CHAPTER ONE
INTRODUCTION

1.1 Background

Capital is the most essential factor for the development of the nation. Due to least developed country, domestic capital formation is very difficult task for Nepal. Handicapped by numerous constraints, economic development is a challenging task in Nepal. The landlocked nature, limited infrastructure of development and the rugged mountain terrain of a large part of the country add to the economic rigidities of Nepal. Reduction of widespread poverty is Nepal's biggest development challenge today. In order to make tangible progress in reducing poverty; Nepal needs to grow more rapidly. There is little scope in Nepal for improving living standards of the poor through income redistribution and higher growth is necessary both to increase income levels and to generate additional resources to provide better services and infrastructure to the poor. In the context of wide spread poverty, generating adequate income earning and employment opportunities are essential for maintaining social and political stability as well. In such a situation, to all round development of the country, banks could play a key role. To develop and spread industry, boost the trade and commercial activities, generate employment, the bank cannot be ignored rather bank is the must.

Banks are essential financial institution in an economy. They are the principal source of credit that provide most important sources of short-term working capital for business and is increasing active in recent years in making long-term business loans for new plants and equipment. They are different from other firm as their performance is akin to their financial structure. The amount of the banks capital risks of its loans and the nature of its deposits affect its ability to make money and remain profitable.

The commercial bank is simply a business corporation organised for the purpose of maximizing the value of shareholder's wealth invested in the bank at an accepted level of risk. An aggressive pursuit of such an objective requires that an institution be

continually on the look out for new opportunities for further revenue growth, greater efficiency, and more effective planning and control. Therefore, Banks like other firms in the economy are out to operate at a profit. They are closely regulated and scrutinized than a typical business firm. The banks hold saving of the overall health of the economy; regulators and the public subject them to constant scrutiny.

The banks will generate their income in a different way. They collect money from savers and lend it to borrowers. They make profit paying less for saving than what they charge to the borrowers. Banks also generate income by providing other services for which they charge fees and commissions. Such services include trust administration, safety deposit, account services and others. Meanwhile, banks have also entered into financial advisory services, foreign trading, processing and investments.

The success of any organisation, which in other words means the maximisation of the wealth of its shareholders, depends on its capital structure. Capital structure decision is one of the most complex areas of financial decision making due to its interrelationship with other financial decision variable. Since the firm's objectives should be directed towards the investors' wealth maximization, the manager must evaluate all the decisions in terms of its impact on the value of the firm.

Capital can be acquired through issuing debt, preferred stock, common stock and using retained earning. The combination of such component of capital is called capital structure that differs from company to company. Each sources of capital has its own benefits and defects. Equity provides the ownership of the firm to the shareholder's where as debt has fixed charges of interest that has to be paid to debt provider. It does not matter whatever the source of fund used by company. Ultimately it is supply of fund in return there is need of some benefits in terms of dividend or fixed interest charge to fund provider.

The term capital structure is known as composition of long term debt, preferred and common stock. Therefore the financial decision of a firm is the decision of choosing the proportion of debt and equity to finance the investment requirement. Thus, there should be balance between debt and equity to avoid the financial risk and return to the fund provider. Capital structure is the combination of the debt and equity securities that comprises a firm's financing its assets. Both debt and equity are used in most

large corporations. The choice of the amount of debt and equity is made after a comparison of latrine characteristics of each kinds of security of international factors that can affect the firm.

Profit is one of the measurements of success of organization that depends on capital structure. In other words, a capital structure decision also is one of the determinants of securing profit. Thus it is very necessary for any organization to plan its most optimum capital structure to provide maximum return to its shareholders and there by increase the value of the firm. Optimal capital structure is such structure of capital that maximizes the value of the firm and minimizes the overall cost of capital. A particular debt/equity ratio represents the optimal capital structure if it results in the lowest possible WACC. This is sometimes called the firm's target capital structure as well. Hence optimal capital structure can add direct value on shareholder's profitability through the cheaper overall cost of capital. Capital structure involves selecting the capital structure that maximizes EPS over the expected EBIT. Optimal capital structure can be defined in terms of risk and return because different source of capital consists of different risk and returns. The optimal structure is the one that strikes the optimal balance between risk and return and thereby maximizes the price of stock.

1.2 Statement of the Problems

Every business firm can take advantages through appropriate capital structure decisions because long-run profitability depends on its capital structure besides other factor. Generally, higher debt to equity ratio is more risky for the company though high leverage has its own advantage on the other hand. An appropriate balance of debt and owner's equity is essential to avoid financial risk. Therefore, highly levered capital structure with insufficient return represents the weak financial aspect of the banks. The study problems are identified as below:

a. Capital structure consists of debt, preference and equity share. Hence this research is going to study whether the debt capital is higher or the share capital.

b. Are NBBL and HBL in better capital structure?

c. Is there proper relationship between EBIT and interest payment?

d. How efficiently do NBBL and HBL use their capital?

e. Do NBBL and HBL earn adequately?

1.3 Objective of the Study

The main objective of this is to highlight the comparative analysis of capital structure and profitability between the two famous competitive banks namely: NBBL and HBL Besides following are the specific objectives:

a. To study the debt serving capacity of NBBL and HBL.

b. To analyze the relationship between capital structure and profitability.

c. To evaluate the capital structure and profitability position of the banks.

1.4 Significance of the Study

The financial institutions, holding lenders and owners are more concerned with the firm's long-term financial strength. Capital structure analysis would help to indicate and to follow the appropriate mix of debt and owner's equity in the firm whereas; profitability analysis would help to indicate the conditions of earnings. Therefore, to this significance on account this study on behalf of the firm's capital structure and profitability and its relationship is justified as a specific subject matter.

1.5 Limitation of the Study

This study is simply a partial requirement of MBS program. Due to the occurrence of unforeseen circumstances, every study or research is always accompanied by some limitations viz., inadequate coverage of commercial banks, time period taken and other variables. However this researcher has tried to eliminate the limitation of the study to some extent. There are still some limitations which are as follows:

a. This study is limited to only period of 6 years trend of concerned JVB's and hence the conclusion drawn confines only to the above period.

b. The study is based on the published data of two banks which might have been manipulated.

c. Out of numerous affecting factors, only those factors related with capital structure and profitability are considered in this study.

d. This study deals only with two joint venture commercial banks such as NBBL and HBL, other commercial banks have not been considered.

e. Most of the data are secondary which itself is a limiting factor. But for the clarification purpose some primary data are also collected.

1.6 Organization of the Study

This study is organised into five chapters. Each is denoted to the some aspect of the study. The rationale behind this kind of organisations is to follow a simple research methodology approaches. The contents of each chapters of the study are briefly mentioned here.

Chapter I Introduction: - Chapter one consists of introductory part of the study. This chapter consists of background, statement of problem, objective of the study, significance of the study, limitation of the study, and organisation of the study

Chapter II Review of Literature: - Chapter two includes the brief review of available literature on related topic. In includes a discussion on the conceptual framework and review of major studies.

Chapter III Research Methodology: - Chapter three includes the research methodology employed in the study. This chapter deals with the nature and sources of data research design, population and sample, data collection procedure and methods of analysis

Chapter IV Presentation and Analysis of Data: - This chapter deals with the presentation and analysis of relevant data with the help of various financial and statistical tools and techniques.

Chapter V Summary, Conclusion and Recommendations: - Lastly chapter five incorporates summary, conclusion and recommendations of the study which are the important aspect to solve the problems associated to the present analysis and offers recommendation for the improvement in future.

CHAPTER TWO
REVIEW OF LITERATURE

2.1 Introduction.

Review of literature is an essential part of all studies. It is a way to discover what other research in the area of this problem has uncovered. The objective of review of literature is to (Wolf and Panta; 1999: 30)

- Establish a point of departure for future research.
- Avoid investigating problems that have already been definitely answered
- To reveal area of needed research.
- Every possible effort has been made in order to incorporate all the knowledge and information available in libraries, related periodicals and magazines, official and unofficial publications of the banks concerned etc.

2.2 Conceptual Framework.

As this study deals with capital structure and profitability, here it is utmost necessary to mention the conceptual thoughts behind it.

2.2.1. General Concept of Capital Structure.

“The term capital structure is used to represent the proportionate relationship between debt and equity. The debt equity mix of a firm is called its capital structure. The capital structure decision is a significant financial decision since it affects the shareholders return and risk and consequently, the market value of shares.” [Pandey; 1992: 663]

“Generally the term "Capital Structure" is referred to represent the proportionate relationship between the different forms of financing. However, some times a distinction is drawn between 'Financial Structure' and 'Capital Structure'.” [Weston and Brigham; 1989: 249-50]

“The structure is used to refer to manner in which the assets of a firm are financed. Thus, it represents the entire capital and liability side of the balance sheet. On the

other hand, the term capital structure is used in restrictive sense. It refers to the composition of long-term sources of finance such as preference capital, debentures, long-term debt and equity capital including reserve surpluses (i.e. retained earning and excludes short-term debt). Thus used in this sense capital structure is a part of financial structure. From a practical point of view, the distinction is not very rigid. In practice, short-term debts in many cases are used as substitutes of long-term debts for financing the long-term activities. These short-term debts also provide leverage benefits to the shareholders and involve cost and risk like the long-term debts. Hence the terms financial structure and capital structure may be used interchangeably." [Pandey; 1996: 11]

Capital structure is about analysis of the capital composition of the company. "Capital structure is the permanent financing of the firm, represented by long term debt, preferred stock and common stock but excluding all short tem credit. Thus a firm's capital structure is only a part of its financing structure i.e. common stock, capital surplus and accumulated retained earning."[Weston and Brigham; 1989: 666]

"Both debt and equity are used in most large corporations. The choice of the amount of debt and equity is made after a comparison of certain characteristics of each kind of security, of internal factors related to the firm's operation, and external factor that can affect the firm." [Hampton; 1986: 42]

The choice of debt and equity largely depends on the three factors such as cost, risk and control. The cost of capital is the required rate of return for the firm. The riskiness of a firm alters with the change in debt-equity mix and so on earning and maintaining control can be favourable whenever capital structure decisions are made.

"A financial manager must strive to obtain the best financing mix or optimum capital structure for his/her firm. The firm's capital structure is optimum when the market value of share is maximized. The use of debt affects the return and risk of shareholders; this will increase the return on equity but also the risk at the same time. When the shareholders' return is maximised with minimum risk, the market value per

share will be maximized and the firm's capital structure would be optimum.” [Pandey; 1992: 663].

“It can be legitimately expected that if the capital structure/financial leverage decision affect the total value of the firm, a firm should select such a financing mix as will maximize the shareholders' wealth. Such a capital structure is referred to as the optimal capital structure. The optimal capital structure may be defined as that capital structure or combination of debt and equity that leads to the maximum value of the firm.” [Khan and Jain; 1992: 473]

“If a company can change its total valuation by varying its capital structure, an optimal financial mix would exist, in which market price per share could be maximised.” [Van Horne; 1983: 10]

“The concern of the financing decision is with financing mix or capital structure or leverage. The financing decision of a firm relates to the choice of the portion of these sources to finance the investment requirements. There are two aspect of the financing decision. First, the theory of capital structure which shows the theoretical relationship between the employment of debt and equity to ensure a trade off between risk and return to the shareholders is necessary. A capital structure with a reasonable proportion of debt and equity capital is called the optimum capital structure.” [Khan and Jain; 1992: 10]

“Under the assumption that a firm will attempt to maximize the long run market value of ownership shares, there exist an optimal capital structure for each individual firm. It varies from in different industries because the typical assets structure and stability of earnings which determine inherent risks vary for different type of production.”[Kulkarni; 1983: 368]

“Funds can be raised through debt or equity financing. Risk is associated in proportion of its uncertainty in being paid off. The required rate of return expected by investors according to their risk is cost of capital. Therefore, a firm should try to obtain necessary funds at lower cost. The overall cost of capital is fully dependent upon the

proportion of debt and equity capital i.e. financial leverage, which is actually the capital structure of the firm. So, overall cost of capital, value of the firm and earning per share are affected by the mix of the components of capital structure. One of the most perplexing issue facing financial managers is the relationship between capital structure, which is the mix of debt and equity financing, and the stock prices." [Brigham, Gapenski and Ehrhardth; 2001: 580]

"The capital structure of the firm, defined as the mix of financial instruments use to finance the firm, is simplified to include only long term interest bearing debt, common stock and preferred stock. Capital structure is the combination of long term sources of financing i.e. debt, preferred stock and common stock that are used to finance the firm." [Steven and Robert; 1981:348].

"The nature of capital structure differs from company to company, which is directly guided, regulated and controlled by management of the company. However, a reasonable satisfactory capital structure can be determined by considering relevant factors and analyzing the impact of alternative financing proposals on the earning per share." [Chandra; 1985: 176].
Capital structure theory is based on following assumptions. [Van Horne; 1999: 252]

1. There are no corporate or personal taxes and bankruptcy cost (later, we remove these assumptions)
2. The ratio of debt to equity for the firm is changed by issuing debt to repurchase stock or issuing stock to payoff debt. In other words, a change in capital stock is affected immediately. In this regard, we assume no transaction costs.
3. The firm has a policy of paying 100 percent of its earning in dividends. Thus, we abstract from the dividend decision.
4. The expected values of the subjective probability distribution of expected future operating earning for each company are the same for all investors in the market.
5. The operating earning of the firm is not expected to grow. The expected value of probability distribution of expected operating earning for all future periods are same as present operating earnings.

6. Two types of capital are employed: long term debt and shareholders equity.
7. The firm is expected to continue indefinitely.

In this analysis of capital structure theories, the following basic definitions are used.

S = Total market value of stock

D =Total market value of debt

V = Total market value of the firm (S+D)

K_e = Equity capitalization rate.

K_o = Overall capitalization rate= Net Operating Income (NOI)

K_d = Cost of debt capital.

INT = Total amount of annual interest.

EBIT = Earning before interest and taxes.

EBT = Earning before taxes.

By using the above symbols, cost of capital and their respected values can be calculated by using the following formulas.

- **Debt**

$$\text{Value of debt (D)} = \frac{\text{INT}}{K_d}$$

$$\text{Cost of debt } (K_d) = \frac{\text{INT}}{\text{D}}$$

- **Equity or common stock**.

$$\text{Cost of equity } (K_e) = \frac{\text{EBIT-INT}}{\text{V–D}} = \frac{\text{EBT}}{\text{S}}$$

- **Overall or Weighted Average Cost of Capital**.

$$\text{Overall cost of capital } (K_o) = \frac{\text{EBIT}}{\text{V}}$$

The overall cost of capital is the weighted average cost of equity and cost of debt.

Thus,

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

- **The Value of the Firm.**

The value of the firm is combined value of debt capital and share Capital.

So,

$V = D + S$

Or $\frac{EBIT}{K_0}$

2.2.1.1 The Optimal Capital Structure.

Capital structure decision affects the value of firm, earning per share and cost of capital. The objectives of the company are always related to maximizing the value of firm, earning per share and minimizing the overall cost of capital. To achieve this objective, company should make the appropriate composition of capita structure, which is also known as optimal capital structure.

“An optimal capital structure would be obtained at the combination of debt and equity that maximize the total value of the firm, (value of debt plus value of stock) or minimize the weighted average cost of capital.”[Pandey; 1992:675]

“The optimal capital structure is the one that strikes the optimal balance between risks and returns and thereby maximizes the price of the stock.” [Weston and Brigham; 1989:690]

“Optimal capital structure can be defined as that mix of debt and equity, which will maximize the market value of the company. If such an optimal does exist, it maximizes the value of the company and hence the wealth of its owners: it minimizes the companies' cost of capital which in turn increases its ability to find new wealth creating investing opportunities.” [Ezra; 1969: 216]

So, the optimal capital structure is that combination of capital structure, which maximizes the value of the firm, earning per share, and minimizes the weighted

average or overall cost of capital. Therefore, the firm should determine appropriate capital structure, to achieve its targeted objective of maximizing the shareholders wealth. “Although, it is theoretically possible to determine the optimal capital structure, as a practical manner we can not estimate this structure with precision.”[Weston and Brigham; 1989:719]

The relationship of optimal capital structure with other elements of financial management and the capital structure decision process can be shown with the help of following figure.

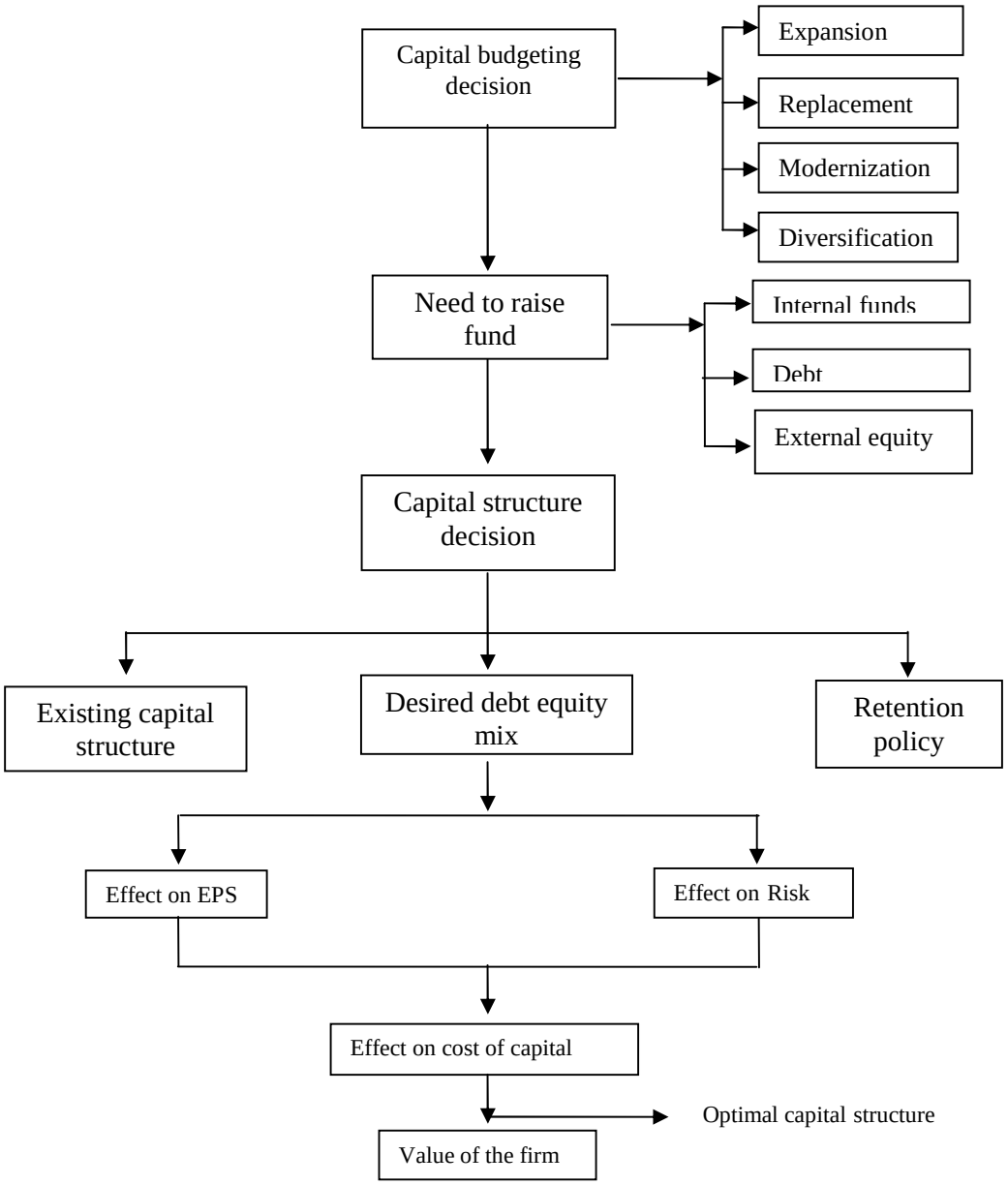


Figure No. 1: Pandey; 1998: 204, The Capital Structure Decision

2.2.1.2. Theories of Capital Structure.

Capital structure is the permanent financing of the firm represented by long term debt, preferred stock and common stock but, excluding all short term credits. There are various theories relating to the capital structure of the firm. Nevertheless, capital structure decision affects the total market value of the firm, earning per share and

firm's cost of capital. So, the theories of capital structure are closely related to the firm's cost of capital. There are many factors which are related to the cost of capital. That mix of capital structure which minimizes the cost of capital is the optimum capital structure. But all does not accept the existence of optimal capital structure. Argument between those who believe that there is an optimum capital structure for each firm and among those who believe in the absence of such optimum capital structure begun in the late 1950's and there is yet no resolution of the conflict.

The cost of debt and cost of equity are assumed to be independent to the capital structure under net income approach. But under net operating approach the cost of equity is assumed to increase linearly with leverage. Modigliani and Miller logically admitted that the value of the firm and cost of capital is independent of capital structure decision of the firm. On the other side traditional theory argue that the value of the firm and the cost of capital are affected by the capital structure change. So to understand about the capital structure decision and concept under different theories it is important to have some idea of major capital structure theories. Many theories about the capital structure have been developed in the field of financial management. Among them the following theories have been considered:

2.2.1.2.1 Net Income (NI) Approach.

2.2.1.2.2. Net Operating Income (NOI) Approach.

2.2.1.2.3. Traditional Theory.

2.2.1.2.4. Modigliani-Miller's Model.

2.2.1.2.5 Miller Model.

2.2.1.2.1. Net Income (NI) Approach.

Under the net income approach, the cost of debt and cost of equity are assumed to be independent to the capital structure. The weighted average cost of capital declines and the total value of the firm rise with increased value of leverage. “The essence of net income approach is that the firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in the capital structure.” [Pandey; 1992: 678]

“Net income approach supports the traditional theory of capital structure. This theory assumes that the cost of debt and cost of equity remain constant as change in the firm's capital structure. A change in the capital structure will lead to the corresponding changes in the overall cost of capital as well as total value of the firm. If the firm adds cheaper debt to its capital structure, its cost of capital declines because debt is less risky than equity. On the other hand, the overall value of the firm increases. Thus, if the firm increases its leverage by increasing debt in capital structure, the overall cost of capital will decline which ultimately increase the value of firm. The crucial assumptions of this approach are:” [Van Horne; 1980: 380]

The use of debt does not change the risk perception of investors; as a result the equity capitalization rate, K_e, and the debt capitalization rate, K_d, remain with changes in leverage.

- The debt capitalization rate, K_d, is less than equity capitalization rate, K_e.
- The corporate income taxes do not exist.

Under this approach “as a firm increase its leverage by increasing its level of debt relative to equity the overall cost of capital declines. The importance of this levered overall cost of capital is that it increases the value of the firm.” [Van Horne; 1999:380]

According to the first assumption, Ke and Kd are constant. Increased use of debt will result in the higher value of the firm via higher value of equity. Consequently, the overall cost of capital, Ko, will decrease. The overall cost of capital is measured by following formula:

$$\text{Overall cost of capital (Ko)} = \frac{\text{Net Operating Income}}{\text{Total Value of Firm}}$$

$$\text{Symbolically, Ko} = \frac{\text{EBIT}}{\text{V}}$$

The overall cost of capital can also be measured by using the following equation:

$$Ko = Ke - (Ke- Kd)\ D/V$$

As per assumptions of NI approach, Ke and Kd are constant and Kd is less than Ke. Therefore Ko will decrease as D/V increase. It also implies that the overall cost of capital, Ko, will be equal to Ke, if the firm does not employ any debt.

The effects of leverage on the cost of capital under NI approach can be shown by the following figure:

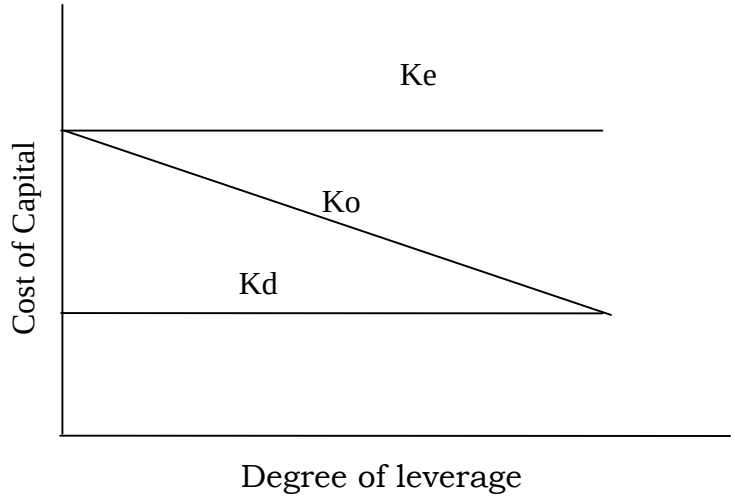


Figure No.2: The Effect of Leverage on Cost of Capital under NI Approach

In the above figure, the degree of financial leverage is shown in the horizontal axis and cost of capital (Ko, Ke, and Kd) in the vertical axis. Under NI approach Ke and Kd are assumed not to change with leverage. As the portion of debt is increased in the capitals structure, it causes weighted average cost of capital to decrease and approach to cost of debt. The optimal capital structure would occur at the point where the value of the firm is maximum and overall cost of capital is minimum. Under this approach, the firm will have a maximum value and lower cost of capital when it is almost debt financing.

2.2.1.2.2. Net Operating Income (NOI) Approach.

Under the net operating income approach, the cost of equity is assumed to increase linearly with leverage. As a result the weighted average cost of capital remains constant and the total value of the firm also remains constant as leverage is changed or according to the net operating income approach, the market value of firm is not affected by the capital structure changes.

The net operating income approach is dramatically opposite to the net income approach. The essence of this approach is that the leverage or capita structure decision of the firm is irrelevant. Any changes in the total value of the firm and market price of the share as the overall cost of capital are independent of the degree of leverage.

"The main assumption of his approach is that Ko is constant, regardless of the degree of leverage. The market capitalizes the value of the firm as a whole; as a result, the breakdown between debt and equity is unimportant. An increase in the use of supposedly cheaper debt fund is offset exactly by the increase in the required equity return, Ke. Thus the weighted average cost of capital remains unchanged for all degree of leverage." [Pandey; 1992:681]

The critical assumptions of NOI approach are: [Pradhan; 2004:480]

- The market capitalizes the value of the firm as a whole. Thus, the split between debt and equity is not important.
- The market uses an overall capitalization rate, Ko, to capitalize the net operating income. Ko depends upon the business risk. If the business risk is assumed to remain unchanged, Ko is constant.
- The use of less costly debt fund increases the risk of the shareholders. This causes the equity capitalization to increase. Thus the advantage of debt is offset exactly by the increase in the equity capitalization rate, Ke.
- The debt capitalization rate is a constant.
- The corporate income taxes do not exist.

Under net operating income (NOI) approach, the total value of the firm is found out by dividing the net operating by overall cost of capital, Ko. The market value of equity, S, can be determined by subtracting the value of the debt, D, from the total market value of firm, V (i.e. S= V-D). The cost of equity, Ke, will be measured as follows:

$$\text{Equity capitalization rate } (K_e) = \frac{\text{EBIT-INT}}{V-D}$$

$$= \frac{\text{EBT}}{S}$$

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

The effects of leverage on the cost of capital under NOI approach can be presented by the following figure:

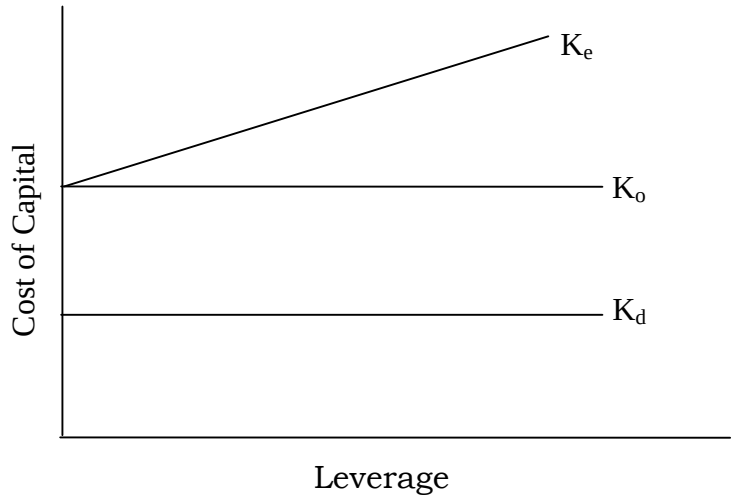


Fig. No.3: The Effect of Leverage on Cost of Capital under NOI Approach

From the above figure, we can found that the overall capitalization rate, K_o, and debt capitalization rate, K_d, is constant and the equity capitalization rate, K_e, increase with leverage continuously. As the cost of capital, K_o, is constant, this approach implies that there is not any unique optimal capital structure. In other words, as the cost of capital is the same at all level of leverage, so, every capital structure is optimum.

"Like NI approach, the NOI approach also assumes a constant rate of K_d, which means that the debt holders do not demand high rate of interest for high level of

leverage risk. But equity holders do react to higher leverage risk and demand higher rate of return for high debt equity ratio." [Van Horne; 1999: 254]

It is therefore reverse to NI approach. Any changes do not change the total value of the firm and overall capitalization rate as well as market price of share. The overall capitalization rate and debt capitalization rate remains constant but the equity capitalization rate increases linearly with leverage.

2.2.1.2.3. Traditional Theory.

Soloman Ezra has popularized the traditional theory of capital structure. This is also known as an intermediate approach, a compromise between net income approach and net operating income approach. "The traditional approach to valuation and leverage assumes that there is an optimal capital structure that the firm can increase the total value of the firm through the judicious use of leverage. The approach suggests that the firm initially can lower its cost of capital and raises its value through leverage." [Van Horne; 1999: 254]

According to this theory, the value of the firm can be increased or the judicious mix of debt and equity capital can reduce cost of capital. This theory implies that the cost of capital decreases within the reasonable limit of debt and then increases with leverage. Thus, an optimal capital structure exists, and it occurs when the cost of capital is minimum or the value of the firm is maximized. The cost of capital declines with leverage because debt capital is cheaper than equity capital within reasonable or acceptable limit of debt. "The statement that the debt funds are cheaper than the equity capital carries the clear implication that the cost of debt plus the increase cost of equity together on a weighted basis will be less than the cost of equity which existed on equity before debt financing."[Barger; 1963: 11]

So, traditional position implies that the cost of capital is not independent of the capital structure and that there is an optimal capital structure.

According to the traditional position, the manner in which the overall cost of capital reacts to changes in capital structure can be divided into three stages: [Soloman; 1969:94]

First Stage: Increasing Value:

In the first stage, the rate at which the shareholders capitalizes their net income, i.e. the cost of equity, K_e, remains constant or rise slightly with debt. But when it increases, it does not increase fast enough to offset the advantages low cost debt. During this stage, the cost of debt, K_d, remains constant or raises negligibly since the market views the use of debt as reasonable policy. As a result the value of firm increased or overall cost of capital falls with increasing leverage.

Second Stage: Optimal Value:

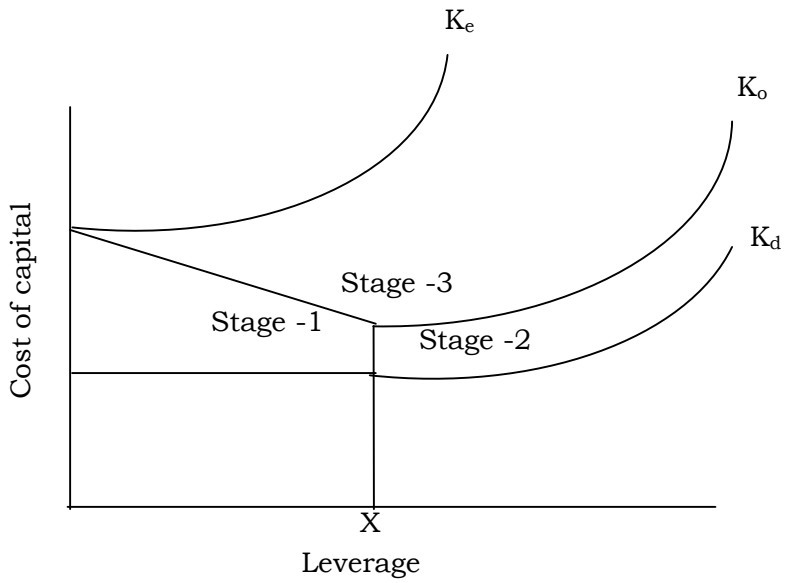
In this stage, once the firm has reached a certain degree of leverage, increases in leverage have a negligible effect on the value, or the cost of capital of the firm. This is so because this increase in the cost of equity due to added financial risk offsets the advantage of low cost debt. Within the range or at a specific point, the value of the firm will be maximized or cost of capital will be minimum.

Third Stage: Declining Value:

Beyond the accepted limit of leverage, the value of the firm decreases with leverage or cost of capital increases with leverage. This happens because investors perceive a high degree of financial risk and demand a high equity capitalization rate, which offsets the advantage of low cost debt.

In this stage, the cost of debt and equity will tends to rise as a result of increasing the degree of financial risk that will make to increase in the overall cost of capital.

The overall effect of these three stages is to suggest that the cost of capital is the function of leverage. It declines with leverage and after reaching a minimum point or range starts rising. The relationship between cost of capital and leverage can be graphically shown as under:



F*igure No –4 Effect of Leverage on Cost of Capital under Traditional Approach*

In the above figure, it is assumed that K_e rise at an increasing rate with leverage, whereas K_d assumed to rise only after significant leverage has occurred. At first, the weighted average cost of capital, K_o, declines with leverage because the rise in K_e does not entirely offset the use of cheaper debt funds. As a result, K_o declines with moderate use of leverage. After a point, however, the increase in K_e more than offset the use of cheaper debt funds in the capital structure, and K_o begins to rise. The rise in K_o is supported further once K_d 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 capital structure.

2.2.1.2.4. Modigliani and Miller (MM) Model.

"Until 1958, capital structure theory considered the loose assertions about investors rather than carefully constructed model, which could test by formal statistical analysis. In what has been called the most influential set off financial paper ever published, Franco Modigliani and Merton Miller (MM) addressed capital structure in a rigorous, scientific fashion, and they set off a chain of research that continuous to this day."[Brigham, Gapenski and Ehrhardth; 2001:622]

"Modigliani and Miller (MM) in their original position advocate the relationship between leverage and the cost of capital, which is explained by the net operating

approach. They make the formidable attack on the traditional position by offering behavioural justification for having the cost of capital, K_o, remain constant throughout all degree of leverage." [Van Horne; 1999:255]

"The Modigliani and Miller (MM) theory is identical with a net operating income approach. They argue that, in an absence of taxes, a firm's market value and cost of capital remain invariant to the capital structure changes. In their 1958 article, they provide analytically sound and logically consistent behavioural justification in favour of their hypothesis, and reject any other capital structure theory as incorrect." [Pandey; 1996:255]

Modigliani and miller explain their theory based on the following important assumptions: [Van Horne; 1983:255]

Capital market is perfect. Information is costless and readily available to all investors. There are no transaction costs and all securities are infinitely divisible. Investors are assumed to be rational and to behave accordingly.

- The average future operating earnings of firms are represented by subjective random variables. It is assumed that the expected value of probability distribution of all investors is same. The MM illustration implies that the expected value of the probability distribution of expected operating earnings for all future periods are same as present operating earnings.
- Firm can be categorized into "equivalent return" classes. All firms within a class have the same degree of business risk. As we shall see later, this assumption is not essential for their proof.
- The absence of corporate taxes is assumed. MM removes this assumption later.

The Modigliani and Miller position is based on the idea that no matter how we can divide the capital structure of a firm among debt, equity and other claims, there is a conservation of investment value. M-M in 1958 proposed that the theory without taxes and they relaxed the theory with tax consideration. So, we can study MM theory under two headings:

- M-M theory without taxes
- M-M theory with taxes.

M-M theory without taxes:

M-M first analyzed leverage under the assumption that there are no corporate or personal income taxes. On the basis of their assumptions, they explain and algebraically proved the following propositions.

Proposition –I

The proposition assumes that the market value of the firm is independent of its capital structure. The value of the firm is established by capitalizing its net operating income (EBIT) at the constant rate, which is based on the firm's risk class. In other words, M-M argue that for the firm in the same risk class, the total market value is independent of the debt – equity mix and is given by the rate appropriate to that risk class. This can be expressed as follows:

Value of the firm = Market value of debt + Market value of Equity

$$= \frac{\text{Expected net operating income}}{\text{Expected overall capitalization rate}}$$

$$= \frac{EBIT}{k_o}$$

For an unlevered firm,

$$V_u = \frac{EBIT}{K_e}$$

Where $K_o = K_e$ in case of unlevered firm.

Since, value of the firm is constant, under the M-M model, when there are no taxes; the value of firm is independent of its leverage. This also implies that: [Brigham, Gapenski and Ehrhardth; 2001:623]

- The weighted average cost of capital of the firm is completely independent of its capital structure.
- The weighted average cost of capital for the firm, regardless of the amount of debt used, is equal to the cost of equity it would have if it uses no debt.

According to this proposition, there is no relationship between value of firm and the way its capital structure is made up, nor there is any relationship between the overall cost of capital and capital structure.

Proposition –II

According to this proposition, the cost of equity, K_e, is a linear function of leverage, measured by the market value of debt to equity, D/S. Thus leverage will result not only in more earning per share to shareholders, but also increased cost of equity. The benefit of leverage is exactly taken off by the increased cost of equity, and constituently, the firm's market value will remain unaffected.

The cost of equity of a levered firm, $K_{eL,}$ is equal to the cost of equity of unlevered firm K_{eU}, in the same risk class plus risk premium where size depends on both differential between unlevered firm's cost of debt and equity and the amount of debt used.

$$K_{eL} = K_e u + \text{Risk premium}$$

$$= K_{eU} + (K_e u - K_d)\, D/S$$

Where,

K_{eU} = Cost of equity of unlevered firm.

K_{eL} = Cost of equity of levered firm.

K_d = Cost of debt

D = Market value of firm's debt

S = Market value of firm's stock.

According to the above equation, as the firm's use of debt increases, its cost of equity also rises. Thus proposition shows the impact of financial leverage on the cost of equity. Due to the increase in leverage, firm gets the benefit of cheaper debt, but the benefit is exactly offset by an increase in the cost of equity in the form of risk premium expected by the shareholders, against an increase in financial risk.

Taken together, the two M-M propositions imply that the inclusion of more debt in the capital structure will not increase the value of the firm. Because the benefit of cheaper debt will be exactly offset by an increase in the risk, hence in the cost of its equity.

Thus M-M argue that in the world without taxes, both the value of the firm and its weighted average cost of capital would be unaffected by its capital structure.

The Arbitrage Proof:

M-M used an arbitrage proof to support their proportions. They showed that, under their assumptions, if two companies differ only in the way they are financed and in their total market value, the investor would sell share of the higher valued firm, buy those of the lowered valued firm, and continue this process until the companies had exactly the same market value.

M- M assumed that all firms are in zero growth situations, i.e. EBIT is expected to remain constant and all earnings are paid out as dividends.

M-M argues that the total risk of the firm is not altered by changes in capital structure. The total value of the firm is same as levered or unlevered firm. This hypothesis is supported by arbitrage process. Arbitrage is the process simultaneously buying and selling the same or equivalent securities in different market.

Investors would inter into this arbitrage process, if they saw two identical firms selling at different prices because of difference in capital structure. The investor could increase return without increasing risk. But they argue that the value of these two firms have to be the same, otherwise investor can earn profit by selling the share of overvalued firm and buying the share of undervalued firm. This arbitrage process will continue until the value of levered firm and unlevered firm are identical.

On the basis of arbitrage process M-M conclude that the market value of a firm or its cost of capital is not affected by leverage. Thus the capital structure decision is irrelevant. It does not have any impact on the maximization of market price per share. This implies that one capital structure is as much desirable as the other. Each of the assumptions listed on the beginning of M-M theory is necessary for the arbitrage proof to work. For example, if the companies do not have identical business risk, or transaction costs are significant, then the arbitrage process cannot be involved.

M-M Theory with Taxes:

M-M's original work published in 1958, assumed zero taxes. In 1963 they published a second article, which incorporated corporate taxes. Under M-M theory without taxes, the value of the firm is independent of its capital structure. But in reality, the corporate income taxes exist and interest paid to the debt holders is treated as a deductible expenses. So, debt financing is advantageous. "In their 1963 article, M-M shows that the value of the firm will increase with debt due to the deductibility of the interest charges for tax computation, and the value of levered firm will be higher than of the unlevered firm"[Pandey;1992:694].

The M-M propositions when companies are subject to income taxes are as follows. [Brigham, Gapenski and Ehrhardth; 2001:626].

Proposition-I

The value of levered firm is equal to the value of unlevered firm in the same risk class plus the gain from leverage. The gain from leverage is the value of tax saving, found as the product of the corporate tax rate (T) times the amount of debt the firm uses (D).

Value of Levered firm = Value when unlevered + Tax shield

$$V_L = V_u + T.D$$

Here the important point is that when corporate tax introduced, the value of levered firm exceed that of the unlevered firm by the amount of tax shield. Since the gain from leverage as debt increases, in theory a firm's value is maximized at 100 percent debt financing. With zero debt, the value of firm is equal to the firm's value of equity. The value of unlevered firm can be found by using following equation.

$$V_u = S = \frac{EBIT\ (1-T)}{K_{eU}}$$

Where,

V_L = Value of Levered firm

Vu = Value of unlevered firm

T = Corporate tax rate

K_{eU} = Cost of equity of unlevered firm

Proposition –II

Under this proposition, the cost of equity of levered firm is equal to the cost of equity of an unlevered firm in the same risk class plus a risk premium whose size depends on the differential between the cost of equity and debt to an unlevered firm, the amount of financial leverage used, and the corporate tax rate.

$K_{eL} = K_{eU} + (keU - K_d)\ (1\text{-}T)\ (D/S)$

Where,

K_{eL} = cost of equity of levered firm

The M-M view under tax consideration suggests that because of tax deductibility of interest charges, a firm can increase its value or lower its cost of capital continuously with leverage. Thus the optimal capital structure is reached when the firms employ 100 percent debt in its capital structure. But the observed expenditure does not entirely support this view. In practice firm do not employ large amount of debt, nor are lenders ready to lend beyond certain limits. M-M suggests that firms would adopt a target debt ratio so as not to violate the limit of debt level imposed by lenders.

Why do companies not employ extreme level of debt in practice? There could be two possibilities. First we need to consider the impact of both corporate and personal tax for corporate borrowing. Personal tax may offset the advantage of the interest tax shield. Second borrowing may involves extra costs – cost of financial distress which may also offset the advantage of interest shield. [Pandey; 1992:697].

2.2.1.2.5. The Miller Model.

M-M introduced the theory first by assuming the absence of corporate and personal taxes in 1958. Later on 1963 they developed their theory by considering the corporate taxes. Although, MM introduced corporate taxes in the second revision of their approach, they did not extend the approach to include personal taxes. “However, in his presidential address to the American Finance Association, Merton Miller introduced an approach designed to show how leverage affects firms' value when both personal

and corporate taxes are taken into account."[Brigham, Gapenski and Ehrhardth; 2001:632]

Due to the Miller argument, changes in the capital structure have no effect on the firm total valuation. This position is the same as M-M's original proposition in the world of no taxes, but it contrasts sharply with their corporate adjustment article, in which they found that debt has substantial advantage.

"Miller model suggest that in market equilibrium personal and corporate tax effects cancel out. He assumes that the personal tax on stock income, $t_{ps,}$ is zero. Accordingly, his model implies that at the margin, the personal tax rate on debt income, t_{pd} must equal to the corporate tax rate t_c. When $t_{pd} = t_{c\ ,}$ changes in proportion of debt in the capital structure do not change in the total after tax income to investors. As a result, capital structure decisions by the corporation would be irrelevant." [Van Horne; 1999:264]

With personal taxes included, and under the same set of assumptions used in the M-M model, the value of an unlevered firm is found as follows:

$$Vu = \frac{EBIT\ (1-t_c\ )\ (1-t_{ps}\ )}{K_{eU}}$$

Where,

EBIT = earning before interest and taxes

tc = Corporate tax rate

tps = Personal tax rate on income from stock

K_eu = Equity capitalization rate of unlevered firm

The value of levered firm under Miler model can be found as follows:

V_L = Vu + Tax shield

Or, $V_L = Vu + D\ \ 1 - \frac{(1-t_c)\ \ (1-\ t_{ps}\ )}{(1-\ t_{pd})}$

Where, tpd = Personal tax rate on income from debt.

The Miller model has two important implications: [Pandey; 1992:702]

i. There is an optimal amount of debt in the economy, which is determined by the corporate and personal tax rates. In other words, there is an optimal debt equity ratio for all firms in the economy.
ii. There is no optimal debt –equity ratio for a singe firm. There are hundreds of firms, which have already included ' tax exempt' and 'low tax bracket' investors. Therefore a single firm cannot gain or loss by borrowing more or less.

So, Miller model corporate and personal income taxes assume that the advantages of corporate borrowing are reduced by the personal tax loss. Capital structure does not matter from the single firm's point of view. Miller's model is based on same controversial assumptions, and therefore, most people still believe that in balance, there is a tax advantage of corporate borrowing. James, C. Van Horne expressed the reaction of this model as: [Van Horne; 1983:266]

The personal tax effect does not entirely offset the corporate tax effect and that there is a tax advantage to borrow for the typical corporation. This particularly true for companies having only moderate amount of debt where tax shield uncertainty is not grate. Still, there would appear to be some lessening of the corporate tax effect wing to personal taxes.

2.2.2. Profitability.

A company should earn profit to survive and grow over a long period of time. Profits are essential but it would be wrong to assume that every action initiated by management of a company should be aimed at maximizing profits, irrespective of social consequences. It is unfortunate that the word 'profit' is looked upon as a term of abuse since some firms always act to maximize profit at the cost of employees, customers and society. Except such infrequent cases, it is a fact that sufficient profits must be earned to sustain the operations of the business to be able to obtain funds from investors for expansion and to contribute towards the social overheads for the welfare of the society. Profit is the difference between total revenue and total expenses

over a period of time. Profit is the ultimate of a company in terms of profits. The profitability ratios are calculated to measure two operating efficiency of the company, creditors and owners are also interested in the profitability of the firm. Creditors want to get interest regularly and return of principal at maturity. Owners want to get a reasonable return on their investment. This is possible only when the company earns enough profit. It is calculated to enlighten the end result of business activities, which is the major criterion efficiency of the company.

2.3 Review of Related studies

2.3.1 Review of Journals and Articles.

Under this heading, an effort has been made to examine and review of some related articles published in different economic journals, magazines, newspapers.

Paul Marsh (1982) in his article, *"The Choice between Equity and Debt."* Expressed the following issues;

- Whether companies are having the targeted debt ratio.
- Whether they have similar targets from the composition of their debt.
- Whether debt ratio or the choice of the finance instrument are influenced by other factors.
- How accurately can we predict whether the company will issue equity or debt?

Then he suggested that:

- While planning their issues, company should consider future as well as current debt ratio.
- If the companies are looking at book value debt ratio, there will be change during the interest-issuing period of retentions and bank loans.
- Any overall change in tax level could cause issuing companies to shift their performance towards either debt or equity.
- Small companies rely on bank loan rather than long term debt because of location, cost and problems of access to capital market.

- Equity issues seem to be favourable as it provides strong share price and overall market performance.[Marsh;1982:121-144]

Manahor Krishna Shrestha (1985) in his journal *"Analysis of Capital Structure in Selected PEs"*, has concluded that the selected PEs under study have very confusing capital structure. Since the corporation are not guided by objectives base financial plans and policies. He has suggested that the debt equity ratio should neither be highly leveraged to create too much financial obligation that lies beyond capacity to meet nor should it be much low leveraged to infuse operation lethargy to by pass responsibilities without performance.[shrestha;1985:15-16]

R.L. Shrestha (1990) in his article *"Capital Adequacy of Bank's; The Nepalese Context"* has thrown precaution over to the capital base that it should neither be to much leading to inefficient allocation of scare resources nor so weak so as to expose to extreme risk while dealing highly risky transactions to maintain strong capital base. He accepts the fact that the operations of banks and the degree of risk associated with them are subject to change country wise, bank wise and time period wise. Therefore the study entirely suggests to present standard capital adequacy ratio for each individual bank keeping in mind various relevant factors. [Shrestha; 1990: 24-27.]

Rima Devi Shrestha (1993) in her journal *"Focus on Capital Structure"* has conducted a study on selected 19 public companies covering 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 higher than equity capital. Consequently, most of them are operating at loss to the extent that payment of interest on loan has been serious issues. Most of the losses are after charging 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 using debt capital will maximize return. It should develop a suitable capital structure guideline to make public enterprises aware of its responsibility to pay the debt schedule. Government has to analyze cost and risk return trade off. Thus, capital structure needs to be made more

determinate 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;1993: 40]

Sudhir Poudyal (2002) in his article, *"Capital Structure: It's impact on Value of Firm"* concentrated his study to examine the interrelationship between the objective of achieving an optimal capital structure and to provide conceptual framework for the determination of the optimal capital structure.

For this a hypothetical firm is constructed and different assumptions are laid down to analyze the effect of capital structure. Various statistical and financial tools like Ratio Analysis are used to extract reasonable figure for the hypothetical firm. It is observed that the minimum weighted cost of capital, maximum value of the firm and price per share are attended at debt ratio of 30%.

Furthermore, if there is flexibility to select capital structure in any proportion, optimal capital structure range from 30% to 40%. An optimal capital structure would fulfil the interest of equity shareholders and financing requirement of a company as well as other concerned groups. [Poudyal; 2002:22]

2.3.2. Review of Thesis.

Kamal Bahadur Rajlawat (1999) in his Unpublished Masters Degree Thesis *"The Capital structure of Necon Air Limited"* has stated that the main objective of the study is to analyze and examine the capital structure of Necon Air Limited, examine the financial position, highlight their growth and policies and review various previous studies relating to the study.

The methodology used in the study includes financial tools such as Ratio Analysis and statistical tools such as Correlation Coefficient and Probable Error. The study used secondary data for the analysis.

The study has found that Necon Air Limited has debt equity ratio higher than required. The higher debt capital is a serious implication from the firm's point of view. In this condition, the capital will lead to inflexibility in the operation of the firm as creditors would exercise pressure and interfere with management. Necon Air has raised debt from different commercial banks and has to pay heavy portion of profit as interest. So, the payment of the interest will be hazardous when profit is declining. So, it is suggested that Necon Air should decrease its debt capital drastically as far as possible. It has added that the ratio of 2:1 is the best ratio for optimal capital structure. That is why the company should reduce its heavy burden of interest payment. [Rajlawat; 1999]

Shanti Raj Prashai (1999) in his Unpublished Masters Degree Thesis *"The capital structure of Nepal Bank Ltd."* has stated that the basic objective of the study made by Shanti Raj Prasai was to analyze the interrelationship and trends among some of the component parts of capital and assets structure and to provide suggestions for the development of an appropriate capital structure.

The study has used financial tools such as Ratio Analysis and Statistical tools such as Karl Pearson's Coefficient, Ratio Percentage, Index and Average to analyze the relation between various Variables.

From the study, it is known that the bank is the composition of loan and advances, cash investment and other assets. Between all these components, loan and advance are the major portions. During the study, total assets and capitals are in increasing trend. But increasing rate of components is different. So, the interrelationship of the component is fluctuating. The average growth rate of total deposits and other liabilities is higher than the average growth rate of net profit, and higher than the growth rate of total expenses. The total income and total expenses are not under control of the bank. And the net profit is only 40.64% of the total income. The study suggested that the bank must control total deposit and the bank must also control investment. The bank needs to reduce its expenses and control fluctuations in the earnings per share to improve its market price per share. [Prashai; 1999]

Anjana Shah (2004*)* in her Unpublished Masters Degree Thesis *"A study on the capital structure of selected Manufacturing Companies (Nepal Lever Ltd., Bottlers Nepal Ltd., Sriram Sugar Mills, Jyoti Spinning Mills, Arun Vanaspati Udhyog)"* has studied with a purpose to access the debt serving capacity of the mentioned manufacturing companies, examine the relation between Return on Equity and Total Debt, Return on Equity and Debt Ratio, Earning After Tax and Total Debt and Interest and Earning Before Interest and Tax.

The methodology used in the study included both financial as well as statistical tools. The financial tools used were ratio analysis and statistical tools used were correlation coefficient and regression analysis.

The study revealed that Nepal Lever Ltd., has not been using Long Term Debt and it was fully equity based. The Bottlers Nepal Ltd. is free of Long- term debt because of improved cash flows and effective management. The Sriram Spinning Mills has 66.33 % of assets financed with debt and hence there is less flexibility to the owners. The degree of financial leverage analysis of Jyoti Spinning Mills shows the failure of the company to gain expected profits. And the Arun Vanaspati Udhyog has a fluctuating Debt Equity Ratio. Its long term debt is decreasing and only creditors make a small share of finance. [Shah; 2004].

Priya Bajracharya (2006) in her Unpublished Masters Degree Thesis *"A Study on the Capital Structure of Commercial Banks"* has stated the main objective of the study is to evaluate and analyze capital structure ratios of the commercial bank under study, analyze the relationship of capital structure with variables such as earning per share, dividend per share and net worth and also to analyze the effect of capital structure on the value of the companies.

The methodology used in the study includes both financial as well as statistical tools. The financial tools used were Ratio Analysis and statistical tools used were Mean, Standard Deviation, Correlation Coefficient and Probable Error.

The study has found that the average debt equity ratio of Bank of Kathmandu shows that claim of owners is higher that the creditors where as Himalayan Bank Limited has lower claims. Similarly, Nepal Investment Bank has a fluctuating trend. All the sample banks have negligible long term debt in comparison to their assets. All the sample banks have

fluctuating trend of long term debt to total debt ratio. Bank of Kathmandu is able to pay interest amount with interest coverage ratio of 1.38 where as Himalayan Bank has increasing trend. Similarly, Nepal Investment Bank too has fluctuating trend of interest coverage ratio with the highest interest coverage ratio among the three sample banks. The return earned by the shareholder's equity of Nepal Investment Bank is least and the return of Himalayan Bank Limited is highest among three sample banks. Nepal Investment Bank seems to have the highest return of 1.32 as compared to 1.02 of Bank of Kathmandu and 1.16 of Himalayan Bank Limited. Correlation Coefficient and Probable Error ratio between long term debt and Earning per share of all entire sample banks' are negative. Similarly, all the sample banks Probable Error relationship between Long Term Debt and Earning per Share is not significant.

Madhav Prasad Gautam (2006) in his Unpublished Masters Degree Thesis *"A Study on Capital Structure Management of Joint Venture Commercial Bank"* has studied with a purpose to analyze the impact of the capital structure on the profitability, to access the debt serving capacity of the JVB's, to examine the correlation and the significance of their relationship between different ratio related to capital structure and to provide suggestions and recommendations for the optimal capital structure of the JVB's.

The study has used both the financial tools and statistical tools. The financial tools used were Ratio Analysis and Correlation Coefficient and Probable Error were used under statistical tools.

The study has found that JVB's have lack of theoretical and practical knowledge with regard to capital structure theories. Nepalese investors are not attracted by the theories. JVB's in Nepal have concentrated their business with business and industrialist. Their client are mostly big manufacturer of carpet and garment export, multinational companies, large scale industries, NGO's as well as INGO's, travel agencies, cargo agencies etc. The saving from rural communities is neglected by JVB's. JVB's are granting significant role in the modern banking system. JVB's are basically not concentrated to mobilize their deposit funds in productive sectors. Nepalese shareholders

are very much concerned about the payment of cash dividend by JVB's rather than their financial statement.

Kiran Adhikari (2006) in his Unpublished Masters Degree Thesis *"Capital Structure & Value of Listed Manufacturing Companies in Nepal"* has stated the main objectives of this study are to examine the existing capital structure position of listed manufacturing companies in Nepal & to analyze the effect of capital structure on their value. The specific objectives is to examine the relationship between the capital structure and value of selected manufacturing companies in Nepal, to examine whether or not the value of company increases by the use of debt in its capital structure, and to examine the relationship among the capital structure variables with each other and to the overall value of manufacturing companies.

The study has used financial tools such as Ratio Analysis and statistical tools such as Simple and Multiple Regression model and Earning Valuation Model.
The study has found that the manufacturing companies which have higher leverage are enjoying the lowest overall cost of capital. The value of Nepalese
manufacturing companies decrease with the use of debt in the capital structure of company. Since, the beta coefficient of leverage, earning variability and liquidity ratio are negative while beta coefficient of size, growth and dividend payout ratio are positive and all are significant except for growth at 5% level of significance. The multiple regression results show that value of company increases with the increase in the size of the capital employed in the company and dividend payout ratio.

2.4. Research Gap.

The present thesis work reflects the following research gap.

1. This thesis work has covered the period of study till 2008/09 A.D., whereas the previous thesis work covered only up to 2004/05 A.D.
2. This thesis work uses primary and secondary data for analysis but the previous thesis works reviewed only secondary data for analysis.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction.

A brief introduction of this study has been already presented in the first chapter. Besides, the review of ideas, theories and research finding has also been presented in the second chapter. Now, it is important to have choice of research methodology that helps to make this analysis meaningful.

This chapter highlights the method of research adopted by this study. Research design, nature and sources of data, population and sample, data collection procedure and tools used for analysis are included in this chapter. The analytical as well as descriptive research designs have been included in the present study. In this study, research methodology has been paid due attention to achieve the objectives of the study.

3.2 Research Design

The main objective of research work is to do the comparative study of capital structure and profitability of NBBL and HBL. To complete this study, following design and format has been adopted.

First of all, information and data are collected. The important information and data are selected. Then data are arranged in useful manner. After that, data are analyzed by using appropriate financial and statistical tools. In analysis part, interpretation and comments are made wherever necessary.

To achieve the objective of this study, descriptive and analytical research design has been used. This study is the comparative study of leading commercial banks of Nepal: Nepal Bangladesh Bank and Himalayan Bank Ltd.

Result and conclusions are given after analysis of data; recommendation and suggestion are also given. The thesis has been adopted from previous research works. Previous thesis styles and formats have been followed.

3.3 Nature and Sources of Data.

The study, however, is based on primary as well as secondary data. For the characteristic study, annual report of the concerned banks, supporting data and information are obtained from the office of the concerned banks and other institutions. Booklets, documents, other published and unpublished materials, thesis, newspapers are the important sources of data. Primary data are also used to get to the bottom of the subject matter. Few questionnaires to bankers as well as customers, personal interviews and observation etc. are applied to clarify the materials.

3.4 Population and Sample.

There are seventeen commercial banks altogether operating in Nepal. To attain the objective, NBBL and HBL are selected to be comparatively analyzed as sample units among the commercial banks.

3.5 Data collection Procedure.

As the study is based on the secondary as well as primary data, the secondary data needed are collected from the balance sheet, P&L account of concerned banks, stock exchange board, and Nepal Rastra Bank. Thereafter, necessary clarifications are also made through officials of the banks. Questionnaires prepared for the purpose are distributed to selected managerial manpower of the banks, and they are collected and taken for the observation and analysis.

3.6 Tools and Techniques Used for Analysis.

As mentioned earlier, this study is confined to the comparative analysis of capital structure and profitability of the two joint venture banks. To reach the objectives, the collected data are computed and analyzed using financial and statistical tools.

3.6.1 Financial Tool (Ratios).

Under financial tool Capital structure Analysis and Profitability Analysis are used.

3.6.1.1 Capital Structure Analysis.

The analysis of capital structure is performed by using capital structure ratios. The ratio indicates the proportion of debt and equity in financing the firm's asset. It is concerned with the long-term solvency of the firm. Capital structure ratios are calculated to measure the financial risk and firm's ability of using the debt for the benefit of shareholders. The capital structure of NBBL and HBL is evaluated through the following different ratios.

1. Fixed Deposit to Net Worth.
2. Fixed Deposit to Capital Employed.
3. Fixed Deposit to Total Assets.
4. Fixed Deposit to Total Debt.
5. Total Debt to Net Worth.
6. Total Debt to Total Assets.
7. Capital Adequacy Ratio.
8. Debt Capacity Ratio. (Interest Coverage Ratio).
9. Capital Structure and Capitalization Rate.

3.6.1.2Profitability Analysis

This is performed by analyzing operating income, operating expenses, return ratios and market related profitability ratios to arrive at conclusion. Profitability analysis would be incomplete if these above aspect are not taken into consideration. Profitability ratios are used to measure the efficiency of operation of firm in terms of profit. The profitability of NBBL and HBL is evaluated through different ratios.

1. Interest Margin.
2. Return on Total Assets.
3. Return on Shareholder's equity.
4. Return on total deposits.
5. Return on Capital employed.
6. Earning per share.
7. Dividend per share.
8. Dividend payout ratio.

9. Price earning ratio
10. Operating income analysis.
11. Operating expense analysis.

3.6.2 Statistical Tools.

Besides financial tools, statistical tools are used to verify the relationships between the variables and also to identify the difference between the variables of one bank to other. Statistical tools i.e. percentage, mean, standard deviation, coefficient of variation; simple correlation coefficient and test of hypothesis are used in this study.

1. Coefficient of Variation. (C.V.)

"The coefficient of variation is the measure of dispersion, comparable across distribution which is defined as the rate of the standard deviation to the mean expressed in percent". [Levin and Rubin; 1989:210]. In this study, C.V. is calculated in order to know and compare the variability of observed data between the banks i.e. NBBL and HBL.

$$C.V = \frac{\pm}{\bar{X}} \mid 100$$

2. Correlation Analysis.

The correlation analysis refers to the techniques used in measuring the closeness of the relationship between the variables. This attempts to determine the degree of relationship between variables. Among the various methods, Karl Pearson's method is applied in the study. The result of correlation coefficient lies between +1 and -1 i.e., correlation can either be positive or negative. If correlation between the variables is positive, this depicts that both the variables are moving in the opposite direction. Correlation coefficient 'r' is calculated as below:

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

It is used to determine whether or not the relationship exists, whether it is significant and finally helps to show cause and effect of the variables.

3. Coefficient of Determination. (r^2)

The coefficient of determination is a measure of the degree of linear association or correlation between two variables. It helps to indicate the percentage variations in independent variable due to the variations in dependent variable.

4. Probable Error. (P.E.)

The probable error of the coefficient of correlation helps to interpret its value with the help of probable error. It is possible to determine the accuracy of 'r' value to same extent i.e., whether 'r' is significant. The probable error of the correlation coefficient is obtained as follows:

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

Where, n=Number of observation.

If the value of 'r' is less than the probable error, there is no evidence of correlation and if the value of 'r' is more than six times the probable error, the coefficient of correlation is practically certain or the name of 'r' is significant.

5. Test of Hypothesis.

Test of hypothesis is performed to test the validity of our assumption of this study about the difference between the variables of one bank to another. In this context, this researcher applies student t-test because the sample size of study is less than 30. It is used to test the significance of difference with respect to capital structure and profitability of the banks. Formula for student t-test is as follows.

$$t = \frac{\overline{X}_1 Z \overline{X}_2}{\sqrt{S^2 \frac{1}{n_1} \Gamma \frac{1}{n_2}}}$$

Some null hypothesis is set for the purpose of the study and verification. They are as below,

6. Null Hypothesis. (H_0)

Two commercial bank (NBBL and HBL), operating under the same environment, are of significant difference as regard:

a) Capital Structure Ratios: DER in terms of total debt to net worth, DER in terms of total debt to net worth, Fixed deposits to capital employed, Total debt to total assets, Capital adequacy ratio and Interest coverage ratio.

b) Profitability Ratios: Interest margin, Return on total deposits, Return on total assets, Return on Capital employed, Return on shareholder's equity and Earning per share.

1 There is no significant relationship between EBIT and interest payment.

2 There is no significant relationship between return and total debt capital.

3 There is no significant relationship between DER and ROSE.

4 There is no significant relationship between DER and overall capitalization rate.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1. Introduction.

The basic objectives of this study have been already highlighted in the first chapter. In order to accomplish the stated objective, analytical and explorative research methodology has been followed. In this chapter, the effort has been made to analyze the capital structure and profitability of both the banks i.e. NBBL and HBL.

4.2 Presentation and Analysis of Primary Data.

Primary data have been used to reach greater depth of capital structure and profitability. Although secondary data have provided a result in this section the opinions of various types of respondents are collected in this report. This investigation deals with the study of the opinions of respondents with respect to the major aspects of capital structure (debt ratio) and profitability of the sample banks.

The study is based on the opinions of ten respondents from each sample bank. The Performa of the questions asked and details of response are given in Appendix A (I).

Q.1. This question was put forward to know the model of capital structure that the commercial bank should follow.

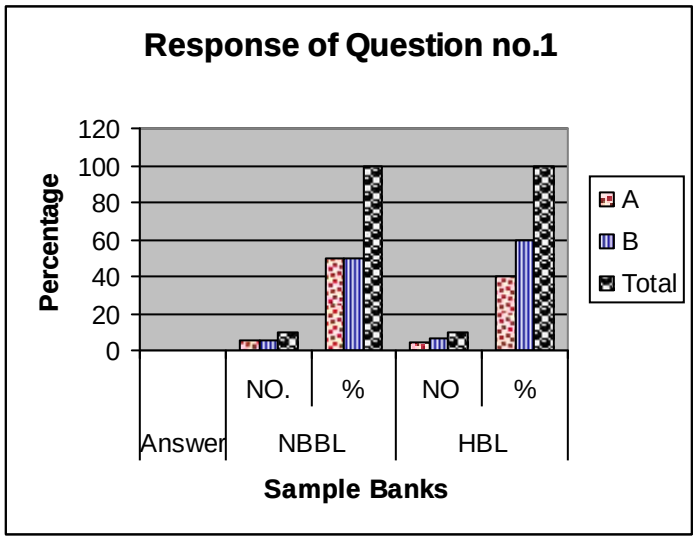
Table no.1

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	High geared capital structure.	5	50	4	40
B	Low geared capital structure.	5	50	6	60
Total		10	100	10	100

[source: Appendix A(I)]

The above table reflects that 50 percent respondents of NBBL and 40 percent respondents of HBL preferred high geared capital structure whereas, 50 percent respondents of NBBL and 60 percent respondents of HBL preferred low geared capital structure .

The percentage of respondents shown in Table-1 is depicted by bar diagram below.



2A.This question was put forward to know the reason behind preferring high geared capital structure by the respondents.

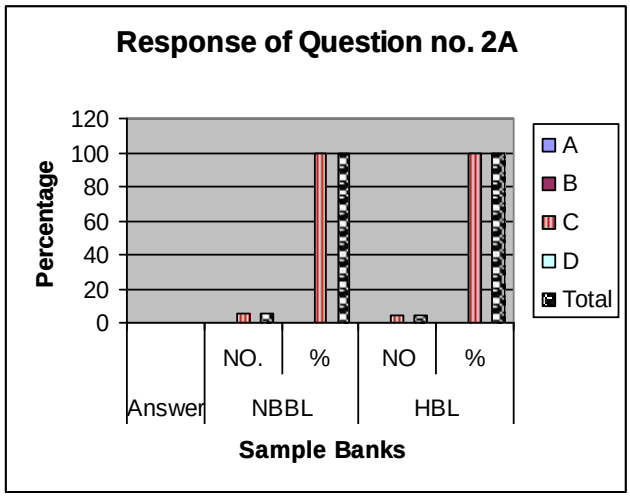
Table no.2A

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	Commercial banks have regular and sufficient fixed income to pay its fixed charges (interest on debt capital and dividend on preference share capital).	0	0	0	0
B	Shareholders can enjoy high EPS incase of high profit.	0	0	0	0
C	Above all.	5	100	4	100
D	If any other reason, please specify	0	0	0	0
Total		5	100	4	100

[source: Appendix A(I)]

T respondents of both the banks (5 respondents o preferred high geared capital structure due to the regular fixed income of commercial banks to meet its fixed charges (interest on debt capital and dividend on preference share capital.) and high EPS incase of profit earned. None of the respondents from both the sample banks did reply to option A, B and they also did not give their specific answer.

The percentage of respondents shown in Table-2A is depicted by bar diagram below.



2. B. This question was put forward to know the reason behind preferring low geared capital structure by the respondents.

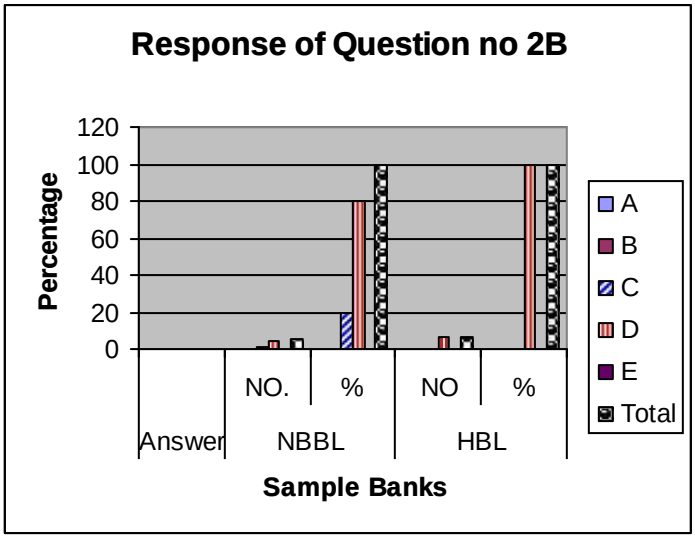
Table no.2B

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	It has less liability to pay fixed charges(i.e. interest on debt capital and dividend on preference share)	0	0	0	0
B	Ordinary shareholders can enjoy more earned profit.	0	0	0	0
C	Commercial bank does not have much regular fixed income	1	20	0	0
D	Above all	4	80	6	100
E	If any reason, please specify	0	0	0	0
Total		5	100	6	100

[source: Appendix A(I)]

The above table reflects 20 percent respondents (out of 5) and none from HBL pr re due to lack of regular income to commercial banks. Likewise, 80 percent respondents(out of 5) of NBBL and 100 percent respondents(out of 6) of HBL preferred low geared capital structure due to lack of regular fixed income to pay even low fixed liability i.e. interest on debt capital and dividend on preference share and claim the most of the profit by the shareholders. None of the respondents from both the sample banks did reply to option A, B and they also did not give any other specific reason.

The percentage of respondents shown in Table -2B is depicted by bar diagram below



Q.3. This question was put forward in order to know whether there is any need of change in the present capital structure composition in their respective banks.

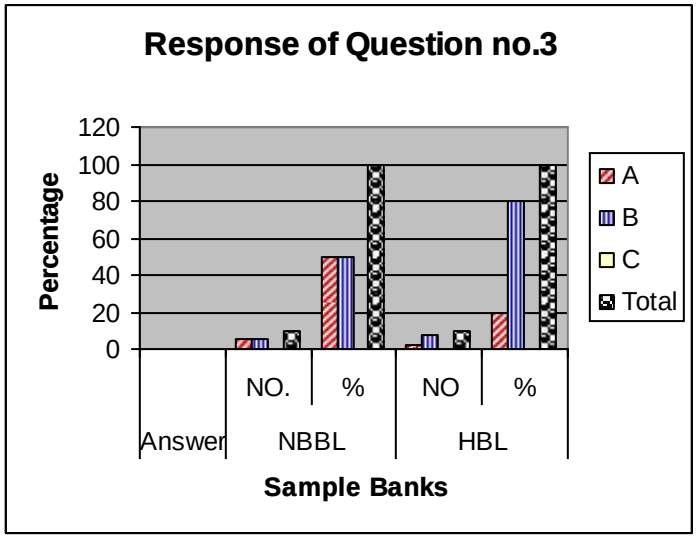
Table no.3

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	Yes	5	50	2	20
B	No	5	50	8	80
C	No idea	0	0	0	0
Total		10	100	10	100

[source: Appendix A(I)]

rcent of NBBL &20 percent of HBL respondents replied as there is necessity to change present capital structure composition where as 50 percent of NBBL & 80percent of HBL replied as there is not any necessity to change the present capital structure composition. Likewise, none of the respondents replied as they do not have any idea regarding the change in present capital structure composition.

The percentage of respondents shown in Table- 3 is depicted by bar diagram below.



Q.4. This question was put forward to know the reason behind changing the present capital structure.

Table no.4

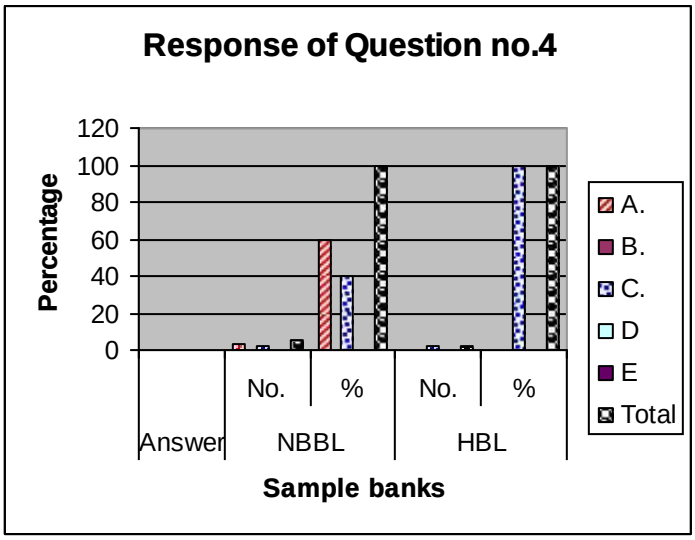
Respondents					
No.	Answer	NBBL		HBL	
		No.	%	No.	%
A.	At present capital structure, bank is obliged to pay large amount of interest.	3	60	0	0
B.	At present capital structure, bank is not using sufficient outsider's fund.	0	0	0	0
C.	Bank is making large amount of profit so it is profitable to repay its debt capital and to use its shareholders fund to invest in profitable sectors instead of retaining it.	2	40	2	100
D	At present capital structure, bank is suffering from loss.	0	0	0	0
E	If any other reason, please specify.	0	0	0	0
Total		5	100	2	100

[source: Appendix A(I)]

nt respondents of NBBL and none from HBL replied the reason behind changing the present capital structure is due to the bank being obliged to pay large amount of interest. Likewise, 40 percent respondents of NBBL and 100 percent respondents of HBL replied the opportunity of investing the retained amount(shareholders' fund) in profitable sector instead of investing through outsider's fund since the banks are making sufficient profit, is the reason behind changing the present capital structure. None of the respondents from both the sample banks did reply to option B and D and they also did not give any other specific reason.

[NOTE: This question was answered by only those respondents who suggested changing the present capital structure i.e. selected option "A" in the above question no. 3

The percentage of respondents shown in Table-4 is depicted by bar diagram below.



Q.5.This question was put forward to know the proportion of debt heading in the respective sample banks.

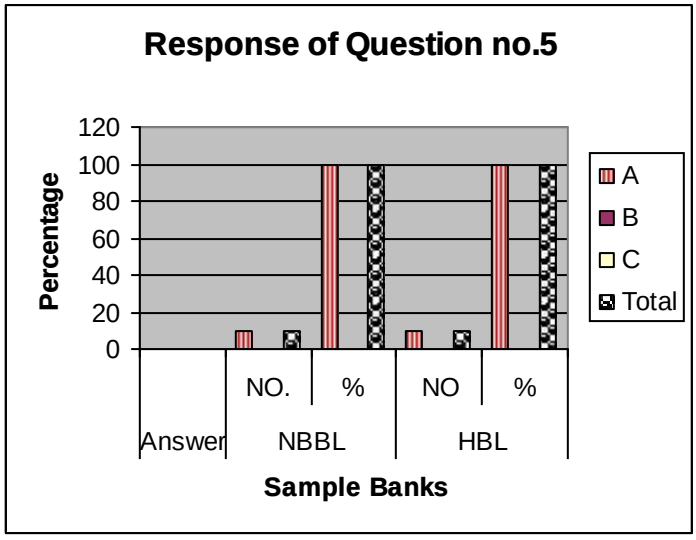
Table no. 5.

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	Only fixed deposit	10	100	10	100
B	Only debenture	0	0	0	0
C	Both	0	0	0	0
Total		10	100	10	100

[source: Appendix A(I)]

The above table reflects that the proportion of debt heading in the respective sample banks includes only fixed deposit i.e. 100 percent of respondents of both the sample banks considered only fixed deposit under debt heading.

The percentage of respondents shown in Table-5 is depicted by bar diagram below.



Q.6. This question was asked to know about the main profit generating source of the respective sample banks.

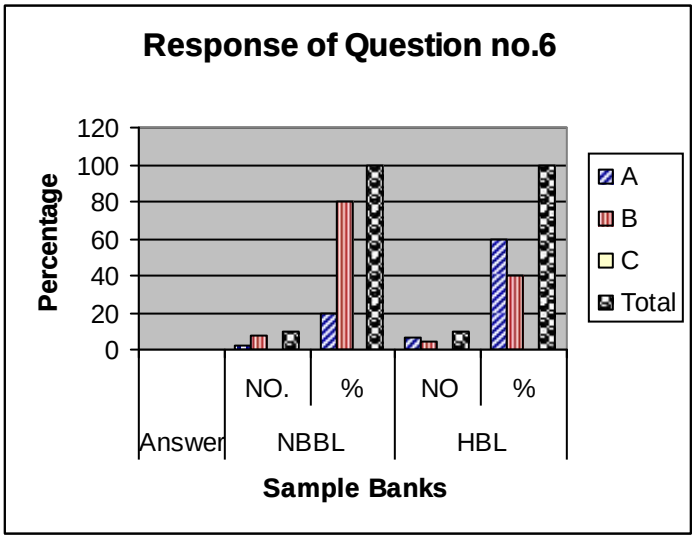
Table no.6.

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	Return on investment in different sectors.	2	20	6	60
B	Interest earned from loan and advance made to customers.	8	80	4	40
C	Other miscellaneous fees and commissions of bank.	0	0	0	0
Total		10	100	10	100

[source: Appendix A(I)]

The above table reflects that 20 percent of NBBL & 60percent of HBL respondents considered that return on investment form different sectors is the main profit generating source. On the other hand, 80 percent of NBBL & 40 percent of HBL respondents regarded that the interest earned from loan and advances made to customers as the main profit generating source of the bank, whereas, none of the respondents form both the sample banks considered other miscellaneous fees and commissions of bank as the main profit generating source.

The percentage of respondents shown in Table-6 is depicted by bar diagram below.



Q.7.This question was put forward in order to know the factor that determines debt serving capacity of the bank.

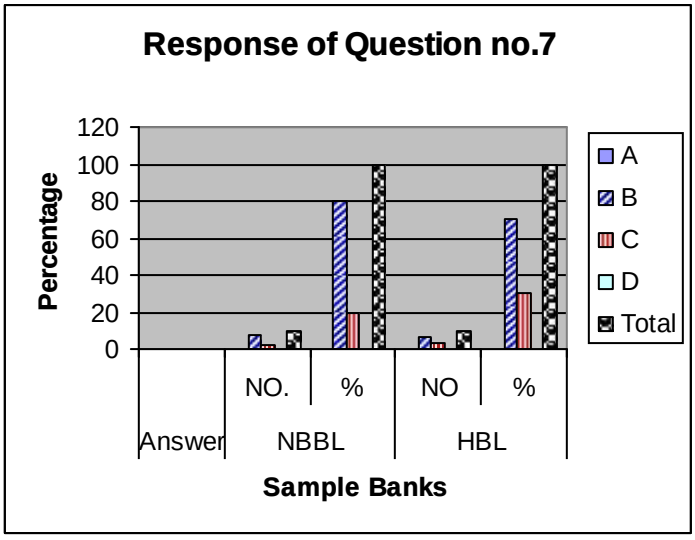
Table no.7.

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	The amount of current assets it holds.	0	0	0	0
B	EBIT and sound loan policy.	8	80	7	70
C	Net income.	2	20	3	30
D	EBT.	0	0	0	0
Total		10	100	10	100

[source: Appendix A(I)]

The above table shows that none of the respondents of both the sample banks consider either the amount of current assets or earning before tax as debt serving factors. On the other hand 80 percent of NBBL& 70 percent of HBL respondents replied to EBIT & sound debt policy as debt serving factors. Whereas 20 percent of NBBL & 30 percent of HBL consider as EBT for the above stated factors.

The percentage of respondents shown in Table-7 is depicted by bar diagram below.



Q.8. This question was put forward to know the reason behind the claim for their sound debt serving capacity.

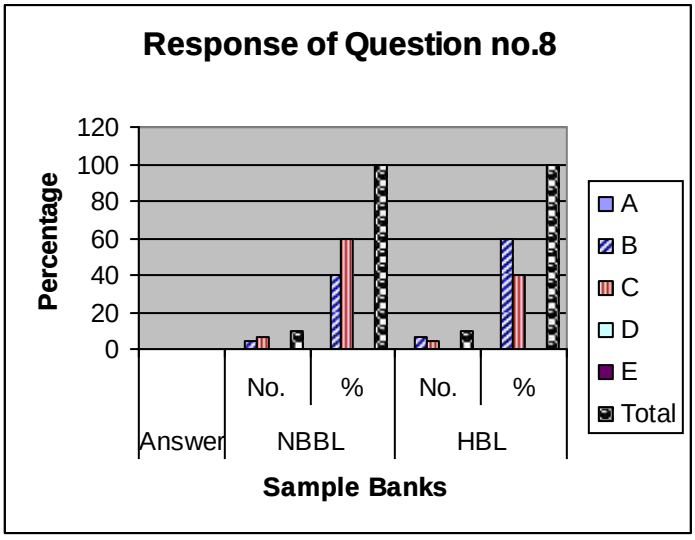
Table no.8.

Respondents					
No	Answer	NBBL		HBL	
		No.	%	No.	%
A	Because our banks holds a large amount of current assets	0	0	0	0
B	Because we pay all debt in time	4	40	6	60
C	Because we have sufficient EBIT	6	60	4	40
D	Because of sound net income	0	0	0	0
E	Because we pay all debt in time	0	0	0	0
Total		10	100	10	100

[source: Appendix A(I)]

The above table shows that none of the respondents of both the sample banks considered the large amount of current asset, sound net income & the amount of dividend they pay, for their sound debt serving capacity. However 60 percent of NBBL & 40 percent of HBL considered sufficient EBIT they possess for the above stated claim. Likewise, 40 percent of NBBL &60 percent of HBL considered paying all debt in time for their sound debt serving capacity.

The percentage of respondents shown in Table- 8 is depicted by bar diagram below.



Q.9. This question was put forward to know the reason behind investing in share capital.

Table no.9.

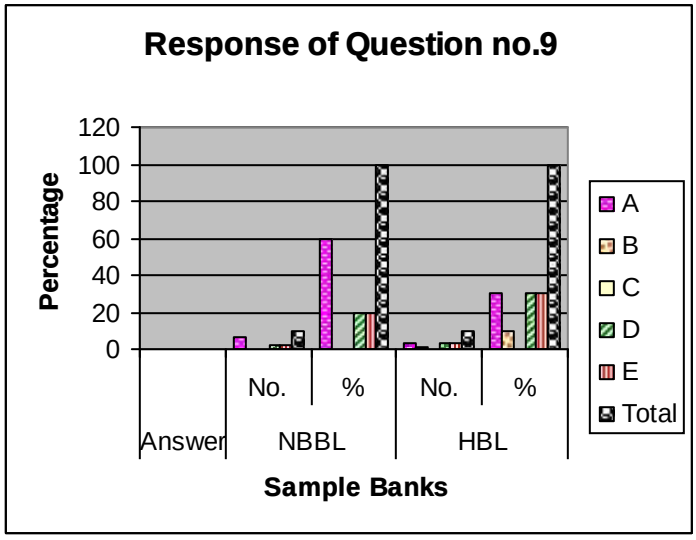
Respondents					
No	Answer	NBBL		HBL	
		No.	%	No.	%
A	To receive dividend.	6	60	3	30
B	To take part in management.	0	0	1	10
C	To get voting right.	0	0	0	0
D	To utilize surplus money.	2	20	3	30
E	This is the best method of investment.	2	20	3	30
Total		10	100	10	100

[source: Appendix A(I)]

The above table shows that 60 percent of NBBL &30 percent of HBL respondents answered that people invest in share capital to receive dividend. On the other hand, none of the respondents of NBBL replied that the reason behind investing in share capital is to take part in management, whereas 10 percent of HBL respondents considered that the reason behind investing in share capital is to take part in management. None of the respondents of both the sample bank considered that the idea behind investing in share capital is to get voting right. On the other hand, 20 percent of NBBL and 30 percent of HBL respondents replied that people invest in

share capital in order to utilize surplus money. Likewise, 30percent of both the sample banks respondents have answered that this is the best method of investment.

The percentage of respondents shown in Table-9 is depicted by bar diagram below.



Q.10.This question was asked in order to know the factors that should be considered while choosing an appropriate capital structure.

Table no.10.

Respondents					
No	Answer	NBBL		HBL	
		No.	%	No.	%
A	Cost of capital	2	20	10	100
B	Return on capital employed	2	20	0	0
C	Net Income	0	0	0	0
D	Earning before interest and Tax	2	20	0	0
E	Investment opportunities.	4	40	0	0
Total		10	100	10	100

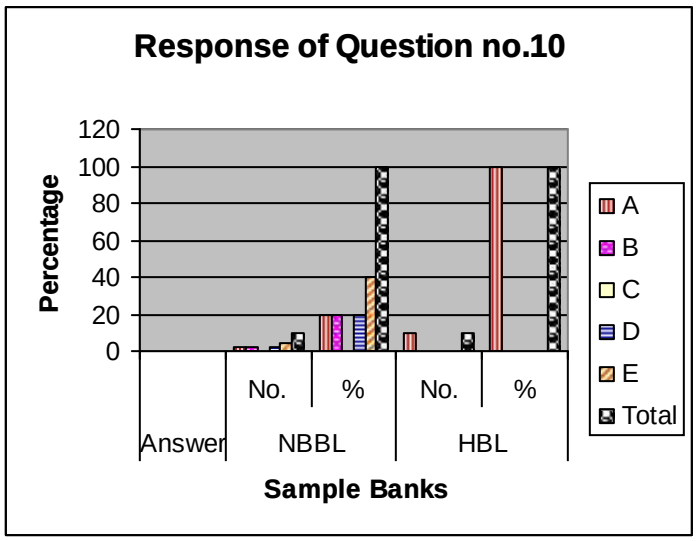
[source: Appendix A(I)]

The above table shows that 20 percent of respondents of NBBL respondents replied that cost of capital should be considered while choosing appropriate capital structure. The next 20 percent of the respondents of NBBL regarded that return on capital employed should be considered while choosing an appropriate capital structure. None of the respondents of NBBL regarded Net income to be considered while choosing an appropriate capital structure. 20percent of respondents of NBBL regarded that Earning

before interest and tax should be considered while choosing an appropriate capital structure, and 40 percent of NBBL respondents regarded Investment opportunities to be considered while choosing an appropriate capital structure.

All the respondents of HBL answered that cost of capital should be considered while choosing an appropriate capital structure. They did not agree with the second, third, fourth and fifth option.

The percentage of respondents shown in Table -10. is depicted by bar diagram below.



Q.11. This question was put forward to know the most important decision of the bank.

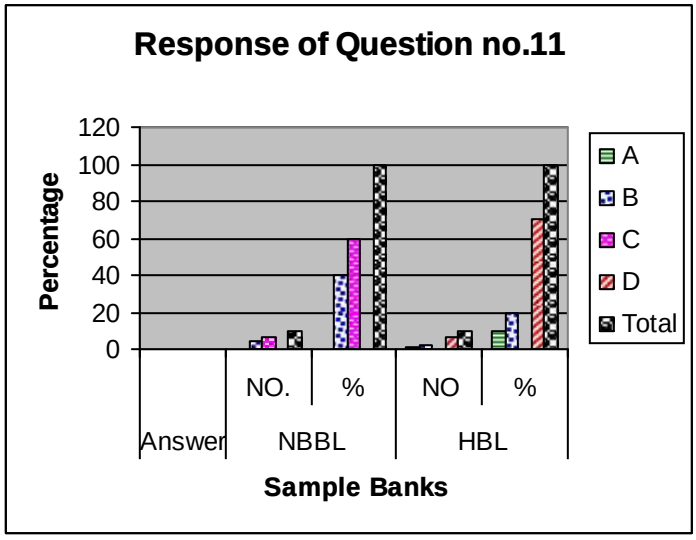
Table no.11.

Respondents					
No	Answer	NBBL		HBL	
		NO.	%	NO	%
A	Capital structure decision.	0	0	1	10
B	Investment decision	4	40	2	20
C	Dividend decision	6	60	0	0
D	Above all	0	0	7	70
Total		10	100	10	100

The above table reflects that none of the respondents from NBBL & 10 percent of respondents from HBL considered capital structure as the major banking decision. Likewise, 40 percent of NBBL&20 percent HBL considered investment decision as the most important banking decision, but none from both the sample banks considered the dividend decision as vital banking decision. Similarly, the major portion i.e. 60

percent of NBBL & 70 percent of HBL respondents considered as all the stated decision as the most important banking decision.

The percentage of respondents shown in Table-11 is depicted by bar diagram below.



4.3. Secondary Data Analysis.

Under secondary data analysis capital structure analysis and profitability analysis are done with the tools stated in chapter three.

4.3.1 Capital Structure Analysis.

Capital structure of the bank is analyzed incorporating the position of Fixed Deposits and Shareholders' Equity, Financial mix ratios analysis and capitalization rate analysis.

4.3.1.1. Position of Fixed Deposits and Shareholders' Equity.

Fixed deposit of bank is considered as long- term debt collected from the customers, which a bank generally accepts for maximum period of two years. Fixed deposit is only the long – term source of debt capital for these two banks i.e. NBBL and HBL. The following table shows the position of fixed deposits of the banks over the past six year. (2003/04-2008/09)

Table no. 12
Fixed Deposit Position of NBBL & HBL

(Rs. in million)

F.Y.	NBBL			HBL		
	Fixed Deposits	Index	Annual rate of % change	Fixed Deposits	Index	Annual rate of % change.
2003/04	4356.58	100	-	3917.14	100	-
2004/05	5236.79	120.20	20.2	4927.37	125.78	25.78
2005/06	5453.63	125.18	4.98	5480.84	139.91	14.13
2006/07	5031.58	115.49	-9.69	3205.37	81.82	-58.09
2007/08	4875.73	111.91	-3.58	4710.18	120.24	38.42
2008/09	3536.63	81.17	-30.74	6107.43	155.91	35.67
Average S.D. C.V. Annual growth rate	4748.49 639.56 13.47		 (3.76)	4724.72 967.15 20.47		 11.18

Source: Financial report of Banks.

Table no.12. Presents the fixed deposit position of NBBL &HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the fixed deposit if NBBL has fluctuating trend. The amount of fixed deposit decreased to 81.17 percent in 2008/09 as compared to that of 2003/04 i.e. base year. With regard to annual rate of percentage change (ARPC), the changes have been found positive in year 2004/05 & 2005/06, the highest among which has been found in the year 2004/05 i.e. 20.2 percent. However, a negative change has also been found in the year 2006/07, 2007/08 & 2008/09. The fixed deposit has been found to decrease at the rate of 3.76 percent annually. This shows that the bank has decreased fixed deposits in its capital structure or financial mix.

Similarly, fixed deposit of HBL has fluctuating trend. The amount of fixed deposit in HBL increased to 155.1 percent in 2008/09 as compared to that of 2003/04, i.e. base year. With regard to annual rate of percentage change (ARPC), the changes have been found both positive and negative; the highest positive change found is 38.42 percent in year 2007/08. The negative change has also been found in the year 2006/07 i.e. -58.09

percent. The fixed deposit of HBL has been found to grow at the rate of 11.18 percent annually. This shows that the bank has increased fixed deposits in its capital structure as financial mix.

On an average, NBBL has collected funds in the form of fixed deposits more than by HBL since 2003/04. Annual growth rate of fixed deposit in HBL has been found more than that in NBBL i.e. 11.18> (3.76) .The variability of deposit has been found more in HBL than in NBBL since HBL has higher C.V. of 20.47 % as compared to NBBL 13.47 %.The following diagram shows the comparative fixed deposits of NBBL &HBL in different study period.

The shareholders equity of the banks includes paid up capital, reserve funds & undistributed profits. The following table shows the position of shareholder's equity of the banks over the past six- years.

Table No.13.
Shareholder's Equity Position of NBBL & HBL

(Rs. in million)

F.Y	NBBL			HBL		
	Net Worth	Index	Annual rate of % change	Net Worth	Index	Annual rate of % change.
2003/04	396.59	100	-	870.54	100	-
2004/05	595.12	150.05	50.05	1198.27	137.64	37.64
2005/06	626.49	157.96	7.91	1501.53	172.48	34.84
2006/07	683.49	172.34	14.38	1905.88	218.93	46.45
2007/08	656.57	165.55	(6.79)	2291.93	263.27	44.34
2008/09	234.57	59.14	(106.41)	2568.40	295.03	31.76
Average S.D. C.V. Annual growth rate	532.14 162.37 30.51		(8.17)	1722.76 594.83 34.53		39.00

Source: Financial report of Banks.

Table no.13. Presents the shareholders equity position of NBBL & HBL for the period between 2003/04 and 2008/09. The figures presented in the above table reveal that the net worth in NBBL has fluctuating. The amount of net worth in NBBL decreased to 59.14 percent as compared to that of year 2003/04 i.e. base year. With regard to annual rate of percentage change (ARPC), the changes have been found positive, the highest among which has been found in year 2004/05 (i.e. 50.06 percent). However, a negative change has also been found in year 2007/08 & 2008/09. Net worth of NBBL has been found to decrease at a rate of 8.17 percent annually.

Similarly, net worth of HBL has increasing trend. The amount of net worth in HBL rose to 295.06 percent in 2008/09 as compared to that of year 2003/04 i.e. base year. With regard to annual rate of percentage change (ARPC), the changes has been found positive, the highest among which has been found in the year 2006/07 (i.e. 46.45 percent). Net worth of HBL has been found to grow at the rate of 39.00 percent annually.

In each year of study period, net worth of HBL has been found more than that of NBBL. This reveals that HBL has managed fund in the form of Net worth more than that of NBBL. Annual growth rate of net worth in HBL has been found more than that in NBBL [i.e. 39 percent > (8.17 percent)]. The following diagram shows the comparative net worth of NBBL & HBL in different study periods.

4.3.1.2 Fixed Deposits to Net Worth Ratio.

This ratio measures the capital formation of a company and tests the solvency position for the payment of long –term liability. This ratio measures the proportion of fixed deposits in relation to net worth. Following formula can be used to measure this ratio.

$$\text{Fixed deposits to net worth ratio} = \frac{\text{Fixed Deposits}}{\text{Net Worth}}$$

The ratio of the sample banks are presented in the following table.

Table no.14
Fixed Deposit to Net worth Ratio NBBL & HBL (In Percentage)

F.Y / Bank	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	1098.51	879.96	870.51	735.70	742.61	1507.71	972.5	267.77	27.53
Change	-	-218.55	-9.45	-134.81	6.91	765.1	-	-	-
HBL	449.97	411.21	365.02	168.18	205.51	237.79	306.28	107.26	35.02
Change	-	-38.76	-46.19	-196.84	37.32	32.28	-	-	-

Source: Appendix A (X)

Table no.14 (A)
Fixed Deposit and Net Worth of NBBL &HBL

(Rs. in million)

Year	NBBL		HBL	
	Fixed Deposits	Net Worth	Fixed Deposits	Net Worth
2003/04	4356.58	396.59	3917.14	870.54
2004/05	5236.79	595.12	4927.37	1198.27
2005/06	5453.63	626.49	5480.84	1501.53
2006/07	5031.58	683.92	3205.37	1905.88
2007/08	4875.73	656.57	4710.18	2291.93
2008/09	3536.63	234.57	6107.43	2568.40

Source: Financial report of Banks.

Table no.14. The figures presented in the table reveal that the fixed deposits to net worth ratio of NBBL has decreasing trend for the first four years and increasing trend for the last two years. The volume of fixed deposit to net worth has increased to 1507.71 percent as compared to that of year 2003/04 (i.e. 1098.51 percent). With regard to the annual rate of percentage change, there have been found highest rate of positive change by 765.1 percent in 2008/09 and negative change i.e. by -218.55 percent in 2004/05. Among the study periods, the bank has the highest ratio of 1507.71 percent and lowest of 735.70 percent in year 2008/09 and 2006/07 respectively. On an average, the bank has 972.5 percent of fixed deposits to net worth ratio which is greater than the ratios of second, third, fourth and fifth years but less than that of remaining years.

Similarly, fixed deposits to net worth ratio of HBL has fluctuating trend. The ratio of the bank has been decreasing for the first four years but increasing in last two years. The volume of fixed deposit to net worth ratio of HBL has increased to 237.79 percent in 2008/09 as compared to that of year 2006/07(i.e.168.18 percent). With regard to annual rate of percentage change, there has been found highest positive change by 37.32 percent in year 2007/08. Among the study periods, the bank has the highest ratio of 449.97 percent and lowest ratio of 168.18 percent in year 2003/04 and 2006/07 respectively. On an average, the bank has 306.28 percent of fixed deposit to net worth ratio which is greater than the ratio of last three years but less than that of remaining years.

Fixed deposit to net worth ratio of both the banks have been found in fluctuating nature. Comparatively, NBBL has highest ratio in each year with higher mean ratio than that of HBL. This explains that NBBL bank has more claims of creditors than that of owners. Further it depicts that, NBBL bank carries higher portion of fixed deposits than shareholders equity in its capital structure. NBBL has been found to be highly leveraged than HBL. Generally; higher ratio is unfavorable for the firm when the rate of return is less than the rate of interest (cost of capital) and vice versa. So it is specially suggested to draw attention of NBBL to reduce the proportion of fixed deposit in relation to net worth. C.V. of HBL (i.e. 35.02 percent) is higher than C.V. of NBBL (i.e. 27.53 percent). This shows that NBBL is more consistent with ratio.

4.3.1.3 Fixed Deposit to Capital Employed Ratio.

This ratio measures the proportion of fixed deposits out of total capital employed in the firm. Higher ratio represents higher risk to creditors and also to shareholders under existing business situation. While lower ratio assures security to creditors. In other words, higher ratio is unfavorable when the rate of interest is higher than the return and vice –versa. However, an appropriate mix of fixed deposits and bet worth should be maintained.

Here, capital employed represents the total of net worth and fixed deposits. This ratio is computed for measuring the relative share of debt in total capital of the firm indicating long –term solvency. This ratio of both the sampled banks is calculated and tabulated as follows.

$$\text{Fixed Deposits to Capital Employed Ratio} = \frac{\text{Fixed Deposit}}{\text{Capital Employed}}$$

Where, Capital Employed = Fixed Deposit +Net Worth

Table no.15
Fixed Deposit to Capital Employed Ratio NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	91.66	89.80	89.70	88.03	88.13	93.78	90.18	2.01	2.23
Change	-	-1.86	-0.1	-1.67	0.1	5.65	-	-	-
HBL	81.82	80.44	78.50	62.71	67.27	70.40	73.52	7.16	9.74
Change	-	-1.38	-1.94	-15.79	4.56	3.13	-	-	-

Source: Appendix A(XII)

Table no.15 (A)
Fixed Deposit and Net Worth of NBBL & HBL

(Rs.in million)

Year	NBBL		HBL	
	Fixed Deposits	Net Worth	Fixed Deposits	Net Worth
2003/04	4356.58	396.59	3917.14	870.54
2004/05	5236.79	595.12	4927.37	1198.27
2005/06	5453.63	626.49	5480.84	1501.53
2006/07	5031.58	683.92	3205.37	1905.88
2007/08	4875.73	656.57	4710.18	2291.93
2008/09	3536.63	234.57	6107.43	2568.40

Source: Financial report of Banks.

Table no .15 Presents the fixed deposits to capital employed ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the ratio of NBBL has fluctuating trend. The ratio of the bank has decreasing

trend for the first four years and increasing trend for the last two years. With regard to annual rate of percentage change (ARPC), there have found highest positive change by 5.65 percent in 2008/09 and negative change i.e. by -1.86 percent in 2004/05. Among the study periods, the bank has the highest ratio of 93.78 percent and lowest ratio of 88.03 percent in 2008/09 and 2006/07 respectively. On an average, the bank has 90.18 percent of fixed deposits to capital employed ratio which is greater than the ratios of second, third, fourth and fifth years but less than that of remaining years.

Similarly, fixed deposits to capital employed ratio of HBL has fluctuating trend. The ratio of the bank has decreasing trend for the first four years and increasing trend for the last two years. The ratio of the bank has decreased to 70.40 percent as compared to that of year 2003/04 (i.e. 81.82 percent). With regard to the annual rate of percentage change (ARPC), there have been found highest positive change by 4.56 percent in 2007/08 and negative change i.e. by -15.79 percent in 2006/07. Among the study periods, HBL has the highest ratio of 81.82 percent and lowest of 62.71 percent in 2003/04 and 2006/07 respectively. HBL has an average ratio of 73.52 percent, which is greater than the ratios of fourth, fifth and sixth years but less than that of remaining years.

The average fixed deposits to capital employed ratio of NBBL (i.e. 90.18 percent) has been found higher than that of HBL (i.e.73.52 percent), which clearly shows that NBBL bank has been using more debt than HBL in total capital. However, both the banks have higher debt ratio. Higher amount of debt is risky for the firm but, HBL still have been able to earn profit by efficiently mobilizing the fixed deposits, but the last six years average return of NBBL is in negative. Therefore NBBL should pay attention to minimize its debt to make favorable business situation, which will be beneficial from owner's point of view.

4.3.1.4 Fixed Deposits to Total Assets Ratio.

This ratio measures the proportion of fixed deposits financed in assets of the firm. If the firm uses more long – term debt, it is said to be a firm having following conservative financing policy and has less risk as well as well as less return. But if the firm uses less fixed deposits and more short- term debt, it is said to be following aggressive financing, which makes firm more risky. Here fixed deposits represent the long –term debt and total assets refers to the total assets on the side of the balance sheet. Fixed deposits to total assets ratio of NBBL and HBL is calculated and tabulated as follows:

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

Table no. 16
Fixed Deposits to Total Assets Ratio NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	59.30	52.56	49.12	42.17	34.20	26.64	44.00	11.06	25.14
Change	-	-6.74	-3.44	-6.95	-7.97	-7.56	-	-	-
HBL	24.69	25.27	25.71	13.25	18.31	21.15	21.40	4.48	20.93
Change	-	0.58	0.44	-12.46	5.06	2.84	-	-	-

[Source: Financial report of Bank (Table 16 B)]

Table no 16(B)
Fixed Deposit and Total Assets of NBBL & HBL

(Rs.in million)

Year	NBBL		HBL	
	Fixed Deposits	Total Assets	Fixed Deposits	Total Assets
2003/04	4356.58	7347.23	3917.14	15863.74
2004/05	5236.79	9962.69	4927.37	19500.57
2005/06	5453.63	11102.24	5480.84	21315.84
2006/07	5031.58	11932.60	3205.37	24197.98
2007/08	4875.73	14257.97	4710.18	25729.78
2008/09	3536.63	13277.15	6107.43	28871.34

[Source: Financial report of Banks]

Table no 16. Presents the fixed deposits to total assets ratio of NBBL and HBL for the period of 2003/04 to 2008/09. The figures presented in the table reveal that the fixed deposits to total asset ratio of NBBL is in decreasing trend. The volume of fixed deposit to total asset ratio decreased to 26.64 percent in 2008/09 as compared to 59.30 percent in year 2003/04. With regard to annual rate of percentage change (ARPC), there have been found highest negative change i.e. by -7.97 percent in 2007/08. Among the study periods, the bank has the highest ratio of 26.64 percent in 2008/09. On an average, the bank has 44 percent of fixed deposit to total asset ratio which is greater than fourth, fifth and sixth years but less than that of remaining years.

At the same time, the fixed deposit to total asset ratio of HBL is in increasing trend except in year 2006/07. With regard to annual rate of percentage change (ARPC), there have been found highest positive change by 5.06 percent in 2007/08 and negative change i.e. by -12.46 percent in 2006/07. Among the study periods, HBL has the highest ratio of 25.71 percent and lowest ratio of 13.25 percent in 2005/06 and 2006/07 respectively. HBL has the average ratio of 21.40 percent which is greater than the ratio of last three years but less than that of remaining years.

Comparatively, NBBL has the higher ratio in each year with higher mean ratio than that of HBL. It shows that NBBL bank has used more fixed deposits than HBL to finance its assets. The ratios of both banks have fluctuating trend but the variability of ratio is more in NBBL than in HBL with C.V. being 25.14 percent and 20.93 percent respectively. Therefore, HBL seems to be more consistent than the ratio of NBBL.

4.3.1.5 Fixed Deposits to Total Debt Ratio

This ratio measures the proportion of fixed deposits out of total debt employed in the firm. Here, total debts refer to all depositors, bills payable, borrowing made from other banks and other liabilities. Higher the ratio of fixed deposits to total debt indicates the higher claim of fixed depositors upon the total debt of the firm and lower the ratio indicates the higher portion of short – term loans and current liabilities in the total debt of the firm. Fixed deposits to total debt ratio of NBBL and HBL are calculated and tabulated as follows:

Fixed Deposits to Total Debt Ratio= $\frac{\text{Fixed Deposits}}{\text{Total Debt}}$

Table no.17
Fixed Deposits to Total Debt Ratio NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	62.68	55.90	52.06	44.73	35.85	27.12	46.39	12.06	26.00
Change	-	-6.78	-3.84	-7.33	-8.88	-8.73	-	-	-
HBL	26.13	26.92	27.66	14.38	20.10	23.22	23.07	5.06	21.93
Change	-	0.79	0.74	-13.28	5.72	3.12	-	-	-

[Source: Financial report of Banks (Table 17A)]

Table no.17 (A)
Fixed Deposit and Total Debt of NBBL & HBL

(Rs.in million)

Year	NBBL		HBL	
	Fixed Deposits	Total Debt	Fixed Deposits	Total Debt
2003/04	4356.58	6950.62	3917.14	14993.20
2004/05	5236.79	9367.57	4927.37	18302.30
2005/06	5453.63	10475.74	5480.84	19814.32
2006/07	5031.58	11248.69	3205.37	22292.10
2007/08	4875.73	13601.39	4710.18	23437.86
2008/09	3536.63	13042.57	6107.43	26302.95

[Source: Financial report of Banks]

Table no.17. presents the fixed deposits to total debt ratio of NBBL and HBL for the period between2003/04 to 2008/09.The figures presented in the table reveal that the fixed deposits to total debt of NBBL is in decreasing trend. The volume of fixed deposit to total debt decreased to 27.12 percent in 2008/09 as compared to that of year 2003/04 (i.e.62.68 percent) With regard to annual rate of percentage change (ARPC), there have been found highest negative change i.e. by -8.88 percent in 2007/08.Among the study periods, the bank has the highest ratio of 62.68 percent and lowest ratio of 27.12 percent in 2003/04 and 2008/09 respectively. NBBL has the average ratio of 46.39 percent, which is greater than the ratios of fourth, fifth and sixth years but less than that of remaining years.

Similarly, fixed deposits to total debt ratio of HBL is in increasing trend except in year 2006/07. With regard to annual rate of percentage change (ARPC), there have been found the highest positive change by 5.72 percent in 2007/08 and highest negative change i.e. by -13.28 in 2006/07. Among the study periods, the bank has the highest ratio of 27.66 percent and lowest ratio of 14.38 percent in 2005/06 and 2006/07 respectively. HBL bank has the average ratio of 23.07 percent, which is greater than the ratios of last two years but less than that of remaining years.

Comparatively, NBBL has the higher ratio in each year with higher mean ratio than HBL. It has been found that the ratio of both the banks have fluctuating trend. The volume of fixed deposit ratio has been fluctuated more in NBBL than in HBL (i.e. C.V. =26 percent> 21.93 percent). Therefore, HBL seems to be more consistent with ratios than NBBL.

4.3.1.6 Total Debt to Net Worth.

The main objective to calculate this ratio is to measure the firm's obligations to creditors in relation to the fund invested by the owners. In this study, total debt refers to all depositors, bills payable, borrowing made from other banks and other liabilities. Similarly, net worth (Shareholder's equity) refers to paid up capital, reserve surplus and undistributed profits. Generally, very high debt to equity ratio is unfavorable to the business firm because debt gives third parties legal claims over the company. On the other hand, a very low debt to equity ratio is unfavorable from the shareholders point of view. They want this ratio to be high so that they can have better return with smaller capital. Investment of debt in the business is considered beneficial when the interest rate is less than the return as this increases shareholders wealth. This process is known as trading on equity. Therefore, an appropriate mixture of debt and equity capital should be maintained by the firm for maximization of owners (i.e. shareholders) wealth. This ratio measures the proportion of external liability in the total capital of the firm. Total debt to net worth ratio of NBBL and HBL is calculated and presented as follows.

$$\text{Total Debt to Net Worth Ratio} = \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

Table no.18
Total Debt to Net worth Ratio of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	1752.60	1574.06	1672.13	1644.74	2071.58	5560.20	2379.22	1431.41	60.2
Change	-	-178.54	98.07	-27.39	426.84	3488.62	-	-	-
HBL	1722.29	1537.29	1319.61	1169.65	1022.63	1024.10	1299.26	259.83	20
Change	-	-185	-217.68	-149.96	-147.02	1.47	-	-	-

[Source: Appendix A(XI)]

Table no.18 (A)
Total Debt and Net Worth of NBBL & HBL

(Rs.in million)

Year	NBBL		HBL	
	Total Debt	Net Worth	Total Debt	Net Worth
2003/04	6950.62	396.59	14993.20	870.54
2004/05	9367.57	595.12	18302.30	1198.27
2005/06	10475.74	626.49	19814.32	1501.53
2006/07	11248.69	683.92	22292.10	1905.88
2007/08	13601.39	656.57	23437.86	2291.93
2008/09	13042.57	234.57	26302.95	2568.40

[Source: Financial report of Banks]

Table no.18 presents the total debt to net worth ratio of NBBL and HBL for the period between 2003/04 and 2008/09. The figures presented in the table reveal that the total debt to net worth ratio of NBBL has fluctuating trend. The ratio of the bank has increasing trend except in year 2004/05 and 2006/07. The volume of total debt to net worth of the bank rose to 5560.20 percent in 2008/09as compared to that of year 2003/04 (i.e. 1752.60 percent). With regard to annual rate of percentage change (ARPC), there has been found highest positive change of 3488.62 percent in year 2008/09 and highest negative change i.e. of -178.54 percent in year 2004/05. Among the study periods, NBBL has the highest ratio of 5560.20 percent and lowest ratio of 1574.06 percent in year 2008/09 and in 2004/05 respectively. NBBL has the average

ratio of 2379.22 percent, which is greater than the ratios of the first five years but less than that of remaining year.

Similarly, total debt to net worth ratio of HBL has decreasing trend except in year 2008/09. The volume of total debt to net worth has decreased to 1024.10 percent in year 2008/09 as compared to that of 2003/04(i.e. 1722.29 percent). With regard to annual rate of percentage change (ARPC), there has been found highest positive change by 1.47 percent in 2008/09 and negative change i.e. by -217.68 percent in 2005/06. Among the study periods, the ratio of HBL has been found maximum in 2003/04(i.e.1722.29 percent) and minimum in 2007/08(i.e. 1022.63 percent). HBL has the average ratio of 1299.26 percent which is greater than fourth, fifth and sixth years but lower than that of remaining years.

The ratios of both banks have been found in fluctuating trend. The mean ratio of NBBL is more than that of HBL. This shows that NBBL has employed high debt capital or outsiders fund than HBL. From the figures presented in the table, we can say that both the banks are extremely leveraged. Due to the employment of more debts, the banks have been facing heavy burden of interest payment. The volume of total debt to net worth has been fluctuated more in NBBL than in HBL (i.e. 60.16 percent>20 percent). Therefore, HBL seems more consistent with the ratio than NBBL.

4.3.1.7 Total Debt to Total Asset Ratio.

This ratio measures the relationship between financial contribution of outsiders and owners on total assets of the firm. It also provides security to outsiders to pay their regular interest, dividend and principal within prescribed time. Generally, creditors prefer the companies to use low debts and owners on the contrary prefer high debt to earn more return. This ratio is similar as debt to equity ratio. Higher debt ratio indicated higher financial risk as well as increasing claim of outsiders in total assets of the firm and vice-versa. Generally, 1:2 ratios are considered good but however no hard and fast rule is prescribed. The ratio of both banks is calculated and presented as follows.

$$\text{Total Debt to Total Assets Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Table no.19
Total Debt to Total Asset Ratio of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	94.60	94.03	94.36	94.27	95.39	98.23	95.15	1.44	1.51
Change	-	-0.57	0.33	-0.09	1.12	2.84	-	-	-
HBL	94.51	93.86	92.96	92.12	91.09	91.10	92.61	1.30	1.40
Change	-	-0.65	-0.9	-0.84	-1.03	0.01	-	-	-

[Source: Appendix A(XIII)]

Table no.19 (A)
Total Debt and Total Assets of NBBL & HBL

(Rs. in million)

Year	NBBL		HBL	
	Total Debt	Total Assets	Total Debt	Total Assets
2003/04	6950.62	7347.23	14993.20	15863.74
2004/05	9367.57	9962.69	18302.30	19500.57
2005/06	10475.74	11102.24	19814.32	21315.84
2006/07	11248.69	11932.60	22292.10	24197.98
2007/08	13601.39	14257.97	23437.86	25729.78
2008/09	13042.57	13277.15	26302.95	28871.34

[Source: Financial report of Banks]

Table no. 19. presents the total debt to total assets ratios of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the total debt to total assets ratio of NBBL has fluctuating trend. With regard to annual rate of percentage change (ARPC), there has been found highest positive change by 2.84 percent in 2008/09 and highest negative change i.e. by 0.57 percent in 2004/05. Among the study periods, the ratio of NBBL has been found maximum in 2008/09 i.e.98.23 percent and minimum in 2004/05 i.e.94.03. The bank has the average ratio of 95.15 percent, which shows that 95.15 percent of debt capital and remaining 4.85 percent of shareholder's equity has been financed for its assets. The average ratio of bank is greater than the first four years but less than that of remaining years.

Similarly, total debt to total assets ratio of HBL has decreasing trend. The volume of total debt to total assets decreased to 91.10 percent in 2008/09 as compared to that of year 2003/04 (i.e.94.51 percent). With regard to annual rate of percentage change (ARPC), there have been found the highest positive change by 0.01percent in 2008/09 and highest negative change i.e. by -1.03 percent in 2007/08. Among the study periods, the ratio of HBL has been found maximum in year 2003/04 (i.e.94.51 percent) and minimum in year 2007/08 (i.e.91.09 percent). The bank has an average ratio of 92.61percent, which shows that 92.61percent of debt capital and remaining 7.39 percent of shareholders equity has been financed for its assets. The average ratio of the bank is greater than the ratio of last three years but less than the remaining years.

The figures presented in the table reveal that the debt financing ratio of both banks have been found very high. The assets of the banks have been financed more by funds collected from creditors. In comparison, NBBL has used more debt capital to finance its assets than that used by HBL. In both the bank the creditor's margin of safety has been found very low or they have higher risk. So, both banks are suggested to minimize actual debt financing over total assets of the firm and rather increase owner's equity to finance its assets. The ratio of NBBL has been found more fluctuating than that of HBL because of C.V. being 1.51 percent and 1.30 percent respectively. Therefore, HBL banks seem to be more consistent than NBBL.

4.3.1.8 Capital Adequacy Ratio.

This ratio measures the portion of firm's capital fund with respect to the total deposit. Banks should maintain the capital fund according to their requirement. If banks have been holding more capital than their minimum requirement it can cause to have higher holding cost and low return and at the same time holding too little amount of capital then required may have disadvantage of inadequacy and shortage of fund. So in this context Nepal Rastra Bank directs the commercial banks to increase or decrease by fixing their percentage of capital fund out of total deposits. If the banks are unable to

meet the require rate, they should increase paid up capital or transfer a part of profit to general reserve to meet the requirement. Here capital fund includes total of paid up capital, reserve and surplus and undistributed profits. Total deposit includes total of current deposits, saving deposits, fixed deposits and call and other deposits. The ratio of NBBL and HBL have been calculated and tabulated as follows.

$$\text{Capital Adequacy Ratio} = \frac{\text{Capital Fund}}{\text{Total Deposit}}$$

Capital Adequacy Ratio of NBBL & HBL (In Percentage)
Table no.20

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	9.49	9.30	9.91	8.11	6.72	3.35	7.81	2.26	28.94
Change	-	-0.19	0.61	-1.8	-1.39	-3.37	-	-	-
HBL	8.03	8.01	11.56	10.93	10.65	11.01	10.03	1.45	14.46
Change	-	-0.02	3.55	-0.63	-0.28	0.36	-	-	-

[Source: Appendix A(XIV)]

Table no.20 (A)
Capital Fund and Total Deposits of NBBL & HBL

(Rs.in million)

Year	NBBL		HBL	
	Capital Fund	Total Deposits	Capital Fund	Total Deposits
2003/04	59249.2	6243.33	112766	14043.1
2004/05	76894.8	8268.26	140435	17532.4
2005/06	90885.2	9171.06	215240	18619.4
2006/07	83548.3	10301.9	229611	21007.4
2007/08	86065.5	12807.4	234410	22010.3
2008/09	40620.7	12125.6	273202	24814

[Source: Financial report of Banks]

Table no.20 presents the capital adequacy ratio of NBBL and HBL for the period 2003/04 to 2008/09.The figures presented in the table reveals that the capital adequacy of NBBL has decreasing trend except in the year 2005/06. The volume of the ratio

decreased to 3.35 percent in year 2008/09 as compared to that of year 2003/04 i.e. 9.49 percent. With regard to annual rate of percentage change (ARPC), the changes have been found both positive and negative, the positive change found in year 2005/06 and the highest negative change i.e. by -3.37 percent found in year 2008/09. Among the study periods, the ratio of NBBL has been found maximum in 2005/06 (i.e. 9.91 percent) and a minimum in 2008/09 (i.e. 3.35 percent). The bank has an average ratio of 7.81 percent which is greater than the ratios of last two years but less than that of remaining years.

At the same time, capital adequacy ratio of HBL has fluctuating trend except in year 2008/09. The volume of ratio rose to 11.01 percent in 2008/09 as compared to that of 8.03 percent in 2003/04. With regard to annual rate of percentage change, there have been found highest positive change by 3.55 percent in 2005/06 and highest positive change, and highest negative change i.e by -0.63 percent found in year 2006/07. Among the study periods, the ratio of HBL has been found maximum in 2005/06 (i.e. 11.56 percent) and minimum in 2004/05(i.e. 8.01 percent). The bank has the capital adequacy ratio of 10.03 percent in average, which can be said to have balanced capital adequacy ratio. The average ratio of the bank is greater than the ratios of first and second years but less than that of remaining years.

On an average, capital adequacy ratio of HBL has been found higher than that of NBBL. So it can be concluded that HBL has maintained excess capital fund to safeguard the depositors' interest. The C.V. of NBBL (i.e. 28.94 percent) has been found higher than that of HBL (i.e. 14.46 percent) which depicts that HBL has more consistent ratio than NBBL.

4.3.1.9 Debt Capacity Ratio (Interest Coverage Ratio)

To analyze debt capacity of the banks or to indicate the firm's ability to meet interest obligations, interest coverage ratio is calculated. Interest coverage ratio is one of the most conventional coverage ratios, which measures the relationship between what is normally available from operations of the firm and the claims of the outsiders. It is

used to test firm's debt serving capacity. Here, EBIT denoted earning before interest &taxes and interest charges denoted all kinds of interest payable on both the deposits and borrowing. From the view point of creditors, the larger the coverage the greater the ability of the firm to handle fixed charges and assurance of the payment of interest to the creditors. However, too high or low ratio is unfavorable to the firms. High ratio implies that he firm is using excessive debt and does not have the ability to offer assured payment of interest to the creditors. The ratio of both the sampled banks are calculated and presented as follows.

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest Charges}}$$

Table no.21
Interest Coverage Ratio of NBBL & HBL (In times)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	1.49	1.55	1.18	1.32	1.16	-0.19	1.09	0.59	54.13
Change	-	0.06	-0.37	0.14	-0.16	-1.35	-	-	-
HBL	1.53	1.59	1.60	1.65	1.86	1.93	1.69	0.15	8.88
Change	-	0.06	0.01	0.05	0.21	0.07	-	-	-

[Source: Appendix A(XVI)]

Table no.21 (A)
EBIT and Interest Charges of NBBL & HBL

(Rs.in million)

	NBBL		HBL	
Year	EBIT	Interest Charges	EBIT	Interest Charges
2003/04	618.69	414.99	908.50	594.80
2004/05	799.77	515.84	1165.88	734.52
2005/06	650.84	550.06	927.18	578.13
2006/07	786.09	594.58	914.16	554.13
2007/08	720.59	620.94	912.12	491.54
2008/09	(101.60)	547.94	1084.5	561.96

[Source: Financial report of Banks]

Table.no.21 presents the interest coverage ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the interest coverage ratio of NBBL has fluctuating trend. With regard to annual change, the highest positive change found in year 2006/07 (i.e. 0.14 times) and the highest negative change found in year 2008/09 (i.e.-1.35 times). The ratio of the bank has been found below the normal rate [i.e. 2 times] in each year of the study period. This shows that each bank has not been to maintain sufficient EBIT to meet the interest obligation. NBBL has average ratio of 1.09times which is less than the first five years but greater than that of remaining years.

At the same time, the interest coverage ratio of HBL bank is in increasing trend with the average interest coverage ratio of 1.69 times. The volume of interest coverage ratio rose to 1.93 times in 2008/09 as compared to that of 2003/04. With regard to the annual rate of percentage change, the changes have been found positive in the year 2003/04 to 2008/09 &negative changes in the remaining study period. The highest change is 0.21 times in the year 2007/08. On an average, the bank has the ratio of 1.69 times which can be considered as tight debt serving capacity. The bank does not seen to have sufficient EBIT to be able to serve the debt. The average ratio of the bank is greater than the ratio of first four year &smaller than remaining period of study.

The interest coverage ratio of both the banks does not seem to be satisfactory where debt capital is extremely higher. NBBL has mean ratio (i.e. 1.09 times) than that of HBL (i.e. 1.69 times). So it reveals that HBL has better debt serving capacity than NBBL. The variability of ratio has been found more in NBBL than in HBL with C.V. being 54.13 percent & 8.88 percent respectively. Therefore, HBL seems more consistent with the ratio than NBBL.

4.3.1.10 Capital Structure Position of the Banks.

When debt and equity are properly mixed it minimizes the cost of capital and maximizes the value of firm. In order to analyze the value of the firms, fixed deposits and equity share are taken into consideration. Net income approach is considered to find out the overall capitalization rate and net operating income approach is

considered to find out the equity capitalization rate of the banks. In order to analyze the capital structure management of the banks. In order to analyze the capital structure management of the banks, the value of the firm is calculated by adding debt and equity. The structure of the bank is of fixed deposits and equity share capital only where equity share capital is valued at market price. The table below shows the capital structure mix of NBBL & HBL.

Table no.22
Capital Structure Mix of NBBL& HBL

(Rs. in million)

F.Y.	NBBL			HBL		
	Fixed Deposits	Equity Share at Market Value	Total Value of firm(FD+ES)	Fixed Deposits	Equity Share at Market Value	Total Value of Firm (FD+ES)
2003/04	4356.58	1802.40	6158.98	3917.14	4080.00	7997.14
2004/05	5236.79	2640.00	7876.79	4927.37	4500.00	9427.37
2005/06	5453.63	1764.00	7217.63	5480.84	3900.00	9380.84
2006/07	5031.58	1296.00	6327.58	3205.37	3586.44	6791.81
2007/08	4875.73	1274.40	6150.13	4710.18	4504.50	9214.68
2008/09	3536.63	1886.40	5423.03	6107.43	5920.20	12027.63

[Source: Financial report of Banks(Table 22A)]

Table no.22 (A)
MPS, No. of Shares and Equity Share at Market Value of NBBL & HBL

Year	NBBL			HBL		
	MPS	No. of Equity Shares	Equity Share at Market Value(Rs. In million)	MPS	No. of Equity Shares	Equity Share at Market Value(Rs in million)
2003/04	1502	1200000	1802.40	1700	2400000	4080.00
2004/05	1100	2400000	2640.00	1500	3000000	4500.00
2005/06	490	3600000	1764.00	1000	3900000	3900.00
2006/07	360	3600000	1296.00	836	4290000	3586.44
2007/08	354	3600000	1274.40	840	5362500	4504.50
2008/09	262	7200000	1886.40	920	6435000	5920.20

[Source: Financial report of Banks]

Table no.22 presents the capital structure mix of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the fixed deposit of NBBL has increasing trend for the first three years and then decreasing for the last three years. Likewise, the fixed deposit of HBL has increasing trend except in the year 2006/07. Whereas the equity shares of both the bank have fluctuating trend. In 2005/06, NBBL has recorded highest amount of fixed deposit (i.e. Rs.5453.63 million). In year 2004/05 the market value of equity is the highest among the study periods resulting the maximum value of the firm (i.e. Rs. 7876.79 million). Similarly in 2008/09, HBL constituted highest amount of fixed deposit (i.e. Rs. 6107.43million) among the study periods resulting the maximum value of firm. (i.e. Rs. 12027.63).So, the value of the firm has been found maximum in 2008/09 where both the amount of fixed deposits and market value of equity share have been found maximum over the study periods.

4.3.1.11 Net Income Approach (Overall Capitalization Rate, K_o)

Under the net income approach, the capital structure decision is relevant to the valuation of the firm. According to this approach, a change in the capital structure/financial leverage will lead to a corresponding change in the overall cost of capital as well as the total value of the firm. The overall capitalization rate is calculated under net income approach, which measures the degree of leverage of the firm. This approach assumes that the cost of debt is less than the cost of equity. So, if the degree of financial leverage is increased, the weighted average cost of capital will decline as a result value of the firm will increase. The higher the use of cheaper debts lowers the cost and consequently increases the value. Overall capitalization rate of NBBL and HBL bank are calculated and presented as below.

$$K_o = \frac{\text{EBIT}}{\text{Value of Firm}}$$

Table no.23
Overall Capitalization Rate of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.
NBBL	10.05	10.15	9.02	12.42	11.72	-1.87	8.58
Change	-	0.1	-1.13	3.4	-0.7	-13.59	-
HBL	11.36	12.37	9.88	13.46	9.90	9.02	11.00
Change	-	1.01	-2.49	3.58	-3.56	0.88	-

[Source: Financial report of banks(Table 23A)]

Table no 23(A)
EBIT and Value of the firm of NBBL & HBL

(Rs. In million)

Year	NBBL		HBL	
	EBIT	Value of the firm	EBIT	Value of the firm
2003/04	618.69	6158.98	908.50	7997.14
2004/05	799.77	7876.79	1165.88	9427.37
2005/06	650.84	7217.63	927.18	9380.84
2006/07	786.09	6327.58	914.16	6791.81
2007/08	720.59	6150.13	912.12	9214.68
2008/09	(101.60)	5423.03	1084.5	12027.63

Source: Financial report of Banks

Table no.23 presents the overall capitalization rate of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in table reveal that the overall capitalization rate in 20004/05is negative. With regard to the annual rate of percentage change, the highest positive change found in year 2006/07 (i.e. 3.4 percent) and the highest negative change found in year 2008/09(i.e. -13.59 percent). The overall capitalization rate of the bank has been found minimum in 2008/09 (i.e.1.87percent). NBBL has an average K_o of 8.58 percent, which is less than K_o of first five years & greater than remaining period of study.

At the same time, the overall capitalization rate of HBL has been found in fluctuating trend. The figures presented in the table reveal that the overall capitalization rate of HBL has decreasing trend except in year 2004/05 and 2006/07. With regard to annual rate of percentage change, the highest positive change found in the year 2006/07 (i.e. 3.58 percent) and the highest negative change found in the year 2007/08(i.e. -3.56

percent). The overall capitalization rate of the bank has been found maximum in 2006/07(i.e.13.46 percent). HBL has the average ratio K_o of 11 percent, which is greater than K_o of third, fifth and sixth years but less than that of remaining years.

Overall capitalization rate of both the banks have been found in fluctuating trend. Average overall capitalization rate of HBL is 11 percent which is greater than of NBBL (i.e. 8.58 percent). From the result obtained, it can be concluded that increase in financial leverage, there is decrease in K_o. This shows that cost of debt is lower than cost of equity. Therefore, there is no interest burden.

4.3.1.12 Net Operating Income Approach (Equity Capitalization Rate, K_e)

The net operating income approach is considered to find out and analyze the equity capitalization rate of NBBL and HBL. According to NOI approach, any degree of leverage of capital structure decision of the firm is irrelevant to valuation of the firm. This approach says that overall capitalization rate(K_o) of the firm remains constant for all degree of leverage but equity capitalization rate (K_e) increases with the increase of degree of leverage. Regarding to the NBBL and HBL, the equity capitalization rate is calculated and presented as follows.

$$K_e = \frac{\text{Earning Before Tax}}{\text{Market Value of Equity}}$$

Table no.24
Equity Capitalization rate of NBBL & HBL (In Percentage)

F.Y. / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.
NBBL	11.30	10.75	5.71	14.78	7.82	-34.43	2.66
Change	-	-0.55	-5.04	9.07	-6.96	-42.25	-
HBL	7.69	9.59	8.95	10.04	9.34	8.83	9.07
Change	-	1.9	-0.64	1.09	-0.7	-0.51	-

[Source: Financial report of Banks (Table 24A)]

Table no. 24(A)
EBT and Market Value of Equity of NBBL & HBL

(Rs. In million)

Year	NBBL		HBL	
	EBT	Market value of Equity	EBT	Market value of Equity
2003/04	203.70	1802.40	313.70	4080.00
2004/05	283.93	2640.00	431.36	4500.00
2005/06	100.78	1764.00	349.05	3900.00
2006/07	191.51	1296.00	360.03	3586.44
2007/08	99.65	1274.40	420.58	4504.50
2008/09	(649.54)	1886.40	522.54	5920.20

[Source: Financial report of Banks]

Table. No.24 presents the equity capitalization rate of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the equity capitalization rate of NBBL has fluctuating trend. With regard to annual rate of percentage change (ARPC), there have been found highest positive change by 9.07 percent in 2006/07 and negative change i.e. by -42.25 percent in 2008/09. The equity capitalization rate of NBBL has been found maximum in 2006/07(i.e.14.78percent). NBBL has average equity capitalization rate of 2.66 percent which is less than the first five years& greater than that of remaining years.

Similarly, the equity capitalization rate of HBL has fluctuating trend. With regard to the annual rate of percentage change, there have been found highest positive change by 1.9 percent in 2004/05 and negative change i.e.- 0.64 percent in 2005/06. The equity capitalization rate of the bank has been found maximum in 2006/07 (i.e. 10.04 percent). HBL has average equity capitalization rate of 9.07 percent which is greater than the K_e of first, third and sixth years but less than the remaining years.

HBL has average equity capitalization rate of 9.07 percent which is greater than that of NBBL i.e.2.66 percent. Equity capitalization rate of both the sample banks have been found in fluctuating trend. However, equity capitalization rate of both the banks have been found highest in 2006/07. This shows that both the banks have improved their operational efficiency in later years.

4.3.2 Profitability Analysis.

Profitability is the main arch around which the venture of every business institution revolves. The efficiency of the management is reflected upon the volume of profit. So, profit has always been essential for every business organization for their smooth operations. Banking transaction has been significantly increased but not the profitability of the banks. It may be the result of top competition coming then. Bank's interest rate, government debentures and bills and tax rate are not under the control of bank's management, but operating cost, efficiency of the staff, bank's own policy, banking tools are under the control of management which are, of course, helpful to improve the profitability.

Profitability of two JVB's are analyzed on behalf of the long-term financial healthiness. A commercial bank is an organization and hence wants to make as much profit as possible. Investment is made with the view of making profit. Higher the earning capacity of assets, higher would be the profitability, other things remaining constant. So in this section, this researcher tried to analyze the profitability condition of the two banks comparatively, working under the same environment. Profitability depends upon earnings and expenditures. Every business institution should attempt to increase earning and minimize expenditures. For this analysis, this researcher has incorporated return analysis, operating income analysis and operating expenses analysis.

4.3.2.1 Interest Margin (IM)

Interest margin shows the percentage a bank earns as interest for each unit of investment made in loan and advances and Govt. securities. This ratio is examined to measure the profitability of these earning assets. A high margin reflects the better efficiency in utilizing the resources in interest generating sectors and vice – versa. Interest margin of both the sampled banks are calculated and presented as below.

$$\text{Interest Margin} = \frac{\text{Interest Income- Interest Expenses}}{\text{Loan \& Advance +Govt. Securities}}$$

Table no.25
Interest Margin of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	9.23	3.86	3.53	4.51	4.23	3.29	4.78	2.03	42.47
Change	-	-5.37	-0.33	0.98	-0.28	-0.94	-	-	-
HBL	4.70	5.27	4.77	4.62	4.90	5.04	4.88	0.22	4.47
Change	-	0.57	-0.57	-0.15	0.28	0.14	-	-	-

[Source: Appendix A(XV)]

Table no.25 (A)
Interest Income, Interest Expenses, Loan &Advance and Government Securities of NBBL & HBL.

(Rs.in million)

Year	NBBL				HBL			
	Interest Income	Interest Expenses	Loan & Advances	Govt. Securities	Interest Income	Interest Expenses	Loan & Advances	Govt. Securities
2003/04	609.27	414.99	4617.10	443.55	1033.66	594.80	7224.73	2112.88
2004/05	810.05	515.84	7358.84	262.56	1326.37	734.52	9015.35	2224.30
2005/06	850.53	550.06	7632.42	891.04	1148.99	578.13	8913.73	3047.75
2006/07	1013.71	594.58	7247.98	2040.45	1201.23	554.13	10001.85	3998.87
2007/08	1095.50	620.94	8648.74	2578.86	1245.89	491.54	11951.87	3431.73
2008/09	876.50	547.94	7787.69	2212.53	1446.47	561.96	12088.71	5469.72

[Source: Financial report of Banks]

Table no.25 presents the interest margin ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the interest margin ratio of NBBL has fluctuating trend. With regard to annual rate of percentage change (ARPC), there have been found the highest positive change by 0.98 percent in year 2006/07 and highest negative change i.e. by -5.37 percent in 2004/05. Among the study periods, the ratio of the bank has been found maximum in 2003/04(i.e. 9.23 percent) and minimum in 2008/09(i.e.3.29 percent). On an average, the ratio of the bank is greater than the ratios of last five years but less than that of remaining year.

In case of HBL, interest margin ratio of the HBL bank has been found higher in each year except in year 2003/04 and 2006/07 with higher mean ratio than that of NBBL. Therefore, HBL seems to be more efficient in utilizing its assets in interest generating

purpose compared to NBBL. Variability of ratio has been found more in NBBL than HBL with C.V. being 42.47 percent and 4.47 percent respectively. So, HBL seems to be more consistent with ratio than NBBL.

4.3.2.2 Return on Total Assets (ROTA)

Return on total assets ratio measures the profitability of banks that explains a firm return to earn satisfactory return on all financial resources invested in the banks assets. The ratio explains net income for each unit of assets. Higher ratio indicated the higher efficiency in utilizing its overall resources and vice-versa. From the point of view of judging operational efficiency, rate of return on total assets is more useful measure. The return on total assets ratio of NBBL and HBL is calculated and presented as follows.

$$\text{ROTA} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Table no.26
Return on Total Assets of NBBL & HBL (In Percentage)

F.Y. / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	1.90	1.99	0.59	0.60	0.02	-5.65	-0.09	2.59	-2877.78
Change	-	0.09	-1.4	0.01	-0.58	-5.67	-	-	-
HBL	1.26	1.42	1.10	0.88	1.02	1.07	1.13	0.17	15.04
Change	-	0.16	-0.32	-0.22	0.14	0.05	-	-	-

[Source: Financial report of Banks (Table 26A)]

Table no.26 (A)
Net Income and Total Assets of NBBL & HBL

(Rs in million)

Year	NBBL		HBL	
	Net Income	Total Assets	Net Income	Total Assets
2003/04	139.53	7347.23	199.38	15863.74
2004/05	198.75	9962.69	277.03	19500.57
2005/06	65.78	11102.24	235.02	21315.84

2006/07	71.51	11932.60	212.13	24197.97
2007/08	2.65	14257.97	263.05	25729.78
2008/09	(749.54)	13277.15	308.27	28871.34

[Source: Financial report of Banks]

Table no.26 presents the return on total assets ratio of NBBL and HBL for the period of 2003/04 to 2008/09. The figures presented in the table reveal that the return on total assets ratio of NBBL has fluctuating trend. This ratio of NBBL is in negative in the year 2008/09. With regard to annual rate of percentage change, the changes have been found negative except in the year 2004/05 and 2006/07. The average ratio of NBBL is -0.09 percent which is less than first five years & greater than sixth year.

In case of HBL, return on total assets ratio of the bank is in fluctuating trend with the highest ratio of 1.42 percent in the year 2004/05 & least ratio of 0.88 percent in the year 2006/07. With regard to the annual rate of percentage change, the changes have been found both positive &negative, among which highest positive change has been found in 2004/05 (i.e.0.16 percent) & highest negative change in 2005/06(i.e. -0.32 percent). The bank has the average ratio of 1.13 percent which is greater than the ratio of first two year less than remaining period of study.

HBL has the higher average return on total assets ratio than NBBL, which shows that HBL has out performed NBBL has not been able to utilize its resources in profitable projects since its average rate of return is in negative. The table shows that both the banks do not seem to be utilizing their assets more efficiently. So, the banks are required to increase the rate of return on total assets by making investment in higher return sectors. The ratio of HBL seems to be more consistent than that of NBBL because of C.V. being (2877.78 percent) & 15.04 percent respectively.

4.3.2.3 Return on Capital Employed (ROCE)

Return on capital employed ratio is another ratio related to the profitability of long –term funds. The ratio provides us a test of profitability related to the sources of long –term funds and sufficient insight into how efficiently the long term of owners and creditors are being used. It explains net income for each unit of long –term funds. The

higher the ratio, the more efficient is the use of capital employed and vice –versa. The ratio of NBBL and HBL is calculated and presented as below.

$$\text{ROCE} = \frac{\text{Net Income}}{\text{Fixed Deposit + Net Worth}}$$

Table no.27
Return on Capital Employed of NBBL & HBL (In Percentage)

F.Y. / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	2.94	3.41	1.08	1.25	0.05	-19.88	-1.86	8.14	-437.6
Change	-	0.47	-2.33	0.17	-1.2	-19.93	-	-	-
HBL	4.16	4.52	3.37	4.15	3.77	3.55	3.92	0.39	9.95
Change	-	0.36	-1.15	0.78	-0.38	-0.22	-	-	-

[Source: Financial report of Banks (Table 27B)]

Table no.27 (B)
Net Income, Fixed Deposit and Net Worth of NBBL & HBL
(Rs. in million)

Year	NBBL			HBL		
	Net Income	Fixed Deposit	Net Worth	Net Income	Fixed Deposit	Net Worth
2003/04	139.53	4356.58	396.59	199.38	3917.14	870.54
2004/05	198.75	5236.79	595.12	277.03	4927.37	1198.27
2005/06	65.78	5453.63	626.49	235.02	5480.84	1501.53
2006/07	71.51	5031.58	683.92	212.13	3205.37	1905.88
2007/08	2.65	4875.73	656.57	263.05	4710.18	2291.93
2008/09	(749.54)	3536.63	234.57	308.27	6107.43	2568.40

[Source: Financial report of Banks]

Table no.27 Presents the return on capital employed ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the return on capital employed ratio of NBBL is in fluctuating trend. With regard to annual rate of percentage change, the change have been found both positive and negative, among which highest positive change in ratio has been found 0.47 percent in year 2004/05 & highest negative change i.e.-19.33 percent in year 2008/09. The

bank has the average ratio of -1.86 percent which is less than first five years ratio & greater than that of the remaining year ratio.

Similarly, return on capital employed ratio of HBL has been found in fluctuating trend with highest ratio of 4.52 percent in year 2004/05 & least ratio of 3.37 percent in year 2005/06. with regard to annual rate of percentage change, the changes have been found both positive and negative, among which highest positive change is 0.78 percent in year 2006/07 & the highest negative change in 2005/06(i.e. -1.15 percent). The bank has the average ratio of 3.92 percent which is greater than the third, fifth & sixth year of study & less than that of remaining years of study.

Comparatively, return on capital employed of HBL has been found higher than NBBL in all the study periods. With higher mean ratio than that of NBBL. This shows that HBL has been able to utilize the long term funds of owner's & creditors into profitable sector than NBBL. However, both the banks performance cannot be regarded well since HBL average ratio is very low. Whereas, NBBL average ratio is in negative. So, it is suggested that both the bank to utilize both its equity and long term funds optimally. HBL has more consistency with ratio than NBBL bank because of C.V. being 9.95 percent & (437.6 percent) respectively.

4.3.2.4 Return on Shareholder's Equity (ROSE)

Return on shareholders' equity (ROSE) is one of the profitability ratios that show the relationship between the net income and shareholders' equity. This ratio is computed to determine how efficiently the funds supplied by shareholders have been used. Hence, this ratio reveals how profitably the owner's fund has been utilized and higher ratio indicated the more efficiency of management on using shareholders fund. It also indicates the firm's ability of generating profit per rupee of shareholders fund. Return on shareholders equity (ROSE) of both the sampled banks have been calculated and presented as below.

$$\text{ROSE} = \frac{\text{Net Income}}{\text{Shareholders' Equity}}$$

Table no.28
Return on Shareholders' Equity of NBBL & HBL (In Percentage)

F.Y. / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	35.18	33.40	10.50	10.46	0.40	-319.54	-38.27	126.42	-330.34
Change	-	-1.78	-22.90	-0.04	-10.06	-319.94	-	-	-
HBL	22.90	23.12	15.65	11.13	11.48	12.00	16.05	5.14	32.02
Change	-	0.22	-7.47	-4.52	0.35	0.52	-	-	-

[Source: Financial report of Banks (Table 28A)]

e no. 28(A)
alue of Equity of NBBL & HBL

(Rs in million)

Year	NBBL		HBL	
	Net Income	Market value of Equity	Net Income	Market value of Equity
2003/04	139.53	1802.40	199.38	4080.00
2004/05	198.75	2640.00	277.03	4500.00
2005/06	65.78	1764.00	235.02	3900.00
2006/07	71.51	1296.00	212.13	3586.44
2007/08	2.65	1274.40	263.05	4504.50
2008/09	(749.54)	1886.40	308.27	5920.20

[Source: Financial report of Banks]

Table no. 28 presents the return on shareholders equity ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the return on shareholders equity ratio of NBBL has decreasing trend. The ratio of the bank has decreased (i.e. -319.54 percent) in year 2008/09 as compared to that of year 2003/04(i.e.35.18 percent). With regard to the annual rate of percentage change (ARPC), the changes have been found negative in all years. The highest among which has been found in year 2008/09 (-319.54 percent) .The bank has the average ratio of -38.27 percent which is less than the first five years and greater than that of remaining year.

Similarly, return on shareholders equity of HBL has decreasing trend for the first four years and increasing trend for the last two years. With regard to annual rate of

percentage change (ARPC), the highest positive change found is 0.52 percent in 2008/09 and highest negative change i.e-7.47 percentage is found in 2005/06. The highest ratio recorded by HBL has been found 23.12 percent in 2004/05. The bank has the average ratio of 16.05 percent, which is greater than the ratio of last four years but less than ratio of remaining years.

Average return on shareholders' equity ratio of HBL has been found higher than that of NBBL which reveals that the HBL has more efficiency to manage shareholders fund to generate more profit than NBBL. The ratio of NBBL has been highly fluctuated than ratio of HBL with CV being negative i.e -330.34 % and 32.02% respectively. Therefore, HBL seems more consistencies with the ratio. But in an individual analysis even the CV of HBL seems high and can be describe as inconsistency to manage the shareholders fund to generate profit.

4.3.2.5 Return on Total Deposits (ROTD)

Major financial sources of a bank are deposit collection and deposits are mobilized for loan and advances and in other investment to earn profit. This return ratio helps to find out the profit earned using total deposits. It assists to identify the banks overall performance as well as its success in generating profit. The ratio here is calculated in order to diagnose whether the banks are well efficient or not in mobilizing its total deposits so that corrective actions could be forwarded to the concerned banks. Higher ratio signifies better mobilization and utilization of deposits and vice-versa. The decreasing trend of return on total deposits represents the weak aspect of the bank. Return on total deposits ratio of NBBL and HBL is calculated and presented as below.

$$\text{ROTD} = \frac{\text{Net Income}}{\text{Total Deposit}}$$

Table no.29
Return on Total Deposits of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	2.23	2.40	0.72	0.69	0.02	-6.18	-0.02	2.88	-14400
Change	-	0.17	-1.68	-0.03	-0.67	-6.2	-	-	-
HBL	1.42	1.58	1.26	1.00	1.20	1.24	1.28	0.18	14.06
Change	-	0.16	-0.32	-0.26	0.2	-0.04	-	-	-

[Source: Financial report of Banks (Table 29 A)]

le no. 29(A)
ıl Deposits of NBBL & HBL

(Rs. In million)

Year	NBBL		HBL	
	Net Income	Total Deposits	Net Income	Total Deposits
2003/04	139.53	6243.33	199.38	14043.09
2004/05	198.75	8268.26	277.03	17532.40
2005/06	65.78	9171.06	235.02	18619.37
2006/07	71.51	10301.89	212.13	21007.37
2007/08	2.65	12807.37	263.05	22010.33
2008/09	(749.54)	12125.57	308.27	24814.01

[Source: Financial report of Banks]

Table no.29 presents the return on total deposits ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the return on total deposit ratio of NBBL has decreasing trend except in year 2004/05. with regard to annual rate of percentage change found is 0.17 percent and the highest negative change i.e.-6.18 percent found in 2008/09 as compared to that of year 2003/04(i.e. 2.23 percent).The bank has the average ratio of -0.02 percent which is greater than the ratio of last year but less than the ratios of remaining years.

At the same time, return on total deposits ratio of HBL has fluctuating trend. The ratio of HBL has decreased to 1.24 percent in 2008/09 as compared to 1.42 percent in 2003/04 year. With regard to annual rate of percentage change, the changes have been found both positive and negative, among which positive change has been found in year 2004/05(i.e.0.16 percent) and negative change in 2005/06(i.e.-0.32 percent). On

an average, the bank registered the ratio of 1.28 percent, which is greater than the last four years but less than that of remaining years.

Average return on total deposits ratio of HBL has been found higher than that of NBBL (-0.02 < 1.28). The average return of NBBL is in negative whereas it is positive in HBL.Though HBL has maintained profitability, it cannot be said satisfactory because it has very low percentage of return. NBBL bank is unable to utilize the deposits into the most profitable projects as compared to HBL. The ratio of NBBL has highly fluctuated than the ratio of HBL with CV being (14400) percentage and 14.06 percentage respectively. HBL seems more consistency with the ratio.

4.3.2.6 Earning Per Share (EPS)

The profitability of a bank for the viewpoint of ordinary shareholders is earning per share. The ratio explains net income for each unit of share. Earning per share of an organization gives the strength of the share in the market. As EPS does neither reveals how much dividend paid to the owners nor how much of the earnings retained by an organization. Thus, it only shows how much theoretically belongs to the ordinary shareholders. In order to see the strength of share in the markets, EPS of NBBL and HBL are calculated and tabulated as below.

Table no.30
EPS of NBBL & HBL

(In Rs)

F.Y. / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	118.48	83.45	18.41	19.87	0.74	(104)	22.82	70.03	37
Change	-	-35.03	-65.04	1.46	-19.13	(103.26)	-	-	-
HBL	83.08	95.57	60.26	49.45	49.05	47.91	63.89	18.01	28.18
Change	-	10.49	-33.31	-10.81	-0.4	-1.14	-	-	-

[Source: Financial report of Banks(Table 32A)]

Table no.30 presents the earning per share of NBBL and HBL for the period between 2003/04 to 2008/09. The figures in the table reveal that the earning per share of NBBL is in decreasing trend and the earning per share of 2008/09 is in negative since the

bank suffered loss during this year. With regard to annual Rs. of change, the changes have been found positive as well as negative, the positive change found in year 2006/07 (i.e. Rs.1.46 percent) and the highest negative change i.e. -Rs. 103.26 found in year 2008/09. The bank has the maximum earning per share EPS of Rs. 118.48 in 2003/04. This is due to the large net income during the year as compared to that of other years. The bank has an average EPS of Rs. 22.82 which is greater than the EPS of third, fourth, fifth and sixth years but less than that of first and second years.

At the same time, EPS of HBL has fluctuating trend. It does not have perfectly decreasing trend. with regard to annual Rs. Change, the changes have been found both positive and negative, among which the positive change is Rs. 10.49 percent in year 2004/05 and highest negative change i.e - Rs.33.31 in year 2005/06 .The bank has maximum EPS of Rs. 83.08 in year 2003/04 due to larger net income during the year as compared to other years. HBL has an average EPS of Rs. 63.89 which is greater than the EPS of last four years but less than the EPS of remaining years.

Both the banks have average EPS during the study period. EPS of both the banks have been decreasing in the later year of the study. The change ratio to declining rate has been found more in NBBL than in HBL. EPS of HBL has been found higher in all the study period s than NBBL except in year 2003/04, along with higher mean ratio which shows that the EPS of HBL gives the strength of the share better in the market than that by NBBL. Regarding coefficient of variation, EPS of NBBL has been found more fluctuating than that of HBL with C.V. being 37 percentage and 28.18 percent respectively. HBL seems more consistent with EPS than NBBL.

4.3.2.7 Dividend per Share (DPS)

Dividend implies that potion of net profit, which is allocated to the shareholders as their return in terms if cash. DPS is the portion of EAT that cash amount is allocated to shareholders divided by total numbers of ordinary shares outstanding. A large number of present and potential investors may be interested in DPS rather than in EPS. Therefore, an institution offering a high DPS is regarded as an efficient in

fulfilling shareholders expectation, which will also enable to increase the value of an institution. As dividend per share measures the capability to earn and distribute the profit, higher the DPS, higher is the profitability and capacity to distribute dividend. DPS of NBBL and HBL has been calculated and tabulated as below.

$$DPS = \frac{\text{Earning paid to Shareholders' or proposed dividend}}{\text{No. of ordinary share issued.}}$$

Table no.31
DPS of NBBL & HBL

(In Rs.)

F.Y. / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	5.04	0	0	0	0	0	0.84	1.88	223.81
Change	-	-5.04	-	-	-	-	-	-	-
HBL	50.00	27.50	25	1.32	0	11.58	19.23	17.31	90.01
Change	-	-22.50	-2.50	-23.68	-1.32	11.58	-	-	-

[Source: Financial report of Bank(Table 32A)]

Table no.31 presents the dividend per share of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveals that the dividend of NBBL has only been distributed in year 2003/04. After 2003/04 the dividend has not been distributed to the shareholders. The highest negative change is found in year 2004/05 by Rs.-5.04. The bank has not been able to fulfill the shareholders expectations. The bank has an average DPS of 0.84 percent.

At the same time, DPS of HBL has decreasing trend except in year 2008/09. With regard to annual Rs. change, the positive change found in year 2008/09(i.e. 11.58) and highest negative change is found in year 2006/07 (i.e.-23.68). The bank has the maximum of Rs. 50 in 2003/04 although the earning paid to shareholders is greater in 2008/09 compared to 2003/04.It is due to lower number of shares in 2003/04 as compared to 2008/09. The bank has an average DPS of Rs.19.23 which is greater than the DPS of fourth and Sixth and less than that of remaining years.

DPS of HBL has been found higher in all the study period than that of NBBL along with higher mean ratio, which reveals that HBL has been more efficient than NBBL in fulfilling shareholders expectation by offering higher dividend. The variability of DPS has been found more in NBBL than HBL with CV being 223.81 and 90.01 percent respectively. Therefore, HBL seems more consistent with DPS than NBBL. But in an individual analysis HBL too is very inconsistency in distributing dividend being very high CV percentage.

4.3.2.8 Dividend Payout Ratio (DPR)

The ratio represents the percentage of the profit distributed as dividend and the percentage retained as revenue and surplus for the growth of the bank. Usually, higher ratio is preferred by the shareholders whereas a very high ratio may slow down the growth rate of the firm. It helps to segregate the proportion of dividend and retained earnings. Importance of DPR lies in its ability to state the dividend policy of the concerned banks more obviously which influences the market value of the share. DPR of NBBL and HBL is calculated and tabulated as below.

$$DPR = \frac{\text{Dividend Per Share}}{\text{Earning Per Share}}$$

Table no.32
DPR of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	4.25	0	0	0	0	0	0.71	1.58	222.54
Change	-	-4.25	-	-	-	-	-	-	-
HBL	60.18	29.39	41.49	2.67	0	24.17	26.32	20.99	79.75
Change	-	-30.79	-	-38.82	-2.67	24.17	-	-	-

[Source: Financial report of Bank (Table 32A)]

Table no.32 (A)
DPS and EPS of NBBL & HBL (In Rs)

Year	NBBL		HBL	
	DPS	EPS	DPS	EPS
2003/04	5.04	118.48	50.00	83.08
2004/05	0	83.45	27.50	93.57
2005/06	0	18.41	25	60.26
2006/07	0	19.87	1.32	49.45
2007/08	0	0.74	-	49.05
2008/09	-	(104)	11.58	47.91

[Source: Financial report of Banks]

Table no.32 presents the dividend payout ratio of NBBL and HBL for the period between 2003/04 to 2008/09. The figures presented in the table reveal that the dividend has not been distributed in the last five years except in 2003/04; therefore dividend payout ratio could not be calculated in those years. The bank has the average DPR of 0.71 percent, which is less than the DPR of the first year. The highest negative change is in year 2004/05 by -4.25 percentages.

At same time DPR of HBL has fluctuating trend. The dividend of NBBL has not been distributed in year 2007/08. with regard to annual rate of percentage change, the changes have been found both positive and negative, among which highest positive change has been found in year 2008/09(i.e. 24.17 percent) and negative change in 2006/07(i.e. -38.82 percent). DPR of the bank has been found maximum in 2003/04(i.e. 60.18 percent). The ratio of the bank decreased to 24.17 percent in 2008/09 as compared to that of 2003/04(i.e. 60.18 percent). The bank has an average ratio of 26.32 percent, which is greater than the ratios of fourth and sixth years but less than that of remaining years.

Average DPR of HBL has been found higher than that of NBBL, which reveals that HBL has been paying higher portion of its earning as dividend and retaining lower portion in comparison to NBBL. NBBL has not paid dividend in the last five years. The ratio has been fluctuating in HBL with C.V. being 79.75 percent in HBL and 222.54 percent in NBBL respectively. Therefore, HBL seems more consistent with ratio than NBBL.

4.3.2.9 Price Earning Ratio (P/E Ratio)

Price earning ratio reflects the price currently being paid by the market for each rupee of currently reported EPS. In other words, it measures investor's expectations and market appraisal of firm's performance. It is an indication of firm's performance. It is an indication of the way investors think that the banks would perform better in the future. Higher P/E suggest that investors expect earning to grow and this gives a high P/E but low P/E implies investors feeling that earnings are not likely to raise. Price earning ratio (P/E ratio) of both the sampled banks are calculated and presented as below.

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

Table no.33
Price Earning Ratio of NBBL & HBL (In Percentage)

F.Y / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Avg.	S.D.	C.V.
NBBL	12.68	13.28	26.82	18.12	472.03	-2.52	90.06	171	189.87
Change	-	0.6	13.54	-8.7	453.91	-474.5	-	-	-
HBL	20.46	16.03	16.59	16.91	17.21	19.20	17.72	1.57	8.86
Change	-	-4.43	0.56	0.32	0.21	2.08	-	-	-

[Source: Financial report of Banks (Table 33A)]

Table no.33 (A)
MPS and EPS of NBBL & HBL

(In Rs.)

Year	NBBL		HBL	
	MPS	EPS	MPS	EPS
2003/04	1502	118.48	1700	83.08
2004/05	1100	83.45	1500	93.57
2005/06	490	18.41	1000	60.26
2006/07	360	19.87	836	49.45
2007/08	354	0.74	840	49.05
2008/09	262	(104)	920	47.91

[Source: Financial reports of Banks]

Table no.34
Operating Income of NBBL & HBL (In Percentage)

Fiscal Year	Interest Earned		Commission & Discount		Foreign exchange Income		Other Income		Total %	
	NBBL	HBL	NBBL	HBL	NBBL	HBL	NBBL	HBL	NBBL	HBL
2003/04	75.86	83.29	15.10	8.89	7.71	7.04	1.33	0.78	100	100
2004/05	75.41	84.33	13.37	6.11	9.51	7.58	1.71	1.98	100	100
2005/06	78.99	82.82	11.55	7.33	6.47	7.54	2.99	2.31	100	100
2006/07	81.50	83.21	8.77	7.10	4.53	7.59	5.2	2.1	100	100
2007/08	83.00	82.17	7.96	8.17	4.25	7.41	4.79	2.25	100	100
2008/09	80.92	82.28	8.59	7.56	3.66	7.81	6.83	2.35	100	100
Avg.	79.28	83.02	10.89	7.53	6.02	7.50	3.81	1.96	100	100
S.D.	2.83	0.72	2.67	0.87	2.09	0.23	2.03	0.54	-	-
C.V.	3.57	0.87	24.51	11.55	34.72	3.07	61.33	27.55	-	-

[Source: Financial report of Banks(Table 34A)]

Table no.34 (A)
Interest Earned, Commission and Discount, Foreign Exchange Income and Other Income of NBBL & HBL

(Rs. In million)

Year	Interest Earned		Commission & Discount		Foreign Exchange Income		Other Income	
	NBBL	HBL	NBBL	HBL	NBBL	HBL	NBBL	HBL
2003/04	609.27	1033.66	121.31	110.33	61.94	87.32	10.62	9.68
2004/05	810.05	1326.37	143.60	96.06	102.10	119.26	18.39	31.22
2005/06	850.53	1148.99	124.42	101.70	69.71	104.60	32.15	32.03
2006/07	1013.71	1201.23	109.05	102.56	56.30	109.59	64.77	30.15
2007/08	1095.50	1245.89	105.06	123.92	56.16	112.41	63.15	34.07
2008/09	876.51	1446.46	92.99	132.81	39.67	137.30	73.99	41.30

[Source: Financial report of Banks]

Interest Earned

In this study, interest earned includes the interest income from loan and advances, overdraft, investment on government securities, money at call and short notice on inter bank loans. This ratio of bank reflects the operational efficiency. So higher the ratio indicated higher efficiency and vice versa. The ratios of both the banks have been in fluctuating trend. The average ratio of HBL (i.e.83.02 percent) has been found greater than that of NBBL (i.e. 79.28 percent). Therefore, HBL seems to have better

operational efficiency than NBBL. HBL has more consistency with ratio than NBBL with C.V. being 0.87 percent and 3.57 percent respectively.

Commission and Discount.

It is also a major source of operating income of JVB's. This ratio reflects the extent of services provided to the customers. In this study, commission and discount earned includes the commission and discount received from letter of credit, collection fees, letter of guarantee, remittance fees and other fees and commission. The ratios of HBL have been in fluctuating trend. The ratio of NBBL has been found in decreasing trend. The ratio of NBBL has ranged between the lowest of 7.96 percent in 2007/08 to the highest of 15.10 percent in 2003/04. Similarly, the ratio of HBL has ranged between the lowest of 6.11 percent in 2004/05 to the highest of 8.89 percent in 2003/04. The average ratio of NBBL (i.e. 10.89 percent) has been found higher than that of HBL (i.e.7.53 percent). HBL has more consistency with ratio than NBBL with C.V. being 11.55 percent and 24.51 percent respectively.

Foreign Exchange Income.

Both the banks are authorized by Nepal Rastra Bank to deal with foreign exchange. Banks are engaged in various trading activities that compel them to deal with foreign currencies. Such trade on various foreign currencies result gain or loss to the banks. Further the position of stock of currency is affected by the exchange rate revalued time to time. Hence foreign exchange income comprises of two types of, trading gain and revaluation gain. The ratios of both the banks have been found in fluctuating trend. The ratio of NBBL has ranged between the highest of 9.51 percent in 2004/05 to the lowest of 3.66 percent in 2008/09. Similarly, the ratio of HBL has ranged between the highest of 7.81 percent in 2008/09 to the lowest of 7.04 percent in 2003/04.

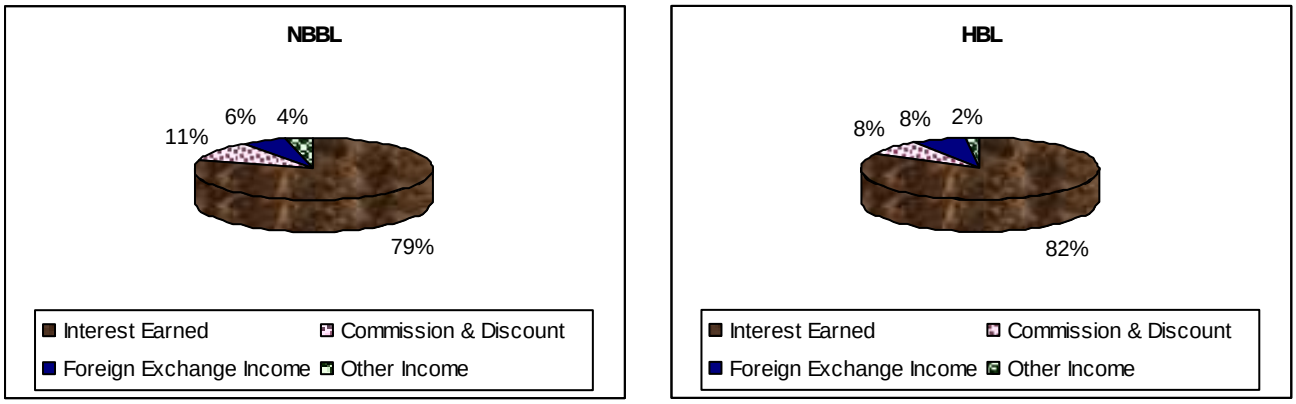
HBL has an average ratio higher than NBBL (i.e. 7.50 percent > 6.02 percent) and it has more consistency with ratio than NBBL with C.V. being 3.07 percent and 7.50 percent. HBL has been able to earn more foreign exchange income than NBBL.

Other Income

Other Income in this study refers to other operating incomes except than that previously discussed in this section. In other words, the other income is the non operating income form sale of investment and assets, non banking assets, subsidy form Nepal Rastra Bank, fixed asset written bank and others. The table no. 34 shows that other income has a very nominal contribution out of the total income in case of both the sample banks except in year 2006/07, 2007/08 and 2008/09. The average ratio of NBBL (i.e. 3.81 percent) has been found higher than that of HBL (i.e.1.96 percent). The ratio of HBL is more consistent than NBBL with C.V being 27.55 percent and 61.33 percent respectively.

The operating income analysis shows that interest earning has the highest contribution in case of both the banks. Commission and Discount has recorded the second position and foreign exchange income comes thereafter.

Fig.5.Average income from each source as percentage of Total operating Income of NBBL and HBL.



4.3.2.11 Operating Expenses Analysis

Expenses stream of any business firm has to be evaluated so that it can be able to identify the proportionate major expenses to total operating expenses. The business firm may be able to curtail down the unnecessary expenses. Here, major stream of expenses are analyzed in relation to the profitability analysis of the banks. The analysis is made as per proportionate major expenses to total operating expenses of the banks. Primary operating expenses of the bank include expenses like, interest and

commission paid, office operating expenses, staff expenses and provision for staff bonus. The proportionate major expenses of NBBL and HBL to the total operating expenses have been presented and analyzed as below.

Table no.35
Major Expenses to Total Operating Expenses of NBBL & HBL
(In Percentage)

Fiscal Year	Interest Expenses		Staff Expenses		Office Operating Expenses		Provision for bonus		Total %	
	NBBL	HBL	NBBL	HBL	NBBL	HBL	NBBL	HBL	NBBL	HBL
2003/04	77.63	72.35	6.60	7.28	11.53	16.12	4.24	4.25	100	100
2004/05	77.28	72.76	7.60	8.48	10.39	13.98	3.59	4.78	100	100
2005/06	78.60	66.13	8.77	11.61	11.03	17.82	1.60	4.44	100	100
2006/07	75.53	62.16	8.88	13.48	12.88	19.87	2.71	4.49	100	100
2007/08	75.50	54.51	9.32	16.91	13.83	23.40	1.35	5.18	100	100
2008/09	68.05	52.23	11.91	16.60	20.03	25.78	0.01	5.39	100	100
Avg.	75.43	63.36	8.85	12.39	13.28	19.50	2.44	4.76	100	100
S.D.	3.48	7.96	1.64	3.68	3.23	4.07	1.42	0.89	-	-
C.V.	4.61	12.56	18.53	29.70	24.32	20.87	63.11	18.70	-	-

[Source: Financial report of Banks (Table 35A)]

Table no.35 (A)
Interest Expenses, Staff Expenses, Office Operating Expenses and Provision for Bonus of NBBL & HBL
(Rs in million)

Year	Interest Expenses		Staff Expenses		Office Operating Expenses		Provision For Bonus	
	NBBL	HBL	NBBL	HBL	NBBL	HBL	NBBL	HBL
2003/04	414.99	594.80	35.30	59.88	61.66	132.54	22.63	34.85
2004/05	515.84	734.51	50.75	85.57	69.35	141.11	31.55	48.33
2005/06	550.06	578.13	61.36	101.53	77.19	155.78	11.20	38.78
2006/07	594.58	554.12	69.90	120.14	101.40	177.13	21.28	40.00
2007/08	620.94	491.54	76.62	152.50	113.76	211.04	11.07	46.73
2008/09	547.94	561.96	95.88	178.58	161.34	277.37	-	58.06

[Source: Financial report of Banks]

Interest Expenses.

In this study interest expenses denoted the interest paid on deposits, borrowing fees and loan and advances. The average ratio of expenses made under this heading of NBBL bank (i.e. 75.43 percent) has been found higher than that of HBL (i.e. 63.36

percent) which depicts that NBBL has comparatively been paying more interest and using more outsider's fund than HBL. Interest expenses to total operating expenses ratio of NBBL is more consistent than that of HBL with C.V. being 4.61 percent and 12.56 percent respectively. This study shows that this heading of expenditure is the major one in case of both the banks.

Staff Expenses

Here staff expenses refer to the total of salaries, allowances, banks contribution to provident fund, training expenses and other personnel expenses. These expenses over its total operating expenses ratio of both the banks have been found in increasing trend. The ratio of NBBL has ranged between the highest of 11.91 percent in 2008/09 to the lowest of 6.60 percent in 2003/04. The ratio of HBL has ranged between the highest of 16.91 percent in 2007/08 to the lowest of 7.28 percent in 2003/04. The average ratio of HBL (i.e. 12.39 percent) is higher than that of NBBL (i.e. 8.85 percent). NBBL has consistency with ratios than HBL as C.V. being 18.53 percent and 29.70 percent respectively. Comparatively, the staff expenses of HBL are higher in HBL than in NBBL. It is due to the higher number of staff in HBL (i.e. around 500) than in NBBL (around 450)

Office Operating Expenses.

This heading includes cost of expenses incurred in office operation. The ratio of NBBL has been found in increasing trend except in year 2004/05 and 2005/06.Similarly, the ratios of HBL is in increasing trend except in year 2004/05. The highest ratio of NBBL is 20.03 percent in year 2008/09 and lowest of 10.39 percent in 2004/05. The average ratio of HBL (i.e. 19.50 percent) has been found higher than that of NBBL (i.e. 13.28 percent) which includes that former is paying more in office operating expenses. However the branches of NBBL

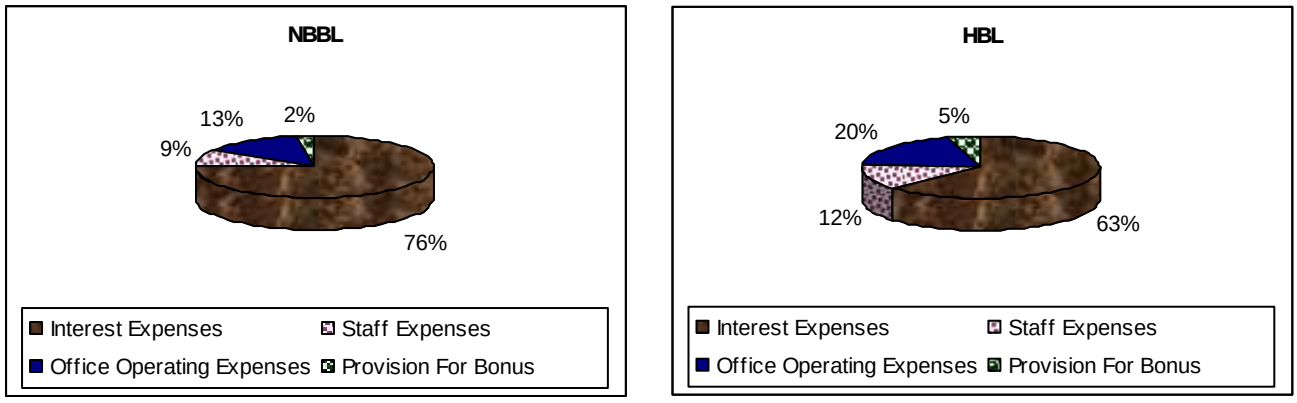
Provision for Bonus.

It is an extra dividend paid to shareholders as an incentive for their efficient services. Bonus is distributed form profit and it helps to uplift moral of employees as well as shareholders. The average percentage of bonus distributed by HBL has been found

higher than that of NBBL (i.e. 4.76 percent > 2.44 percent) and it has more consistency with ratio than NBBL with C.V. being 18.70 percent and 63.11 percent respectively. However, higher bonus payment reduces the degree of dividend payment to the shareholders because both are distributed form profit. So, this is controversial issue and relationship between bonus and dividend is conflicting.

Comparatively, HBL has higher staff expenses, office operating expenses and provision for bonus, whereas NBBL has higher interest expenses. .

Fig. 6.Average Major Expenses to Total Operating Expenses of NBBL & HBL (in %)



4.3.3 Empirical Analysis

Under this analysis, the correlation between different variables is studied.

4.3.3.1 Coefficient of Correlation between EBIT and Interest Payment

The relationship between EBIT and interest payment is evaluated in order to measure debt serving of the banks. It is assumed that there is significant relationship between EBIT and interest payment .here interest payment (x) is dependent variable and (EBIT) is independent variable. The following result has been obtained for NBBL and HBL.

Table no. 36
Correlation between EBIT and Interest Payment of NBBL & HBL

Evaluation criterion						
Banks	r	r^2	P.E	6 P.E.	Relationship	Sig.\Insig.
NBBL	0.063	0.0039	0.274	1.645	Low degree of positive	Insignificant
HBL	0.74	0.55	0.12	0.72	High degree of positive	Significant

[Source: Appendix A (II) and A (III)]

From table no 36. presented above, it has been found that the correlation between EBIT and interest payment in case of NBBL and HBL bank is 0.063 and 0.74 respectively ,which NBBL has low degree of positive correlation and HBL has high degree of positive correlation. Correlation of determinant (r^2) of NBBL indicates that 0.39 percent of the variation in interest payment is explained by the independent variable (EBIT) whereas 55 percent of the variation in the interest payment is explained by EBIT of HBL.

Considering the probable error P.E., the value of 'r' of HBL has been found greater than six times of P.E. therefore , it can be concluded that the value of 'r' is significant i.e., there is significant relationship between EBIT and interest payment. However, it is also found that the value of 'r' of NBBL is less than it's P.E. and therefore it is concluded that the value of 'r' is not significant i.e. there is no evidence of relationship between EBIT and interest payment.

4.3.3.2 Correlation Coefficient between Return and Total Debt.

The relationship between return and total debt capital of both the banks are analyzed in order to examine whether debt capital is significant is generating more returns. It is assumed that there is significant relationship between return and total debt capital. Here, return (X) is dependent variable and debt capital (Y) is independent variable. The following result has been obtained for NBBL and HBL.

Table no. 37
Correlation between Return and Total Debt of NBBL & HBL

Evaluation criterion						
Banks	r	r^2	P.E	6 P.E.	Relationship	Sig.\Insig.
NBBL	0.162	0.026	0.268	1.608	Low degree of positive	Insignificant
HBL	0.617	0.3806	0.1705	1.023	High degree positive	-

[Source: Appendix A (IV) and A (V)]

From table no.37 presented above, correlation between return and total debt capital of NBBL has been found 0.162 which shows that the variables are Low degree positively correlated. This refers that increase in debt capital increases the return. Coefficient of determination (r^2) of NBBL indicates that 2.6 percent of the variation in the dependent variable (i.e. return) is explained by the independent variable (i.e. total debt capital). Considering the probable error (P.E.), the value of 'r' of the bank has been found less than P.E. Therefore, the value of 'r' is not significant which depicts that there is no any evidence of correlation between return and debt capital.

Similarly, correlation between return and total debt capital of HBL has been found 0.617 which shows high degree of positive relationship. This refers that increase in total debt capital increases return. Coefficient of determination (r^2) of the bank indicates that 38.06 percent of the variation in the return is explained by the total debt capital. But considering the probable error (P.E), the value of 'r' has been found less than 6 times P.E. This indicates that nothing can be calculated with certainty.

4.3.3.3 Coefficient of Correlation between Returns on Shareholders Equity (ROSE) and Debt Equity Ratio (DER)

The correlation between ROSE (Y) and DER(X) in terms of fixed deposits to net worth of both the banks is analyzed in order to know whether increase in debt capital portion in the capital structure increase returns on equity . The following result has been obtained for NBBL and HBL.

Table no. 38
Correlation between ROSE and DER of NBBL & HBL

Evaluation criterion						
Banks	r	r^2	P.E	6 P.E.	Relationship	Sig.\Insig.
NBBL	-0.85	0.72	0.075	0.45	High degree of negative	Insignificant
HBL	0.94	0.88	0.030	0.183	High degree of positive	Significant

[Source: Appendix A (VI) and A (VII)]

From table no.38 presented above, correlation between ROSE and DER in terms of fixed deposits to net worth of NBBL and HBL bank have been found -0.85 and 0.94 respectively which shows high degree of negative relationship of NBBL and high degree of positive relationship of HBL. This refers that increase in leverage increases return on shareholders equity in HBL and increase in leverage decreases return on shareholders' equity in NBBL. Coefficient of determination indicates that 72. % of the variation in ROSE is explained by DER of NBBL whereas 88% of the variation in ROSE is explained by DER of HBL .It has been found that there is certain evidence of correlation i.e. the value of 'r' is higher than 6times P.E. in case of HBL. Since, the value of r is less than P.E in NBBL; there is not any evidence of relation between ROSE and DER.

4.3.3.4 Coefficient of Correlation between Overall Capitalization Rates (K_0) and Debt Equity Ratio (DER)

The correlation coefficient between overall capitalization rate (X) and debt equity ratio (Y) in terms of fixed deposits to net worth is calculated in order to measure whether increase in debt equity ratio decreases overall capitalization rate of the banks .Applying Karl Pearson's correlation coefficient , the following result has obtained for NBBL and HBL.

Table no. 39
Correlation between K_0 and DER of NBBL & HBL

Evaluation criterion						
Banks	r	r^2	P.E	6 P.E.	Relationship	Sig.\Insig.
NBBL	-0.936	0.876	0.034	0.2048	High degree of negative.	Insignificant
HBL	0.037	0.0014	0.275	1.65	Low degree of positive	Insignificant

[Source: Appendix A (VIII) and A (IX)]

From the above table, it has been found that correlation between overall capitalization rates (K_0) and debt equity ratio (DER) is -0.936 and 0.037 respectively, which shows high degree of negative relationship and low degree of positive correlation in NBBL and HBL respectively. Coefficient of determination (r^2) of NBBL indicates that 87.6 % of the variation in overall capitalization rate is explained by debt equity ratio where as 0.14 % of the variation in overall capitalization is explained by debt equity ratio in case of HBL. Since the value of 'r' is less than P.E., there is no evidence of correlation in case of both the banks and the value of 'r 'is insignificant.

4.3.4 Test of Hypothesis

It has been already stated earlier in the 'introduction chapter' some null hypothesis are set for the purpose of evaluating the difference between one banks to another regarding some financial ratios. This researcher has supposed that the commercial banks, operating under the some environment and of the same class as well are of no significant difference regarding capital structure and profitability. So, the hypothesis testing i.e. t- test is performed as below for NBBL and HBL taking as samples.

Student's t-test regarding capital structure

4.3.4.1 Test of hypothesis on Fixed Deposits to Net Worth Ratio. (FD/NW)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average fixed deposit to net worth ratio of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e., there is significant difference between average fixed deposit to net worth ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{972.50\,Z306.28}{\sqrt{49924.21\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

X5.16

/t/ = 5.16 [Source: Appendix A(X)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= n_1 +n_2-2 .

Decision: since the calculated value of 't' i.e. 5.16 is higher than tabulated value of 't' at 5% significant level i.e. 2.228, h_1 is accepted which explains that there is significant difference between the mean ratios of FD/NW of NBBL and HBL.

4.3.4.2 Test of hypothesis on Total Debt to Net Worth ratio (TD/NW)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average total debt to net worth ratio of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e., there is significant difference between average total debt to net worth ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{2379.22\,Z1299.26}{\sqrt{1269871.109\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

X1.65

/t/ = 1.65 [source: Appendix A (XI)]

Tabulated value of‘t’ at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= n_1 +n_2-2 .

Decision: Since the calculated value of‘t’ i.e. 1.16 is less than tabulated value of ‘t’ at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between the mean ratios of TD/NW of NBBL and HBL.

4.3.4.3 Test of hypothesis on Fixed Deposit to Capital Employed Ratios (FD/CE)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average fixed deposit to capital employed ratios NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e., there is significant difference between the average fixed deposit to capital employed ratios NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{90.18\,Z73.52}{\sqrt{33.157\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

X5.01

/t/ = 5.01 [Source: Appendix A (XII)]

Tabulated value of ‘t’ at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= n_1 +n_2-2 .

Decision: Since the calculated value of ‘t’ i.e. 5.01 is higher than tabulated value of ‘t’ at 5% significant level i.e. 2.228, h_1 is accepted which explains that there is significant difference between the mean ratios of FD/CE of NBBL and HBL.

4.3.4.4 Test of hypothesis on Total Debt to Total Assets Ratio (TD/TA)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average total debt to total assets ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e., there is significant difference between the average total debt to total assets ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{95.15 Z92.61}{\sqrt{2.261\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

X2.926

/t/ = 2.926 [Source: Appendix A (XIII)]

Tabulated value of't' at 5% level of significance for 10 degree of freedom (df) is 2.228

Where df= $n_1 + n_2$-2.

Decision: Since the calculated value of't' i.e. 2.926 is higher than tabulated value of't' at 5% significant level i.e. 2.228, h_0 is rejected which explains that there is significant difference between the mean ratios of TD/TA of NBBL and HBL.

4.3.4.5 Test of hypothesis on Capital Adequacy Ratio(CAR)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average capital adequacy ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e there is significant difference between the average capital adequacy ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{7.81Z10.03}{\sqrt{4.319\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

$$XZ1.85$$

/t/ = 1.85 [Source: Appendix A (XIV)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= n_1 +n_2-2 .

Decision: Since the calculated value of't' i.e. 1.85 is less than tabulated value of 't'at 5% significant level i.e. 2.228, h_1 is rejected which explains that there is no significant difference between mean ratio of CAR of NBBL and HBL.

4.3.4.6. Test of hypothesis on Interest Margin (IM)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average interest margin ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e., there is significant difference between the average interest margin ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{4.78Z4.88}{\sqrt{2.51\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

$$XZ0.109$$

/t/ = 0.109 [Source: Appendix A(XV)]

Tabulated value of ‘t’ at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= $n_1 + n_2 - 2$.

Decision: Since the calculated value of‘t’ i.e. 0.109 is less than tabulated value of ‘t’at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between IM ratio of NBBL and HBL.

4.3.4.7 Test of hypothesis on Interest Coverage Ratio. (ICR)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average interest Coverage ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e .,. there is significant difference between the average interest coverage ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t = \frac{\overline{X}_1 Z \overline{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} \Gamma \frac{1}{n_2}\right)}}$$

$$X \frac{1.09 Z 1.69}{\sqrt{0.22 \left(\frac{1}{6} \Gamma \frac{1}{6}\right)}}$$

XZ2.21

/t/ = 2.21 [Source: Appendix A(XVI)]

Tabulated value of ‘t’ at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= $n_1 + n_2 - 2$.

Decision: Since the calculated value of ‘t’ i.e.2.21 is less than tabulated value of ‘t’ at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between the mean ratio of ICR of NBBL and HBL.

Student's Test Regarding Profitability.

4.3.4.8 Test of hypothesis on Return on Total deposits (ROTD)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between return on total deposit ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e . there is significant difference between return on total deposit ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z \overline{X}_2}{\sqrt{S^2 \ \frac{1}{n_1} \Gamma \frac{1}{n_2}}}$$

$$X \frac{Z0.02 \, Z1.28}{\sqrt{5.012 \ \frac{1}{6} \Gamma \frac{1}{6}}}$$

$$XZ1.01$$

/t/ = -1.01 [Source: Appendix A (XVII)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= $n_1 + n_2 - 2$.

Decision: Since the calculated value of't' i.e. 1.01 is less than tabulated value of 't'at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between mean ratio of ROTD of NBBL and HBL.

4.3.4.9 Test of hypothesis on Return on Capital Employed.(ROCE)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between the average return on capital employed ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e. there is significant difference between the average return on capital employed ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\bar{X}_1 Z \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1}\Gamma\frac{1}{n_2}\right)}}$$

$$X\frac{Z1.86\,Z3.92}{\sqrt{39.84\left(\frac{1}{6}\Gamma\frac{1}{6}\right)}}$$

$$XZ1.59$$

/t/ = 1.59 [Source: Appendix A (XVIII)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= n_1 +n_2-2 .

Decision: Since the calculated value of't' i.e. 1.59 is less than tabulated value of 't' at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between mean ratio of ROCE of NBBL and HBL.

4.3.4.10 Test of hypothesis on Return on Total Assets (ROTA)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between average return on total assets ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e there is significant difference between average return on total assets ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{Z0.09\ Z1.13}{\sqrt{4.033\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

XZ1.05

/t/ = 1.05 [Source: Appendix A(XIX)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= n_1 +n_2-2 .

Decision: Since the calculated value of 't' i.e.1.05 is less than tabulated value of 't' at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between mean ratio of ROTA of NBBL and HBL.

4.3.4.11 Test of hypothesis on Return as on Shareholders Equity (ROSE)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between average return on shareholders equity ratios of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ i.e there is significant difference between average return on shareholders equity ratios of NBBL and HBL.

Test statistics: under $H_{O,}$ test statistics is:

$$t=\frac{\overline{X}_1 Z\overline{X}_2}{\sqrt{S^2\ \frac{1}{n_1}\Gamma\frac{1}{n_2}}}$$

$$X\frac{Z38.27\ Z16.05}{\sqrt{9605.14\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

XZ0.96

/t/ = -0.96 [Source: Appendix A(XX)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= $n_1 + n_2 - 2$.

Decision: Since the calculated value of 't' i.e. 0.96 is less than tabulated value of 't' at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between average return of ROSE NBBL and HBL.

4.3.4.12 Test of hypothesis on Earning Per Share (EPS)

H_O : $\mu X_1 = \mu X_2$ i.e., there is no significant difference between average earning per share of NBBL and HBL.

H_1 : $\mu X_1 \neq \mu X_2$ there is no significant difference between average earning per share of NBBL and HBL. :

Test statistics: under $H_{O,}$ test statistics is:

$$t = \frac{\bar{X}_1 Z \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} \Gamma \frac{1}{n_2}\right)}}$$

$$X \frac{22.83 Z 63.89}{\sqrt{3137.23 \left(\frac{1}{6} \Gamma \frac{1}{6}\right)}}$$

$$X Z 1.27$$

/t/ = -1.27 [Source: Appendix A (XXI)]

Tabulated value of 't' at 5% level of significance for 10 degree of freedom (df) is 2.228

where df= $n_1 + n_2 - 2$.

Decision: Since the calculated value of't' i.e. 1.27 is less than tabulated value of 't' at 5% significant level i.e. 2.228, h_0 is accepted which explains that there is no significant difference between the mean ratio of EPS NBBL and HBL.

4.3.5 Major Findings

4.3.5.1 Findings from Primary Data Analysis.

1. With respect to capital structure model majority of the respondents stated that low geared capital structure is preferred for commercial banks.

2. Majority of respondents, who preferred low geared capital structure stated the reason behind preferring it, is due to the lack of regular fixed income in paying the interest expenses and to claim more on earned profit by the shareholders.
3. Majority of respondents, who preferred high geared capital structure stated the reason behind preferring it, is due to the regular fixed income of commercial banks to meet its fixed interest expenses and to enjoy high EPS.
4. Majority of respondents stated that return from shareholders equity is higher than return from debt, is the cause of changing the present capital structure from high geared to low geared.
5. All the respondents of both the sample banks considered only fixed deposit under debt heading.
6. Majority of the respondents stated that return on investment in different sector as a major profit generating source of the banks.
7. Majority of the respondents stated that debt serving capacity of the bank depends upon EBIT and sound debt policy.
8. Majority of the respondents stated that their banks claimed of having sound debt serving capacity since they pay all debt in time.
9. Majority of the respondents stated that people invest in share capital to receive dividend.
10. Majority of the respondents stated that cost of capital should be considered while choosing an appropriate capital structure.
11. Majority of the respondents stated that all financial decisions are equally important to the bank.

4.3.5.2 Findings from Secondary Data Analysis.

1. NBBL has collected funds in the form of fixed deposits more than that by HBL since 2003/04. Annual growth rate of fixed deposits in HBL has been found more than that in NBBL i.e. 11.16 % > (3.76) %. The variability of deposits have been found more in HBL than in NBBL i.e. C.V. =956.16 > 639.56. NBBL has decreased & HBL has increased fixed deposit in its financial mix.

2. Net worth of HBL has been found more in each year of study period than NBBL along with higher mean ratio. Annual rate of percentage change in net worth of both banks have been found lower in later years in comparison to starting years. Annual growth rate of Net worth in HBL has been found more than that in NBBL. HBL has increased the net worth in its financial mix where as NBBL has decreased its net worth.
3. Debt equity ratio in terms of fixed deposits to net worth of both the banks have been decreasing in the later years except the final year of study. However, both the banks have been using more fixed deposits in relation to net worth. Comparatively, NBBL has higher ratio in each year with higher mean ratio than that of HBL. NBBL has been found to be highly leveraged than that of HBL. Fixed deposit to net worth ratio of both the banks have been found maximum in year 2003/04. It can be concluded that both the banks have more claim of creditors than that of owners. Moreover, in banking business, fixed deposits on which the banks are dependent to strengthen the profitability would obviously be more than the equity capital when capital markets are not well developed.
4. Debt Capital ratio in terms of fixed deposits to capital employed of both the banks has been in fluctuating trend. The portion of fixed deposits in capital employed ratio of 90.18 percent of capital employed has been financed by fixed deposits in case of NBBL and 73.52 percent of capital employed has been financed by fixed deposits of HBL. Comparatively, NBBL has higher fixed deposits to capital employed than HBL. So, borrowed fund has greater contribution to capital employed in NBBL than HBL.
5. Fixed deposit to total asset ratio of both the banks have been found in fluctuating trend but the variability of ratio have been found more in NBBL than in HBL with C.V. being 25.14 percent and 20.93 percent respectively. Comparatively, NBBL has higher ratio in each year with higher mean ratio than that of HBL. On an average 44 percent of total asset has been financed by fixed deposits of NBBL whereas 21.40 percent of total assets have been financed by fixed of HBL. In 2008/09, this ratio of NBBL and HBL has been

found 26.64 percent and 21.15 percent respectively. This shows that both the banks have been decreasing the portion pf fixed deposits in total assets in later years of the study periods in comparison to earlier years.

6. The contribution of fixed deposits in total debt has been measured by fixed deposits to total debt ratio. On an average, the ratio of NBBL and HBL constituted 12.06 percent and 5.06 percent respectively. This shows that 87.94 percent and 94.94 percent of total debt of NBBL and HBL has been financed by current liabilities. Comparatively, claim of fixed depositors upon the total debt of the firm has been more in NBBL than in HBL.
7. Debt equity ratio in terms of total debt to net worth of both the banks (i.e. NBBL and HBL) has been found in fluctuating trend. The ratios of both the banks are in decreasing trend in later years as compared to that of previous years. The ratio of NBBL have been found extremely higher in 2008/09.HBL has been, to some extent, able to reduce the debt capital in its financial structure compared to NBB. However, both the banks have been using more debt capital in its financial mix which depicts that banks have been facing heavy burden of interest payment.
8. Debt capital ratio in terms of total debt to total asset ratio shows that total assets has been financed more by funds contributed by outsiders than owners in both the banks. This further explains that the banks have been employing less equity financing in raising the assets. NBBL has the average ratio of 95015 percent, which shows that 95.15 percent of debt capital and remaining 4.85 percent of share holder's equity has been financed for its assets. Similarly, HBL has an average ratio of 92.61 percent of debt capital and remaining 7.39 percent of shareholders equity has been financed for its assets. However, debt financing of both the banks have been very high. The assets of both the banks have been financed more by funds collected from creditors than owners. In comparison, NBBL has used more debt capital to finance its assets than that used by HBL. In both the banks, the creditor's margin of safety has been found very low or they have higher risk and creditors claim on total assets is very high. If the

banks would be unsuccessful to yield a substantial percentage of return, the creditors should bear heavy loss but the owners would suffer from moderate loss. Due to the undeveloped capital markets, people are attracted towards depositing their money in the banks to avoid risk ness inherent in security.

9. Capital adequacy ratios of both the banks have been found in fluctuating trend. Over the study periods both the banks have been maintaining capital adequacy ratio as directed by central bank. (i.e. NRB) in order to safeguard the depositors interest. On an average, capital adequacy ratio of HBL (i.e. 10.03 percent) has been found higher than that of HBL (i.e. 7.81 percent). So, it can be concluded that HBL has maintained excess capital fund to safeguard the depositor's interest.
10. The average interest coverage ratio of HBL (i.e. 1.69 times) has been found more than that of NBBL (i.e. 1.09 times). This shows that debt serving capacity of HBL is higher than that of NBBL. Both the banks are able to serve the debt capital but the ratio of both the banks cannot be said sufficient where debt capital is extremely higher.
11. According to Net Income Approach, the firm can increase its value or lower the overall cost of capital by increasing the amount of debt in the capital structure. In the case of NBBL the value of firm has direct relation with debt capital i.e. increase in debt has increased the value of the firm and vice- versa. But the overall capitalization rate is not under its assumption i.e. increase in debt has increased the overall capitalization rate. Similarly, in HBL the value of firm has direct relation with debt capital i.e. increase in debt capital has increased the value of the firm. Likewise, the overall capitalization rate is also under its assumption except in year 2004/05.
12. According to Net Operating Income Approach, the overall capitalization rate (K_o) remains constant for all degree of leverage but equity capitalization rate (K_e) increases with the increase in degree of leverage.
13. Interest margin ratios of both the banks have been in fluctuating trend. Average interest margin ratio of HBL (i.e. 4.88 percent) has been found higher than that of NBBL (i.e. 4.78 percent), operating under the same environment. Therefore, HBL seems to be more efficient in utilizing its assets in interest generating purpose compared to NBBL.

14. Return on total assets of both the bank has been found in fluctuating trend. HBL has higher average ratio (i.e. 1.13 percent) than NBBL (i.e. -0.09 percent). So, it can be concluded that HBL has insufficient return whereas NBBL has negative return. However, HBL is efficient to utilize its resources in the most profitable projects compared to NBBL.
15. Return from the employment of capital has been in fluctuating trend of both the banks. Comparatively, return on capital employed ratio of HBL has been found higher in each year of the study period with higher mean ratio than that of NBBL. (i.e. 3.92 percent > -1.86 percent). This shows that HBL has been able to utilize the long term funds of owners and creditors into profitable sector than NBBL.
16. Returns on shareholders equity ratio of both the banks have been found decreased in last year as compared to that of base year.

    Average ROSE of HBL has been found higher than NBBL (16.05 percent > -38.27 percent), which reveals that HBL has more efficiency to utilize shareholders fund to generate more profit than NBBL. NBBL has ROSE in negative.
17. Return on total deposits of NBBL has been found in decreasing trend whereas it has been found in fluctuating trend incase of HBL. In 2008/09, return on total deposits of both banks have found decreased as compared to that of base year. Though , HBL has maintained profitability
18. HBL as significant earning per share i.e. the strength of share in the market, whereas NBBL has very low earning per share i.e. the weak position of share in the market. Earning per share of NBBL is in decreasing trend except in year 2006/07 and it is only in decreasing trend in HBL. The change ratio to declining rate has been found more in NBBL than in HBL. EPS of HBL has been found higher in each year than NBBL except in year 2003/04. HBL mean ratio is higher than NBBL i.e. (63.89 > 22.82). Therefore, it can be concluded that HBL has strength of share in the market; HBL leads NBBL in this regard.
19. On an average, both dividends per share and dividend payout ratio of HBL have been found higher than that of NBBL. This shows that HBL is more efficient than NBBL in fulfilling shareholders expectations by offering higher dividend.
20. Total operating income of the banks constitute of interest income, commission and discount income, foreign exchange income and other income. Among these

sources of income interest income has the greatest contribution in total operating income of both the banks. Commission and discount has recorded the second position and foreign exchange income and other income comes thereafter. Other income has only nominal contribution. Comparatively, HBL has higher operating income from interest income and foreign exchange income. The main sources of interest income of both the banks are from loan, advances and overdrafts and investment in government securities. The average investment in loan and advances and government securities of HBL is higher than that of NBBL. This is the cause of being higher interest income in HBL compared to NBBL. Because of higher foreign exchange income, HBL seems to be more efficient in dealing with foreign currencies and providing services to customers than that of NBBL.

21. The correlation coefficient between EBIT & Interest payment in case of NBBL & HBL bank as been found 0.063 & 0.74 respectively which shows low degree of positive and high degree of positive relationship between the variable in NBBL and HBL respectively. Considering the Probable Error (P.E) the value of 'r' in NBBL is less than P.E which shows that the value of 'r' is insignificant. i.e. there is no evidence of relationship between EBIT and interest payment. Similarly, considering the probable error of HBL, the value of 'r' is 6 times greater than P.E. Therefore, the value of 'r' is significant i.e. there is significant relationship between EBIT and interest payment which shows HBL is significantly able to serve its debt capital.
22. The correlation coefficient between return and total debt capital incase of NBBL and HBL have been found 0.16 and 0.617 respectively. This shows that there is low and high degree of positive correlation in NBBL and HBL respectively. Considering the probable error (P.E), the value of 'r' in NBBL is less than P.E which depicts that there is no evidence of relationship between the variables. Likewise, the value of 'r' in HBL is less than 6 times P.E. which shows that nothing can be calculated with certainty.
23. The correlation coefficient between ROSE and DER in NBBL is – 0.853 and in HBL is 0.943 which shows high degree of negative and high degree of positive relationship between ROSE and DER in NBBL and HBL respectively. The value of 'r' is found less than P.E. in NBBL. So, it can be concluded that there is no

evidence of correlation i.e. the value of 'r' is in significant in NBBL. Whereas, in HBL the value of 'r' is higher than 6 times P.E. so it can be concluded that there is significant relationship between ROSE and DER. Hence, it is found that there is no relationship between capital structure and profitability in NBBL and significant relationship between capital structure and profitability in HBL.

24. The correlation coefficient between overall capitalization (K_o) & debt equity ratio (DER) in terms of fixed deposit to net worth of NBBL & HBL have been found -0.936 & 0.037 in NBBL & HBL respectively which shows that there is high degree of negative relationship between the variable in NBBL & low degree of positive relationship in HBL. Considering the probable error, the value of 'r' is less than probable error in both the banks, which indicates that there is no evidence of relationship between variables.
25. According to the test of hypothesis, it has been found that there is significant difference between the mean ratios fixed deposit to net worth, fixed deposit to capital employed ratio, total debt to total assets ratio of NBBL and HBL at 5 percent significant level.

    According to the test of hypothesis, it has been found that there is no significant difference between the mean ratio of total debt to net worth, capital adequacy ratio, interest coverage ratio, interest margin, return on total deposits, return on shareholders equity, earning per share, and return on capital employed of NBBL and HBL at 5 percent significant level.

    It can be concluded, in comparison the capital structure pattern of both the banks are in moderate pattern since three ratios out of five are against null hypothesis. But it has been found not significant difference between the profitability ratios of both the banks. This shows that profitability ratios of both banks are in similar pattern. Therefore, from the result obtained above, it can be concluded that there is moderate relationship between the capital structure and profitability of the banks. Further, it can be concluded that only capital structure decision cannot affect profitability. Other factor like operating efficiency, assets uses efficiency; sales turnover etc also have significant impact on profitability.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.1. Summary

This study entitled "Capital structure and Profitability: Comparative Study between Nepal Bangladesh Bank and Himalayan Bank Limited" has been prepared to fulfill the requirement of Master's of Business Studies (MBS). The main objective of this study is to evaluate capital structure and profitability, study the debt serving capacity and analyze the relationship between capital structure and profitability of the banks under study. This study is based on the secondary data collected from the concerned banks, documents and published and unpublished materials & primary data collected from questionnaire. Descriptive as well as analytical research has been designed to attain the objectives of the study. The methods of investigation is followed by accounting /financial tools i.e. percent, mean, coefficient of variation, Karl Pearson's correlation coefficient and test of hypothesis. The scheme of the study is divided into five chapters. The brief introduction of the study has been already presented in the first chapters. The brief introduction of the study has been already presented in the first chapter. In the second chapter, the literature related to the study has been reviewed. Research methodology has been explained in the third chapter and the available data have been presented and analyzed in the fourth chapter. This is the last chapter of the study .This chapter incorporates summary of the study, conclusion of the analysis and recommendations.

5.2 Conclusions

Based on the major findings that have been obtained by analyzing capital structure and profitability, NBBL has suffered loss in the last year i.e.2008/09, it is due to the increase in staff expenses, office operating expenses. NBBL has retained more profit, no dividend is distributed in the last five years and HBL has not distributed dividend in the last year i.e. 2008/09.

From the major findings of primary data, the following conclusions are drawn:

1. Fixed regular income and cost of capital are the factors that determine the capital structure.
2. The net return (i.e. ROTD & ROSE) is considered while changing the capital structure composition.
3. Bank that pays all debt in time is said to have sound debt policy.
4. Although all financial decisions (capital structure decision, investment decision and dividend decision) are equally important in the bank, the major earning source is investment.
5. People invest in share capital to receive dividend.
6. Only fixed deposit lies under debt heading.

From the major findings of secondary data, the following conclusions are drawn:

1 Both the banks have extremely used debt capital in its financial structure (i.e. fixed deposits to net worth and total debt to net worth are very higher.)
2 Both the banks have higher geared up capital structure.
3 Annual growth rate in shareholders equity of NBBL is higher than HBL even though it is in negative. Similarly, the annual growth rate of fixed deposits of HBL is higher than NBBL
4 Both the banks are able to maintain capital adequacy ratio.
5 NBBL is not able to utilize shareholders equity in efficient manner whereas; HBL has been able to utilize shareholders equity in moderate level.
6 HBL has significant strength of share in the market.
7 Return ratios of NBBL are poor, at the same time; return ratios of HBL are not satisfactory. Therefore, being geared up capital structure and insufficient return represents the weak aspects of these two banks.
8 NBBL is weak in using long term funds and total debt and HBL performance in using long term fund and total debt is not satisfactory.
9 All operating expenses of HBL are higher than NBBL.
10 Both the banks are significantly able to serve their debt capital. However, interest coverage ratio of both the banks cannot be regarded sufficient where debt capital is extremely higher.

11 Debt equity ratio tends to increase return on shareholders equity significantly in case of both the bank.

12 It cannot be ascertained to establish the relationship that the capital structure decision strongly affects the profitability incase of both the banks. Since, other factors like operating efficiency, assets use efficiency and sales turnover etc. also have significant impact on profitability.

In comparison, it is found that HBL seems to be better in terms of profitability and capital structure than NBBL. Thus, it can be remarked from the analysis that HBL promises a better future. Increase in value of the firm is the result of increasing market price of share not only leverage and it shows that only leverage cannot determine the overall capitalization rate.

5.3. Recommendations.

After identifying strengths and weaknesses derived from major findings, some practicable recommendations are suggested. It is expected that the provided suggestions would help in taking prompt decisions in relation to capital structure management and profitability for mitigating the constraints. The recommendations are as below.

Recommendations for Primary Findings.

1 Banks are recommended to use low geared capital structure when they are newly established because at this point bank does not have sufficient fixed regular income to meet their fixed charges (interest expenses) but, when the bank starts earning profit, it is recommended to change its capital structure into high geared because at this point they can meet their fixed interest expenses.

2 Banks are recommended to go through its cost of capital too while changing capital structure composition. If the cost of capital is lower than its return (i.e. ROTD), they are recommended to use more debt capital. If the cost of capital is higher than its return (i.e.ROTD), they are recommended to use only equity capital, but the banks cannot run without debt because the major function of the

bank is to collect debt. So, they are recommended to use its debt in profitable sectors only.

3 Banks are recommended to distribute more profit as dividend to their shareholders so, that they can increase their goodwill and can raise more share capital when their shares are issued in the market.

4 Banks are recommended to keep sound debt policy as it is.

5 They are recommended to provide various schemes to attract more depositors to the bank.

Recommendations for secondary findings.

1 The capital structure of both the banks is highly leveraged. The proportion of debt and equity capital should be decided keeping in mind the effects of tax advantage and financial distress. Since, the debt equity ratio of both the banks have been found extremely higher, the capital structure position is not better. Keeping this fact in mind, both the banks are required to maintain improved capital structure by increasing equity base i.e. issuing more capital, expanding general reserve and retaining more earnings. With this improved capital structure of the banks, it will compromise among the conflicting factors of cost and risk.

2 Return ratios like return on total debt and return on total assets are weak in NBBL; at the mean time it is not satisfactory in HBL. Having geared up capital structure position and insufficient returns represents the weak aspects of these two banks. Both the banks are suggested to use the resources into the most profitable sectors.

3 HBL has paid more dividends and NBBL has retained higher portion of earning and distributed lower dividend except the final year of study. Since, the bank suffered form heavy loss. So it is suggested that NBBL should increase dividend payout ratio by distributing more dividend to shareholders. However, an ideal dividend payout ratio is based upon shareholders expectations and growth requirement of the bank. So it is difficult to suggest on the basis of present study as DPR is still a controversial issue.

4 Regarding operating income analysis interest income and foreign exchange income of HBL, but commission and discount income and other income of NBBL have been found higher. Therefore, HBL is recommended to concentrate its activity in purchasing and discounting bills and accepting guarantees where as NBBL is recommended to concentrate its activity in dealing with foreign currencies and to invest more in loan and advance. However, operating income level does not seem to be satisfactory for both the banks. Thus, both the banks should increase their operational efficiency by mobilizing their resources maximum in profit generating sectors.

5 Both the banks vary incase of total assets, number of staff, number of bank branches and their volume of transactions. Both the banks are well established, however office operating expenses of HBL is higher than that of NBBL considering the number of branches. And also provision for staff bonus of HBL is quite higher than that of NBBL considering the number of staff. Therefore, HBL is suggested to curtail down the unnecessary expenses which ultimately improves the profitability of the bank than the present condition. However, operating expenses level of both the banks seem to be high. So, it is preferable to minimize such expenses by them.

6 The banks have lack of theoretical and practical knowledge with regard to capital structure theories, thus they haven't utilized their sources of fund in a proper way. So, both the banks are recommended to follow well financial mix. This type of capital structure policy helps to provide adequate returns to common shareholders and helps to increase the market value per share. Besides this, it will help for long run survival of the firms.

7 Majority of join venture banks have been found to be profit oriented ignoring their social responsibility and which is not a proper strategy to sustain in long run. So, both the banks are suggested to render services even in rural areas providing special loans to the deprived and priority sectors, which might further intensify the goodwill of the banks in future. In addition, they have not been able to collect the savings from rural areas. So, they are recommended to open up branches in rural areas.

8 It is true that the financial strength of a bank heavily depends upon the market in urban area. But to concentrate banking services only in urban area is not desirable for the economic development of the country. Rural communities are neglected by JVB's. They have not opened their branches to serve society adequately. Concentration of branches only in urban areas does not make any contribution to the economic development of the country. Banks are the essential and effective means to mobilize financial resources throughout the country. So, the banks are required to be cooperative and should open up or expand their branches to the rural areas. This will after all influence the profitability of the banks.

9 The economic liberalization policy adopted by government has created an environment of strict competition even in the banking sectors. In this context, both the banks are suggested to formulate and implement some sound and efficient financial and non- financial strategies to meet required level of profitability as well as the social responsibility.

10 It has been found that the modern banking technologies followed by NRB of Nepal are mostly beneficial to the high level of depositors. So, both the banks are suggested here to make these technologies accessible to all kinds of their depositors as far as possible.

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APPENDIX A (I)

Dear Sir\Madam

I am an MBS final year student of **Post Graduate Campus** preparing a thesis on *"A Comparative Study Of Capital Structure and Profitability Between Nepal Bangladesh Bank Limited and Himalayan Bank Limited"* to fulfill the partial requirement of my study. I therefore request you to fill up this questionnaire and help me to carry out my study. Your response would be of utmost help to me in conducting my study. All your answer would be taken confidentially and would not be provided for any business application.

Name:

Organization:

Position:

Date

Signature:

Questionnaire

Please circle the correct answer.

Question no.1. What type of capital structure do you prefer for a commercial bank?

a. High geared capital structure.(Debt capital +Preference share capital > Ordinary share capital)
b. Low geared capital structure. (Debt capital +Preference share capital <Ordinary share capital)

Question no.2. Why do you prefer particular type of capital structure (Either high geared or low geared capital structure)?

Note: Please select “2A” to answer if you have selected option “a” (High geared capital structure) in question no.1 and select “2B” to answer if you have selected option “b”(Low geared capital structure) in question no 1.

2A. High geared capital structure is preferred because

a. a. Commercial banks have regular and sufficient fixed income to pay its fixed charges (interest on debt and dividend on preference share).
b. Shareholders can enjoy high EPS incase of profit.
c. Above all.
d. If any other reason, please specify…….
……....

2B Low geared capital structure is preferred because

a. It has less liability to pay fixed charges (interest on debt and dividend on preference share).
b. Ordinary shareholders can enjoy more earned profit.
c. Commercial banks do not have sufficient regular fixed income.
d. Above all.
e. If any other reason, please specify……
……

Question no.3. Is there any necessity to change the present capital structure composition in your bank?

a. Yes.
b. No.
c. No idea

Question no.4.Why is it necessary to change capital structure in your bank? (Please answer this question if your answer is “Yes” in the above question)

a. At present capital structure, bank is obliged to pay large amount of interest.
b. At present capital structure, bank is not using sufficient outsider’s fund.
c. Bank is making large amount of profit so it is profitable to repay its debt capital and to use its shareholders fund to invest in profitable sectors instead of retaining it.

d. At present capital structure, bank is suffering from loss.

e. If any other reason, please specify……...

……

Question no 5. In your debt heading, are you using fixed deposits or only debenture?

a. Only fixed deposits
b. Only debenture.
c. Both.

Question no.6. What do you think is the main profit generating source of banks?

a. Return on investment in different sectors.
b. Interest earned from loan and advances made to customer.
c. Other miscellaneous fees and commissions of bank.

Question no.7 What does the debt serving capacity depend on?

a. The amount of current assets that it holds.
b. Earning before interest and tax and sound loan policy.
c. Net income
d. Earning before tax.

Question no 8.How can you claim that your bank has sound debt serving capacity?

a. Because our bank holds a large amount of current assets.
b. Because we pay all debt in time.
c. Because we have sufficient earning before interest and tax (EBIT).
d. Because we have sound net income.
e. Because we pay dividend

Question no 9. Why do people invest in share capital?

a. To receive dividend.
b. To take part in management.
c. To get voting right.
d. To utilize surplus money.
e. This is the best method of investment.

Question no10. What factors should be considered to choose an appropriate capital structure?

a. Cost of capital
b. Return on capital employed.
c. Net income.
d. Earning before interest and tax.
e. Investment opportunities.

Question no 11 Which of the following decision, do you think, is the most important in the bank?

a. Capital structure decision.
b. Investment decision.
c. Dividend decision.
d. Above all.

RESPODENTS ANSWER SHEET SUMMARY.

Number of respondents of NBBL is presented in the following table

Question no.	Answer option				
	a	b	c	d	e
1.	5	5	*	*	*
2a	0	0	5	0	*
2b	0	0	1	4	0
3	5	5	0	*	*
4	3	0	2	0	0
5	10	0	0	*	*
6	2	8	0	*	*
7	0	8	2	0	*
8	0	4	6	0	0
9	6	0	0	2	2
10	2	2	0	2	4
11	0	4	6	0	*

[Note: * indicates that there is no answer option]

Number of respondents of HBL is presented in the following table.

Question no.	Answer option				
	a	b	c	d	e
1.	4	6	*	*	*
2a	0	0	4	0	*
2b	0	0	0	6	0
3	2	8	0	*	*
4	0	0	2	0	0
5	10	0	0	*	*
6	6	4	0	*	*
7	0	7	3	0	*
8	0	6	4	0	0
9	3	1	0	3	3
10	10	0	0	0	0
11	1	2	0	7	*

[Note: * indicates that there is no answer option]

Appendix A (II)
Correlation Coefficient between Interest Payment (X) and Earning before Interest and Taxes (Y) of NBBL

FY	X	Y	$x = X - \overline{X}$	$y = Y - \overline{Y}$	x^2	y^2	xy
2003/04	414.99	618.69	-125.73	39.69	15808.03	1570.53	-4982.67
2004/05	515.84	799.77	-24.88	220.71	619.01	48712.90	-5491.26
2005/06	550.06	650.84	9.34	71.78	87.23	5152.36	670.42
2006/07	594.58	786.09	53.86	207.03	2900.89	42861.42	11150.63
2007/08	620.94	720.59	80.22	141.53	6435.24	20030.74	11353.53
2008/09	547.94	-101.60	7.22	-680.66	52.12	463298.03	-4914.36
	$\overline{X}$=540.72	$\overline{Y}$=579.06			x^2= 25902.55	y^2= 581626.00	xy= 7786.28

Appendix A (III)
Correlation Coefficient between Interest Payment (X) and EBIT (Y) of HBL

FY	X	Y	$x = X - \overline{X}$	$y = Y - \overline{Y}$	x^2	y^2	xy
2003/04	594.80	908.50	8.95	-76.89	80.10	5912.07	-688.93
2004/05	734.52	1165.88	148.67	180.49	22102.77	32576.64	26833.45
2005/06	578.13	927.18	-7.72	-58.21	59.60	3387.40	449.38
2006/07	554.13	914.16	-31.72	-71.23	1006.16	5073.71	2259.42
2007/08	491.54	912.12	-94.31	-73.27	8894.38	5368.49	6910.09
2008/09	561.96	1084.50	-23.89	99.11	570.73	9822.79	-2367.74
	$\overline{X}$=585.85	$\overline{Y}$=985.39			x^2= 32713.74	y^2= 62140.95	xy= 33396.43

Value of Correlation Coefficient 'r'

NBBL HBL

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

$$r = \frac{7786.28}{\sqrt{25902.55 \mid 581626.00}}$$

$r = 0.063$

$r^2 = 0.0039$

P.E. $= 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.274$

6 P.E. $= 1.646$

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

$$r = \frac{33395.26}{\sqrt{32711.39 \mid 62140.95}}$$

$r = 0.74$

$r^2 = 0.55$

P.E. $= 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.124$

6 P.E. $= 0.72$

Appendix A (IV)
Correlation Coefficient between Return (X) and Total Debt Capital (Y) of NBBL

FY	X	Y	$x = \bar{X} - X$	$y = \bar{Y} - Y$	x^2	y^2	xy
2003/04	139.53	6950.62	184.75	-3830.47	34132.56	14672500.42	-707679
2004/05	198.75	9367.57	243.95	-1413.52	59511.60	1998038.79	-344828
2005/06	65.78	10475.74	111.00	-305.35	12321.00	93238.62	-33893.
2006/07	71.50	11248.69	116.73	467.60	13625.89	218649.76	54582.9
2007/08	2.65	13601.39	47.87	2820.30	2291.53	7954092.09	135007.
2008/09	-749.54	13042.57	-704.32	2261.48	496066.66	5114291.79	159280
	$\bar{X}$= -45.22	$\bar{Y}$= 10781.10			x^2= 617949.25	y^2= 30050811.47	xy= 695

Appendix A (V)
Correlation Coefficient between Return (X) and Total Debt Capital (Y) of HBL

FY	X	Y	$x = \bar{X} - X$	$y = \bar{Y} - Y$	x^2	y^2	xy
2003/04	199.38	14993.20	-49.76	-5863.91	2476.05	34385557.77	291847.29
2004/05	277.03	18302.30	27.89	-2554.81	777.85	6527105.23	-71228.38
2005/06	235.02	19814.31	-14.12	-1042.80	119.66	1087431.84	-14734.764
2006/07	212.13	22292.09	-37.01	1434.97	1370.48	2059167.6	-53122.95
2007/08	263.05	23437.85	13.91	2580.73	193.21	6660218.9	35872.29
2008/09	308.27	26302.94	59.13	5445.82	3495.17	29657064.39	321957.46
	$\bar{X}$= 249.14	$\bar{Y}$= 20857.11			x^2= 8512.86	y^2= 80376545.78	xy= 510590.94

Value of Correlation Coefficient 'r'
NBBL HBL

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

$$r = \frac{695994.91}{\sqrt{617949.25 \mid 30050800.47}}$$

$r = 0.1615$

$r^2 = 0.026$

$P.E. = 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.268$

$6 P.E. = 1.608$

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

$$r = \frac{510590.94}{\sqrt{8512.86 \mid 80376545.78}}$$

$r = 0.617$

$r^2 = 0.3806$

$P.E. = 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.1705$

$6 P.E. = 1.023$

Appendix A (VI)

Correlation Coefficient between Debt Equity Ratio (X) and Return on Equity (Y) of NBBL

FY	X	Y	$x = \bar{X} - X$	$y = \bar{Y} - Y$	x^2	y^2	xy
2003/04	1098.50	35.18	126.02	73.44	15881.04	5393.43	9254.90
2004/05	879.95	33.39	-92.53	71.65	8561.80	5133.72	-6629.77
2005/06	870.50	10.49	-101.98	48.75	10399.92	2376.56	-4971.52
2006/07	735.69	10.45	-236.79	48.71	56069.50	2372.66	-11534.04
2007/08	742.60	0.40	-229.88	38.66	52844.80	1494.60	-8887.16
2008/09	1507.66	-319.52	535.18	281.26	286417.60	79107.18	150524.72
	$\bar{X}$= 972.48	$\bar{Y}$= -38.27			x^2= 430217.48	y^2= 95892.797	xy= -173319.105

Appendix A (VII)

Correlation Coefficient between Debt Equity Ratio (X) and Return on Equity (Y) of HBL

FY	X	Y	$x = \bar{X} - X$	$y = \bar{Y} - Y$	x^2	y^2	xy
2003/04	449.97	22.90	143.70	6.86	20649.69	47.05	984.28
2004/05	411.20	23.12	104.93	7.08	11010.30	50.12	742.90
2005/06	365.01	15.65	58.74	-0.39	3450.38	0.15	-23.99
2006/07	168.18	11.13	-138.09	-4.91	19068.84	24.10	678.02
2007/08	205.51	11.47	100.76	-4.57	10152.57	20.88	460.47
2008/09	237.79	12.00	-68.48	-4.04	4689.51	16.32	276.65
	$\bar{X}$= 306.28	$\bar{Y}$= 16.05			x^2= 69024.59	y^2= 158.55	xy= 3119.99

Value of Correlation Coefficient 'r'

NBBL

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

$$r = \frac{Z173319.105}{\sqrt{430217.48 \mid 95892.77}}$$

$r = -0.85$

$r^2 = 0.72$

P.E. $= 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.075$

6 P.E. $= 0.449$

HBL

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

$$r = \frac{3119.99}{\sqrt{69024.59 \mid 158.55}}$$

$r = 0.94$

$r^2 = 0.88$

P.E. $= 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.031$

6 P.E. $= 0.183$

Appendix A (VIII)

Correlation Coefficient between Overall Capitalization Rate (X) and Debt Equity Ratio (Y) of NBBL

FY	X	Y	$x = \bar{X} - X$	$y = \bar{Y} - Y$	x^2	y^2	xy
2003/04	10.05	1098.50	1.47	126.02	2.16	15881.04	185.24
2004/05	10.15	879.95	1.57	-92.53	2.46	8561.80	-145.27
2005/06	9.02	870.50	0.44	-101.98	0.19	10399.92	-44.87
2006/07	12.42	735.69	3.84	-236.79	14.74	56069.50	-909.27
2007/08	11.72	742.60	3.14	-229.88	9.85	52844.81	-721.82
2008/09	-1.87	1507.66	10.45	535.18	109.20	286417.63	-5592.63
	$\bar{X}$= 8.58	$\bar{Y}$= 972.48			x^2= 138.62	y^2= 430217.50	xy= -7229.04

Appendix A (IX)

Correlation Coefficient between Overall Capitalization Rate (X) and Debt Equity Ratio (Y) of HBL

FY	X	Y	$x = \bar{X} - X$	$y = \bar{Y} - Y$	x^2	y^2	xy
2003/04	11.35	449.97	0.36	143.70	0.13	20649.69	51.73
2004/05	12.36	411.20	1.37	104.93	1.87	11010.30	143.75
2005/06	9.88	365.01	-1.12	58.74	1.72	3450.38	-65.78
2006/07	13.45	168.18	2.46	-138.09	6.05	19068.84	-339.72
2007/08	9.90	205.51	-1.09	-100.76	1.19	10152.57	110.84
2008/09	9.01	237.79	-1.98	-68.48	3.92	4689.51	136.61
	$\bar{X}$= 10.99	$\bar{Y}$= 306.28			x^2= 14.44	y^2= 69024.59	xy= 37.42

Value of Correlation Coefficient 'r'

NBBL

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

$r = \frac{Z7229.04}{\sqrt{138.62 \mid 430217.50}}$

$r = -0.936$

$r^2 = 0.876$

$P.E. = 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.034$

$6 P.E. = 0.2048$

HBL

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

$r = \frac{37.42}{\sqrt{14.44 \mid 69024.59}}$

$r = 0.037$

$r^2 = 0.0014$

$P.E. = 0.6745 (1 - r^2)/\sqrt{n}$

$= 0.2752$

$6 P.E. = 1.65$

Appendix A(X)
Fixed Deposits to Net Worth (FD/NW)

FY	NBBL		HBL	
	X_1	$dx_1^2 = (X_1-X_1)^2$	X_2	$dx_2^2=(X_2-X_2)^2$
2003/04	1098.51	15878.52	449.97	20646.82
2004/05	879.96	8563.65	411.21	11010.30
2005/06	870.51	10401.96	365.02	3450.39
2006/07	735.70	56074.24	168.18	19071.61
2007/08	742.61	52849.41	205.51	10154.59
2008/09	1507.71	286449.74	237.79	4690.88
	X_1= 5834.819	dx_1^2 = 430217.52	X_2= 1837.69	dx_2^2 = 69024.59

Where, X_1 = DER in terms of FD/NW of NBBL

$\underline{X_2}$ = DER in terms of FD/NW of HBL

$X_1 = X_1/n_1 = 5834.816/6 = 972.50$

$\overline{X}_2 = X_2/n_2 = 1837.69/6 = 306.28$

$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{430217.52 \Gamma 69024.59}{6 \Gamma 6 Z 2}$

$S^2 = 49924.21$

Appendix A (XI)
Total Debt to Net Worth (TD/NW)

FY	NBBL		HBL	
	X_1	$dx_1^2 = (X_1-X_1)^2$	X_2	$dx_2^2=(X_2-X_2)^2$
2003/04	1752.60	392652.62	1722.29	178954.38
2004/05	1574.06	648282.63	1537.29	56658.28
2005/06	1672.13	499976.27	1319.61	414.12
2006/07	1644.74	539460.87	1169.65	16798.60
2007/08	2071.58	94642.37	1022.63	76524.16
2008/09	5560.20	10118633.76	1024.10	75713.03
	X_1= 14275.14	dx_1^2 = 12293648.52	X_2= 7785.60	dx_2^2 = 405062.57

Where, X_1 = DER in terms of TD/NW of NBBL

X_2 = DER in terms of TD/NW of HBL

$\overline{X}_1 = X_1/n_1 = 14275.14/6 = 2379.22$

$\overline{X}_2 = X_2/n_2 = 7785.60/6 = 1299.26$

$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{12293648.52 \Gamma 405062.57}{6 \Gamma 6 Z 2}$

$S^2 = 1269871.109$

Appendix A (XII)
Fixed Deposits to Capital Employed (FD/CE)

FY	NBBL		HBL	
	X_1	$dx_1^2 = (X_1-X_1)^2$	X_2	$dx_2^2=(X_2-X_2)^2$
2003/04	91.66	2.19	81.82	68.89
2004/05	89.80	0.14	80.44	47.88
2005/06	89.70	0.23	78.50	24.80
2006/07	88.02	4.62	62.71	116.85
2007/08	88.13	4.20	67.27	39.06
2008/09	93.78	12.96	70.40	9.73
	X_1= 541.06	dx_1^2 = 24.35	X_2= 441.09	dx_2^2 = 307.22

Where, X_1 = DCR in terms of FD/CE of NBBL
X_2 = DCR in terms of FD/CE of HBL
$\overline{X_1}$ = X_1/n_1 = 541.06/6 =90.18
$\overline{X_2}$ = X_2/n_2 = 441.09/6 =73.52

$$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{24.35\,\Gamma\,307.22}{6\,\Gamma\,6\,Z2}$$

S^2 = 33.15

Appendix A (XIII)
Total Debt to Total Assets (TD/TA)

FY	NBBL		HBL	
	X_1	$dx_1^2 = \overline{(X_1-X_1)^2}$	X_2	$dx_2^{\overline{2}}=(X_2-X_2)^2$
2003/04	94.60	0.3025	94.51	3.61
2004/05	94.03	1.2544	93.86	1.56
2005/06	94.36	0.62	92.96	0.12
2006/07	92.27	0.77	92.12	0.25
2007/08	95.39	0.057	91.09	2.31
2008/09	98.23	9.48	91.10	2.28
	X_1=570.90	dx_1^2 = 12.49	X_2= 555.62	dx_2^2 = 10.12

Where, X_1 = DCR in terms of TD/TA of NBBL

X_2 = DCR in terms of TD/TA of HBL

$\overline{X_1}$ = X_1/n_1 = 570.90/6 =95.15

$\overline{X_2}$ = X_2/n_2 = 555.62/6 =92.61

$$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{12.49 \Gamma 10.12}{6 \Gamma 6 Z 2}$$

S^2 = 2.261

Appendix A (XIV)
Capital Adequacy Ratio

FY	NBBL		HBL	
	X_1	$dx_1^2 = \overline{(X_1-X_1)^2}$	X_2	$dx_2^2=\overline{(X_2-X_2)^2}$
2003/04	9.49	2.82	8.03	4.00
2004/05	9.30	2.22	8.01	4.08
2005/06	9.91	4.41	11.56	2.34
2006/07	8.11	0.09	10.93	0.81
2007/08	6.72	1.18	10.65	0.38
2008/09	3.35	19.89	11.01	0.96
	X_1= 46.88	dx_1^2 = 30.62	X_2= 60.19	dx_2^2 = 12.57

Where, X_1 = CAR of NBBL

X_2 = CAR of HBL

$\overline{X_1}$ = X_1/n_1 = 46.88/6 =7.81

$\overline{X_2}$ = X_2/n_2 = 60.19/6 =10.03

$$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{30.61\Gamma12.57}{6\Gamma6Z2}$$

S^2 = 4.31

Appendix A (XV)
Interest Margin (IM)

FY	NBBL		HBL	
	X_1	$dx_1^2 = \overline{(X_1-X_1)^2}$	X_2	$dx_2^2=\overline{(X_2-X_2)^2}$
2003/04	9.23	19.80	4.70	0.036
2004/05	3.86	0.85	5.27	0.15
2005/06	3.53	1.56	4.77	0.015
2006/07	4.51	0.07	4.62	0.07
2007/08	4.23	0.30	4.90	0.0004
2008/09	3.29	2.22	5.04	0.03
	X_1= 28.68	dx_1^2 =24.80	X_2= 29.28	dx_2^2 = 0.286

Where, X_1 = IM of NBBL

X_2 = IM of HBL

$\overline{X_1}$ = X_1/n_1 = 28.68/6 =4.78

$\overline{X_2}$ = X_2/n_2 = 29.28/6 =4.88

$$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{24.80 \Gamma 0.286}{6 \Gamma 6 Z 2}$$

S^2 = 2.51

Appendix A (XVI)
Interest Coverage Ratio (ICR)

FY				
	X_1	$dx_1^2 = \overline{(X_1-X_1)^2}$	X_2	$dx_2^2=\overline{(X_2-X_2)^2}$
2003/04	1.49	0.16	1.53	0.03
2004/05	1.55	0.21	1.59	0.01
2005/06	1.18	0.0081	1.60	0.09
2006/07	1.32	0.05	1.65	0.002
2007/08	1.16	0.0049	1.86	0.03
2008/09	-0.19	1.64	1.93	0.06
	X_1= 6.54	dx_1^2 =2.087	X_2= 10.14	dx_2^2 = 0.13

Where, X_1 = ICR of NBBL

X_2 = ICR of HBL

$\overline{X_1}$ = X_1/n_1 = 6.54/6 = 1.09

$\overline{X_2}$ = X_2/n_2 = 10.14/6 = 1.69

$$S^2 = \frac{dx_1^2 + dx_2^2}{n_1 + n_2 - 2} = \frac{2.087 \Gamma 0.13}{6 \Gamma 6 Z 2}$$

S^2 = 0.2217