A Study of Capital Structure Management of Commercial Banks in Nepal

(With reference to Nepal Investment Bank Ltd and Himalayan Bank Ltd)

A THESIS

Submitted By:

Madhab Prasad Bhattarai

Shanker Dev Campus

Campus Roll No.: 337/063

T.U Regd. No: 7-2-32-494-2003

Submitted To:

Office of the Dean

Faculty of Management

Tribhuvan University

In Partial Fulfillment of the Requirements for the Degree of

Master's of Business Studies (MBS)

Kathmandu, Nepal

2012

RECOMMENDATION

This is to certify that the thesis

Submitted By:

Madhab Prasad Bhattarai

Entitled

A STUDY OF CAPITAL STRUCTURE MANAGEMENT OF COMMERCIAL BANKS IN NEPAL

(With reference to Nepal Investment Bank Ltd and Himalyan Bank Ltd)

has been prepared as approved by this Department in the Prescribed format of Faculty of Management. This thesis is forwarded for examination.

| --- | --- | --- |
| Lecturer Rita Maskey | Prof. Bisheswor Man Shrestha | Asso. Prof Ruchila Pandey |
| (Thesis Supervisor) | (Head of Research Department) | (For Campus Chief) |

VIVA –VOCE SHEET

We have conducted the viva – voce examination of the thesis presented

By:

Madhab Prasad Bhattarai

Entitled

A STUDY OF CAPITAL STRUCTURE MANAGEMENT OF COMMERCIAL BANKS IN NEPAL

(With reference to Nepal Investment Bank Ltd, Bank of Kathmandu Ltd, Himalyan Bank Ltd and Everest Bank Ltd)

and found the thesis to be original work of the student and written according to the prescribe format of Faculty of Management, Tribhuvan University. We recommend the thesis to be accepted as partial fulfillment of the requirement for the **Master's Degree of Business Studies (M.B.S)**

Viva –Voce Committee

Head, Research Department ----------

Member (Thesis Supervisor) ----------

Member (External Expert) ----------

DECLARATION

I hereby declare that the work reported in this thesis entitled ***"A Study of Capital Structure Management of Commercial Banks in Nepal"*** (with reference to Nepal Investment Bank Ltd and Himalayan Bank Ltd) submitted to the Office of the Dean, Faculty of Management, Tribhuvan University is my original work completed in the form of partial fulfillment of the requirements for the Master of Business Studies (M.B.S.) under the supervision of **Lecturer Rita Maskey** of **Shanker Dev Campus.**

……..

Madhab Prasad Bhattarai

Researcher

Shanker Dev Campus

Campus Roll No.: 337/063

T.U Regd. No:7-2-32-494-2003

ACKNOWLEDGMENTS

This research work entitled ***"A Study of Capital Structure Management of Commercial Banks in Nepal"*** (with reference to Nepal Investment Bank Ltd and Himalayan Bank Ltd) is prepared to submit in Office of the Dean, Faculty of Management, and T.U. in partial fulfillment of requirement of the Master Degree of Business Studies (M.B.S.)

It is my great opportunity to complete this thesis under the supervision of **Lecturer Rita Maskey** of **Shankar Dev Campus** for generous encouragement and undertaking of the supervision of my entire research work. This form of the report is the outcome of this continuous encouragement, helpful suggestions and comments.

At this moment I cannot forget teaching and non- teaching staffs of Sankar Dev Campus, T.U. who inspired me by showing keen interest in my work. The help of my friends is also unforgettable to me. I would also express my sincere thanks to my brother for providing proper suggestion while preparing this thesis. There are other compatriots who have been supportive, directly or indirectly. I thank all of them.

I would like to thanks my family members for their valuable suggestions, continuous encouragement and help through the research work.

Madhab Prasad Bhattarai

Shankar Dev Campus

TABLE OF CONTENTS

LIST OF TABLES

TABLE NO **PAGE NO**

LISIT OF FIGURES

FIGURE NO **PAGE NO**

ABBREVIATION

C.V	:	Coefficient of Varience
DFL	:	Degree of Financial Leverage
DPS	:	Dividend Per Share
EBIT	:	Earning Before Interest and Tax
EBT	:	Earning Before Tax
EPS	:	Earning Per Share
F.Y	:	Fiscal Year
HBL	:	Himalayan Bank Limited
i.e	:	Exaple
Kd	:	Cost of Debt
Ke	:	Cost of Equity
LTD	:	Long Term Debt
NI	:	Net Income
NIBL	:	Nepal Investment Bank Limited
NOI	:	Net Operating Income
P.E	:	Probable Error
r	:	Correlation Coefficient
ROSHE	:	Return on Shareholders Equity
S.D	:	Standard Deviation
t_{cal}	:	Calculated value of t
t_{tab}	:	Tabulated value of t

CHAPTER-I

INTRODUCTION

1.1 General Background

A bank is the institution which accepts deposits from the public and in turn advances loans by creating credit. In other words, banks are the institutions offering deposits subject to withdrawal on demand and making loans of a business nature. Bank offers wide range of financial services like credit saving payments services etc.

The bank will generate the income in different ways; they collect money from savers and lend it to borrowers by charging more to lending and by giving less to savings. Bank also generates income by providing other services for which they charge fees and commissions. The success of any organization in other words say “profit” depends largely on its capital structure.

The term capital structure refers to, the relationship between the various long terms forms of financing such as debentures, preference shares, capital and equity share capital. Financing the firm assets is a very crucial problem in every business and as a rule there should be a proper mix of a debt and equity capital financing the firm’s assets. Though the capital structure cannot affect the total earning of a firm, it greatly affects the earnings of available equity holders. Managing the capital structure of a firm is an important aspect of corporate financing. The main issue with respect to source of financing is concerned with the nature of relationship between the debt-equity ratio and the market value of the firm.

Capital structure is concerned with qualitative aspects. To meet their requirements, companies generally issue three types of securities, such as: debenture, equity shares and preference shares. A decision about the proportion among these types of securities refers to the capital structure of an enterprise. Different authors have defined the capital structure in their own way, but for the common man point of view we can say that, for the company to run funds are needed, if funds are inadequate and are not managed properly the entire organization will suffer badly.

Massive mobilization of country's domestic resources and their investment in productive sector is the key factors fro the progress and prosperity of any country so for this the bank to be specific i.e. commercial banks should formulate the sound capital structure management policies that automatically contribute to the economic development/growth of a country.

1.1.1 Evolution of the Banking Industry

The basis of banking is the expectation that the business will generate money at some time in future to repay the amount lent or invested plus a return to the owner of the funds.

Banking is nearly as old as civilization. The ancient Romans developed and advanced banking system to serve their vast trade network which extended throughout Europe, Asia and much of Africa.

According to historical sources, the goldsmiths and, moneylenders contributed to a large extent in the growth of banking. In the early age the goldsmiths used to store peoples gold charging nominal charges and issued a receipt to the depositors which were good for payments. At the time this was done for security rather than interest. Later they started advancing the money charging interest. The goldsmith- Money lenders started performing the functions of modern banking i.e. accepting deposits and advancing loans.

However, the modern banking originated in Italy in 1157 A.D with the establishment of the first bank "bank of Venice" to finance the monarch in the wars. Following it were the establishments of bank of Barcelona and the bank of Genoa in 1401 AD and 1407 AD respectively. With large banking activities spread throughout Europe and slowly spread throughout the world. Since the 1960's banking has become much more international because of the increase in the number of multinational companies and the spread of their operations worldwide.

1.1.2 Development of Banking Industry in Nepal

Nepal is a small landlocked country nestled between two giants India and china. Both the country's have natured economy and enjoying the almost double digit growth rate for the past few tears. But unfortunately mainly because of uncertain political conditions Nepal has not been able to catch up with these nations and its having the growth rate of about 2.5% with half of the population living below the poverty line.

The development of banking is relatively recent in the context of Nepal. The Nepali banking sector is small and fragmented history of banking in Nepal in the true sense started on the year 1937 A.D. With the establishment of Nepal bank limited, Nepal's first commercial bank.

Nepal's first central bank "Nepal Rastra Bank" was established in 1956 A.D to make the banking system more systematic and dynamic and to help the government to formulate monetary policies likewise to develop the financial sector. As Nepal started adopting the planned development in the mid fifties the nation to financial resources. Only one commercial bank was not sufficient to meet the growing financial needs of the country. Therefore the need was felt to established another commercial bank and as a result another commercial bank formed in 1965 A.D under the name of
Rastriya Banijya Bank.

With the authorized capital of Rs. 10 million. Similarly, as Nepal's economy was highly attached to the agricultural sector and need was felt to develop the agricultural sector by helping farmers by introducing new technology in the agricultural sector, the Agricultural Development Bank was established in 1968 A.D to develop agricultural Sector.

In 1985 A.D Nepal's first joint venture bank was established. The bank was Nepal Arab Bank Limited also known as NABIL Bank Limited which proved to be a milestone in the history of banking in Nepal. In 1986 A.D. Nepal Indosuez
Bank Ltd was established which is now known Nepal Investment Bank Limited and in 1987 A.D. Nepal Grindlays Bank Limited was established which is now known as Standard Chartered Bank Ltd. After the restoration of democracy in 2090 A.D. many commercial banks have flooded the banking sector. Currently there are 32 commercial banks operating by taking license from Nepal Rastra Bank.

1.1.3 Introduction of Samples Commercial Banks.

Nepal Investment Bank Limited

Nepal Investment Bank Limited previously Nepal Indosuez Bank ltd, was established in 1986 as a joint venture between Nepalese and French partner. The French partner (holding 50% of the capital of NIBL) was credit Agricole Indosuez, a subsidiary of one the largest banking group of 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 bank's Annual General meeting. Nepal Rastra Bank and Company Registrar's offices with the following shareholding structure.

- A group of companies holding 50% of the capital.
- Rastriya Banijya Bank holding 15% of the capital.
- Rastriya Bima Sansthan holding 15% of the capital.
- The remaining 20% being held by the general Public (which means that NIBL is company listed on the Nepal stock Exchange. We believe that NIBL, which is managed by a team of experience bankers and professionals having proven track record, can offer you what you're looking for, we are sure that your choice of a bank will be guided among other things by its reliability and professionalism. (www.nepse.com)

Himalayan Bank Limited (HBL)

Himalayan Bank Limited was established in 1992 AD by the distinguished business personalities of Nepal in Partnership with employee's provident Habib Bank Ltd, one of the largest commercial bank of Pakistan. It is the first commercials bank of Nepal with maximum shareholding by Nepalese private sector. Beside commercial activities, the bank also offers industrial and merchant banking. The bank at present has the five branches in Kathmandu in Birgung, Bharatpur, and Tandi. The bank is also operating a counter in the premise of the Royal Palace. The bank has a very aggressive plan of establishing more branches indifferent parts of the country in the near future. Himalayan Bank's policy is to extend quality and personalized services to its customers as promptly as possible. All customers are treated with utmost courtery as valued clients. The bank, as fro as possible, offers tailor? Made facilities to its clients based on the unique needs and requirement. To extend more efficient services to its customers, Himalayan Bank has been adopting innovative and latest banking technology. This has not only helped the Bank to constantly improve its service level but has also kept it prepared for future adoption of new technology.

1.2 Capital Structures of Commercial Banks

Every Business firm or bank requires the initial funds for its sound operation. Capital is the blood of the business, a business firm or enterprises cannot run their business without capital, enterprises whether they are government owned or privately owned have to make pertinent capital structure decision in identifying exactly how much capital is needed to run their operation smoothly.

The fund required are generated usually by two means i.e. Equity and debt. Equity provides the ownership of the firm to the shareholder on the other hand debt is a fund borrowed with fixed charges to be paid periodically to the debtor.

The term capital structure refers to the proportion of the debt and equity capital or the composition of long term source of finance, such as preference capital, debentures, long term debt and equity capital including service and surpluses i.e. retained earning and excluding short term debts. The term capital structure refers to the mix of different types of fund a company uses to finance its activities; capital structure varies greatly from one company to another. For example, some companies are financed mainly by shareholders funds whereas other makes much greater use of borrowing. Firstly we must decide what we mean by a good capital structure. This would be a capital structure, which results in a low overall cost of capital for the company. I.e. a low overall rate of return that needs to be paid on funds provided. If the cost of capital is low then the discounted value of future cash flows generated by the company is high, resulting in a high overall company value. The objective is therefore to find the capital structure that gives the lowest overall cost of capital and consequently the highest company value.

The capital structure decision affects the total value of the firm proper balance between debt and equity is necessary to ensure a trade off between risk and return to the shareholders. The capital structure of the bank should be such that leads to the value maximization. The optimal capital structure i.e. the capital structure with reasonable proportion of debt and equity minimize the opportunity cost of capital and maximizes the shareholders wealth.

1.3 Focus of the Study

As we have stated above the meaning and importance of the capital structure of financial institution. The main purpose of this study is to evaluate the capital structure of the private

commercial banks. The capital structure decision is a major decision, which affects the overall cost of capital, total value of the firm and earning per share.

This study is based upon the study of overall cost of capital structure by using various relative measurement tools. It considered earning per share, dividend per share, return on total assets etc. Optimal capital structure plays vital role in every organization. So, this study tries to evaluate the optimality of their capital structure using various financial variables for the purpose of comparative evaluation

.

Hence the focus of this study mainly deals with the effects of the capital structure on the growth and profitability of the firm and the extent to which the capital structure policy is followed by the commercial banks.

1.4 Statement of Problems

Although banking industry in Nepal is making remarkable progress and growth it is not without the problem. At the present context the main problem faced by the business sector as well as banking sector is the unstable political situation and poor economic growth of the country.

But beside these common problems another problem faced by the banking industry is the lack of optimal structure in the commercial banks. The success and prosperity of a bank relies heavily on the maximization of the wealth of the shareholders or return on equity. Nepalese banks do not take the capital structure is not proportionate which in turn affects the value maximization of the bank.

The present study focuses on the existing capital structure management of some selected banks. More specifically this study seeks to solve the answer of following question:

1. What are the factors that affect the capital structure of commercial banks?
2. Does the capital structure of banks affect its profitability?
3. How are the commercial banks managing their financial needs?
4. What is the existing situation of capital structure practices in Nepalese commercial Banks?

1.5 Objectives of the Study

The main objective of this study is to analyze the capital structure and its affects on the risk and returns of the sampled commercial in the context of Nepal. The specific objectives are given below:

- To analyze the factors that affects the capital structure of commercial banks.
- To evaluate the impact of capital structure on the profitability of sample commercial banks in Nepal.
- To analyze the relationship of capital structure with variables like earning per share, dividend per share.
- To give the suggestion and recommendation for the sample commercials banks.

1.6 Significance of the Study

Since capital structure is essential indicators of company's financial decision making. It is a too large a determinant of company's profitability. As it is a well known fact that the commercial banks can affect the economic condition of the capital structure policy of commercial banks.

- The study would help them to take corrective action to optimize the value of the bank by using optimal capital structure.
- Thus the analysis of selected companies capital structure through this study will lead to shed light on their financial performance and hope it will be useful for further research.

1.7Limitation of the Study

This study is simply for partial fulfillment of the requirement of Master in Business Studies (MBS). However there are some limitations, which narrowed the generalizations. For instant inadequate coverage of industries, time periods taken reliability of statistical tools used and other variations. The study is completely based on the data collected from the banks. The following are the some limitations of the study:-

- The study will cover only six fiscal year from 2004/05 to 2009/10 historical data of Himalayan bank Ltd. and Nepal Investment bank Ltd.
- The study will be based on the secondary data.
- The study will depend upon the true response and the data provided by the management of the banks.

- Time and resources lack are the main limitation to the study.
- This study would only concern with fulfilling in partial requirement in master of business studies (MBS).
- This study does not present the sample banks data of 2010/2011 because the data are unaudited.

1.8 Organization of the Study.

This study has been organized into five chapters.

Chapter one deals with major issues to be investigated along with background of the study, statement of the problem, Limitations of the study and objectives of the study.

Chapter two includes a discussion on the conceptual framework and review of the major empirical works as well as review of Nepalese studies. The conceptual consideration and review of related literature conducted in this chapter provides a framework with the help of which this study has been accomplished.

Chapter three describes the research methodology employed in the study. This chapter deals with research design, nature and sources of data and data tools analysis.

Chapter four consists of presentation and analysis of data which deals with the empirical analysis of the study and findings.

Chapter five indicates the summary, conclusions and recommendations of the study.

CHAPTER-II

REVIEW OF LITERATURE

This chapter deals with review of literature. Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. Since completely new and original problems are rare it is necessary to show how the problem under investigation relates to previous research works done under similar topic, however a previous study not be exactly replicated. It is believed that the review of literature is literature which is helpful to show the needs of the research work and to justify the work, it tries to clear the conceptual thought and bank related terms.

2.1 Conceptual Framework

Capital structure is the mix of firm's permanent long term financing represented by the debt, preferred stock and common stock equity (Van Horne, 1997:112).

Capital structure of the firm is the permanent financing represented by long-term debt, preferred stock and shareholders equity. Thus, a firm's capital structure is only part of its financial structure (Western and Brigham 1978:19).

Sound capital structure is required to operate business smoothly and achieve the business goal. Capital structure is concerned with analyzing the capital composition of the company (Western and Brigham, 1978:25).

Capital structure is one of the most complex areas of financial decision making due to its interrelation with other financial decision variables. The success and failure of the enterprise depends on the ability of top management to make appropriate capital decision.

2.2 Theories of Capital Structure

Capital structure is an important subject, especially for firms. A bad capital structure is more expensive than good capital structure.

Firms raise investment funds in number of different ways. A firm's mix of these different sources of capital is referred to as its capital structure.

Basically, the theories of capital structure are distinguished into 6 different groups:

Traditional Theory, Modigliani-Miller Theory, Trade Off Theory, Free cash Flow Theory, Pecking order Theory and Stakeholder Theory.

2.2.1 Traditional Theory

The first theory is called the "Traditional Theory" supporters of this theory believe that the lowest weighted average cost of capital (WACC) will maximize the firm's market value. This means the existence of an optimum relation between debts and equity but it is very difficult to reach that point.

Although it is cheaper to finance with debt, this theory certainly rejects to finance all with debt because after a certain level of the risks of non payment increases. In this case shareholders and debt financiers demand a higher compensation.

2.2.2 Modigliani – Miller Theory

In 1958, two prominent financial researchers, Franco Modigliani and Merton Miller (MM), showed that under certain assumptions, a firm's overall cost of capital, and therefore, its value is independent of the capital structure.

The Modigliani-Miller theorem states that if the capital structure decision has no effect on the cash flows generated by a firm, the decision also will have no effect in the absence of transaction costs. On the total value of the firms debt and equity. This means that there is no relationship between a firm's market value and the capital structure. Profitability of firm's activities is the only factor that determines the market value.

This theory is based on the perfect capital market. The only market imperfections they admit are corporate taxes (Van Horne 1995:127).

The assumption of the Modigliani –Miller theorem are:

1. capital markets are perfect
2. Information is free of costs and widely available
3. There are no transactions cost of buying and selling securities.
4. All investors behave rationally and have homogeneous expectations of a firm's earning.
5. Every firm has perpetual flows of money with equal time values.
6. All investors can borrow or lend at the same rate.
7. There are no personal or corporate taxes.

2.2.3 Trade off Theory

The third theory is called the static trade off Theory. The trade off between the costs and return of debt financing determines the optimum debt ratio. Firms consider this ratio as a target debt ratio, because this ratio will maximize the market value of firm Corporation. Myers assumes those firms need to adapt their capital structure to reach that ratio. But an adaptation of the capital structure needs time and costs money. Therefore, it is possible that present temporary debt ratios differ from the target ratios. Or as Myers formulated it: "a static trade off framework in which the firm is viewed as setting debt to value ratio and moving gradually towards it in much the same way that a firm adjusts dividend to move towards a target payout ratio" (Myers, 1984:111).

2.2.4 Free Cash Flow Theory

In the contrary of the trade off theory, in which a firm strives after a maximization of the market value, the free cash flow theory presumes that there are enormous conflicts of interest between shareholders and stakeholders. This implies that manager's decisions don't always maximize the market value of a firm (Jensen 1986). A free cash flow is the balance of money. When all project (with positive net present values) is financed. Debt reduces the agency costs of free cash flow by reducing the cash flow available for spending at the discretion of managers (Jensen, 1986:215).

Debt also reduces the freedom of decisions, because a firm is forced to pay at certain times interest and payoffs. There will always be risk that a firm won't be able to pay interest and payoffs in future times. This risk causes managers to lead and organize a firm more efficient.

2.2.5 Pecking Order Theory

Pecking order is also known as a ladder or class structure of financing. It was first suggested by Myers and Majluf in 1984. It is also known as pecking order theory for capital structure. This theory is preference theory because the fund sources are selected in preference.

The first preference to given to the internal financing that is retained earnings. It is because it avoids the outside scrutiny of suppliers of capital and there is no flotation costs associated with the use of retained earnings. The next preference is also given to the straight debt. As explained in the previous sections it is a good signal to the investors and help to raise the market price. Moreover, debt results in less intrusion into management by suppliers of capital and flotation costs are less than those with other types of external financing. Next In order of financing preference is preferred stock which has some of the feature of debt. This followed by the various hybrid securities, like convertible bonds. Finally, the least desirable security to issue is straight equity. It is not only a method of financing but it is also likely to have an adverse signaling effect

This story is mainly a behavioral explanation of why certain companies finance the way they do. It is consistent with some rational arguments, such as asymmetric information and signaling, as well as flotation costs. The sequence of investment resources is restricted by problems caused by asymmetrical information between managers and potential investors. The following assumptions are made by this theory (Myers, 1984).

1. Firms prefer internal ways to finance projects.
2. Firms adapt their target dividend payout ratios to available investment resources.
3. Internal resources of a firm are fluctuating because of unpredictable fluctuations of profitability.
4. When firms need extra resources, they prefer the safest way of getting funds; this means that firms prefer debt to convertible stocks and common stocks.

The result of this pecking order theory is that a firm doesn't have a certain target debt ratio. The target ratio is dependant on the way a firm financed its projects in the past. This theory also pays attention to costs of asymmetrical information and costs of bankruptcy.

When this cost exits, a firm doesn't always choose to finance projects with a positive net present value. Net a positive net present value determines whether a firm finance a project or not, but the way in which a firm is able to finance their projects.

Baskin researched the validity the validity of this theory in 1989 and he made the following conclusion;

The accumulated evidence in favor of the pecking order hypothesis is now substantial. Now it is possible to provide pecking order behavior with a rational basis and there seems no longer any reason to ignore the manifest empirical evidence.

2.2.6 Stakeholders Theory

Cornell and Shapiro (1987) assume that not only investors have an interest in a firm. There are different groups of non – investor stakeholders and some of them have a lot of influence in the financial policy of a firm. Or as Cornell and Shapiro wrote: financial structure may also depend on a firm's net organizational capital and on the nature of its stakeholders (Cornell and Shapiro 1987).
Examples of non-investor stakeholders are customers, employees and suppliers.

Non investor stakeholders hold implicit claims. Implicit claims are non written promises and Rights, such as the right to provide service to customers or job security for employees (Pandey, 1990: 234)

2.3 Approaches to Capital Structure

» Traditional Approach
» Net Income approach
» Net operating income approach
» Modigliani –Millers Approach
All the above approaches are based on some common assumptions, which are as follows:

Basic assumptions and definitions: (Western and Brigham, 1992:146)

1. Only two types if capital structures are employed long term debt and common stock.
2. There is no tax on corporate income.
3. The firms total assets are fixed, but its capital structure can be changed immediately by selling debt to repurchase common stock to retire debt.
4. All earnings are paid out as dividends.
5. All investors have the same subjective probability distributions of expected future operating earnings (EBIT) for a given firm that is investors have homogeneous expectations.
6. The operating earnings of the firm are not expected to grow that is the firms expected EBIT is same in all future periods.
7. The firm's business risk is constant over time and it is independent of its capital structure and financial risk.
8. The firm of is expected to continue indefinitely.

In addition to these assumptions, it uses the following basic definitions and symbols:

S=total market value of the stock. (Equity)

B=total market value of the bonds (debt)

V=total market value of the firm = S+B

EBIT = earning before interest and taxes = net operating income (NOI)

I = interest payments.

Cost of Debt (Kd) = Interest = I/ Debt

Value of debt (B) =Interest / Kd = I/Kd

Cost of equity capital (Ks) = cost of equity capital (K) = D1/Po+g = D1/P = EPS/Po

Where,

D1 = Next dividend

P0 = Current price per share

G = Expected growth rate

Overall or Weighted Average cost of capital

K = WdKd + WeKe

The total value of a firm is thus defined as, the sum of the value of the firm's debt and firm's equity.

2.3.1 Traditional Approach

This theory was propounded by Ezra Solomon. According to this theory a firm can reduce the overall cost of capital or increase the total value of the firm by increasing the debt proportion in its capital structure to a certain limit, because debt is a cheap source of raising funds as compared to equity capital. The traditional view of capital structure which is also known as an intermediate approach is a compromise between the net income approach and the net operating income approach. It states that when a company starts to borrow, the advantages outweigh the disadvantages. The cheap cast of debt, combined with its tax advantage will cause the WACC to fall as borrowing increases. However, as gearing increases the effect of financial leverage causes shareholders to increase their required return (i.e. the cost of equity rises). At high gearing the cost of debt also rises because the chance of the company defaulting on the debt is higher (i.e. risk of bankruptcy). So at higher gearing the WACC will increase.

According to this view, the value of firm can be increased or the cost of capital can be reduced by a judicious mix of debt and equity capital and that an optimum capital exists for every firm.

This approach clearly implies that the cost of capital decreases within the reasonable limit of debt and then increases with leverage. Thus, an optimum capital structure exists and it occurs when the cost of capital is minimum or the value of firm is maximum.

The statement that debt funds are cheaper than equity funds carry the clear implication that the interest rate of debt plus the increased yield on the common stock, together on the weighted bases will be less than yield (cost of equity) which existed on the common stock before debt financing that is the weighted average cost of capital will decrease with the use of debt up to a limit.

According to the traditional position, the manner in which the overall cost of capital reacts to changes in capital structure can be dividing into three stages. (Egra, Solomon 1963:129)

First stage; increasing value

The first stage with the introduction of debt in the firm's capital structure. In this stage, the cost of equity (Ke) either remains constant or rises slightly with debt because of the added

financial risk. But it does not increase fast enough to offset the advantage of low cost debt. In other words, the advantage arising out of the use of debt is so large that, even after allowing for higher cost of equity, the benefit of the use of the cheaper sources of funds are still available. As a result the value of the firm (V) increases as the overall cost of capital falls with increasing leverage. During the stage cost of debt (Kd) remains constant or rises only modestly. The combined effect of all these will be reflected in increase in market value of the firm and decline in over all cost of capital (Ko).

Second Stage: Optimum Value

In the second stage, further application of debt will raise cost of debt and equity capital so sharply as to offset the gains in net income. Hence, the total market value of the firm would remain unchanged, while the firm has reached a certain degree of leverage, increase in it has a negligible effect on the value of the firm or overall cost of capital of the firm. The increase in the degree of leverage increases the cost of equity due to the added financial risk that offsets the advantage of low cost of debt. Within the range of such debt level or at a specific cost point, the value of the firm will be maximum or the cost of capital will be minimum. (Gitman Lawrence, 1988:200)

Third stage: Declining Value

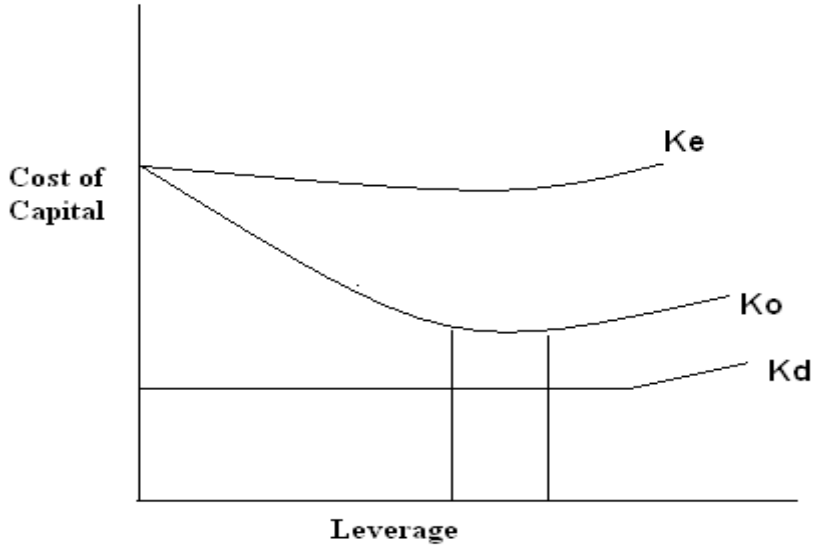
Beyond the acceptable limit of leverage, the value of the firm decreases with the increases of the leverage or the overall cost of capital increases with the additional leverage. This happens because investors perceive a high degree of financial risk, which increases the cost of equity by more than enough to offset the advantage of low cost debt.

The overall effect of these three stages is to suggest that the cost of capital is a function of leverage, i.e. first falling and after reaching minimum point or range it would start rising. The relation between cost of capital and leverage is graphically shown in figure below.

Figure: 2.1

Effect of leverage on Cost of Capital under Traditional Theory

Cost of Capital



Source: (Ghimire, Sharma and Sapkota 2012)

In the figure no: 1, it is assumed that Ke rise at an increasing rate with leverage, where as Kd is assumed to rise only after significant leverage has occurred. At first, the weighted cost of capital, Ko, declines with leverage because the rise in Ke does not entirely offset the use of cheaper debt funds. As a result, Ko declines with moderate use of leverage. After a point, however, the increase in Ke more than offset the use of cheaper debt funds in the capital structure, and Ko begins to rise. The rise in Ko is supported further and Kd begins to rise. The optimal capital structure is point X. thus the traditional position implies that the cost of capital is not independent of capital structure of the firm and that there is an optimal structure. (Pradhan, 1999: 124)

Corresponding change in the overall cost of capital and total value of the firm. Thus, with an increase in the ratio of debt to equity, overall cost of capital will decline and market price of equity stock as well as value of firm will rise (David Durand, 1959). The converse will hold true if ratio of debt to equity tends to decline. The approach assumes no change in the behavior of both stockholders and debt holders as to the required rate of return on response to a change in the debt- equity ratio of the firm. They want to invest since debt holders are exposed to lesser degree of risk, assumed of a fixed rate of interest and are given preferential claim over the profit and assets, the debt holders required rate of return is relatively lower

than that of equity holders. So, the debt financing gis relatively cheaper than equity. Fro this reason, at constant cost of equity (Ke) and cost of debt (Kd), the of overall cost of capital (Ko) declines with the increased proportion of the debt in the capital structure. This suggests that higher the level of debt, lower the overall cost of capital and higher the value of firm, it means that a firm attends an optimal capital structure when it uses 100% debt financing. Running a business with 100% debt financing, however, is quite uncommon in the real world. The firm can achieve optimal capital structure by making judicious use of debt and equity and attempt to maximize the market price of its stock.

2.3.2 Net Income Approach

In sum, as per NI approach, increase in ratio of debt to total capitalization brings about corresponding increase in total value of firm and decline in cost of capital. On the contrary, decrease in ratio of debt to total capitalization causes decline in total value of firm and increase cost of capital. Thus, this approach is appeared as relevancy theory. This approach is based on the following assumptions:

1. The cost of equity and debt remain constant to the acceptable range of leverage.
2. The corporate income taxes do not exist.
3. The cost of debt rate is less than the cost of equity.
4. The increasing leverage beings about no deterioration in the equity of net earning so long as borrowing is consigned to the amount below the acceptable limits.

Graphically, the effect of leverage on the firm's cost of capital and the total market value of the firm is shown below.

Figure: 2.2
The Effect of Leverage on the Cost of Capital

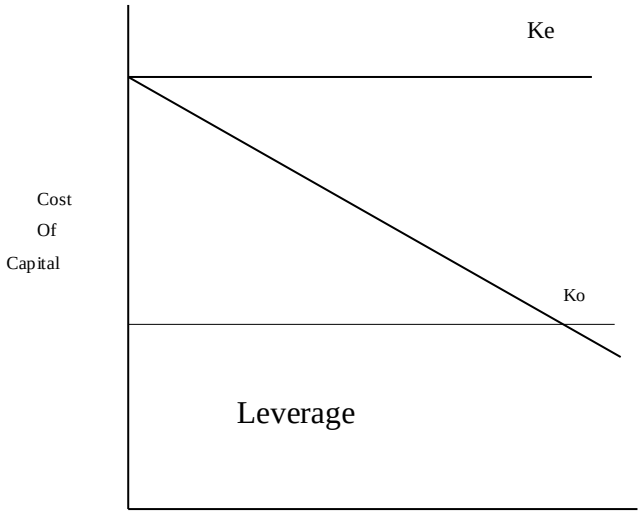
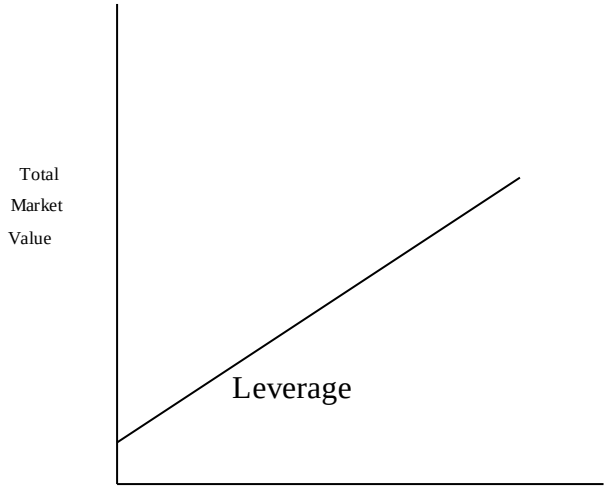


Figure: 2.3
the Effect of Leverage on the Total Market Value of the Firm



Source: (Ghimire, Sharma. and Sapkota 2012)

Figure 2.2 shows a continuous decrease in Ko with the increase in debt equity ratio, since any decrease in Ko directly contributes to the value of the firm; it increases with the increase in the debt-equity ratio (figure 2.3). Thus the financial leverage, according to the NI approach is an important variable in the capital structure decision of a firm. Under the NI approach, a firm can determine an optimal capital structure. If the firm unleveled the overall cost of capital will be just equal capitalization rate. (Subedy, 2001: 150)

In brief, the essence of the net income approach is that the firm can lower its cost of capital by using debt. The approach is based on the assumption that the use of debt does not change the risk perception of the investor. Consequently, the interest rate of debt (Kd) and the equity capitalization rate (Ke) remain constant to debt. Therefore, the increased use of debt results in higher market value of shares a das a result, lower overall cost of capital (Ko).

2.3.3. Net Operating Income (NOI) Approach

Net Operating Income Approach is another behavioral approach suggested by Durand David. This approach is diametrically apposite from the NI approach with respect to the assumption of the behavior of equity holders and debt holders. The essence of this approach is that the leverage/capital structure decision of the firm is irrelevant. The overall cost of capital is independent of the degree of leverage; any change in leverage will lead to change in the value of the firm and the market price of the shares. Net operating approach is slightly different

from NI approach, unlike the NI approach in NOI approach, the overall cost of capital and value of firm are independent of capital structure decision and change in degree of financing. Leverage does not bring about any change in the value of firm and cost of capital

The main different between NI and NOI approach is the base that investors use to value the firm. Under NOI approach, the net operating income, i.e. the earning before interest and tax (EBIT) instead of net income is taken as the base. Like the NI approach, the NOI approach also assumes a constant rate of Kd, which means that the debt holders do not demand higher rate of interest for higher level of leverage risk. However, unlike the assumption of NI approach, NOI approach assumes that the equity holders do reach to higher leverage risk and demand higher rate of return for higher debt-equity ratio. This approach says that the cost of equity increases with the debt level and the higher cost of equity offset the benefit of cheaper debt financing, resulting no effect at all on overall cost of capital (Ko). (Acharya; 1990: 234)

The NOI approach is based on following assumptions.

1. The market capitalizes the value of the firm as a whole. Thus, the split between debt and equity is not important.
2. The market uses an overall capitalization rate, Ko to capitalize the net operating income. Ko depends on the business risk in assumed to remain unchanged, Ko is constant.
3. The use of less costly debt funds increases the risk of shareholders. This cause the equity-capitalization rate to increase. Thus, the advantages of debt are offset exactly by the increase in the equity capitalization rate, Ke.
4. The debt-capitalization rate, Kd is constant.
5. The corporate income taxes do not exit.

The function of Ks under NOI approach can be expressed in equation as follows;

$Ke = Ko + (Ko – Kd) B/S$

The relation between financial leverage and K, Ks and Kd has been graphically depicted in following figures:

Figure: 2.4

The Effect of leverage on the Cost of capital

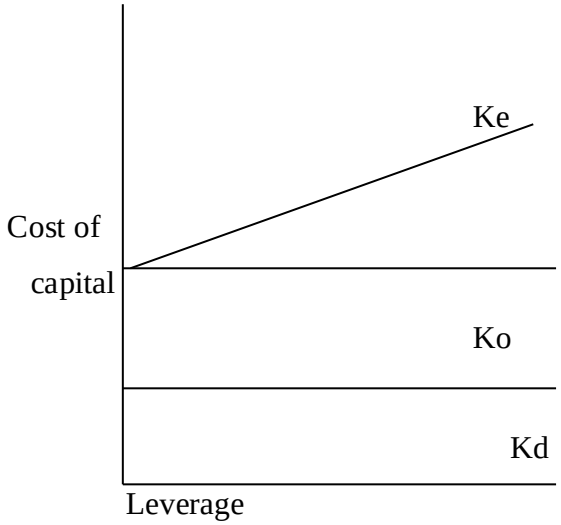
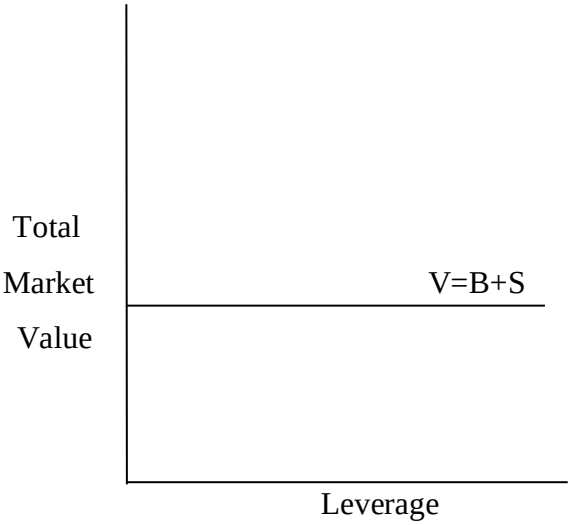


Figure: 2.5

The Effect of Leverage on Total Market Value of the Firm



Source: (Ghimire, Sharma. and Sapkota 2012)

In the figure 2.4 shown that the curve Ko and Kd are parallel to the horizontal X-axis and Ke is increasing continuously. This is because Ko and Ke remain constant under all the circumstances but the Ke increases with the degree of increase in the leverage. Thus, there is no single point or range where the capital structure is optimum. We know obviously from the figure 4 that under the NOI approach as low cost of debt is used; its advantage is exactly offset by increase in cost of equity in such a way that the cost of capital remains constant. By this, value of the firm also remains constant. At this extreme degree of financial leverage, hidden cost becomes very high hence the firm's cost of capital and its market value are not influenced by the use additional cheap debt fund .(Gitman Lawrence;1988: 214)

2.3.4. Modigliani-Miller Approach (MM Approach)

The Modigliani- Miller theses (Modigliani F. and M.D. Miller, "The cost of capital corporate finance, and The Theory of investments," American Economic Review, XLVIII June 1958) relating to the relation is akin to net operating income approach. MM approach, supporting the net operating income approach, argues that, in the absence of taxes, total market value and cost of capital of the firm remain invariant to the capital structure changes. They make a formidable attach on the transitional position by offering behavioral justification for having the cost of capital, K, remain constant through all degree of leverage. MM contend that cost of capital is equal to the capitalization rate of a pure equity stream of income and the market value is ascertained by capitalizing its expected income at the appropriate discount rate of its

risk class. MM position is based on debt equity and other claims; there is a conversion of investment value. However, the following assumptions regarding the behavior of the investors crucial for the validity of the MM hypothesis.(Pandey; 1998:240)

1. Perfect capital market: the implication of perfect capital market is that securities are infinitely divisible. Investors are free to buy and sell securities, investors can borrow without restrictions on the same terms and conditions as firms can, there are no transactions costs and investors are rational and behave accordingly.
2. Firms can be grouped into homogeneous risk classes. Firms would be considered to belong to a homogeneous risk class as their expected earnings, adjust fir scale differences have identical risk characteristics. The share of the homogeneous firm would be perfect substitute for one another.
3. Firms distributed all net earning to the shareholder. I.e. dividend payout ratio is 100 percent.
4. There are no taxes. This assumption is removed later.
5. The assumption of perfect information and rationality, all investors has the same exception of firm's net operating income with which to evaluate the value of any firm.

The MM cost of capital hypothesis can be best expressed in terms of their proposition I and II (Modigliani and Miller; 1969:112)

Propositions

The theorem was originally proven under the assumption of no taxes. It is made up of two propositions which can also be extended to a situation with taxes.

Consider two firms which are identical except for their financial structures. The first (Firm U) is unlevered: that is, it is financed by equity only. The other (Firm L) is levered: it is financed partly by equity, and partly by debt. The Modigliani- Miller theorem states that the value of the two firms is the same.

Propositions I:

Where *Vu is the value of an unlevered firm* = price of buying a firm composed only of equity, and *VL is the value of a levered firm* = Price of buying a firm that is composed of some mix of debt and equity.

To see why this should be true, suppose an investor is considering buying one of the two firms U or L. instead of purchasing the shares of the levered firm L, he could purchase the shares of firm U and borrow the same amount of money B that firm L does. The eventual returns to either of these investments would be the same. Therefore the price of L must be the same as the price of U minus the money borrowed B, which is the value of L's debt.

This discussion also clarifies the role of some of the theorem's assumptions. We have implicitly assumed that the investor's cost of borrowing money is the same as that of the firm, which need not be true in the presence of asymmetric information or in the absence of efficient markets.

Propositions II

This proposition states that the cost of equity is a linear function of the firm's debt to equity ratio. A higher debt to equity ratio leads to a higher required return on equity, because of the higher risk involved for equity-holders in a company with debt. The formula is derived from the theory of weighted average cost of capital

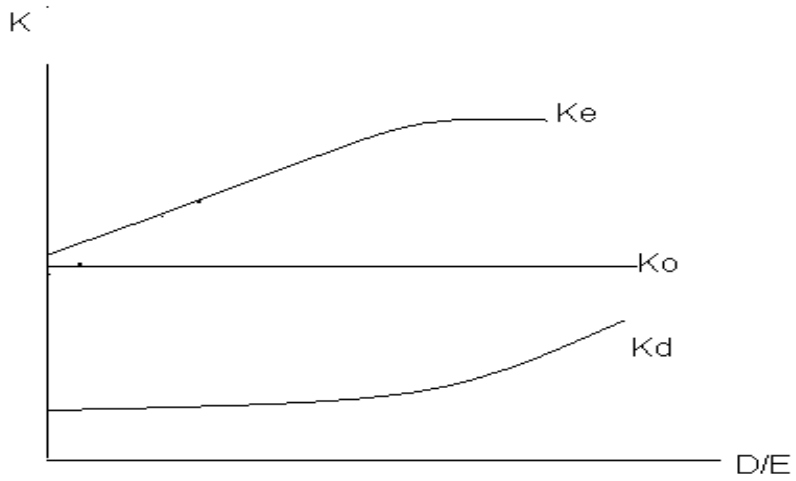
These propositions are true assuming the following assumptions:

- No taxes exist,
- No transaction costs exist, and
- Individuals and corporations borrow at the same rates.

These results might seem irrelevant (after all, none of the conditions are met in the real world), but the theorem is still taught and studied because it tells us something very important. That is capital structure matters precisely because one or more of these assumptions are violated. It tells us where to look for determinants of optimal capital structure and how those factors might affect optimal capital structure.

Figure: 2.6

Behavior of Ko, Kd and Ke under MM hypothesis.



Source: (Ghimire, Sharma. and Sapkota 2012)

Where

- Ke is the required rate of return on equity, or cost of equity.
- Ko is the cost of capital for an all equity firm.
- Kd is the required rate of return on borrowings, or cost of debt.
- D/E is the debt-to-equity ratio.

It is clear from the figure that Ke will increase till the marginal rate of interest (Kd) is below the cost of capital (Ko). As soon as the marginal rate of interest cuts the cost of capital, Ke will start falling. (Pradhan 1999:124)

$$Ke = Ko + D/E (Ko – Kd)$$

2.4 Leverage

The term leverage may be defined as the use of that source of funds in the business for which the firm has to pay fixed charges, irrespective to the earnings of firm. There are two types of leverage

i. Financial Leverage
ii. Operating Leverage

Leverage association with investment activities is called operating leverage and the leverage concerned with financial activities is called financial leverage.

Financial Leverage

Financial leverage is the ratio of total debt to total assets or the total value of the firm (Western and Brigham; 1981:185)

The use of fixed sources of funds, such as debt and preference capital along with the owners equity in the capital structure are described as financial leverage (Waterman & Martin; 1963:212)

Financial leverage refers to the response of shareholders income to change in earning before interest and taxes and it is created by debt or preferred stock financing with fixed interest and dividend payment (Lawrence, D Schell and Haley; 1983:112)

The debt is risky as well as more advantageous in the context of earning. The use of debt and preferred stock financing provide the income advantage over the common stock financing of the firm under the favorable condition and they increase the risk too. Leverage is employed by the company to earn more. The surplus will increase the return on equity. Since the interest and principle payments are the contractual obligation to the firm, it is risky in the viewpoint of the shareholders.

2.6 Review of Related Research

G.C (2005) conducted a study on the topic "*Focus on capital structure of selected and listed Public Companies."* The study used data from 19 Companies, which covered different sectors such as manufacturing, finance, utility service and other allied areas. It was found that most of these companies have debt capital relatively very high than equity capital. Consequently most of them are operating at loss to the extent that payment of interest on loan which has been a serious issue. Most of these losses are after changing interest on loan. It has suggested that the government has to consider the public enterprises in evaluating the relationship between use of debt and its impact on overall earning of public enterprises. So government should be sure in knowing how to use debt capital which will maximize return. It should develop a suitable capital structure guideline to make public enterprises aware of its responsibility and to repay the debt schedules. Government has to analyze cost and risk return trade off. Thus capital structure needs to be made more determine by realistic analysis of cost. Lastly, she concluded

that policy makers have to be careful in developing the suitable capital structure guidelines in making public enterprises as well as listed companies to be aware of financial accountability.

Shrestha (2006) has carried out a study under the topic fo *"interrelationship of capital structure"* with various important variable such as earning per share(EPS), dividend per share (DPS) and net worth of the joint venture banks and provide suggestions to overcomes various issues and gaps. The study has used financial tools such as ratio analysis, EBIT-EPS analysis, and overall capitalization rate equity capitalization rate. Total value calculation and statistical tools such as Karl Pearson's correlated and probable error. The study concluded that all the joint venture banks are using high percentage of total debt in raising the assets and all the banks are able to pay the interest. The study suggested that the bank must control total deposit and the bank must control investment, the bank needs to reduce its expenses and control fluctuations in the earnings per share to improve its market price per share.

Karki (2008) has carried out a study on *"capital structure and profitability*" a comparative case study between the Nepal Indosuez bank ltd (now Nepal Investment Bank Ltd) and then Nepal Grindlay Bank Ltd (now Standard Chartered Bank Ltd)". The capital structures of both banks are highly levered, so it is difficult for them to pay interest and principal that may ultimately lead them to liquidity or for them to pay interest and principal that may ultimately dead them to liquidity or bankruptcy. There is no significant relationship between debt and equity ratio in terms of fixed deposits to net worth and overall capitalization rates of the banks. The ROE fluctuation is found to be influenced by the dividend payout ratio and interest margin in NIB Ltd. Both banks vary in the case of total assets, number of bank branches and volume of transactions. Both the banks are efficient and well established and doing well. He has suggested that NIB Ltd should expand assets and branches, which may ultimately affect the banks performance and increase the profitability more than ever.

Shrestha (2009) His study on *"Analysis of capital structure in selected public enterprises"* argue that most of public enterprises have confusing capital structure since the corporation are not guided by any objectives based financial plan and policies. The corporations are using least combination of debt with equity to avoid financial burden as far as possible.

Review of Unpublished Thesis.

Mandal (2006) in his thesis paper, *"Comparative financial performance appraisal of joint venture banks"* has studied mainly three banks i.e. Nepal Arab Bank Ltd (NABIL), Nepal Indosuez Bank Ltd.(NIBL), and Nepal Grindlays Ltd. (SCBNL). His main finding is that both SCBNL and NABIL have mobilized the debt funds in proper way for generating more return but NIBL could not do so as good as NABIL and SCBNL. He has recommended enhancing banking facilities in rural areas by encouraging small entrepreneurs development programmers, to play merchant banking role to mobilize.

His Major objectives are as follows:

- To analyze the lending practices and resources utilizations of NB bank.
- To examine the correlation and the signification of their relationship between different ratios related to capital structure

His Research Methodologies are as follows:

In this research, data are analyzed by using different types of tools. As per topic requirements, emphasis is given on statistical tools rather than financial tools. So for this study following statistical tools and financial tools are use such as Loans and advances to Total Risk Weighted Assets Ratio, non-performing Loan to Total Loans and advances Ratio, Loan Loss Provision to Non Performing Loan, Arithmetic Mean Standard Deviation and Hypothesis Test.

His Major Findings are as follows:

- The bank has been managing its investment portfolio efficiency and Operational efficiency of the bank indicates by the operational.
- SCBNL and NABIL have mobilized the debt funds in proper way for generating more return but NIBL could not do so as good as NABIL and SCBNL.

Shrestha, (2007) has done a research on *"Working capital management of selected manufacturing companies in Nepal"* .The study is covered only the five years data of 2002 AD to 2006 A.D. It study is based on only six manufacturing companies, like unlevel ltd bottlers Nepal, Dabur Nepal, Dairy development corporation, Nepal tea development corporation and Nepal drugs.

His Main Objectives are as follows:

- To examine the position of working capital is selected companies.
- To analyze risk return of working capital position.
- To assets than turnover of working capital and analyze.

His Research Methodologies are as follows:

In his thesis the data are analyzed by using different types of tools. As per topic requirements, emphasis is given on statistical tools rather than financial tools. So for this study following statistical tools and financial tools are use such as Debt to Equity ratio, Debt Ratio Interest Coverage Ratio, Earnings per Share, Price Earnings Ratio, Return on Total Assets, Return on Share Holder's Fund or Equity, Arithmetic means, Standard Deviation and Correlation Coefficient.

His Major Findings are as follows:

- Is the composition of working capital in manufacturing companies is appropriate.
- The overall selected manufacturing companies are positive on other correlation coefficients between various components of working capitals with moderate sales.
- Those liquidity and profitability position of all selected companies is satisfactory.

Regmi (2008) on his thesis entitled***, "A comparative study of financial performance of Himalayan Bank Ltd and Nepal Bangladesh Bank Ltd."*** The main objective of the study is to analyze and to evaluate the financial performance of the selected banks. He conducted a study between HBL and NBBL. Some of the findings of the researcher are that HBL has better profitability position than NBBL, so it is recommended to NBBL to utilize its resources more effectively.

His Main Objectives are as follows:

- To analyze the different factor to selected commercial banks.
- To examine the relationship between different ratio.
- To give suggestion & recommendation for the betterment at selected commercial banks.

His Research Methodologies are as follows:

The research, data are analyzed by using different types of tools. For this study following statistical tools Arithmetic mean, Standard Deviation, Correlation Coefficient, Probable Error and Regression Analysis and financial tools Earnings per Share, Price Earnings Ratio, Return on Total Assets and Return on Share are also use.

His Major Findings are as follows:

- He has further suggests that both the banks should extends their resources to rural areas to promote development
- Hence, the bank has been suggested to manage its investment portfolio efficiency

Pokhrel (2009) on his thesis entitled, *"A comparative study on financial performance of Nepal Bangladesh bank Ltd and Everest Bank Ltd."* was concluded to analyzes, examine an interpret the financial performance of NBBL and EBL for the study. The study finds out that the average net profit margin remains greater in NBBL. Higher CV in EBL suggests greater fluctuation in the ratio over the period. EBL found to be weaker in utilizing the bank assets for the profit generation. EBL holds greater capacity in paying immediate obligation as revealed by the higher cash and bank balance to current assets ratio.

His Main Objectives are as follows:

- To explan the financial performance of NBL & EBL.
- To evaluated the impact and analyze relationship between different ratio.
- To give a suggestion and recommendation for the selected commercial banks.

His Research Methodologies are as follows:

The research is analyzed by using different types of tools such as statistical tools and financial tools ie. Earnings per Share, Price Earnings Ratio, Return on Total Assets Return on Share, Holder's Fund or Equity, Arithmetic mean, Standard Deviation Correlation Coefficient, Probable Error and Regression Analysis.

His Major Findings are as follows:

- Therefore, there should be the awareness program, regularly conduced in terms of seminars
- Workshop from well experienced personnel such as top executives from banks and concerned regulating authorities.

- They should introduce novel technology and equipment's to collect deposit.

Shrestha, Sagun (2010) has done a research on *"A study on working capital management of Nepal lube oil limited."*

His Main Objectives are as follows:

- To examine the working capital position of NLOL.
- To examine the structure of working capital of NLOL
- To assess the financial liquidity position of the NLOL.

His Research Methodologies are as follows:

Research methodology is the focal part of the study. Ranges of financial and statistical tools are used to analyze the collected data and to achieve the objectives of the study. The analysis of the data will be done according to pattern of data available. Because of limited time and resources, simple analytical statistical tools such as graph, percentage, coefficient of correlation, regression analysis and the technique of least square are adopted in this study. Financial tools such as ratio analysis and trend analysis have also been used for financial analysis.

His Major Findings are as follows:

- The company had lesser participation of fixed assets in total assets. cash holds of the company was relatively a small proportion total assets and inventory held largest portion indicating un sounded inventory management.
- The company has insufficient in collecting receivable

Adhikari (2011) in his study entitled, *"Evaluating the financial performance of Nepal Bank Limited"* has calculated and analyzed the different ratios by observing figures of balance sheets of Nepal Bank Limited for the period FY 2004/05 to 2009/10. He remarked that the bank is not found to have been able to utilize its fund effectively and efficiently for the development of the economy.

His Main Objectives are as follows:

- The collection of deposit and loan investment done by the commercial banks also to sustain themselves in the environment of competitions.
- The deposit funds in productive sectors and to grants more priority to the local manpower.

His Research Methodologies are as follows:

The research is analyzed by using different types of tools. For this study following statistical tools and financial tools are use such as Loans and advances to Total Risk, Weighted Assets Ratio, Non-performing Loan to Total Loans and advances Ratio, Loan Loss Provision to Non Performing, Loan Ratio Loan Loss Provision to Total Loans and Advances, Arithmetic mean, standard Deviation, Correlation Coefficient, Probable Error, Regression Analysis and Test of Hypothesis.

His Major findings are as follows:

- Economic development of a country cannot be imagined without the development of commerce and industry
- He has focused on utilization and mobilization of funds and resources of Nepal Bank Ltd.

2.6 Research Gap

This study is different in the sense that the selected companies are totally different from the previous studies. The study totally revolves around the banking and the named of selected commercial banks. This study done considering the data of six year (2004/05-2009/10) of all the selected banks. This study is also observed defect in capital structure. As for, example in many enterprises their debt capital was comparatively high their equity, progress of time, there to bring down the amount of beta capital. Despite the companies performs have not better signs of recovery the defective capital structure shown in the studies induced the research for the further study on the subject. Various studies have been conducted on capital structure management of various study owned and Public Limited Companies of Nepal. Most of the study individual that a sound principle of capital structure, cost of capital and its management have not been followed thoroughly by the enterprises in Nepal.

The most of the studies has been considered many more objectives which made their study more complicated but in this research report only four objectives are taken into study. The researcher has tried he is best to fill up the gap created by previous studies. Even there are not enough study conducted on the topic of relationship between capital structure and cost of capital. Therefore, this study is also devoted to test the relationship and affect between structure and cost of capital in Nepalese enterprises. Most of the researcher did not use SPPS program so, I used that program and calculate the statistical tools which is used in Standard deviation and Covariance.

CHAPTER-III

RESEARCH METHODOLOGY

Research is the systematic process of collecting and analyzing information to increase our understanding of the phenomenon under study. It is the function of the researcher to contribute to the understanding of the phenomenon and to communicate that understanding to others. Research is the process of gathering information for the purpose of initiating, modifying or terminating a particular investment or group of investments.

3.1 Research Design

A research design is the specification of methods and procedures for acquitting the information needed. It is the overall operational pattern of framework for the project that stipulates what information is to be collected, from which sources and by what procedures. On this regard the research design followed for this study is descriptive cum analytical.

3.2 Population and Sample

The large group about which the generalization is made is called the population under study or the universe and small portion which the study is made is called the sample of the study. Till date, there are altogether 32 commercial banks which are licensed by Nepal Rastra Bank in Nepal. Out of them only two commercial banks are considered for samples to carry out this thesis out of this one is are joint ventures i.e. Nepal Investment Bank Limited and Everest Bank Limited and rest of the two are entirely managed by Nepalese investors and owned by the general public.

3.3 Data Collection Procedure

Mainly, the study is conducted on the basis of secondary data. The required date are extracted from the balance sheets, profit and loss Account, annual reports, journals, internet and other sources. These crude data collected from will then be properly synthesized, arranged, tabulated and calculated to meet the objectives of this research.

3.4 Data Processing and Presentation

Data collected for the study can be presented in various forms. Most of the secondary data will be presented in tabular forms and some graphical presentation can also be taken into

account. As far as the different computation is concerned it will be dome with the help of computer software

3.5 Tools for Analysis

Appropriate financial and statistical tools will be used according to the nature and type of data as well as subject matter. The major tools employed for the analysis of the data is ratio analysis, which establishes the numerical relationship between the two variables of the financial statement. Besides these, the statistical tools shall be used for the test of hypothesis.

3.5.1 Financial Analysis

Financial analysis is the process identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet. In this study ratio analysis is used as the financial tool for the data analysis.

Ratio analysis: Ratio analysis is a technique of analyzing and interpreting financial statements to evaluate the performance of an organization by creating the ratios from the figures of different accounts consisting in balance sheet and income statements. Even though there are many ratios, only those ratios which are related to this study have been covered.
This study contains following ratios:

Long Term Debt to Total Debt

The long term debt to total debt ratio measures the percentage of long term debt to total debt. It is the percentage of long term debt among the total debt employed by the company.

The long term debt to total debt is calculated as:

$$\text{Long Term Debt to Total Debt} = \frac{\text{Long term debt}}{\text{Total debt}} \times 100$$

Long Term Debt to Capital Employed

The ratio is used to express the relationship between long term debt and capital employed by the firm. it shows the proportion of long term debt and shareholders fund in the capital structure. This ratio is calculated as:

$$\text{The Long Term Debt to capital} = \frac{\text{Long Term Debt}}{} \times 100$$

Capital Employed

The higher ratio of long term debt to capital employed ratio shows the higher contribution of long term debt to the capital structure and vice versa.

Total Debt to Total Assets

This ratio measures the extent to which borrowed funds have been used to finance the company's assets. The total debt includes long term debt and current liabilities. The total assets consist of permanent assets and other assets. It is calculated as:

$$\text{Total Debt to total assets ratio} = \frac{\text{Total Debt}}{\text{Total assets}} \times 100$$

The lower long term debt to total assets ratio indicates that the creditors claim in the total assets of the company is lower than the owner's claim and vice versa.

Long Term Debt to Equity Ratio

The long term debt to equity ratio measures the long term components of capital structure long term debt and shareholders equity are used in financing assets of the companies. So it reflects the relative claim of creditors and shareholders against the assets of the firm. The relationship between outsiders claim and owner's capital can be shown by debt-equity ratio. It is calculated as:

$$\text{Long Term Debt to Equity ratio} = \frac{\text{Long Term Debt}}{\text{Shareholders' equity}} \times 100$$

The ratio is also known as debt to net worth ratio. A high debt-equity ratio indicates that the claims of the creditors are greater than that of the shareholders/owner's of the company.

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 are charged in short term and long term loans. Generally interest coverage ratio measures the debt serving capacity of the firm and it is concerned with long term loans. It shows how many times the interest charges 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 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 the EBIT.

It is also known as time interest earned ratio. This ratio measures the debt servicing capacity of a firm. So far a fixed interest on long term loan can earn. It is determined by using following formula:

$$\text{Interest Coverage Ratio} = \frac{\text{Earning Before Interest and Tax}}{\text{Interest}}$$

Higher interest coverage ration indicates the company's strong capacity to meet interest obligations. A firm always prefers high interest coverage ratio because low interest coverage ratio is danger signal for the firm which means the company is using excessive debt and does not have ability to assured the payment back to its creditors.

Return on Total Assets

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

$$\text{Return on Total Assets} = \frac{\text{Net Profit after Tax}}{\text{Total Assets}}$$

The higher ratio shows the higher return on assets of the company and vice versa.

Return on Shareholders Equity

Shareholders fund represents that part of long term source of funds which is collected by using equity shares and preference shares. 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.

Since shareholders are the owners of the company they want to have good return on their investment. So for this, we use this return on shareholders equity ratio to measure the return on shareholders. This ratio helps to analyze whether the company has been able to provide higher return on investment to its owners or not.

This ratio is calculated as:

$$\text{Return on Shareholders Equity} = \frac{\text{Net Profit after tax}}{\text{Shareholders Equity}}$$

Hither ratio represents the higher profitability of the firm and vice versa. So, obviously a company's owners prefer higher return on shareholders equity.

Earning Per Share (EPS)

The profitability of the bank from the viewpoint of the ordinary shareholders is the earning per share. The ratio explains net income for each unit of share. It ratio shows how much of the total earning belongs to the ordinary shareholders. EPS is calculated as:

$$\text{EPS} = \frac{\text{Net Income}}{\text{No. of Shares Outstanding}}$$

Dividend per Share (DPS)

Dividend per share is calculated to know the share of dividend that the shareholders receive in relation to the paid up value of the share. An institution offering a high dividend per share is regarded as efficient in fulfilling shareholders expectation which will also increase the value of an institution. It is calculated by using following equation.

$$\text{DPS} = \frac{\text{Total Dividend}}{\text{No. of Ordinary Share}}$$

Dividend per share is the earning distributed to ordinary shareholders dividend by the number of ordinary shares outstanding.

Leverage Analysis

Leverage refers to the use of 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 owner's returns but it is used at the risk of

increasing losses if the firm's economic 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 leverage operating leverage, financial leverage, and combine leverage. Operating leverage is the function of fixed cost, contribution margin and sales volume.

The degree of financial leverage (DFL) as part of leverage analysis also reflects the leverage if the firm as similar as above ratios. 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 in EPS due to a given percentage change in EBIT or this is a relationship between EBIT and EBT in this study following relationship will be used.

$$DFL = \frac{\text{\% change in EPS}}{\text{\% change in EBIT}}$$

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 capital structure which helps to evaluate the value of the firm. Such as net income approach (NI) net operating income approach (NOI) traditional method and MM approach. All these approaches are based on the market value. Practical used of other approaches are a bit complex. Thus NI and NOI approaches are used in this study.

3.5.2 Statistical Analysis

Statistical tools are equally important to meet the objectives of this study. This will help us to analyze the relationship between two or more variables. For this research following statistical tools are used. They are:

- Arithmetic Mean.
- Standard Deviation.
- Karl Pearson’s Coefficient of correlation.

- t-test for significant

Arithmetic Mean

Arithmetic mean also called ‘ the mean’ or ‘average arithmetic mean’ is the most popular and widely used method of central tendency. It is the ratio of sum of all observations. It is calculated from ungrouped data and frequency.

$\bar{X} = \frac{\Sigma X}{N}$

Where,

$\overline{X}$ = Mean Average

$\sum$ = Summation.

N = No. of Years

Standard Deviation

Standard deviation is the most popular and most useful measure of dispersion and gives uniform, correct and stable results. The main characteristics of standard deviation are that it is based on mean. Furthermore a standard deviation is always a positive number and it is superior to the mean deviation.

A standard deviation is the positive square root of average sum of squares of deviations of observations from the arithmetic mean of the distribution.

Standard Deviation (σ) = $\sqrt{\frac{\Sigma(x-\bar{x})^2}{n-1}}$

Where,

σ = Standard Deviation

$\sum$ = Summation

X = Sample Data

$\overline{X}$ = Average Mean

N = No. of Years

Correlation Coefficient (r)

For the purpose of comparison and further analysis, it is necessary to get a numerical for the correlation between two variables. A relative measure of this type is developed by Karl Pearson called Pearson’s coefficient of correlation or product movement correlation coefficient. It measures the relationship between two or more than two variables and they are so related that the change in the value of one variable is accompanied by change in the value

if the other or, it indicates the direction of relationship among others. It is denoted by (r) the correlation coefficient can be calculated as:

$$r = \frac{n\sum xy - \sum x.\sum y}{\sqrt{N\sum x2 - (\sum x)2}\sqrt{N\sum y2 - (\sum y)2}}$$

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 are perfectly positive correlated.

r = -1, the variables are perfectly negative correlated

CHAPTER- IV

DATA PRESENTATION AND ANALYSIS

This is the most important chapter of the study. In this chapter the data collected are analyzed and presented mathematically.

This chapter is divided into following sections:

- Analysis of capital structure
- Determinants of capital structure and Profitability's
- Correlation analysis
- Leverage analysis
- Major finding of the study

4.1 Analysis of Capital Structure

The first objective presents the capital structure of commercials banks. This objectives deals the calculated and analysis of long term debt to total debt ratio, long term debt to capital debt ratio, total debt to total assets ratio, long term debt to equity ratio and interest coverage ratio.

4.1.1 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 firm uses 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 and total debt of the firm. The total debt includes all types of borrowed fund, current liabilities and provisions. If the firm uses large amount of short term loans and occur current liabilities and provisions in large amount, the percentage of long term debt to total 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 upon the total debt and the lower ratio 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 usually depends upon the liquidity of that firm. This relationship of long term debt and total debt is presented in the following table along will the percentage change in the ratio to show the movement of trend individually. In addition the average ratios

are also calculated to compare with each other. But the detailed calculation is shown in the appendix1.

Table: 4.1

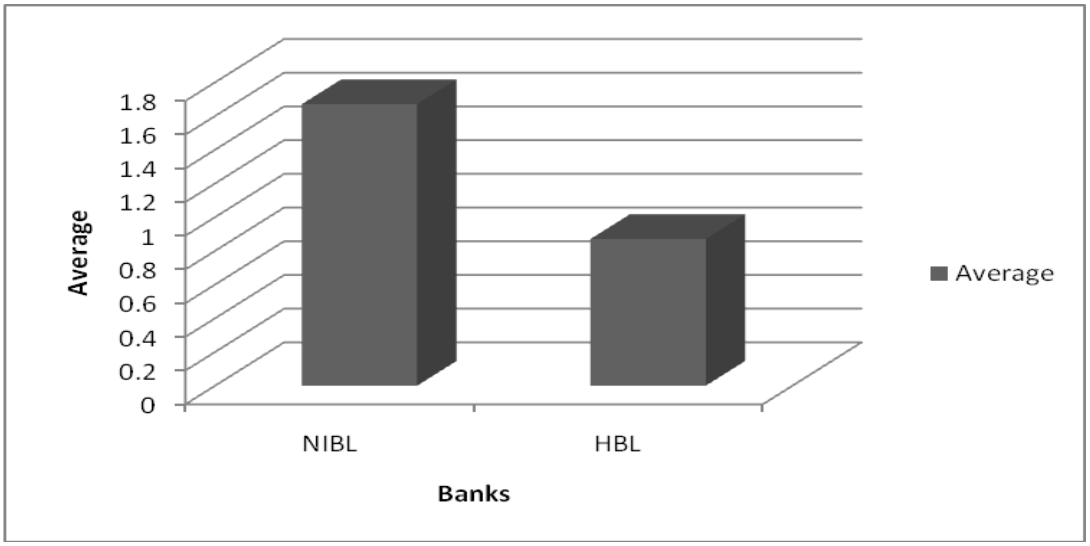
Long Term Debt to Total Debt Ratio

Fiscal Year	NIBL	HBL
2004/05	0.08	--
2005/06	0.03	--
2006/07	2.30	1.36
2007/08	2.70	1.30
2008/09	3.05	1.15
2009/10	1.91	1.38
Average	1.67	0.87
S.D	1.31	0.68
C.V	78.62	78.16

Source: Appendix 1 & 18

Figure: 4.1

Long Term Debt to Total Debt Ratio



Source: Table 4.1

The table no: 4.1 and figure no 4.1 shows that the ratio of long term debt to total debt of NIBL constituted 0.08% in fiscal year 2004/05. This means the contribution of long term debt in total debt is 8% and the remaining portion is contributed by the current liabilities. The company average has 1.67% of leverage long term debt to total debt ratio.

In the case of HBL, it didn't used long term debt in the FY 2004/05 and 2005/06 it was 1.36% in year 2006/07 which indicates there is 1.36% contribution of long term debt in total debt and remaining portion is contributed by current liabilities. The ratio decreases to 1.30% in the following year 2007/08 and 1.15% and 1.38% in 2008/09 and 2009/10 respectively.

The S.D of HBL is 0.68 which is lowest than another bank and NIBL has the highest S.D which is 1.31. The lowest C.V is 78.16 of HBL. The C.V range between 78.16 to 117.39. And the C.V is 78.62, and 78.16 for NIBL and HBL an respectively.

4.1.2 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 used in the capital structure of the firm. This ratio highlights the need of long term debt in the capital employed by the firm. Long term debt indicates the debt which matures in more than one accounting period whereas capital employed can be analyzed by establishing the ratio between them. Larger the ratio larger the proportion of long term debt to 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, where permanent capital means total assets minus current liabilities. The long term debt to permanent capital ratio is presented in the following table:

Table: 4.2

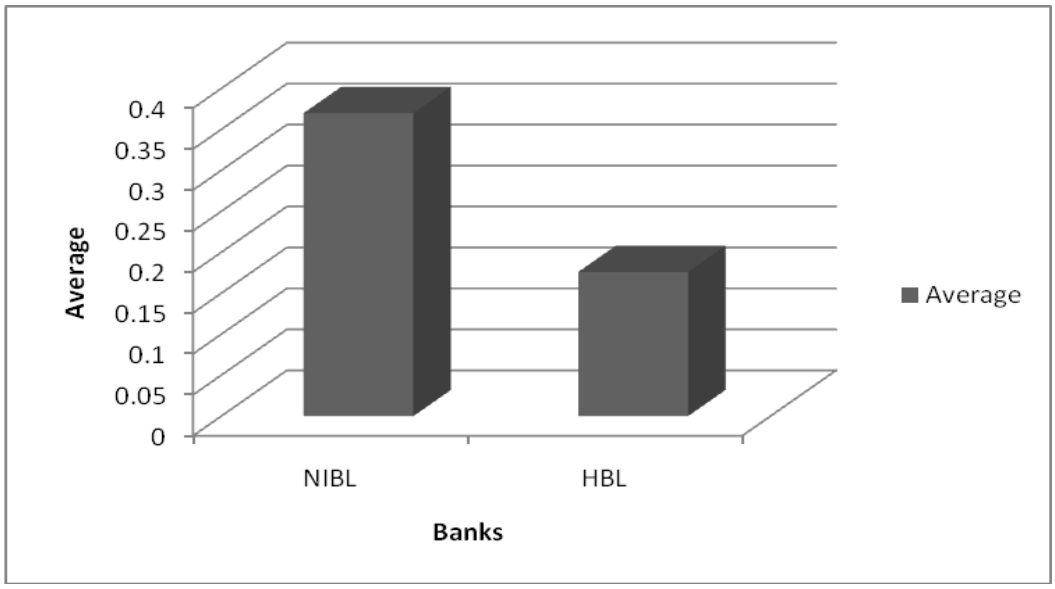
Comparative Long Term Debt to Capital Employed Ratio

Fiscal Year	NIBL	HBL
2004/05	0.02	--
2005/06	0.53	--
2006/07	0.36	0.31
2007/08	0.47	0.28
2008/09	0.48	0.26
2009/10	0.33	0.21
Average	0.37	0.176
S.D	0.19	0.14
C.V	51.35	79.55

Source: Appendix 2 & 19

Figure: 4.2

Comparative Long Term Debt to Capital Employed Ratio



Source: Table 4.2

The table no 4.2 and figure no 4.2 shows that the long term debt to capital employed ratios of NIBL, in the FY 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 are 20%, 53%, 36%, 47%,, 48% & 0.33% respectively. The average ratio is 37%.

Similarly, the HBL also has not used the long term debt in the FY 2004/05 and 2005/06 but in the FY 2006/07, 2007/08, 2008/09 & 2009/10 the long term debt to capital employed ratio is 31%, 28%, 26% & 21% It looks in the decreasing trend. The average ratio is 17.6%.

4.1.3 Total Debt to Total Assets Ratio

Debt to total assets ratio express the relationship between creditors fund and total assets. Debt includes all loans and total assets include all types of assets of the firm. This ratio measures the extent to which borrowed funds have been used to finance the company's assets. The total debt includes long tern debt and current liabilities.

This ratio can be calculated by simply dividing long term debt by the total assets of the firm.

Table: 4.3

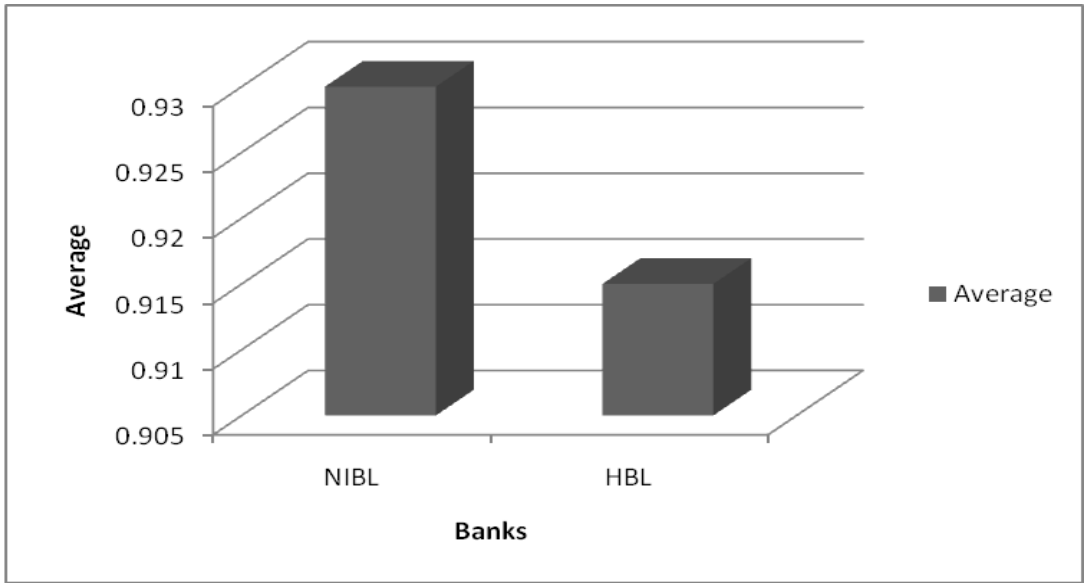
Comparative Debt –Assets Ratio

Fiscal Year	**NIBL**	**HBL**
2004/05	0.92	0.92
2005/06	0.94	0.91
2006/07	0.94	0.92
2007/08	0.90	0.89
2008/09	0.90	0.93
2009/10	0.96	0.92
Average	0.93	0.915
S.D	0.0245	0.0138
C.V	2.63	1.51

Source: Appendix 3 & 20

Figure: 4.3

Comparative Debt –Assets Ratio



Source: Table 4.3

In the table no 4.3 and figure no 4.3 shows long term debt to total assets of all two sampled banks included in this study i.e. NIBL, and HBL shows the average of 0.93, and 0.915 respectively. The S.D is 0.0245, and 0.0138 respectively. On the other hand, the C.V ranges from 2.63, and 1.51 respectively. The highest C.V being that of NIBL which is 2.63 and lowest of HBL which is 1.51

4.1.4 Long Term Debt to Equity Ratio

Long term debt to 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 words, 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.

Table: 4.4

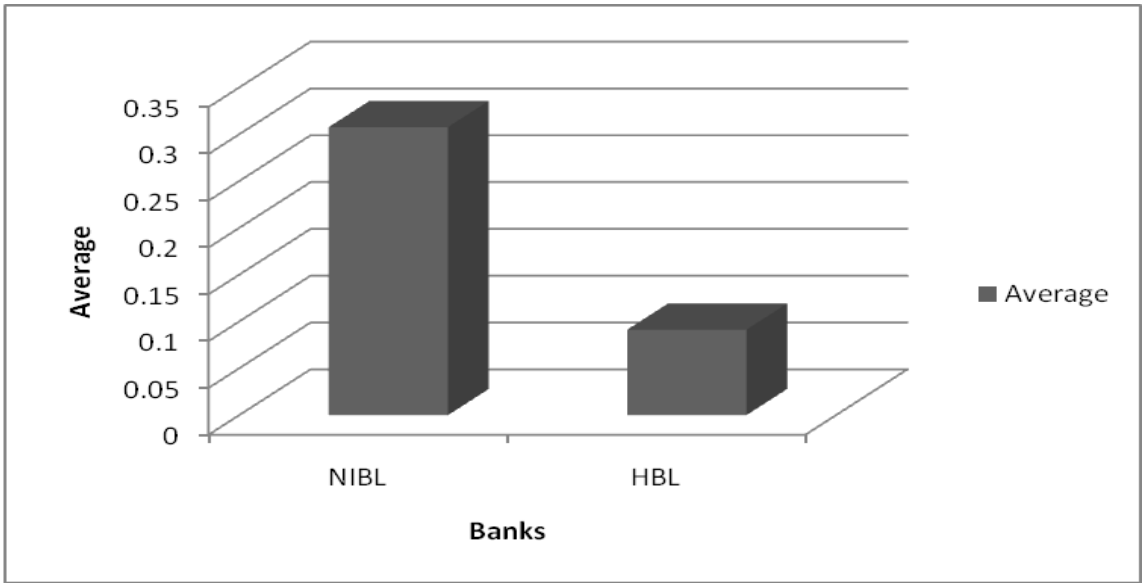
Comparative Debt- Equity Ratios

Fiscal Year	NIBL	HBL
2004/05	0.0106	--
2005/06	0.4958	--
2006/07	0.2965	0.1401
2007/08	0.3885	0.1247
2008/09	0.4259	0.1223
2009/10	0.0089	0.1603
Average	0.3077	0.0912
S.D	0.17	0.056
C.V	56.38	61.44

Source: Appendix 4 & 21

Figure: 4.4

Comparative Debt- Equity Ratios



Source: Table 4.4

The table and figure 4.4 shows that debt equity ratio and average ratio has been calculated in the above table. Six years data have been presented here. It shows that D/E ratios of NIBL are 0.0106, 0.4958 0.2965, 0.3885, 0.4259 & 0.0089 in the FY 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 respectively. The average D/E ratio of NIBL is 0.3077.

Similarly, the ratio of HBL is Nil in the year 2004/05 and 2005/06 after that it shows the declining trend it was 0.1404 in 2006/07, 0.1247 in 2007/08, 0.1223 in 2008/09 and 0.1603 in 2009/10. Its average D/E ratio is 0.0912.

The S.D is 0.17 and 0.56 of NIBL and HBL respectively. Here, the C.V of HBL is highest which 61.44 and NIBL has the lowest which is 56.38.

4.1.5 Interest Coverage Ratio

For the second objectives the impact of capital structure on profitability is calculated and analysis as following way, they are: return on total assets, return of shareholder's equity, earning per share, dividend per share and net income.

Interest coverage ratio is calculated dividing EBIT by interest. So it is necessary to analyze EBIT and interest. This ratio is useful to measure the 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 three companies are presented in the following table.

Table: 4.5

Comparative Interest Coverage Ratio

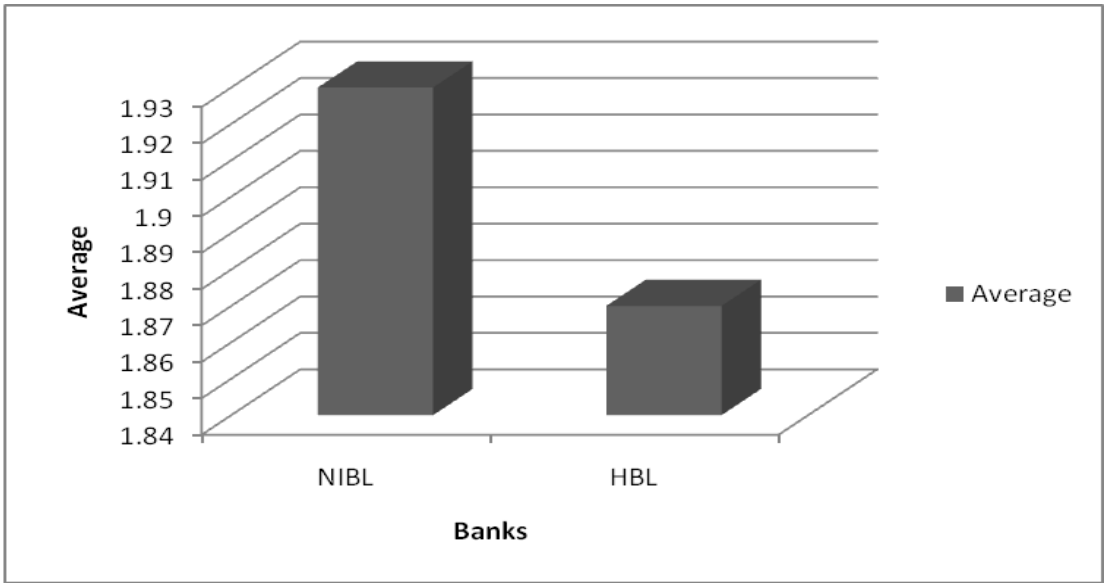
Fiscal Year	**NIBL**	**HBL**
2004/05	1.89	1.64
2005/06	1.70	1.85
2006/07	1.94	1.92
2007/08	2.03	2.03
2008/09	2.05	1.93
2009/10	1.94	1.83
Average	1.93	1.87
S.D	0.13	0.13

C.V	6.51	7.01

Source: Appendix 5 & 22

Figure: 4.5

Comparative Interest Coverage Ratio



Source: Table 4.5

The table and figure 4.5 indicate the average ratio of NIBL is 1.93. Which implies the number of times the interest covered by its EBIT. The interest coverage ratio of NIBL in FY 2004/05 is 1.89 then increases in fiscal year 2005/06 to 1.70 in 2006/07 to 1.94 in 2007/08 to 2.03 and in 2008/09 to 2.05 and in 2009/10 to1.94.

Similarly, the interest coverage ratio of HBL in FY 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 1.64 1.85, 1.92, 2.03, 1.93 and 1.83 respectively. And the average ratio is 1.87. Its average ratio is 1.74. Finally the banks S.D are 0.13, and 0.13 and C.V are 6.51, and 7.04 and of NIBL and HBL respectively.

4.1.6 Return on Total Assets

For the second objectives the impact of capital structure on profitability is calculated and analysis as following way, they are: return on total assets, return of shareholder's equity, and net income.

Return on total assets ratio measures the profitability of a firm that explains a firm to earn satisfactory return on all financial resources invested in the banks assets. The ratio explains

net income for each unit of assets. The higher ratio shows the higher return on assets of the company. From the viewpoint of judging operational efficiency, rate of return on total assets is more useful measure. The return on total assets calculated using the following formula:

Table: 4.6

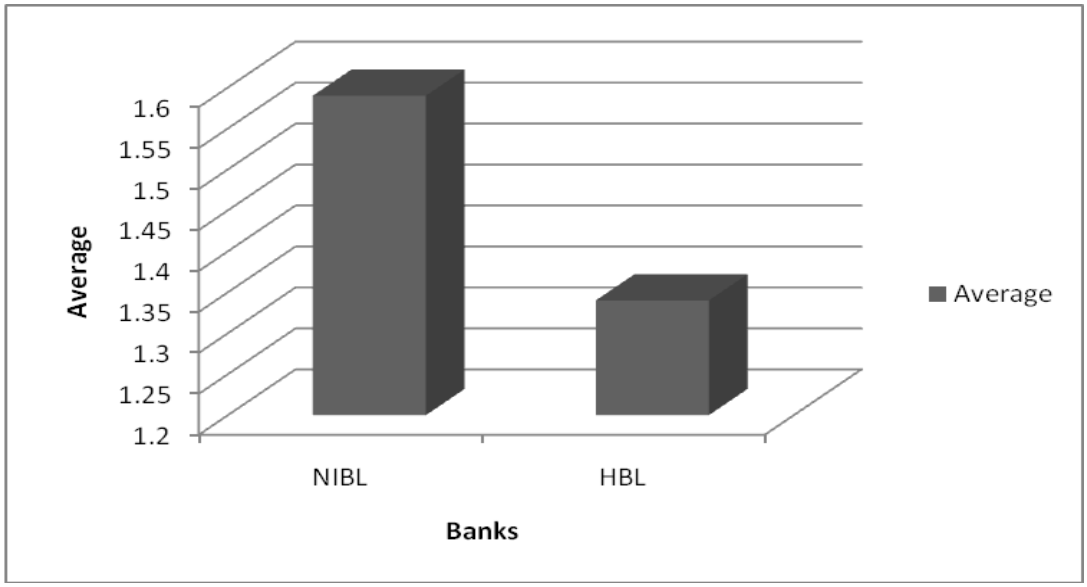
Position of Comparative Return on Total Assets

Fiscal Year	**NIBL**	**HBL**
2004/05	1.30	0.91
2005/06	1.15	1.06
2006/07	1.44	1.11
2007/08	1.64	1.55
2008/09	1.82	1.47
2009/10	2.20	1.91
Average	1.59	1.34
S.D	0.38	0.37
C.V	23.89	27.96

Source: Appendix 6 & 2

Figure: 4.6

Position of Comparative Return on Total Assets



Source: Table no: 4.6

The table 4.6 and figure 4.6 shows the comparative position of return on total ratio of the two commercial banks. From the table, the ROA of NIBL in the FY 2004/05, 2005/06, 2006/07,

2007/08, 2008/09 and 2009/10 is 1.30, 1.15, 1.44, 1.64, 1.82 and 2.20 respectively. The average ratio is 1.59.

The ROA of HBL recorded in the FY 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 are 0.91, 1.06, 1.11, 1.55, 1.47 & 1.91 respectively. Its average return is 1.34.

The S.D of the banks is 0.38- NIBL, and 0.37- HBL. While on C.V part HBL has the highest of 27.96 and lowest of HBL which is 23.89.

4.1.7 Return of Shareholders' Equity (ROSHE)

If the company's earning is good, shareholders earning is greater than outside investors because they are ultimate owners and they are bearing a high risk as well. But outside investors get 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. Earning after tax (EAT) is the profit of the shareholders. Therefore this ratio is calculated on the basis of equity. In this study, the sampled companies have not been employed the preference share thus it includes only return on shareholders' equity.

This ratio is calculated as:

Higher ratio represents the higher profitability of the firm and vice versa. So obviously a company's owners prefer higher return on shareholders equity.

Table: 4.7

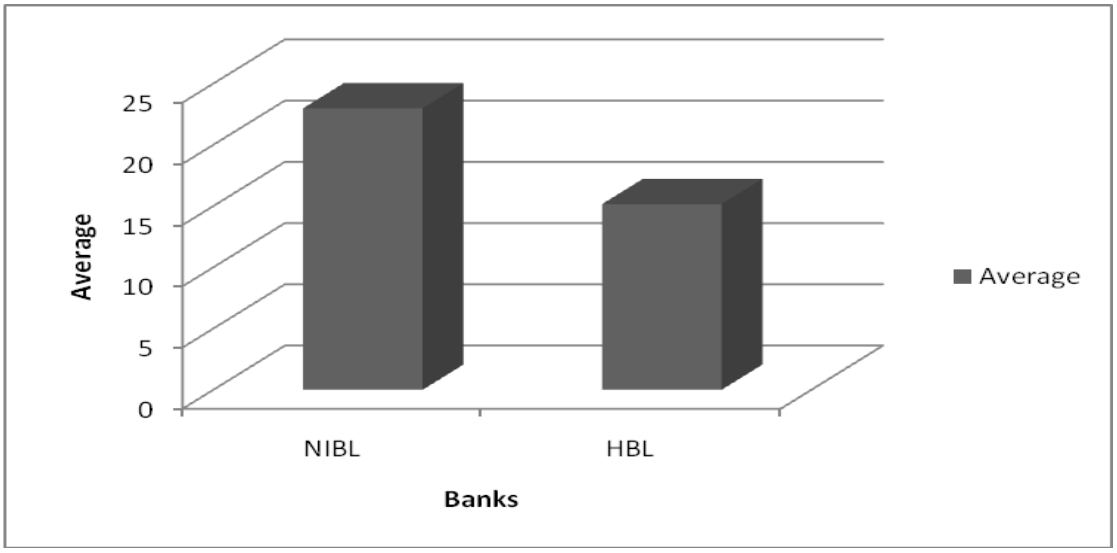
Position of comparative ROSHE

Fiscal Year	NIBL	HBL
2004/05	18.29	11.13
2005/06	20.93	11.00
2006/07	19.67	12.00
2007/08	24.77	16.00
2008/09	26.68	16.71
2009/10	27.58	24.13
Average	22.98	15.16
S.D	3.88	5.04
C.V	16.88	23.53

Source: Appendix 7 & 24

Figure: 4.7

Position of comparative ROSHE



Source: Table no: 4.7

The Table no 4.7 and figure no 4.7 exhibits, return on shareholders equity of sampled banks of our study. In the case of NIBL in the FY 2004/05, the ratio is 18.29% which imply that one rupee investment by shareholders' equity earned 18.29 paisa in one year. In the FY 2005/06 it increased to 20.93% and then the year 2006/07 it shows increasing trend from 19.67%, 24.77% in 2007/08 and 26.68% in 2008/09 and 27.58% in 2009/10.

Similarly in the case of HBL, in the FY 2004/05 it was 11.13% in the FY 2005/06 it was 11.00% then we can see continuous rise, from 12.00% in 2006/07 to 16.00% in 2007/08 to 16.71% in the FY 2008/09 to 24.13% in the FY2009/10. On the basis of S.D, NIBL has 3.88, and HBL has 5.04. On the C.V part the highest C.V is 23.53 which is of HBL and the lowest C.V is 16.88 of NIBL. It ranges from 16.88, and 23.53 respectively.

4.1.8 Earning per Share

The third objectives analysis the relationship of capital structure with earning per share and dividend per share. The profitability of bank from the view point of ordinary shareholders is earning per share or EPS. The ratio explains net income for each unit of share it also shows how much of the total earning belongs to the ordinary shareholders.

Table: 4.8

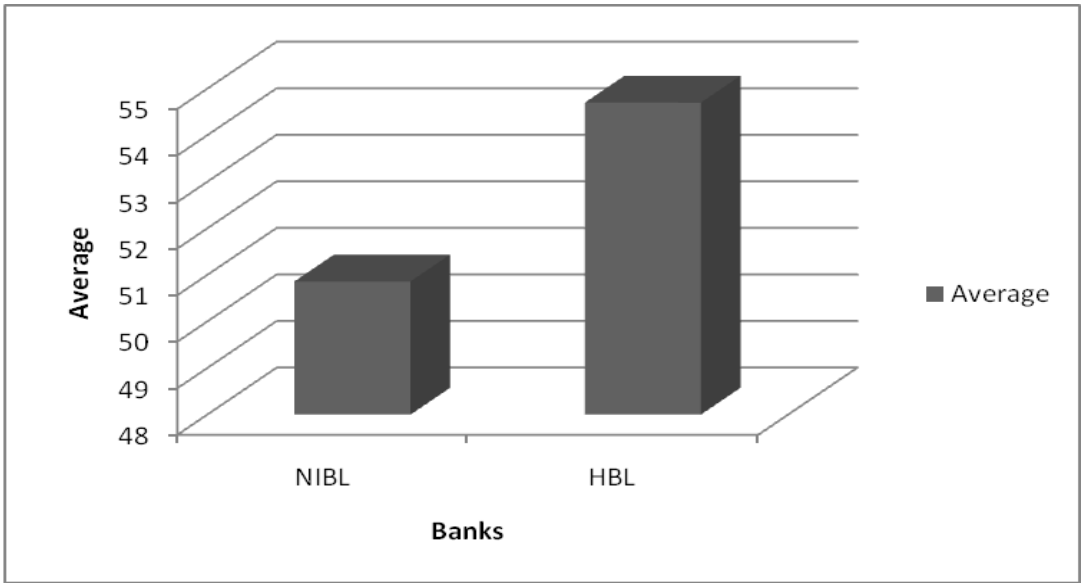
Position of Comparative EPS

Fiscal Year	NIBL	HBL
2004/05	39.56	49.45
2005/06	51.70	49.05
2006/07	39.50	47.91
2007/08	59.35	59.24
2008/09	62.57	60.66
2009/10	52.50	61.89
Average	50.86	54.70
S.D	9.69	6.53
C.V	19.05	11.94

Source: Appendix 8 & 25

Figure: 4.8

Position of Comparative EPS



Source: Table no: 4.8

EPS of NIBL are 39.56, 51.70, 39.50, 59.35, 62.57 and 52.50 in the FY 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively. The average EPS is 50.86. The overall trend is fluctuating but somewhat in increasing way. The highest EPS was recorded in 2008/09. Above presented data are tabulated and figure out accordingly. The EPS of HBL in 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 are 49.45, 49.05, 47.91, 59.24,

60.66 & 61.89 respectively. The S.D of NIBL and HBL are 9.69, and 6.53, are respectively. In the same manner, their C.V is 19.05, and 11.94 are respectively.

4.1.9 Dividend per Share (DPS) Analysis

Dividend per share is calculated to know the share of dividend that the shareholders receive in relation to the paid up value of the share. An institution offering a high dividend per share is regarded as efficient in fulfilling shareholders expectation which will also increase the value of an institution. It is calculated by using following equation.

Table: 4.9

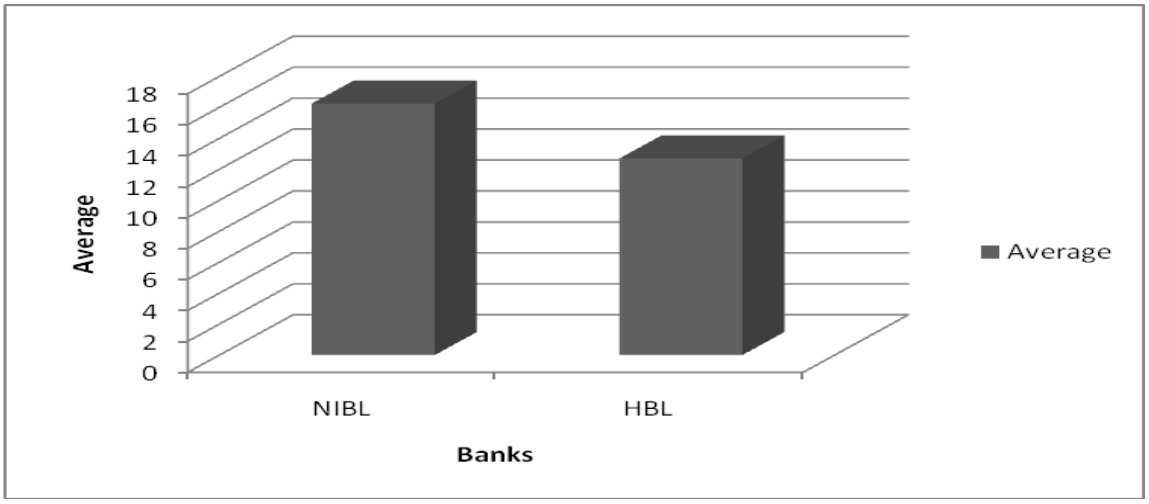
Position of Comparative DPS

Fiscal Year	**NIBL**	**HBL**
2004/05	20.00	1.32
2005/06	15.00	--
2006/07	12.50	11.58
2007/08	55.46	30.00
2008/09	30.00	20.00
2009/10	25.00	13.32
Average	16.25	12.70
S.D	7.03	11.36
C.V	43.24	89.43

Source: Appendix 9 & 26

Figure: 4.9

Position of Comparative DPS



Source: Table no: 4.9

The dividend per share of NIBL is Rs 20.00, Rs 15.00, Rs 12.50, Rs 55.46, Rs 30.00 Rs. 25.00 in the FY 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 respectively. The average DPS is Rs 16.25. The overall trend looks fluctuating. It paid the highest dividend in the fiscal year 2007/08 that is Rs 55.46.The DPS of HBL in fiscal year 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 are Rs 0.00, 0.00, 11.58, 30.00, 20.00 & 13.32 respectively. Average dividend per share of HBL is Rs 12.70. It paid highest DPS in the fiscal year 2007/08 i.e. Rs 30.00 and lowest of Rs 1.32 in year 2004/05.The average DPS of NIBL and HBL are Rs 16.25 and 12.70 respectively and among them HBL paid the highest dividend. Here the S.D ranges from 7.03, and 11.36 & while C.V ranges from 43.24 and 89.43 of NIBILand HBL respectively.

4.1.10 Net Income (NI) Approach

Net Income (NI) approach is also known as dependent hypothesis of capital structure. The essence of this approach is that the firm can reduce its cost of capital by using debt 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 firms' 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 the 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 10&11.

Net Operating Income (NOI) = Ko × V

Where,

Ko = Cost of Overall Capitalization Rate.

V = Total Market Value of the Firm

Table: 4.10

Comparative Position of Overall Capitalization Rate

Fiscal Year	NIBL		HBL	
	Cost of Capital (Ko)	Value of firm (in million (Rs)	Cost of Capital (Ko)	Value of firm (in million (Rs)
2004/05	15.10%	2,364.01	22.98%	3,978.60
2005/06	14.90%	2,795.23	18.57%	4,911.48
2006/07	14.50%	4,734.82	16.80%	6,455.03
2007/08	13.20%	7,493.47	14.20%	9,261.56
2008/09	10.00%	13,952.37	12.80%	11,584.62
2009/10	11.10%	36,867.83	18.10%	11,040.13
average	13.98%	11,367.95	18.10%	7,871.89

Source: Appendix 10 & 11

Computed overall capitalization rate of NIBL shows that the costs are 15.10% 14.90%, 14.50% 13.20%, 10.00% 11.10% from the FY 2004/05 to 2009/10 respectively. When the value of the firm were Rs. 2,364.01, 2,795.23, 4,734.82, 7,493.47, 13,952.37 & 36,867.83 million respectively. The average cost is 13.98% at an average of Rs 11,367.95million.

Similarly, in the case of HBL the costs are 22.98%, 18.57%, 16.80%, 14.20%, 12.80% & 18.10% from the FY 2004/05 to 2009/10 respectively, when the values of the firm were Rs 3,978.60, 1911.48, 6455.03, 9261.56, 11584.62 & 11040.13 respectively. The average cost is 18.10% at an average of Rs 7,871.89 million. On the basis of NI approach, we can see on the above table that, on the decrease in the cost of capital the value of the firm has increased,

which matches to the theory of NI approach, which says if we increase the ratio of debt in the capital structure, the cost of capital will decline and the value of firm will increase.

4.1.11 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 and overall cost 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 id independent of the degree of leverage. The increase in leverage leads to an increase in financial risk of the ordinary shareholders. To minimize the finandial risk, the shareholders want a higher return on their investment. Increases in cost of equity (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-11.

Table: 4.11

Comparative Position on Effect of Debt on Equity

Fiscal Year	NIBL		HBL	
	Cost of Equity (Ke)	Long Term Debt (in millions)	Cost of Equity (Ke)	Long Term Debt (in millions)
2004/05	7.3%	6.82	10.0%	---
2005/06	8.3%	361.50	9.3%	---
2006/07	7.0%	350.00	8.8%	360.00
2007/08	6.8%	550.00	7.9%	360.00
2008/09	5.2%	800.00	6.7%	360.00
2009/10	5.4%	1050.00	8.17%	500.00
average	6.67%	519.72	8.17%	263.33

Source: Appendix 12

The equity capitalization rates of NIBL in the fiscal years 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 are 7.3%, 8.3%, 7.0%, 6.8%, 5.2% & 5.4% respectively. And their respective long term debts are Rs 6.82, 361.50, 350.00, 550.00, 800.00 & 1050 millions. The average cost is 6.67% at an average long term debt of Rs 519.72 millions.

The equity capitalization rates of HBL in the fiscal years 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 & 2009/10 are 10.00%, 9.3%, 8.8%, 7.9%, 6.7% & 8.17% respectively. And their respective long term debts are Rs 0.00, 0.00, 360.00, 360.00, 360.00 & 500.00 million respectively. The average cost is 8.17% at an average long term debt of Rs 263.33 millions.

4.2 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 it fixed cost assets or trends 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 whereas decrease in leverage result in decreased return and risk. The amount of leverage in the firm's capital structure the mix of long term debt and equity maintained by the firm can significantly affect its value by affecting return and risk, because of its value the financial manager must understand how to measure and evaluate leverage when attempting to create the best capital structure.

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 in sales. An operating income and financial leverage exist when the capital structure of the firm comprises 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.

4.2.1 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 leverage 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 earning 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 second method is chosen. The higher the degree of financial leverage, the more volatile EPS will be, all other things remaining the

same. The degree of financial leverage of sampled banks is presented in the following table. The formula is as follows:

Table: 4.12

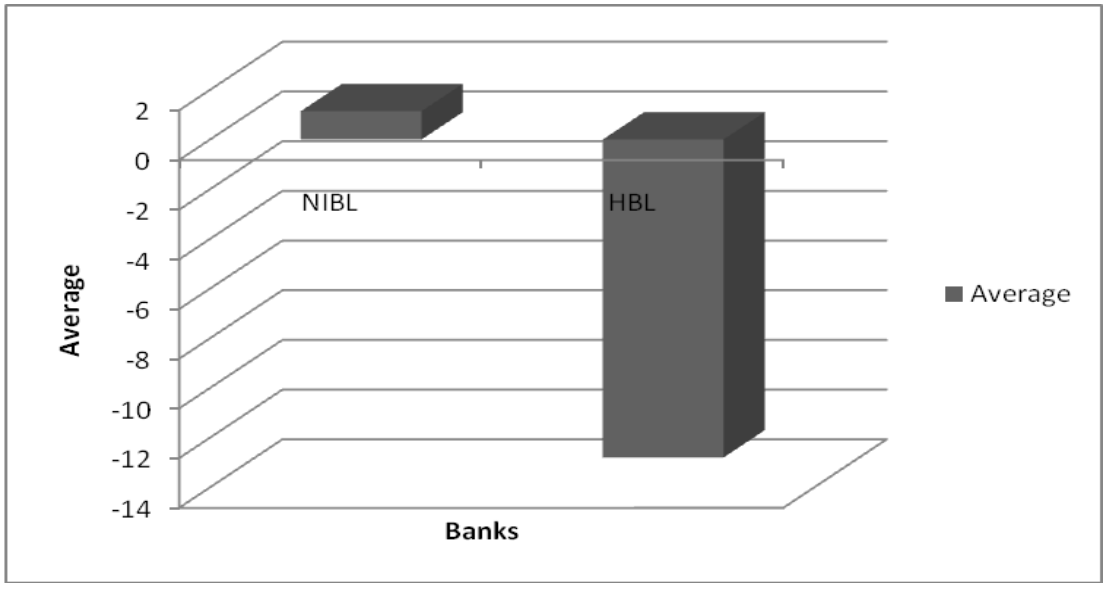
Comparative Degree of Financial Leverage

Fiscal Year	NIBL	HBL
2004/05	--	--
2005/06	0.65	-68
2006/07	1.91	1.26
2007/08	1.15	1.32
2008/09	1.07	0.54
2009/10	0.91	0.88
Average	1.138	-12.80

Source: Appendix 13

Figure: 4.10

Comparative Degree of Financial Leverage



Source: Table no: 4.12

The table 4.12 calculated DFL of NIBL indicates fluctuation trend. In the fiscal year 2005/06 the DFL is 0.65 times in the second year i.e. 2006/07 the DFL is 1.91 times. In the fiscal year 2007/08 the DFL is 1.15 times. In the fiscal year 2008/09 and 2009/10 the DFL are 1.07 & 0.91 respectively. Similarly the DFL of HBL looks somewhat in decreasing trend. It is -68

times in 2005/06 and in the rest of the fiscal years 1.26, 1.32, 0.54 & 0.88 times are at FY 2006/07, 2007/08, 2008/ 09 & 2009/10 respectively. The average DFL was 0.408 times.

In general, higher the DFL for a company, closer the company is to its financial BEP(Break Even Point) and the more sensitive its EPS is to a change in operating income or greater risk. Thus it is concluded that HBL with lower DFL in comparison to other commercial sample banks. It shows HBL has lower financial risk than other sample banks. Similarly NIBL has the highest DFL; it is consider having greater financial risk.

4.3 Correlation Analysis and t-Test for Significance

Correlation analysis enables us to have an idea about the degree and direction of the relationship between the two or amore variable, 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 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 correlation but in this study we will give focus on simple correlation based on 'Pearson's coefficient of correlation'.

In the following section correlation between different variables are calculated and presented of the banks which are being studied under this research:

- Total debt and shareholders equity
- Long term debt and earning per share
- EBIT and interest
- EBIT and DPS
- Variables Profitability's

4.3.1 Total Debt and Shareholders' Equity

The relationship between total debt and shareholders equity has 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 SHE and their respective probable error is also presented. P.E interprets the value of correlation coefficient. It also 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 13

Table: 4.13

Correlation Coefficient between TD and SHE of NIBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.99	14.04	2.776	Significant

Source: Appendix 14

Karl Pearson's correlation coefficient between total debt and shareholders equity of NIBL is 0.99, which is closer to 1 and positive. There is high degree of positive correlation between TD and SHE. Tabulated value of $t_{5\%,\ 6\text{-}2}$ is 2.776. Since the calculated value of t of NIBL i.e. 14.04 is higher than tabulated t so the H_0 is rejected and H_1 is accepted. It means the correlation coefficient of NIBL between Total Debt and Shareholders Equity is significant.

Table: 4.14

Correlation Coefficient between TD and SHE of HBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.92	4.69	2.776	Significant

Source: Appendix 14

Karl Pearson's correlation coefficient between total debt and shareholders' equity of HBL is 0.92, which is positive. There is positive correlation between TD and SHE. Tabulated value of $t_{5\%,\ 6\text{-}2}$ is 2.776. Since the calculated value of t of HBL i.e. 4.69 is higher than tabulated t so the H_0 is rejected and H_1 is accepted. It means the correlation coefficient of HBL between Total Debt and Shareholders Equity is significant.

4.3.2 Long Term Debt and Earning Per Share

Long term debt is the source of long term financing or long term funds. Company should pay interest for this debt capital. Where as earning per share (EPS) is earning of a share of a firm s from one year business. EPS has a positive relationship with companies earning. In this section the relationship between these two variables has been shown using Karl Pearson's

correlation coefficient method. It tries to analyze that the increment in LTD leads to increment in the EPS or not. The calculated correlation coefficient has been shown in the following table.

Table: 4.15

Correlation Coefficient between 'Long Term Debt (LTD)' and Earning Per Share (EPS) of NIBL

Correlation Coefficient (r)	t_{cal}	t_{tab}	Result
0.64	1.67	2.776	Insignificant

Source: Appendix 15

On the basis of table 4.15 correlation coefficient between long term debt (LTD) and earning per share (EPS) of NIBL is 0.64 and positive. Tabulated value of $t_{5\%,\ 6-2}$ is 2.776. Since the calculated value of t of NIBL 1.67 is less than tabulated t so the H_0 is accepted. It means the correlation coefficient of NIBL between Long Term Debt and Earning per Share are insignificant.

Table: 4.16

Correlation Coefficient between 'Long Term Debt (LTD)' and Earning Per Share (EPS) of HBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.55	1.32	2.776	Insignificant

Source: Appendix 15

In the basis of table 4.16 the correlation coefficient between long term debt (LTD) and earnings per share (EPS) of HBL is 0.55 and positive. Tabulated value of $t_{5\%,\ 6-2}$ is 2.776. Since the calculated value of t of HBL 1.32 is less than tabulated t so the H_0 is accepted. It means the correlation coefficient of HBL between Long Term Debt and Earning per Share are insignificant.

4.3.3 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 been presented of concerned companies to analyze whether there is positive or negative correlation between interest and operating profit those are calculated in the basis of Karl Pearson's correlation coefficient. Following table shows the relationship between these variables of sampled banks which are included in this study. And to check the significance of these calculated correlations t-test is presented as follows table.

Table: 4.17

Correlation Coefficient between EBIT and Interest of NIBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.99	14.04	2.776	Significant

Source: Appendix 16

In the above table, correlation coefficient of NIBL is found to be 0.99 it is positive and almost equal to '1'. There is high degree of positive correlation between EBIT and Interest. Tabulated value of $t_{5\%,\ 6\text{-}2}$ is 2.776. Since the calculated value of t of NIBL i.e. 14.04 is higher than tabulated t so the H_0 is rejected and H_1 is accepted. It means the correlation coefficient of NIBL between EBIT and Interest is significant.

Table: 4.18

Correlation Coefficient between EBIT and Interest of HBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.99	14.04	2.776	Significant

Source: Appendix 16

In the table 4.18 correlation coefficient of HBL is found to be 0.99 it is positive and almost equal to '1'. There is high degree of positive correlation between EBIT and Interest. Tabulated value of $t_{5\%,\ 6\text{-}2}$ is 2.776. Since the calculated value of t of HBL i.e. 14.04 is higher than tabulated t so the H_0 is rejected and H_1 is accepted. It means the correlation coefficient of HBL between EBIT and Interest is significant.

4.3.4 EBIT and DPS

Shareholders get the dividend as return and EBIT is operating profit of the company. Here correlation coefficient of EBIT and DPS has been presented of concerned to analyze whether there is positive or negative correlation between dividends and operating profit. Following table shows the relationship between these variables of sampled banks. And to check the significance of these calculated correlations t-test is presented as following table.

Table: 4.19

Correlation Coefficient between EBIT and DPS of NIBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.44	0.979	2.776	Insignificant

Source: Appendix 17

In the table 4.19 correlation coefficient of NIBL is found to be 0.44 which is positive . There is positive correlation between EBIT and DPS. Tabulated value of $t_{5\%,\ 6\text{-}2}$ is 2.776. Since the calculated value of t of NIBL i.e. 0.979 is less than tabulated t so the H_0 is accepted. It means the correlation coefficient of NIBL between EBIT and DPS is insignificant.

Table: 4. 20

Correlation Coefficient between EBIT and DPS of HBL

Correlation Coefficient (r)	t-cal	t-tab	Result
0.31	0.652	2.776	Insignificant

Source: Appendix 17

In the table 4.20 correlation coefficient of HBL is found to be 0.31 which is positive. There is positive correlation between EBIT and DPS. Tabulated value of $t_{5\%,\ 6\text{-}2}$ is 2.776. Since the calculated value of t of HBL i.e. 0.652 is less than tabulated t so the H_0 is accepted. It means the correlation coefficient of HBL between HBL and DPS is insignificant.

4.4 Major Finding of the Study

- The long term debt in comparison to their total assets used by all the two banks for financing is very minimum or negligible. Hence, the debt to total assets ratio on NIBL and HBL are negligible.

- The debt- equity ratio shows the claim of creditors on the total assets of the company. The trend analysis shows fluctuating trend in all the sampled banks used for this study. The average debt-equity ratio of NIBL shows that creditors have 30.77% claims on the assets of NIBL. It also shows that the bank has used high amount of debt for financing and has highest amount to be paid as interest on debt. Likewise, the average ratio of HBL is 0.091 which shows claim of creditors.

- 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 1.67% of average long term debt to total debt ratio. Similarly HBL and NIBL has average ratio of 0.87%, and 1.67% respectively. In all the two cases the total debt is contributed by current liabilities to a large extent. The analysis of all the two banks reveals the fluctuating trend of long term debt to total debt ratio. Among these banks has used minimum long term debt in comparison to NIBL and HBL. In the FY 2004/05 & 2005/06 HBL and NIBL had stopped using the long term debt of financing.
- The next analysis of long term debt to capital employed ratio shows that HBL has leased and NIBL has the highest long term debt to capital ratio of 0.148 and 0.37 respectively. This indicates that NIBL is using more long term debt for financing its capital. Similarly, the HBL and NIBL have the average ratio of 0.176 and 0.1910.
- The return on shareholders equity of NIBL and HBL is fluctuating and of HBL is showing increasing trend. The NIBL has average return of 22.98 which indicates that the shareholders earned 22.98 paisa investing one rupee. Likewise, HBL have average return of 15.16 respectively. The return of NIBL is highest and HBL is lowest among the sampled banks.
- The earning per share explains net income for each unit of share. It shows the market position of the firm. The average earning per share of NIBL, and HBL are 50.86, and 54.70 respectively. In the analysis we can see that the EPS of HBL is the highest with 54.70.
- Dividend per share is the earning distributed to ordinary shareholders. The analysis shows that NIBL paid the highest DPS on average with 16.25 with lowest of 7.18 on average. It didn't paid DPS to its ordinary shareholders in the FY2004/05, 2005/06 & 2008/09, while DPS of NIBL and HBL is 16.09 and 12.70 respectively.

- 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 we can say that NIBL has somewhat optimum capital structure because it has the least cost of capital and high value of firm. On the contrary we can assume that HBL had bad capital structure because it has high cost of capital and the lowest value of 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 6.67% with an average long term debt of 519.72m which is lowest among the two sampled banks under this study. The cost of equity of HBL and NIBL is 8.17% and 7.52% and its long term debt is 263.33m and 200m respectively. So, we can say that HBL has the optimum capital structure among the two banks.
- The financial leverage analysis helps to evaluate the financial risk of the firm. The average degree of NIBL and HBL are 1.138, and 12.80 and respectively. From the analysis we can say that NIBL is bearing the highest DFL. So, we can say its EPS is quite volatile. Meanwhile, HBL is bearing the lowest risk among the two banks.
- NIBL has positive correlation between TD and SHE of 0.99 and calculated value of t is higher than tabulated value of t i.e. relationship between TD and SHE is significant.
- Correlation coefficient between long term debt and Earning per share of NIBL shows positive correlation and significant relationship whereas that of NIBL and HBL shows positive correlation and insignificant relationship .The correlation coefficient between EBIT and DPS of NIBL and HBL is positive and calculated value of t is less than tabulated value of t, indicating insignificant correlation.
- The correlation coefficient between EBIT and Interest of all the two sampled banks under this study are positive. In the case of NIBL and HBL correlation coefficient is almost '1'. And calculated value of t is greater than tabulated value of t of NIBL and HBL so they have significant correlation. But NIBL has less calculated value t than tabulated value of t so it has insignificant correlation.

CHAPTER-5

SUMMERY, CONCLUSION AND RECOMMENDATION

This is the concluding chapter of this study. This chapter is divided into three sections. Summery, Conclusion and Recommendations. In this chapter, we summarize the study in brief. In the last section of this chapter some recommendations have given. Which are useful to stakeholders and to concerned companies as well? They can use these recommendations to take some corrective actions to draw decisions.

5.1 Summery

First Chapter starts with historical background of the study. An introduction of the banking industry of Nepal, a short introduction of the selected banks selected for the study, description of the capital structure is presented briefly. This study endeavors to evaluate capital structure of commercial banks with reference to NIBL and HBL. The main focus of the study arised a question what is the condition of capital structure of the commercial banks in Nepal? Whether or not they are using an appropriate financial mix. If not, what may be the suggestion to improve or to maximize the value of the firm in the context if Nepalese firms?

The statement of the problems deal with the effect of the capital structure policy, which is followed by the commercial banks and the main problems faced by the commercial banks in implementing the capital structure.

In this section of study, we are about to analyze capital structure of the two commercial banks (Nepal Investment Bank Ltd, and Himalayan Bank Ltd) that has been chosen for this study. All these banks are listed in NEPSE. To make the study more reliable, the whole study has been divided into five chapters. The summaries of each chapter are presented below:

The main objectives of this study presented are to evaluate the role of capital structure on the growth of the commercial banks in Nepal. To analyze the effectiveness and efficiency of capital structure of the commercial banks of Nepal and to analyze the and relationship of capital structure with variables such as earning per share, dividend per share and net worth. Finally, significance of the study and limitations of the study are also presented on the first chapter.

In second chapter various books, research studies and articles concerned with the capital structure have been reviewed and presented as the review if literature to make the concept of capital structure more clearly. Capital structure theories such as NI approach, NOI approach, MM model and other theoretical approaches to establish appropriate capital structure are described in this chapter. Review of different management journals, articles as well related Nepalese studies have been presented as well.

In third chapter the methodology, researcher can use to get appropriate guidelines and knowledge about the various sequential steps to adopt a systematic analysis has been explained in this chapter. Most of data used in this study are secondary in nature that is annual reports provided by concerned banks. Five years data are taken as sample years and are analyzed by using financial and statistical tools such as ratio analysis. Leverage analysis, capital structure analysis, correlation analysis, probable error methods, etc. in which the study of financial analysis are exhibited in this chapter.

The fourth chapter presentation of data of individual banks and its financial analysis has been presented by using methods mentioned in the chapter third such as ratio analysis, leverage analysis, correlations, and probable errors and capital structure analysis. Detail calculation has been calculated and tabulated after the fifth chapter which is shown as in appendix separately.

In last chapter summarized the study of capital structure management of commercial banks in brief to understand the whole about of the study instantly after which conclusion of the study with recommendation are presented.

5.2Conclusion

All banks used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsider's claim in total assets of the banks is higher than owners claim.

It’s a renowned fact that the globalization process has also made its impact on the banking sector. The growth and increasing integration of the world economy has been paralleled by expansion of global banking activities. On the basis of entire study, some conclusion has been deduced.

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 in average has 1.67% of long term debt to total debt ratio which means 98.33% of the total debt is contributed by current liabilities. Similarly, HBL and NIBL have 0.87% and 1.16% respectively.

Long term debt to capital ratio highlights the portion of fund financed by long term debt in the capital employed by the firm. The data shows NIBL has the average ratio of 0.37 similarly; at the same time in the case of HBL they have the average ratio of 0.176 times respectively. We can conclude that all the companies do not have appropriate ratio of long term debt to capital employed and among these two banks NIBL has employed more of the long term debt in the capital than the other three.

Debt to total ratio express the relationship between creditors fund and total assets the debt ratio or debt to total assets ratio of NIBL, and HBL is negligible which concludes that the debt used as the capital are negligible.
Debt to equity ratio analysis shows that the creditors have 30.77%claims on the assets of NIBL which is very higher among the two banks. It also indicates that NIBL has higher amount to be paid as interest on debt. Just the opposite, in the case of the creditors have 8.96% claims on its assets. Similarly, the creditors have 9.12% and 17.18% claimed on the assets of HBL respectively.

Interest coverage ratio shows whether or not the banks are capable in paying interest. The conclusion drawn by the study is the average interest coverage ratio on NIBL is 1.93, HBL is 1.87. This clearly shows that all the sampled banks are able to cover the interest but since the higher interest coverage ratio is better, in this regard NIBL seems to be in the front.

Since shareholders are the real owners of the company they obviously wants good return on their investment on this part we can conclude from our analysis that NIBL has the highest average return of 22.98 with fluctuating trend. Just the opposite shows the trend with average ROSHE. Likewise HBL have the average ROSHE of 15.16% respectively. All of them quite show they have satisfactory return of earning that is most desirable objectives of any banks. The ratio of ROSHE reflects the extent to which this objective has been accomplished.

EPS explains net income for each unit of share the two banks under our study shows the average of 50.86 for NIBL, likewise, 33.32 for HBL and 55.98 for NIBIL respectively. Among the two has the highest earning per share.

Dividend per share shows the amount of earning distributed to ordinary shareholders. The investors invest in those companies which pays adequate amount of dividend. Our analysis concludes that average dividend per share of NIBL is 16.25 share that of HBL is 7.18, of HBL and 16.09 of NIBL. Among the two NIBL has the highest and HBL has the lowest. HBL should think seriously if it wants to earn the goodwill of its investors by giving dividend on regular basis.

Net Income approach are the dependent hypothesis of capital structure which states that with the increased use of leverage, overall cost of capital declines and the total value of firm rise. According to this hypothesis the firm with the highest value and the least cost of capitalization rate is considered to have the best capital structure. The average value of firm of NIBL and HBL are 5,837.77, and 11,040.13 respectively. From the calculation we can say that this approach is well acquainted with this study as the value of banks has increased as the cost of capital has decreased.

Net operating income approach 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 Ke we can conclude the NIBL has the lesser Ke i.e. 6.67% and HBL has the highest Ke with 9.02%, HBL has 8.17% respectively.

When the company employs debt or other fund carrying fixed charges in the capital structure, financial leverage exists. From the calculations we can conclude that NIBL is bearing the highest risk among the two banks with average DFL of 1.138, but we can conclude that it is taking corrective actions to decrease its risk since the trend looks decreasing. Among the two HBL has the lesser financial risk has moderate financial risk.

Considering the correlation coefficient 'r' and calculated t is higher than tabulated t, which concludes that the total debt and shareholders equity deviate in the same direction and relationship between total debt and correlation are significant.

In the case of EBIT and Interest of all two banks, the correlation coefficient are positive and Cal t is greater than Tab t of NIBL, and HBL which concludes significant correlation between EBIT and Interest. Likewise in case of Cal t is less than Tab t so it has insignificant correlation between EBIT and Interest.

Similarly in the case of LTD and EPS the correlation coefficient of all two has positive Correlation Coefficient which is concludes that the positive correlation exists between the two variables. Since Calculated t is greater than tabulated t correlation the relationship between LTD and EPS of HBL is significant and Cal t are less than Tab t of NIBL and HBL so they has insignificant correlation between LTD and EPS.

In the case of EBIT and DPS the three among two i.e. NIBL and HBL shows positive correlation and Cal t is less than Tab t which shows positive and insignificant correlation
The operating profit of all the private sector commercial banks have gone up, so as the provision for loan loss. In brief, we can say that the banking sector in Nepal is somehow doing well enough though it has to face a lot of political and other hurdles in the past years.

5.3 Recommendation

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

Nepalese share holders are very much concerned about the payment of cash dividend by the banks rather than their financial statement. But, while observing the areas like EPS and DPS. It should work seriously because it may demoralize the shareholders if it continuous to retain its earning by not distributing to its owner that is the shareholders

- Selected banks should follow the theoretical aspects of the capital structure management or give some seriousness in this matter and try to manage their activities accordingly.
- By looking a some of the aspects of capital structure management like LTD to total debt ratio, capital employed ratio NIBL seems to be in the weaker position. While observing interest coverage ratio, return on total assets, return on shareholders equity NIBL seems to be in the better position. The banks are also recommended to minimize their financial and other expenses so that the interest coverage ratio could be improved.
- Due to the lack of theoretical knowledge regarding the capital structure, banks have not given significant attention to the capital structure that affects EPS, value of the firm, cost of capital etc.
- On the DFL part, we know that shareholders not only seek high return from their investment but also consider the risk of their investment. So it is recommended to all these banks under our study to plan their financial leverage well by analyzing the possible alternatives considering the high return and less risk.
- They are also recommended to use less debt, improve strategy of promotion activities analyze and evaluate before making investments etc.
- Since, there are lots of commercial banks in the market and lots are certain to be establishing in the near future. They should seriously adopt customer oriented strategy if not they may have to lose their loyal customer and in return their business.
- Since, human resources are the main source to make the banking activity successful they should give more priority in regular training, conduct regular workshops which will give staffs the new information about the modern banking industry in the world.
- It is visible that all of these two banks are playing significant role in contributing in the modern banking system to uplift the economical development of the nation.
- But it can be seen that almost all of the commercial banks are urban based, they should try to make their operation broad by moving to rural areas. The saving from the rural areas is seemed to be neglected by the banks without which they can't contribute to the economic development of the country.
- The capital structure of selected banks is highly leveraged. Still NIBL has higher leverage ratio in compared to HBL. It is good making handsome return by employing outsider's fund but at same time it also brings risk to the bank. The proportion of debt and equity capital should be decided keeping in mind the efforts of tax advantage and

financial distress. The banks, when in difficulty to pay interest and principal, ultimately lead to liquidation or bankruptcy. For such the bank should reduce the high use of debt capital.

- The ROSE, ROA and EPS of HBL are very low in compare to so they needed to seek more profitable are in order to increase profit of the bank. And they also need to maintain optimal capital structure considering cost of capital so that it helps to enhance the ROSE and profitability of the banks.
- Dividend payout ratio should be determined considering the shareholder's expectation and the growth requirements of the banks. A higher payment attracts both the existing and potential investors leading to increase in market price of the share, which consequently leads to the strength of financial capacity. Hence HBL and NIBL banks are recommended to maintain consistent dividend payout ratio.
- The earnings of the selected banks are decreasing. Yearly this may be due to the providing economic, political condition of the country. But the banks need to enhance their profitability by increasing efficiency in their productivity and decreasing the cost.
- The central bank as a regulating supervising and directing bank mandates all the commercial banks to increase their capital fund to Rs. 1 (One) billion and also needed to maintain sufficient capital adequacy radio as per NRB directives. So all selected banks need to adopt the guidance of the central bank to maintain appropriate capital structure so safe guard the depositor's money.
- All the selected banks need to review and monitor leverage ratio regularly so that risk to the bank may not increase which may effect in efficient operation of the banks and it is basically not concerned to mobility their deposit fund to productive areas. So they are proposed to come forward to match government obligation by financing the priority sector development program.

So, it is recommended that it should try to adopt more cooperative approach and should expand its branches by covering all the inner parts of the country. So that all the Nepalese living in any nooks and corner of the country can enjoy the banking facility and can benefit from it.

BIBLIOGRAPHY

Books

Barges A. (1963), "The Effect of Capital Structure on the Cost of Capital", Eagle Wood Cliffs, NJ, Prentice Hall of India Pvt Ltd.

Brealey, R. A and Myers, S.C (2002), "Principles of Corporate Finance", New Delhi, Tata McGraw Hill Calcutta ICWA.

Chakraborty, S.K (1997), "Corporate Capital Structure and Cost of Capital",

Foster, George (2002), "Financial Statement Analysis 2nd edition," New Delhi Nutech Photolithography's.

Ghimire P.R, Sharma, P. and Sapkota P. (2012) "Capital structure of management" (1st edition) Dream land Publication: Kathmandu

Gitman L.J (1988), "Principle of Managerial Finance", New York: Harper and Row Publisher 5th Edition.

Joshi P.R (2003), "Research Methodology", Kathmandu, Buddha Academic Publishe and Distributors Pvt Ltd.

Kothari, C.R, "Research Methodology Methods and Techniques", New Delhi, Vikash Publication House Pvt Ltd.

Pandey, I.M (1992), " Financial Management", New Delhi, Vikash Building House Private Ltd.

Shilu M. B. and Bhattarai R. (2006), "Corporate Financial Management" 3rd edition, Budha Academic Publishers and Distributors PVT. LTD.

Solomon, E. (1969), "The Theory of Financial Management", New York Columbia University press.

Van Horne, J.C (1990), "Financial Management and Policy", New Delhi, Prentice hall of India Pvt Ltd.

Van Horne, James C. " Fundamental of Financial Management" 10th edition, Prentice Hall of India Ltd; New Delhi.

Journals/ Articles

Monohar K.S (1985) "Analysis of capital structure in selected public enterprises"

Pandey S. (2006) has carried out a study on the basic objective of the study made by Ms Manju Kumari Pandey"

Pathak K. (2007) "capital structure and profitability:

Shrestha H. (2005) conducted a study on the topic "Focus on capital structure of selected and listed Public Companies."

Thesis

Adhikari (2011) *"Evaluating the financial performance of Nepal Bank Limited"* An unpublished Master's Thesis: Central Department of Management T.U.

Mandal (2006) *"Comparative financial performance appraisal of joint venture banks"* An unpublished Master's Thesis: Central Department of Management T.U.

Pokhrel (2009) *"A comparative study on financial performance of Nepal Bangladesh bank Ltd and Everest Bank Ltd."* An unpublished Master's Thesis: Central Department of Management T.U.

Regmi (2008) *"A comparative study of financial performance of Himalayan Bank Ltd and Nepal Bangladesh Bank Ltd."* An unpublished Master's Thesis: Central Department of Management T.U.

Shrestha S.(2010) *A Study on Working Capital Management of Nepal Lube oil Limited,* Kathmandu, Master Degree Thesis T.U.

Shrestha S.K. (2007) *Working capital management of selected Manufacturing Companies in Nepal.* Kathmandu, Master Degree Thesis T.U.

Related Websites

www.google.com

www.hbl.com.np

www.investopedia.com

www.nrb.org.np

APPENDICES

APPENDIX: 1
Long Term Debt to Total Debt

$$\text{LTD/ TD} = \frac{\text{Long term debt}}{\text{Total debt}} \times 100$$

(Rs in Millions)

Long term debt to Total debt of NIBL

F/Y	Long term Debt	Total debt	LTD/TD (%)
2004/05	6.80	8525.35	0.08
2005/06	361.50	12734.89	0.03
2006/07	350.00	15210.47	2.30
2007/08	550.00	20316.64	2.70
2008/09	800.00	26195.39	3.05
2009/10	1050	54896.31	1.91
Average			1.67

Source: Annual report of NIBL

Long term debt to Total debt of HBL

F/Y	Long term Debt	Total debt	LTD/TD(%)
2004/05	0.00	22292.09	0.00
2005/06	0.00	23437.85	0.00
2006/07	360.00	26302.94	1.36
2007/08	360.00	27694.21	1.30
2008/09	360.00	31372.64	1.15
2009/10	500.00	36200.44	1.38
Average			0.87

Source: Annual report of HBL

Appendix: 2
Long term debt to Capital Employed Ratio

$$\text{The Long Term Debt to Capital Employed} = \frac{\text{Long Term Debt}}{\text{Capital Employed}}$$

(Rs in Millions)

Long term Debt to Capital Employed Ratio of NIBL

F/Y	Long term Debt	Capital Employed	LTD/C.E(%)
2004/05	6.80	325.75	0.02
2005/06	361.50	685.19	0.53
2006/07	350.00	952.39	0.36
2007/08	550.00	1165.50	0.47
2008/09	800.00	1647.30	0.48
2009/10	1050.00	3226.29	0.33
Average			0.37

Source: Annual report of NIBL

Long term Debt to Capital Employed Ratio of HBL

F/Y	Long term Debt	Capital Employed	LTD/C.E(%)
2004/05	0.00	551.49	0.00

2005/06	0.00	706.21	0.00
2006/07	360.00	1161.67	0.31
2007/08	360.00	1288.75	0.28
2008/09	360.00	1355.19	0.26
2009/10	500.00	2403.33	0.21
Average			0.176

Source : Annual report of HBL

Appendix: 3
Total Debt to Total Assets Ratio

$$\text{Total debt to total assets ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

(Rs in Millions)

Debt to Total Assets Ratio of NIBL

F/Y	Total Debt	Total Assets	TD/TA
2004/05	8525.35	9014	0.92
2005/06	12734.89	13265	0.94
2006/07	15210.47	16064	0.94
2007/08	20316.64	21330	0.90
2008/09	26195.39	27591	0.90
2009/10	54896.31	57305.41	0.96
Average			0.93

Source: Annual report of NIBL

Debt to Total Assets Ratio of HBL

F/Y	Total Debt	Total Assets	TD/TA
2004/05	22292.09	24197.97	0.92
2005/06	23437.85	25729.78	0.91
2006/07	26302.94	28871.34	0.92
2007/08	27694.21	30579.80	0.89
2008/09	31372.64	33519.14	0.93
2009/10	36200.44	39320.32	0.92
Average			0.915

Source: Annual report of HBL

Appendix: 4
Long Term Debt to Equity Ratio

$$\text{Debt to Equity Ratio} = \frac{\text{Long Term Debt}}{\text{Shareholders Equity}}$$

(Rs in Millions)

Long term Debt to Capital Employed Ratio of NIBL

F/Y	Long term Debt	Shareholder's Equity	D/E Ratio (%)
2004/05	6.80	638.54	0.0106
2005/06	361.50	729.04	0.4958
2006/07	350.00	1180.17	0.2965
2007/08	550.00	1415.44	0.3885
2008/09	800.00	1878.12	0.4259
2009/10	1050.00	4585.39	0.2289
Average			0.3077

Source: Annual report of NIBL

Long term Debt to Capital Employed Ratio of HBL

F/Y	Long term Debt	Shareholder's Equity	D/E Ratio (%)
2004/05	---	1905.88	--
2005/06	---	2291.92	--
2006/07	360.00	2568.39	0.1401
2007/08	360.00	2885.59	0.1247
2008/09	360.00	2942.22	0.1223
2009/10	500.00	3119.87	0.1603
Average			0.0912

Source: Annual report of HBL

Appendix: 5
Interest Coverage Ratio

$$\text{Interest Coverage Ratio} = \frac{\text{Earning Before Interest and Tax}}{\text{Interest}}$$

(Rs in Million)

Interest Coverage Ratio of NIBL

F/Y	EBIT	Interest	I/C Ratio
2004/05	359	189	1.89
2005/06	557	326	1.70
2006/07	687	354	1.94
2007/08	995	490	2.03
2008/09	1407	685	2.05
2009/10	4080	2099	1.94
Average			1.93

Source: Annual report of NIBL

Interest Coverage Ratio of HBL

F/Y	EBIT	Interest	I/C Ratio
2004/05	914.14	554.12	1.64
2005/06	911.81	491.54	1.85

2006/07	1084.50	561.96	1.92
2007/08	1321.23	648.84	2.03
2008/09	1484.81	767.41	1.93
2009/10	2580.00	1407.00	1.83
Average			1.87

Source: Annual report of HBL

Appendix: 6
Return on Total Assets

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

(Rs in Millions)

Return on Total Assets of NIBL

F/Y	Net Profit After Tax	Total Assets	ROA(%)
2004/05	117	9014	1.30
2005/06	153	13265	1.15
2006/07	232	16064	1.44
2007/08	350	21330	1.64
2008/09	501	27591	1.82
2009/10	1265	57305	2.20
Average			1.59

Source: Annual report of NIBL

Return on Total Assets of HBL

F/Y	Net Profit After Tax	Total Assets	ROA(%)
2004/05	212.13	24197.97	0.91
2005/06	263.05	25729.78	1.06
2006/07	308.27	28871.34	1.11
2007/08	457.45	30579.80	1.55
2008/09	491.82	33519.14	1.47
2009/10	752.83	39320.32	1.91
Average			1.34

Source: Annual report of HBL

Appendix: 7
Return on Shareholders' Equity

$$Return\ on\ shareholders'\ equity = \frac{Net\ profit\ after\ tax}{Shareholders\ Equity} \times 100$$

(Rs in Millions)

Return on Shareholders' Equity of NIBL

F/Y	Net Profit After Tax	Shareholder's Equity	ROE(%)
2004/05	117	638.54	18.29
2005/06	153	729.04	20.93
2006/07	232	1180.17	19.67
2007/08	350	1415.44	24.77
2008/09	501	1878.12	26.68
2009/10	1265	4585.39	27.58
Average			22.98

Source: Annual report of NIBL

Return on Shareholders' Equity of HBL

F/Y	Net Profit After Tax	Shareholder's Equity	ROE(%)
2004/05	212.13	1905.88	11.13
2005/06	263.05	2291.92	11.00
2006/07	308.27	2568.39	12.00
2007/08	457.45	2885.59	16.00
2008/09	491.82	2942.22	16.71
2009/10	752.83	3119.87	24.13
Average			15.16

Source: Annual report of HBL

Appendix: 8
Earning Per Share

$$EPS = \frac{Net\ Income}{No.\ of\ Shares\ Outstanding}$$

(Rs in Millions)

Earnings Per Share of NIBL

F/Y	EAT	No. of Shares (N)	EPS
2004/05	117	2952930	39.56
2005/06	153	2952930	51.70
2006/07	232	5877385	39.50
2007/08	351	5905860	59.35
2008/09	501	8013526	62.57
2009/10	2165	24090977	52.50
Average			50.86

Source: Annual report of NIBL

Earnings Per Share of HBL

F/Y	EAT	No. of Shares (N)	EPS

2004/05	212.13	4290000	49.45
2005/06	263.05	5362500	49.05
2006/07	308.28	6435000	47.91
2007/08	457.45	7722000	59.24
2008/09	491.82	6108100	60.66
2009/10	752.83	12162150	61.89
Average			54.70

Source: Annual report of HBL

Appendix: 9
Dividend Per Share

$$DPS = \frac{Total\ Dividend}{No.\ of\ Ordinary\ Shares}$$

Dividend Per Share of NIBL

F/Y	Total Dividend	No. of Shares	DPS
2004/05	59058600	2952930	20
2005/06	44293950	2952930	15
2006/07	73466975	5877385	12.50
2007/08	118117200	5905860	20.00
2008/09	40067630	8013526	5.00
2009/10	602274425	24090977	25.00
Average			16.25

Source: Annual report of NIBL

Dividend Per Share of HBL

F/Y	Total Dividend	No. of Shares	DPS
2004/05	5662800	4290000	1.32
2005/06	--	5362500	--
2006/07	74517300	6435000	11.58
2007/08	231660000	7722000	30.00
2008/09	121620000	6108100	20.00
2009/10	162096954	12162150	13.32
Average			12.70

Source: Annual report of HBL

Appendix: 10
Calculation of NI Approach

Market value of Equity (s) = No of shares × closing MPS
Market value of Firm (V) = Market value of Debt (B) + Market value of Equity (S)

Value of Firm of NIBL

FY	NO of Share	Closing MPS	Market value of Share(s)	Market value of debt (B)	V=S+B
2004/05	2952930	795	2,347,579,350	16,433,055	2,364,012,405
2005/06	2952930	940	2,775,754,200	19,430,279	2,795,184,479
2006/07	5877385	800	4,701,908,000	32,913,356	4,734,821,356
2007/08	5905860	1260	7,441,383,600	52,089,685	7,493,473,285
2008/09	8013526	1729	13,855,386,450	96,987,710	13,952,374,160
2009/10	24090977	1526	36,762830902	105000000	36867830902
Average					5837774796

Source: Annual report of NIBL

Value of Firm of HBL

FY	NO of Share	Closing MPS	Market value of Share(s)	Market value of debt (B)	V=S+B
2004/05	4290000	836	3,586,440,000	392,160,000	3,978,600,000
2005/06	5362500	840	4,504,500,000	406,980,000	4,911,480,000
2006/07	6435000	920	5,920,200,000	534,830,868	6,455,030,868
2007/08	7722000	1100	8,494,200,000	767,366,028	9,261,566,028
2008/09	6108100	1740	10,628,094,000	956,528,460	11,584,622,460
2009/10	12162150	1525	18547278750	11252267692	29799546442
Average					11040139410

Source : Annual report of HBL

Appendix : 11
Calculation of Overall Capitalization of Rate (Ko)

$$\textit{Cost of overall capitalization rate (Do)} = \frac{\text{Net operating income (EBIT)}}{\text{Total market value of the firm (V)}}$$

(Rs in Million)

Calculation of Overall Capitalization Rate of NIBL

F/Y	EBIT	Value of Firm	Ko
2004/05	359	2,364.01	0.151
2005/06	557	2,795.18	0.149
2006/07	687	4,734.82	0.145
2007/08	995	7,493.47	0.132
2008/09	1407	13,952.37	0.100
2009/10	4080	36867.83	0.111
Average			0.1398

Source : Annual report of NIBL

Calculation of Overall Capitalization Rate of HBL

F/Y	EBIT	Value of Firm	Ko
2004/05	914.14	3,978.60	0.229

2005/06	911.81	4,711.48	0.185
2006/07	1084.50	6,455.03	0.168
2007/08	1321.23	9,261.56	0.142
2008/09	1484.81	11,584.62	0.128
2009/10	2580.00	11040.31	0.234
Average			0.181

Source : Annual report of HBL

Appendix: 12

Calculation of 'NOI' Approach.

$$\text{Cost of Equity (Ke)} = \frac{\text{Earning available to common stock holders(NI)}}{\text{Market value of stock (S)}}$$

(Rs in Million)

Calculation of Equity Capitalization Rate of NIBL

F/Y	EBT	Market value of stock(S)	Ke
2004/05	170	2347.57	0.073
2005/06	231	2775.75	0.083
2006/07	333	4701.90	0.070
2007/08	505	7441.38	0.068
2008/09	722	13855.38	0.052
2009/10	1981	36762.83	0.054
Average			0.0667

Source: Annual report of NIBL

Calculation of Equity Capitalization Rate of HBL

F/Y	EBT	Market value of stock(S)	Ke
2004/05	360.02	3586.44	0.100
2005/06	420.27	4505.50	0.093
2006/07	522.54	5920.20	0.088
2007/08	672.39	8494.20	0.079
2008/09	717.41	10628.09	0.067
2009/10	1173.00	18547.27	0.063
Average			0.0817

Source : Annual report of HBL

Appendix: 13
Degree of Financial Leverage

$$DFL = \frac{\text{\% Change in EPS}}{\text{\% Change in EBIT}}$$

(Rs in Million)

Degree of Financial Leverage of NIBL

F/Y	EBIT	EBT	DFL
2004/05	359	170	--
2005/06	557	231	0.65
2006/07	687	333	1.91
2007/08	995	505	1.15
2008/09	1407	722	1.07
2009/10	4080	1981	0.91
Average			1.138

Source : Annual report of NIBL

Degree of Financial Leverage of HBL

F/Y	EBIT	EBT	DFL
2004/05	914.14	360.02	--
2005/06	911.81	420.27	(68)
2006/07	1084.50	522.54	1.26
2007/08	1321.23	672.39	1.32
2008/09	1484.81	717.41	0.54
2009/10	2580.00	1173.00	0.88
Average			(12.80)

Source: Annual report of HBL

Appendix: 14
Correlation coefficient between Total Debt and Shareholders equity with probable Error.

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

Where, N = Number of observations

X and Y are variables.

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

Follows t-distribution with (n-2) degree of freedom

Where, r = sample correlation coefficient

n = sample size(pairs)

(Rs in Million)

Correlation Coefficient Between TD and SHE of NIBL

F/Y	TD(X)	SHE(Y)	XY	X2	Y2
2004/05	8525.35	638.54	5443777	72681592	407734
2005/06	12734.89	729.04	9284244	162177423	531500
2006/07	15210.47	1180.17	17950940	231358397	1392800
2007/08	20316.64	1415.44	28756985	412765860	2003470
2008/09	26195.39	1878.12	49198086	686198457	3527335
2009/10	54896.31	4585.39	251720990	3013604852	21025801
Total	137879.05	10426.7	361465022	4578786581	28888640

Source : Annual report of NIBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 361465022 - 137879.05 \times 10426.7}{\sqrt{6\times 4578786581 - (137879.05)^2} \times \sqrt{6\times 28888640 - (10426.7)^2}}$$

$= 0.99$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.99}{\sqrt{1-0.99^2}} \times \sqrt{6-2}$$

$$= 14.04$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.98}{\sqrt{1-0.98^2}} \times \sqrt{6-2}$$

$$= 9.85$$

Correlation coefficient Between TD and SHE of HBL

F/Y	TD(X)	SHE(Y)	XY	X2	Y2
2004/05	22292.09	1905.88	42486048.49	496937276.6	3632378.57
2005/06	23437.85	2291.92	53717677.17	549332812.6	5252897.28
2006/07	26302.94	2568.39	67556208.07	691844652.6	6596627.19
2007/08	27694.21	2885.59	79914135.43	766969267.5	8326629.64
2008/09	31372.64	2942.22	92305208.86	984242540.6	8656658.52
2009/10	36200.44	3119.87	112940666.74	1310471856.19	9733588.82
Total	167300.17	15713.87	448919944.74	4799798406.19	42198780.02

Source : Annual report of HBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 448919944.74 - 167300.17 \times 15713.87}{\sqrt{6}\times 4799798406.19 - (167300.17)^2 \times \sqrt{6}\times 42198780.02 - (15713.87)^2}$$

$$= 0.91$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.91}{\sqrt{1-0.91^2}} \times \sqrt{6-2}$$

$$= 4.69$$

Appendix: 15

Correlation Coefficient Between Long Term Debt and Earning Per Share

(Rs in Million)

Correlation Coefficient Between LTD and EPS of NIBL

F/Y	LTD(X)	EPS(Y)	XY	X2	Y2
2004/05	6.80	39.56	269.00	46.24	1564.99
2005/06	361.50	51.70	18689.55	130682.25	2672.89
2006/07	350.00	39.50	13825.00	122500.00	1560.25
2007/08	550.00	59.35	32642.50	302500.00	3522.42
2008/09	800.00	62.57	50056.00	640000.00	3915.00
2009/10	1050.00	50.86	53403.00	1102500.00	2586.74
Total	3113.30	303.54	168885.05	2298228.49	15822.29

Source : Annual report of NIBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 168885.05 - 3113.30 \times 303.54}{\sqrt{6 \times 2298228.49 - (3113.30)\,2} \times \sqrt{6\times 15822.29 - (303.54)\,2}}$$

$$= 0.64$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.64}{\sqrt{1-0.64^2}} \times \sqrt{6-2}$$

$$= 1.67$$

Correlation Coefficient Between LTD and EPS of HBL

F/Y	LTD(X)	EPS(Y)	XY	X2	Y2
2004/05	--	49.45	--	--	2445.30
2005/06	--	49.05	--	--	2405.90
2006/07	360.00	47.91	17247.60	129600.00	2295.36
2007/08	360.00	59.24	21326.40	129600.00	3509.37
2008/09	360.00	50.66	21837.60	129600.00	3679.63
2009/10	500.00	54.70	27350.00	250000.00	2992.09
Total	1580.00	321.01	87761.60	638800.00	17327.65

Source : Annual report of HBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6 \times 87761.60 - 1580 \times 321.01}{\sqrt{6 \times 638800 - (1580)^2} \times \sqrt{6 \times 17327.65 - (321.01)^2}}$$

$$= 0.55$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.55}{\sqrt{1-0.55^2}} \times \sqrt{6-2}$$

$$= 1.32$$

Appendix: 16
Correlation Coefficient between EBIT and Interest

(Rs in Million)

Correlation Coefficient between EBIT and Interest of NIBL

F/Y	EBIT(X)	INTEREST(Y)	XY	X2	Y2
2004/05	359	189	67851	128881	35721
2005/06	557	326	181582	310249	106276
2006/07	687	354	243198	471960	125316
2007/08	995	490	487550	990025	240100
2008/09	1407	685	963795	1979649	469225
2009/10	4080	2099	8563920	16646400	4405801
Total	8085	4143	10507896	20527173	5382439

Source : Annual report of NIBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 10507896 - 8085 \times 4143}{\sqrt{6 \times 20527173 - (8085)^2} \times \sqrt{6\times 5382439 - (4143)^2}}$$

$$= 0.99$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.99}{\sqrt{1-0.99^2}} \times \sqrt{6-2}$$

$$= 14.04$$

Correlation Coefficient Between EBIT and Interest of HBL

F/Y	EBIT(X)	INTEREST(Y)	XY	X2	Y2
2004/05	914.14	554.12	506543.25	835651.93	307048.97
2005/06	911.81	491.54	448191.08	831397.47	241611.57
2006/07	1084.50	561.96	609445.62	1176140.25	315799.04
2007/08	1321.23	648.84	857266.87	1745648.71	420993.34
2008/09	1484.81	767.41	1139458.04	2204660.73	588918.10
2009/10	2580.00	1407.00	3630060.00	6656400.00	1979649.00
Total	8296.49	4430.87	7190964.86	13449899.09	3854020.02

Source : Annual report of HBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 7190964.86 - 8296.49 \times 4430.87}{\sqrt{6 \times 13449899.09 - (8296.49)^2} \times \sqrt{6\times 3854020.02 - (4430.87)^2}}$$

$$= 0.99$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.99}{\sqrt{1-0.99^2}} \times \sqrt{6-2}$$

$$= 14.04$$

Appendix: 17
Calculation Coefficient between EBIT and DPS

(Rs in Million)

Correlation Coefficient between EBIT and DPS of NIBL

F/Y	EBIT(X)	DPS(Y)	XY	X2	Y2
2004/05	359	20.00	7180.00	128881.00	400.00
2005/06	557	15.00	8355.00	310249.00	225.00
2006/07	687	12.50	8597.50	471969.00	156.25
2007/08	995	20.00	19900.00	990025.00	400.00
2008/09	1407	5.00	7035.00	1979649.00	25.00
2009/10	4080	25.00	102000.00	16646400.00	625.00
Total	8085	97.50	153057.00	20527173.00	1831.25

Source : Annual report of NIBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 153057 - 8085 \times 97.50}{\sqrt{6 \times 20527173 - (8085)^2} \times \sqrt{6\times 1831.25 - (97.50)^2}}$$

$$= 0.44$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.44}{\sqrt{1-0.44^2}} \times \sqrt{6-2}$$

$$= 0.979$$

Correlation Coefficient between EBIT and DPS of HBL

F/Y	EBIT(X)	DPS(Y)	XY	X2	Y2
2004/05	914.14	1.32	1206.66	835651.93	1.74
2005/06	911.81	--	--	831397.47	--
2006/07	1084.50	11.58	12558.51	1176140.25	134.09
2007/08	1321.23	30.00	39636.90	1745648.71	900.00
2008/09	1484.81	20.00	29696.20	2204660.73	400.00
2009/10	2580.00	12.70	32766.00	6656400.00	161.29
Total	8296.49	75.60	115864.27	13449899.09	1597.12

Source : Annual report of HBL

$$\text{Correlation coefficient (r)} = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{6\times 115864.27 - 8296.49 \times 75.60}{\sqrt{6 \times 13449899.09 - (8296.49)^2} \times \sqrt{6\times 1597.12 - (75.6)^2}}$$

$$= 0.31$$

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2} \approx t_{n-2}$$

$$= \frac{0.31}{\sqrt{1-0.31^2}} \times \sqrt{6-2}$$

$$= 0.652$$

Appendix: 18
Calculation of Standard Deviation and Coefficient of Variation of Long Term Debt to Total Debt

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	2.52	0.76
2005/06	2.68	0.76
2006/07	0.40	0.24
2007/08	1.06	0.18
2008/09	1.90	0.08
2009/10	0.06	0.26
$\sum(X - \overline{X})^2$	8.62	2.28
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	1.31	0.68
$C.V = \frac{\sigma}{\overline{X}} \times 100$	78.62	78.16

(using of SPPS Program)

Appendix: 19
Calculation of Standard Deviation and Coefficient of Variation of Long Term Debt to Capital Employed

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	0.1225	0.0310
2005/06	0.0256	0.0310
2006/07	0.0001	0.0179
2007/08	0.0100	0.0108
2008/09	0.0121	0.0070
2009/10	0.0016	0.0012
$\sum(X - \overline{X})^2$	0.1719	0.989
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	0.19	0.14
$C.V = \frac{\sigma}{\overline{X}} \times 100$	51.35	79.55

(using of SPPS Program)

Appendix :20

Calculation of Standard Deviation and Coefficient of Variation of Debt – Assets Ratio

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	0.0001	0.000025
2005/06	0.0001	0.000025
2006/07	0.0001	0.000025
2007/08	0.0009	0.000625
2008/09	0.0009	0.000225
2009/10	0.0009	0.000025
$\sum(X - \overline{X})^2$	0.0030	0.00095
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	0.0245	0.0138
C.V= $\frac{\sigma}{\overline{X}} \times 100$	2.63	1.51

(Using SPPS Program)

Appendix: 21

Calculation of Standard Deviation and Coefficient of Variation of Debt to Equity Ratio

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	0.0883	0.0032
2005/06	0.0354	0.0032
2006/07	0.0001	0.0024
2007/08	0.0065	0.0011
2008/09	0.0140	0.0010
2009/10	0.0062	0.0048
$\sum(X - \overline{X})^2$	0.1505	0.0157
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	0.17	0.056
C.V= $\frac{\sigma}{\overline{X}} \times 100$	56.98	61.44

(using SPPS Program)

Appendix: 22

Calculation of Standard Deviation and Coefficient of Variation of Interest Coverage Ratio.

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	0.0016	0.0529
2005/06	0.0529	0.0004
2006/07	0.0000	0.0025
2007/08	0.0100	0.0256
2008/09	0.0144	0.0036
2009/10	0.0001	0.0016
$\sum(X - \overline{X})^2$	0.079	0.0866
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	0.13	0.13
C.V= $\frac{\sigma}{\overline{X}} \times 100$	6.51	7.04

(using SPPS Program)

Appendix: 23

Calculation of Standard Deviation and Coefficient of Variation of Return on Total Assets.

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	0.0841	0.1849
2005/06	0.1936	0.0784
2006/07	0.0225	0.0529
2007/08	0.0025	0.0441
2008/09	0.0529	0.0169
2009/10	0.3721	0.3249
$\sum(X - \overline{X})^2$	0.7277	0.7021
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	0.38	0.37
C.V= $\frac{\sigma}{\overline{X}} \times 100$	23.89	27.96

(using SPPS program)

Appendix: 24
Calculation of Standard Deviation and Coefficient of Variation of Return on shareholders equity

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	21.9961	16.2409
2005/06	4.2025	17.3056
2006/07	10.9561	9.9856
2007/08	3.2041	0.7056
2008/09	13.69	2.4025
2009/10	21.16	80.4609
$\sum(X - \overline{X})^2$	75.2088	127.1509
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	3.88	5.04
C.V= $\frac{\sigma}{\overline{X}} \times 100$	16.88	23.53

(Using SPPS Program)

Appendix :25
Calculation of Standard Deviation and Coefficient of Variation of EPS

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	127.69	27.56
2005/06	0.7056	31.92
2006/07	129.0496	46.10
2007/08	72.0801	20.61
2008/09	137.1241	35.52
2009/10	2.6896	51.69
$\sum(X - \overline{X})^2$	469.339	213.4
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	9.69	6.53
C.V= $\frac{\sigma}{\overline{X}} \times 100$	19.05	11.94

Appendix: 26
Calculation of Standard Deviation and Coefficient of Variation of DPS

FY	NIBL	HBL
	$(X - \overline{X})^2$	$(X - \overline{X})^2$
2004/05	14.06	129.50
2005/06	1.56	161.29
2006/07	14.06	1.25
2007/08	14.06	299.29
2008/09	126.56	53.29
2009/10	76.56	0.3844
$\sum(X - \overline{X})^2$	246.86	645.00
$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N - 1}}$	7.03	11.36
$C.V = \frac{\sigma}{\overline{X}} \times 100$	43.24	89.43

(Using SPPS program)