A STUDY ON CAPITAL STRUCTURE MANAGEMENT OF COMMERCIAL BANKS

(With Reference to NIBL and NABIL)

By:

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VIVA-VOCE SHEET

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And found the thesis to be the original work of the student written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the **Degree of Master of Business Studies (M.B.S.)**

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DECLARATION

I hereby declare that the work reported in this **entitled** "A STUDY ON CAPITAL STRUCTURE MANAGEMENT OF COMMERCIAL BANKS" (With reference to NIBL And NABIL Bank Limited) submitted to Tribhuvan Multiple Campus, Palpa, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master of Business Studies (M. B. S.) Under the supervision of supervisor Mr. **Nirdosh Khanal** of Tribhuvan Multiple Campus, Palpa.

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CHAPTER - I
INTRODUCTION

1.1 Background of the Study

The word “banking” has been derived from French word “Benque” and Italian word “Banca” which means accumulation of money. In Italian business house, banking was called benchi and the word was received from the German word bench which means bank in English. Thus the first meaning of bank is derived from Italian and then from German. A bank is an establishment of the custody of money, which it pays out on customers’ orders. In other words, bank is an organization that collects the various types of deposit from people. Bank is a mediator between people because it takes deposits in one side and provides the loan to them in other side.

Generally, the term “Bank” refers to commercial banks. Commercial banks are the foundation of the national economy. They transfer monetary sources from savers to users. They involve in various functions like money creation, credit facilitating, foreign trade facilitating, safe keeping etc. Commercial banks have their own roles and contributions in the economic development. They are sources of economic development and they maintain economic confidence of various segments and extend credits to the people. Thus, activities of commercial banks are to eliminate poverty, reduce unemployment problems and increase economic growth.

Modern commercial banks can be identified by different names, such as business banks, retail banks, clearing banks, joint venture banks and merchant banks etc. Regardless of the name we give to banks, they all perform the same basic function i.e. they provide a link between lenders those who have surplus money and do not wish to spend immediately with borrowers, there who do not have surplus money but wish to borrow for investment in productive purpose.

Success and failure of any organization or banks mainly depends upon the structure of its optimum capital structure. It determines the profit making power of the bank as well as it helps to reduce its risk to minimum level. Capital Structure is the mixture of

sources of funds a firm uses (debt, preference stock & common stock). The amount of debt that a firm uses to finance its assets is called leverage. A firm with lot of debt in its capital structure is said to be highly levered. Capital structure can be viewed as the permanent financing the firm represents primarily by long term debt, prefer stock & common equity but excluding all short term credit.

The proportions of debt & equity determine a firm's capital structure. Capital is used in financing the firm's assets. The financial manager should seek that the capital structure which maximizes the value of the firm. The capital structure decision & the firm leverage position are co-determined. An optimal financial structure makes better use of society's fund of capital resources, and thus it increases the total wealth of society. Also, by increasing the firm's opportunity to engage in future wealth-creating investment, it increases the economy's rate of investment and growth. (Solomon; 1969:92)

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

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

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

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

The fund required are generated usually by two means i.e. Equity capital or the composition of long term sources of finance, such as preference capital, debenture long term debt and Equity capital including services and surpluses i.e. retained earnings and excluding short term debts.

The term of capital structure refers to the proportion of the debt and equity capital or the composition of long term sources of finance, such as preference capital, debentures long term debt and Equity capital including services and surpluses i.e. retained earnings and excluding short term debts.

The term capital structure refers to the mix of different types of funds a company uses to finance its activities; capital structure varies greatly from one company to another. For example some companies are financed mainly by shareholders funds whereas other makes much greater use of borrowings. Firstly we must decide what we mean by a good capital structure. This would be a capital structure, which results in al low overall cost of capital for the company, i.e. a low overall rate of return that need to be on funds provided .if the cost of capital is low then the discounted value of future cash flows generated by the company is high, resulting in a high overall company value. The objective is therefore to find the capital structure that gives the lowest overall cost of capital and consequently the highest company value.

The capital structure decision affects the total value of the firm the proper balance between debenture and Equity is necessary to ensure a tradeoff between risk and

return to the shareholders. The capital structure of the bank should be such that leads to the value maximization. The optimal capital structure i.e. the capital structure with reasonable proportion of debt and equity minimizes the opportunity cost of capital and maximizes the shareholders wealth.

The proportion of the short term & long term debt is considered when analyzing capital structure. And, when people refer to capital structure they are most likely referring to firm debt to equity ratio, which provides insight into how risky a company is. Usually a company more heavily financed by debt poses greater risks. So it gives hindsight to investor, which investment is worthy & which is not.

1.2 Profile of Sample Bank

1.2.1 Nepal Investment Bank Limited (NIBL)

Nepal Investment Bank Limited (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, Industrialists and businessmen, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal I Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank Annual General Meeting, Nepal Rastra Bank and Company Registrar s office. *(www.nibl.com.np)*

1.2.2 NABIL Bank Limited (NABIL)

NABIL Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984 under the company act 1964. The initial foreign partner handed its share to Emirates Bank Limited and now its shares are transferred to National Bank Limited in January 1, 2002. The bank was renamed as NABIL Bank Limited; previously it was named Nepal Arab Bank Limited. Out of total share, National Bank Limited (Bangladesh) holds 50% share and remaining 30% by general public and 20% by financial institution.

NABIL was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective,

NABIL provides a full range of commercial banking services. NABIL, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Tele banking system. (www.nabil.com.np)

1.3 Focus of the Study

Commercial banks have deep bearings upon the economic condition of the whole country. Especially in the developing country as ours, economic welfare largely depends on commercial banks and their capital management. Hence, in this study, the effort is made to highlight the capital structure policy of commercial bank which is being studied so that the study can help balance the proportion of the equity and debt capital used by the commercial banks.

Commercial bank in this era is not just about depositing and lending, but it act in various different aspects of services, hence this study tries to focus on various aspects on capital structure of commercial banks, with specific focus on Nepal Investment Bank Ltd. In this regard apart from capital structure, this study also focuses on cost of capital, earning per share of bank, management and performance of bank with help of various tools.

1.4 Statement of the Problems

For developing country like Nepal, banks are the strong factor in economic development as they provide credit to businesses and industries as well as various other areas. While doing so they also have to keep their capital structure in balanced and proper ratio as per guidelines of central bank. But in Nepal, there is lack of proper utilization of capital partly due to lack of proper knowledge and guidelines and partly due to mismanagement of funds. There are still lots of cases, where loans are provided without following proper guidelines, which basically has caused a lot of problems for

various commercial banks in Nepal with the increase in bad debts. Thus, the matter of assisting in economic growth of the company growth of the company by these banks is far away from the reality and in this context of being burden to themselves due to the large proportion of non-performing loan.

Capital structure refers to the proportion of different types of securities issued by the firm like common shares, long term debt, preference share capital, debentures and retained earnings. We know that major portion of the capital comprises of owners fund and creditors fund. The owners expect dividend and appreciation in the share price whereas creditors expect interest and return of the fund at the mentioned time. So the capital structure of the firm is important factor in determining the success of the firms. So the challenge for commercial banks is to make correct capital structure decisions regarding debt and equity. This present study will try to analyze and examine the practice of capital structure in Nepal Investment Bank Ltd. and Nabil Bank limited and try to analyze and answer following questions:

- To what extent has the process of capital structure management is followed in Nepal Investment Bank Ltd. and Nabil Bank Limited and what can be done to improve it?
- What are actual overall financial conditions of these banks?
- Is return on equity of these banks satisfactory in relation to risk?
- How far the banks under study are able to generate income from utilization of debt efficiency?
- Does the capital structure of bank affects its growth or not?
- Does the capital structure affects Profitability of the firm?
- Do the banks are enjoying the optimal capital structure?
- How are the commercial banks managing their financial needs?

1.4 Objective of the Study

This main objective of this study is to study various aspects of capital structure management of selected commercial bank i.e. Nepal Investment Bank Ltd. and Nabil Bank Ltd. Besides this, other specific objectives of the study are:

- To evaluate the role of capital structure on the growth of selected commercial banks in Nepal.

- To analyze the capital structure of the selected commercial banks in Nepal.
- To analyze the relationship of the capital structure with various important variable such as earning per share, dividend per share, & net worth.
- To analyze market value of selected commercial banks.

1.5 Significance of the Study

This study is concerned with capital structure of Nepal Investment Bank Ltd. And this study is done with the help of performance of this bank over last five years. Hence, this bank's capital structure management over last five years could be significant in studying. Capital structure, itself as a field of study, has become the vital & important tool in the field of managerial decisions. Hence, this study will very useful to decision maker & further researcher, too.

The financial institutions, holding render & owner, are more concern with the firm's long-term financial strength. To judge the long term financial position of firm capital structure is worthy to analysis. Capital structure analysis would help to indicate & to follow the appropriate mix of debt & owners equity in financing the firm's assets. A firm having good return & efficient management is considered to be better & brighter in future. Therefore to these significances on account, this study on behalf of firm's capital structure is justified as a specific subject matter.

1.6 Limitations of the Study

There are limitations of this thesis, which on generalization can be inadequate coverage of banking sector as a whole, period taken & reliability of statistical tools used and other variables. This study is simply a partial requirement of MBS program. So, this study will be limited by following data.

- Only secondary data will be analyzed to interpreter results emerging from decision so the results depend on reliability of secondary.
- The study period only covers fiscal years beginning 2007/2008 to 2011/2012.
- There are many factors that affect capital structure of bank. However only those factors related with comparative capital structure will be taken into consideration in this study.

- This study only focuses on capital structure and ignores other aspects of banks.
- Only two commercial banks are taken into consideration in this study.

1.7 Organization of the Study

This study has been categorized in five chapters. Each denotes the specific aspect of the study.

Chapter I: Introduction

This chapter deals with the subject matter of the study consisting introduction, profile of concerned banks, focus of the study, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

Chapter II: Review of Literature

This chapter deals with review of available literature of studies related to the subject matter. It contains conceptual framework, review of related journals & articles and review of thesis.

Chapter III: Research Methodology

This chapter is about the research methodology. It offers the method of investigation followed to achieve objective of the study.

Chapter IV: Analysis & Presentation of Data

This chapter deals with the presentation & analysis of data by using financial & statistical tools and major findings.

Chapter V: Summary, Conclusions & Recommendations

This chapter consist output of the study which is presented in the form of summary, conclusions & recommendations.

Recommendation sheet, Declaration, Acknowledgement, Table of contents, List of table, List of figure, Abbreviation has been included at the beginning of this report where as bibliography and appendixes have been included at the end.

CHAPTER – II
REVIEW OF LITERATURE

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

Review of literature is an essential part of all studies. It is a way to discover what other research has uncovered in the area of this problem. The main objective of this review of literature is to-

- Establish a point of departure future research.
- Avoid investing problem that has already been definitely answered.
- To reveal area of needed research.
- Every possible efforts has been made in order to incorporate all the knowledge and information available in libraries related periodical and magazines, official and unofficial of the banks concerned etc *(*Wolf and Pant: 1999).

2.1 Conceptual Framework

2.1.1 Meaning and Concept of Capital Structure

Capital Structure refers to the relationship among various long term forms of financing which includes mainly three types securities i.e. equity shares, preference shares and debenture. It is a part of a firm's financial structure. Financial structure, presented in the liabilities side of balance sheet, includes both long term and short term debt and shareholder's equity. Capital structure is a part of financial structure of a firm that excludes short term debt.

"Financial structure is different from capital structure as capital structure includes only the long-term sources of financing while financial structure includes only the long-term and short-term sources of financing. Long term sources of financing include long-term debt (i.e. bond, debentures etc.) preferred stock and shareholder's equity. Conclusively, it can be said that capital structure is a part of financial structure not the whole." (Bhattarai; 2005)

Capital Structure is the mixture of sources of funds a firm uses (debt, preference stock & common stock). The amount of debt that a firm uses to finance its assets is called leverage. A firm with lot of debt in its capital structure is said to be highly levered. To an extent, degree of liquidation of a firm is also dependent on its capital structure. So, Capital Structure is simply the ratio of different kinds of securities raised by a firm as long-term finance. The capital structure involves two decisions-

a. Types of securities to be issued are equity shares, preference shares and long term borrowings (Debentures).
b. Relative ratio of securities can be determined by process of capital gearing. On this basis, the companies are divided into two-
    i. Highly geared companies- Those companies whose proportion of equity capitalization is small.
    ii. Low geared companies- Those companies whose equity capital dominates total capitalization.

"The firm's mix of different securities is known as capital structure. The choice of capital structure is fundamentally a marketing problem. The firm can issue dozen's of various securities in countless combination but it attempts to find the combination which maximizes its overall market value."*(*Brealey & Myers; 2002)

“The capital structure is the combination of long-term debt and equity. It is a part of financial structure i.e. comprised to the total combination of preferred stock, common stock, long term debt and current Liabilities. If current Liabilities are removed from it we get capital structure.” (Mathur; 1979:92)

Capital structure planning is the key to the objective of profit maximization which ensures minimum cost of capital and the maximum rate of return to the equity holders. The amount of capital a firm need is not its only financial consideration and

equally important is the capital mix: the kinds of capital that form the company's financial base. How much will be the equity money representing funds owned by the stockholders in the enterprises? A financial manager determines the mix of debt and equity securities which would maximize the value of the sock. To maximize the shareholder's wealth as well to minimize the opportunity cost of capital, optimal capital structure is required. Debt is an important part of capital structure and determines the leverage firm. It increases shareholder's return when the firm has highly operating income but makes them worse than they otherwise would be when the firm has low operating income.

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

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

"Financial leverage is related to the extent to which a firm relies on debt financing rather than equity. Measures of financial leverage are tools in determining the

probability that the firm will default on its debt contracts. The more debt a firm has, the more likely it is that the firm will become unable to fulfill its contractual obligations. In other words, too much debt can lead to a higher probability of insolvency and financial distress." (Ross, Westerfield, Jaffe; 2002)

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

2.1.2 Factors affecting Capital Structure

Following are some important factors which affect capital structure os an entity:

a. Trading on Equity

The word "equity" denotes the ownership of the company. Trading on equity means to take advantage of equity share capital to borrow funds on reasonable basis. It refers to additional profits that equity shareholders earn because of issuance of debentures and preference shares. It is based on the thought that if the rate of dividend on preference capital and the rate of interest on borrowed capital is lower than the general rate of company's earnings, equity shareholders are at advantage which means a company should go for a judicious blend of preference shares, equity shares as well as debentures. Trading on equity becomes more important when expectations of shareholders are high.

b. Degree of Control

In a company, it is the directors who are so called elected representatives of equity shareholders. These members have got maximum voting rights in a concern as compared to the preference shareholders and debenture holders. Preference shareholders have reasonably less voting rights while debenture holders have no voting rights. If the company's management policies are such that they want to retain their voting rights in their hands, the capital structure consists of debenture holders and loans rather than equity shares.

c. Flexibility of Financial Plan

In an enterprise, the capital structure should be such that there is both contractions as well as relaxation in plans. Debentures and loans can be refunded back as the time requires, while equity capital cannot be refunded at any point which provides rigidity to plans. Therefore, in order to make the capital structure possible, the company should go for issue of debentures and other loans.

d. Choice of Investors

The company's policy generally is to have different categories of investors for securities. Therefore, a capital structure should give enough choice to all kind of investors to invest. Bold and adventurous investors generally go for equity shares and loans and debentures are generally raised keeping into mind conscious investors.

e. Capital Market Condition

In the lifetime of the company, the market price of the shares has got an important influence. During the depression period, the company's capital structure generally consists of debentures and loans, while in period of boons and inflation, the company's capital should consist of share capital generally equity shares.

f. Period of Financing

When company wants to raise finance for short period, it goes for loans from banks and other institutions; while for long period it goes for issue of shares and debentures.

g. Cost of Financing

In a capital structure, the company has to look to the factor of cost when securities are raised. It is seen that debentures at the time of profit earning of company prove to be a cheaper source of finance as compared to equity shares where equity shareholders demand an extra share in profits.

h. Stability of Sales

An established business which has a growing market and high sales turnover, the company is in position to meet fixed commitments. Interest on debentures has to be paid regardless of profit. Therefore, when sales are high, thereby the profits are high and company is in better position to meet such fixed commitments like interest on debentures and dividends on preference shares. If company is having unstable sales,

then the company is not in position to meet fixed obligations. So, equity capital proves to be safe in such cases.

i. Sizes of a Company

Small size business firms' capital structure generally consists of loans from banks and retained profits. While on the other hand, big companies having goodwill, stability and an established profit can easily go for issuance of shares and debentures as well as loans and borrowings from financial institutions. The bigger the size, the wider is total capitalization.

2.1.3 Basic Assumptions and Definitions in Capital Structure Theories

The theories of Capital Structure basically are based upon following assumptions:

- All investors have complete knowledge of what future returns will be.
- All firms within an industry have the same risk regardless of capital structure
- No taxes (we will relax this assumption subsequently)
- No transactions costs
- Individuals can borrow as easily and at the same rate of interest as the corporation
- All earnings are paid out as dividends (thus, earnings are constant and there is no growth)
- The average cost of capital is constant

Following equations are used in Capital Structure Theories:

a) Cost of debt (K_d) = $\frac{Interest}{Debt} = \frac{I}{B}$

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

c) Overall Cost of Capital (Ko) = $K_d(B/V) + K_e(S/V)$

d) Value of the Firm (V) = B + S = $\frac{I}{K_d} + \frac{EBIT - I}{K_e}$

2.1.4 Capital Structure Theories

There have been various theories or approaches regarding Capital Structure in the course of time. Basically, there are four approaches to Capital Structure theory.

A. Traditional approach

B. Net income approach

C. Net operating income approach

D. Modigliani-Miller (M-M) approach

I. Without taxes

II. With taxes

The Net Income theory and Net Operating Income theory stand in extreme forms. Traditional approach stands in the midway between these two theories**.**

A. Traditional Approach

This Traditional theory was advocated by financial experts Ezta Solomon and Fred Weston**.** According to this theory a proper and right combination of debt and equity will always lead to market value enhancement of the firm. This approach accepts that the equity shareholders perceive financial risk and expect premiums for the risks undertaken. This theory also states that after a level of debt in the capital structure, the cost of equity capital increases.

"According to this view, the value of firm can be increased or the cost of capital can be reduced by a judicious mix of debt and equity capital, and that an optimum capital structure exists of every firm. This approach very clearly implies that the cost of capital decreases within the reasonable limit of debt and then increases with leverage. Thus, an optimum capital structure exists, and it occurs when the cost of capital is minimum or the value of firm is maximum." (Barges; 1983)

This traditional approach advocates that there are three stages in which overall cost of capital react to changes in capital structure.

a. First Stage:

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

b. Second Stage:

In the second stage, the firm has reached a certain degree of leverage. Increases in leverage have a negligible effect on the value or the cost of capital of the firm. This is

so because the increase in the cost of equity due to the added financial risk offset the advantage of low cost of debt. Within the range of the specific point, the value of the firm will be maximum or the overall cost of capital will be minimum.

c. Third Stage:

In the stage, the value of the firm decrease with leverage or the cost of the capital increases with leverage. This happens because investors perceive a high degree of financial risk and demand a higher equity capitalization rate, which offsets offset the advantage of low cost debt. So the three stages can be summarized as:

- Increase Valuation and decreased overall cost of capital.
- Optimum valuation and optimal overall cost of capital.
- Declined valuation and increases cost of capital.

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

Cost of Capital & Leverage under Traditional Approach

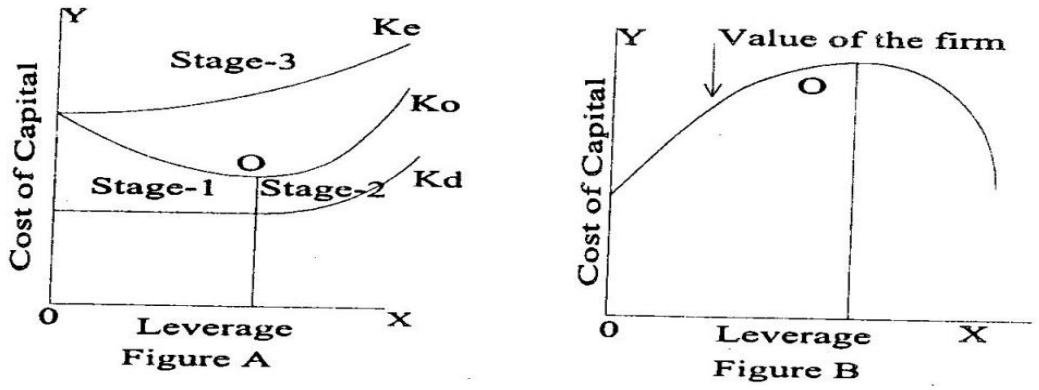


Figure 2.1

Figure 2.1 A shows the cost of equity (K_e) increases with increase in leverage but much more rapidly than the cost of dept. The cost of debt will remain fixed as leverage increases, until a point is reached where lenders feel that the firm is becoming financially risky. At this point, the cost of debt (K_d) will increase. The overall cost is optimal at point O and ten after K_o is increasing upward. In figure 2.1

B, the firm value is optimal up to the point O and then after the value declines. Hence in this traditional approach, the overall effect of these three stages is to suggest that the cost of capital is a function of leverage, i.e. first falling and after reaching minimum point or range it would start rising.

B. Net Income Approach

Net Income theory was introduced by David Durand. According to this approach, the capital structure decision is relevant to the valuation of the firm. This means that a change in the financial leverage will automatically lead to a corresponding change in the overall cost of capital as well as the total value of the firm. According to NI approach, if the financial leverage increases, the weighted average cost of capital decreases and the value of the firm and the market price of the equity shares increases. Similarly, if the financial leverage decreases, the weighted average cost of capital increases and the value of the firm and the market price of the equity shares decreases.

Assumptions of NI approach

- There are no taxes
- The cost of debt is less than the cost of equity.
- The use of debt does not change the risk perception of the investors

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

Cost of Capital & Leverage under NI Approach

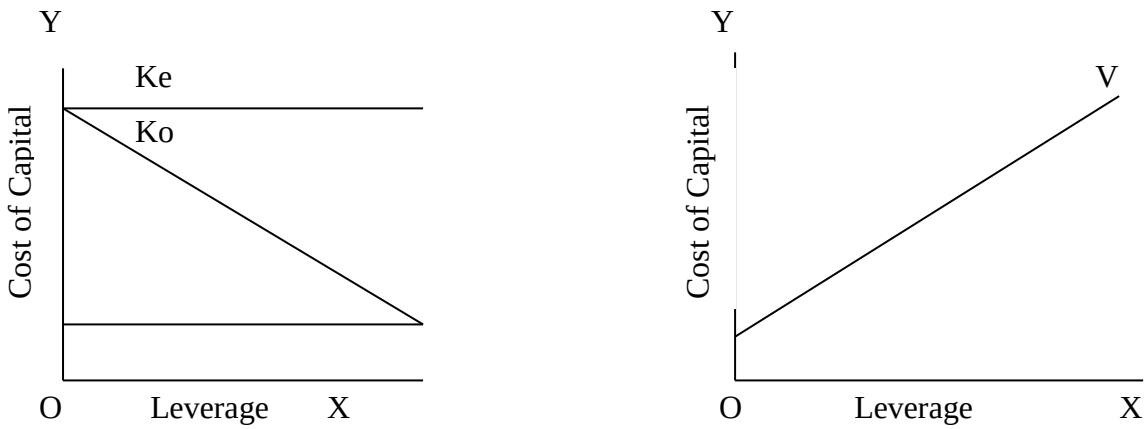


Figure 2.2

In figure no. 2.2, x-axis called of leverage and y-axis called cost of capital. Under NI approach, K_e and K_d are assumed as constant. As the proportion of debt is increased in the capital structure, being less costly, it causes weighted average cost of capital to decrease as it approach the 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. Since, $K_o = K_e – (K_e\text{-}K_d)$ B/V, and K_e and K_d are constants and K_d is less than the K_e, so Ko decreases if B/V increases.

C. Net Operating Income Approach:

Net Operating Income Approach was also suggested by Durand. This approach is of the opposite view of Net Income approach. This approach suggests that the capital structure decision of a firm is irrelevant and that any change in the leverage or debt will not result in a change in the total value of the firm as well as the market price of its shares. This approach also says that the overall cost of capital is independent of the degree of leverage.

Features of NOI approach

- At all degrees of leverage (debt), the overall capitalization rate would remain constant. For a given level of Earnings before Interest and Taxes (EBIT), the value of a firm would be equal to EBIT/overall capitalization rate.
- The value of equity of a firm can be determined by subtracting the value of debt from the total value of the firm. This can be denoted as follows:

Value of Equity = Total value of the firm - Value of debt

- Cost of equity increases with every increase in debt and the weighted average cost of capital (WACC) remain constant. When the debt content in the capital structure increases, it increases the risk of the firm as well as its shareholders. To compensate for the higher risk involved in investing in highly levered company, equity holders naturally expect higher returns which in turn increases the cost of equity capital.

This theory can be explained in the following figure 2.3

Cost of Capital & Leverage under NOI Approach

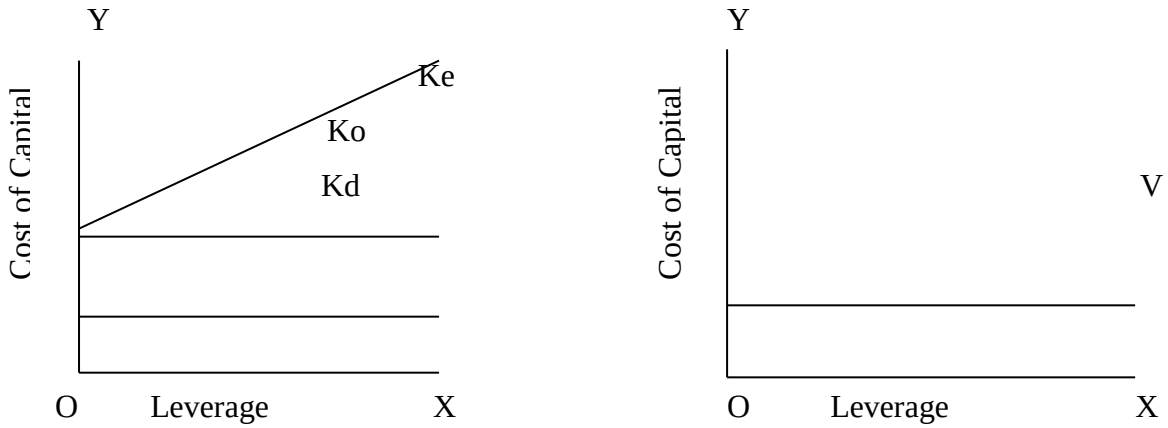


Figure 2.3

Figure no. 2.3 shows that K_o and K_d remain constant and K_e continuously increases with the degree of increase in the leverage. The NOI approach implies that there is no one optimum capital structure.

The cost of equity capital is given by:

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

D. Modigliani Millar Approach

Modigliani Millar approach, popularly known as the MM approach is similar to the Net operating income approach. The MM approach favors the Net operating income approach and agrees with the fact that the cost of capital is independent of the degree of leverage and at any mix of debt-equity proportions. The significance of this MM approach is that it provides operational or behavioral justification for constant cost of capital at any degree of leverage. Whereas, the net operating income approach does not provide operational justification for independence of the company's cost of capital.

Assumptions of MM approach

- Capital markets are perfect.
- All investors have the same expectation of the company's net operating income for the purpose of evaluating the value of the firm.
- Within similar operating environments, the business risk is equal among all firms.
- 100% dividend payout ratio.

- An assumption of "no taxes" was there earlier, which has been removed.

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

Terminology:

- Levered: - A firm that uses dept and equity in its capital structure is called levered firm.
- Unleveled: - A firm that uses only equity in capital structure is called unleveled firm.
- Risk premium: - It is the expected additional return required by the equity holders for making a risky investment.

Notation

- K_s = Equity capitalization rate of an unlevered firm.
- K_{el} = Equity capitalization rate of a levered firm.
- K_d = Dept capitalization rate.
- K_{ou} = Overall capitalization rate of unlevered firm.
- V_u = Value of an unlevered firm.
- V_l = Value of a levered firm.
- T = Corporate tax-rate.
- BT = Present value of tax-shied benefits of debt/ PV of interest tax-shield

MM theory can be divided into

a) Without Taxes

Proposition I

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

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

For unlevered firm, $K_o = K_e$

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

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

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

Proposition II

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

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

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

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

b) With Taxes

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

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

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

i.e. $V_l = V_u + BT$

We know, the value of an unlevered firm when corporate taxes exist is given by

$$V_u = \frac{NOI(1-T)}{K_{ou}} = \frac{NI}{K_{eu}}$$

Where NI = Net income after taxes.

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

Thus $V_i = \frac{NI}{K_{eu}} + BT$

The above equation implies that when the corporate tax rate T is positive (T > 0), the value of the levered firm will increases continuously with debt. Thus, theoretically the value of the firm will be maximum when it employs 100% debt.

Cost of Capital & Leverage under MM Approach

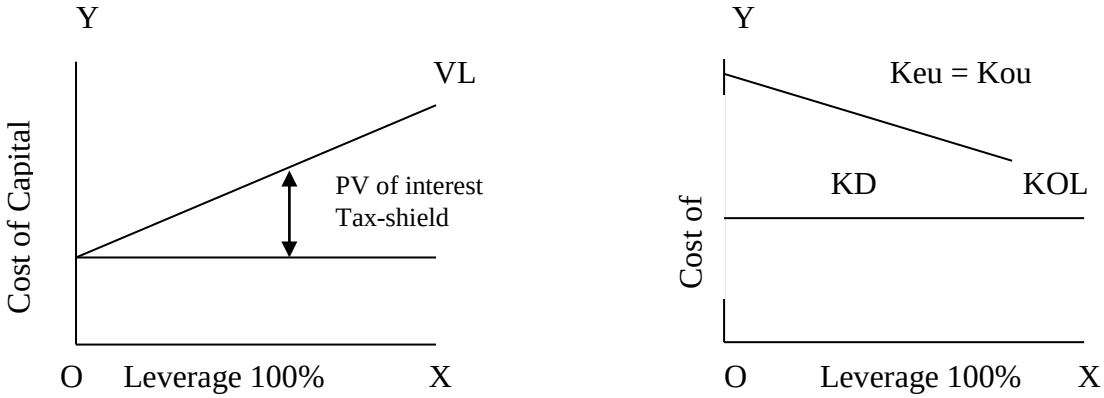


Figure 2.4

The figure no. 2.4 shows that a firm can increases its value or lower its cost of capital continuously with leverage because of the tax deductibility of interest charges. Thus the optimal capital structure is reached when the firm employs 100% debt. In practice, firms neither employ large amount of debt nor are lenders ready to lend beyond certain limits.

"Why does company 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 taxes for corporate borrowing. Personal income tax may offset the advantages of the interest tax-shied. Second, borrowing may involve extra costs (in addition to contractual interest cost) of financial distress, which may also offset the advantage of the interest shield." (Pandey; 2003)

2.1.5 Determinants of Capital Structure

Capital structure of a firm is determined by various internal and external factors. The micro variables of the economy of a country like tax policy of government, inflation rate, capital market condition, are the major external factors that affect the capital

structure of a firm. The characteristics of an individual firm, which are termed here as micro factors (internal), also affect the capital structure of enterprises. (Baral, 2004) Capital structure refers to the mix of long-term sources of fund, which maximizes value of the firm/equity holders. Concept/definition of capital structure gives the main theme of optimal capital structure.

According to Weston, J.F; Besley, S. & Brigham, E.F. (1996), "theoretically, the financial manager should plan an optimal capital structure for his company. The optimal capital structure is obtained when the market value per share is maximum. The values will be maximized when the marginal cost of each source of funds is the same. In practice, the determination of an optimum capital structure is a formidable task and one has to go beyond the theory. There are significant variations among industries and among individual companies within an industry in term of capital structure. Since a number of factor influence the capital structure decision of a company, the judgment of the person making the capital structure decision plays a crucial."

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

1. Size of a Firm

The bankruptcy cost theory explains the positive relation between the capital structure and size of a firm. The bankruptcy cost theory suggests the lower bankruptcy costs, the higher debt level.

2. Growth Rate

The agency cost theory and pecking order theory explain the contradictory relation between the growth rate and capital structure. Agency cost theory suggests that equity controlled firms have a tendency to invest sub-optimally to expropriate wealth from the enterprises' bondholders. The agency cost is likely to be higher for enterprises in growing industries which have more flexibility in their choice of future investment. Hence, growth rate is negatively related with long-term debt .Pecking order theory, contrary to the agency cost theory, shows the positive relation between the growth rate and debt level of enterprises. This is based on the reasoning that a higher growth

rate implies a higher demand for funds, and, ceteris paribus, a greater reliance on external financing through the preferred source of debt.

3. Business Risk

Both agency and bankruptcy cost theories suggest the negative relation between the capital structure and business risk. The bankruptcy cost theory contends that the less stable earnings of the enterprises, the greater is the chance of business failure and the greater will be the weight of bankruptcy costs on enterprise financing decisions. Similarly, as the probability of bankruptcy increases, the agency problems related to debt become more aggravating. Thus, this theory suggests that as business risk increases, the debt level in capital structure of the enterprises should increase.

4. Profitability

The static trade-off hypothesis pleads for the low level of debt capital of risky firms (Myers; 1984). The higher profitability of firms implies higher debt capacity and less risky to the debt holders. So, as per this theory, capital structure and profitability are positively associated. But pecking order theory suggests that this relation is negative. Since, firm prefers internal financing and follows the sticky dividend policy. If the internal funds are not enough to finance financial requirements of the firm, it prefers debt financing to equity financing.. Thus, the higher profitability of the enterprise implies the internal financing of investment and less reliance on debt financing.

5. Dividend Payout

The bankruptcy costs theory pleads for adverse relation between the dividend payout ratio and debt level in capital structure. The low dividend payout ratio means increase in the equity base for debt capital and low probability of going into liquidation. As a result of low probability of bankruptcy, the bankruptcy cost is low. According to the bankruptcy cost theory, the low bankruptcy cost implies the high level of debt in the capital structure. But the pecking order theory shows the positive relation between debt level and dividend payout ratio. According to this theory, management prefers the internal financing to external one. Instead of distributing the high dividend, and meeting the financial need from debt capital, management retains the earnings. Hence, the lower dividend payout ratio means the lower level of debt in capital structure.

6. Debt Service Capacity

The higher debt level in capital structure increases the probability of bankruptcy and bankruptcy costs of the enterprises. Probability of bankruptcy refers to the chances of cash flows to be less than the amount required for servicing the debt. The debt service ratio measured by the ratio of operating income to total interest charges indicates the firms' ability to meet its interest payment out of its annual operating earnings. Therefore, the higher debt service ratio shows the higher debt capacity of the enterprises.

7. Operating Leverage

The use of fixed cost in production process also affects the capital structure. The high operating leverage-use of higher proportion of fixed cost in the total costs over a period of time-can magnify the variability in future earnings. Both the bankruptcy cost theory and agency cost theory suggest the negative relation between operating leverage and debt level in capital structure. The bankruptcy cost theory contends the higher operating leverage, the greater the chance of business failure and the greater will be the weight of bankruptcy costs on enterprise financing decisions. Thus, these theories suggest that as operating leverage increases, the debt level in capital structure of the enterprises should decrease. (Baral, 2004)

8. Asset structure

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

9. Sales stability

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

10. Taxes

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

11. Controls

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

12. Market Condition

Conditions in the stock and markets undergo both long and short run changes, which can have an important bearing on a firm's optimal capital structure. For example, during the credit crunch in the winter of 1982, there was simply no market at any "reasonable" interest rate for new long-term bonds. Low rated companies that needed capital were forced to go to the stock market or to the short term debt market. Such action does not represent permanent changes in target capital structure but are of temporary departures from targets. The important point, however, is that stock and bond market conditions do influence the type of securities used for a given financing.

13. Lenders and Rating Agency Attitude

Regardless of manager's own analysis of the proper leverage factors for their firms, there is no question that the lender's and rating agencies attitudes are frequently important determinants of financial structure. In the majority of cases, the corporation discusses its financial structure with lenders and rating agencies and gives much weight of their advice. But when management is so confident of the future that it seeks so use leverage beyond the norms for its industry. Lenders may be unwilling to accept such debt increases or may do so only at a high price.

14. Management Attitude

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

15. The Firm's Internal Condition

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

16. Cash Flow

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

17. Contractual Obligation

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

18. Timing

Timing decisions are to be necessary based on expected development in a hard-to-predict market. If the price of the company's equity stock is currently depressed but is expected to rise in the wake of better performance and/ or bullish development in the market. It may be advantageous to resort to debt finance now and equity finance later. On the other hand, if the price of company's equity stock is balanced, it may be desirable to resort to equity finance now and debt finance later. The above considerations are important for developing aim of financing about debt and stock.

The above considerations are the general features of an appropriate capital structure. The particular characteristics of a company may reflect some additional specific

features. The company will have to plan its capital structure initially at the time of its promotion. Subsequently, whenever funds have to be raised to financial investment, a capital structure decision is involved.

2.1.6 Approaches for determining Appropriate Capital Structure:

Features of an Appropriate Capital Structure

a. Return

The capital structure of the company should be most advantageous subject to other considerations it should generate maximum returns to the shareholders without adding cost to them.

b. Risk

The use of excessive debt threatens the solvency of the company. To the point debt does not add significant risk it should be used otherwise its use should be avoided.

c. Flexibility

The capital structure should be possible for a company to adapt its capital structure with a minimum cost and delay if warranted by a changed situation. It should also be possible for the company to provide funds whenever needed to finance its profitable activities.

d. Capacity

The capital structure should be determined within the debt capacity of the company, and this capacity should not be exceeded. The debt capacity of a company depends on its ability to generate future cash flows. It should have enough cash to pay creditor's fixed charges and principle sum.

e. Control

The capital structure should involve minimum risk of loss of control of the company. The owner's of closely-held companies are particularly concerned about dilution of control.

Approaches to establish appropriate Capital Structure

The following are the 3 most common approaches to decide about a firm's capital structure:

a. EBIT-EPS approaches

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

b. Cost of Capital and Valuation Approach

The cost of a source of finance is the minimum return expected by its suppliers. The expected return depends on the degree of risk assumed by investors. A high degree of risk is assumed by the shareholders than the debt-holders. In case of debt-holders, the rate of interest is fixed and the company is legally bound to pay interest whether it makes profits or not. The loan of debt-holders is returned within a prescribed period, while shareholders will have to share the residue only when the company is wound up. This leads one to conclude that debt is a cheaper source of funds than equity. The preference share capital is also cheaper than equity capital, but not as cheap as debt.

c. Cash Flow Approach

One of a feature of a sound capital structure is conservatism. Conservatism does not mean employing no debt or small amount of debt. Conservatism is created by the use of debt or preference capital in the capital structure and the firm's ability to generate cash to meet these fixed charges. The fixed charges of a company include payment of interest, preference dividends, and the principal, and they depend on both the amount of loan securities and the terms of payment. The amount of fixed charges will be high if employs a large amount of debt or preference capital with short-term maturity. The company expecting larger & stable cash inflows in the future can employ a large amount of debt in their capital structure.

One important ratio which should be examined at the time of planning the capital structure is the ratio of net cash inflows to fixed charges (debt- servicing ratio). It indicates the number of times the fixed financial obligations are covered by the net cash inflows generated by the company. The greater the coverage, the greater is the amount of debt a company can use.

2.2 Review of Related Studies

2.2.1 Review of Related Journals and articles

Modigiliani and Miller (1958) have conducted an article on "The Cost of Capital, Corporation and Theory of the Investment". The study showed that the impact of additional debt in a tax less and economically, perfect, word the total market value of company's debt plus equity should not charge as debt is substituted for equity. Although expected earnings per share will increase as debt is substituted for equity (or additional financing is done with debt rather than equity). This effect is exactly offset by a markdown is the company's price/earnings ratio. The mar-down occurs because the additional debt exposes the common shareholder to an extra financial risk.

Gajurel (2005) has conducted an article on "*Capital Structure Management in Nepalese Enterprises*" and has recommended following:

- Before designing capital structure of any company, a careful attention should be paid on appropriate features of capital structure and various determinants of capital structure. It is observed that more executives or practitioners do not pay attention to their capital structure.
- Capital structure of the firm should be compared to similar other firms or with industry debt. HMG should come up with the policy of industry data or debt ratios. It will enable the firm to compare with industry data.
- One can increase the sample size to obtain more reliable and valid conclusions. Also, a study extending the survey regarding optimal capital structure is anticipated.
- A study similar to this should be conducted from time to time. The long- term stability of results needs to be reviewed from time to time. Also, the determinants of capital structure may vary from one period to another period,

from one firm to another firm and from one industry to another industry. Hence, a study of capital structure determinants in individual firm, particular industry should be conducted.

- There are different measures of average; one can use those different alternative measures of leverage to test the results.

  Cost of capital is another important aspect of capital structure. One can along study the effect of cost of capital.

Shrestha (**2010)** has conducted an article on "*Analysis of Capital Structure of Selected Public Enterprises",* and concluded that the enterprise has a chaotic capital structure since the corporations are not guided on the basis of financial plans and policies. In many instances most of them wanted to eliminate debt if possible to relieve financial obligations. He further pointed out that the calculation of equity capitalization rate has been giving many fantastic results in many cases. The use of NI and NOI approach on the whole was more an academic exercise rather than providing much valid. The debt equity ratio was improperly determined and the contribution of debt, procurement of assets was insignificant. He suggested that the ratio should neither be highly levered to create financial obligation beyond the capacity nor too low to infuse operational lethargy to pass responsibilities without performance. The aid donor strategies should be taken into consideration as the inflow of foreign government and international financial institution credit has dominant influence in the capital structure.

Ali (2011) has conducted an article on "*Practical Implication of Capital Structure Theories: Empirical Evidence from Banks of Pakistan and finds that banking sector of Pakistan offer a number of financial facilities to corporate and individual users."* Along with its number of financial products and services banking sector of Pakistan is often considered as the backbone of the economy. He suggests that mainly two directions can be explored within future research. First is to testify the implication of capital structure theory across different industries. Secondly, cross-sectional study can be attributed on the financial and non-financial industries in the economic segment of Pakistan.

2.3 Review of Unpublished Dissertation

Various Students under MBS program have carried out several theses related to this thesis, which were also studied and reviewed. They were as follows:

Gurung (2003) has conducted the study on "*Analysis of Capital Structure in Selected Joint Banks of Nepa*l" with the following objectives:

- To find out the profitability of the banks in respect to its capital structure.
- To determine the interest burden of debts over the banks.
- To examine the efficiency of working capital of the joint venture banks.

The major findings of the study are as follows:

- The utilization of total assets is not adequate to generate earning.
- The banks using more debt capital to procure total assets.
- The profitability situation of the banks is poor due to nominal return rate.

Mainali (2005) has conducted a study on *"A Structure on Capital Management of Jyoti Spining Mills Limited"* with following objectives:

- To be familiar with the capital structure of Jyoti Spining Mills Limited in the terms of financial ratios.
- To analyze the relationship between their capital structure and profitability.
- To provide a suggestive frame work which will strengthen the capital structure position so that they can take concrete steps in achieving their objectives?

The major findings of the study are as follows:-

- The company was highly levered
- The portion of share capital is found comparatively low and increasing with moderate growth rate.
- The company's earning power is weak and investors are bearing high loss upon their investment.

Pathak (2006) has conducted a study on *"Capital structure management of Gorakhali Rubber Udhyogh Limited."* The objectives of this study are as follows in details:

- To analyze the financial position of Gorakhakali Rubber Udhogh.
- To analyze the financial performance of Gorakhakali Rubber Udhogh Ltd.
- The main objective of this study is to assets the capital structure of the company in terms of debt interest coverage, EBIT and EBT, EAT and total debt value of firm and find out capitalization rate.
- To give the suggestive judgmental decision which will strengthen their capital structure position? So that they can achieve their objective.

The major findings are as follows

- The company's debt serving capacity was poor as its interest coverage ratio was negative.
- The operational performance was not satisfactory due to the negative earnings and low volume of sales revenue.
- The company was not able to use its full capacity, which resulted in a huge loss.
- Its debt capital was very high as compared to the shareholders equity and the trend of debt / equity was increasing every year.

Paudel (2007) has conducted a study on "*A Comparative Case Study Between Nepal Bangladesh Bank And Himalayan Bank Ltd.*" with the following objectives:

- To determine the comparative position of capital structure of these two banks and provides suggestive framework issue relating to capital structure management.
- To examine the cost of capital especially cost of debt.
- To find out the investment of the raised capital.

The major findings of the study are as follows:

- Debt capital of the banks and interest burden as well is too high.
- High operating cost and low return on equity.
- More concentration and investment of NBBL only in the area of loan and advance.
- Less utilization of value of the firm of NBBL.

Khanal (2009) has conducted a study on *"Capital and Assets Structure of Nepal Bank Limited"*. The specific objectives of the study are as follows:

- To highlight about the company regarding its growth, expansion stability etc.
- To analyze the related variable like assets liabilities in case of Nepal bank limited.
- To provide suggestion by appropriate capital structure for the Nepal bank limited.

The major findings of the study are as follows:

- The total investment was not significantly related with total deposit and total assets. So the bank needs to stabilize the ratio trend of the total deposit to total investment through the help of sound investment policies and programs.
- The net worth of the bank was low as compared to the total deposit and total liability. So the bank needs to increase its net worth to reduce the risk. An increase in net worth will help to reduce the fluctuation on net profit.
- The net worth of the bank was loss than other assets of the bank. It indicated that all the net worth of the bank was used on unproductive uses of its net worth.
- The increasing trend of total expenditure exceeded the increasing trend of total income. The bank needs to review the trend and it is possible only when the asset and liabilities management is improved. The net profit of the bank was fluctuating so do the earnings per shares. To stabilize net profit and earnings per shares, total expenditure and total income of the bank should be under control. To control total income and total expenditure, the bank in effect needs to control total deposit and total investment.

Koirala (2010) has conducted a study on "*A study of Capital Structure Management of Commercial Banks- Nabil Bank Ltd. and Himalayan Bank Ltd.*" with the following objectives:

- To find out comparative position in capital structure between NBL and HBL.
- To examine the correlation and the significance of their relationship between different ratios related to capital structure.
- To analyze the relationship of debt and total capital.

- To analyze the profitability position of NBL and HBL

The major findings of the study are as follows:

- NBL shows higher value and lower capitalization rate hence maintain optimum capital structure than HBL.
- NBL has optimum capital structure compared to HBL.
- HBL bearing high financial risk because it has used long term debt, NBL has employed less long term debt so it has lesser financial risk.
- HBL has to increase in Return on equity in next year to get rid of constant ratio.

Acharya, (2011) has conducted a study on "*A Comparative Study of Capital Structure Management Between Kumari Bank Ltd. And Siddhartha Bank Ltd.*" with the following objectives:

- To find out comparative position in capital structure between two banks.
- To analyze the various source of capital and their cost.
- To highlight the relationship between operating profit and interest expenses to measure the debt service capacity of the banks.
- To analyze the return on capital in relation to capital employed.
- To study capital structure & adequacy ratio.

The major findings of the study are as follows:

- The shareholder's equity of both the banks is in increasing trend during the entire study period.
- Higher overall capitalization rate of KBL is more capable to utilize the value of the firm compare to SBL.
- KBL is more capable to utilize its long term capital.
- Debt equity ratio of both banks is significant in generating more return on equity.

Gnawali (2012) has conducted a research in "*Study on the Relationship between Capital Structure and Profitability of Joint Venture Commercial Bank and NRB,"* and this study tries to analyze the relationship between capital structure and profitability of the company.

This study has following other specific objectives:

- To study the debt servicing capacity of above JVBs
- To analyze the relationship between capital structure and profitability of the company.
- To highlight there growth and policy of banks.
- To examine the existing financial position.
- To provide suggestion and recommendation.

The major findings of the study are as follows:

- The capital structure of the JVBs is highly levered. The portion of debt and equity capital should be decided keeping in mind the effect of tax advantage and financial distress. The banks when it is difficult to pay interest and principle, ultimately lead to liquidation.
- The largest item of the bank in the assets side is loan and advances which is the main cause of an assists in the bank an area of the main resources a bank failure to overcome this commercial bank are strongly recommended to follow liberal lending policy.
- The banks are required to maintain improved capital structure by increasing equity base i.e. issuing more equity capital expanding general reserve and retained more earnings. It will compromise among the conflicting factors of cost and risk.
- The bank's most unsatisfactory performance in net profit and earnings per share deteriorates yearly. This is mostly due to sudden decrease interest rate of loan and investment. So in this scenario the bank should explore the new ways of service marketing increase its income based on fees and the bank should attract its clients on low or non interest bearing deposits.
- To increase its liquidity and profitability position it should bring revolution in its quality of loans and investments. The bank should explore the new ideas of client’s satisfaction and initiate different services to customer viz. home banking, tale banking, credit card facilities automated tailor machine service, all time banking services and so on.
- In the scenario of operating large number of banks and financial institutions in a limited modern and fast growing urban area, to operate efficiently and to

build the liquidity position strong the bank should expand its branches in proper area all over Nepal.

2.3 Research Gap

Most of the studies as stated above have been conducted in various banks and firms, which indicates that a sound principle of capital structure and its management haven't been followed by the enterprises in Nepal. Their study reveals that they have not been using long term debt effectively. The net worth of the bank was used in unproductive assets, shows low debt equity ratio. The research gap among the previous studies and this current study lies firstly in fiscal years and in the sample banks. In this study it is tried to carry out the distinct from the previous studies in terms of sample, size and methodology used. The two banks studied in this study are the first two joint venture commercial banks of Nepal and thus it is believed that the study conducted on these two banks will provide most accurate situation of capital structure management in Nepalese commercial banks. This study will therefore be helpful to interested groups and concerned parties.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology is a sequential procedure and collection of scientific methods to be adopted in a systematic study. In other words, research methodology describes the methods and process applied in the entire of the study. It is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his/ her research problem along with the logic behind them. Thus, this deals with the research design, nature of procedures and tools of analysis.

3.1 Research Design

A research design is the plan structure & strategy of investigation. It is the arrangement of condition purpose with economy in procedure. It is a blueprint for the collection measurement and analysis of data. "Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do form the writing the hypothesis and their operational implications to the final analysis of data" *(Kerlinger, 1986:275).*

The present study tries to analyze the capital structure of the selected commercial banks in the present e-generation. The study follows analytical and descriptive research design. The study is based on most recent financial data provided by the concerned banks i.e. the data become secondary sources to the research work. Comparative data of two commercial banks have been presented in such a way, so as to make the research informative to the readers. Financial as well as statistical tools are used to analyze and interpret.

3.2 Population and Sample

Population covers the whole or total of observation that have been selected for the study. Sample is the part of population which represents population with regards to the study. There are 31 commercial banks functioning all over the country and most

of their stocks are actively traded in stock market and 8 joint venture banks are operating in Nepal. In this study, two joint venture banks (NABIL and NIBL) are taken for research work. These banks are compared as per fund collecting joint venture because data from fiscal year 2007/08 to 2011/12 are analyzed for the fulfillment of the objective.

3.3 Nature and Sources of Information/ Data Collection Procedure

The main sources of information were the concerned banks and their published reports, NRB and its published reports, Experts views, Newspaper and many other published and non-published sources. Required reports are downloaded from the websites of the banks. Mainly the secondary sources of data are collected in order to achieve the real and fact data as far as available.

The secondary sources of data the information are received from books, journals, newspapers, published reports and dissertations and concerned websites etc. The major sources of secondary data are as follows:

- Annual reports of the concerned banks.
- Related websites of concerned banks.
- Economic survey, Ministry of finance
- NRB Samachar, NRB Directives.
- Company ACT, 2063
- Banking and financial statistics of NRB.
- Survey, reports, journals issued by NRB.
- Annual reports, NEPSE.
- Book related to financial performance analysis.
- Previous Dissertations.
- News paper, Journals and Business magazines.
- Other publications etc.

3.4 Data Processing and Presentation Procedure

The information or data obtain from the different sources are in raw form. From that information, direct presentation is not possible so it is necessary to process data and converts it into required form. Only after then, the data is presented for this study. For

this study, only required data are taken from the secondary sources (Bank's publications) and are presented in this study. For presentation different tables are used. Similarly in same case graphical presentation are also made. So far a computation is concerned. It has been done with the help of scientific calculator and spreadsheet software Microsoft Excel.

3.5 Tools for Analysis and Presentation

3.5.1 Financial Tools

Financial tools are basically used to find out the strength and weakness of banks. Financial tools like ratio analysis have been used in this research. Ratio simply means a mathematical relationship between two quantitative figures. Financial ratio is the relationship of two accounting figures. Ratio analysis is a part of the whole process of analysis of financial statements of any business or industrial concern especially to take output and credit decisions. Thus ratio analysis is used to compare a firm's financial performance and status to that of other firm's to it overtime. Thus ratio analysis provides a strong foundation for qualitative judgment regarding financial performance of a firm. There are different financial ratios which can be described as follows.

3.5.1.1 Liquidity Analysis/ Working Capital Analysis

It measures the adequacy of a firm's resources to meet its near term cash obligations. It is pre-requisite for the very survival of firm. Liquidity analysis measures the liquidity position and short-term obligation. To meet the current or short-term obligations, commercial banks must maintain adequate out in commercial banking. NRB has directed all the banks to maintain adequate CRR to meet its current obligations. Thus to measures the banks liquidity positions. CRR assumes the key indicator has other ratios. It is also found that central banks practically pay more attention towards the CRR of commercial banks.

3.5.1.1.1 Cash Reserve Ratio (CRR)

CRR measures the ability to meet short-term obligation and reflect the short-term financial strength and solvency of the bank. The cash reserve ratio (CRR) is being used as a prime and effective instrument to inject liquidity to and absorb liquidity

from the economy. The CRR, which has been used particularly for last few to reduce the cost of resources of commercial banks and to manage necessary liquidity in the economy, has been gradually lowered in the neighboring countries as well as the majority of the countries in the world in complement to the prevalent use of indirect monetary instruments and prudential regulatory measures. "In this context, the CRR has been maintained at 5.5% for FY 20012/13"(Monetary Policy,2070/71: NRB).

3.5.1.2 Fixed Deposit to Total Liability Ratio

The fixed deposit of bank is termed as long-term debt collected from customers, which a bank generally accepts for maximum period of two years. Whereas, total liability includes long term debt and short term debt. Fixed deposit to total liability ratio can be calculated as:

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

3.5.1.3 Net Worth to Total Liabilities Ratio of NABIL & NIBL

The shareholder's equity also called a net worth of a bank includes paid-up Capital and Reserve Funds. Whereas, total liability includes long term debt and short term debt. Net Worth to total liability ratio can be calculated as:

$$\text{Net Worth to Total Liability Ratio} = \frac{\text{Net Worth}}{\text{Total Liability}}$$

3.5.1.4 Analysis of Debt to Equity Ratio

Debt is between borrowed funds and owner's capital. This ratio reflects the relative claims of creditors and shareholders against the assets of the firm. The ratio is important tool to appraise the financial structure of the firm.

A higher ratio shows a large share of financing by the creditors relatively to the owners. So, there is a larger claim against the assets of the firm, which is the danger signal for the creditors. It would be risky for the creditors. A high proportion of debt in the financial structure would lead to inflexibility in the operations of the firm because the firm is legally liable to pay the interest even if the firm is having loss and a smaller ratio shows smaller claim of creditors. To the creditors, relatively high stake of the owners implies sufficient safety margin and substantial protection against shrinkage in assets.

Debt to equity has been calculated in following ways:

Debt to Equity Ratio in terms of Fixed Deposit to Net Worth

D/R = Fixed Deposit / Net Worth

3.5.1.5 Return on Assets (ROA)

It measures the productivity of the assets. It is a measure in terms of relationship between net profit and assets. The income figure used in computing this ratio should be operating income *(Munakarmi; 2002:485).* This ratio is calculated by:

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

3.5.1.6 Return on Equity (ROE)

These ratios measure that how much profits are generated on the amount by the shareholders. This ratio is helpful in measuring the degree of effectiveness with which funds of the shareholders are being utilized. It is also helpful in comparing the relative profitability and soundness of different firms. Higher ratio indicates the more efficient management and utilization of shareholders' funds. This ratio can be calculated as:

$$\text{Return on Equity} = \frac{\text{Net Profit}}{\text{Shareholder's Equity}} \times 100$$

3.5.1.7 Interest Income on Loan and Advances

The major source of operating income of any commercial bank is interest income. Interest income to loan and advance ratio shows the high utilization of loan and advances. Higher percentage income reflects better operational efficiency or higher level of risk due to higher volume of investment in loan and advances (*Shrestha; 2003:124).* This ratio is calculated by:

$$\text{Interest income on loan and advances} = \frac{\text{Interest Income}}{\text{Total Loan and Advance}} \times 100$$

3.5.1.8 Market Value Analysis

The market value ratios represent a group of ratio that relate to the firm's stock price to its earning and book value per share. These ratios give management an indication of what investors think of the company/banks past performance and future prospectus. If the firm's liquidity, asset management, debt management and profitability ratios are all good then its market value ratio will be high its price will be probably be as high as can be expected *(Weston & Brigham, 1996:104).*

3.5.1.8.1 Earnings per Share

Apart from the return of return, the profitability of a firm from the profit view of the ordinary shareholders is the earning per share (EPS). It measures the profit available to the equity shareholders on per share basis i.e. the amount they can get on each share held. In other words, this ratio measures the earning available to an equity shareholder on a per share basis. The objectives of computing this ratio is to measure the profitability of the firm on per equity share basis. There are two components of this ratio as under:

1. Net profit after preference dividend
2. Number of equity shares outstanding

It is computed by dividing the net profit after preference dividend by the number of equity shares outstanding. It is expressed as an absolute figure.

$$\text{Earnings per Share} = \frac{\text{Net Profit after Tax} - \text{Preference Dividend}}{\text{No. of Equity Shares Outstanding}}$$

3.5.1.8.2 Price-Earnings Ratio

Price–earnings ratio is widely used by the security analyst to value the firm's performance as expected by investors. It reflects investors' expectation about the firm's growth in the firm's earning. This ratio measures investors' expectation and the market appraisal of the performance of the firm *(Munakarmi; 2002:490).* Price-earnings ratio shows how much the investors are willing to pay per dollar of reported profits (Weston & Brigham, 1996:296). This ratio is calculated as follows:

$$\text{P/E Ratio} = \frac{\text{Market Prince Per Share}}{\text{EPS}} \times 100$$

Therefore, calculation of P/E ratio of commercial banks is more appreciate by an investor's point of view.

3.5.1.8.3 Cash Dividend on share Capital

The amount of earning distributed and paid as cash dividend is considered as the cash dividend on share capital or dividend per share. The net profit after taxes belongs to the equity shareholder *(Munakarmi; 2002:489).* This ratio is computed by dividing the amount of dividend distributed to shareholders by the number of common shares outstanding. It may be expressed as under:

$$\text{Dividend per Share} = \frac{\text{Earning Dividend Paid to Shareholders}}{\text{No. of Equity Shareholders}}$$

3.5.2 Statistical Tools

3.5.2.1 Arithmetic Mean

An arithmetic mean of a gain given set of observations is the sum of the observation divided by the number by the number of observations. In such a case all the items are equally important. Simple arithmetic mean is used in this study as per necessary for analysis.

We have,

$$\text{Mean } (\overline{X}) = \frac{\sum X}{n}$$

Where,

ΣX = Sum of all values of the observations.

n = Number of observations.

X = Values of variables.

3.5.2.2 Standard Deviation

The standard deviation is usually denoted by the letter sigma (σ).It is a widely used measure of dispersion and is defined as the deviation of the observation from their arithmetic mean of a set of value. It is also known as root mean square deviation. Standard deviation in this study has been used to measure the degree of fluctuation of interest rate and that of other variables as per the necessity of the analysis.

We have,

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum X^2}{N} - (\frac{\sum X}{N})^2}$$

3.5.2.3 Coefficient of Variation (C.V)

The relative measure of dispersion based on standard deviation is called coefficient of standard deviation and 100 times coefficient of standard deviation is called coefficient of variation. It is denoted by C.V. Thus,

$$C.V = \frac{\sigma}{\overline{X}} \times 100$$

Where,

σ = Standard deviation

$\overline{X}$ = Mean value of variables

Coefficient of variation being a pure number is independent of the units of measurement and thus is suitable for comparing the variability or uniformity of two or

more distribution. The distribution having less C.V. is said to be less variable or more consistent or more stable. A distribution having greater C.V. is said to be more variable or less consistent or less stable. C.V. is used in this research for comparing the uniformity of variables of sample banks.

3.5.2.4 Correlation Coefficient (r)

Correlation may be defined as the degree of linear relationship existing between two or more variables. These variable are said to be correlated when the change in the value of one results change in another variable. Correlation is of three types. They are simple, partial and multiple correlations. Correlation may be positive, negative or zero. Correlation can be classified as linear or non-linear. Here, we study simple correlation only. In simple correlation, the effect of others is not included; rather these are taken as constant considering them to have no serious effect on the dependent variables.

The popular method of statistical tool, Karl Pearson's co-efficient of correlation has been adopted to measure the significance of the relation between the deposit and the investment, loan and advance of the four Joint Venture Banks. The formula for computing the correlation coefficient(r) using direct method is as follows:

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

Where,

N = Number of pairs of X and Y observed

X = Values of Investment, Loan and Advance

Y = Values of Total Deposit

r = co-efficient of correlation

3.5.2.5 Coefficient of Determination:

The coefficient of determination is the measure of the degree of linear association or correlation between two or more independent variables. It measures the percentage total variation in dependent variables explained by independent variables. If R^2 has a zero value then, it indicates that there is no correlation which means all the data points in scatter diagram fall exactly on the regression line. If it has the value equal to one then it indicates that there is perfect correlation and as such the regression line is the perfect estimator. But in most of the cases the value of R^2 will lie somewhere between

these two extremes of 1 and 0. One should remember that R^2 close to one indicates a strong correlation between two variables and R^2 near to zero means there is little correlation.

$$\text{Coefficient of Determination } (R^2) = \frac{\text{Explained variation}}{\text{Total Variation}}$$

$$\text{or, } R^2 = 1 - \frac{\text{Unexplained variation}}{\text{Total Variation}}$$

3.5.2.6 Probable Error

The Probable Error (PE) of correlation coefficient is an old measure of testing of reliability of an observed correlation coefficient. The Probable Error of the correlation coefficient is the basis for the interpretation of its value.

PE is used in interpretation whether the calculated value of r is significant or not.

- If r<PE than it is insignificant or there is no evidence of correlation.
- If r >6PE than, it is significant.
- If PE<r<6PE than, nothing can be concluded.

3.5.2.7 Student's t-test

Decision making about the characteristics of the population on the basis of study of the sample taken from the population involves the risk of taking wrong decision. A hypothesis is an assumption that we make about the population parameter. The test of hypothesis is a process of testing of significance regarding the parameter of the population on the basis of the sample drawn from the population.

To test whether there is statistically significant correlation between the related variables of NIBL and NABIL in terms of capital structure, profitability and associated risk, student's t-test has been computed by using following formula.

$$t = \frac{\overline{x}_1 - \overline{x}_2}{\sqrt{S_2\{\frac{1}{n_1} + \frac{1}{n_2}\}}}$$

Where, t = student's t-test

X1 and X2 = expected or mean variables of NIBL & NABIL

n_1 and n_2 = No. of observation for NIBL & NABIL

$s^2 = (\sum x_1^2 + \sum x_2^2)/ (n_1 + n_2 - 2)$

Tabulated value is based on n – 2 degree of freedom and 5% level of significance.

If the calculated value of t is less than the tabulated value of t at 5% level of significance and for the above mentioned degree of freedom, the null hypothesis (H_0) is accepted and alternative hypothesis (H_1) is rejected. This implies that the value of r is significant i.e. there is statistically significant relationship between the variables or there is statistically significant difference between the average rate of returns of the variables and vice versa.

3.5.2.8 Diagrammatic Representation

Diagrams & graphs are visual aids that give bird's eye view of a given set of numerical data. They represent the data in simple, comprehensive and readily understandable form. Multiple bar diagrams are used for presenting a comprehensive picture of the banks selected for the research study. Line graph is used to represent the trend of financial indicator variables of private and government banks.

CHAPTER - IV
ANALYSIS AND PRESENTATION OF DATA

The previous chapter is mainly emphasized on research methodology that is about to be adopted to carry out the study. This chapter deals with the presentation, analysis and interpretation of data collected by secondary sources in order to fulfill the objective and the collected data from secondary sources have been represented in the suitable formats (i.e. on tables and charts). The financial as well as statistical tools are used for the comparison of financial indicators. The strength and weakness of those banks, to some extent, is evaluated and the significance of the different financial variables is also analyzed. The five years secondary data (2007/08 to 2011/12) of the banks are taken for the analysis. Each detail of calculation is tabulated in the respective appendix.

4.1 Financial Tools

Various financial ratios related to the investment management and the fund mobilization are presented and discussed to evaluate and analyze the performance of NABIL and NIBL. The ratios are designed and calculated to highlight the relationship between financial items and figures. Those ratios are as follows. The capital structure of a bank has been analyzed incorporating the analysis of relationship between fixed deposits and shareholders equity, its composition and index, financial mix ratio and capitalization rate analysis.

4.1.1 Liquidity Analysis

Commercial banks need liquidity to meet loan demand and deposit withdraws. Liquidity is also needed for meeting cash reserve ratio (CRR) requirement prescribed by NRB. The failure of the bank to meet its cash obligation due to lack of sufficient liquidity will result bad credit worthiness and loss of creditors' confidence. A very high degree of liquidity is also bad: idle or non-performing assets earn nothing. Therefore, it is necessary to strike a proper balance between liquidity crunch and liquidity crisis.

4.1.1.1 Cash Reserve Ratio (CRR)

A bank must ensure that it has a sound liquidity position to face the instant claims by its creditors. Therefore, CRR measures the ability to meet short-term obligation and reflect the short-term financial strength and solvency of the bank.

Table 4.1 : Comparative Cash Reserve Ratio

Year	Ratio %	
	NABIL	NIBL
2007/08	6.00	10.47
2008/09	8.37	10.91
2009/10	9.03	10.32
2010/11	3.02	7.77
2011/12	4.90	7.67
Mean $\overline{X}$	6.26	9.43
S.D.	2.22	1.41
C.V.	35.46	14.95

Source: Appendix I

Comparative Cash Reserve Ratio

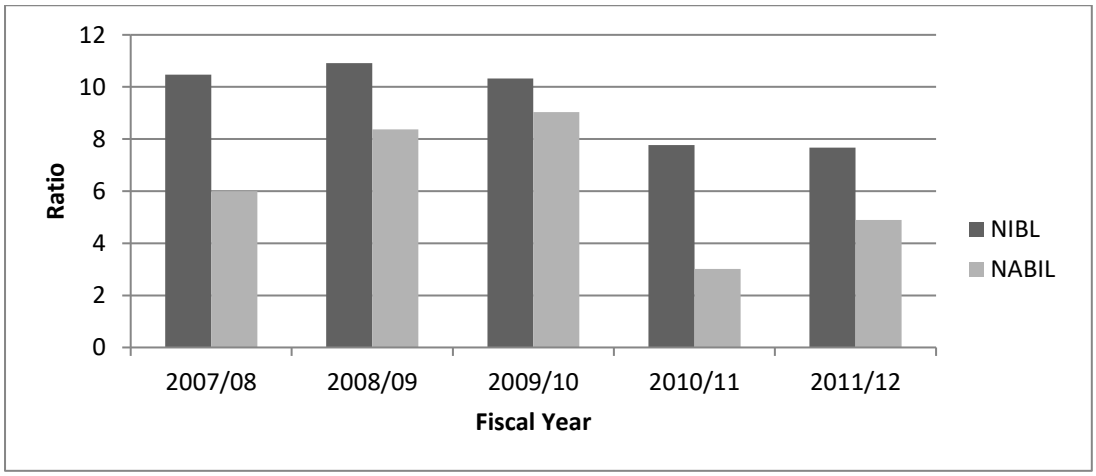


Figure 4.1

The table 4.1 shows average CRR of NABIL and NIBL are 6.26% and 9.43% respectively and the CV of the same banks is 35.46% and 14.95% respectively. This shows that the average CRR of NABIL and NIBL is much different. CRR of NABIL is near NRB directives of 5.5% and CRR of NIBL is higher than NRB directives. On the basis of CV, it indicates that the value of NIBL is more consistent than NABIL.

The figure 4.1 shows that the cash reserve ratio of two mentioned banks for fiscal year 2007/08 to 2011/12. CRR of NIBL is increasing up to the fiscal year 2008/09 and starts to decrease, where as CRR of NABIL is increasing up to the fiscal year 2009/10 and decrease in FY 2010/11 and again increase.

4.1.2 Analysis of Fixed Deposit

The fixed deposit of bank is termed as long-term debt collected from customers, which a bank generally accepts for maximum period of two years.

Table 4.2 : Fixed Deposit Position and Index Table of NABIL & NIBL

Fiscal Year	NABIL			NIBL		
	Fixed Deposit	Index p_1/p_{0*100}	% Change	Fixed Deposit	Index p_1/p_{0*100}	% Change
2007/08	5435189720	100		7516686866	100	-
2008/09	8464086113	155.73	55.73	7944232558	105.69	5.69
2009/10	8310708297	152.91	-1.81	11633380218	154.77	46.44
2010/11	14711158487	270.67	77.01	16825148284	223.84	44.63
2011/12	16840831154	309.85	14.48	18378300034	244.5	9.23
Average			36.35			26.50
Standard Deviation (S.D.)			36.35			22.04
Coefficient Of Variation (C.V.)			99.98			83.19

(Source: Appendix I

Fixed Deposits of NABIL & NIBL

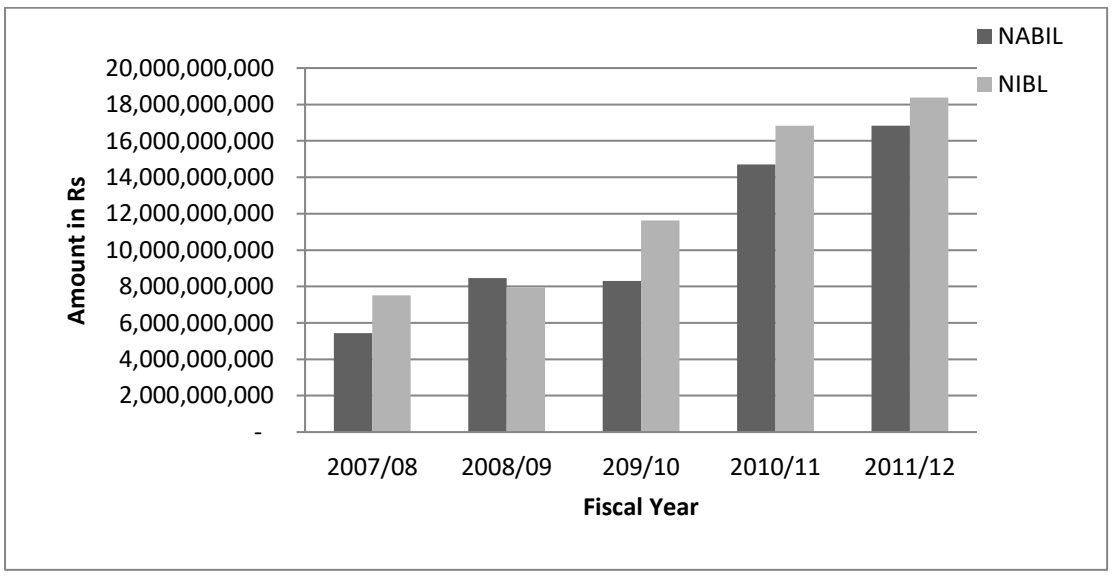


Figure 4.2

Table 4.2 and figure 4.2 shows that fixed deposited of NABIL are increasing during every fiscal year except in F.Y. 2009/10. This shows that the bank is concentrating to increase fixed deposits in it financial mix or capital structure. The fixed deposit of NABIL is increased by 55.73% in F.Y. 2008/09 over the last F.Y. and decrease by 1.81% in F.Y. 2009/10. It is increasing by 77.01%, in F.Y. 2010/11, which is the highest increment over the past seven years. Again, it is increased by less percentage 14.48% in fiscal years 2011/12. Thus, the banks are giving more emphasis to increase importance to decrease fixed deposit in F.Y.2009/10. The index shows the fixed deposit is increased by 309.85% during the entire study period.

Similarly, fixed deposit of NIBL is increased by 5.69% in F.Y. 2007/08 and followed by 46.44% in 2008/09, which was the highest change though out the study period. It increased 44.63% in F.Y. 20010/11 and at last it was little bit increased 9.23% in F.Y 2011/12. The index shows that fixed deposit was increased by 244.5% during the entire study period. In average, the fund collected in the firm of fixed deposits is more by NABIL (Av. = 36.35%) than NIBL (Av. = 26.50%). The variability of deposits is found more in NABIL (C.V. = 99.98) than NIBL (C.V. = 83.19). Both the banks were found increasing fixed deposits in its financial mix.

Table 4.3 : Fixed Deposit to Total Liability Ratio of NABIL & NIBL

Fiscal Year	**NABIL**	**NIBL**
	Ratio	**Ratio**
2007/08	19.94	27.24
2008/09	22.79	20.44
2009/10	18.95	21.95
2010/11	28.21	29.36
2011/12	28.97	31.49
Average	23.77	26.10
Standard Deviation (S.D.)	4.63	4.75
Coefficient Of Variation (C.V.)	19.46	18.21

(Source: Appendix 1I)

Fixed Deposit to Total Liability Ratio of NABIL & NIBL

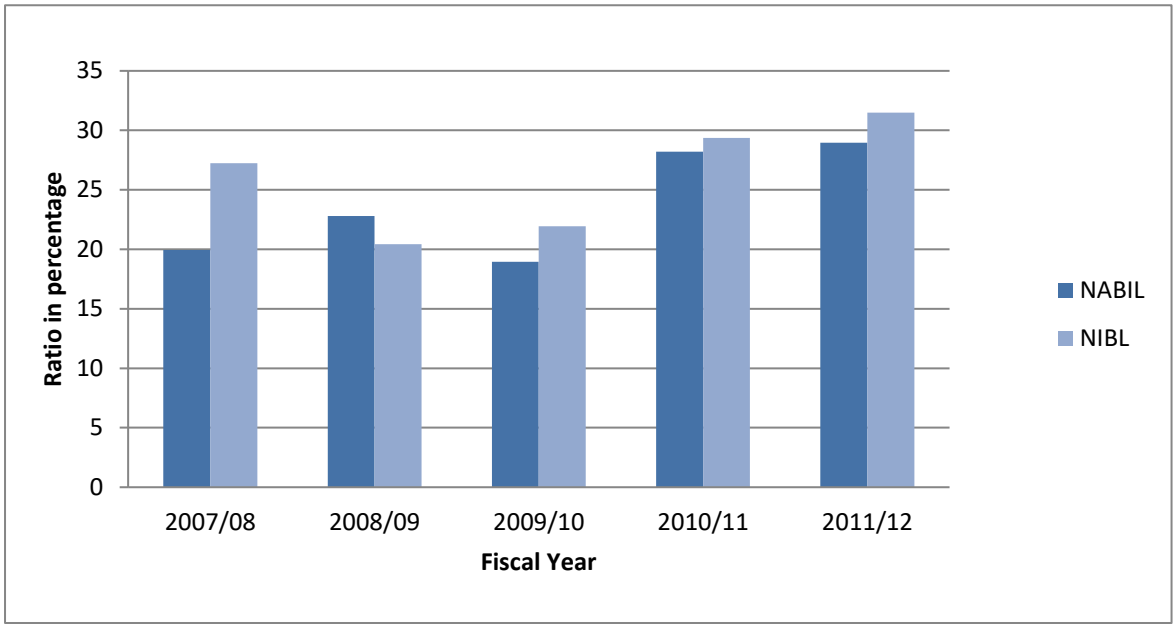


Figure 4.3

Table 4.3 and Figure 4.3 indicate that fixed deposit to total liabilities ratio of NABIL is 19.94% in F.Y.2007/08. It became 22.79% in F.Y. 2008/09. It is decreased in F.Y. 2009/10 and becomes 18.95 and recorded as the minimum throughout the study period 2010/11 and 2011/12 by 28.21% and 21.97% respectively, which is the highest over the study period.

Similarly, fixed deposit to total liabilities of NIBL is 27.24% in F.Y 2007/08. The minimum fixed deposit was 20.44% in F.Y. 2008/09 over the study period. It was increased in every F.Y. except in F.Y. 2008/09, where it was decreased by 20.44% in F.Y 2011/12 it becomes 31.49, which is the highest fixed deposit portion in total asset over the study period.

The average value of NABIL is 24.67 and NIBL is 23.07. Thus, NABIL has higher portion of fixed deposited in total liabilities than of NIBL. Also fluctuation of the ratio was more NABIL (C.V. = 19.46%) than NIBL (C.V. = 18.21%).

4.1.3 Analysis of Shareholder's Equity

The shareholder's equity of a bank includes paid-up Capital and Reserve Funds, which are presented in following table.

Table 4.4 : Shareholders Equity Composition and Index Table of NABIL & NIBL

Fiscal Year	NABIL			NIBL		
	Net Worth	Index p_1/p_{0*100}	% Change	Net Worth	Index p_1/p_{0*100}	% Change
2007/08	2057049715	100		1878123538	100	
2008/09	2437198989	118.48	18.48	2686786048	143.06	30.10
2009/10	3130240637	152.17	28.44	3907839708	208.07	45.45
20010/11	3834225929	186.39	22.49	4585393092	244.15	17.34
2011/12	4572056221	222.26	19.24	5159759697	274.73	12.53
Average			22.16			26.36
Standard Deviation (S.D.)			4.53			14.73
Coefficient of Variation (C.V.)			20.45			55.90

(Source: Appendix I)

Net Worth of NABIL & NIBL

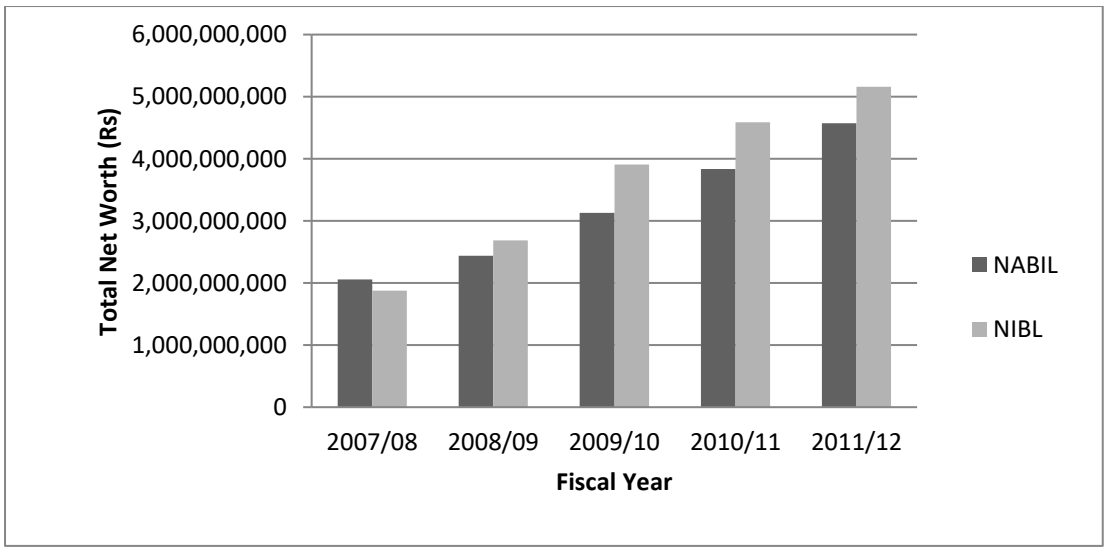


Figure 4.4

Table No. 4.4 and Figure no. 4.4 shows that shareholder's equity of both banks i.e. NABIL & NIBL was increasing during every fiscal year. The highest increment in the shareholder's equity of NABIL is 28.44% in FY2009/10 and that of NIBL is 45.45% in 2009/10. Similarly, the lowest increment in the equity of NABIL and NIBL are 18.48% in FY 2008/09 and 12.53% in FY2011/12 respectively. The variability of equity was found more in NIBL (C.V. = 55.90%) than in NABIL (C.V. =20.45) and average for NABIL is 22.16 and NIBL is 26.36.

Table 4.5 : Net Worth to Total Liabilities Ratio of NABIL & NIBL

Fiscal Year	NABIL	NIBL
	Ratio	Ratio
2007/08	7.55	6.81
2008/09	6.56	6.91
2009/10	7.14	7.37
2010/11	7.35	8.00
2011/12	7.86	8.84
Average	7.29	7.59
Standard Deviation (S.D.)	0.49	0.85
Coefficient Of Variance (C.V.)	6.69	11.14

(Source: Appendix III)

Table 4.5 and figure 4.5 indicates that proportion of shareholder's equity i.e. net worth in total claims of assets (Total Liabilities) of NABIL and NIBL. The highest ratio NABIL is 7.86% in the FY 2011/12 and the lowest is 6.56% in the FY2008/09. Again, the highest ratio of NIBL is 8.84% in the FY 2011/12 and the lowest is 6.81% in FY 2007/08.

Thus, the proportion of shareholder's equity of NIBL is higher than that of NABIL except in 2007/08 And fluctuation of the proportion of shareholder's equity is more in NIBL (C.V. = 11.14%) than NABIL (C.V. = 6.69%). The average ratio of net worth to total asset of NIBL is 7.59% and NABIL is 7.29.

Net Worth to Total Liabilities Ratio of NABIL & NIBL

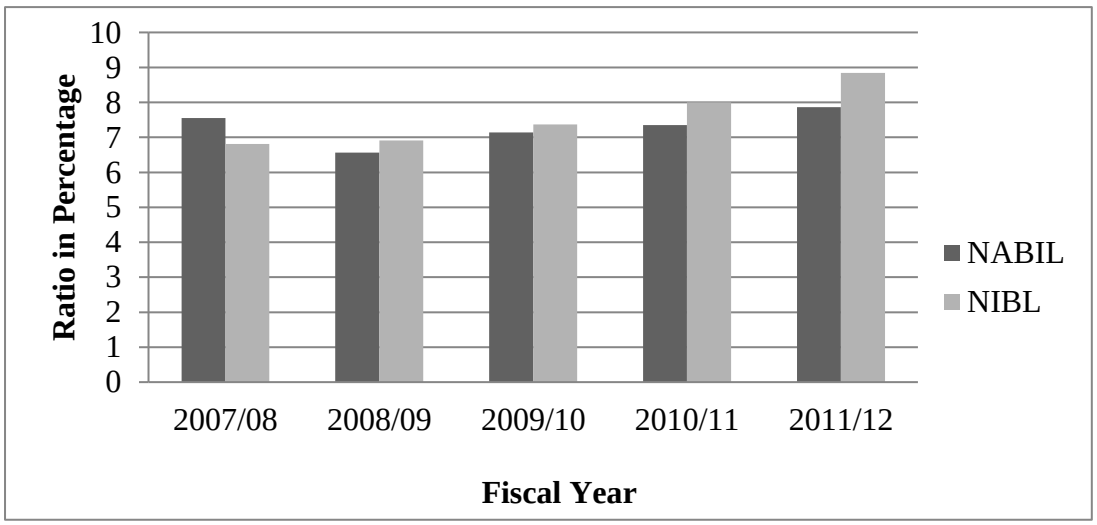


Figure 4.5

4.1.4 Analysis of Debt to Equity Ratio

Debt is between borrowed funds and owner's capital. This ratio reflects the relative claims of creditors and shareholders against the assets of the firm. The ratio is important tool to appraise the financial structure of the firm.

A higher ratio shows a large share of financing by the creditors relatively to the owners. So, there is a larger claim against the assets of the firm, which is the danger signal for the creditors. It would be risky for the creditors. A high proportion of debt in the financial structure would lead to inflexibility in the operations of the firm because the firm is legally liable to pay the interest even if the firm is having loss and a smaller ratio shows smaller claim of creditors. To the creditors, relatively high stake of the owners implies sufficient safety margin and substantial protection against shrinkage in assets.

Debt to equity has been calculated in following ways:

Debt to Equity Ratio in terms of Fixed Deposit to Net Worth

D/R = Fixed Deposit / Net Worth

Table 4.6 : Debt to Equity Ratio of NABIL & NIBL

Fiscal Year	NABIL			NIBL		
	Fisxed Deposit (Rs)	Net Worth (Rs.)	Ratio (%)	Fixed Deposit (Rs.)	Net Worth (Rs.)	Ratio (%)
2007/08	5435189720	2057049715	264	7516686866	1878123538	400
2008/09	8464086113	2437198989	347	7944232558	2686786048	296
2009/10	8310708297	3130240637	265	11633380218	3907839708	298
2010/11	14711158487	3834225929	385	16825148284	4585393092	367
2011/12	16840831154	4572056221	368	18378300034	5159759697	356
Average			325.8			343.4
Standard Deviation (S.D.)			57.56			45.35
Coefficient Of Variance (C.V.)			17.67			13.21

(Source: Appendix I)

The debt equity ratio is more significant to determine whether a fixed deposit is adequate to strengthen the profitability of the bank. Table no 4.5 reveal that both the banks have more DER i.e. greater claims of creditors than owner.

From Table no. 4.6 and Figure no. 4.6, D/E of NABIL in the F.Y. 2010/11 385% i.e. the greatest portion of the fixed deposit. It is 264% in the F.Y. 2006/07 i.e. the lowest portion of the fixed deposit throughout the study period. Similarly, D/E of NIBL in the F.Y. 2007/08 is 400%, i.e. the greatest portion of the fixed deposit. It is 296% in the F.Y. 2008/09 i.e. the lowest portion of the fixed deposit. The Average increment in the D/E of NIBL is 325.80% and that of NIBL is 343.40% and C.V is 17.67 and 13.21 respectively.

Debt to Equity Ratio of NABIL & NIBL

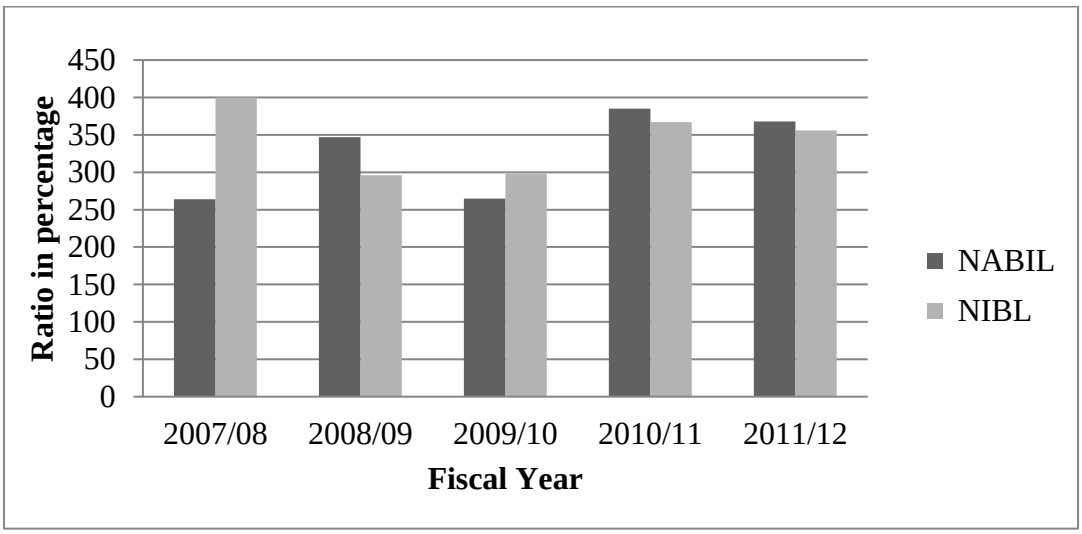


Figure 4.6

4.1.5 Return on Assets (ROA)

The effectiveness in using the total fund supplied by the owners and creditors is judged by this ratio. It indicates the maximum utilization of available assets. Higher ratio shows the higher return on assets used in business thereby indicating effective use of the resources available and vice-versa.

The table 4.7 shows the average ROA of NIBL and NABIL which are 1.91% and 2.48%, respectively. As such NABIL has higher ROA than NIBL. This show the higher ROA earning bank i.e NABIL has higher efficiency in utilizing their assets. Both mentioned banks have lower CV i.e. 9.42% of NIBL and 5.64% of NABIL, which shows the less fluctuation on ROA of both banks. But the fluctuation of NIBL is quiet higher than that of NABIL.

Table 4.7 : Return on Assets

Year	Ratio %	
	NABIL	NIBL
2007/08	2.72	1.82
2008/09	2.32	1.79
2009/10	2.55	1.70
2010/11	2.37	2.2
2011/12	2.43	2.02
Mean $\overline{X}$	2.48	1.91
S.D.	0.14	0.18
C.V.	5.64	9.42

Source: Appendix I

Return on Assets

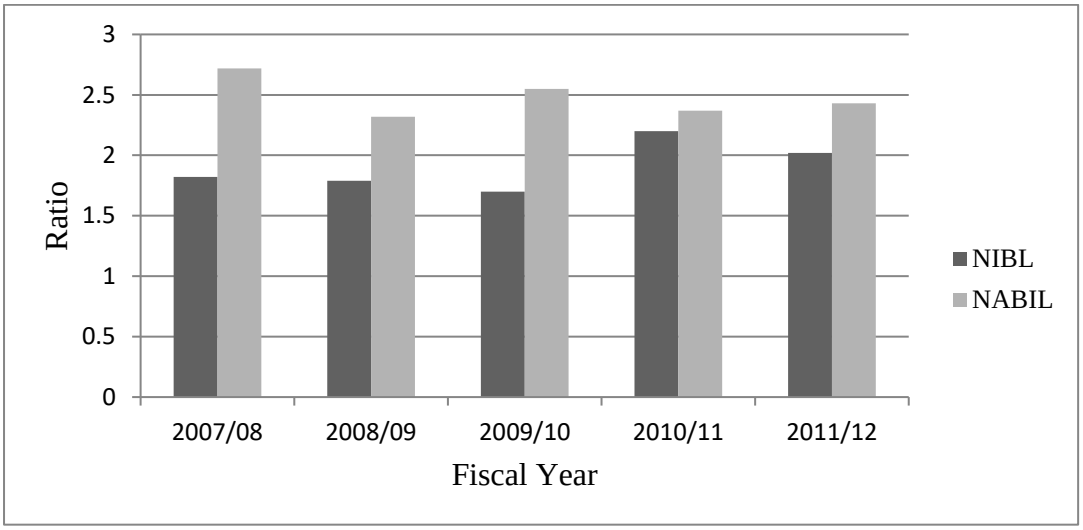


Figure 4.7

The figure 4.7 shows the ROA of both mentioned banks for fiscal year 2007/08 to 2011/12. ROA of NIBL and NABIL are fluctuating. NIBL has highest ROA on FY 2010/11 and NABIL has highest ROA on FY 2007/08.

4.1.6 Return on Equity (ROE)

These ratios measure that how much profits are generated on the amount by the shareholders. This ratio is helpful in measuring the degree of effectiveness with which funds of the shareholders are being utilized. It is also helpful in comparing the relative profitability and soundness of different firms. Higher ratio indicates the more efficient management and utilization of shareholders' funds.

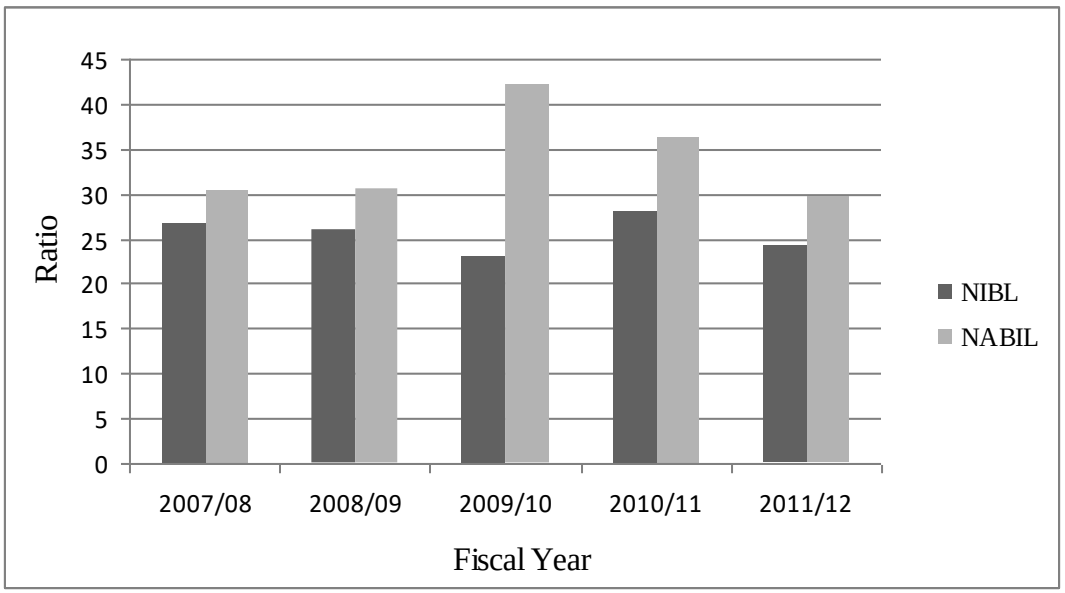
Table 4.8 : Return on Equity

Year	Ratio %	
	NABIL	NIBL
2007/08	30.47	26.68
2008/09	30.72	25.93
2009/10	42.22	23.05
2010/11	36.39	28.00
2011/12	29.69	24.10
Mean $\overline{X}$	33.90	25.55
S.D.	4.80	1.78
C.V.	14.16	6.97

Source: Appendix I

The table 4.8 shows the average ROE of NIBL and NABIL which are 25.55% and 33.90%, respectively. As such NABIL has higher ROE than NIBL. This show the higher ROE earning bank i.e NABIL has higher efficiency in utilizing their shareholders'' fund. Both mentioned banks have lower CV i.e. 6.97% of NIBL and 14.16% of NABIL, which shows the less fluctuation on ROE of both banks. But the fluctuation of NABIL is quiet higher than that of NIBL.

Return on Equity



Fifigure 4.8

The figure 4.8 shows the ROE of both mentioned banks for fiscal year 2007/08 to 2011/12. ROE of NIBL and NABIL are fluctuating. NIBL has highest ROE on FY 2010/11 and NABIL has highest ROE on FY 2008/09.

4.1.7 Interest Income on Loan & Advances

Interest income is the major source of income from loan and advances that comprises higher rate of interest income. It shows higher utilization of loan & advances.

The below table 4.9 and figure 4.9 shows that the interest income on loan and advance ratio of NIBL and NABIL for the five fiscal years. The average ratio of NIBL is 9.13% and of NABIL is 9.58%, which shows that the ratio of NABIL is slightly highest than NIBL. And the CV of NIBL and NABIL are 25.19% and 17.64%, which shows that both mentioned banks have lower fluctuations. Interest income on loan and advance ratio seems to be decrease on FY 2008/09 and starts to increase continuously of both banks.

Table 4.9 :Interest Income on Loan and Advances

Year	Ratio (%)	
	NABIL	NIBL
2007/08	8.14	7.33
2008/09	8.04	6.93
2009/10	8.82	7.89
2010/11	10.41	10.51
2011/12	12.50	13.00
Mean $\overline{X}$	9.58	9.13
S.D.	1.69	2.30
C.V.	17.64	25.19

Source: Appendix I

Interest Income on Loan and Advance

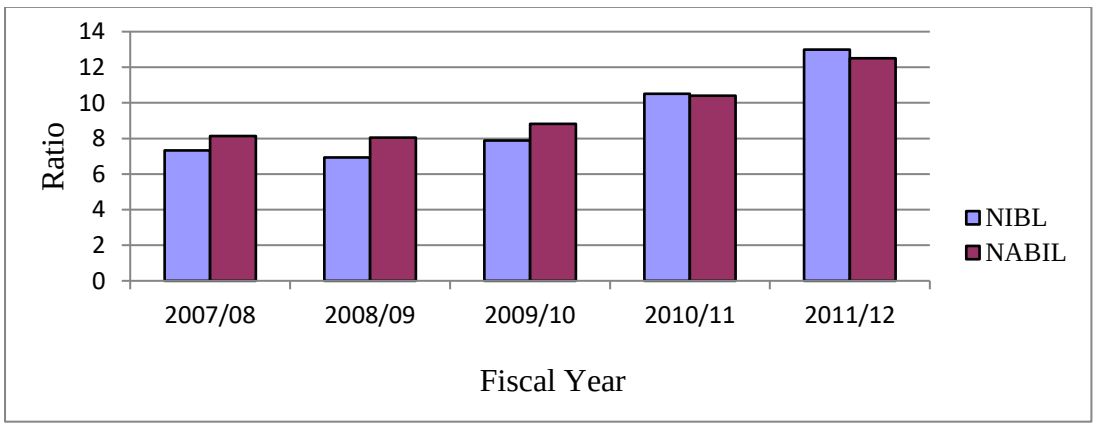


Figure 4.9

4.1.8 Market Value Analysis

Market value analysis indicates the market value of the banks as compared to the bank value and measure the stock price relative to earnings. In this part, the researcher analyzes and compares the various market related ratio analysis such as EPS, P/E ratio, Cash dividend on share capital & dividend (including bonus) on share capital for better presentation. However, this part lacks the proper comparative analysis as government commercial banks do not have their share listed in Nepal stock exchange and therefore their market value cannot be known. So we have calculated EPS only.

4.1.8.1 Earning Per Share (EPS)

EPS shows the profitability of the banks on per share basis. It shows the earning available to each shareholder out of the total earning. It is the major stake concerning banks shareholders.

Table 4.10 : Earnings per Share

Year	Rupees	
	NABIL	NIBL
2007/08	137.08	62.57
2008/09	115.86	57.87
2009/10	113.44	37.42
2010/11	83.81	52.55
2011/12	70.67	48.84
Mean $\overline{X}$	104.07	51.85
S.D.	23.84	8.59
C.V.	22.91	16.57

Source: Appendix I

Earnings per Share

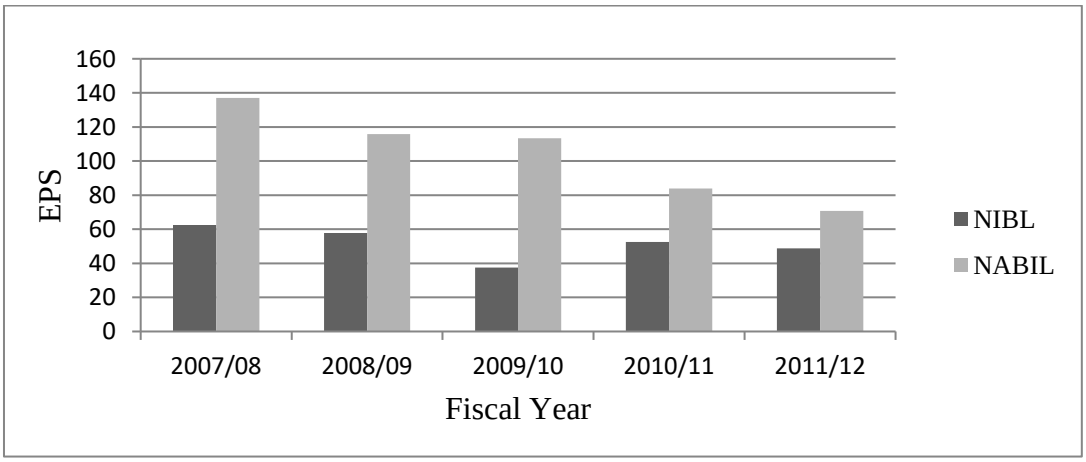


Figure 4.10

The table 4.10 shows the earnings per share of the two mentioned banks for the five fiscal years. NIBL has average EPS of Rs. 51.85 and NABIL has average EPS of Rs. 104.07, which shows the highest EPS of NABIL than NIBL. CV of NIBL and NABIL are 16.57% and 22.91% respectively which shows more consistent EPS on NIBL than NABIL.

The figure 4.10 shows EPS of NABIL is decreasing continuously during the fiscal period. But the EPS of NIBL is fluctuating. NABIL has more EPS than NIBL in all the study period.

4.1.8.2 Net Worth Per Share (NWPS)

Net worth per share, also called book value, is computed by dividing the amount of total shareholder's equity by the number of shares outstanding. The NWPS of the listed banks is tabulated as follows.

Table 4.11 : Net Worth per Share

Year	Rupees	
	NABIL	NIBL
2007/08	418	234
2008/ss09	354	223
2009/10	324	162
2010/11	265	190
2011/12	225	171
Mean $\overline{X}$	317.20	196
S.D.	67.51	28.25
C.V.	21.28	14.41

Source: Appendix I

The table 4.11 shows the net worth per share of two banks. NIBL has average NWPS of Rs. 196 and NABIL has average NWPS of Rs. 317.20, which shows the highest average NWPS of NABIL than NIBL. But the CV of NIBL and NABIL are 14.41% and 21.28% which shows a more consistent of NWPS of NIBL. The figure 4.11 reflects the decreasing trend of NWPS of NABIL. Whereas NWPS of NIBL is firstly

decreasing up to the FY 2009/10 and increase in FY 2010/11 and again decrease in FY 2010/11. And NWPS of NABIL is highest than NIBL on all the fiscal years.

Net Worth per Share

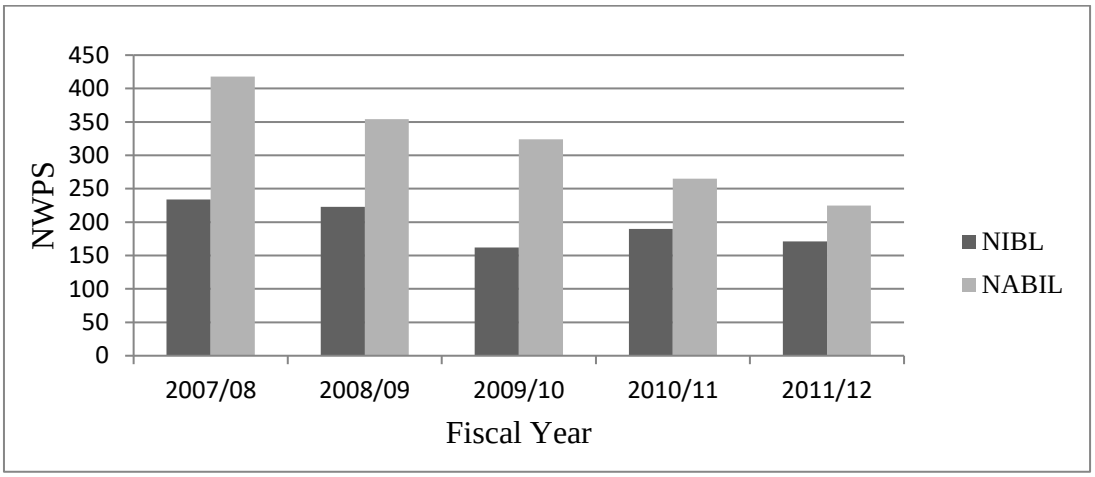


Figure 4.11

4.1.8.3 Price-Earnings Ratio

Price–earnings ratio is widely used by the security analyst to value the firm's performance as expected by investors. It reflects investors' expectation about the firm's growth in the firm's earning. This ratio measures investors' expectation and the market appraisal of the performance of the firm *(Munakarmi; 2002:490).* Price-earnings ratio shows how much the investors are willing to pay per dollar of reported profits.

Table 4.12 : Price – Earnings Ratio

Year	Ratio	
	NABIL	NIBL
2007/08	36.84	27.63
2008/09	45.53	42.33
2009/10	43.19	37.10
2010/11	30.33	13.42
2011/12	19.00	10.54
Mean $\overline{X}$	34.98	26.20
S.D.	9.58	12.57
C.V.	27.39	47.98

Source: Appendix I

The table 4.12 shows the price-earnings ratio of both banks during the study period. NIBL has lowest average P/E ratio i.e. 26.20 than NABIL i.e. 34.98. CV of NIBL and NABIL are 47.98% and 27.39% respectively which shows moderate fluctuations on both banks, but the fluctuation is high on NIBL than NABIL due to higher CV.

Price-Earnings Ratio

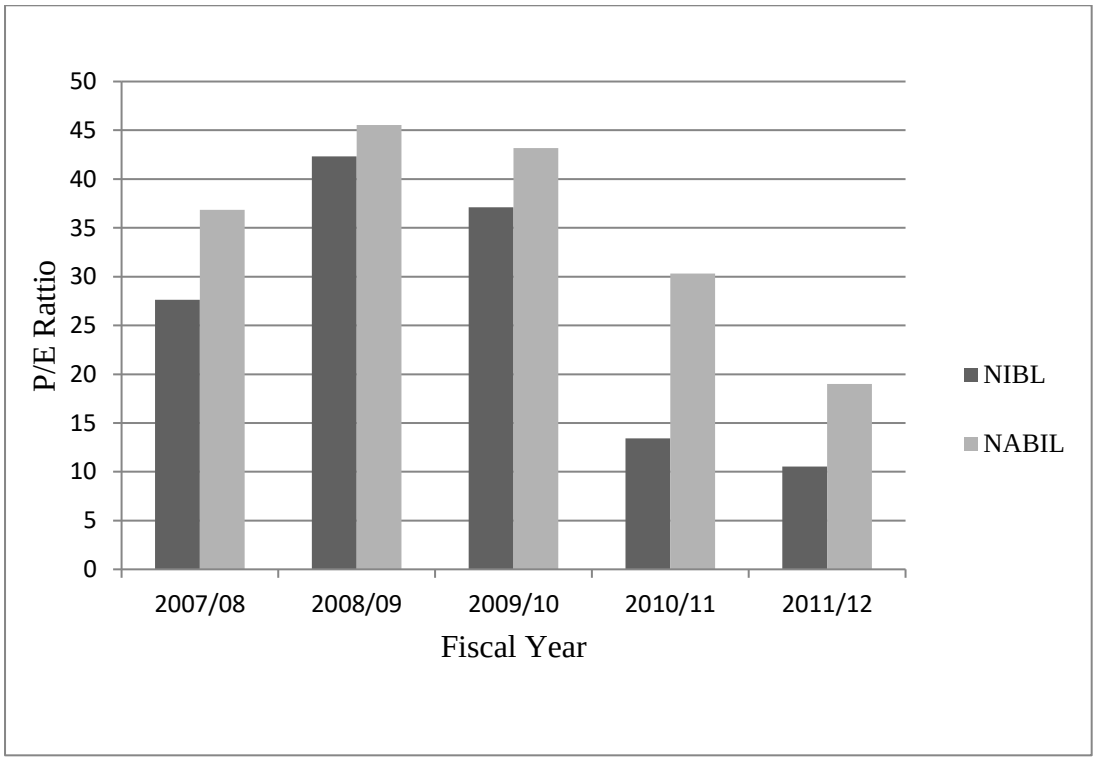


Figure 4.12

The figure 4.12 shows the increasing P/E ratio of NIBL and NABIL up to the FY 2008/09 and decreasing P/E ratio later continuously. And P/E ratio of NABIL is higher than of NIBL on all the fiscal years.

4.1.8.4 Cash Dividend on Share Capital

It measures the market value or profitability of the banks on dividend per equity share. In general higher the ratio, better it is and vice versa.

The table 4.13 shows the cash dividend on share capital of two mentioned banks at which NABIL has highest average cash dividend i.e. 51% than that of NIBL i.e. 16.5%. And the variation on cash dividend is slightly higher on NABIL than on NIBL due to the higher CV.

Table 4.13 : Cash Dividend on Share Capital

Year	Ratio (%)	
	NABIL	NIBL
2007/08	100	5
2008/09	60	7.50
2009/10	35	20
2010/11	30	25
2011/12	30	25
Mean $\overline{X}$	51	16.5
S.D.	26.91	8.60
C.V.	52.76	52.12

Source: Appendix I

Cash Dividend on Share Capital

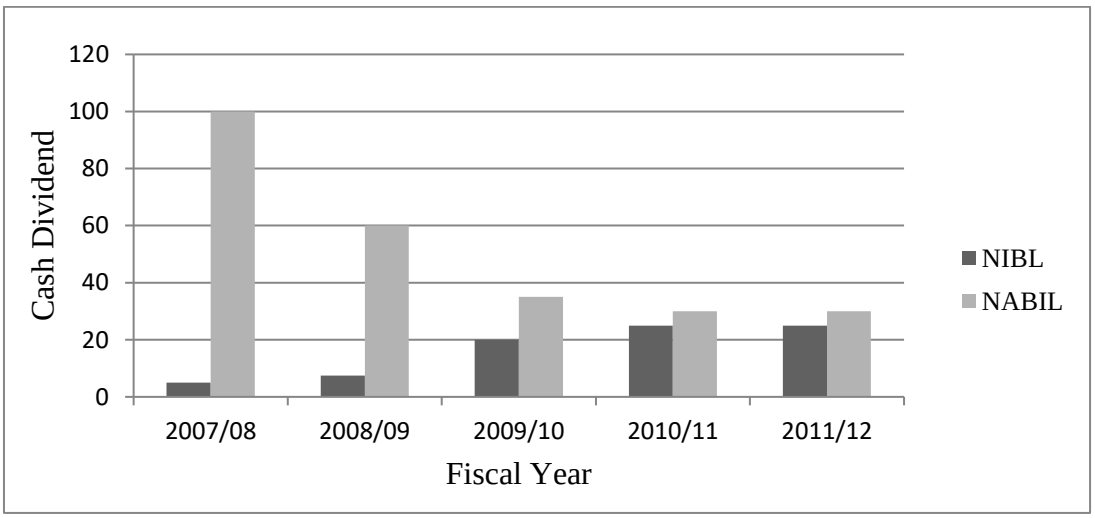


Figure 4.13

The figure 4.13 shows that the decreasing trend of cash dividend on share capital of NABIL and increasing trend of NIBL during the fiscal period. And the cash dividend on NABIL is high than NIBL on all the fiscal period.

4.2 Statistical Analysis

Statistical tool is one of the important tools to analyze the data. There are various tools for the analysis of tabulated data such as, mean, standard deviation, regression

analysis, co-relation analysis, trend analysis, various types of tests etc. There is convenient statistical tools are used in this thesis study.

4.2.1 Coefficient of Correlation Analysis

Co-efficient of co-relation shows the relationship between two or more than two variables. It measures that the two variables are positively or negatively co-related. For this purpose, Karl Pearson's co-efficient of correlation has been taken and applied to find out and analyze the relationship under the following headings:

4.2.1.1 Correlation Coefficient between Fixed Deposits to Total Liability Ratio and Net Worth to Total Liabilities Ratio

MPS and DPS, MPS and EPS, DPS and EPS of NABIL and NIBL using Karl Persons coefficient of correlation, value of coefficient of determination etc.

Table 4.14 : Coefficient of Correlation Analysis

Componants	NABIL		NIBL	
	Correlation	Determination	Correlation	Determination
Fixed Deposit to Total Liability Ratio & Net Worth to Total Liabilities Ratio	0.4070	0.1657	0.7450	0.5550
MPS and DPS	0.6356	0.4039	-0.8837	0.7809
MPS and EPS	0.9351	0.8744	0.4043	0.1634

(Source: Appendix IV and VII)

From Table 4.14, it is found that coefficient of correlation between Fixed Deposit to Total Liability Ratio & Net Worth to Total Liabilities Ratio of NABIL & NIBL are 0.4070 and 0.7450 respectively. Here the correlation determinations are 0.1657 and 0.5550. MPS and DPS of NABIL and NIBL is 0.6356 and -0.8837 respectively. It is shows that NIBL have the negative relationship between these two variables. Moreover, the coefficient of determination of NABIL is 0.4039. It means 40.39 percent of variation in MPS has been explained by DPS. Similarly, value of coefficient of determination of NIBL is 0.7809. It refers that 78.9 percent variance in MPS are affected by DPS.

Again, the researcher found that the coefficient of correlation between MPS and EPS of NABIL is 0.9351. In addition, coefficient of determination of is 0.8744. It means only 87.44 percent of MPS is explained by EPS. Similarly, there is high degree correlation positive coefficient between MPS and DPS of NIBL, which is indicator by correlation coefficient of 0.9351. The value of coefficient of determination is found 0.4043 this refers that 40.43 percent of the variation. Here NABIL 0.1634 coefficient of determination.

4.3.2 Hypothesis Test

A hypothesis is a conjectural statement of the relation between two or more variables. Hypothesis is always in declarative sentence form and they relate either generally or specifically, variables to variables. In this study, test of significance of difference between two mean is used to analysis. In case of testing the significance of difference between two means of small sample, t-values are used to the t-distribution.
In this study, following sets of hypothesis have been formulated and tasted.

H_0 : There is no significance difference between Fixed deposit to Total liabilities ratio of NABIL & NIBL

H_1 : There significance difference between fixed deposit to Total liabilities ratio of NABIL & NIBL

H_0 : There significance difference between Net worth to Total liabilities ratio of NABIL & NIBL

H_1 : There significance difference between Net worth to Total liabilities ratio of NABIL & NIBL

H_0 : There significance difference between Debt to equity ratio NABIL & NIBL

H_1 : There significance difference between Debt to equity ratio NABIL & NIBL

H_0 : There significance difference between Earning per share (EPS) of NABIL & NIBL

H_1 : There significance difference between Earning per share (EPS) of NABIL & NIBL

Table 4.15 : Testing of Hypothesis (T-Distribution)

Tested Variable	Degree of Freedom	Level Of Significance	Calculated T-Value	Tabulated T- Value	Result
Fixed deposit to Total liabilities ratio	(5+5-2)=8	∝=5%	0.2098	2.306	H_0 Accepeted
Net worth to Total liabilities ratio	(5+5-2)=8	∝=5%	0.3670	2.306	H_0 Accepeted
Debt to equity ratio	(5+5-2)=8	∝=5%	0.6167	2.306	H_0 Accepeted
Earning per share	(5+5-2)=8	∝=5%	0.0092	2.306	H H_0 Accepeted

(Source: Appendix IV- VI)

From the Table 4.15, it is found that the tabulated value of t-distribution is greater than calculated value in each case by considering the test statistic. So, null hypothesis H_0 is accepted and alternative hypothesis H_1 is rejected, it means there is no significance difference between Fixed deposit to Total liabilities ratio, Net worth to Total liabilities ratio, Debt to equity ratio & Earning per share of NABIL & NIBL. In other words, there is significant relationship between all above t-tested variables topic.

4.4 Major Findings of the Study

Basically in this research work, all the data has been obtained from secondary sources. Data has been analyzed by using financial as well as statistical tools. This topic focuses on the major findings of the study, which are derived from the analysis of working capital management of the selected banks with comparatively applying five years data from 2007/08 to 2011/12.

The major findings of the study derived from the analysis of financial tools of the selected banks are given below:

- Average cash reserve ratio of NABIL is near NRB directives of 6.5% and CRR of NIBL is higher than NRB directives. In comparison, NIBL has higher average CRR than NABIL which measures the ability to meet short-term obligation and reflect the short-term financial strength and solvency of the bank than NABIL.

- The major components of Total fixed deposit of NABIL & NIBL are local currency and foreign deposit currency and Total shareholder equity are paid up capital & Reserve fund. The level of Total deposit and Total shareholder equity are in increasing trend over the study period.
- The trend of total deposit index and net worth index is in increasing trend but changing percentage of both banks total deposit and net worth are in fluctuating trend and sometimes it becomes negative also.
- The capital structures of both banks are good. Total deposit to total liabilities ratios of both banks are in fluctuating and increasing trend.
- Both the banks have more debt equity ratio (DER) i.e. Greater claims of creditors than owners, which shows that the banks have somehow able to reduce the claim of creditors than that of owners. The average ratio of NIBL was higher than the average ratio of NABIL. The variability of fixed deposit to net worth is higher in NABIL and NIBL.
- NABIL has higher ROA than NIBL. This show the higher ROA earning bank i.e NABIL has higher efficiency in utilizing their assets. Both mentioned banks have lower CV i.e. 9.42% of NIBL and 5.64% of NABIL, which shows the less fluctuation on ROA of both banks. But the fluctuation of NIBL is quiet higher than that of NABIL.
- NABIL has higher ROE than NIBL. This show the higher ROE earning bank i.e NABIL has higher efficiency in utilizing their shareholders' fund.
- The average interest income on loan and advance of NIBL is 9.13% and of NABIL is 9.58%, which shows that the ratio of NABIL is slightly highest than NIBL. And the CV of NIBL and NABIL are 25.19% and 17.64%, which shows that both mentioned banks have lower fluctuations. Interest income on loan and advance ratio seems to be decrease on FY 2007/08 and starts to increase continuously of both banks.
- NIBL has average EPS of Rs. 51.85 and NABIL has average EPS of Rs. 104.07, which shows the highest EPS of NABIL than NIBL. CV of NIBL and NABIL are 16.57% and 22.91% respectively which shows more consistent EPS on NIBL than NABIL.
- NIBL has average NWPS of Rs. 196 and NABIL has average NWPS of Rs. 317.20, which shows the highest average NWPS of NABIL than NIBL. But the

CV of NIBL and NABIL are 14.41% and 21.28% which shows a more consistent of NWPS of NIBL.

- NIBL has lowest average P/E ratio i.e. 26.20 than NABIL i.e. 34.98. CV of NIBL and NABIL are 47.98% and 27.39% respectively which shows moderate fluctuations on both banks, but the fluctuation is high on NIBL than NABIL due to higher CV.
- NABIL has highest average cash dividend i.e. 51% than that of NIBL i.e. 16.5%. And the variation on cash dividend is slightly higher on NABIL than on NIBL due to the higher CV.
- The entire topic made by researcher in t-test is accepting the null hypothesis and rejecting the alternative hypothesis.
- The correlation co-efficient between MPS and DPS of NIBL becomes negative and other are positive

CHAPTER - V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Without the significant improvement in the economic conditions, the growth and prosperity of a developing country like Nepal cannot be assured. The commercial banks play a major role in the economic growth of the nation. Commercial banks accumulate the funds by mobilizing scattered and idle resources from the savers in order to fulfill the fund requirement of productive sectors, promote trade and industrialization in the country, thereby, raising the employment opportunities and earning to the laborers who are the service providers to such industries and traders, which ultimately further promotes saving into the banks. More saving means more funds available in the bank for further investment. Thus, as the chain reaction, the economy growth of a nation can be realized.

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

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

Risk on the other hand is the chances of loss. Risk can be thought as the possibility that actual return from holding a security will deviate from an expected return. An

asset is concerned as risky if its future return is highly volatile. The risk pertaining to an investment can be measured by computing standard deviation, coefficient of variance, covariance coefficient and beta coefficient and so on.

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

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

5.2 Conclusions

On the basis of entire research study some conclusions have been deduced. This study particularly deals about the capital structure management of commercial banks in Nepal. The present study is mainly an attempt to give account of comparative study about commercial banks in different aspects such as analizing fixed doposits, anslyzing shareholders equity, anayzing MPS, EPS, DPS and other related ratios and indicators of the basis of financial statement.

After conducting the Capital structure management of NABIL and NIBL, covering the study period of 2007/08 to 2011/12, the following conclusions can be drawn from the study:

- This study is particularly deals with conclusion about "A comparative study of capital structure management of NABIL Bank Limited and Nepal Investment Bank Limited". The Capital Structure decision is crucial because of the need to maximize returns to various organizational constituencies, and also because of the impact such a decision has on an organization's ability to deal with its competitive environment. This present study evaluated the capital structure ratios and the relationship between capital structures of firms. The study reveals that the

companies are financially leveraged with a large percentage of total debt being short term. Commercial bank has been using debt. The higher D/E ratio constitutes that the outsider's claim in total assets of the banks in owner's claim.

- The major components of Total fixed deposit of NABIL & NIBL are local currency and foreign deposit currency and Total shareholder equity are paid up capital & Reserve fund. The level of Total deposit and Total shareholder equity are in increasing trend over the study period.
- The private sector banks have been successful in increasing their deposits .The operating profits have gone up, so have the provision for loan loss. In short, banking sector in Nepal is somehow doing well even though it has to face a number of hurdles.
- Capital structure of any investing entity is the main key to ensure its return and make it more sustainable even in adverse environment. A commercial Bank also, being a commercial and investing institution (investor), has to plan for the reasonable capital structure.
- When an individual and a firm affect savings for the expectation of greater degree of future utility, financial system allow them to earn an additional income on the accumulated savings, which is termed as a return on investment. Rate of Return on investment, therefore, is cash plus accrued capital gain. It is generally expressed on the basis of annual percentage rate.
- Data relating to various activities of the Bank has been collected presented in tabular and various pie charts, figures and bars diagrams form and are tried to be interpreted in the study report in logical ways. Data are then analyzed applying various accounting financial, mathematical and statistical tools and findings of the study have been listed in a systematic manner. All these works are compiled in the forth chapter titled as 'Data Presentation and Analysis' of this study.
- During the research works, an extensive review of various literatures, books, past thesis, journals have been made and Internet materials from relevant web site were also consulted. The works were compiled into the chapter two titled as 'Review of Literature' of this study report.

5.3 Recommendation

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

- Capital structure is a serious matter, which affects EPS, Value of the firm, cost of capital etc. Between both the companies, NABIL is found to have the lesser cost of capital and higher value in comparison to NIBL. However, in the context of both companies; they have not given more attention in the capital structure matter seriously. So it is recommended that both the companies follow or give more attention into the theoretical aspects of the capital structure management and try to manage their activities accordingly.
- On the basis of liquidity ratio analysis it is found that NABIL has the cash reserve ratio of nearly NRB directives, but quiet lower, whereas NIBL has higher average CRR than NRB directives. Thus, it is recommended following NRB directives. To maintain liquidity in perfect, all banks have to follow the mid way, i.e. they should invest the idle deposit in productive sector and on the other hand they have enough cash balance to meet current requirement.
- Share holders are the real owners of the organization. So they should have the satisfaction with the rate of return on equity provided by the banks. To some extent, NIBL and NABIL have been successful in providing a better return but in decreasing order.
- NIBL had lower EPS than NABIL. The number of shares outstanding and low earnings might be the factor of decreasing EPS of NIBL, which increases the strength of the share and improve the market price of NABIL than NIBL. The management of NIBL should eager to increase its performance in the market so that investor should hold the share of NIBL like NABIL.
- The average MPS and C.V. of NABIL is better than that of NIBL. There is high variation in MPS of NABIL over NIBL and ultimately encourages the investor to hold the share of NIBL rather than NABIL.

- Both the banks are more concentrating in the area of loan and advances. But due to the competitive market and present worse economic and political condition of the country, investment in the sector of loan and advances only is not favorable. So, both banks should also give the emphasis in the other commission based sector like bill purchase and discount, government security and other investment so that profit could be secure.
- Banks are not able to mobilize to its deposits in terms of loans due to lack of sufficient safe investment opportunities. Thus it is suggested to the government to improve the political situation of the country.
- As published report of concerned banks are the major sources of data and information regarding this topic, untimely and late publication makes the researcher wait long and they also do not put available information regarding capital structure on their published report. So joint venture banks are suggested to publish all necessary publication in time and in their publication respectively for the convenience of researcher and other interested people.
- As the key to success for any organization and for good financial system in the country capital investment is essential, this is possible only by proper decision making of capital structure. So all the joint venture banks are supposed to set proper and practical in capital structure management.
- Further studies can be conducted by increasing sample size, by increasing number of observations and by using other methodologies.

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Appendix I

Five Years Financial Summary of NABIL

Particulars	2007/08	2008/09	2009/10	20010/11	2011/12
Cash Reserve Ratio (In %)	6.00	8.37	9.03	3.02	4.90
Net Profit Margin (In %)	32.16	29.68	30.56	24.11	22.29
Return on Assets (In %)	2.72	2.32	2.55	2.37	2.43
Return on Equity (In %)	30.47	30.72	42.22	36.39	29.69
Net Worth (In Rs.)	2057049715	2437198989	3130240637	3834225929	4572056221
Int. Income on Loan and Advance (In %)	8.14	8.04	8.82	10.41	12.50
Loan and Advance (Rs. In millions)	15455.78	21365.05	27589.93	32268.87	28034.10
Total Deposit (Rs. In millions)	23342.75	31915.48	37348.25	46410.70	49696
Fixed Deposit (Rs. In millions)	5435.20	8464.1	8310.7	14711.16	16840
Earnings per Share (In Rs.)	137.08	115.86	113.44	83.81	70.67
Net Worth per Share (In Rs.)	418	354	324	265	225
P/E Ratio (In times)	36.84	45.53	43.19	30.33	19.00
Cash Dividend on Share Capital (In %)	100	60	35	30	30

Source: Annual Reports of Respective Banks

Five Years Financial Summary of NIBL

Particulars	2007/08	2008/09	2009/10	20010/11	2011/12
Cash Reserve Ratio (In %)	10.47	10.91	10.32	7.77	7.67
Net Profit Margin (In %)	25.07	25.33	22.97	23.67	17.91
Return on Assets (In %)	1.82	1.79	1.70	2.2	2.02
Return on Equity (In %)	26.68	25.93	23.05	28.00	24.10
Net Worth (In Rs.)	1878123538	2686786048	3907839708	4585393092	5159759697
Int. Income on Loan and Advance (In %)	7.33	6.93	7.89	10.51	13.00
Loan and Advance (Rs. In millions)	17769	27529	36827	40948	41887
Total Deposit (Rs. In millions)	24488.86	34451.73	46698.10	50094.73	50138.12
Fixed Deposit (Rs. In millions)	7516.69	7944.23	11633.38	16825.15	18378.30
Earnings per Share (In Rs.)	62.57	57.87	37.42	52.55	48.84
Net Worth per Share (In Rs.)	234	223	162	190	171
P/E Ratio (In times)	27.63	42.33	37.10	13.42	10.54
Cash Dividend on Share Capital (In %)	5	7.50	20	25	25

Source: Annual Reports of Respective Banks

Appendix: II

Computation of Fixed deposit to Total Liabilities Ratio of NABIL & NIBL

Year	NABIL		NIBL		Ratio NABIL = FD/TL	Ratio NIBL = FD/TL
	Fixed deposit	Total Liabilities	Fixed deposit	Total Liabilities		
2007/08	5435189720	27253393008	7516686866	27590844761	19.94	27.24
2008/09	8464086113	37132759149	7944232558	38873306084	22.79	20.44
2009/10	8310708297	43867397504	11633380218	53010803126	18.95	21.95
2010/11	14711158487	52150237343	16825148284	57305413482	28.21	29.36
2011/12	16840831154	58141437401	18378300034	58356827501	28.97	31.49

Source: Annual Reports of Respective Banks

Appendix: III

Computation of Net worth to Total Liabilities Ratio of NABIL & NIBL

Year	NABIL		NIBL		Ratio NABIL = NW/TL	Ratio NIBL = NW/TL
	Net worth	Total LiabilitieS	Net worth	Total Liabilities		
2007/08	2,057,049,715	27253393008	1,878,123,538	27590844761	7.55	6.81
2008/09	2,437,198,989	37132759149	2,686,786,048	38873306084	6.56	6.91
2009/10	3,130,240,637	43867397504	3,907,839,708	53010803126	7.14	7.37
2010/11	3,834,225,929	52150237343	4,585,393,092	57305413482	7.35	8.00
2011/12	4,572,056,221	58141437401	5,159,759,697	58356827501	7.86	8.84

Source: Annual Reports of Respective Banks

Appendix - IV

Calculation for Mean value, Standard Deviation, Correlation & t-test between Fixed Deposit to Total Liability Ratio & Net Worth to Total Liabilities Ratio

Year	FD/TL Ratio (X_1)	NW/TL Ratio (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
2007/08	19.94	27.24	-3.832	1.144	-104.384	14.68	1.31
2008/09	22.79	20.44	-0.982	-5.656	-20.0721	0.96	31.99
2009/10	18.95	21.95	-4.822	-4.146	-105.843	23.25	17.19
2010/11	28.21	29.36	4.438	3.264	130.2997	19.70	10.65
2011/12	28.97	31.49	5.198	5.394	163.685	27.02	29.10
$N_1 = 5$ $N_2 = 5$	$\sum X_1$ =118.86	$\sum X_2$ =130.48			$\sum x_1.x_2$ = 63.69	$\sum x_1^2$ = 85.62	$\sum x_2^2$ = 90.24

Source: Annual Reports of Respective Banks

For Fixed Deposit to Total liabilities Ratio,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{118.86}{5} = 23.772$$

$$\text{S.D } (\sigma) = \sqrt{\frac{\sum (X_1 - \bar{x}_1)^2}{N_1}} = \sqrt{\frac{85.62}{5}} = 4.14$$

For Net Worth to Total Liabilities Ratio,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{130}{5} = 26.096$$

$$\text{S.D } (\sigma) = \sqrt{\frac{\sum (X_2 - \bar{x}_2)^2}{N_2}} = \sqrt{\frac{90.24}{5}} = 4.248$$

Correlation between Total deposit and Loan & Advance of EBL,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}} = \frac{63.69}{\sqrt{85.62 \times 90.24}} = 0.407$$

For Hypothesis,

Test statistic under H_0,

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{s^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}} = \frac{(118.86 - 130.48}{\sqrt{5.243\left(\frac{1}{5}+\frac{1}{5}\right)}} = 0.2098$$

$$S^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2} = \frac{5 \times 4.14 + 5 \times 4.248}{5+5-2} = 5.243$$

Appendix - V

Calculation for Mean value, Standard Deviation & t-test between EPS of NABIL & NIBL

Year	EPS NABIL (X_1)	EPS NIBL (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
2007/08	137.08	62.57	32.908	10.72	352.77	1082.94	114.92
2008/09	115.86	57.87	11.688	6.02	70.36	136.61	36.24
2009/10	113.44	37.42	9.268	-14.43	-133.74	85.90	208.22
2010/11	83.81	52.55	-20.362	0.7	-14.25	414.61	0.49
2011/12	70.67	48.84	-33.502	-3.01	100.84	1122.38	9.06
$N_1 = 5$ $N_2 = 5$	$\sum X_1$ =118.86	$\sum X_2$ =130.48			$\sum x_1.x_2$ = 375.99	$\sum x_1^2$ = 2842.44	$\sum x_2^2$ = 368.96

For Hypothesis,

Test statistic under H_0,

$$t = \frac{(\bar{X}_1-\bar{X}_2)}{\sqrt{s^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}} = \frac{(104.172-51.85}{\sqrt{22.66\left(\frac{1}{5}+\frac{1}{5}\right)}} = 0.0091$$

$$S^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1+n_2-2} = \frac{5\times26.657+5\times9.604}{5+5-2} = 22.66$$

Appendix - VI

Calculation for t-test between Debt to equity ratio of NABIL & NIBL

Year	DER NABIL (X_1)	DER NIBL (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
2007/08	264	400	-61.8	56.6	-3497.88	3819.24	3203.56
2008/09	347	296	21.2	-47.4	-1004.88	449.44	2246.76
2009/10	265	298	-60.8	-45.4	2760.32	3696.64	2061.16
2010/11	385	367	59.2	23.6	1397.12	3504.64	556.96
2011/12	368	356	42.2	12.6	531.72	1780.84	158.76
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 1629	$\sum X_2$ =1717			$\sum x_1.x_2 =$ 186.40	$\sum x_1^2 =$ 13250.80	$\sum x_2^2 =$ 8227.20

For Hypothesis,

Test statistic under H_0,

$$t = \frac{(\bar{X}_1-\bar{X}_2)}{\sqrt{S^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}} = \frac{(325.8-343.40}{\sqrt{64.32\left(\frac{1}{5}+\frac{1}{5}\right)}} = 0.6167$$

$$S^2 = \frac{n_1 s_1^2 + n_2 s_2^2}{n_1+n_2-2} = \frac{5\times57.56+5\times45.35}{5+5-2} = 64.32$$

Appendix - VII

Calculation for Correlation coefficient between MPS & DPS of NABIL

Year	MPS NABIL (X_1)	DPS NABIL (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
2007/08	5050	100	1278	49	62622	1633284	2401
2008/09	5275	60	1503	9	13527	2259009	81
2009/10	4899	35	1127	-16	-18032	1270129	256
2010/11	2384	30	-1388	-21	29148	1926544	441
2011/12	1252	30	-2520	-21	52920	6350400	441
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 18860	$\sum X_2$ =255			$\sum x_1.x_2 =$ 140185	$\sum x_1^2 =$ 13439366	$\sum x_2^2 =$ 3620

For MPS,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{18860}{5} = 3772$$

$$\text{S.D } (\sigma) = \sqrt{\frac{\sum(X_1-\bar{x}_1)^2}{N_1}} = \sqrt{\frac{13439366}{5}} = 1832.99$$

For DPS,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{255}{5} = 51$$

$$\text{S.D } (\sigma) = \sqrt{\frac{\sum(X_2-\bar{x}_2)^2}{N_2}} = \sqrt{\frac{3620}{5}} = 30.08$$

Correlation between MPS & DPS of NABIL,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{140185}{\sqrt{13439366 \times 3620}} = 0.6356$$