CHAPTER-I
INTRODUCTON

1.1 Background of the Study:

Nepal is a predominantly agricultural landlocked country. Its economy is almost based on agriculture. Though dependence is decreasing day by day and approximately 80% of total population is still hanging on agriculture. Thus a major source of income of the people as well as the country is agriculture. But the position of the agriculture in the country is not so good and the entire country is losing its revenue from agriculture day by day because of lack of sufficient capital, fertilizer, irrigation, latest technology, professionalism in agriculture, supportive government policy and stable government. People are unable to handle their livelihood from this profession. They are changing their profession toward trade, commerce and industry.

Fund or capital is the most essential part for the development of any sector. Establishment of trade and industry is impossible in the absence of sufficient capital. In the context of capital flows, the bank plays a vital role as a financial intermediary. Without banks, capital flow could not be systematic. In the present business, market becomes more competitive and complicated due to globalization, transfer of technology, political situation, socio-cultural, economic condition and global warming. Every sort of change occurring in one sector of the world affects the other. So no one can operate their business successfully only with their own capital. Everyone should depend upon financial intermediary even for the small scale business. Thus the bank plays the key role in the economic development of the country.

The business world today is entirely different from past. The social needs have increased tremendously in quantity as well as in quality. So, the establishment and development of business is essential and it is possible only if there is sufficient fund. The type of finance needed by a firm largely depends upon the type of enterprise and varies from one firm to another.

There are two sources of finance, internal and external. An internal source of finance mainly consists of retained earnings of the enterprise, different kinds of reserves and provision. With the development of finance and financial institutions, it is no longer for an enterprise to finance from its internal sources alone and have a

balance budget. Furthermore the innovation of corporate firm of business organization with the principal of limited liability and efficient technique of acquiring capital through the issue of various ownership and debt securities has enable investors to satisfy their diverse assets preferences. So it is possible for a corporate enterprise to attract the external funds from the public by issuing shares, debentures and preference share to the public is essential under government rules and regulation.

Success and failure of any organization or banks mainly depends upon the structure of its optimum capital structure. It determines the profit making power of the bank as well as it helps to reduce its risk to minimum level. Increase in equity capital decreases the earning power as well as risk to its shareholders. Similarly increase in debt capital increase the profit as well as risk to the shareholders. Therefore, the bank should manage the optimum capital structure so that profit and risk both could be managed well.

Hence banking is the source for economic development. The bank itself should have strong and sufficient capital to mobilize the funds into a profitable direction by satisfying their stakeholders. Without smooth and sound capital structure, a bank could not be able to maintain the financial position into a desired goal.

1.1.1 Commercial Banks

Commercial banks means a bank which operates currency exchange transactions, accept deposits, provides loan performs dealing relating to commerce except the banks which have been specified for the cooperative, agriculture, industry or other similar specific objectives. There are 26 commercial banks in Nepal.

1.1.2 History of Bank

When, where and how the modern banking actually came in existence cannot be pointed out. But from the different historical facts it reveals that some banking activities have been carried out since the time immemorial. At that time merchants, money lenders, goldsmiths, etc performed the banking transactions. Latter the transactions started increasing and they became the activities of money exchange securing the valuable goods, deposit money, lending money and so on. For all these types of activities written receipts began to be used and the modern banking started. In the historic age sources say that goldsmiths and money lenders contributed to large extent in the growth of banking system. They used to store peoples gold charging

them nominal charges issuing receipts to the depositors which could be used as money. Latter they started advancing money charging interest on it. So the goldsmiths and money lenders started performing the functions of modern banking i.e. accepting deposits and advancing loans. However, the modern banking originated in Italy. The word bank was derived from the Italian word "Banco" which means accumulation of money or stock. The bank of Venice which was established in 1157 A.D was the first bank in the history of banking and it was established to finance the monarch in the wars. The Bank of Barcelona, Spain which was established in 1404 A.D. was the second bank in the World and then The Bank of Genoa was set up in 1407 A.D.

The first central bank though was the bank of England which was established in 1844 A.D. Banking has come to the present advanced form through various stages. Traditional forms of banking were traced during the civilization of Greek, Rome and Mesopotamia. With large banking firms established in Florence, Rome, Venice and other Italian cities the banking activities spread through out the Europe and it slowly spread throughout the world.

1.1.3 Banking industry in Nepal

The specific date of beginning of money and banking transaction in Nepal is unknown. The banking functions were carried out in unorganized sectors. It is found that minted coins, copper coins, silver coins, and gold coins were introduced by different kings.

Institutional development of modern banking in Nepal had begun from early 1990s. With the establishment of Nepal Bank Limited in 1994 B.S, the new era of banking sector had started in Nepal. As a central authority of monitory system, Nepal Rastra Bank was established in 2013 B.S. under the provision of Nepal Rastra Bank Act 2012, with the objectives of helping in the development of monetary and financial sector by undertaking various functions. Another step was added when Rastriya Banijya Bank was established in 1966(2022 B.S.) under the Banijya Bank Act 1965(2021 BS). Likewise, Agriculture Development Bank was established in 1965(2024 BS) with the objective of increasing the life standard of those people who are involved in agriculture.

The banks opened before the decade of 1980s were owned by the government. No private sector was permitted to open banks in Nepal. The process of development adopted liberalized economic policies to develop the financial sector. As a pre-

condition to economic liberalization, the Foreign Investment and Technology Transfer Act, 1981 came into existence. The government allowed private sectors to open banks. Joint venture projects were also allowed. Many joint venture commercial banks and financial institutions were established. As a result, Nepal Arab Bank Limited was established as a first joint venture commercial bank in 1985 under the provision of Commercial Bank Act, 1974 and Company Act, 1965. Then, Nepal Indosuez Bank Limited was established in 1985 and Nepal Grindlays Bank Limited in 1986. In 2001, the name of Nepal Grindlays Bank Limited has been changed into Standard Chartered Bank Limited and Nepal Indosuez Bank Limited has been changed into Nepal Investment Bank Limited in 2002, presently which has no foreign share of investment. After the restoration of multiparty democracy, the newly formed government adopted liberalized economic policies aimed at accelerating economic growth and considerably reducing state interference in business. The government encouraged foreign and private investment by offering attractive incentives and facilities including 100% foreign ownership in all but few sectors. This help to create conductive business environment for banking. As a result, additional commercial banks came into existence. When the internal violence shows green signal to manage and Nepal Rastra Bank make ease for rules and regulations, many new commercial banks are coming in existence and existing development banks and financial institutions are upgrading them as commercial banks. At present there are 26 commercial banks registered and operated in Nepal.

Table 1.1(Listed commercial banks)

S.N.	Names of the Banks
1	Nepal Bank Limited
2	Rastriya Banijya Bank
3	NABIL Bank
4	Nepal Investment Bank Ltd
5	Standard Chartered Bank Nepal Ltd.
6	Himalayan Bank Ltd.
7	Nepal SBI Bank Ltd.
8	Nepal Bangladesh Bank Ltd.
9	Everest Bank Ltd
10	Bank of Kathmandu Ltd.
11	Nepal Credit and Commerce Bank Ltd.
12	Lumbini Bank Ltd.
13	Nepal Industrial and Commercial Bank Ltd.
14	Machhapuchhre Bank Ltd.
15	Kumari Bank Ltd.
16	Laxmi Bank Ltd.
17	Siddhartha Bank Ltd.
18	Agriculture Development Bank Ltd.
19	Global Bank Ltd.
20	Citizens Bank International Ltd.
21	Prime Commercial Bank Ltd.
22	Bank of Asia Nepal Ltd.
23	Sunrise Bank Ltd.
24	Development Credit Bank Ltd.
25	NMB Bank Ltd.
26	Kist Bank Ltd.

Source: www.nrb.org.np

1.1.4 Profile of the Banks:

a) Nepal Investment Bank Ltd. (NIBL)

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

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on

April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

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

A group of companies holding 50% of capital

Rastriya Banijya Bank holding 15% of the capital.

Rastriya Beema Sansthan holding the same percentage.

The remaining 20% being held by the General Public (which means that NIBL is a company listed on the Nepal Stock Exchange).

b) Himalayan Bank Limited

Himalayan Bank Limited was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial Banks of Pakistan. Banking operation was commenced from January 1993. Himalayan Bank is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the Bank also offers industrial and merchant banking services.

Himalayan Bank has total network of 17 branches across the Country and a counter in the premises of the Royal Palace. There are six branches in Kathmandu valley. In addition, the bank also has ten branches outside Kathmandu valley.

1.2 Objectives of the Study

The main objective of the study is to analyze the behavior of the capital structure of the selected commercial banks. The study involves 5 yrs financial data of two commercial banks to evaluate, compare and examine their capital structure. The main objectives of selected commercial banks are given below:

a) To find out comparative position of capital structure of Nepal Investment Bank Ltd. (NIBL) and Himalayan Bank Ltd. (HBL).

b) To measure the cost of capital of NIBL and HBL.

c) To examine the different sources of capital structure of the two banks.

d) To examine the relationship of capital structure with variables such as earning per share, dividend per share and net worth

e) To provide suggestions on the basis of findings for future growth of the banks under study.

1.3 Statement of the Problem

The financial problem is to be considered as one of the greatest obstacle for overall socio-economic development of any country. Commercial banks can play a predominant role in the development of agriculture, industry, commerce and trade. In underdeveloped and developing countries, there are not quite commercial activities of financial institutions. In Nepal commercial banks have not been organized and developed, there is insufficient capital which can help to prevent financial problem. So, they are still in the age of growth and development. Most commercial banks of Nepal miss-invest their capital due to lack of proper knowledge on utilization of capital in productive sectors. Some commercial banks have lost a lot of capital to the selfishness i.e. they give loan to their relatives, those who give bribe to them, those who have unauthorized influence on officers.

Banks accepts various types of deposits from the general public and lends them to various sectors for generating some return at the same time assuming some level of risk associated with the specific sector. Thus, there is risk and return. To minimize risk for a given level of return or to maximize return for a given level of risk, banks have to manage their optimum level of capital structure. But Nepal Bangladesh Bank Ltd, Nepal Bank Ltd, and Rastriya Banijya Bank Ltd, have huge loss despite their strong capital and deposit because of the lack of their capability in capital structure management. The matter of assisting in economic growth of the company growth of the company by these banks is far away from the reality and in this context of being burden to themselves with the proportion of non performing loan about 60% of their total loan portfolio.

Other commercial banks are also not showing enough consciousness towards the capital structure management. Every bank seems to go after a few lucrative business sectors or business houses and for price war. This has disproportionately benefited a few business people at the cost of larger section of the population. The risk- return trade-of has not been properly analyzed before making capital proportion, which has result the higher cost of fund than the acceptable level. Current situation of

banking sector shows that the growth of Non-Performing Assets (NPA) has been faster than the growth of credit due to the higher cost of fund and poor management of loan.

In last few years, the trend of launching joint venture banks seems to be stopped and some of the foreign banks have withdrawn their investment from Nepal. Withdrawal of foreign finds is due to some anomalies in Nepalese banking sector irrespective of what the withdrawing foreign bank would say officially to the Nepalese authorities or the general public. If such situation of shortsightedness prevails longer, Nepalese banking sector may fall into crisis as in East and Argentina in the past and even the public deposits made in these banks may be unsecured. To avoid such potential crisis, the concerned authorities i.e. Nepal Rastra Bank and commercial banks themselves have to pay their proper attention in their capital structure management. Rare researches made regarding this issue also indicate the less perceived importance for such a sensitive fact. This study will attempt to answer the following questions:

a) How far the banks under study are able to maintain their optimum capital structure?
b) How far the banks under study are able to generate income from utilization of debt efficiency?
c) What are the factors affecting financial efficiency?
d) To what extent the investors of these banks are getting benefits from its current operation?
e) What are actual overall financial conditions of these banks?
f) Is return level of the banks under study satisfactory in relation to the risk?
g) Whether the capital structure affects the growth of a bank or not?

1.4 Significance of the Study

This study is concern with the capital structure management of Nepal Investment Bank Ltd. and Himalayan Bank Ltd. It is expected that this study will significantly contribute towards the field of capital structure.

The banks capital structure should be managed in such a way that the fund could be provided efficiently and effectively. The goal of the study is to examine the

efficiency and performance of these two banks management as reflected in the annual financial reports. The following points justify the study:

a) The study will help to specify the entire glory of these two banks especially in the sector of capital structure.

b) The study will help to show the financial position of the banks to the investors as well as concerned management.

c) The study will help to find out which bank is showing comparatively good performance in the economic development of the country.

d) The study will help to indicate strengths and weaknesses of these banks especially in the sector of capital structure.

e) Optimum capital structure is the key of success of any organizations to lack of sound knowledge of capital structure, many organizations failed in our country. So, this study will help to the concerned management to improve their efficiency.

f) This study will also be helpful to depositors, lenders, borrowers, policy makers, shareholders and customers of the banks under research.

1.5 Limitations of the Study

The study suffers from the following limitations.

a) This study is based on secondary sources of data i.e. annual reports of the banks, Nepal Rastra Bank and government publications and other related journals. Thus, the result of the analysis depends on the information provided by the concern offices.

b) The study covers only the latest five fiscal years.

c) The study covers the capital structure management and its impact on risk-return trade-of the banks under research.

d) Standard normal performance level is not available. So, interpretations of data depend upon judgment and common sense. In this context, concerned experts are also consulted.

1.6 Organization of the Study

This study has been organized in five chapters. Each devoted to some aspects of the capital structure of these two banks. The titles and contents of each chapter are briefly mentioned below.

Chapter 1: Introduction

It describes the introductory part of the study where general background, statement of the problem, objective, limitations, significance and organization of the study are investigated.

Chapter 2: Review of Literature

It deals with review of available literature of related studies. It contains conceptual review, major studies, review of books, review of articles and reports.

Chapter 3: Research Methodology

It describes the research methodology adopted in carrying out the present research. It includes research design, sources of data, method of analysis, and limitation of the study, financial and statistical tools.

Chapter 4: Presentation and Analysis of Data

It concerns with presentation and analysis of data. Various tools are used to analyze the data like statistical tools, financial tools and accounting tools. It consists of analyzing capital structure of the banks under research.

Chapter 5: Summary, Conclusion and Recommendation

This chapter comprises summary, conclusion and some recommendation to the organization that help them to improve their miserable situation to some extent.

CHAPTER-II
REVIEW OF LITERATURE

2.1 Introduction

This chapter deals with the capital structure management as a brief to find previous condition of the company which gives proper material to forecast the future of the company.

The purpose of the reviewing the literature is to develop some expertise in one's area to see what new contribution can be made and to review some idea for developing design.[1]

For the study of comparative capital structure management of Nepal Investment Bank Ltd. (NIBL) and Himalayan Bank Ltd.(HBL), there is not enough previous investigation information of capital structure management about them. During the investigation, dissertation have been consulted which are presented by various students (researcher) about capital structure management.

2.2 Conceptual Review

Various articles, books and principles are reviewed to clarify capital structure management.

2.2.1 Concept of Capital Structure

Capital is termed in different ways by different scholars and professionals. Economics speak of as wealth, businessmen speak of it as total assets whereas the accountant as net assets or stockholders interest as shown by the balance sheet or the net worth of the shareholders equity. Similarly, a lawyer calls it capital stock. Whatever may be the term used, capital is the fund raised to finance different assets, short-term or long-term. Therefore, capital is a mix of long-term as well as short-term funds.[2] Capital structure decision is one of the most important decision that are taken by financial manager. It is because the capital structure decision affects weighted

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[1] Pant, P.R and Wolff, H.K. (2005). *Social Science Research and Thesis Writing.*4th edition, Budhha Academic Enterprises, p:39

[2] Bhattarai, R. (2008). *Capital Structure Management Theory and Practice*. Kathmandu: Dhaulagiri Books and stationary, p:1

average cost of capital (WACC), value of the firm and risk position of the firm. A firm therefore, should try to find out the structure, which minimizes the WACC and risk and maximizes the value of the firm. The optimal capital structure is the combination of debt, preferred stock, and common equity that minimizes the WACC. At the capital structure where the WACC is minimized, the value of firm's securities (or value of the firm) is maximized. As a result, the minimum cost of capital is called optimal capital structure.[3]

Financial structure:

Financial structure refers to the way the firm's assets are financed to use or invest in business. The various means of financing represent the financial structure of an enterprise. Financial structure is represented by the Capital and Liabilities side i.e. entire left-hand side (in Nepal) and entire right hand side (in USA) of the balance sheet. So, it includes shareholder's funds (equity), long- term loans as well as short-term loans. Shareholders equity includes common stock, paid-in or capital surplus, different kinds of reserves and accumulated amount of retained earning. But, it is different from capital structure as capital structure includes only the long-term sources of financing while financial structure includes only the long-term and short-term sources of financing. Long term sources of financing include long-term debt (i.e. bond, debentures etc.) preferred stock and shareholder's equity. Conclusively, it can be said that capital structure is a part of financial structure not the whole.[4]

Capital Structure:

Capital structure or capitalization of the firm is a permanent financing which includes long term debt, preferred stock and shareholder's equity. Thus, a firm's capital structure is only of its financial structure. The determination of the degree of liquidity of a firm, but whether it survives to achieve long run profitability depend to some extent on its capital structure. The term includes only long-term debts and total stockholder's investment. Some companies do not plan their capital structure, and it develops as a result of the financial decision taken by the financial manager without

[3] Gautam, R.R. & Thapa, K. (2062). *Capital Structure Management*. Kathmandu: 3rd edition, Asmita Books Publishers and Distributors, p: 3

[4] Bhattarai, R. (2008). *Capital Structure Management Theory and practice*. Kathmandu: Dhaulagiri Books and stationary, p:2

any formal planning. These companies may prosper in the short-run but ultimately they may face considerable difficulties in raising funds to financial their activities. With unplanned capital structure these companies may also fail to economize the use of their funds. Theoretically, the financial manager should plan an optimal capital structure for his company. The optimal capital structure is obtained when the market value per share is maximum. In practice the determination of an optimal capital structure is a formidable task and one has to beyond the theory.

There is significant variation among industries and among individual companies within any industry in terms of capital structure since a number of factors influence the capital structure decision of a company. The judgment of the person making the capital structure decision plays a crucial part. These factors are highly psychological complex and qualitative and do not always follow accepted theory, since capital markets are not perfect and the decision has to be taken under imperfect knowledge and risk.

Capital structure planning is the key to the objective of profit maximization which ensures minimum cost of capital and the maximum rate of return to the equity holders. The amount of capital a firm need is not its only financial consideration and equally important is the capital mix: the kinds of capital that form the company's financial base. How much will be the equity money representing funds owned by the stockholders in the enterprises? A financial manager determines the mix of debt and equity securities which would maximize the value of the sock. To maximize the shareholder's wealth as well to minimize the opportunity cost of capital, optimal capital structure is required. Debt is an important part of capital structure and determines the leverage firm. It increases shareholder's return when the firm has highly operating income but makes them worse than they otherwise would be when the firm has low operating income.

Capital means money or fund. Without capital no one do any thing. The capital has both features of risk as well as return. So, optimal capital mix is required to obtain high return in tolerable amount of risk. Management of this optimal capital mix is called capital structure management. Capital rises from debenture, long-term debt, preference share, equity shares, and short-term debt including retained earning, reserve and surplus too. Every types of fund have risk. They require different rate of return. Common stock is riskier and it required rate of return will be higher than that of debt.

Thus, it is necessary that the firm should make a portfolio of such types of capitals, which result higher return with low cost of capitals. The firm should also to generate at least sufficient cash flow to pay investors and creditors (i.e. shareholders, preference shareholders and dept holders). So the firm should yield more cash flow than to just satisfy the investor's expectation to maximize the shareholders wealth and the firm should try to obtain necessary funds in lowest cost as soon as possible.

The cost capital will depend upon the proportion of capital (dept and equity). When capital structure is optimal, it has optimal; it has optimal risk, which makes entrepreneurs capable to hold the market in this competitive business environment for long period. On the basis of priority, short term dept get second priority, preference share get third priority and equity share get last priority. The capital structure should be planned generally keeping in view the interest of the equity shareholders and the financial requirement of a company. However, the interest of other groups such as employees, customers, creditor, society and government should also be given reasonable consideration. The management of a company may fix its capital structure near the top this range in order to make maximum use of favorable subject to other requirements such as flexibility, solvency, control and norm set by the financial institutions, the Security Exchange Board of Nepal and Stock Exchange.

The firm's mix of different securities is known as capital structure. The choice of capital structure is fundamentally a marketing problem. The firm can issue dozen's of various securities in countless combination but it attempts to find the combination which maximizes its overall market value.[5]

Capital structure is the combination of long-term debt and equity. It is a part of financial stock, long term debt and equity. It is a part of financial structure is the combination of total combination of preferred stock, common stock, long term dept and current liabilities. If current liabilities are removed from it, we get capital structure. [6]

One of the principal goals of the financial manager's is to maximize value of the firm. For this purpose, the firm should select a financial mix (financial leverage), which will help in achieving the objective management with a view to maximize the

[5] Brealy, Richard & Steward, Myers (2002). *Principles & Corporate Finance*. New Delhi: Tata McGraw Hill Publishing Co. Ltd., p:569

[6] Mathur, Iqwal (1979). *Introduction of Financial Management*. New York: Mac Millan Publishing Co. Inc., p:693

value of the share. In order to attain this business goal, the firm should select an appropriate capital structure. "Given the objective of the firm to maximize the value of equity share, the firm should select a financial mix which helps in achieving the objective of financial management.

If capital structure decision affects the total value of a firm, the firm should select such a financial mix as will maximize the shareholders wealth. Such a capital structure is referred to as the optimum capital structure.

An optimum capital structure would be attained at the combination of debt and equity that minimizes the weighted averages cost of capital.[7]

Optimal capital structure is that mix of debt and equity which will maximizes the market value of the company. If such an optimum does exist, it has two folds. Firstly, it maximizes the value of company and hence the wealth of its owners. Secondly, it minimizes the company's cost of capital which in turn increases its ability to find new wealth creation investment opportunities.[8]

Leverage and capital structure are closely related concepts liked to cost of capital and therefore capital budgeting decision. Leverage results from the use to fixed-cost assets of tend to magnify return to the firm's owners. Changes in leverages result in level of return and associated risk. Generally, increase in leverages results increase in return and risk. The amount of leverage in the firm's capital structure, the mix of long term dept and equity maintained by the firm can significantly affect its value by affective return and risk. Because of its effect on value, the financial must understand how to measure and evaluate leverage when attempting to create the best capital structure.[9]

Financial leverage generally raises expected EPS but it also increases as the debt/assets ratio rises. So do the interest rate in dept and the required rate of return on the equity. Thus, leverage produces two opposing effects: higher EPS which leads to a higher stock price but increases risking which depresses stock price. There is, however, a debt/assets ratio that strikes an optimal balance between these opposing

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[7] Pandey, I. M. (1995). *Financial Management.* New Delhi: Vikas Publishing House Pvt. Ltd., p:11

[8] Soloman. E. (1968). *The Theory Financial Management*. Colombia: Colombia University Press, p:478

[9] Gitman, L.J. (2001). *Principles of Management Finance*. New York: Harper Collins Publishing, p:246

effects. This ratio is called optimal capital structure and if the one that maximizes the price of the firm is stock.[10]

The capital structure is the composition of debt and securities that make up the firm's financing of its assets. Both debt and equity securities are used in most large corporations. The choice of the amount of the debt and equity is made after a comparison on certain characteristics of each kind of security of internal factors related to the firm's operations on of external factors that can affect the firm.

Given the objective of the firm to maximize the value of the equity share, the firm should select a financial mix capital structure which will help in achieving the objective of financial management.

Thus, the capital structure management means the appropriate mix of long-term capital and short-term capital and short-term capital, which gives the company sufficient profit. Optimal capital structure has certain risk and appropriate return. This is done by a good management. "How much debt is appropriate for a firm?" In this reference Prasanna Chandra has given the following suggestion in tanning the capital structure for establishing new company.

a) The debt-equity ratio does note exceeds 2:1 for large capital intensive projects. A higher dept-equity ratio of 4:1 or even 6:1 may be allowed (debt for this purpose is defined as long-term debt plus preference capital, which is redeemable after 12 years).

b) The ratio of preference capital to equity does not exceed1:3

c) Promoters hold least 25% of the equity capital.

The factors listed above given information's to the financial manager. He should adhere in proper maximizes the value and minimizes the overall cost of capital of the firms. There are four-dimensional lists when thinking about capital structure decision.

a) Taxes: - If a company is a tax-paying entity, the increase in leverage reduces the income tax paid by the company and increases the tax paid by the investors. If the company has a large accumulated loss, an increase in leverage cannot reduces corporate tax but does increases personal taxes

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[10] Brigham, E.F. & Houston, J.F. (2004*). Fundamentals of Financial Management.*
      Singapore: Thompson Asia Pvt. Ltd., p:369

b) Bankruptcy cost: - With presence of bankruptcy cost, financial distress is costly; other things equal, distress is more likely for the firms generally issue less debt.

c) Assets type: - The cost of distress is likely to be greater for firms whose value depend on growth opportunity or intangible assets. These firms are likely to pursue more profitable opportunities and if default occurs, their assets may erode rapidly. Hence, firms whose assets are weighted forward intangible assets should borrow significantly less on average their holding assets they can kick.

d) Financial slack: - In the long run, a company's value rests more on its capital investment on operating decision than on financing. Therefore, we need to make sure that our fire has sufficient financial slacks, so that financing is quickly accessible when good investment opportunity arises. Financial slack is most valuable to the firms that have positive NPV growth opportunity. This is another reason that why growth company usually sticks to conservation capital structure.

Commercial Banks

Commercial banks accept both demand deposits and time deposits. These funds are loaned to individuals, businesses and government. Commercial banks are important sources of short term loans. Banks are also major sources of term loans, which have initial maturities between 1 and 10 years and are usually repaid in instalments over the life of the loan. The proceeds from term loans can be used to finance current assets, such as inventory or account receivable, and to finance the purpose of fixed plant facilities and equipment, as well as to reply other debts. Many people maintain a checking amount at a commercial bank. These demands are demand deposits, time deposit and certificates of deposit.[11]

2.2.2 Assumption of Theories of Capital Structure

In order to grasp, the capital structure and value of the firm on the cost of capital controversy properly, we make the following assumptions:

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[11] Thapa, K., Bhattarai, R. & Basnet, D. (2006). *Investments Theory & Solution.* Kathmandu: Asmita Books & Stationary, p:12

- Firms employ only two types of capital, debt and equity.
- The total assets of the firm are given. The degree of leverage can be changed by selling debt to repurchase shares or selling share to retire debt.
- Investors have the same subjective probability distributions of expected future operating earning for a given firm.
- The firm has a policy of paying 100% dividends.
- The operating earnings of the firm are not expected to grow.
- The business risk is assumed to be constant and independent of capital structure.
- The corporate and personal income taxes do not exit. This assumption is relaxed later on.

Definitions

In the theoretical analysis of capital structure, the following symbols are used.

B = Total market value of debt.

S = Total market value of stock.

V = Total market of firm (B+S).

K_e =Equity capitalization rate.

K_d = Before tax cost of debt.

K_o = Overall capitalization rate.

I = Total amount of capital interest.

NI = Net income

EBIT or NOI = Earning Before Interest & Tax or Net Operating Income.

a) Cost of debt (K_d) $= \dfrac{Annual\,Interest\,Charge}{Market\,Value\,of\,Debt} = \dfrac{I}{B}$

b) Cost of equity (K_e) $= \dfrac{NI}{S} \qquad = \dfrac{EBIT - I}{S} \qquad = \dfrac{NOI}{S}$

c) Overall Cost of Capital (K_e) $= \dfrac{NOI}{V} = K_d(B/V) + K_e(B/V)$

d) Value of the Firm (V) $= B + S \qquad = \dfrac{NOI}{Ko}$

2.2.3 Approaches to Capital Structure

Different approaches have been developed under the relevancy of capital structure to value of firm and cost of capital. The approaches to explain the

relationship between capital structure, cost of capital and value of the firm are following:

- a) Net income approach
- b) Net operating income approach
- c) Traditional approach
- d) Modigliani-Miller (M-M) approach
    - I. Without taxes
   - II. With taxes

a) Net Income (NI) Approach:-

This approach is a relevant theory of capital structure. According to this approach, the cost of debt capital and equity capital remains unchanged when leverage ratio varies. As a result, the weighted average cost of capital of declines as the leverage ratio increases. This is because when the leverages ratio increases, cost of debt, which is lower than cost of equity, receives a higher weight in average cost of capital.

"The essence of the net income theory is that the firm can increase its value or lower the overall cost of capital by increasing the position of debt in the capital structure". As the portion of cheaper debt funds in the capital structure increases the weighted average cost of capital decreases and approaches the cost of debt. The crucial assumptions of this approach are:

a. The use of debt does not change the risk perception of investors; as a result, the equity capitalization rate (K_e) and the debt capitalization rate (K_d) remain constant with change in leverage.
b. The debt capitalization rate is less than the equity capitalization rate (i.e. $K_d > K_e$).
c. There are no taxes.
d. Net operating income remains constant.

From above assumptions, if K_e and K_d are constant increased use of dept by increasing the shareholder earning will result in higher value of the firm via higher value of equity. Consequently the overall the cost (K_o) will decrease.

Y

Ke

Cost of Capital

Ko

Kd

O　　　Leverage　　　X

y

V

Cost of Capital
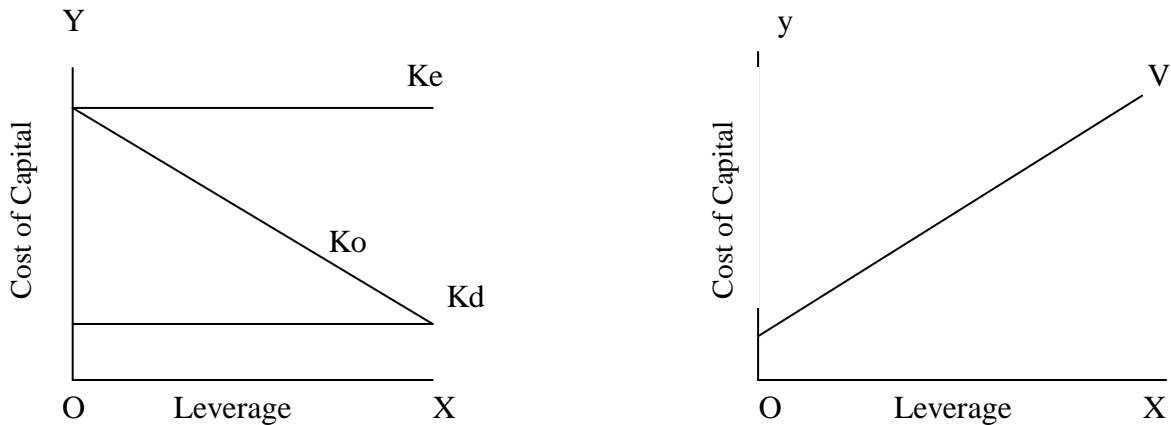
O　　　Leverage　　　X

In the above figure, x-axis called of leverage and y-axis called cost of capital. Under NI approach K_e and K_d are assumed as constant. As the proportion of dept is increase in the capital structure, being less costly, it causes weighted average cost of capital to decrease approach the of debt. The optimal capital structure would occur at the pointing where the value of the firm is maximum and overall cost of capital is minimum.

As the whole assumption of NI approach, K_e and K_d are constants and K_d is less than the K_e, so that Ko decreases if B/V increases. Also $K_e = K_d$ and S=V. Also $K_o = K_e - (K_e - K_d) B/V$.

## b) Net Operating Income (NOI) Approach:-

This theory was identified by David Durand. Under NOI approach, the cost of equity is assumed to increase linearly with leverage. As a result, the weighted average cost of capital remains constant total value of the firm also remains constant though leverage is changed.

"The total value of the firm remains unaffected by its capital structure. There is no optimum capital structure and investors are indifferent to change in capital structure as whatever results from debt financing, will offset by the rise in cost of equity capital with result that overall cost of capital remains unaffected for all the degrees of financial leverage.

Assumptions of this approach are following:

a) The market capitalizes the value of the firm as a whole. Thus, the split between debt and equity is not important.

b) The market use an overall capitalization rate (K_o) to capitalization the net operating income. K_o depends on the business risk and the business risk is assumed to remain unchanged. K_o is constant.

c) The use of less costly debt funds increases. Thus, the advantage of debt is offset exactly by the increase in the equity capitalization rate, K_e.

d) The dept capitalization rate, K_d is a constant.

e) The corporate income taxes do not exist.
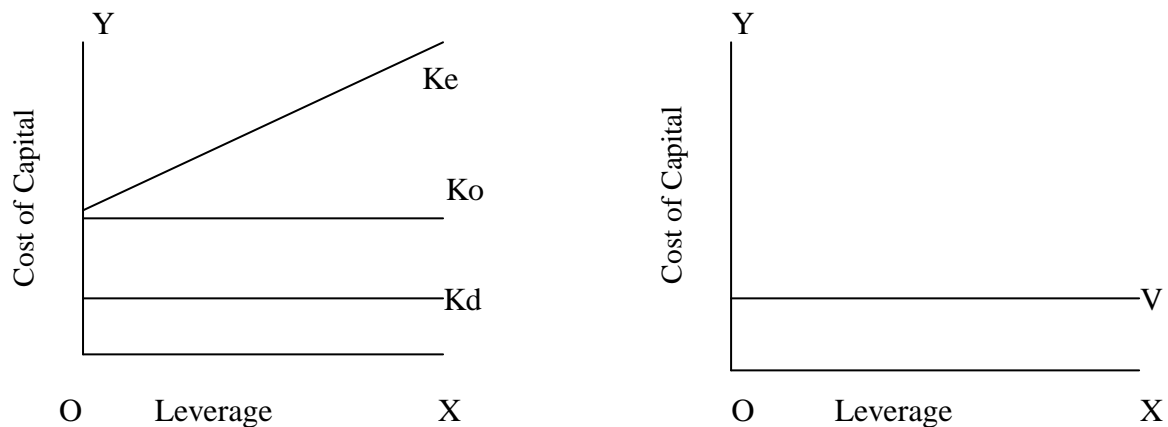
From above assumption, we know that the leverage/ capitalization structure decision of firm is irrelevant. Any charge in leverage will not lead to any change in the total value of the firm and the market price of shares, as the overall cost of capital is independent of the degree of leverage.

The above figure shows that K_o and K_d are constant and K_e is continuously increases .As the firm increase it's degree of leverage, the fixed charge increases with the result that the financial risk also increases. As long as K_d remains constant, K_e remain constant liner function of the debt to equity ratio. The NOI approach implies that there is no one optimum capital structure.

The cost of equity capital is given by:

$$K_e = K_o + (K_o + K_d)\ B/S$$

Also $K_e = \dfrac{NOI - I}{V - B}$

b) **Traditional Approach:-**

The traditional theory is also known as an intermediate approach compromise between the NI approach and NOI approach. This approach says that the value of a firm can be increased or the cost of capital can be reduced by the judicious mix of debt and equity capital. In addition the cost of capital decreases within the reasonable time limit of debt and then increases with the leverage. Thus an optimal capital structure exists when the cost of capital is minimum or the value of the firm is maximum.

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, the overall cost of capital or overall capitalization rate can be found.[12]

The more sophisticated version of the net income approach is contained in the traditional view. According to this approach, the value of the firm can be increased or the cost of capital can be decreased by the judicious mix of debt and equity capital.

It is also known as an intermediate approach .It comprises between net income approach & operating income approach. Thus, we know that the value of firm can be judicious mix of debt and stock of the firm.

Finally, we know that from tradition 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 charges in capital structure can be divided into three stages as given below:

Stages-1

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

$$\text{So, } K_o = K_e (S/V) + K_d (B/V)$$

Stage: - 2:

In the second stage, once the firm has reached to a certain degree of leverage, further application of debt will increase the cost of equity due to the added financial

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[12] Gitman, L.J. (2001). *Principles of Management Finance*. New York: Harper Collins
    Publishing.p:325

risk that offsets the advantages of low cost debt. So the total market value of the firm remains unchanged. Within the range of such debt level or at a specific point the value of the firm will be maximum or the cost of capital will be minimum.

Stage: - 3:

In the stage, the value of the firm decrease with leverage or the cost of the capital increases with leverage. This happens because investors perceive a high degree of financial risk and demand a higher equity capitalization rate, which offsets offset the advantage of low cost debt. From the above stage we come to know that:

a) Increase Valuation and decreased overall cost of capital.
b) Optimum valuation and optimal overall cost of capital.
c) Declined valuation and increases cost of capital.

Thus, the overall effect of these three stages is to suggest that the cost of capital is a function of leverage. It decline with leverage and after reaching a minimum point or range starts rising. The relation between cost of capital and leverage is graphically shown as below:
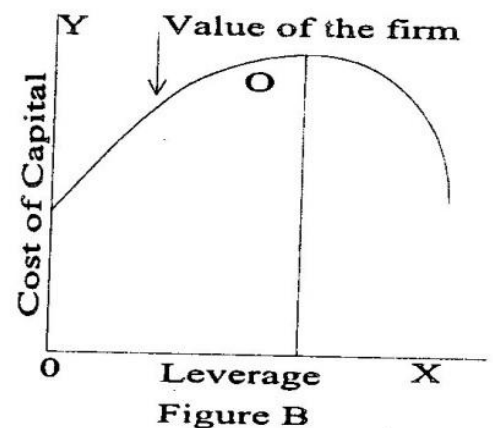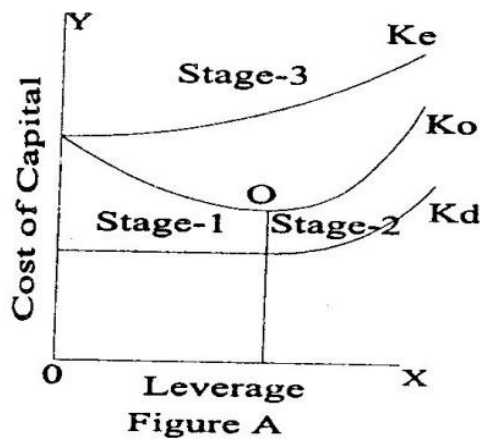

Figure A shows the cost of equity (K_e) increases with increase in leverage but much more rapidly than the cost of dept. The cost of debt will remain fixed as leverage increases, until a point is reached where lenders feel that the firm is becoming financially risky. At this point, the cost of debt (K_d) will increase. The overall cost is optimal at point O and ten after K_o is increasing upward. In figure B, the firm value is optimal up to the point O and then after the value declines.

d) Modigliani- Miller (MM) Model: -

MM without corporate tax:

Before 1958, all management believed that capital structure made by judicious mix of dept and equity capital. Optimal capital structure decreases the overall cost of capital and increases the value of the firm. In 1958, two prominent financial researchers, Franco Modigliani and Miller (MM) argue that in the absence of taxes a firm's market value and the cost of capital remain invariant to the capital structure changes.

Modigliani and 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, Ko remains constant throughout all degree of leverage.

The M-M theory is based on following assumption.

Prefect capital market: - This specifically means that (a) investors are free to buy or sell securities, (b) they can borrow without restriction at the same term as the firm do and (c) they behave rationally. It is also implied that the transaction costs, the cost of buying and selling securities do not exist.

Homogeneous risk classes: - Firm can be grouped into homogeneous risk classes. Firms would be considered to belong to a homogeneous risk class if their expected earning has identical within same industry constitute the homogeneous class.

Risk: - The risk of investors is defined in terms of the variability of the net operating income. The risk to investors depends on both the random fluctuation of the expected NOI and the possibility that the actual value of the variable may turn out to be different than their best estimate.

Full Payout: - Firm's distribute all net earnings to the shareholder, which mean a 100% payout.

No Taxes: - In MM hypothesis, it is assumed that no corporate income taxes exist.

Terminology and notation in used in MM Model are given below:

Terminology

Levered: - A firm that uses dept and equity in its capital structure is called levered firm.

Unleveled: - A firm that uses only equity in capital structure is called unleveled firm.

Risk premium: - It is the expected additional return required by the equity holders for making a risky investment.

Notation

K_s = Equity capitalization rate of an unlevered firm.

K_{el} = Equity capitalization rate of a levered firm.

K_d = Dept capitalization rate.

K_{ou} = Overall capitalization rate of unlevered firm.

V_u = Value of an unlevered firm.

V_l = Value of a levered firm.

T = Corporate tax-rate.

BT = Present value of tax-shied benefits of debt/ PV of interest tax-shield

Basic Propositions

Proposition I

In this proposition, the overall cost of capital (K_o) and the value of the firm (V) are independent of its capital structure. The K_o and V are constant for all degree of leverage. The total value is given by capitalizing the expected stream of operating earnings at a discount rate appropriate for its risk class. This preposition can be expressed as below:

For levered firm, $V = EBIT (NOI)/K_o$

For unlevered firm, $K_o = K_e$

$S \ V_o = NOI/K_{ou} = NOI/K_{eu}$

From the above proposition, MM theory conclude that the total market value of the firm is unaffected by financing mix. It follows that the cost capital is independent of the capital structure.

This proposition states about the implication of propositions for investment decision-making. It emphasizes the point that investment and financing decisions are independent because the average cost of capital is not affected by the financing decision.

Proposition II

This proposition states that the K_e is equal to the capitalization rate of a pure equity stream plus a premium for financial risk equal to the difference between the pure equity capitalization rates (K_e) and (K_d) times the ratio of debt to equity. In other words, K_e increases in a manner to offset exactly the use of a less expensive source of funds represented by debt. The cost of equity capital for levered firm (K_{el}) is equal to

the cost of equity of an unleveled firm (K_{eu}) plus a risk premium equal to the difference between K_{eu} and K_d multiplied by the debt equity ratio.

$$K_{el} = K_{eu} + (K_{eu} - K_d)\ B/S$$

$$\text{Since } K_{eu} = K_{ou} \quad \text{So, } K_{el} = K_{ou} + (K_{ou} - K_d)\ B/S$$

This proposition shows the impact of financial leverage on the cost of equity. Due to increases in leverage, the firm gets the benefits of cheaper debt but the benefit is exactly offset by increases in the cost equity in the from of risk premium demanded by shareholder.

ii) MM with corporate taxes:

This hypothesis states that the value of the firm is independent of its debt. Policy is based on the critical assumption that the corporate income taxes do not exist. In reality, corporate income taxes exist and interest paid to debt holders is treated as deductible expenses. Dividends paid to shareholders on the hand are not tax deductibles.

Thus unlike dividends, the return to debt holder is not subject to the taxation at the corporate level. This makes debt financing advantageous. In their 1963 article, MM shows that the value of the firm will increase with debt due to the deductibility of interest charges for tax computation and the value of the levered firm will be higher than the unlevered firm.

Thus, the value of the levered firm is equal to the value the unlevered firm plus the present value of the interest tax-shied as shown below:

Value of a levered firm = Value of an unlevered firm + PV of interest tax-shied.

$$\text{i.e. } V_l = V_u + BT$$

The value of an unlevered firm when corporate taxes exist is given by

Where NI = Net income after taxes.

Also when a firm is unlevered, $K_{ou} = K_{eu}$

Thus $V_i = V_u$

The above equation implies that when the corporate tax rate T is positive (T > 0), the value of the levered firm will increases continuously with debt. Thus, theoretically the value of the firm will be maximum when it employs 100% debt.
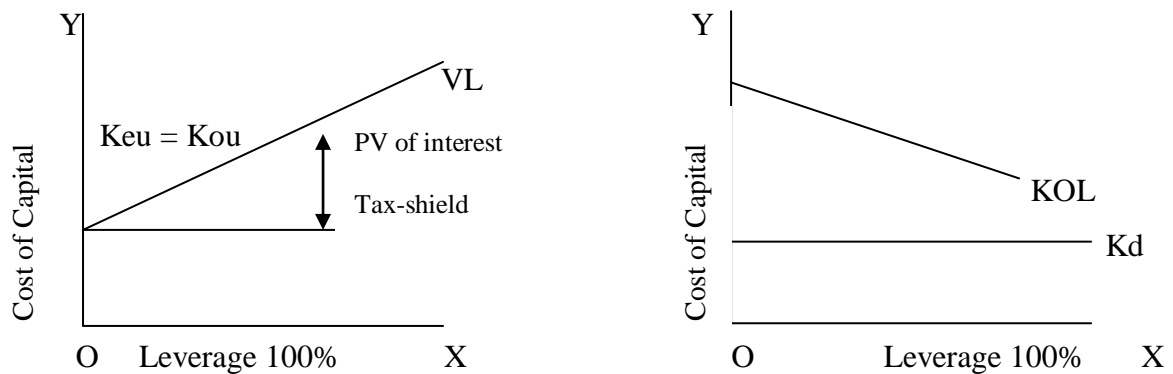
The figure 2.4 shows that a firm can increases its value or lower its cost of capital continuously with leverage because of the tax deductibility of interest charges. Thus the optimal capital structure is reached when the firm employs 100% debt. In practice, firms neither employ large amount of debt not lenders ready to lend beyond certain limits.

2.2.4 Determinants of Capital Structure Decision

Capital structure refers to the mix of long-term sources of fund, which maximizes value of the firm/equity holders. Concept/definition of capital structure gives the main theme of optimal capital structure.

Theoretically, the financial manager should plan an optimal capital structure for his company. The optimal capital structure is obtained when the market value per share is maximum. The values will be maximized when the marginal cost of each source of funds is the same. In practice, the determination of an optimum capital structure is a formidable task and one has to go beyond the theory. There are significant variations among industries and among individual companies within an industry in term of capital structure. Since a number of factor influence the capital structure decision of a company, the judgment of the person making the capital structure decision plays a crucial.

Generally, the factors listed below, all have an important bearing on the firm's capital structure decision:

a) **Asset structure: -** The firm whose assets are suitable as security for loans tend to use dept heavily. Thus real estate companies are tending to be highly levered while manufactures with heavy investment in specialized machinery and work in progress employ less debt.

b)   **Operating leverage: -** Other things remaining the same, a firm with less operating is better able to employ financial leverage because the interaction of operating and financial leverage determines the overall of decline in sales on operating income and net cash-flows.

c)   **Sales stability:** A firm whose sales are relatively stable can safely take on more debt and incur higher fixed charges than a company with unstable sales. Utility companies have historically been able to use more financial leverage than industrial firms because of their stable demand.

d) **Profitability:** One often observes that firm's with very higher rate of return on investment use relatively little debt. Although there is on theoretical justification for this fact, the practical reason seems to be that very profitable firm's such as IBM and KODAK simply do not need to do much dept financing. Their higher rates of return enable them to do most of them to do most of their financing with retained earnings.

e)   **Growth Rate: -** Other things remaining the same, faster growing firm most rely more heavily on external capital. Further, the flotation costs involved in selling common stock exceed those incurred in selling debt. Thus, to minimize financing costs, rapidly growing firm tends to use somewhat more dept than do slower growth companies.

f) **Taxes: -** Interest is a deductible expense, while dividends are not. Hence, the higher a firm's corporate tax rate, the greater the advantage of using debt.

g) **Controls: -** A management concerned about control may prefer to issue debt rater than (voting) common stock to raise funds. If makes conditions are favorable, a firm can sell non-voting equity shares or make a pre-empty offering, allowing each share holders to maintain proportionate ownership. Generally, only in closed held firms or firms threatened by takeover control become a major concern in the capital structure decision by process.

h) **Market Condition: -** Conditions in the stock and markets undergo both long and short run changes, which can have an important bearing on a firm's optimal capital structure. For example, during the credit crunch in the winter of 1982, there was simply no market at any "reasonable" interest rate for new long-term bonds. Low rated companies that needed capital were forced to go to the stock market or to the short term debt market. Such action does not represent permanent changes in target capital structure but are of temporary departures from targets. The important point, however, is that stock and bond market conditions do influence the type of securities used for a given financing.
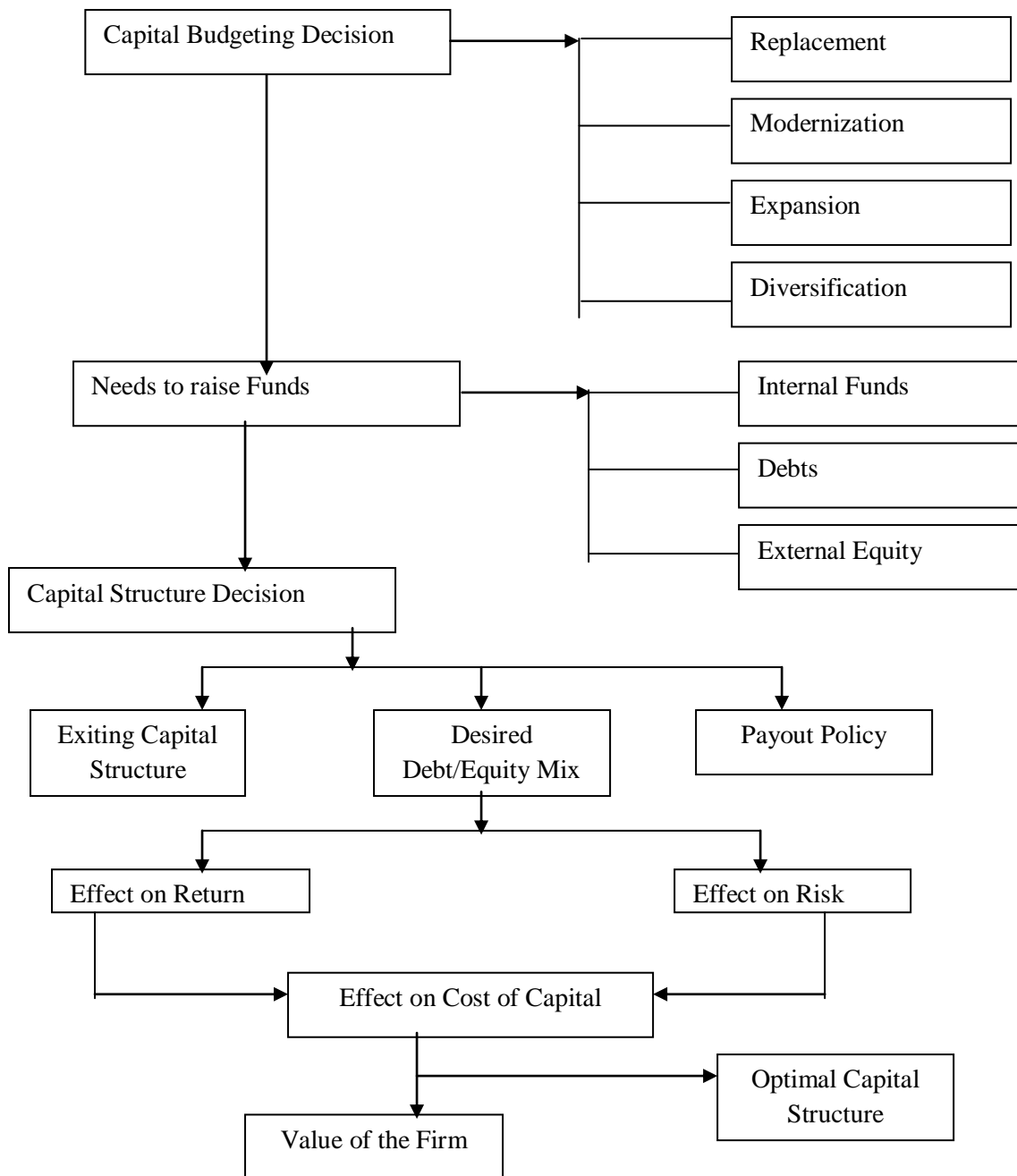
i) **Lenders and Rating Agency Attitude: -** Regardless of manager's own analysis of the proper leverage factors for their firms, there is no question that the lender's and rating agencies attitudes are frequently important determinants of financial structure. In the majority of cases, the corporation discusses its financial structure with lenders and rating agencies and gives much weight of their advice. But when management is so confident of the future that it seeks so use leverage beyond the norms for its industry. Lenders may be unwilling to accept such debt increases or may do so only at a high price.

j) **Management Attitude: -** In the absence of proof that one capital structure will lead to higher stock price than another, management can exercise its own judgment about a proper choice. Some management tends to be more conservative than other and thus use lesser amount of debt than the average firm in their industry, while for other management the reverse is true.

k) **The Firm's Internal Condition: -** A firm's own internal condition can also have a bearing on its target capital structure. For example, suppose a firm has just successfully completed a Research & Development program and it projects higher earning in the immediate future. However, yet new earning is not yet anticipated by investors and hence is not reflected in the price of the stock. This company would not want to issue stock, it would prefer to finance with debt until the higher earning materialization and are reflected in the stock price at which time it might want to sell an issue of common stock, retire the debt and return to its target capital structure.

l) **Cash Flow: -** The key concern of the firm, when considering a new capital structure, must center on its ability to generate the necessary cash flows to meet obligation. Cash forecast reflecting ability to service debt and preferred stock must support any capital structure shift.

m) **Contractual Obligation: -** A firm may be contractually constrained with respect to the type or from of funds it subsequently raises. For example, a contract describing condition of an earlier bond issue might prohibit the firm from selling additional debt except where the claims of holders of such debt are made subordinate to the existing debt. Contractual constraints on the sale of additional stock as well as the ability o distribute dividends on stock might also exist.

n) **Timing: -** Timing decisions are to be necessary based on expected development in a hard-to-predict market. If the price of the company's equity stock is currently depressed but is expected to rise in the wake of better performance

and/ or bullish development in the market. It may be advantageous to resort to debt finance now and equity finance later. On the other hand, if the price of company's equity stock is balanced, it may be desirable to resort to equity finance now and debt finance later. The above considerations are important for developing aim of financing about debt and stock. The management of company may fix its capital structure near top of those ranges in order to make maximum use of favorable leverage." For further detail, subject to other requirement are given below:

a) **Profitability: -** The capital structure of a company should be the most advantageous. Within the constraints, maximum use of leverage at a minimum cost should be made.

b) **Solvency: -** The use of excessive debt threatens the solvency the solvency of the company. To the point debt does not add significant risk it should be used, otherwise its use should be avoided.

c) **Flexibility: -** The capital structure should not be inflexible to meet the changing condition. It should be possible for a company to adopt its capital structure with a minimum cost and delay if warranted by a changed situation. It should also be possible for the company to provide funds whenever needed to finance its profitable activities.

d) **Capacity: -** The capacity structure should be determined within the debt capacity of the company and its capacity should not be exceeded. The debt capacity of a company depends on its ability to generate cash flows. It should have enough cash to pay creditor's charges and principal sum.

e) **Control: -** The capital structure should involve minimum risk of loss of control of the company. The owners of closely held companies are particularly concerned about dilution of control.

The above considerations are the general features of an appropriate capital structure. The particular characteristics of a company may reflect some additional specific features. The company will have to plan its capital structure initially at the time of its promotion. Subsequently, whenever funds have to be raised to financial investment, a capital structure decision is involved.

Figure: 2.1 Process of the capital structure decision

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┌─────────────────────────┐                      ┌──────────────────────┐
│ Capital Budgeting        │─────────────────────▶│ Replacement          │
│ Decision                 │                      └──────────────────────┘
└─────────────────────────┘                      ┌──────────────────────┐
            │                                     │ Modernization        │
            │                                     └──────────────────────┘
            │                                     ┌──────────────────────┐
            │                                     │ Expansion            │
            │                                     └──────────────────────┘
            │                                     ┌──────────────────────┐
            │                                     │ Diversification      │
            ▼                                     └──────────────────────┘
┌─────────────────────────┐                      ┌──────────────────────┐
│ Needs to raise Funds     │─────────────────────▶│ Internal Funds       │
└─────────────────────────┘                      └──────────────────────┘
            │                                     ┌──────────────────────┐
            │                                     │ Debts                │
            │                                     └──────────────────────┘
            │                                     ┌──────────────────────┐
            │                                     │ External Equity      │
            ▼                                     └──────────────────────┘
┌─────────────────────────┐
│ Capital Structure        │
│ Decision                 │
└─────────────────────────┘
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┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐
│ Exiting Capital │   │ Desired   │   │ Payout Policy   │
│ Structure   │   │ Debt/Equity Mix │   │   │
└──────────────────┘   └──────────────────┘   └──────────────────┘

┌──────────────────┐   ┌──────────────────┐
│ Effect on Return │   │ Effect on Risk   │
└──────────────────┘   └──────────────────┘

┌─────────────────────────┐   ┌──────────────────┐
│ Effect on Cost of Capital│─────────▶│ Optimal Capital │
└─────────────────────────┘   │ Structure   │
                                      └──────────────────┘
┌──────────────────┐
│ Value of the Firm│
└──────────────────┘

2.2.5 Important tools of Capital Structure Decision

In management, basic tools are necessary for getting appropriate decision. Financial manager should determine the capital structure that best to the company. It is appropriate, when the company will have optimal capital structure. When the cost of capital tends to increase due to more debt, the use of more debt makes the capital structure volatile.

There are two approaches given below, which help the manager in taking decision.

I. EBIT-EPS Analysis.

II. Cash flow Analysis.

I. **EBIT-EPS Analysis: -** For an appropriate capital structure, we need to understand how sensitive is earning per share (EPS) to changes in earnings before interest and tax (EBIT) under different financial alternatives. Finance manager always want to know about, what is the effect of leverage on risk? A precise answer of this question is not possible with the help of EBIT-EPS analysis.

The finance manager may do two things: (a) Compare the expected value of EBIT with its indifference value, and (b) assess the probability of EBIT falling below its indifference value. If the most likely value of EBIT exceeds the influence value of EBIT, the debt financing option, may be advantageous. The larger the differences between expected value of EBIT and its indifference value, the stronger the case for debt financing, other things being the same.

Given the variability of EBIT, arising out of the business risk of the company, the probability of EBIT falling below the indifference level of EBIT may be assessed. If such probability is negligible, the debt financing option is advantageous. On the other hands, if such probability is high, the debt financing alternative is risky.

The EBIT-EPS analysis is an important tool in the hands of finance manager to get an insight into the firm's capital structure management. He/She can consider the possible fluctuations in EBIT and examine their impact on EPS under different financial plan. If the probability of earning a rate of return on the firm's assets less than the cost of debt is insignificant, a large amount of debt can be used by the firm in its capital structure to increases the earning per share. This may have a favorable effect on the market value per share. On the other hand, if the probability of earning a rate of return of the firm's assets less than the cost of debt is very high, the firm should stop in employing debt capital. Thus, it may be concluded that the greater the level of EBIT and lower the probability of downward fluctuation, the more beneficial it is to employ debt in the capital structure. However, it should be realized that the EBIT-EPS is a first step in deciding about a firm's capital structure.

Cash Flow Analysis: - Cash flow analysis is most important part of the company. Cash flow analysis gives us information about liquidity position of the company.

Sound liquidity Position Company is able to pay fixed charged on basis of its cash generation. Fixed charges include.

a) Principal and interest payments on debt.

b) Lease payment.

c) Preferred stock dividends and etc.

If the firm is unable to pay is fixed charges, it suffers from difficulty as market domination. It is bad for reputed company. Therefore, the firm must estate and analyzes expected future cash flows before committing itself of fixed. Following two generalizations are important to note for the company.

a) The greater the expected future ash flows, the greater the debt capacity of the firm.

b) The more stable the expected future cash flows, the greater the debt capacity of the firm.

2.3 Review of previous study:

Dissertations of capital structure related to banking and other sectors done by MBS and MBA students are reviewed as follows

Malik, Aisha (2009)."*Capital Structure Management in Nepal, a case study on NABIL, NIBL, NEA, NTC & HGICL*" An Unpublished Masters Degree Thesis, Submitted to Shanker Dev Campus.

The main objectives were as follows:

a) To analyze the return on equity and assets.

b) To analyze the value of the firm.

c) To analyze the relationship between liability and assets of the selected organizations.

d) To analyze the profitability of the selected organizations.

The major findings were as follows

a. Comparatively, total loan liabilities to shareholders fund ratio of NIBL is highest, ratio of NABIL is in second position, NEA is in third position, HGICL is in fourth position and NTC is in fifth position.

b. Comparatively, total debt to total assets ratio of NIBL is highest, ratio of NABIL is higher, NEA is in third position, HGICL is in fourth position and NTC is in fifth position.

c. Interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and other organization are seems very weak in the concern of interest expenses bearing.

d. NTC is the organization having own sufficient fund, HGICL has moderate level of own fund, NEA has poor in the concern of self fund and NIBL and NABIL are poorest in the concern.

e. Comparatively, NIBL and NABIL are massively investing in risky assets than other organization; HGICL is also deploying the capital on risky asset which is also aggressive investment. Similarly NEA is trying to invest on risky asset as the capital of the organization. NTC is either increasing the capital or reducing the volume of investment on risky asset so the ratio is very high than 100%.

f. ROA of NTC is highest, HGICL is in second position, NABIL is in third position, NABIL is in fourth position and NEA is in last position in above concern.

g. C/D Ratio of NIBL is highest, NABIL is in second position, NTC is in third position and NEA is in fourth position.

To solve these problems, following suggestions are made:

a) The value of the firm can be maximized either by minimizing the overall cost of capital. The organizations should focus more on optimal capital structure rather than increasing debt portion or equity.

b) NTC should focus to the unutilized capital to generate extra income.

c) NEA should focus on profit for sustainability and effectiveness. So, NEA is recommended to review the statistics and should prepare the sound financial plan.

d) NABIL and NIBL are seems in satisfactory trend so, they should try to maintain at least same pattern to stabilize the condition.

e) HGICL is seems in down trend pattern in the concern of profit so, it should think about the innovating gearing and operation for betterment.

f) It is recommended that cost and benefit should be analyzed before raising fund from different source of capital. Although debt creates tax benefit and increase ROE.

g) The capital structure decisions are not found to be considered properly by the companies. It affects the value of the firm and overall cost of capital so every investment and financing decision of the company should be taken by considering the capital structure of firm.

Sharma, A. (2004). "*A comparative case study between Nepal Bangladesh Bank and Himalayan Bank Ltd.*" An Unpublished Masters Degree Thesis, Submitted to T.U.

The main objectives were as follows:

a) To determine the comparative position of capital structure of these two banks and provides suggestive framework issue relating to capital structure management.

b) To examine the cost of capital especially cost of debt.

c) To find out the investment of the raised capital.

The major findings were as follows:

a) Debt capital of the banks and interest burden as well is too high.

b) High operating cost and low return on equity.

c) More concentration and investment of NBBL only in the area of loan and advance.

d) Less utilization of value of the firm of NBBL.

To solve these problems, following suggestions are made:

a) The bank's capital structure should be restructured by increasing equity capital and decreasing debt capital.

b) The debt capital should be issued in low interest rate to reduce the interest burden of the banks.

c) Investment should also be made in the sector of commission base so that investment risk could be minimized.

d) Operating expenses should decrease to increase the profit.

Adhikari, S. (2005). *A comparative study on capital structure of selected joint venture banks*. An Unpublished Masters Degree Thesis, Submitted to T.U.

The main objectives were as follows:

a) To suggest appropriate capital structure and profitability trend.

b) To examine the cost capital of the joint venture banks.

c) To examine the financial condition and performance of the banks.

d) To determine the proper utilization of the resources.

The major findings were as follows:

　　　a) Interest and commission expenses are the major expenses of the joint venture banks.

　　　b) The problem of over and under inventory exists there.

　　　c) The bank's financial condition/performance is not sound.

To solve these problems, following suggestions are made:

　　　a) The banks must utilize the scientific inventory management system.

　　　b) The banks must minimize cost of capital in order to maximize the profit.

　　　c) The banks should pay attention on proper use of the available resources.

　　　d) The banks must follow other pricing policies according to the situation.

2.4 Review of Articles

In this section, various related articles related to the study of the capital structure management.

a) Modigiliani F. and Miller M.H. (1958) has studied the cost of capital, corporation and theory of the investment. The study showed that the impact of additional debt in a tax less and economically, perfect, word the total market value of company's debt plus equity should not charge as debt is substituted for equity. Although expected earning per share will increase as debt is substituted for equity (or additional financing is done with debt rather than equity). This effect is exactly offset by a markdown is the company's price/earning ratio. The mar-down occurs because the additional debt exposes the common shareholder to an extra financial risk. [13]

b) Shrestha, (1985) under "Analysis of Capital Structure of selected public enterprises", had concluded that the enterprise has a chaotic capital structure since the corporations are not guided on the basis of financial plans and policies. In many instances most of them wanted to eliminate debt if possible to relieve financial obligations. He further pointed out that the calculation of equity capitalization rate has been giving many fantastic results in many cases. The use of NI and NOI approach on the whole was more an academic exercise rather than providing much valid. The debt equity ratio was improperly determined and the contribution of debt, procurement of

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[13] Modigliani, F. & Miller, M.H. (1958). *The Cot of Capital, corporation and Theory of the Investment.* USA: American Economic Review.

assets was insignificant. He suggested that the ratio should neither be highly levered to create financial obligation beyond the capacity nor too low to infuse operational lethargy to pass responsibilities without performance. The aid donor strategies should be taken into consideration as the inflow of foreign government and international financial institution credit has dominant influence in the capital structure.[14]

c) Marsh, (1982) in his article "The choice between equity and debt" had expressed an issue that whether companies have target debt ratio or not. They should have similar targets for the composition of debt. Another issue is whether other factors influence their debt ratios or the choice of financial instrument. He has questioned how accurate the prediction of the company is issuing debt or equity can be made. His suggestion to the study was that when planning their issues, companies should consider further as well as current debt ratio. If companies are looking at book value debt ratios, there will be change during the inter issue period because of retentions and bank loans. Any overall change in tax levels could cause issuing companies to shift their performance towards either debt or equity. Small companies rely on bank loans rather than long term debt because of location cost and problems of access to capital market. Equity issues seem to be favored after it provides strong share price and overall market performance.[15]

d) Joshua, Abor in the study "The effect of capital structure on profitability" mentioned that the relationship between capital structure and firm value has been the subject of considerable debate. Throughout the literature, debate has centered on whether there is an optimal capital structure for an individual firm or whether the proportion of debt usage is irrelevant to the individual firm's value. The capital structure of a firm concerns the mix of debt and equity the firm uses in its operation. Brealey and Myers contend that the choice of capital structure is fundamentally a marketing problem. According to Weston and Brigham, the optimal capital structure is the one that maximizes the market value of the firm's outstanding shares.

Other theories that have been advanced to explain the capital structure of firms include bankruptcy cost, agency theory, and the pecking order theory. These theories are discussed in turn.

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[14] Shrestha, M.K.(1985). *Analysis of Capital Structure of Selected Public Enterprises*.
    Kathmandu: Nepalese Journal of Public Administration.

[15] Marsh, Paul (1982).The Choice between Equity and Debt. *The Journal of Finance*. Vol.17,
    No. 1

Bankruptcy costs are the cost directly incurred when the perceived probability that the firm will default on financing is greater than zero. The bankruptcy probability increases with debt level since it increases the fear that the company might not be able to generate profits to pay back the interest and the loans. The potential costs of bankruptcy may be both direct and indirect. Examples of direct bankruptcy costs are the legal and administrative costs in the bankruptcy process. Examples of indirect bankruptcy costs are the loss in profits incurred by the firm as a result of the unwillingness of stakeholders to do business with them. The use of debt in capital structure of the firm also leads to agency costs. Agency costs arise as a result of the relationships between shareholders and managers and those between debt-holders and shareholders. The need to balance gains and costs of debt financing emerged as they known as the static trade-off theory by Myers. It values the company as the value of the firm if unleveled plus the present value of the tax shield minus the present value of bankruptcy and agency costs.

In summary, there is no universal theory of the debt-equity choice. Different views have been put forward regarding the financing choice.

2.5 Research Gap

Review of literature is an essential part of all studies. A critical review of literature helps the research through understanding and insights into previous research works that relates the present study. It also avoids investigating problem that has already been definitely answered. Therefore researcher seems to identify these new contributions and add them to the body of knowledge before researcher conducts own investigation. As the above research works are concerned with capital structure. Some researcher uses both primary and secondary data but only secondary data are considered in this research. Besides this, latest data are used which makes it the latest version on this study of related banks. Furthermore this study will be helpful to the interested groups. At last this study will be different from the above in terms of sample companies, data presentation as well as statistical tools used for interpretation and analysis of data.

CHAPTER -III
RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology refers to the four various sequential steps to be adopted by a researcher in studying a problem with certain objective in view. Research methodology basically describes the methods, processes, tools and techniques applied in the entire process of a scientific research. Research is the process of systematic and in-depth study or search for any particular topic, subject or area of investigation backed by collection, presentation and interpretation or relevant details or data.

In this chapter, "Capital structure" of two banks has been analyzed. It describes about the capital structure of these two banks. The major objectives of this study include the analysis of the comparative trend of various variables by measuring the relationship between debt and equity capital and the analysis of financial decision through correlation analysis. So this chapter is divided into different headings as below:

a) Research Design
b) Population and Sample
c) Nature and Types of Data
d) Tools of Analysis

3.2 Research Design

Research design is the plan, structure, and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes as outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data. The structure of the research is more specific. It is the outline, the scheme, the paradigm of the operation of the variables. When we draw diagrams that outline the variables and their relation and juxtaposition, we build structural schemes for accomplishing operational research purposes. Strategy, as we used here, is also more specific than plan. In other words, strategy implies how the research objectives will be reached and how the problems encountered in the research will be tackled

Since this study seeks to analyze the capital structure in terms of risk and returns of NIBL and HBL to establish the nature as well as between the returns of the selected banks and the market return as well as between the selected banks themselves. The research design of the study is analytical and correlation type. Moreover, as the study is concentrated on the comparative study of the capital structure of the two selected banks.

Firstly, the study analyses the risk and return of NIBL and HBL on the basis of income from investing activities. For this purpose, the researcher determines the average, standard deviation and coefficient of variation of the return of NIBL and HBL. The study also analyses the risks of the respective banks in terms of coefficient of variance and correlation coefficient. Besides, the study also focuses on analyzing the different variables related to the capital structure management of both banks. Secondly, the study analyses the risk and return of NIBL and HBL on the basis of net return. Thirdly, the study concentrates on the hypothesis testing to test the significance of observed correlation coefficient and significance of computed average returns.

3.3 Populations and Sample

Population is the group of interest of the research on which the results of the study can be generalized. In any investigation, the interest usually lies in the studying the various characteristics relating to individuals belonging to population. Since the study is concerned with the capital structure of the selected two commercial banks, therefore, the population for the study has been all the twenty-six commercial banks which are listed in Nepal Stock Exchange.

The individuals selected from a population in such a way that they represent the larger group from which they are selected comprise a sample. The purpose of selecting a sample is to gain information about a population. In the present study, judgment or porosities sampling (a non-random sampling methods) technique has been used in the selection of the commercial banks. The two commercial banks have been selected for the studies are:

1. Nepal Investment Bank Ltd. And
2. Himalayan Bank Ltd.

In addition, financial data of each of the sampled commercial banks are taken for the period of 5 years, during FY 2004/05 to FY 2008/09.

3.4 Nature and Type of Data

Since the study is basically analytical and historical on nature, most of the data are based on the past performance of the sampled commercial banks. For the purpose of the study, all the data used are second-hand published data of the respective banks under study. Such data have been derived from the financial statements of the companies concerned.

a) Sources of Data

All the data used in this study are obtained from the secondary sources. The main of the data are the financial statements of the selected commercial banks under study and of the other banks also. The required financial statements have been obtained from the website of Nepal Investment Bank Ltd. (www.nibl.com.np), Himalayan Bank Ltd. (www.himalayanbank.com.np), Nepal Rastra Bank (www.nrb.org.np), Economic Survey (www.mof.gov.np) and Nepal stock Exchange Limited (www.nepalstock.com). Similarly some of the data has been obtained from Annual Reports of the Banking and Financial Statistics published by NRB and Economic Survey published by Ministry of Finance, Government of Nepal.

b) Data Gathering Procedure

After identification of sources of data, the required data for the study have been gathered through the following procedures:

> ➢ Firstly, to obtain the data, the annual reports of all the listed commercial banks were-down loaded to the computer disk. Secondly, all the downloaded annual reports were transcribed into computer printouts and the data required for the study were taken from there.
>
> ➢ To get data from NRB publication (Economic Review and Banking and financial Statistics), authorized staffs of NRB Head Office at Baluwatar, Kathmandu were approached and required data are taken.
>
> ➢ Other books and Journals had also been consulted.

c) Data Processing Procedure

Thus, data are gathered through different procedures have been further processed according the requirements of the study. First of all, the collected data were thoroughly studies to identify the required data for the analysis purpose. Secondly, all

the required data were extracted from those sources as per need of the study. Then after, the data have been applied for the analysis of the risk and return of NIBL and HBL on the basis of income from investing activities. For this purpose, the data have been used to determine the average return, standard deviation and coefficient of variation of NIBL and HBL. The data have been also processed for the analyses, the risks of the respective banks in terms of coefficient of variance and correlation coefficient. Besides, they have been used for capital structure performance measure of the selected banks. The data have also been applied for the analysis of the risks and return NIBL and HBL on the basis of net return. The data have also been used for the purpose of hypothesis testing (i.e. testing the significance of the computed mean values). Furthermore; the collected data have been processed for the comparative analysis of the selected banks on the basis of liquidity risks and credit risks.

3.5 Tools of Analysis

For the analysis of the data and to reach to a conclusion, different tools of analysis have been applied for the study. Mainly, the accounting tools, statistical tools and financial tool have been used as mentioned below.

3.5.1 Accounting Tools

❖ **Ratio Analysis**

Ratio is the numerical relationship between two variables. It is generally expressed in percentage. It is obtained by dividing one variable to another variable and multiplied by 100.

3.5.2 Financial Tools

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet. In this study leverage analysis, capital structure analysis as well as ratio analysis are used as the financial tools for the data analysis.

❖ **Leverage Analysis**

The degree of financial leverage as part of leverage analysis also reflects the leverage of the firm as similar as ratios analysis. The degree of financial leverage analyzes the burden of interest expenses and financial risk of the company. The degree of financial leverage (DFL) is defined as the percentage change EPS due to

a given percentage change in EBIT or this is a relationship between EBIT and EBT. In this study the following relationship will be used. It is expressed as:

$$DFL=EBIT/EBT$$
$$Or$$
$$DFL=\% \text{ Change in EPS}/\% \text{ Change in EBIT}$$

The higher ratio of DFL indicates the higher financial risk as well as higher fixed charges of the company and vice versa.

❖ **Capital Structure Analysis**

Various approaches have been developed under the relevancy of the capital structure, which helps to evaluate value of the firm, such as Net Income approach (NI), Net Operating Income approach (NOI), Traditional Method and MM approach. These all approaches are based on the market value. Practical usualness of other approaches is bit complex thus NI and NOI approaches are used in this study.

Market Value of Firm (V) = Market Value of Debt (B) +Market Value of Equity(S)

Market Value of Equity (S) = No Of Shares Outstanding× Closing MPS

Cost Of Overall Capitalization Rate (Ko) =Net Operating Earnings (EBIT)/Total Market Value Of the Firm (V)

Cost Of Equity (Ke) = Equity Available To Common Stockholder (NI)/Market Value of Stock (S)

3.5.3 Statistical Tools

- The statistical tools applied in this study are expected rate of return, standard deviation, Kari Pearson's coefficient of correlation and probable error. Due to the most used of average and standard deviation in financial sector also the researcher has used the financial for these statistical tools.
- Expected rate of return/ average rate of return(Mean)
- Standard Deviation
- Karl Pearson's Coefficient of Correlation
- Probable Error

❖ **Expected rate of return or average rate of return**

Expected rate of return is the most popular and widely used measure of representing the entire data by on value called average. Expected rate of return has been used to compute the average rate of return of the variable of the selected two banks. It is also the sum of multiply of the variables with their respective probability distribution.

Symbolically,

Expected rate of return, $\overline{X} = \sum X/n$

Where, X = Variables

n = Number of variables.

❖ **Standard Deviation**

The standard deviation measures the absolute value of risk, i.e., variability of the returns from the means returns. It is also known as root mean square deviation for the reason that it is the square root of the squared deviation from arithmetic mean. Symbolically,

Standard Deviation, $\sigma = \sqrt{(\sum X^2/n - \overline{X}^2)}$

Where, X = Variables

n = Number of variables.

$\overline{X}$ = Expected rate of return or average rate of return.

❖ **Karl Pearson's Correlation Coefficient**

In simple correlation gives the relation between two variables. In other words, correlation is defined as the relationship (or association) between (among) the one dependent variable or factor and other (or more than one) independent variables(s) or factor(s). Thus, correlation is a statistical tool which determines the degree (extent) and direction of correlation. It helps in studying the variance of two or more variables. There is several method of analyzing the correlation between the two variables such as Graphic Method, Least Squire Method and so on. Among them, Karl Pearson's Coefficient of Correlation is most widely used in order to establish the relationship between the returns of NIBL and HBL. Karl Pearson's Coefficient measures the degree of association between the variables. It is denoted by 'r'. The correlation coefficient can be calculated by using following formula:

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X2 - (\sum X)2} \times \sqrt{N\sum Y2 - (\sum Y)2}}$$

Where,

N= number of observations

X and Y are variables.

The decision criteria:

When,

r = 0, there is no relationship between the variables.

r = 1, the variables have perfectly positive correlated.

r = -1, the variables have perfectly negative correlated.

❖ **Probable Error (P.E.)**

P.E. interprets the value of correlation co-efficient. It helps to determine applicability for the measurement of reliability of computed value of the correlation coefficient 'r'. It can be calculated as:

$$P.E. = 6 \times \frac{0.6745 \times (1 - r2)}{\sqrt{N}}$$

Where,

r = correlation coefficient

N = number of pairs of observations.

If the value of r is less than the probable error there is no evidence of correlation, i.e. the value of r is not significant.

If the value of r is more than 6 times of probable error the coefficient of correlation is practically certain, i.e. the value of r is significant.

CHAPTER –IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This is the most important chapter of the study. In this chapter, collected data will be analyzed and presented mathematically. All the above-mentioned financial and statistical tools will be used to present the data.

The main objective of the study is to evaluate the capital structure of NIBL and HBL. To analyze the financial performance in respect to capital structure, various presentation and analysis have been presented in this chapter according to analytical research design mentioned in the third chapter using various financial and statistical tools.

It is already stated that capital structure refers to the combination of preference share, equity share capital including reserve and surplus as well as long-term debt. Optimal capital structure refers to that combination of funds, which maximizes the EPS and value of the firm, minimizes overall cost of capital. Thus this chapter emphasizes the position of capital structure of NIBL and HBL. The analysis in this chapter is divided into following section, which is directly and indirectly related to the capital structure.

- Ratio Analysis
- Analysis of Capital Structure
- Leverage Analysis
- Correlation Analysis

4.2 Ratio Analysis

- **Long Term Debt to Total Debt Ratio**

The relationship between long term debt and total debt has a decisive impact on the financial structure of the companies. This relationship indicates what percentage of total debt is covered by long term debt of the firm. Normally firms use short term and long term debt. Current liabilities and provisions are also needed during the operation of the firm. Simply dividing long-term debt by the total debt can derive the relationship between the long term debt and total debt of the firm. The total debt includes all types of borrowed fund, current liabilities and provisions. If the firm used large amount of short term loans and over current liabilities and provision in the larger amount, the percentage of long term debt will be low and vice versa. The higher ratio of long term debt to total debt indicates the higher claim of long term debt holders upon the total debt and the lower ration indicates the higher portion of short term loans and current liabilities in the total debt of the firm. The amount of short

term loans and current liabilities used depends upon the liquidity of that firm. This relationship of long term debt and total debt is presented in the following table along with the percentage change in that ratio to show the movement of trend individually. In addition the average (standard) ratios are also calculated to compare with each other. But the detailed calculation is shown in the appendix 1
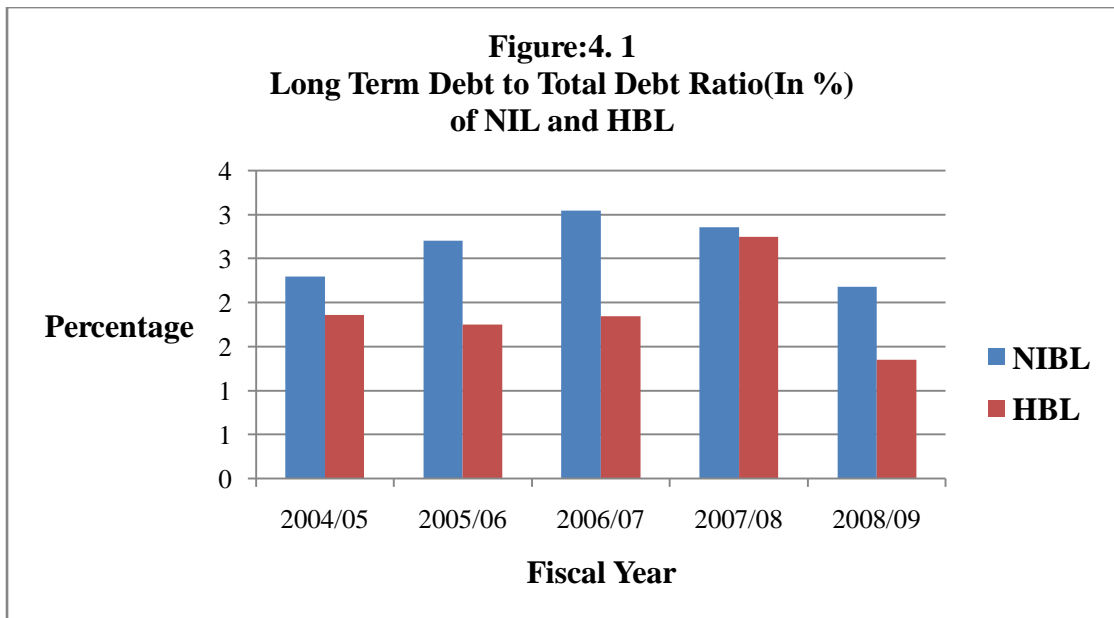
Long Term Debt to Total Debt Ratio= (Long Term Debt/ Total Debt) × 100

Table 4.1

Comparative Position of Long term Debt and Total Debt

Fiscal Years	Long Term Debt to Total Debt Ratios (In %)	
	NIBL	HBL
2004/05	2.30	1.86
2005/06	2.71	1.75
2006/07	3.05	1.85
2007/08	2.86	2.75
2008/09	2.18	1.35
Average	2.62	1.91

Source: Appendix 1

The above calculation shows that the ratio of long term debt to total debt of NIBL constituted 2.30% in fiscal year 2004/05. This means of contribution of long term debt in total debt is 2.30% and remaining portion is contributed by the current liabilities. This ratio of NIBL in FY 2005/06 is 2.71% which is increased than previous year and then increased to 3.05% in FY 2006/07. The company has 2.86% in 2007/08 and 2.18% in 2008/09. The company has 2.62% of average long term debt to total debt ratio.

Figure:4. 1
Long Term Debt to Total Debt Ratio(In %)
of NIL and HBL

In the case of HBL, it shows in the fiscal year 2004/05, the ratio is 1.86%, which indicates there is 1.86% contribution of long term debt in total debt and remaining portion is contributed by current liabilities, in the year 2005/06, the ratio is 1.75% which is increased to 1.85% in 2006/07. Then it again is increased to 2.75% in 2007/08 and in the year 2008/09 the ratio is 1.35%. The average ratio is 1.91%.

- **Long Term Debt to Capital Employed Ratio**

The optimal capital structure has important relationship with the long term debt to capital employed ratio. This relationship suggests the portion of long term debt and capital employed used in the capital structure of the firm. This ratio highlights the need of long term debt in the capital employed not the firm. Long term debt includes the debt, which matures in more than one accounting period whereas capital employed includes long term debt and shareholders equity of the firm. The relationship of long term debt and capital employed can be analyzed by establishing the ratio between them. This ratio is called the long term debt to capital debt ratio. Larger the ratio, larger the proportion of long term debt in the capital employed and vice versa. This ratio can be calculated by dividing the long term debt with capital employed by the firm. This ratio is also known as debt to permanent capital ratio, whereas permanent capital means total assets minus current liabilities. The long term debt to permanent capital ratio is presented in the following table:
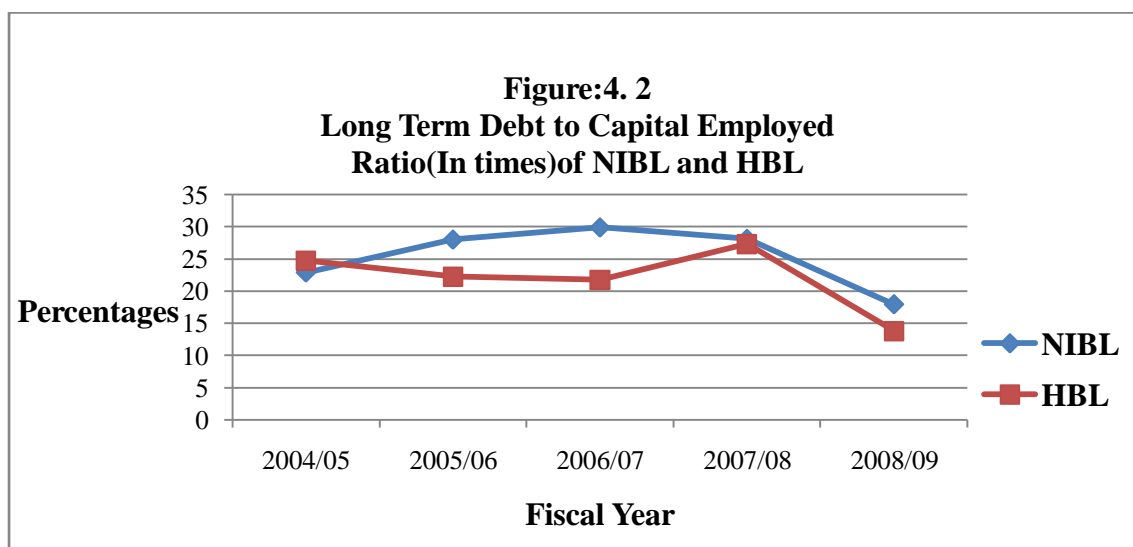
Long Term Debt to Capital Employed Ratio= Long Term Debt/Capital Employed

Table 4.2

Comparative Position of Long term Debt to Capital Employed Ratio

Fiscal Years	Long Term Debt to Capital Employed Ratios (In %)	
	NIBL	HBL
2004/05	22.87	24.71
2005/06	27.98	22.22
2006/07	29.87	21.73
2007/08	28.09	27.29
2008/09	17.92	13.81
Average	25.35	21.95

Source: Appendix 2

The above table shows that the long term debt to capital employed ratios of NIBL in fiscal year 2004/05, 2005/06, 2006/07, 2007/08,and 2008/09 are 22.87%, 27.98%, 29.87%, 28.09% and 17.92% respectively. The average ratio is 25.35%.

Figure:4. 2
Long Term Debt to Capital Employed Ratio(In times)of NIBL and HBL

Similarly HBL has fluctuating trend of long term debt to capital employed ratio. In the FY 2004/05, the ratio is 24.71%. That means the contribution of long term debt in total capital employed is 24.71% and owner of the companies contributed remaining 75.29%. In the following year 2005/06, the ratio decreases to 22.22%. In the FY 2006/07the ratio decreased to 21.73%. In the year 2007/08 & 2008/09 it is 27.29% &13.81%. The average of five years data shows a ratio of 21.95%

- **Long Term Debt to Total Assets Ratio**

Long term debt to total assets ratio express the relationship between long term fund provided by creditors and total assets. This type of capital structure ratio is a variant of debt equity ratio. Calculating long term debt to total assets is one calculation approach of the debt to capital ratio. Long term debt includes the debt, which matures in more than one accounting period Debt and total assets include all types of assets, it measures the percentage of total funds provided by creditors. This ratio can be calculated by simply dividing long term debt by the total assets of the firm.

Long Term Debt to Total Asset Ratio= (Long Term Debt /Total Assets) × 100

Table 4.3

Comparative Position of Debt to Total Asset Ratios

Fiscal Years	Debt to Asset Ratios (In %)	
	NIBL	HBL
2004/05	2.14	1.75
2005/06	2.53	1.65
2006/07	2.85	1.74
2007/08	2.66	2.56
2008/09	1.98	1.25
Average	2.43	1.79

Source: Appendix 3

The above table shows that the long term debt to total assets of NIBL in fiscal year 2004/05, 2005/06, 2006/07, 2007/08, and 2008/09 are 2.14%, 2.53%, 2.85%, 2.66% and 1.98% respectively. The average ratio is 2.43%.
.

Figure: 4. 3
Debt to Asset Ratios (%)
of NIL and HBL
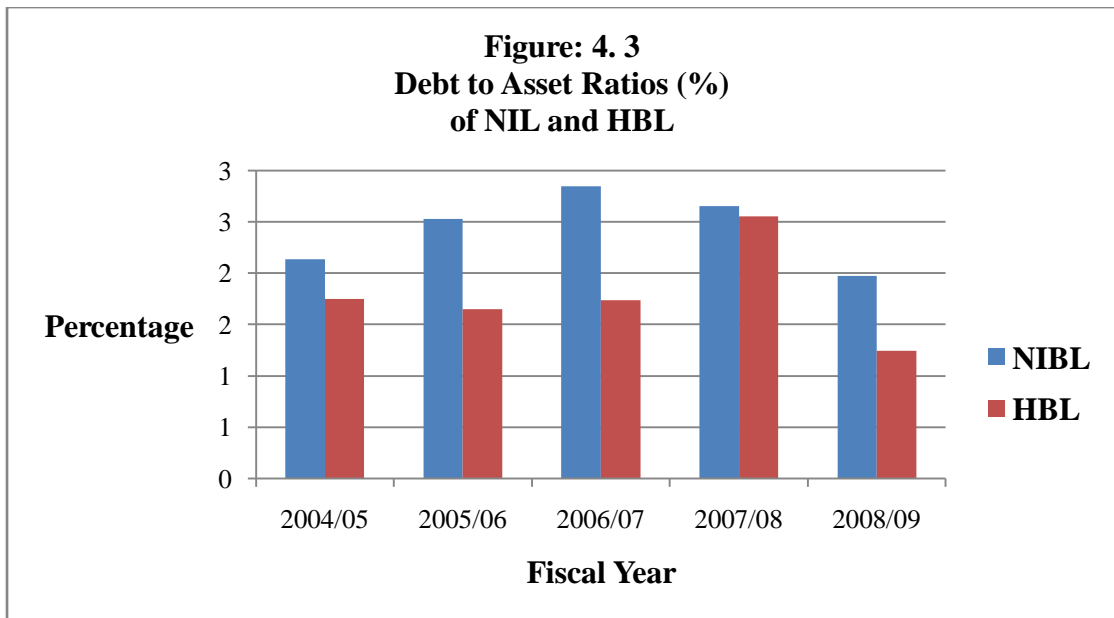
Similarly HBL has fluctuating trend of long term debt to total assets. Long term debt to total assets of HBL in fiscal year 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 are 1.75%, 1.65%, 1.74%, 2.56% and 1.25% respectively. The average ratio is 1.79%.

- **Debt Equity Ratio**

    Debt equity ratio is used to show the relationship between borrowed funds and owners' capital. It reflects the relative claims of creditors and shareholders against the assets of the firm. It is an important tool for the financial analysis to appraise the financial structure of a firm. The ratio reflects the relative contribution of owners and creditors capital of business in its financing. In other word, this ratio exhibits the relative proportions of capital contributed by owners and creditors. Debt equity ratio can be calculated in the basis of shareholders' equity and long term debt. Shareholders' equity includes reserve and accumulated profit, preference share and equity share capital. Where long term debt includes total debt minus short term debt or current liabilities, here debt equity ratio is also computed by simply dividing long term debt of the firm by shareholders' equity. The high D/E ratio shows the large share of financing in the capital by the creditors then the owners or it also reflects that the creditors claim is higher against the assets of firm and vice versa. D/E ratios of concerned companies are shown in the following table that is referred from the appendix.

Debt- Equity Ratio= (Long Term Debt/ Shareholder's Equity) × 100

Table 4.4

Comparative Position of Debt - Equity Ratios

Fiscal Years	Debt to Equity Ratios (In %)	
	NIBL	HBL
2004/05	29.66	32.82
2005/06	38.86	28.57
2006/07	42.60	27.76
2007/08	39.08	37.53
2008/09	21.84	16.03
Average	34.41	28.54

Source: Appendix 4

The debt equity ratio and average ratio has been calculated in the above table. Five years data have been presented here. The table shows that D/E ratios of NIBL are 29.66%, 38.86%, 42.60% 39.08%, and 21.84%in fiscal years 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average D/E ratio of NIBL is 34.41%

Figure:4. 4
Debt to Equity Ratios(In %)
of NIL and HBL
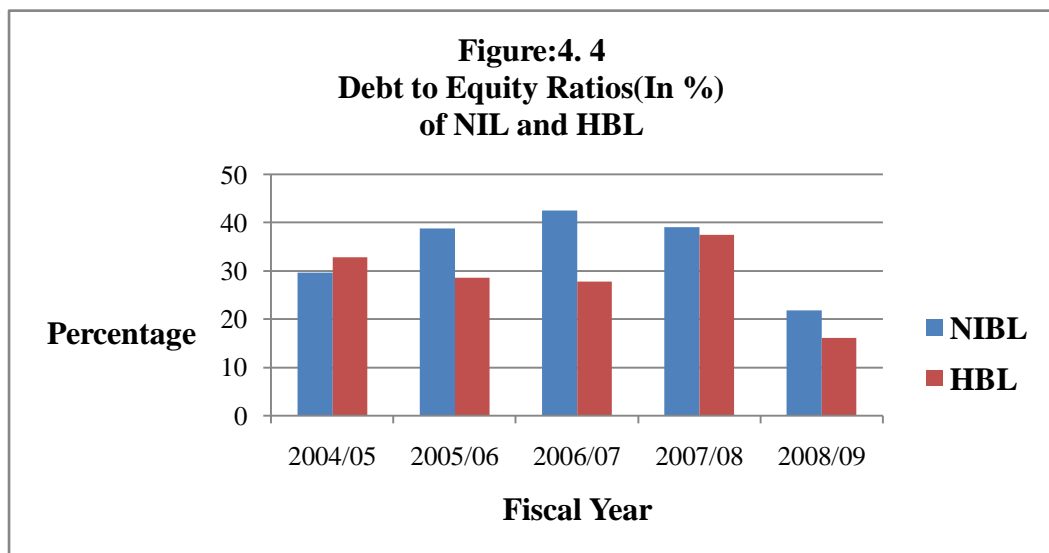
In the fiscal year 2004/05, D/E ratio is 32.82% which decreases to 28.57% in the fiscal year 2005/06.Again it decreased to 27.76%in FY 2006/07.The ratio increases to 37.53% and decreases to16.03% in the following year 2007/08 and 2008/09 respectively. The average D/E ratio of BOKL is 28.54%.

- **Interest Coverage Ratio**

The interest coverage ratio is useful tool to measure long term debt serving capacity of the firm. It is also called interest earned ratio. Interest is fixed charges of the companies, which is charged in long term and short term loans. Generally, interest coverage ratio measured the debt serving capacity of a firm and it is concerned with long term loans. It shows how many times the interest charges are covered by EBIT out of which they will be paid. This ratio uses the concept of net profit before tax because interest is tax deductible or tax is calculated after paying interest on loan. This ratio examines the interest paying capacity of the firm by how many times the interest charges are covered by EBIT.

Interest coverage ratio is calculated dividing EBIT by interest. So, it is necessary to analyze EBIT and interest. This ratio is useful to measure long term debt serving capacity of the firm. The high ratio shows that the firm may imply unused debt capacity and the firm has greater capacity to handle fixed charges liabilities of creditors. Whereas, low ratio is a signal that the firm is using excessive debt and does not have the ability to offer assured payment of interest to the creditors. The calculated interest coverage ratios of two companies are pres0ented in the following table.
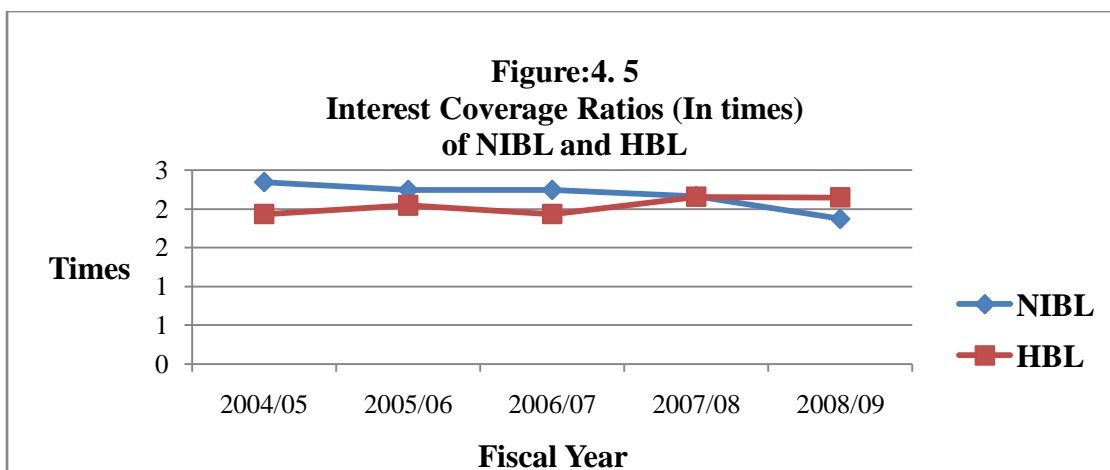
Interest Coverage Ratio= EBIT /Interest

Table 4.5
Comparative Position of Interest Coverage Ratio

Fiscal Years	Interest Coverage Ratio (In times)	
	NIBL	HBL
2004/05	2.34	1.93
2005/06	2.24	2.04
2006/07	2.24	1.93
2007/08	2.16	2.15
2008/09	1.87	2.14
Average	2.17	2.04

Source: Appendix 5

In the above table, the average ratio of NIBL is 2.34 which implies the number of times the interest covered by its EBIT. The interest coverage ratio of HBL shows a fluctuating trend. The interest coverage of HBL in FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 is 2.34, 2.24, 2.24, 2.16and 1.87respectively.

Figure:4. 5
Interest Coverage Ratios (In times)
of NIBL and HBL

In case of HBL, the interest coverage ratio in times is 1.93, 2.04, 1.93, 2.15 and 2.14 in the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively.

- **Return on Total Assets**

Return on total assets ratio measures the profitability of bank that explains a firm to earn satisfactory return on all financial resources invested in the bank's assets. The ratio explains net income for each unit of assets.

Higher ratio indicates efficiency in utilizing its overall resources and vice versa. From the point of view of judging operational efficiency, rate of return on total assets is more useful measure. The return on total assets ratio is calculated using the formula below:

Return on Total Assets= (Net Profit after Tax /Total Assets) × 100

Table 4.6
**Comparative Position of Return on Total Assets Ratios (%)**

Fiscal Years	Return on Total Assets Ratios (In %)	
	NIBL	HBL
2004/05	1.42	1.07
2005/06	1.62	1.50
2006/07	1.79	1.43
2007/08	1.77	1.73
2008/09	1.70	1.88
Average	1.66	1.52

Source: Appendix 6

The above table shows the comparative position of return on total assets of the two commercial banks. From the table, the ROA of NIBL in the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 are 1.42%, 1.62%, 1.79%, 1.77% and 1.70% respectively. The average ratio is 1.66%

.

Figure:4. 6
Return on Total Assets Ratios (In %)
of NIL and HBL
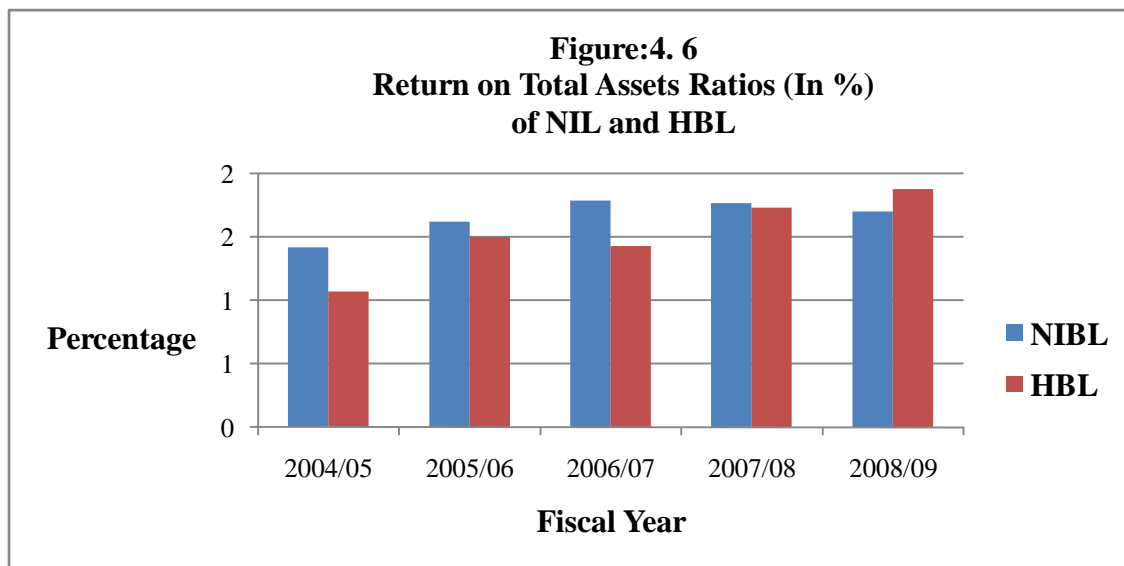
Similarly, the ROA of HBL in the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 is 1.07%, 1.50%, 1.43%, 1.73% and 1.88% respectively. The average ratio is 1.52%

- **Return on Shareholders' Equity**

Shareholders' fund represents that part of long term source of funds, which is collected by issuing equity shares and preference shares. Shareholders are actually the owners of the company. Shareholders have ultimate claim in the return of the company. To measure the return earned by shareholders, return on shareholders' equity is used or this ratio is calculated to find out the profitability on the owners' capital or investment.

If the company's earning is good, shareholders' earning is greater than outside investors because they are ultimate owners and they are bearing high risk as well. But outside investors return before the owners that is fixed. Shareholders get the return after paying the fixed interest charge to the creditors and tax to the government. An earnings after tax (EAT) is the profit of the shareholders. Therefore this ratio is calculated on the basis of EAT. In this study, the sampled companies have not employed the preference share thus it includes only return on shareholders' equity.

The high return on shareholders' equity represents the high profitability of the firm and vice versa. So, high return on shareholders' equity is desirable from the point

of view of the owners of the firm. This ratio can be calculated simply by dividing earning after tax by shareholders' equity, which is presented in the following table.
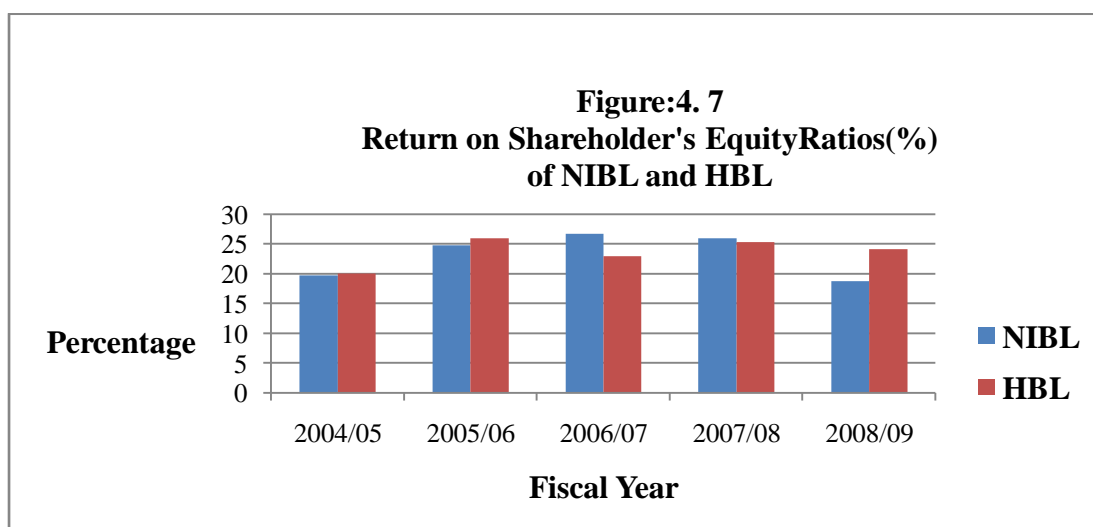
Return on Shareholders' Equity= (Net Profit after Tax / Shareholders' Equity) × 100

Table 4.7

Comparative Position of Return on Shareholder's Equity Ratio

Fiscal Years	Return on Shareholder's Equity Ratios (In %)	
	NIBL	HBL
2004/05	19.67	20.00
2005/06	24.77	25.90
2006/07	26.70	22.91
2007/08	25.93	25.30
2008/09	18.73	24.13
Average	23.16	23.65

Source: Appendix 7

The above table exhibits return on shareholders' equity of sampled companies. In case of NIBL, in the fiscal year 2004/05, the ratio is 19.67% that implies that one rupee investment by shareholders' equity earned 19.67 paisa in one year. In the fiscal year 2005/06, 2006/07, 2007/08 and 2008/09 are 24.77%, 26.70%, 25.93% and 18.73% respectively. The average ratio is 23.16%.

Figure:4. 7
Return on Shareholder's EquityRatios(%)
of NIBL and HBL

Similarly in the case of HBL, return on shareholders' equity in FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 are 20.00%, 25.90%, 22.91%, 25.30% and 24.13% respectively. Average ratio is 23.65%.

- **Earning Per Share (EPS)**

The profitability of bank from the point of view of the ordinary shareholders' is earning per share. The ratio explains net income for each unit of share. Earning per share of an organization gives the strength of the share in the market. It shows how much theoretically belongs to the ordinary shareholders. The EPS is calculated as below:

EPS = Net Profit after Tax / No. of share outstanding

Table 4.8
Comparative Position of EPS

Fiscal Years	Earnings Per Share (In Rs)	
	NIBL	HBL
2004/05	39.5	47.91
2005/06	59.35	59.24
2006/07	62.57	60.66
2007/08	57.87	62.74
2008/09	37.42	61.9
Average	51.342	58.49

Source: Annual Report of NIBL and HBL2004/05-2008/09

The earnings per share of NIBL in Rs are 39.5, 59.35, 62.57, 57.87and 37.42 in the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average EPS in Rs is 51.34. The highest EPS is 62.57 in the year 2006/07 and lowest EPS is 37.42 in the FY 2008/09

Figure:4. 8
Earning Per Share(Rs)
of NIBL and HBL
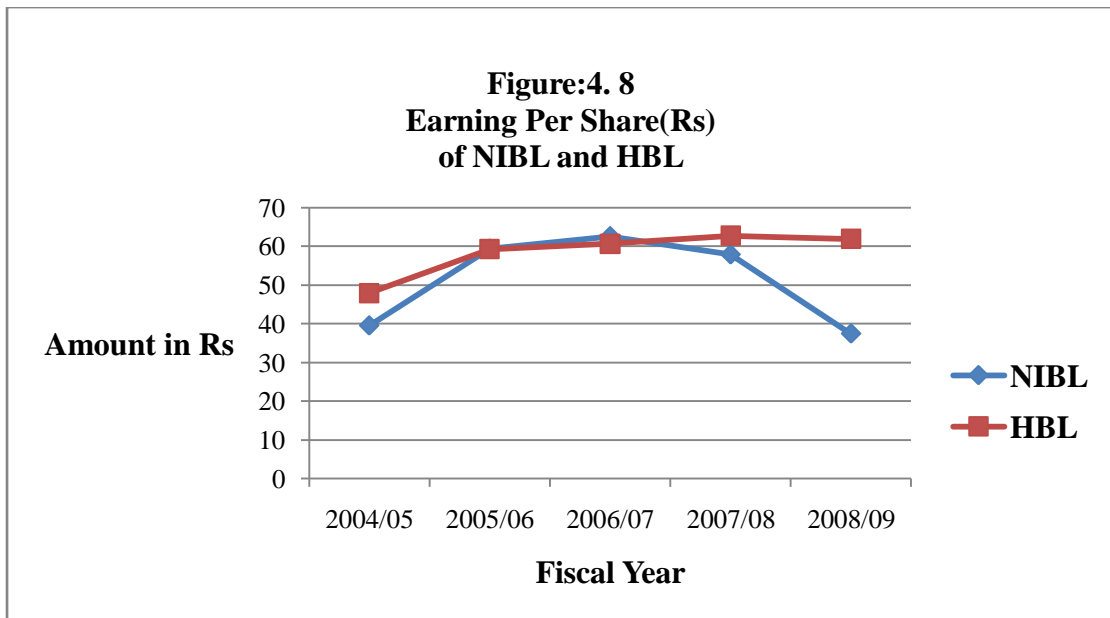
Similarly, the earnings per share of HBL in Rs. are 47.91, 59.24, 60.66, 62.74and 61.9 in the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average EPS in Rs is 58.49.

- **Dividend Per Share (DPS)**

DPS is evaluated to know the share of dividend that the shareholders received in relation to paid up value of the share. A large number of present and potential investors may be interest in the dividend per share, rather than the earning per share. Therefore an institution offering a higher DPS is regarded as an efficient in fulfilling shareholders expectation, which will also enable to increase the value of an institution. As DPS measures the capability to earn and distribute the profit, higher DPS have higher profitability and capacity to distribute dividend.

The shareholders of the bank were not satisfied in term of low cash dividend distributed by the bank. DPS is the earning distributed to ordinary shareholders divided by the number of ordinary shares outstanding.

DPS = Dividend Paid / No. of ordinary shares Outstanding

Table 4.9

Comparative Position of DPS

Fiscal Years	Dividend Per Share(In Rs)	
	NIBL	HBL
2004/05	12.5	11.58
2005/06	20	30
2006/07	5	15
2007/08	7.5	25
2008/09	20	12
Average	13	18.72

Source: Annual Report of NIBL and HBL 2004/05-2008/09

Table No. 4.9 indicates that the DPS of NIBL shows a fluctuating trend. The decrease in DPS of the bank indicates that the bank has low earnings during those periods in comparison to previous years and vice versa. In the fiscal year 2004/05, the DPS is Rs 12.5. In the fiscal year 2005/06, 2006/07, 2007/08 and 2008/09 are Rs 20, 5, 7.5 and 20 respectively. The average DPS is Rs 13.

.

Figure:4. 9
Divedend Per Share(Rs)
of NIBL and HBL
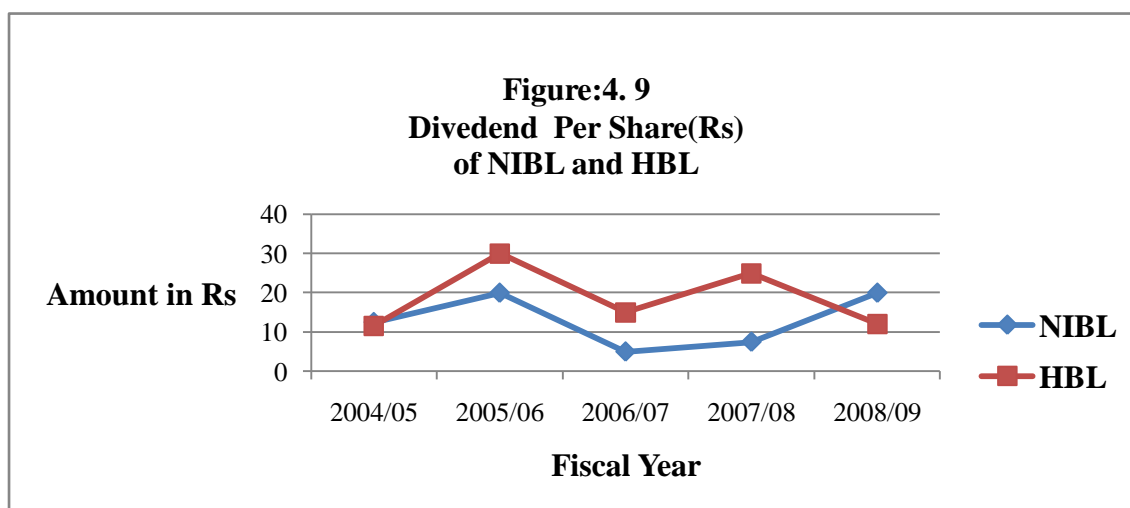
Again, the DPS of HBL indicates the fluctuating trends. In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 are 11.58, 30, 15, 25 and 12 respectively. The average DPS is Rs 13.

- **Dividend Payout Ratio (DPR)**

It represents the percentage of the profit distributed as dividend and percentage retain as revenue and surplus for the growth of the bank. The shareholders prefer usually higher ratio but a very high ratio may slow down the growth rate of the firm. It helps to segregate the proportion of dividend and retained earnings. Importance of DPR shows its ability to state eth dividend policy of the concerned banks more, obviously, which influences the market value of the share. DPR can be calculates as below: Where dividend includes both cash dividend and share dividend.

DPR = (Dividend per Share / Earning Per Share) × 100

Table 4.10

Comparative Position of DPR

Fiscal Years	Dividend Payout Ratios (In %)	
	NIBL	HBL
2004/05	31.64	65.92
2005/06	93.45	59.08
2006/07	47.95	65.94
2007/08	70.55	71.72
2008/09	53.45	70.37
Average	59.41	66.61

Source: Annual Report of NIBL and HBL2004/05-2008/09

Table No. 4.10 indicates that the DPR of NIBL is fluctuating trend. It is recorded as 31.64%, 93.45%, 47.95%, 70.55% and 53.45% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average DPR of the bank is found to be 59.41%

Figure:4. 10
dividend payout ratios(In %)
of NIBL and HBL
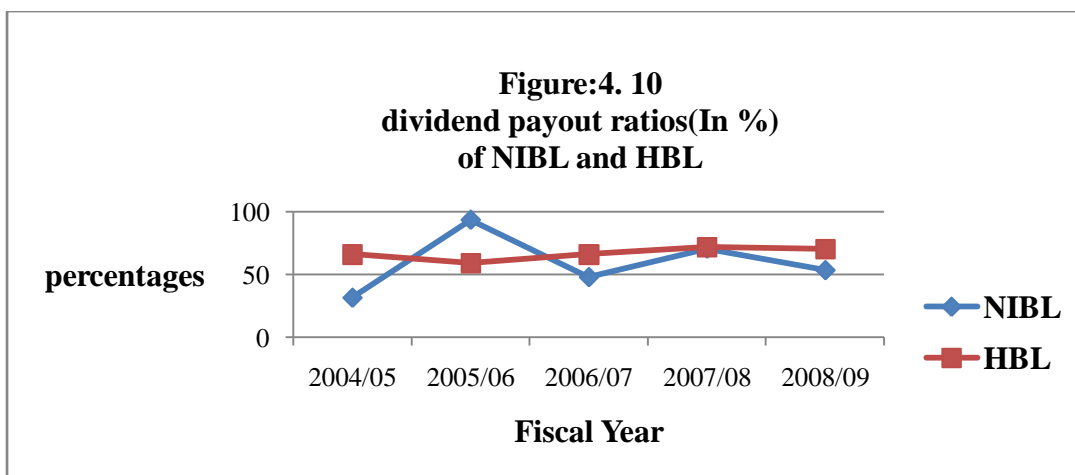
Similarly, DPR of HBL is also fluctuating trend. It is recorded as 65.92%, 59.08%, 65.94% 71.72% and 70.37% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average DPR of the bank is found to be 66.61%.

- **Pricing Earning Ratio (P/E Ratio)**

It indicates the price currently being paid by the market for each rupee of currently recorded EPS. Thus, it measures investor's expectations and the market appraisal of the performance of a firm. It is an indication that investors think that the banks would perform better in the future. Higher market price suggests that investors expect earnings to grow. This gives a high P/E ratio implies that earnings are not likely to raise. The P/E ratio is calculated as below:

P/E ratio = (Market price of a share / Earning per share) × 100

Table 4.11
Comparative Position of Pricing Earning Ratio

| Fiscal Years | Pricing Earning Ratios (in %) | |
	NIBL	HBL
2004/05	20.25	19.20
2005/06	21.23	18.57
2006/07	27.63	28.69
2007/08	42.33	31.56
2008/09	37.1	28.43
Average	29.71	25.29

Source: Annual report of NIBL and HBL 2004/05-2008/09

Table No. 4.11 indicates that the P/E ratio of NIBL is fluctuating over the study period. It is recorded as 20.25%, 21.23%, 27.63% 42.33% and 37.1% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average P/E ratio of the bank is found to be 29.71%.

Figure:4. 11
Pricing Earning Ratio (in %)
of NIBL and HBL
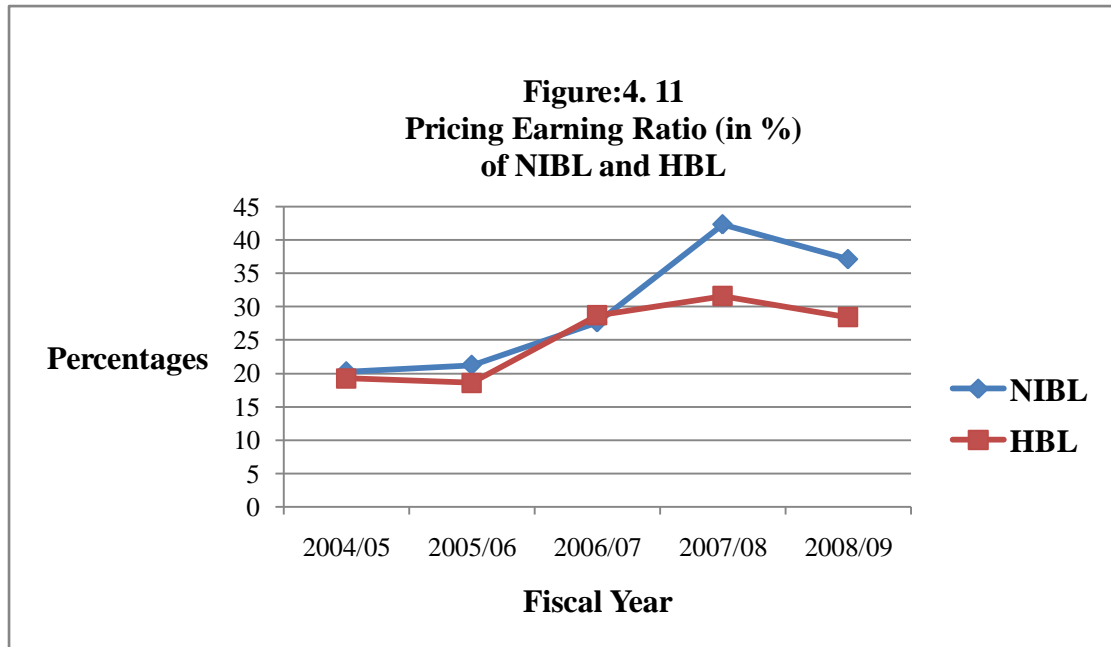
Similarly, The P/E ratio HBL is also fluctuating over the study period. It is recorded as 19.20%, 18.57%, 28.69% 31.56% and 28.43% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average P/E ratio of the bank is found to be 25.29%

- **Book Value per Share (BVPS)**

It is a market related profitability ratio. It helps to indicate the financial achievement throughout the operation. It explains net worth of each unit of ordinary share outstanding. Higher the ratio, higher will be the value of the firm. The BVPS is calculated as below.

BVPS= Net Worth/No of Ordinary Share Outstanding

Table 4.12

Comparative Position of BVPS

Fiscal Years	Book Value Per Share(In Rs)	
	NIBL	HBL
2004/05	201	239.59
2005/06	240	228.72
2006/07	234	264.74
2007/08	223	247.95
2008/09	162	256.52
Average	212	247.50

Source: Annual Report of NIBL and HBL2004/05-2008/09

Table No. 4.12 indicates that the BVPS of NIBL is fluctuating over the study period. It is recorded as Rs. 201, 240, 234, 223 and 162 In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The highest BVPS of the bank is Rs. 240. The lowest BVPS of the bank is Rs. 162 in the FY 2008/09. The average BVPS of the bank is Rs. 212.

Figure:4. 12
Book Value Per Share(in Rs)
of NIBL and HBL
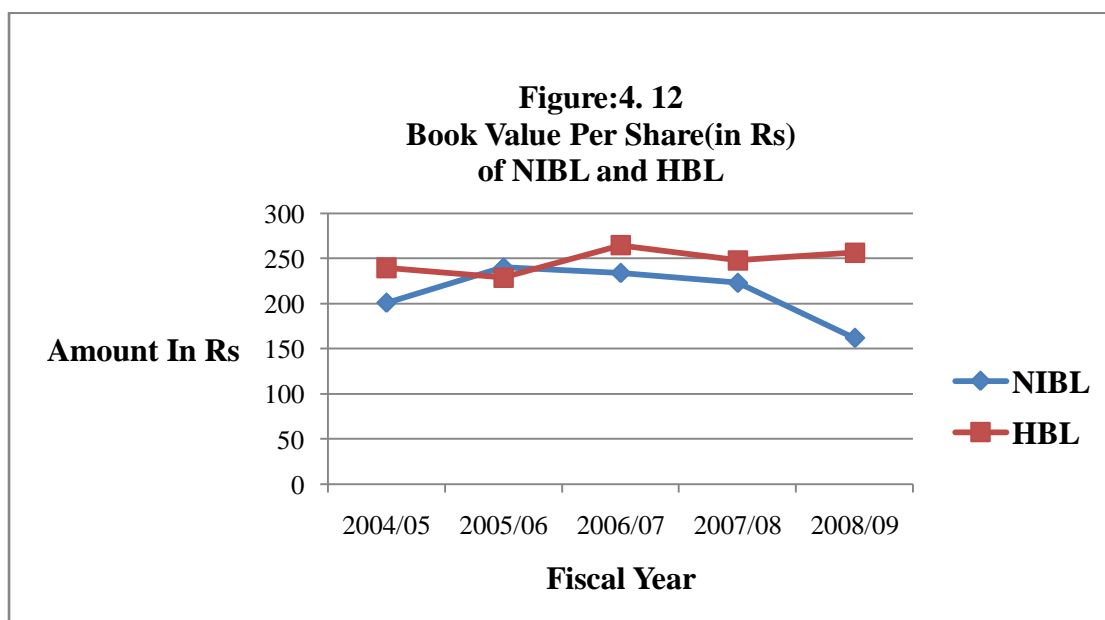
Similarly, the BVPS of HBL also is fluctuating over the study period. It is recorded as Rs. 239.59, 228.72, 264.74, 247.95 and 256.52 In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The highest BVPS of the bank

is Rs. 256.52in the FY 2008/09. The lowest BVPS of the bank is Rs. 228.72in the FY 2005/06. The average BVPS of the bank is Rs. 247.50.

4.3 Capital Structure

- **Net Income (NI) Approach**

Net income (NI) approach is 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 and total valuation of the firm through the reduction in the cost of capital leading to an increase in the cost of capital thus leading to an increase in the degree of leverage. This theory assumes that the cost of debt and cost of equity remain constant as change in the firm's capital structure. In other words, the firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in the capital structure. It gives attention on overall capitalization rate. According to this theory, optimum capital structure is that, where the total value of the company is highest and the overall capitalization rate is lowest. The overall capitalization rate can be calculated simply by dividing EBIT by the value of the company. Calculated rates are presented below that is referred from appendix.

Table 4.13

Comparative Position of Overall Capitalization Rate (Amount in Rs "000")

| Fiscal Years	NIBL		HBL	
	Cost of Capital (Ko)	Value of Firm	Cost of Capital (Ko)	Value of Firm
2004/05	16.4	5051908	16.9	6426248
2005/06	13.8	7991384	14.7	8998825
2006/07	10.5	14655386	10.1	14704062
2007/08	07.0	30545927	08.4	21010726
2008/09	09.4	33515116	09.1	21905384
Average	11.4	18351944.2	11.8	14609049

Source: Appendix 9-10

Above computed overall capitalization rate of NIBL shows that the costs are 16.4%, 13.8%, 10.5%, 07.0% and 09.4% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 when the values of the firm are Rs. 5051908, 7991384,

14655386, 30545927and 34460116 in thousand respectively. The average cost is 11.4% at an average value of Rs. 18540944 in thousand.

Figure:4. 13
Value of Firm
of NIBL and HBL
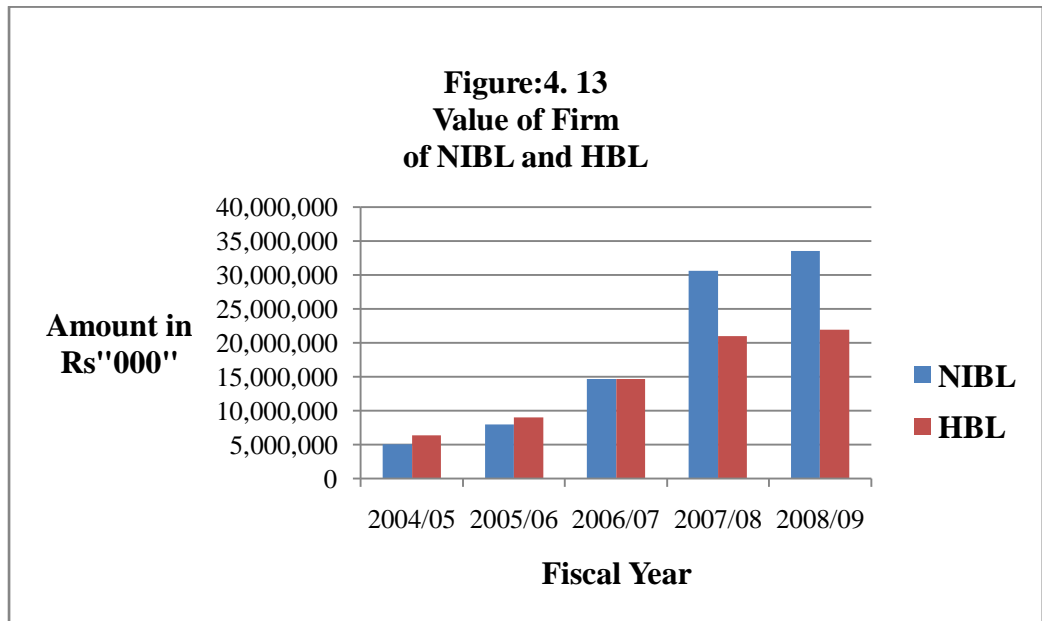
Above computed overall capitalization rate of HBL shows that the costs are 16.9%, 14.7%, 10.1%, 08.4% and 09.1% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 when the values of the firm are Rs. 6426248, 8998825, 14704062, 21010726 and 21905384 in thousand respectively. The average cost is 11.8% at an average value of Rs. 14609049 in thousand

Figure:4. 14
Cost of Capital(In %)
of NIBL and HBL
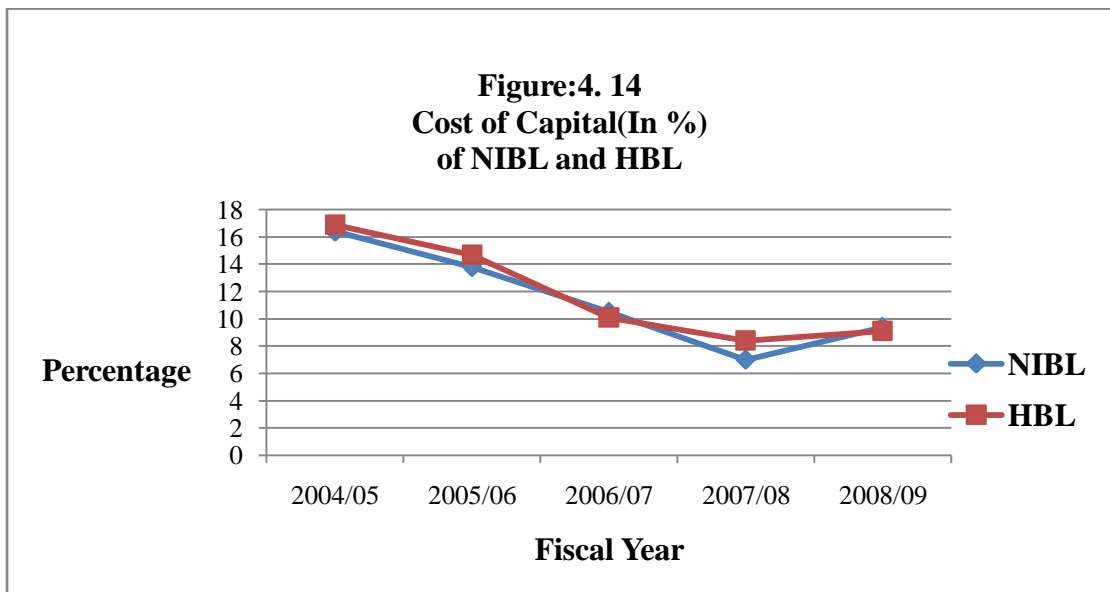
- **Net Operating Income (NOI) Approach**

It is an independent hypothesis of capital structure decision of the firm and which is irrelevant to the value of firm an overall cost of capital. Change in leverage will not lead to any change in the total value of the firm and market price of share, as the overall cost of capital is independent of the degree of leverage. The increase in leverage leads to an increase in financial risk of the ordinary shareholders. To minimize the financial risk, the shareholders want a higher return on their investment. Increases in Ko are exactly offset by using cheaper debt fund keeping Ko constant. So equity capitalization rate Ke is calculated here by simply dividing EBT by the market value of common equity, which is presented in the following table. Detail calculation of Ke is presented in the appendix.

Table 4.14

**Comparative Effect of Debt on Equity Capitalization Rate   (AmountinRs"000")**

Fiscal Years	NIBL		HBL	
	Cost of Equity (Ke)	Long Term Debt	Cost of Equity (Ke)	Long Term Debt
2004/05	10.1	350000	8.8	506048
2005/06	8.2	550000	7.9	504625
2006/07	6.2	800000	5.1	595968
2007/08	3.9	1050000	4.7	943178
2008/09	4.4	1050000	5.0	500000
Average	6.5	760000	6.3	609964

Source: Appendix 11

Above computed cost of Equity of NIBL shows that the costs are 10.1%, 8.2%, 6.2%, 3.9% and 4.4% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 when the values of the long term debt are Rs. 350000, 550000, 800000, 1050000 and 1050000 in thousand respectively. The average cost of equity is 6.5% at an average value of long term debt is Rs. 760000 in thousand

Figure:4. 15
Long Term Debt
of NIBL and HBL
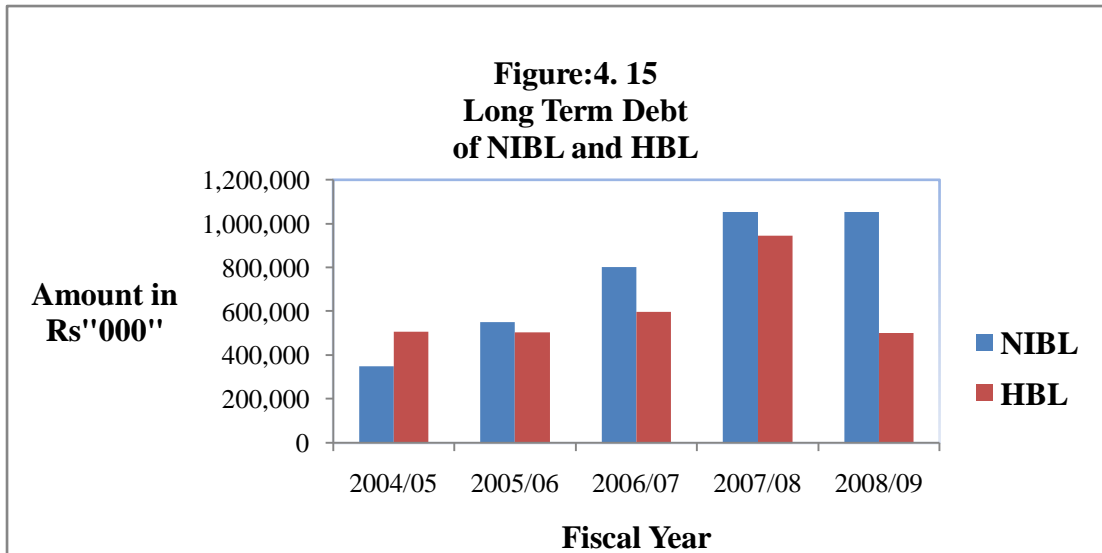
Similarly, Above computed cost of Equity of HBL shows that the costs are 8.8%, 7.9%, 5.1%, 4.7% and 5.0% In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 when the values of the long term debt are Rs. 506048, 504625, 595968, 943178 and 500000 in thousand respectively. The average cost of equity is 6.3% at an average value of long term debt is Rs. 609964 in thousand

Figure:4. 16
Cost of Equity (In %)
of NIBL and HBL
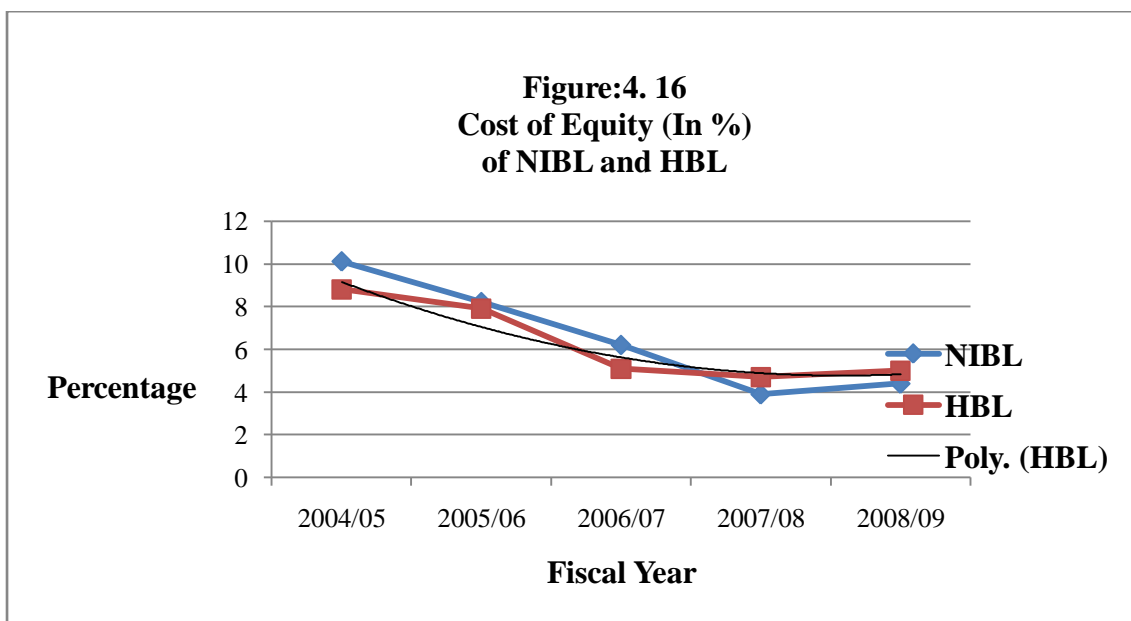
4.4 Leverage Analysis

Leverage and capital structure are closely related concepts linked to cost of capital and therefore capital budgeting decision. Leverage results from the use of fixed cost assets or tends to magnify return to the firm's owners. Changes in leverage result in changes in level of return and associated risk. Generally, increase in leverage

result in increase in return and risk, where as decrease in leverage result in decreased return and risk. The amounts of leverage in the firm's capital structure the mix of long term debt and equity maintained b the firm can significantly affect its value by affecting return and risk. Because of its effect on value, the financial manager must understand how to measure and evaluate leverage when attempting to create the best capital structure.

Generally, leverage refers to the use of special force of power to have more than normal results from a particular action. Similarly in financial term it is used to describe about utilization of funds for which the firm has to pay fixed cost and to have more return than normal having more risk as well. Leverage may be used to boost owners' returns, but it is used at the risk of increasing losses, if the firm's economics fortune declines. Thus gain and losses are magnified by leverage, and the higher the leverage employed by a firm, the greater will be the volatility of its returns. There are three types of leverages: operating leverage, financial leverage and combine leverage. Operating leverage is the function of fixed cost, contribution margin and sales volume. Financial leverage is the relationship between EBIT and EBT and combined leverage is the combined effect of operating leverage and financial leverage. The operating leverage indicates the impact of changes sales an operating income and financial leverage exist when the capital structure if the firm composed debt capital. Financial leverage is related to the capital structure of the firm. So, financial leverage is the relevant issue of this study, which is explained in this section.

- **Analysis of Financial Leverage**

When the company employs debt or other fund carrying fixed charges i.e. interest in the capital structure, financial leverage exists. If the financial charge is high the company can have advantage of tax shield but it will affect to owners' return i.e. net profit as well. Financial leverage explains the relationship between earnings before interest and taxes and net profit of the company.

Two methods: either dividing percentage change into EPS by percentage change into EBIT or dividing percentage change into EBT by EBIT can calculate degree of financial leverage. In this analysis of financial leverage second method is chosen. High the financial leverage, high will be the financial risk and also high will be the shareholders' return. The degree of financial leverage of sampled companies is presented in the following table.

$$DFL=EBIT/EBT$$
$$Or$$
$$DFL=\% \text{ Change in EPS}/\% \text{ Change in EBIT}$$

Table 4.15

Comparative Degree of Financial Leverage in times

Fiscal Years	Degree of Financial Leverage(In Times)	
	NIBL	HBL
2004/05	1.75	2.08
2005/06	1.81	1.96
2006/07	1.80	2.07
2007/08	1.86	1.87
2008/09	2.15	1.88
Average	1.87	1.97

Source: Appendix 11

Above calculated DFL of NIBL indicates fluctuation trend. It is recorded as 1.75, 1.81, 1.80, 1.86 and 2.15 times In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average DFL of NIBL is 2.15 times.

Figure:4. 17
Degree of Financial Leverage
of NIBL and HBL
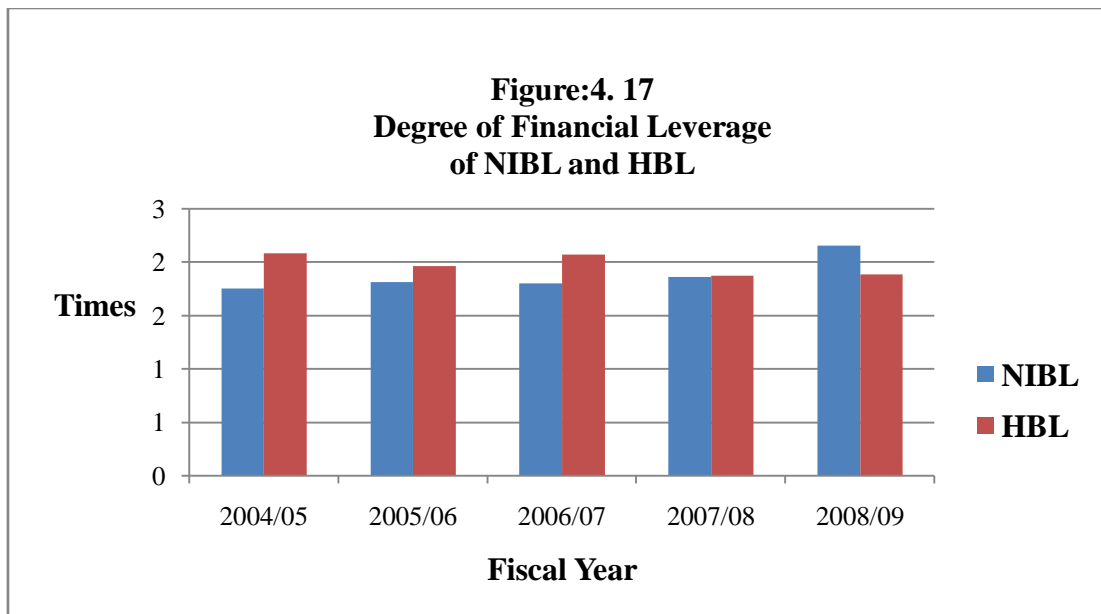
Similarly, calculated DFL of HBL indicates fluctuation trend. It is recorded as 2.08, 1.96, 2.07, 1.87and 1.88 times In the FY 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. The average DFL of HBL is 1.97times.

4.5 Correlation Analysis

Correlation analysis enables us to have an idea about the degree and direction of the relationship between the two or more variables. The correlation is a statistical

tool which studies the relationship between two or more variables and correlation analysis involves various methods and techniques used for studying and measuring the extent of the relationship between the two or more variables. It is denoted by 'r'. However, it fails to reflect upon the cause and effect relationship between the variables. Although there are three types of correlation i.e. simple, partial and multiple but here we focus on simple correlation based on 'Pearson's coefficient of correlation'. Correlation Coefficient between Total Debt and Shareholders Equity with Probable Error is calculated as below.

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X2 - (\sum X)2} \times \sqrt{N\sum Y2 - (\sum Y)2}}$$

Where,

N= number of *observations*

X and Y are variables.

$$P.E. = 6 \times \frac{0.6745 \times (1 - r2)}{\sqrt{N}}$$

r = correlation coefficient

N = number of pairs of observations.

In the following section correlation between different variables are calculated and presented of the sampled companies.

- **Total Debt and Shareholders' Equity**

The relationship between total debt (TD) and shareholders' equity (SE) have been shown in the following table below. The total debt includes all types of long term borrowed funds, current liabilities and provisions, whereas shareholders' equity includes share capital reserve and surplus. This correlation indicates whether there is positive or negative correlation between TD and SE and their respective probable error is also presented. P.E. interprets the value of correlation co-efficient. It helps to determine applicability for the measurement of reliability of the computed value of the correlation coefficient (r). Detail calculations are presented in the appendix.

Table 4.16

Comparative Coefficient between TD and SE with Probable Error

NIBL		HBL	
Correlation Coefficient (r)	Probable Error 6(P.E.)	Correlation Coefficient (r)	Probable Error 6(P.E.)
0.969	0.1104	0.9885	0.0416

Source: Appendix 12

Karl Pearson's correlation coefficient between total debt and shareholders' equity of NIBL is 0.969. There is positive correlation between TD and SE. The probable error 6(PE) of NIBL is 0.1104. PE is less than correlation coefficient (r). Similarly, the correlation coefficient of HBL is 0.9885. There is positive correlation between TD and SE. The probable error is 0.0416, which is less than r.

- **EBIT and Interest**

Long term debt holders get the interest as return and EBIT is operating profit of the company. Here correlation coefficient of interest and EBIT has presented of concerned companies to analyze whether there is positive or negative correlation between interests and operating profit, those are calculated on the basis of Karl Pearson's correlation coefficient. Following table shows the relationship between these variables of sampled companies. And to check the significance of these calculated correlations. PE is also presented, which is referred from appendix:

Table 4.17
Correlation Coefficient between EBIT and Interest, & their respective Probable Error

NIBL		HBL	
Correlation Coefficient (r)	Probable Error (P.E.)	Correlation Coefficient (r)	Probable Error (P.E.)
0.995	0.018	0.981	0.067

Source: Appendix 13

In the above table, correlation coefficient of NIBL is found to be 0.995 i.e. there is positive correlation between Interest and EBIT. PE of respected correlation is 0.018, which is less than correlation coefficient (r).

Similarly, in the case of HBL, the correlation coefficient between Interest and operating profit is 0.981. There is positive correlation between Interest and EBIT. The Probable error of respected correlation is 0.067, which is greater than correlation coefficient (r).

4.6 Major findings of the Study
- The percentage of total debt of the firm covered by long term debt is indicated by long term debt to total debt ratio. NIBL has 2.62% of average long term

debt to total debt ratio. Similarly HBL has average ratio of 1.91%. In two cases, the total debt is contributed by current liabilities to a large extent. The analysis of two companies reveals the fluctuating trend of long term debt to total debt ratio. Among the two, NIBL has used maximum long term debt in comparison to HBL.

- The analysis show that in an average HBL has used least and NIBL has the highest long term debt to capital employed ratio of 0.2195 and 0.25355 in times respectively. This indicates that NIBL is using more long term debt financing as its capital.

- The long term debt for financing used by both sample companies is very minimum. Hence, the debt to total assets ratio of NIBL and HBL is 2.43% and 1.79% respectively.

- The debt equity ratio shows the claim of creditors on the total asset of the company. The trend analysis shows fluctuating trend in two sample banks. The average debt equity ratio of NIBL is 0.3441, which shows that the creditors have 34.41% claims on the assets of NIBL. It also indicates that the company has used less amount of debt as financing and has lesser amount to be paid as interest on debt. HBL has the low debt equity ratio among the two with the average ratio of 0.2854 which implies that the claim of creditors is 28.54%.

- The analysis shows that both the sample companies NIBL and HBL are able to pay the interest amount. Among the two samples, HBL has the low average interest coverage ratio of 2.04 times, which shows that the firm is able to pay the interest amount. In case of NIBL, the average interest coverage ratio is 2.17 times.

- In comparison, NIBL and HBL have the average return on asset of 1.66% and 1.52% respectively. The overall return on asset of both NIBL and HBL is fluctuating in trend.

- The returns on shareholder's equity of both banks are fluctuating over the period of five years. The average return of NIBL is Rs. 23.16% which indicates that the shareholders earned Rs. 23 and 16 paisa investing rupees 100. By analyzing the average return, we can conclude that return earned by the shareholders' equity of HBL is highest among two companies i.e. 23.65%

- The earnings per share explain net income for each unit of share. It shows the market position of the market. The average earning per share of NIBL is Rs. 51.34. The average earning per share of HBL is Rs.58.49. Among the two, HBL has the high average earning per share.

- The analysis shows that in an average dividend per share of NIBL and HBL are Rs 13 and 18.72 respectively. This indicates that HBL is paying high dividend per share to its shareholders to compare the NIBL.

- Similarly, the analysis shows that in an average dividend payout ratio of NIBL and HBL are 59.41% and 66.61% respectively. HBL pays the more dividends from its earnings to compare to NIBL.

- In comparison, NIBL and HBL have the average P/E ratio of 29.71% and 25.29% respectively. Among the two samples bank NIBL has the higher P/E ratio than HBL.

- BVPS of NIBL and HBL also is fluctuating over the study period. The analysis shows that the average BVPS of both banks are 212 and 247.29 respectively. HBL has the high average BVPS to compare the NIBL.

- Under the NI approach, the interest rate and the cost of equity are dependent of the capital structure. With the increased use of leverage, overall cost of capital declines and the total value of firm rise. From the calculations, NIBL has the optimum capital structure because it has the least cost of capital and the highest value of the firm.

- Net operating income (NOI) approach is an independent hypothesis of capital structure. Any changes in leverage will not lead to any change in the total value of the firm and market price of share. From the position of average cost of equity, it is found that NIBL has an average cost of equity of 6.56% with an average long-term debt of Rs. 760 million. Where HBL has average cost of equity of 6.30% at long term debts of Rs.610 million. So we can say that HBL has the optimum capital structure compared to NIBL.

- The financial leverage analysis helps to evaluate the financial risk of the firm. The average degree of financial leverage of NIBL and HBL are 1.87 and 1.97 respectively, which concludes that HBL is bearing the highest risk and NIBL is bearing the least financial risk among the two.

- NIBL has positive correlation between TD and SE of 0.969 that is deviate in the same direction. Likewise, the probable error is 0.1104, less than correlation coefficient, i.e. relationship between TD and SE is significant. In case of HBL the correlation coefficient is 0.9885. The probable error of HBL is 0.0416 which shows that the value of r is significant.

- NIBL has highly positive correlation between EBIT and interest of 0.995 that is deviate in the same direction. Likewise, the probable error is 0.18, less than correlation coefficient, i.e. relationship between EBIT and interest is significant. In case of HBL the correlation coefficient is 0.9813. The probable error of HBL is 0.06697 which shows that the value of r is significant.

CHAPTER-V
SUMMARY, CONCLUSION AND RECOMMENDATION

This study has been designed to analyze the comparative capital structure of the NIBL & HBL. In this chapter summary, conclusions and recommendations have been reported under the following heads:

5.1 SUMMARY

The prosperity of every developing country can only be ensured but its economic growth. The role of commercial banks in the economic growth of the nation can fairly estimated to be very prominent. By mobilizing scattered idle resources from the savers, commercial banks pool the fund in a sizable volume in order to feed the fund requirement of productive sectors, promote trade and industrialization in the country. Thereby, raising the employment opportunities and earning to the laborers materials & service providers to such industries and traders, which as a chain effect, promotes saving into the banks. More saving means more funds available in the bank for further investment. Thus, as the chain moves rolling on, the economy of the nation also grows.

To be a major contributing factor in the growth of the nation's economy, the commercial banks also have sustainable existence and growth of themselves. So, the banks must ensure reasonable profitability for which capital structure management decision is one of the important functions. As the banks are joint stock companies promoted by shareholders, it must primarily concerned with determining an optimal capital structure in the view of providing reasonable return on the funds of the shareholders.

For the accomplishment of this objective, it needs a rational evaluation of the alternative courses of actions. It entails risk and return analysis as risk and return are involved in each of the alternative courses of action. By analyzing the capital structure of a commercial bank in terms of involved risk and return, it can restructure the capital to attain optimum capital structure. Therefore, the bank can increase return at its risk level and/or lower its risk level in the same class of return. Furthermore, a rational capital structure decision leads to more profit making opportunity. So, its capital base must be stronger and more sustainable for facing any future threat that may come up.

The capital structure of any investing entity is the main key to ensure its return and make it more sustainable even in adverse environment. A commercial bank also has to plan for the reasonable capital structure. When a firm and/or an individual affect savings for the expectation of greater degree of future utility, the financial system allow them to earn an additional income on the accumulated savings, which is termed as a return on investment. Therefore, rate of return on investment is cash plus accrued capital gain. It is generally expressed on the basis of annual percentage rate.

Risk on the other hand is the chances of loss. Risk can be thought as the possibility that actual return from holding a security will deviate from an expected return. An asset is concerned as risky if its future return is highly volatile. The risk pertaining to an investment can be measured by computing standard deviation, coefficient of variance, covariance coefficient and beta coefficient and so on.

Investors always want to secure a higher return by taking a minimum level of risk. But theoretically, if they want to secure a higher return, they should also assume a higher risk. Again, at lower risk they should remained satisfied with lower return as there is positive relationship between risk and return.

Capital is the base of business firm. In the absence of capital or money, no one can imagine the existence and promoting of a business firm. For the smooth running of a business firm, different types of capital in the optimum level are required. Generally, there are two types of capital. One is debt capital and another is equity capital. Equity is owner's capital where as debt is the capital of creditors. Debt capital can be also divided in two parts. They are short term debt and long term debt.

Nepal Investment Bank Ltd. (NIBL) was established in 1986 as a joint venture between Nepalese and French partners. Now, the bank has the following shareholding structure:

A group of companies holding 50% of the capital

Rastriya Banijya Bank holding 15% of the capital

Rastriya Beema Sansthan holding the same percentage

The remaining 20% being held by the General Public (which means that NIBL is a company listed on the Nepal Stock exchange).

Himalayan Bank limited was incorporated in 1992 with employees Provident Fund and Habib Bank Limited, Pakistan. Himalayan Bank is the first commercial bank of Nepal whose maximum shares are hold by the Nepalese private sector.

Besides commercial banking services, the Bank also offers industrial and merchant banking services.

This study has tried to cover the various aspects of capital structure of the NIBL & HBL for the time period of five years from FY 2004/05 to 2008/09.

5.2 Conclusions

In this study, comparison among concerned banks has been done taking data of these banks. To evaluate the capital structure, different types of tools and technique are used. The following conclusion can be drawn.

- Long term debt to total debt ratio shows that all of the sample banks have fluctuating trend of long term debt to total debt ratio. NIBL has 2.62% of average long term debt to total debt ratio which means that about 97.38% of the total debt is contributed by current liabilities. Similarly HBL has average ratio of 1.91%.

- Long term debt to capital employed ratio highlights the portion of fund financed by long term debt in the capital employed by the firm. The analysis show that in an average HBL has used least and NIBL has the highest long term debt to capital employed ratio of 0.2195 and 0.25355 in times respectively. This indicates that NIBL is using more long term debt financing as its capital.

- Debt to total assets ratio express the relationship between creditors fund and total assets .The long term debt for financing used by both sample companies is very minimum. Hence, the debt to total assets ratio of NIBL and HBL is 2.43% and 1.79% respectively.

- The debt equity ratio shows the claim of creditors on the total asset of the company. The trend analysis shows fluctuating trend in two sample banks. The average debt equity ratio of NIBL is 0.3441, which shows that the creditors have 34.41% claims on the assets of NIBL. It also indicates that the company has used less amount of debt as financing and has lesser amount to be paid as interest on debt. HBL has the low debt equity ratio among the two with the average ratio of 0.2854 which implies that the claim of creditors is 28.54%.

- Interest coverage ratio shows how many times the interest charges are covered by EBIT out of which they will be paid. The conclusion drawn by the study is the average interest coverage ratio of NIBL is 2.17 times and HBL is 2.04 times, which shows that both banks are able to cover the interest but as the higher interest coverage ratio is better. NIBL seems to have higher ratio than HBL.

- In regards of the comparative position of return on total assets of the two commercial banks NIBL seems to have the highest return of 1.66% in comparison of 1.52% of HBL.

- The returns on shareholder's equity of both banks are fluctuating over the period of five years. The average return of NIBL is Rs. 23.16% which indicates that the shareholders earned Rs. 23 and 16 paisa investing rupees 100. By analyzing the average return, we can conclude that return earned by the shareholders' equity of HBL is highest among two companies i.e. 23.65%

- The earnings per share explain net income for each unit of share. It shows the market position of the market. The average earning per share of NIBL is Rs. 51.34. The average earning per share of HBL is Rs.58.49. Among the two, HBL has the highest earning per share

- The analysis shows that in an average dividend per share of NIBL and HBL are Rs 13 and 18.72 respectively. This indicates that HBL is paying high dividend per share to its shareholders to compare the NIBL.

- Similarly, the analysis shows that in an average dividend payout ratio of NIBL and HBL are 59.41% and 66.61% respectively. HBL pays the more dividends from its earnings to compare to NIBL.

- In comparison, NIBL and HBL have the average P/E ratio of 29.71% and 25.29% respectively. Among the two samples bank NIBL has the higher P/E ratio than HBL.

- BVPS of NIBL and HBL also is fluctuating over the study period. The analysis shows that the average BVPS of both banks are 212 and 247.29 respectively. HBL has the high average BVPS to compare the NIBL.

- Under the NI approach, the interest rate and the cost of equity are dependent of the capital structure. With the increased use of leverage, overall cost of capital declines and the total value of firm rise. From the calculations, NIBL has the optimum capital structure because it has the least cost of capital and the highest value of the firm.

- Net operating income (NOI) approach is an independent hypothesis of capital structure. Any changes in leverage will not lead to any change in the total value of the firm and market price of share. From the position of average cost of equity, it is found that NIBL has an average cost of equity of 6.56% with an average long-term debt of Rs. 760 million. Similarly, HBL has average cost of equity of 6.30% with an average long term debts of Rs.610 million. So we can say that HBL has the optimum capital structure compared to NIBL.

- Net operating income is the independent hypothesis of the capital structure decision of the firm. According to this hypothesis, any change in the leverage will not lead to any change in the total value of the firm and market price of the share, as the overall cost of capital is independent of the degree of leverage.

From the position of average Ke we can conclude that NIBL has lesser Ke i.e. 8.02% than HBL i.e. 8.12%.

- The financial leverage analysis helps to evaluate the financial risk of the firm. The average degree of financial leverage of NIBL and HBL are 1.87 and 1.97 respectively, which concludes that HBL is bearing the highest risk and NIBL is bearing the least financial risk among the two.

- Considering the correlation coefficient and probability error calculated the correlation coefficients are positive and PE are less than the correlation coefficient which concluded that the total debt and shareholder's equity deviate in the same direction. Likewise in the case of EBIT and interest the correlation coefficient are positive and significant in relationship.

5.3 Recommendations

In this section of study, few points that can be helpful to stakeholders as well as to the company are recommended based upon above calculations and drawn conclusions. These recommendations are guidelines, which would be helpful in taking prompt and appropriate decision about capital structure. These recommendations are given below:

- The capital structure decisions are not found to be considered properly by the companies. It affects the value of the firm and overall cost of capital so every investment and financing decision of the company should be taken by considering the capital structure of firm.

- The value of the firm can be maximized either by minimizing the overall cost of capital. The organizations should focus more on optimal capital structure rather than increasing debt portion or equity

- Observing the return on shareholders' equity, earning per share, dividend per share, return on assets, HBL seems to have better capital structure but with greater financial risk than the NIBL. The companies along with the return should also consider the risk associated. The companies' shareholders not only seek the high return from their investment but also consider the risk of the investment. So it is recommended to all these companies to plan their capital structure well by analyzing the possible financial alternatives considering high return and least risk.

- The companies are also recommended to minimize the financial and other expenses so the interest coverage ratio could be increased. They are recommended to use less cost debt, improve strategy of promotion activities, analyze and evaluate before making investments etc to increase the return and decreases risk.

- The concerned authorities should give continuity in providing both conceptual and practical training to the staffs to enhance their knowledge, skill and competency.

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