e. debt (without deposit) to equity ratio] of both banks is highly leveraged. The proportion of debt and equity capital should be the effect of tax advantage and distress. Since the D/E ratio of both banks has been found extremely higher, the capital structure position is aggressive due to greater public deposit. Thus, both banks are required to maintain improved capital structure by increasing equity base i.e. either issuing more capital or expanding general reserve and retained more earnings. With this improved capital structure of the banks, it will compromise among the conflicting factors of cost and bank's risk. Higher level of D/E ratio indicates the total capital structure of the outsider's claims than the owner's. It creates bad impact to the outsiders. So, make it uniformity by both banks.
- 5.3.2** Capital adequacy ratio of both banks are sufficient as per NRB standard expect in FY 2003/04 of HBL and in FY 2007/08 of NIBL and the ratios are changing frequently of both banks during the study period. So it is suggested to maintain stable capital adequacy ratios with in the boundary of NRB standard.
- 5.3.3** The total expenses to total income ratio of both banks are fluctuating trend during the review period. So, it is recommended to the management of the both banks to reduce the ratio, which may positively affect the banks profitability.
- 5.3.4** The low level of ICR is an indicator of poor debt servicing capacity in both banks. So, the higher ratio is favorable, it is recommended to both banks to improve the ICR efficiently. It is necessary to sustain the business in long run.
- 5.3.5** The both banks are recommended to increase their ROE and ROA ratio through full utilization of fund to maximize shareholder's wealth.

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## Appendix 1

### List of Commercial Banks in Nepal

S. N.	Name of the Banks	Operation Date In A.D.	Listed Dated In A.D.
1.	Nepal Bank Ltd.	1937-11-15	-
2.	Rastriya Banijya Bnak	1966-01-23	-
3.	NABIL Bank Ltd.	1984-07-16	1985-11-24
4.	Nepal Investment Bank Ltd.	1986-02-27	1986-07-22
5.	Standard Chartered Bank Ltd.	1987-01-30	1988-07-04
6.	Himalayan Bank Ltd.	1993-01-18	1993-07-05
7.	Nepal SBI Bank Ltd.	1993-07-07	1995-01-17
8.	Nepal Bangladesh Bank Ltd.	1993-06-05	1995-12-24
9.	Everest Bank Ltd.	1994-10-18	1996-04-07
10.	Bank of Kathmandu Ltd.	1995-03-12	1997-07-17
11.	Nepal Credit and Commerce Bank Ltd.	1996-10-14	2005-01-31
12.	Lumbin Bank Ltd.	1998-07-17	2004-11-10
13.	Nepal Industrial and Commercial Bank Ltd.	1998-07-21	2000-06-13
14.	Machhapuchhre Bank Ltd.	2000-10-03	2003-05-28
15.	Kumari Bank Ltd.	2001-04-03	2004-07-29
16.	Laxmi Bank Ltd.	2002-04-03	2004-04-20
17.	Siddhartha Bank	2002-12-24	2006-02-23
18.	Agriculture Development Bank Ltd.	2006-03-16	-
19.	Global Bank Ltd.	2007-01-02	-
20.	Citizen International Bank Ltd.	2007-04-20	-
21.	Prime Commercial Bank Ltd.	-	-
22.	Bank of Asia Nepal	-	-
23.	Sunrise Bank Ltd.	-	-
24.	Development Credit Bank Ltd.	-	-
25.	NMB Bank Ltd.	-	-

Source: [www.nrb.org.com](http://www.nrb.org.com)

## Appendix 2

### List of On-Balance Sheet and Off-Balance Sheet Assets and Weights

S.N.	Particulars	Weights
<b>A</b>	<b>On Balance Sheet Assets</b>	
1.	Cash Balance	0%
2.	Gold (Tradable)	0%
3.	Balance at NRB	0%
4.	Investment in Govt. Securities	0%
5.	Investment in NRB Bond	0%
6.	Fully Secured loan against Fixed Deposit Receipt	0%
7.	Fully Secured loan against Govt.	0%
8.	Balance at Domestic Banks and Financial Institution	20%
9.	Fully Secured for loan against FDR of other bank	20%
10.	Balance at Foreign Banks	20%
11.	Money at Call	20%
12.	Loan against Guarantee of Internationally Rated Banks	20%
13.	Other Investment in Internationally Rated Bank	20%
14.	Investment in shares Debentures and Bonds	100%
15.	Other Investments	100%
16.	Loan Advances and Bills Purchased/Discounted	100%
17.	Fixed Assets	100%
18.	All other assets	100%
<b>B</b>	<b>Off Balance Sheet Items</b>	
1.	Bills Collection	0%
2.	Forward Foreign Exchange Contract	10%
3.	Letters of Credit with maturity of less than 6 months	20%
4.	Guarantees Provided against CG of A+ international banks	20%
5.	Letters of credit with maturity more than 6 months	50%
6.	Bid Bond	50%
7.	Performance Bond	50%
8.	Advance Payment Guarantee	100%
9.	Financial Guarantee	100%
10.	Other Guarantee	100%
11.	Irrevocable Loan Commitment	100%
12.	Contingent Liability in respect of income tax	100%
13.	All other contingent liabilities	100%

Source: NRB, Directives

## Appendix 3 (A)

### Himalayan Bank Ltd.

Balance sheet and profit and Loss Account (Rs. In '000')

Capital Liabilities	FY 2003-4	FY 2004-5	FY 2005-6
Capital	536,250	643,500	772,200
Reserves & Surplus	787,916	898,246	993,976
Debenture & Bonds	-	-	360,000
Deposit	22,010,333	24,814,012	26,490,852
Borrowing	659,006	506,048	144,625
Bills payable	64,382	68,399	73,578
Other Liabilities	704,138	914,489	625,160
<b>Total Liabilities</b>	<b>24,762,025</b>	<b>27,844,695</b>	<b>29,460,390</b>
<b>Assets</b>			
Cash Balance	274,235	286,530	305,428
Bank Balance	1,726,949	1,727,941	1,411,924
Money at call	368,900	441,081	1,005,280
Investment	9,292,103	11,692,342	10,889,032
Loan and Advances	11,951,869	12,424,521	14,642,560
Fixed Assets	299,643	295,822	540,824
Other Assets	848,326	976,459	665,342
<b>Total Assets</b>	<b>24,762,025</b>	<b>27,844,695</b>	<b>29,460,390</b>
<b>Expenses</b>			
Interest Expenses	491,543	561,964	648,842
Staff Expenses	152,509	178,589	234,589
Office Expenses	211,047	277,375	329,699
Exchange Loss	-	-	-
Bad debts written off	-	-	-
Loan Loss Provision	186,225	58,886	145,155
Provision for NBA	10,988	15,012	-
Provision for staff Bonus	46,731	58,060	67,240
Provision for Income Tax	157,522	214,265	214,941
<b>Total Expenses</b>	<b>1,256,565</b>	<b>1,364,151</b>	<b>1,640,466</b>
<b>Income</b>			
Interest Income	1,245,895	1,446,468	1,626,474
Commission and Discount	123,929	132,816	165,448
Exchange Income	112,419	137,301	198,130
Non operating Income(NET)	3,299	2,795	1,877
Other Income	34,076	41,301	52,325
<b>Total Income</b>	<b>1,519,618</b>	<b>1,760,681</b>	<b>2,044,254</b>
<b>Net Profit/(Loss)</b>	<b>263,053</b>	<b>396,530</b>	<b>403,788</b>

Source: HBL Annual Report 2003/04-2007/08

### Appendix 3 (B)

#### Nepal Investment Bank Limited

Balance sheet and profit and Loss Account (Rs. In '000')

Capital Liabilities	FY 2003-4	FY 2004-5	FY 2005-6
Capital	295,293	587,738	590,586
Reserves & Surplus	433,755	592,435	824,854
Debenture & Bonds	-	-	550,000
Borrowing	361,500	350,000	-
Deposit	11,524,680	14,254,574	18,927,306
Bills payable	57,836	15,008	18,820
Other Liabilities	582,432	479,309	418,572
<b>Total Liabilities</b>	<b>13,255,496</b>	<b>16,274,064</b>	<b>21,330,138</b>
<b>Assets</b>			
Cash Balance	315,383	374,266	562,561
Bank Balance	911,540	966,215	1,773,961
Money at call	310,000	140,000	70,000
Investment	3,862,483	3,934,189	5,602,869
Loan and Advances	7,130,126	10,126,056	12,776,208
Fixed Assets	249,788	320,592	343,450
Other Assets	476,177	412,746	201,090
<b>Total Assets</b>	<b>13,255,496</b>	<b>16,274,064</b>	<b>21,330,138</b>
<b>Expenses</b>			
Interest Expenses	326,020	354,549	490,947
Staff Expenses	89,749	97,549	111,054
Office Expenses	149,479	182,915	200,215
Exchange Loss	-	-	-
Bad debts written off	-	-	-
Loan Loss Provision	91,092	140,409	103,808
Provision for NBA	-	-	-
Provision for staff Bonus	25,719	37,075	50,491
Provision for Income Tax	78,801	101,529	154,378
<b>Total Expenses</b>	<b>761,042</b>	<b>913,481</b>	<b>1,110,893</b>
<b>Income</b>			
Interest Income	731,403	886,800	1,172,742
Commission and Discount	55,747	93,551	115,942
Exchange Income	87,980	102,518	125,747
Non operating Income(NET)	17,68	61,92	391
Other Income	36,816	56,567	35,902
<b>Total Income</b>	<b>913,714</b>	<b>1,145,628</b>	<b>1,450,724</b>
<b>Net Profit/(Loss)</b>	<b>152,672</b>	<b>232,147</b>	<b>339,831</b>

Source: NIBL Annual Report 2003/04-2007/08

## Appendix 4 (A)

### Himalayan Bank Ltd.

Calculation of NIT, EBT and NPAT \* (Rs. In '000')

Particulars\Fiscal Year	FY 2003-4	FY 2004-5	FY 2005-6
Interest Income	1,245,895	1,446,468	1,626,474
Interest Expenses	491,543	561,964	648,842
Net Interest Income	754,352	884,504	977,632
Interest Income	1,245,895	1,446,468	1,626,474
Commission and Discount	123,929	132,816	165,448
Exchange Income	112,419	137,301	198,130
Other Income	34,076	41,301	52,325
Total Operating Income	1,516,319	1,757,886	2,042,377
Staff Expenses	152,509	178,589	234,589
Office Expenses	211,047	277,375	329,699
Exchange Loss	-	-	-
Bad debt written off	-	-	-
Loan loss provision	186,225	58,886	145,155
Provision for NBA	10,988	15,012	-
Provision for staff Bonus	46,731	58,060	67,240
Total Operating Expenses	607,500	587,922	776,683
Operating Profit (EBIT)	908,819	1,169,964	1,265,694
Less: Interest Expenses	481,543	561,964	648,842
EBTs & non-operating Income items	427,276	608,000	616,852
Add: Non-operating Income (NET)	3,276	2,795	1,877
Earning Before Tax (EBT)	430,575	610,795	618,729
Less: provision for Income Tax	157,522	214,265	214,941
Net Profit/(Loss) or NPAT	273,053	395,530	403,788

**Source: \* Work out from Appendix 3 (A)**

## Appendix 4 (B)

### Nepal Investment Bank Limited

Calculation of NIT, EBIT, EBT and NPAT \* (Rs. In '000')

Particulars\Fiscal Year	FY 2003-4	FY 2004-5	FY 2005-6
Interest Income	731,403	886,800	1,172,742
Interest Expenses	326,202	354,549	490,947
Net Interest Income	405,201	532,251	681,795
Interest Income	731,403	886,800	1,172,742
Commission and Discount	55,747	93,551	115,942
Exchange Income	87,980	102,518	125,747
Other Income	36,816	56,567	35,902
Total Operating Income	911,946	1,139,436	1,450,333
Staff Expenses	89,749	97,004	111,054
Office Expenses	149,479	182,915	200,215
Exchange Loss	-	-	-
Bad debt written off	-	-	-
Loan loss provision	91,092	140,409	103,808
Provision for NBA	-	-	-
Provision for staff Bonus	25,719	37,075	50,491
Total Operating Expenses	356,039	457,403	465,568
Operating Profit (EBIT)	555,907	682,033	984,765
Less: Interest Expenses	326,202	354,549	490,947
EBTs & non-operating Income items	229,705	327,484	493,818
Add: Non-operating Income (NET)	1,768	6,192	391
Earning Before Tax (EBT)	227,937	333,676	494,209
Less: provision for Income Tax	78,801	101,529	154,378
Net Profit/(Loss) or NPAT	149,136	232,147	339,831

Source: \* Work out from Appendix 3 (B)

## Appendix 5 (A)

### Himalayan Bank Ltd.

Calculation sheet of Different Ratios\*

Particulars\Fiscal Year	FY 2003-4	FY 2004-5	FY 2005-6
Share Capital (Paid-up)	536,250	643,500	772,200
Reserve & Surplus	787,916	898,246	993,976
Total Equity Capital	1,324,166	1,541,746	1,766,176
Debenture & Bonds	-	-	360,000
Deposit	22,010,333	24,814,012	26,490,852
Borrowing	659,006	506,048	144,625
Bills Payable	64,382	68,399	73,578
Other Liabilities	704,138	914,489	625,160
Total debt Capital (with deposit)	23,437,859	26,302,949	27,694,215
Total debt Capital (without deposit)	1,427,526	1,488,937	1,203,363
Total debt (with deposit) to equity Ratio (%)	1770.01	1706.05	1568.03
Total debt (with deposit) to equity Ratio (%)	107.81	96.57	68.13
Operating Profit (EBIT)	908,819	1,169,964	1,265,694
Interest Change	491,543	561,964	648,842
Interest coverage Ratio (Times)	1.85	2.08	1.95
Total Expenses	1,256,565	1,364,151	1,640,466
Total Income	1,519,618	1,760,681	2,044,254
total Expenses to Total Income Ratio (%)	82.69	77.48	80.25
Net Profit/(Loss) or NPAT	273,053	395,530	403,788
Total Equity Capital	1,324,166	1,541,746	1,766,176
Return on Equity (%)	20.62	25.65	22.86
Net Profit/(Loss) or NPAT	273,053	395,530	403,788
Total Assets	24,762,025	27,844,695	29,460,390
Return on Assets (%)	1.10	1.42	1.37
Net Interest Income	754,352	884,504	977,632
Interest on Govt. Sect.	9,292,103	11,692,342	10,889,031
Loan & Advances	11,951,689	12,424,521	14,642,560
Net Earning Assets	21,243,792	24,116,	25,531,591
Net Interest Margin (NIN in %)	3.55	3.67	3.83
Share Capital	536,250	643,500	772,200
Par Value of Share (Rs)	100	100	100

No. of Outstanding Shares	5362.50	6435	7722
Net Profit/Loss or NPAT	273,053	395,530	403,788
Earning Per Shares (EpS in Rs)	50.92	61.47	52.29
Market price per share (MPPS in Rs)	100	100	100
Price Earning Ratio (P/E ratio in times)	1.96	1.63	1.91

Source:



## Appendix 5 (B)

### Nepal Investment Bank Limited

Calculation sheet of Different Ratios\*

Particulars\Fiscal Year	FY 2003-4	FY 2004-5	FY 2005-6
Share Capital (Paid-up)	295,293	587,738	590,586
Reserve & Surplus	433,755	592,435	824,854
Total Equity Capital	729,048	1,180,173	1,415,440
Debenture & Bonds	-	-	550,000
Deposit	11,524,680	14,254,574	18,927,306
Borrowing	361,500	350,000	-
Bills Payable	57,836	15,008	18,820
Other Liabilities	582,432	474,309	418,572
Total debt Capital (with deposit)	12,526,448	15,093,891	19,914,698
Total debt Capital (without deposit)	1,001,768	839,317	987,392
Total debt (with deposit) to equity Ratio (%)	1,718.19	1278.96	1406.96
Total debt (with deposit) to equity Ratio (%)	137.41	71.12	69.76
Operating Profit (EBIT)	555,907	682,033	984,765
Interest Change	326,202	354,549	490,947
Interest coverage Ratio (Times)	1.70	1.92	2.01
Total Expenses	761,042	913,481	1,110,893
Total Income	913,714	1,145,628	1,450,724
Total Expenses to Total Income Ratio (%)	83.29	79.74	76.58
Net Profit/(Loss) or NPAT	152,672	237,147	339,831
Total Equity Capital	729,048	1,180,173	1,415,440
Return on Equity (%)	20.94	19.67	24.01
Net Profit/(Loss) or NPAT	152,672	232,147	339,831
Total Assets	13,255,496	16,274,064	21,330,138
Return on Assets (%)	1.15	1.43	1.59
Net Interest Income	405,201	532,251	681,795
Interest on Govt. Sect.	3,862,483	3,934,189	5,602,869
Loan & Advances	7,130,126	10,126,056	12,776,208
Net Earning Assets	10,992,609	14,060,245	18,379,077
Net Interest Margin (NIN in %)	3.69	3.79	3.71
Share Capital	295,293	587,738	590,586
Par Value of Share (Rs)	100	100	100

No. of Outstanding Shares	2952.93	5877.38	5905.86
Net Profit/Loss or NPAT	152,672	237,147	339,831
Earning Per Shares (EpS in Rs)	51.70	40.35	57.54
Market price per share (MPPS in Rs)	100	100	100
Price Earning Ratio (P/E ratio in times)	1.93	2.53	1.74

Source:

## Appendix 6 (A)

### Himalayan Bank Ltd.

Calculation of CC, SC, TCF and CCAR, SCAR, CAR (Rs. In '000')

Particulars\Fiscal Year	FY 2003-4	FY 2004-5	FY 2005-6
Core Capital	1,297,384	1,525,773	1,721,940
Supplementary Capital	498,535	491,290	520,903
Total Capital Fund	1,796,219	2,017,064	2,242,843
Total Risk weighted Assets	16,860,638	183,211,720	19,918,325
CCAR (%)	7.69	8.33	8.65
SCAR (%)	2.96	2.68	2.62
CAR (%)	10.65	11.01	11.26
CCAR (%) with NRB Standard	5.5	5.5	6
SCAR (%) with NRB Standard	Not more than core capital or %		
CAR (%) with NRB Standard	11	11	11

Source: Himalayan Bank Limited, Annual Reports  
FY 2003-4 to FY 2007-8

## Appendix 6 (B)

### Nepal Investment Bank Ltd.

Calculation of CC, SC, TCF and CCAR, SCAR, CAR (Rs. In '000')

Particulars\Fiscal Year	FY 2003-4	FY 2004-5	FY 2005-6
Core Capital	710610	161478	1393274
Supplementary Capital	388770	417291	700926
Total Capital Fund	1099380	1578769	2094200
Total Risk weighted Assets	9836700	13632907	17491788
CCAR (%)	7.22	8.52	7.97
SCAR (%)	3.96	3.06	4.01
CAR (%)	11.18	11.58	11.97
CCAR (%) with NRB Standard	5.5	5.5	6
SCAR (%) with NRB Standard	Not more than core capital or %		
CAR (%) with NRB Standard	11	11	11

Source: Nepal Investment Bank Limited  
FY 2003-4 to FY 2007-8