CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal, home to Mount Everest, is dominated by the world's most imposing mountains. Although the country is relatively small (147,181 square kilometers), 80 percent of its territory is occupied by the dramatic peaks of the Himalayas. Nepal was closed to foreign visitors until 1951, a situation which contributed greatly to its mystique in the west. This small, hospitable country has since become an exceptionally popular destination for travelers, whether they are in search of climbing challenges or spiritual enlightenment.

Nepal can be divided into three geographical regions, each stretching from east to west across the country. The southernmost strip of land, the Terai, is bordered to the north by Himalayan foothills and to the south by the Ganges River. The area was originally covered with tropical vegetation, but has been almost completely converted to agricultural production. The Terai is now the breadbasket of Nepal and is covered with farms.

Propelled by the a strong growth in both the agriculture and non-agriculture sectors, the long-ailing economy has bounced back to record 5.56 percent growth in the current fiscal year, highest economic expansion in last the seven years. With the growth, the total size of Nepali economy in producers' price has scaled up to Rs 828.8 billion (US$12.80 billion) while the per capita income has also increased by around 11 percent to Rs 30,361 per year (470 US$). However, with the creeping inflation, which is around 9 percent, the real purchasing capacity of Nepali consumers is estimated to grow marginally in the year. According to a preliminary estimate of national accounts prepared by the Central Bureau of Statistics (CBS), agriculture sector, which contributes 32 percent to national economy, grew by 5.65 percent while the growth of non-agriculture sector was around 5.52 percent. Former Finance minister Dr Ram Sharan Mahat said that the growth which has been encouraging, was made possible due to prudent and tactful management of the economy even at the most difficult period. The big push for this year's growth came from the long-yeaning agriculture sector, which witnessed a record 5.65 percent growth in 14 years, thanks mainly to almost 17 percent growth in production of paddy, the heavyweight of the agricultural sector. Likewise, the wholesale and retail sector that holds the second largest contribution to national economy after agriculture expanded by 6.43 percent whereas its expansion last year was negative. Increasing purchasing power of consumers mainly due to a double-digit growth in remittance inflow fueled the

growth. Similarly, despite a strong growth in communication sector, the lengthy transport disturbances took a toll on the sector, resulting in a slowest growth of 6.6 percent in transport and communication sector, the third largest contributor to national output. The most impressive growth came from the financial intermediation sector, which mainly represents banking and insurance businesses (www.google.com).

Nepal is an interesting country to examine due, in additional to her developing nature, to her unique geographical situation. The geographical situation has affected Nepalese policy with India and is best represented by the 1950 Trade and Transit treaty, which provides for unrestricted labor and capital movements between both countries.

Nepal has high population growth rate 2.21% low per capita income US $ 473 in 2008. It has poorest economic status and low rate of capital formation as well as limited resources of the world. The various factors that affected for the development of the nation are landlocked position, rugged terrain, poor resources endowment institution weakness and lack of appropriate economic policies, due to political instability as well as lack of political commitment. The main reason of Nepal's underdeveloped economy is due to improper utilization of the available resources in the efficient manner. Every economy has its own fiscal and monetary policies which stabilize and supervise the economy. The development of any country largely depends upon the economic health and conditions of the country (www.financialexpress.com).

The development of any country largely depends upon the economic and health condition of the country. Now day’s financial institutions are viewed as catalyst in the process of the economic growth. The mobilization of the domestic resources is one of the key factors in the economic development of the country. The industrial sector plays a significant role in the economic development of the country, as they are main sources of the capital.

Development of industrial sector, amongst others, is equally essential for the rapid economic development of the country. Despite the role of the industrial sector in resolving issues regarding growing unemployment and rural poverty, the share of productive industrial sector in Nepal's Gross Domestic Product (GDP) is only in the range of 10 percent. Given the majority of population dependent on agriculture, need to create job option for them in non-agriculture sector through the development of the productive industry is imminent. This will help not only to solve the problem of unemployment and under employment but also stimulate the process of economic development of the country. As the effort of government alone is not enough for this to happen, the active role of private sector is indispensable in promoting domestic and foreign industrial investment.

Only establishment of industry is not sufficient but their successful operation is also necessary. Establishment and operation of industries need finance. The success and failure of business depends mainly upon the ability of management to make right financial decisions. Capital structure decision is one of the most complex area of financial decision making due to its interrelationship with other financial decision variable. In order to achieve the firm's goal of owner's wealth maximization. The financial manager must be able to assess the firm's capital structure and understand its relationship to risk, return and value.

Financial matter is at the center of each organization whether it is trading concern or an industry, the combination of sources of financing structure and cost of capital are measure factor affecting the calculation profitability and its financial strength. Capital structure is considered as that mix of debt and equity and to operate in long run prospect. A firm must concentrate in its proportion. A firm can raise required fund by issuing various types of financial instrument. Investors and creditors being the key supplier of capital, they hold greater degree of risk and hence have claims over firms assets and cash flow. Similarly, debt holders are also a source of financial fund, they have risk considering firm’s cash flow is uncertain, and there is probability that it may default in its obligations to pay off its interest and principle.

The term capital structure refers to the proportionate relationship of debt and equity capital. Debt includes all long-term borrowing incurred by the firm e.g. debentures, long-term loan and bond etc. Equity fund consists of long-term fund provided by the firm’s owners, the stockholder. Equity includes paid-up capital, share premium and reserve and surplus (retained earning). The financing or capital structure decision is significance managerial decision. It influences shareholder return and risk. Consequently, market value of the share may be affected by the capital structure decision. The company will have to plan its capital structure initially during its inception.

In Nepal, some companies do not plan capital structure. Financial manager without any systematic and comprehensive planning develop from the financial decision. Those companies may prosper in the short-run, but ultimately they will face great difficulties in raising funds to finance their activities. Without unplanned capital structure, the companies may fail to economize the use of their funds. Thus, it is being increasingly realized that a company should plan its appropriate capital structure to maximize the use of funds and be able to adapt more easily to changing conditions.

The research is concerned with the study of capital structure management of some selected manufacturing companies. To describe the capital structure of any firm the long-term source of funds is necessarily used. Well financial performance depends on optimal

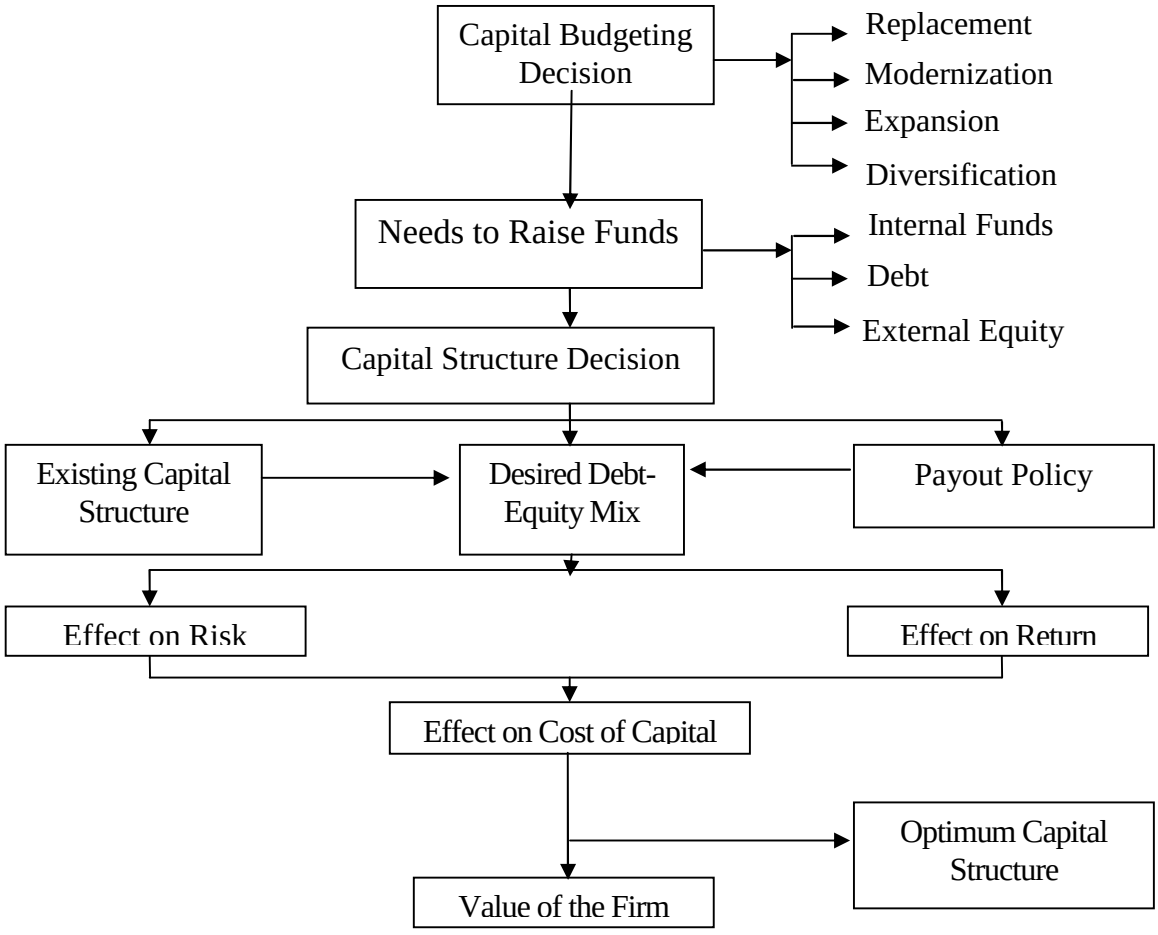
capital structure. The term capital structure refers to the long term funds like debt equity. The mix capital, which leads to the maximum value and minimum cost of capital of optimal capital structure, can be obtained by changing the financing mix.

Composition of capital structure is one of the most important components of solvency analysis. Capital structure refers to a company's sources of financing and its economic attributes. Capital structure is usually measured in terms of the relative magnitude of the various financing sources. A company's financing stability and risk of insolvency depend on its financing sources and the types and sizes of various assets its own. Common size and ratio analysis of capital structure and preliminary measures of the risk of the company's capital structure. The higher the proportion of debt the larger the fixed charges of interest and debt repayment and the greater the likelihood of insolvency during period of earnings decline or hardships. Capital structure measures serve as screening devices (Bernstein and Wild, 1997;58). This study is directed towards analyzing the effect of capital structure on the value of the firm in the context of Nepalese manufacturing.

Subsequently whenever funds have to raise to finance investment a capital structure decision is involved.

Figure 1.1

Capital Structure Decision Process



Introduction of Selected Companies

Nepal Lubes Oil Limited (NLOL)

Nepal lube Oil Ltd. was established in the Year 2041 B.S. It produces Gulf Mobile and Lubricant Oil(in various sizes)to meet domestic demands. It has adopted policy of continuous quality improvement as result to assure customer it success to get certificate of ISO 9001;2002.The Nepal Oil Corporation, Nepal Industrial Development Corporation, National Trading Ltd, Salt Trading Corporation Ltd. Himal Cement Company and Rastriya Beema Santhan have invested from public sector and private investor has also invested. The prime objective of NLO is to produce and sell the lubricant Oil (i.e. Gulf Oil) within the country at reasonable price. NLOL is one of the public undertakings of the country, which has an authorized capital of Rs.50 million. It issued capital is Rs.30 million and paid up capital is Rs.20, 292,200.

Bottlers Nepal Limited (BNL)

Bottlers Nepal Limited was established as a private Limited company under the company Act 1964 in 1973 A.D. it was converted in public Limited company in 1984. It is one of the manufacturing and processing companies, which are manufacturing soft drinks, under the brand name coca-cola company. The company also makes the sales of the soft drinks under the registered trade name of Coca Cola Company; its registered office is located at Balaju, Kathmandu. The company has established a subsidiary company, Bottlers Nepal (Terai) Limited in Chitwan District. The main objective of the company is to produce and to market soft drinks under the brand name of Coke, Fanta and to market soft drinks under the brand name of Coke, Fanta and Sprite etc in the country. Raw materials for the production are imported from France and Atlanta. Flavor of the coke is prepared by the company secretly and is sold without disclosure. These are brought from countries like Singapore, India and Germany has production capacity of 430 bottlers per minute.

The company has authorized share capital of Rs.64.8 million and paid up value per share is Rs.100. it has issued capital of Rs.43.5 million and paid up capital is.19, 673,000.

1.2 Focus of the Study

Nepal is among the least developing countries with a low per capita income of U.S. $320. It has a slow industrial growth with 2.9% and 5.1% economic growth (Economic survey, 2003/04). Thus, the economic growth is not satisfactory for an overall growth of

the national economy, and industrialization is essential for the sustainable long-term improvement of the country.

Though there are numerous manufacturing industries in Nepal, most of them are suffering from heavy losses and some of them have already closed their operation. Similarly, most of the industries use major portion of their income in paying interest and could not afford for the improvement of new technology. Some industries even could not meet the interest and other expenses from the income, so they increase loan (debt) and become more levered. Capital structure decision directly affects the shareholders risk, return, and market value of the share. As capital structure, decision includes decision of debt and equity mix, which has implications for the shareholder's earning and risk, which in turn, will affect the cost of capital and market value of the firm.

1.3 Statement of the Problem

Generally, every company has its own policy in determining capital structure for operating business activities. Some of the business use only equity capital some use only debt capital and some combine both equity and debt capital.

The debt-equity mix has implication for the shareholder's earning and risk, which in turn will affect the cost of capital and market value of the firm. Theoretically, the financial manager should plan an optimum capital structure for his company. The optimum capital structure is one that maximizes the market value of the firm. In practice, the determination of optimum capital structure is formidable task and one has to go beyond the theory. There are significant variations among industries and among companies within an industry in terms of capital structure. Since a number of the factor, influence the capital structure decision of a company the judgment of the person a crucial part. Two similar companies may have different capital structure if the decision makers differ in their judgment of significance of various factors.

In context of Nepal, here are very few manufacturing companies are in operation. Without increasement of manufacturing companies, the prosperity of the country cannot be imagined. However, study of manufacturing company mainly focusing on capital structure is very limited. Most of the studies are concern with research title "Capital Structure Management". Some research has selected various manufacturing companies for the study whereas some confined with only single company. This study has chosen capital structure of Nepal Lube Oil Ltd and Bottlers Nepal Ltd. he study has raised following question.

- What is the relationship among the companies in term‘s of cost of capital and return on capital and it’s effect on capital structure?
- What is the trend of return on assets of unlevered firm?
- Does the capital structure decision affect the value of firm?
- Is the quality of financial management good in manufacturing companies?

1.4. Objective of the Study

The main objective of this study is to analyze the capital structure of listed companies from manufacturing sector. The specific objectives of the study are pointed out as under:

- To examine the capital structure of selected companies.
- To assess the debt servicing capacity of the selected companies.
- To analyze cost of capital and return on capital in relation to the capital employed.
- To analyze the financial and operating leverage effect on the capital structure.
- To identify whether there exist an optimum finance mix in terms of maximum value to the firm’s shareholder.
- To recommend possible capital structure.

1.5 Significance of the Study

The manufacturing sector of Nepal is expanding. In the recent days due to political instability, load shedding the manufacturing sector is facing many difficulties. In this situation this study will be helpful to the companies to overview their capital structure management and to formulate future strategies to do much better in their horizon.

Further the concerned scholars, academicians, investors, professionals may also be benefited from this study. This study will also help to inform the decision makers about the importance of capital structure management for their further success. Finally yet importantly, the study will provide literature to those who want to research in future.

1.6. Limitation of the Study

This study is mainly concerned with capital structure of listed manufacturing companies of Nepal. This research has tried to minimize the limitation of the study to some extent.

However, there exists some limitation mention below.

- The study covers only five years period.
- For our convience, annual data has been taken which becomes easy for us to perform the study.
- Due to lack of time and financial resources only two manufacturing companies are selected as sample for the study.
- The consistency of the result is mainly based on the information provided to us.

1.7 Organization of the Study

This study has been divided into five chapters which are as follows:

Chapter - I : Introduction

This chapter deals with subject matters of the study consisting background of the study, focus of the study, statement of the problem, objective of the study, significance of the study and limitation of the study.

Chapter - II: Review of Literature

This chapter deals with review of the different literature of the study field. Therefore, it includes conceptual framework along with the review of related studies and research gap.

Chapter - III: Research Methodology

This chapter deals research methodology and it includes research design, population and sample, source of data and technique of data collection and method of data analysis.

Chapter - IV: Data Analysis and Analysis

It deals with presentation and analysis of relevant data and information through definite courses of research methodology and major findings. It includes Leverage and Ratio Analysis.

Chapter - V: Summary, Conclusion and Recommendations

This chapter contains summary and conclusion of the study. After that all necessary recommendation are presented.

At the last part of the study, a bibliography has been included. All necessary appendices are also included after bibliography.

CHAPTER II

REVIEW OF LITERATURE

Literature review is basically a “stock taking” of available literature in one’s field of research. The literature survey provides the student with the knowledge of the status of their field of research. In social science there is no dearth of literature. The library is a rich storage base for all kinds of published material including thesis, dissertations, business reports etc.

The purpose of literature review is thus to find out what research studies have been conducted in ones’ chosen field of study and what remains to be done. It provides the foundation for developing a comprehensive theoretical frame work. This paper highlights about the relevant literature to make the base of knowledge for the study. The scholars in respect of capital structure have expressed different reason. Review of literature comprises with provision articles concerned with the study.

This chapter is a comprehensive study in the conceptual frame work review of books journals and various researches regarding the capital structure, cost of capital, theories of capital structure and financial leverage.

2.1 Conceptual Framework

Sound capital structure is required to operate business smoothly and achieve the business goal. Capital structure is concerned with analyzing the capital composition of the company (Weston and Brigham: 1978;555).

Capital structure is the mix of firm's permanent long term financing represented by the debt, preferred stock and common stock Equity (Van Horne: 1997;240).

Capital structure is one of the most complex areas of financial decision making due to its interrelation with other financial decision variables. The success and failure of the enterprise depends on the ability of top management to make appropriate capital decision. Capital structure of the firm is the permanent financing represented by long-term debt, preferred stock and shareholders Equity. Thus, a firm's capital structure is only part of its financial structure (Weston and Brigham: 1978;565).

The capital structure is the combination of the long term debt and equity; it is a part of financing structure**,** comprised to total combination of preferred stock, common stock and long term debt and current liabilities” (Mathur: 1979; 239).

The capital structure involves long term loan financing decision or choice between debt and equity capital. Selection of appropriate mix of debt and equity tends to minimize cost of capital and maximize and value of firm or shareholders wealth. The cost of capital and value of the firm varies with changes in capital structure. The cost of capital and capital structure are interrelated and has a joint impact up on the value of the firm.

Capital structure refers to the combination of long term sources of funds, such as debentures, long term debt, preference share capital and equity share capital including reserves and surpluses. Capital structure represents the relationship among different kinds of long term sources of capital and their amount. Normally, a firm raises long term capital through the issue of common shares sometimes accompanied by preference shares. The share capital is often supplemented by debt securities and other long-term borrowed capital. In some cases, the firm accepts deposits. In going concern, retained earnings or surplus too form a part of capital structure. Except for the common shares, different kinds of external financing i.e. preference as well as borrowed capital carry fixed return to the investors.

Capital structure is made up of debt and equity securities which comprise a firm's finance of its assets. It is the permanent financing of the firm represented by long term debt plus preferred stock plus net worth' (Kulkarni: 1983; 363). Capital structure decision is one of the most important decisions that are taken by financial manager. Once the financial manager is able to determine the best combination of debt and equity, he or she must raise the appropriate amount through best available sources. A capital structure with a reasonable proportion structure indicator of the optimum capital structure is net profit earning per share and value of firm.

The term cost of capital is the rate of return required on capital investment. The weighted average cost of capital is a technique that measure required return in terms of the individual's components of the firm's financial structure; the capital structure decision can affect the value of the firm either by changing the expected earning or the cost of capital or both.

2.1.1 Optimal Capital Structure

The optimal capital structure is the structure or the combination of debt and equity that maximizes the price of the firm's stock. Hence optimum capital structure maximizes shareholder's wealth and minimizes the cost of capital. The optimal capital structure is combination of debt, preferred stock and ordinary share that minimizes the WACC. At the point where WACC is minimized the value of the firm's securities (or value of the firm) is maximize. The minimum cost of capital structure is called optimal capital

structure. There should be trade off between risk and return to maximize shareholder wealth. Hence optimal capital structure support to achieve these goals. The objectives of optimal capital structure are as follows.

i) To maximize return on equity capital

ii) To maximize cost of capital

iii) To maintain control power

iv) To increase flexibility

v) To employ high-grade securities

2.1.2 Financial Structure and Capital Structure

Financial structure refers to the composition of all sources and amount of funds invested in business. In other words the various means of financing represent financial structure. The left hand side of the balance sheet (liabilities plus equity) represents financial structure of the company. Therefore it includes shareholder fund, long-term loans as well as short-term loans.

Similarly difference between capital structure and financial structure presented in balance sheet are:

Balance Sheet

Capital/liabilities		Assets	
Common Equity			
Preferred Stock			
Long term debt			
(Non current liabilities)			
Current Liabilities			
Total Capital and Liabilities	xxxxx	Total Assets	xxxxx

Capital Structure

Financial Structure

The relationship between financial structure and Capital structure can be expressed in equation form,

Capital Structure=Financial Structure-Current Liabilities

Financial structure is different from capital structure as capital structure includes only the long-term sources of financing i.e debenture, longterm debt, preference share capital and

equity including reserve and surplus. Hence firm capital structure is only part of its financial structure. While financial structure includes both long-term and short-term sources of financing.

2.1.3 Assumption of the Theory of Capital Structure

To present the analysis as simply as possible, the following assumption have been made (Van Horne: 1994; 251).

- There are no corporate or personal income taxes and no bankruptcy costs.

  (This assumption is relaxed later on)

- The ratio of debt to equity for a firm is changed by issuing debt to repurchase stock or issuing stock to pay off debt. In other words a change in capital structure is effected immediately. In this regard we assume no transaction costs.

- The firm has a policy of paying 100 percent of its earning in dividends.

- The expected values of the subjective probability distribution of expected future operating earnings for each company are the same for all investors in the market.

- The operating earnings of the firm are not expected to grow. The expected values of the probability distribution of expected operating earnings for all future periods are the same as present operating earnings.

- Firms employ only two types of capital i.e. debt and equity and the business risk is assumed to be constant and independent of capital structure and financial risk (Pandey: 1986; 228).

- The total assets of the firm are given. The degree of leverage can be charged by selling debt to repurchase share or selling share to retire debt.

In this analysis of capital structure theories the following three rates are concerned:

i. $K_i = \frac{I}{B}$

ii. $K_e = \frac{E}{S}$

iii. $K_o = \frac{NOI}{V_r}$

Where $V_r = B+S$. Here, K_o is an overall capitalization rate for the firm.It is defined as the weighted average cost of capital and may also be expressed as follows:

$$KO=K_i\left(\frac{B}{B+S}\right)+K_e\left(\frac{S}{B+S}\right)$$

Where as, K_i = cost of debt, F=Annual interest charges or total interest payment, B=market value of debt outstanding, K_e=cost of equity, E=earning stock outstanding, EBIT=Earning before interest and taxes, K_o=overall capitalization rate or overall cost of capital, NOI=Net operating income or earnings, V_f =total market value of the firm(i.e. B+S).

2.1.4 Approaches to Capital Structure

- Net income approach
- Net operating income approach
- Traditional approach
- Modigliani -Millers approach

All the above approaches are based on some common assumptions, which are as follows:

Basic assumptions and definitions: (Weston and Brigham: 1992:741).

a) Only two types if capital structures are employed long term debt and common stock.

b) There is no tax on corporate income.

c) The firms total assets are fixed, but its capital structure can be changed immediately by selling debt to repurchase common stock to retire debt.

d) All earnings are paid out as dividends.

e) All investors have the same subjective probability distributions of expected future operating earnings (EBIT) for a given firm that is investors have homogeneous expectations.

f) The operating earnings of the firm are not expected to grow that is the firms expected EBIT is same in all future periods.

g) The firm's business risk is constant over time and it is independent of its capital structure and financial risk.

h) The firm of is expected to continue indefinitely.

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

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

B = Total market value of the bonds (debt)

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

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

I = Interest payments.

$$\text{Cost of Debt (Kd)} = \frac{\text{Interest}}{\text{Debt}} = \frac{I}{B}$$

$$\text{Value of Debt (B)} = \frac{\text{Interest}}{K_d} = \frac{I}{K_d}$$

$$\text{Cost of Equity capital (Ks)} = \text{Cost of Equity Capital (K)} = \frac{d_i}{p_o} + g$$

Where,

d_i = Next dividend

p_o = Current price per share

g = Expected growth rate

2.1.5 Net Income Approach (NI)

Net Income Approach is suggested by David Durand. According to this Approach the capital structure decision is relevant to the valuation of the firm, in other words, a change in the capital structure or financial leverage will lead to a corresponding change in the overall cost of capital as well as the total value of the firm. This is because when the leverage ratio increases the cost of debt which is lower than the cost of equity receives a higher weight in the calculation of the average cost of capital. Thus higher leverage results higher value of the firm.

The NI Approach to valuation is based on the following three assumptions:

i) There are no taxes.

ii) That the cost of debt is less than the equity capitalization rate/cost of equity.

iii) That the use of debt doesn't change with the introduction of debt or change is either the cost of debt or cost of equity.

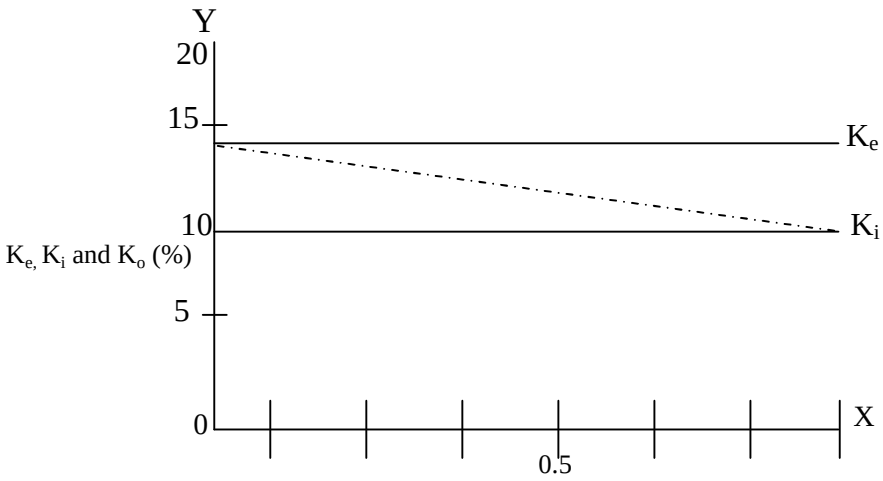
The financial leverage is according to NI Approach an important variable in the capital structure decision of a firm, with a judicious mixture of debt and equity a firm can involve an optimum capital structure, which will be the one at which value of the firm is the firm uses no debt or if the financial leverage is zero the overall cost of capital will be equal to the equity capitalization rate, the weighted average cost of capital will decline

and will Approach the cost of debt as the degree of leverage researches one (Khan and Jain:1995;476-477).

"The essence of the net Income Approach is that the firm can increase its value of lower the overall cost of capital by increasing the proportion of debt in the capital structure (Pandey:1986;230).

The use of additional debt has caused the total value of the firm to increase and the overall cost of capital to decrease. Thus, the decrease in leverage has increased the overall cost of capital and has reduced the value of the firm. Thus, according to the NI cost of capital as it increase/decrease the degree of leverage. As a result, the market price per share is affected (Khan and Jain: 1992; 479).

The relationship between the various factors (i.e. k_e, k_i, k_o,) with the degree of leverage, on the basis of its above mentioned assumption can be presented by figure as under.



Leverage of Degrees

The degree of operating leverage (B/S) is plotted along the X-axis, while the percentage rate for K_i, K_e and K_o on the Y-axis. Due to the assumptions that k_e and k_i (i.e. cost of equity and cost of respectively) remain unchanged as the degree of leverage changes, where both curves are parallel to the X- axis. But as the increases, k_o (i.e. overall cost of capital) decreases and Approaches the cost of debt when the leverage is 1.0, (i.e. $k_o=k_e$). It will be so obviously owing to the fact there is no equity amount in the firm's capital structure. At this point, the firm's overall cost capital would be minimum. Therefore, the significant conclusion of the NI Approach is that the firm can employee almost 100% debts to maximize is value.

Under this Approach, total value of firm and k measured by following ways: (Pandey, 1998;231).

$$Ko = \frac{NOI}{Vr}$$

Where, k_o= overall cost of capital, NOI= Net operating Income, V_r = value of the firm (i.e. B+S), B= Market value of debt outstanding S=Market value of stock outstanding.

2.1.6 Net Operating Income Approach

Another theory of capital, suggested by Durand David, is the net operating Income (NOI) Approach. This Approach is diametrically opposite to the NI Approach. The essence of this Approach is that the leverage/ capital structure decision of the firm is irrelevant. Any change in leverage will not lead to any change in the total value of the firm and the market price per shares, as the overall cost of capital in independent of the degree of leverage, and this Approach (NOI) is based on the following proposition (Khan and Jain, 1992; 481).

- Overall cost of capital or capitalization rate k is constant-the NOI Approach to valuation argues that the overall capitalization rate of the firm remains constant for all degree of leverage. The value of the firm, given the level of EBIT, is calculated as:

$$V = \frac{EBIT}{Ko}$$

In other words, the market evaluates the firm as a whole. The split of the capitalization between debt and equity is therefore, not important.

- Residual value of equity- the value of equity is a residual value, which is determined by deducting the total value of the debt (B) from the total value of the firm V_f. Thus, total market value of equity (S) =V_f-B.

- Changes in cost of equity capital- the cost of capital (k_e) increase with the degree of leverage. The increase in the proposition of debt in the capital structure relatively to equity shares would lead to an increase in the financial risk to the ordinary shareholders. In other words, the use of less costly debt finds increases the risk to shareholders. Thus, the advantage of debt is offset exactly by the increase in the equity-capitalization rate (K_e).

- Cost of debt- it has two parts, they are (i) explicit cost-represented by the rate of interest. Irrespective of the degree of leverage, the firm is assumed to be able to borrow at a given rate of interest. This implies that the increasing proportion of debt in the financial risk of the lenders and they don't penalize the firm by charging higher interest (ii)

Implicit or hidden cost- as shown in the assumption relating the changes in k_e, increase in the decrease if leverage or the proportion of debt to equity causes an increase in the cost of equity capital. This increase in k_e being attributable to the increase in debt is the implicit part of k_i. thus, the advantage associated with the use of debt, supposed to be a cheaper source of funds in terms of the explicit cost in exactly neutralized by the implicit cost represented by the increase in k_e, as a result, the real cost of debt and the real cost of equity, according to the NOI Approach is the same and equal k_o.

- Optimum capital structure- the total value of the firm is unaffected by its capital structure, no matter what the degree of leverage is, the total value of the firm will remain constant. The market price of shares will also not change with the change in the debt-equity ratio. There is nothing such as an 'optimum capital structure". Any capital structure is optimum according to this NOI Approach.

Other critical assumption of the NOI Approach can be explained as: the corporate taxes don't exist, the debt capitalization rate K_j is constant as K_o, the market uses on overall capitalization rate (K_o) to capitalize the net operating Income, K_o depends on the business risk, if the business risk is assumed to remain unchanged, K_o is a constant.

$$Vr = (B+S) = \frac{NOI}{Ko}$$

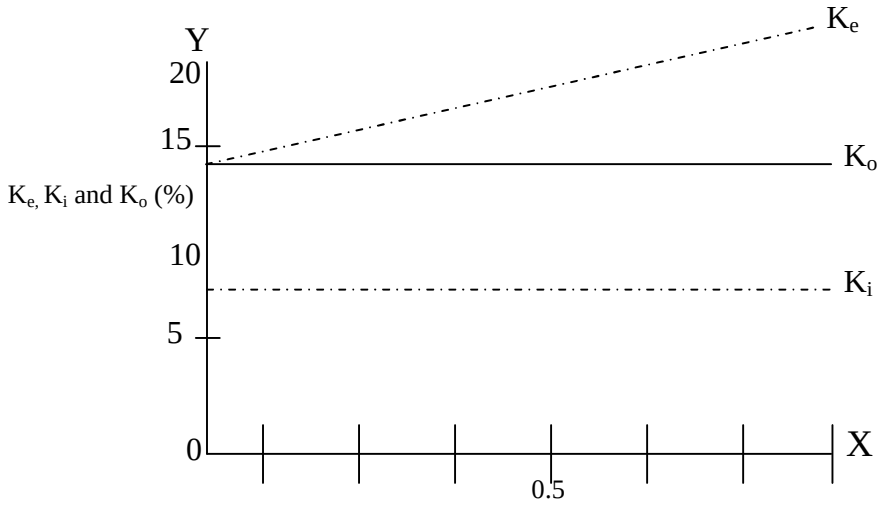
The cost of equity (K) will be measured as follows:

$$K_e = K_o + (K_o - K_e)\ \frac{B}{S}$$

Or, $$K_e = \frac{E}{S}$$

Where, E is simply net operating Income minus interest payments and S is market value of stock.

The relationship between the various factors (i.e. K_e, K_i, K_o) with the degree of leverage, on the basis if its above-mentioned assumptions, figure can be presented as follows;



Leverage of Degrees (B/S)

With this Approach, net operating Income is capitalized at on overall capitalization rate to obtain the total market value of the firm. The market value of the debt then is deducted from the total market value to obtain the market value of the stock. Under this Approach (NOI), the overall capitalization rate, K_o as well as the cost of debt funds, K_i stay the same regardless of the degree of leverage. The required return on equity, however, increases linearly with leverage.

The critical assumption with this Approach is that K_o is constant, regardless of the degree of leverage. The market capitalizes the value of the firm as a whole; as a result, the breakdown between debt and equity is unimportant. An increase in the use of supposedly 'cheaper' debt funds is offset exactly by the increase in the required equity return, K_e. Thus, the weighted average of K_e and K_i remains unchanged for all degree of leverage.

As the firm increases its degree of leverage, it becomes increasingly more risky. As long as K_i remains constant, K_e is a constant linear function of the debt-to-equity ratio. Because the K_o can't be altered through leverage, the NOI Approach implies that there is one optimal capital structure.

2.1.7 Traditional Approach (TA)

"The traditional Approach is valuation and leverage assumes that there is an optimal capital structure and that the firm can increase the total value of the firm of the traditional Approach is also known as intermediate Approach. The traditional Approach of capital structure has been popularized by Ezra Solomon. This Approach is compromise between Net Income (NI) and Net Operating Income (NOI) Approach.

According to this view, the value of the firm can be increased or the judicious mix of debt and equity capital can reduce the cost of capital. In addition, the costs of capital decrease with the reasonable limit of debt and then increase with leverage. Thus an optimal capital structure exists when the cost of overall capitalization rate is minimum or the value of the firm is maximum.

Under this Approach the limit of equity capitalization rate is higher than debt capitalization rate. It means the debt funds area cheaper than equity funds. The total is called overall cost of capital or overall capitalization rate. This rate will be less than the cost of equity and higher than the cost of debt.

According to the traditional position, the manner in which the overall cost of capital reacts to changes in capital structure can be divided in to three stages (Pandey; 1998;236).

- **Increasing Value Stage**

This is the first stage in this first stage, the rate at which the shareholders capitalize their net Income, i.e. the cost of equity (K_e), remains constant or rises slightly with debt. But when it increases it doesn't increase fast enough to offset the advantage, of low cost debt. During this stage, the cost of debt (K_i) remains constant or rise negligibly. Since, the market views use of debt as a reasonable policy. As a result, the value of the firm (V_f) increases or the overall cost of capital (K_o) fall with increasing leverage.

Under the assumption that 'K_e' remain constant with the acceptable limit of debt, the value of the firm will be,

$$V = S+B = \frac{X - KdB}{Ke} - \frac{KdB}{Kd}$$

$$= \frac{X - KdB}{Ke} - B$$

$$= \frac{X}{Ke} + \frac{(Ke - Kd)B}{Ke} \quad \text{..... (2.2)}$$

Thus, so long as 'K_e and 'K_d' are constant the value of the firm 'V' increases at constant rate $(K_e-K_d)/K_e$ as the financial leverage increases.

When equation (2.1) is solved for X/V

$$\text{We get } K_o = X/V = K_e-(K_e-K_d) \times B/V \text{..... (2.3)}$$

Where, X= Net operating Income

B= Bond Value (Debt)

S= Equity Capital

K_d= Cost of debt

K_e= Cost of equity

V= Value of the firm

K_o= Cost of overall Capitalization rate.

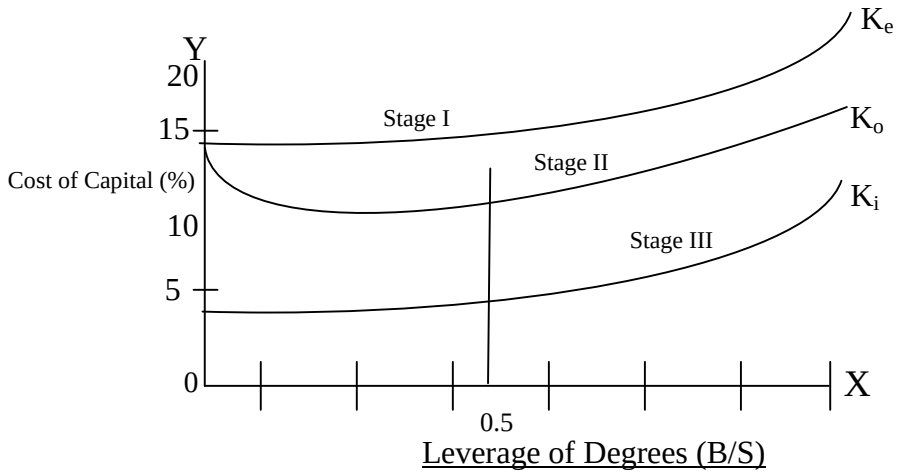
This implies that, with $K_e > K_d$, the average cost of capital will decline with leverage.

- **Optimal Value Stage**

This is the second stage. In the second stage, when the firm has reached to a certain degree of financial leverage, further application of debt will increase the cost of equity due to the added financial risk that offsets the advantages of low cost debt. Hence, the total market value of the firm remains unchanged within the range of such debt level or at a specific point the value of the firm will be maximum or the costs of capital will be minimum.

- **Declining Stage**

In this stage, the value of the firm decreases with leverage or the cost of capital increases with leverage. This happens because, the investors perceive a high degree of financial risk and increase equity capitalization rate by more than to offset the advantage of low cost debt. It can be shown from following figure.



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

2.1.8 Modigliani and Miller Approach (MM)

In 1958, France Modigliani and Meron H Miller published a research paper "The cost of capital corporation Finance and theory of Investment" where a comprehensive analysis of capital structure was revealed. It has added a milestone on the theory of capital structure.

The Modigliani-Miller thesis relating to the relationship between the capital structure, The Modigliani-Miller thesis relating to the relationship between the capital structures, cost of capital and valuation structure, cost of capital and valuation is needed to the net operating (NOI) Approach (Khan and Jain, 1992; 484).

M-M proposition supports the degree of leverage at any level of debt equity ratio. M-M theory is based on the following assumptions:

1. Perfect capital markets: This specifically means that investors are free to buy or sell securities.

    i. They can borrow without restriction at the same terms as the firms do, and
    ii. They behave rationally. It is also implicit the transaction costs i.e., the cost of buying and selling securities do not exists.

2. Homogenous risk classes: Firms can be grouped in to homogeneous risk classes. Firms would be considered to belong to a homogeneous risk classes if their expected earnings have identical risk characteristic. It is implied under the M-M hypothesis that forms with in same industry constitute a homogeneous class.

3. Risk: The risk of investors is defined in terms of the variability of the net operating Income (NOI).

4. No taxes: Originally M-M assumes that no-corporate Income taxes exist. This assumption is relaxed later on.

5. Full payout: Firms distribute all net earnings to the shareholders.

M-M theory can be explained two ways.

a. M-M Theory (without taxes) and
b. M-M Theory (with taxes)

a. M-M Theory(Without Taxes)

Modigliani and Miller (M-M) support the relationship between leverage and cost of capital that explained by NOI Approach. They argue that in the absence of taxes, total market value and cost of capital of the firm remain in variant to the cost of capital structure change.

They make formidable attack on the traditional position by offering behavioral justification for having the cost of capital remains constant throughout all degree of leverage (Solomon, 1996; 92).

M-M contained that the cost of capital is equal to the capitalization rate of pure equity stream on Income and the market value is ascertained by capitalizing its expected Income at the appropriate discount rate for its risk class. The M-M cost of capital hypothesis can be best expressed in terms of their propositions I and II.

Proposition I

The M-M proposition I, states that the market value of a firm is independent of its capital structure. If is because the value of the firm is determined by capitalizing the net operating Income (NOI or EBIT) at a rate appropriate for the firms risk class. Accordingly, the value of firm is obtained by

$$V = \frac{NOI}{K_0}$$

Where, V = value of the firm

NOI = Net operating Income

K_o= Risk adjusted capitalization rate.

The M-M proposition I also implies that the weighted average cost of capital(K_o) to any firm i.e., levered or unleveled is completely independent of its capital structure and equal to the cost of equity(K_e) to an unleveled firm in the same risk class. Thus, there is no relationship between the value of a firm and the way its capital structure is made up, nor there is any relationship between the average cost of capital and the capital structure, it is identical to the NOI Approach.

Proposition II

The proposition II stated the cost of equity rises proportionately with the increase in the financial leverage in order to compensate in the form of premium for bearing additional risk from risk arising from the increased leverage. In other words, for any firm (i.e. levered or

unleveled in a given risk class the cost of equity) is equal to the cost of equity is equal to the constant average cost of capital and interest. If can be expressed as follows:

$$K_e = K_o + (K_o - K_d)\ D/E)$$

Where, K_e= cost of equity

K_o= Average cost of capital

K_d = cost of debt or interest rate

D/E = debt equity ratio.

The validity of proposition II depends up on the assumptions that K_d will not increase for any degree of leverage but in practice K_d increases with leverage beyond a certain acceptable level. However, M-M mentions that even if K_d is function of leverage, Ko will remain constant, as well as K_e will increase at a decreasing rate of compensate (Pandey; 1987;40).

Thus, taking both the proposition I and II together, the M-M theory in the absence of taxes contends that the overall cost of capital as well as the value of the firms are independent of capital structure. The theory in a tax free world is identical to the No I Approach. In other words, the value of levered firm (V_L) is equal to the value of unleveled firm (V_U) in the risk class i.e., $V_L = V_L$.

b. M-M Theory(with taxes)

At first, M-M assumes that the corporate tax does not exist and said that cost of capital and the value of firm are independent to the capital structure decision. This assumption was not valid ion reality, there exist corporate taxes and interest on debt is deductible for the purpose of the tax reality, there exist corporate taxes and interest on debt is deductible for the purpose of the tax calculation. Thus, the value of levered firm will be more by the present value of debt tax shield than that of unleveled firm. In other words, the value of levered firm is equal to the value of unleveled firm plus present value of debt tax shield.

This can be shown equation:

$$V_L = V_U + TB$$

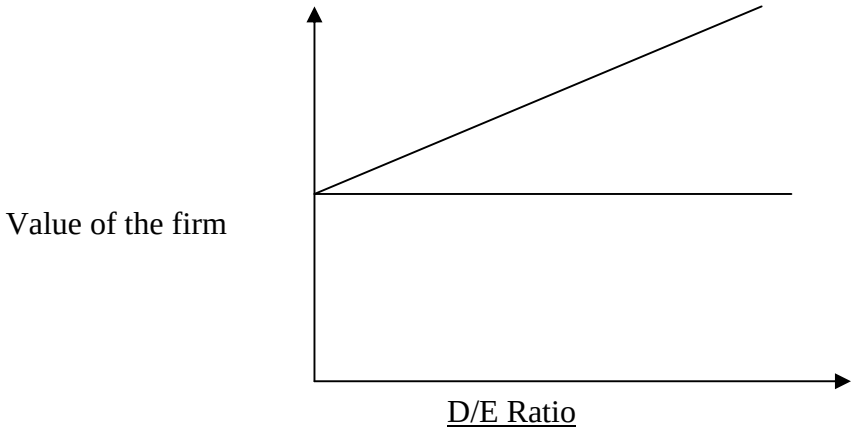
Where, V_L = Value of levered firm

V_U = value of unleveled firm

T= tax rate

B = amount of debt

Thus, M-M proposition I with taxes indicates that $V_L > V_U$ and suggests that a firm's value rises continuously as it moves from zero debt to 100% debt. It can also be presented through the figure below:



Proposition I

The M-M proposition states that the cost of equity of levered firm rises with leverage ratio to compensate for the additional leverage risk while the cost of debt remains constant because the debt is assumed to be risk less (Pradhan, 1986; 369).

Accordingly the cost of equity is calculated as follows:

$$K_{eL} = K_{eU} + (K_{ev} - K_d)\,(1-t)\,D/E$$

Where, K_{eL} = Cost of equity of levered firm

K_{eV} = Cost of equity of unleveled firm

K_d = Cost of debt

T = tax rate

D/E = Debt equity ratio

It indicates that the cost of equity increases with D/E ratio. On the other hand, the tax deductibility of interest on debt lowers the cost of debt but still remains constant irrespective of debt equity ratio. This reduction in the cost of debt as result of tax saving outweighs the increased cost of equity, forcing the average cost of capital to increases with every additional unit of debt financing. As such, the theory suggests that it is always better to have maximum debt financing.

Assumption of MM Hypothesis

Perfect competition market environment where information relating investment is freely accessible there involves no transaction cost. In addition to this, investors are free to sell and buy the securities and can borrow without any restriction at the same rates as corporation does. All investors are rational and no investor can influence the market.

- The individual investors may have the different views as to the shape of the probability distribution but expected rate of return for all in is assumed the same.
- The division of the Income between cash dividend and retained earning in any periods is a more detail or dividend payout ratio is 100%.
- There are no Income taxes. Modigliani and Miller remove this assumption latter.
- Homogeneous business risk (Pandey, 1987; 240).

Assumptions of M.M. Hypothesis can be classified in two ways.

A. M.M Hypothesis with no taxes.
B. M.M. Hypothesis with taxes.

A: M.M. Hypothesis with no taxes is identical to Net operating Income Approach, which has already explained.

B: According to Franco Modigliani and Merton H. Miller hypothesis with taxes, the value of levered firm must be greater than value of unleveled firm by the amount of debt tax shield (Merton H. Miller and Franco Modigliani, 1966)

a) Debt tax shield when corporate tax is given present value of Debt –tax shield
   B × t…….(2.4)

Where, B= value of debt

T= corporate Tax

b) Debt tax shield when corporate and personal taxes are given.

Present value of debt-tax shield.

$$B= \quad 1Z\frac{(1Zt)(1Ztcs)}{1Ztb}$$

Where, t = Corporate Tax

t_{cs}= personal tax an common stock

t_b= Marginal personal tax on debt.

Proposition I

According to assumption of M-M hypothesis that for firm in same class business risk, value of the firm is independent of its capital structure i.e. financial leverage. This is their proposition it can be expressed as follows (Pandey, 1987;240).

$$V=(S+B) = X/K_o=NOI/K_o \text{…….(2.6)}$$

Proposition I can be stated in an equivalent way in terms of the firms overall cost of capital (K_o), which is the ratio of the market value of all its securities.

That is: $$\frac{X}{fS\ \Gamma\ B\text{Å}} X \frac{X}{V} Ko \text{ ……} \quad (2.7)$$

If defining K_d as the expected return on the firms debt and K_e as the expected return on the firm's equity then expected net operating Income is given as,

$$X=K_oV=K_oV+K_dB$$

As given in equation (2.7) by definition

$$K =X/V$$

$$K_o =K_e \frac{B}{S\ \Gamma\ B} \Gamma\ Kd \frac{B}{S\ \Gamma\ B} \text{ ……} \quad (2.8)$$

It can be expressed as follows too,

$$V_L=V_u=X/K_{ou}$$

Where, K_{ou} = cost of overall capital of unleveled.

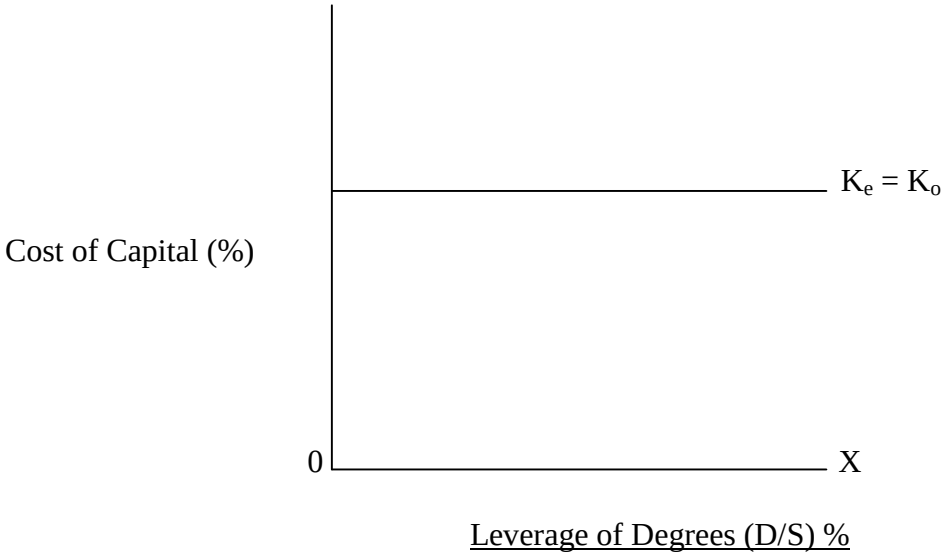
V_L= value of levered firm

V_u= value of unleveled firm.

Thus, under the conditions we have specified, the value of levered firm is equal to the value of unleveled firm. This is the famous capital structure irrelevance or leverage irrelevance of proposition- I of Modigliani-Miller.

M.M. concluded that the total market value of firm is unaffected by financing mix, it follows that the cost of capital is independent of the capital structure and is equal to the capitalization rate of a pure equity stream of its class (Pandey, 1987;241).

The cost of capital functional, as hypothesized by M.M. through proposition-I, is shown in figure



It is evident from figure 2.5 that average cost of capital is a constant and is not affected by leverage.

Proposition II

Based on proposition I, M.M. formulated proposition II, which defines the cost of equity is the linear function of the leverage. The equation form of this proposition can be expressed as follows.

$$K_e=K_o-(K_o+K_e)\ B/S \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (2.9)$$

Validity of the M.M. proposition II depends up on the assumption of 'K_e' constant for only degree of leverage. But in real Business world 'K_e' increases with leverage beyond a certain acceptable level of leverage According to this assumption.

$K_{oL}=K_{ou}$

K_{oL}= Cost to Overall Capital of Levered Firm.

K_{ou}= Cost to Overall Capital of Unleveled Firm.

2.1.9 Determinants of the Capital Structure

The initial capital structure should be designed very carefully. The management of company should set a target capital structure and the subsequent financing decision should be made with a view to achieve the target capital structure. The financial manager has also to deal with an existing capital structure. Every time, when the funds have to be procured the financial manager weight the pros and cons of various sources of finance and selects most advantageous sources if capital structure. Generally the following factors should be considered whenever a capital structure decision has to be taken.

a) Leverage Effect on EPS

The use of fixed cost sources of financial such as debt and preference share capital to finance the assets of the company is known as financial leverage. If the assets financial with the use of debt yield a return greater ten the cost of debt, the earning per share increase without an increase in the owner's investment, the EPS also increase when the preference share capital is used to acquire assets. But leverage impact is more pronounced in case of debt because the cost of debt is usually lower than the cost of preference share capital ad interest paid on debt is tax debenture, because it effects in the EPS. Financial leverage is one of the important considerations in planning the capital structure of a company. The companies with high level of earning before interest and taxes can made profitable use of the high degree of leverage to increase return on the share holder's equity. The firm is able to maximize the EPS when it uses the debt financing. Through the rate of preference dividend is equal to the rate of interest, EPS is high in case of debt financing because the interest charges are tax deductibles while preference dividends aren't. The EBIT-EPS analysis is an important tool in the hands of the financial manager to get an insight to the firm's capital structure management and the financial manager can consider the possible fluctuations in EBIT and examine their impact on EPS under different financial plans.

b) Sales Stability and Growth

Firms whose sales are relatively stable can safety take on more debt and incur higher fixed charges than a company with unstable sales, the company or firm with stable sales can empty.

c) Profitability

The capital structure of the company should be most advantageous within the constraints; maximum use of leverage at a minimum cost should be made (Pandey, 1987;259).

d) Taxes

Interest is a deductible expense, and deductions are most valuable to firms with high tax rates. Therefore, the higher a firms tax rate, greater the advantage of debt.

e) Management Attitude

Since no one can prove that one capital structure will lead to higher stock prices than another, management can exercise its own judgments about the proper capital structure some management tends to be more conservative than others and thus use less debt than the average firm in their industry, whereas aggressive management use more debt in the quest for highest profits.

f) Lender and Rating

Lender's and rating agencies attitude frequently influence financial structure decision the loss of control. A very excessive amount of debt can also cause bankruptcy i.e. complete loss of control.

g) Flexibility

Flexibility is one of the most serious considerations in setting up the capital structure; it is the firm's ability to adapt its capital structure to the needs of the changing conditions. The capital structure of a firm is flexible if it has no difficulty in changing its source of funds. The company should be able to raise funds without undue delay and costs. The financing plan of the company should be flexible enough to change the composition of the capital structure. The degree of flexibility in the capital structure of a company depends on the flexibility in fixed charges, the terms o redemption and the debt capacity, although flexibility is most desirable, it is achieved at a cost. A company trying to obtain loans at a easy terms will have to pay interest at a higher rate. Also to obtain the right of refunding, it will compensate creditors by paying a higher rate. Also to obtain the right of refunding, it will compensate the benefits and costs attaining the desired degree of flexibility and balance them properly.

h) Size of the Company

The size of the company greatly influences the availability of funds from different sources. Generally, a small has great difficulties in raising long term loans. On the other hand, if it is able to obtain some long term loan, it will be available at a higher rate of interest and inconvenient terms. Small companies depend upon share capital and retained earning for their long term funds. The share of small companies are not widely scattered

therefore, sometimes the small companies limit the growth of their business to what can easily be financed by retaining the earning. On the other hands, the share of large company is widely distributed and it may difficult to organize and to manage the widely scattered shareholders against the existing management team. A large company has a greater degree of flexibility in designing its capital structure. Such company can obtain the loans at easy terms as well as can sell theirs common stock, preference share and debentures to the public. Because of large size of issues, its cost of distributing any kinds of security is less than that for a small company. Thus a company should make a best use of its size in planning the capital structure.

i) Marketability

It is the readiness of investors to purchase a particular type of security in a given period of time. It doesn't influence the initial capital structure but it is an important consideration to decide about the appropriate timing of security issues and at another time, it may readily accept common shares issues. The capital markets are changing continuously. The market favors debenture issues and at another time, it may readily accept common shares issues. Due to the changing market sentiments the company has to decide whether to raise funds with a common share issue or with a debt issue. Thus, it should be considered in planning the capital structure to the company.

j) Flotation Cost

It is not a very important factor influencing the capital structure. Flotation cost is incurred only when the funds are raised. Generally, the cost of floating a debt is less then the cost of floating equity issue. This may encourage a company to use debt than issue common shares. If retaining the earning increases the owner's capital, no flotation cost is incurred.

Therefore, the financial manager should consider above mentioned factors in planning their optimal capital structure of the company. If the financial manager ignores any factors, then the capital structure of a company may failure.

2.2 Review of Related Studies

To make the study more realistic, previous studies have also been reviewed. It consists of thesis and dissertations done by previous master's level student as well as other research works related to the capital structure of the firm which are as following:

2.2.1 Review of Books

Weston (1996), capital structure theory has been developed along with two main line: (1) tax benefit bankruptcy cost trade-off theory and (2) signaling theory, they said that each firm has an optimal capital structure, defined as that mix of debt, preferred stock and common equity which minimize its weighted average cost of capital.

Pandey (1998), the professor of Indian institute of management, Ahmedabad had also studies about capital structure. According to him, under favorable economic conditions the earning per share increase with leverage. But leverage also increases the financial risk of shareholders. As a result, it can not be stated definitely whether or not the value of the firm will increase with leverage. Further he has said if the value of the firm can be affected by capital structure which maximizes the market value of the firm. Pandey further added there exist conflicting theories on the relationship between capital structures: Pandey has argued that the capital structure decision of the firm can be characterized as a choice of that combination of debt and equity, which maximize the market value of the firm. He has supported to traditional Approach the cost of equity declines with leverage at a acceptable range of debt and then starts to increase with increasing debt in capital.

Van Horne (1999) has also presented controversial decision about capital structure. Study conveys, financial signaling occurs when capital structure changes convey information to security holders. It assumes symmetric information between management and stock holders. Management behavior results in debt issue being regarded as good news by investors and stock issues as bad news.

2.2.2 Review of Journals/Articles

Different scholars in different parts of the world have carried out numerous theoretical as well as an empirical works. But leading theoretical and empirical works have been engaged out form USA since the publication of MM independent hypothesis.

Modigliani and Miller Study

Modigliani and Miller the first study (Modigliani and Miller's Theorem and the Integration of Financial Market) was carried out in American electric utilities and oil companies and took a sample form the electric utilities (43 large electric utilities) and sample from the oil companies (42 oil companies). This study turned out the results in support of their hypothesis that cost of capital and the value of the firm are independent to the capital structure decision and cost of equity is the linear function of the leverage.

Modigliani and Miller the second study in correction of their original hypothesis (1963) concluded that the leverage has a tax saving and value of the firm can be maximized when the leverage measured by DL = VL =1. Thus in other words, cost of capital can be minimized when equity financing is zero.

They tested this tax saving of leverage in 1963 A.D. with 63 samples of the large electric utilities of USA for the years 1954, 1956 and 1957 A.D. In this test they concluded that the leverage is significant factor because of the tax advantage involved in it.

Horne, James C. Van (1999) has also presented controversial decision about capital structure. According to this decision, financial signaling occurs when capital structure changes convey information to security holders. It assumes symmetric information between management and stockholders. management behaviour results in debt issue being regarded as good news by investors and stock issues as bad news.

Other study conducted by Shrestha, Rima Devi under the title of "Focus on capital structure selected and listed public companies" has been reviewed (Shrestha, 2004). It was empirically analyzed 19 companies from different sectors like manufacturing, finance, utility service and other allied area, on the basis of data availability to see how far they have been successful in determination their capital structure. It was found that most of these companies have debt capital relatively very higher than equity capital consequently most of them are operating at losses to the extent that payment of interest on loan has been and serious issues. Most of the losses are after charging interest on loan.

The conclusion was made that the most of public enterprises have no transparent capital structure, in these companies is ad-hocly determined without realistic parameter. Thus, policy makers have to be careful in developing suitable capital structure guideline in making public enterprises as well as listed companies to aware of financial accountability.

The suggestions made were that government has to consider in public enterprise is that of evaluating the relationship between use of debt and its impact on overall earning of public enterprises. So government should be sure is knowing how using debt capital will maximize return. It should need to develop a suitable capital structure guideline is necessary to make public enterprises swear of its responsibility to repay the debt schedules. The government has to analyze of cost and risk-return trade off. Thus, capital structure ends to be made more determinate by realistic analysis of cost. (Shrestha, Rima Devi "Focus of Capital structure Selected and Listed Public Companies)" Pravaha Journal of Management, Nepal Commerce Campus, Kathmandu, 1993).

Study conducted by Rao, Cherukuri U. and Berger, Robert Litzen (1971) presented the result of comparative study of the effect of capital structure on the cost of capital in a less developed and less efficient capital market and a highly developed and efficient capital market. Especially the effect of leverage on the cost of capital is tested with sample of 28 Indian utilities and 77 American utilities. The result for the American utilities are consistent with the Modigliani-Miller studies that allowed for the tax advantages of debt financing the cost of capital is independent of capital structure. These result for the Indian utilities provide a useful benchmark comparing to the relative efficiency of the Indian capital market. They concluded that MM thesis after allowing for the tax advantage of debt, firm's cost of capital is independent of capital structure does appear to be applicable in the case of developing economy.

Shrestha, on "Analysis of Capital structure of Selected Public Enterprises" concluded that the capital structure of those enterprises were quite confusing. This is because those enterprises were not guided by the objective based financial plans and policies. Most of them, to relive financial obligations debts are eliminated. It was further added that the calculation of equity capitalization rate and overall capitalization rate has been given very fantastic results in many cases. The use of NI and NOI approach in those were rather academic practice than providing valid. The debt equity ratio was improperly determined and the contribution of the debt procurement of assets was very insignificant and suggested that debt equity ratio neither should be highly levered to create too much financial obligation that lies beyond capacity to meet nor should it be much low to infuse operational lethargy to pass responsibilities without performances. The aid donor strategies should be properly taken into considerations as the inflow of foreign government and international financial decision institution credit has dominant influence in the capital structure.

"A study on Capital structure: Its Impact on a Value of a Firm" an article by Mr. Poudyal, Sudhir concentrated study to examine the interrelationship between the objective of achieving an optimal capital structure and to provide conceptual framework for the determination of the optimal capital structure.

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

Furthermore, if there is flexibility to select capital structure in any proportion optimal capital structure, range from 30% to 40%. An optimal capital structure would fulfill the interest of equity shareholder and financing requirement of a company as well as other concerned groups.

In this article "The Choice between Equity and Debt', Paul Marsh has expressed the following issues:

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

Then the following suggestions were made:

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

Franco Modigliani and Metron H. Miller, on their study of debt equity composition stated that, the impact of the additional debt in a tax less and economically perfect world, the total market value of the company's debt plus equity should not be changed as debt is sustained for equity. Although expected earning per share will increase as debt is sustained by equity (or additional financing is done with debt rather equity) this affect is exactly offset by the markdown in the company's price/earning ratio. The markdown occurs because the additional debt exposes the common stock holders to an extra financial risk.

2.2.3 Review of Unpublished Research

Under this section various master's level dissertation related to this study have been reviewed. These are as follows:

Parajuli, (2001) study on 'Capital Structure and its impact on profitability of Nepal Lever Ltd.', he has analyzed that the appropriate mix of capital keeps a firm sound and healthy. In the long run, liquidity may depend on the profitability of a firm but to survive to achieve log run profitability, it has to depend on its capital structure to some extent. He has used hypothesis to measure the significant relationship between debt and equity. The NLL's long term debt 2056/57, there is no long-term debt at all. Thus it can be said that the company's management is reluctant toward employing long-term loans. From the DU point analyses, it is found that the profit margin and equity multiplier are in decreasing trend, which causes continuous decrease in 'ROE. Now it appears that increasing the amount of debt in the firm can lever ROE up. According to different calculations, he has found that performance of NLL is not is satisfactory level. He has recommended the maintenance of a proper capital structure by including long-term debt.

Uprety, (2004) "A study of capital structure decision and its impact risk and return analysis of Bottlers Nepal Limited." the main objectives of this study are:

- To analyze the related variable of capital structure, determining risk and return.
- To evaluate the capital structure of BNL with respects to its net worth.
- To experiment the relationship between the capital structure and value of BNL.

For this study, he found that long term debt to debt ratio was higher than the general acceptable level. The debt servicing capacity of company was not satisfactory due to negative I/C ratio. The return on capital employed and debt servicing capacity also was not satisfactory due to negative earning. The overall capitalization rate was also negative form. Thus he suggested that the company should reduce operation cost and utilized optimum capacity.

Dhital, (2005) "A capital structure decision and its impact on risk and return analysis of Hulas Still Industry Private Limited." The main objectives of this study are:

- To examine the relationship between capital structure and profitability of the company.
- To suggest the appropriate capital structure for the Hulas Still Industries Private Ltd.

For this study, he found that debt equity ratio of the company very poor. The long-term debt to total assets ratio indicate that loans are not fully secured with assets. Thus HSIPL should try to reduce short term debt and use more long-term funds.

Bhattarai, (2006) "A study of capital structure of manufacturing company in Nepal." The main objectives of this study are:

- Analyze the characteristics and the relation among the element of capital structure.
- To analyze the use of current liabilities with respect to long-term debt.
- To analyze and study the types of sources of capital structure and their implication of the sources of the Nepalese manufacturing company.

For this study she conducted that companies do not always plan capital structure and it develops as the result financial decision taken to be financial managers without any formulating moreover, some company even should not meet the interest and other expenses from the income. So they increase debt became more levered.

Chaudhary, (2006) study on ' Capital Structure of selected manufacturing and Trading Companies in Nepal', he made this study:

- To analyze the relationship of the capital structure and cost of capital in selected manufacturing and trading companies in Nepal.
- To examine the relationship capital structure with cost of equity in manufacturing and trading companies.
- To examine the relationship between capital structure and other financial variables.

He Conclude that the cost of capital can be affected by the use of debt in capital structure. The cost of capital is decline with increase in leverage. The cost of equity also declines with increase in leverage. He suggested that Nepalese enterprise should design an appropriate capital structure in order to minimize the cost of capital and maximize the

shareholder's wealth. The company should use appropriate amount of debt to minimize WACC. It is suggested to access longer term source of debt, which will be less costly for them rather than relying heavily in short term loans.

Ranjit, (2008) "A study of capital structure of manufacturing company of Nepal." The main objectives of this study are:

- To decide the proportion of equity capital and debt capital to make the capital structure balance and maximizes the shareholders wealth.
- To examine the dynamics of the capital structure of Nepalese manufacturing companies,
- To examine about the correlation between long-term debt and net worth capital.

For this study, he found that these company are highly unlevered, debt equity ratio of these companies are consistent in nature. Thus he suggested that minimizes the industrial risk and try to maintain leverage position.

Khadka (2009) has presented analysis of capital structure of Mayos Noodles Pvt. Ltd.:

- To find out the financial planning & control of the industry
- To find out the objectives of risk and return of the industry
- To highlight the cost of capital of different manufacturing companies
- To control the inventory management of manufacturing company

Research suggested increasing the profitability of the company by reducing the profitability of the company by reducing the burden of interest on debt. The study recommends having the optimal capital structure. Hence, the excessive use of debt should be gradually curtailed in the coming year because the companies have no earning capacities to meet the interest burden.

2.3 Research Gap

All the above studies are concerned with research title "Capital Structure." Some researchers have selected various companies for this research and some have concentrated in only one institution. But this study selects two manufacturing companies i.e. Nepal Lubes Oil Limited and Bottlers Nepal Limited to cover the analytical part and fulfill the objective of this study. This thesis work has covered the period of the study from 2005 to 2009. It has used all possible financial and ratio analysis tools to cover the objectives of this study.

CHAPTER III

RESERCH METHODOLOGY

According to John W. Best, "Research may be defined as the systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations of principles or theories resulting in prediction and possibly ultimate control of events."

Methods mean different way to find at the solution of problems. It means methodology refers to the various ways to solve the problems. Research methodology describes the methods and process applied in the entire subject of the related study. Thus, "Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view." It means research methodology is away to solve the research problem systematically and scientifically. Every research should adopt the systematic research methodology to solve the research problem. The research methodology is wider concept. It considers the logic behind the methods used in the context of research study and explains why particular method or technique is used. The main objectives of the research methodology are to analyze examine, highlight and interpret the investment situation of the bank. For that it concerned about various fact like what data have been collected what are the purpose and problem of research, why hypothesis has been formulated etc. Hence, research methodology is a way to analysis for the study, which deals with research design, sources of data, data collection, population and sample, processing and tabulating procedures.

Thus, research methodology is the way how we conduct our research.

It is known as a path from which the researcher can systematically solve the research problem. In order to accomplish the objectives at this study the research methodologies have been designed on the basis of secondary data by using useful financial and statistical tools. The research methodologies adopted in this study are discussed in the following manner.

3.1 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and control variance. Research design specifies an outline of plant to be carried our concerning with the proposed research. The design is in simple form but it covers the main comprehension of the study. The research design show the capital structure position of the manufacturing companies in derived form using

five years data of Bottlers Nepal Ltd. and Nepal Lubes Oil Limited. To accomplish this study, the applied design is descriptive and core perspective because the secondary data have been mainly applied for analysis. According to Kothari "Research design is a plan, structure and strategy of investigation conceived so as to obtain answer to research question and to control variances."

The main objective of the study is to analyze the relationship between debt and equity of listed company and provide recommendation on the basis of funding to fulfill this purpose. The study follows the analytical and descriptive research design. In order to achieve the objective of the study secondary data has been used.

3.2 Population and Samples

All listed company in NEPSE is consideration as total population. Sample drawn from target population is judgmental sampling from 38 manufacturing companies. Out of them, two manufacturing companies have been chosen. The samples manufacturing selected are as follows:

1. Nepal Lube Oil Limited (NLOL)
2. Bottlers Nepal Limited(BNL)

3.3 Sources of Data

The study is based on secondary data. Thus secondary data are extensively used in this study. The raw secondary raw data are modified to some extent for the study purpose mostly; data are collected from the balance sheet, income statement and profit and Loss account of Bottlers Nepal limited and Nepal Lube Oil Limited. Some other necessary data used in this study have also been supplemented from auditor’s general reports and various related journals in a management and other publications.

3.4 Method of Data Analysis

The main purpose of analyzing the data is to change it from an unprocessed from to an understandable presentation. The method of analysis employed in this study; consist of financial tools.

a) Financial Tools

Financial Tools offers a simple yet powerful suite of financial analysis and risk management software solutions that promotes smart decision making and positively impacts long-term growth and profitability.

The measuring instrument, which can be used in financial analysis, is known as financial tools. It helps to calculate the relationship between two financial variable on ratio and percentage basis. Financial tools employed in this study represent ratio analysis and leverage analysis.

b) Ratio Analysis

A tool used by individuals to conduct a quantitative analysis of information in a company's financial statements. Ratios are calculated from current year numbers and are then compared to previous years, other companies, the industry, or even the economy to judge the performance of the company. Ratio analysis is predominately used by proponents of fundamental analysis.

Ratio analysis is the powerful tool of financial ratio, which represents the relationship between two accounting figures, expressed mathematically. Ratio analysis is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial conditions can be determined, like other tools of financial management, ratio analysis involves two types of comparison. First, it is employed to compare present ratio with post and expected figure ratio for same corporation. Second the comparison is done to see the difference exist between ratios of one corporation with industries average of the same period. The required financial ratios for this study are enables in details as follows:-

) Total Debt to Total Assets Ratio

The total debt of the firm comprises long-term debt plus current liabilities while total assets consist of permanent capital plus current liabilities. Thus, it can be calculates as:

$$\text{TD/TA ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

This ratio however gives somewhat similar indicates as the debt equity ratio.

) Interest Coverage Ratio

This is also known as 'time interest earned ratio'. This ratio is used to test debt servicing capacity easier the debt servicing capacity of a firm.

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

Larger the coverage ratio the greater the liability of the firm to handle fixed charge. Liabilities and the more assured the payment of interest to the creditors. However, too high a ratio may imply unused debt capacity.

⁾ Profit Margin on Sales

The profit margin on sales in computed by dividing net income after taxes by sales. Profit margin on sales establishes a relationship between Net profit and Sales and indicates management efficiency in manufacturing, administering and selling the product.

$$\text{Profit Margin on Sales} = \frac{\text{Net Income}}{\text{Sales}}$$

⁾ Return on Assets (ROA)

It is the ratio of Net Income after Tax divided by its Total Assets. ROA ratio is primarily an indicator of managerial efficiency. It indicates how capably the management of the company has been converting the institutions assets into Net Earning.

$$\text{Return on Assets}\,(ROA)\,\text{X}\frac{Net\ Income}{Total\ Assets}$$

⁾ Return on Net Worth(Ordinary Shareholder Equity)

The ratio on net profit after taxes to net worth measure the rate of return on the stockholders investment. It is computed by dividing EAT with Net Worth. Here Net Worth represents only Equity Capital.

$$\text{Return on equity (ROE)} = \frac{\text{Net Income}}{\text{Common Equity}}$$

It approximates the net benefit that the stock holders have received from investing their capital in the firm.

⁾ Degree of Leverage

Leverage implies forces used to move something up. Here in finance, Leverage means ability of a firm in employing Long-term funds having a fixed cost, to increase return to the oweners. Higher the Leverage, higher the profit and vice versa. Here leverage is broadly classified into:

- **Degree of Operating Leverage**

The degree of operating Leverage is the percentage change in profit resulting from a 1%change in the number of units of product sold.

$$Degree\ of\ Operating\ Leverage \text{X} \frac{\%\ Chagne\ in\ \text{Pr}\ ofit}{\%\ Change\ in\ Quantity}$$

$$DOL \quad \text{X} \frac{\frac{\zeta\ EBIT}{EBIT}}{\frac{\zeta\ Sales}{Sales}}$$

To measure the efficiency of a change in sales volume on Operating income we calculate the degree of Operating Leverage (DOL).

- **Degree of Financial Leverage**

The degree of financial Leverage (DFL) is the percentage in Earning Per Share due to 1%change in Earning before Interest and Tax.

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

$$\text{X} \frac{\frac{\zeta\ EPS}{EPS}}{\frac{\zeta\ EBIT}{EBIT}}$$

The Financial Leverage measures financial risk arises from use of Debt or Preferred Stock. Firms with higher DFL generally are considered to have greater financial risk than with lower DFL.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

Data analysis and presentation deals with the main body of thesis study i.e. analysis and finding of the collected data. This section is divided into two heading. The first heading of this chapter deals with determination of relevant financial and technical tools and explained the results. The available information are changed and adjusted into required data for analyzing. Analyzing is done through presentation of data and calculating various leverage ratios that reflect the relationship variable affecting capital structure.

This chapter is related to the presentation and analysis of data collected from various secondary sources. This chapter has been divided into two main sections. The first section of the chapter deals with the analysis of secondary data and second section deals with major findings of the study.

4.1 Analysis of Long Term Debt and Shareholder's Equity

The ratio of borrowed and owners capital is a popular measure of the long-term financial solvency of the firm. In usual version, the debt/equity is the ratio of long-term debt to total equity. Although, short-term debt and accruals provide leverage just as long-term debt, current liabilities are usually omitted. From the ratio, the firm is assumed able to adjust the short-term part of capital structure rapidly. When the rate of return on assets decline. Thus, the debt considers here is exclusive of current liabilities. Thus, in the following table long term debt to equity ratio is presented in quantitative term to show the movement of the trend from the year 2005 to 2009 of Nepal lube Oil Limited and Bottlers Nepal Limited.

Table 4.1

Debt Equity Ratio

Years	BNL	NLOL
2005	-	2.72
2006	-	2.95
2007	-	3.16
2008	-	3.06
2009	0.36	3.16
Average	0.072	3.01
S.D.(6)	0.14	0.16
C.V. (%)	2%	5.31%

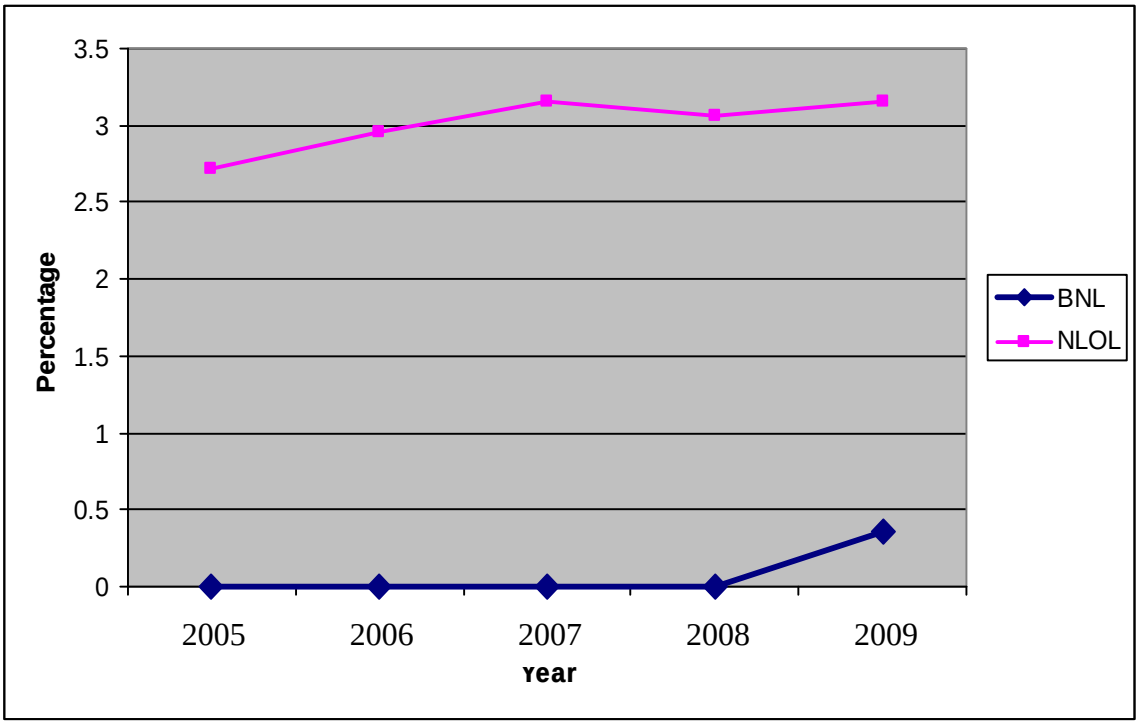
(See Appendix 3)

Source: Annual Reports of Shareholders (2005-2009)

Table 4.1 BNL has not used any long-term debt on its capital structure until 2009. To maximize the profit companies have to use LTD on its capital structure.

Figure 4.1

Debt Equity Ratio



4.1.1 Analysis of Total Debt to Net Worth Ratio

This ratio is also known as debt equity ratio the relationship between lenders contributions is shown by debt. Equity ratio and it reflect the relative claims of creditors and shareholders against the assets of the company. This ratio is calculated by dividing the total debt by net worth. Net worth consists of the entire share capital reserve and surplus of the company and total debt consists of all types of long-term debt and current liabilities. This total debt to net worth ratio is composed using following formula.

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

Table 4.2

Total Debt to Net Worth Ratio

Years	BNL	NLOL
2005	0.285	4.48
2006	0.260	4.45
2007	0.174	4.39
2008	0.215	3.86
2009	0.401	3.56
Average	0.267	4.14
S.D.	0.076	0.36
C.V (%)	28	8.7

(See appendix 4)

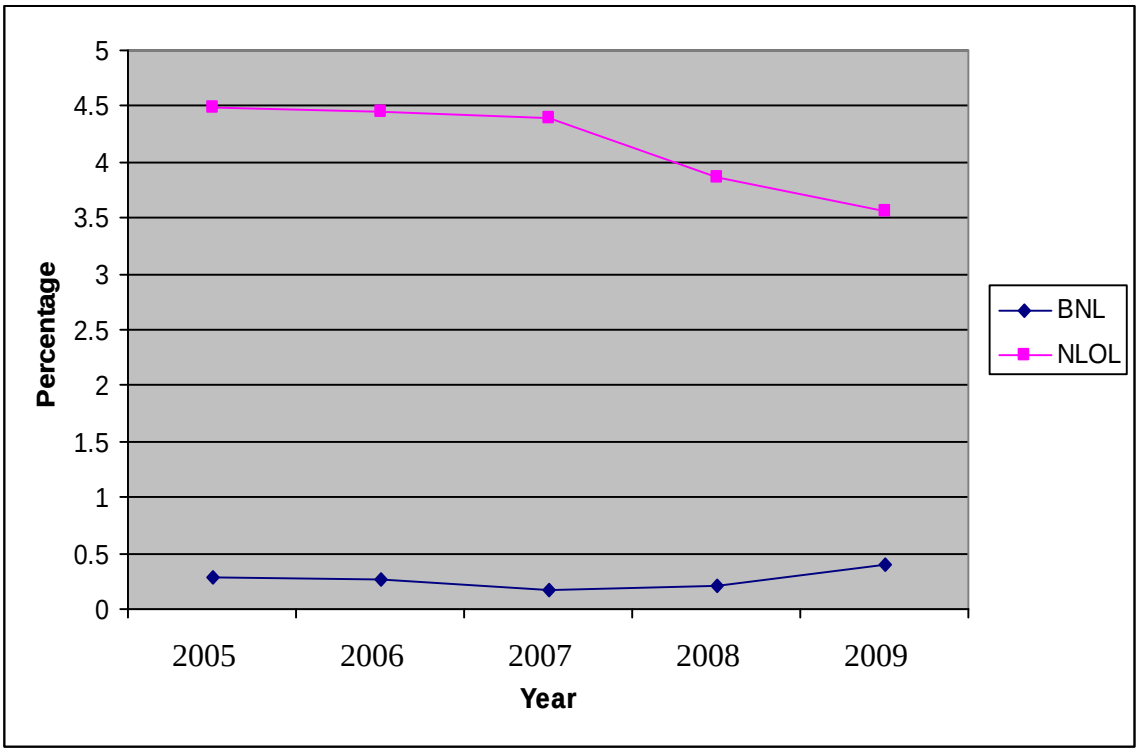
Source: Annual Reports of Shareholders (2005-2009)

A high ratio shows the large share of financing by creditors would suffer more in times of distress than the owner. The standard ratio 2:1. The total debt to net worth ratio of BNL is very lower. During the study period, the average total debt to net worth ratio is 0.267, which is very lower. This ratio suggests that BNL must be increased in debt. S.D. and C.V. on BNL is 0.076 and 28% respectively. Average total debt to net worth ratio of NLOL during the study period is 4.14, which is contributed from short term debts. The S.D. and C.V. of NLOL is 0.36 and 8.7% respectively.

There is huge difference in average ratio between two companies. As an unlevered firm, BNL has 0.267 of Total debt to Shareholder ratio. But NLOL has the same ratio with 4.14

Figure 4.2

Total Debt to Net Worth Ratio



4.1.2 Analysis of Interest Coverage Ratio

Interest ratio is design to relate the interest charge of a firm to its ability to service them. It is simply the ratio of earning before interest and taxes for the particular reporting period to the amount of interest charge for the period. This ratio measures the debt servicing capacity of a company. It is computed by dividing net profit before interest and tax by interest;

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit Before Interestand Tax}}{\text{Interest}}$$

This ratio is also known as time earn ratio. A high ratio is a sign of low burden of boring the business and lower utilization or borrowing capacity. The large the coverage is the greater the ability of the company to make the payment of interest to creditors. The comparative picture of manufacturing companies for interest coverage ratio has been presented in the following table.

Table 4.3

Interest Coverage Ratio in %

Years	BNL	NLOL
2005	8.66	0.90
2006	10.47	0.86
2007	112.5	1.01
2008	33.20	2.12
2009	119.55	1.04
Average	56.87	0.46
S.D.(6)	0.49	0.46
C.V.	86.35	38.98

(See Appendix 5)

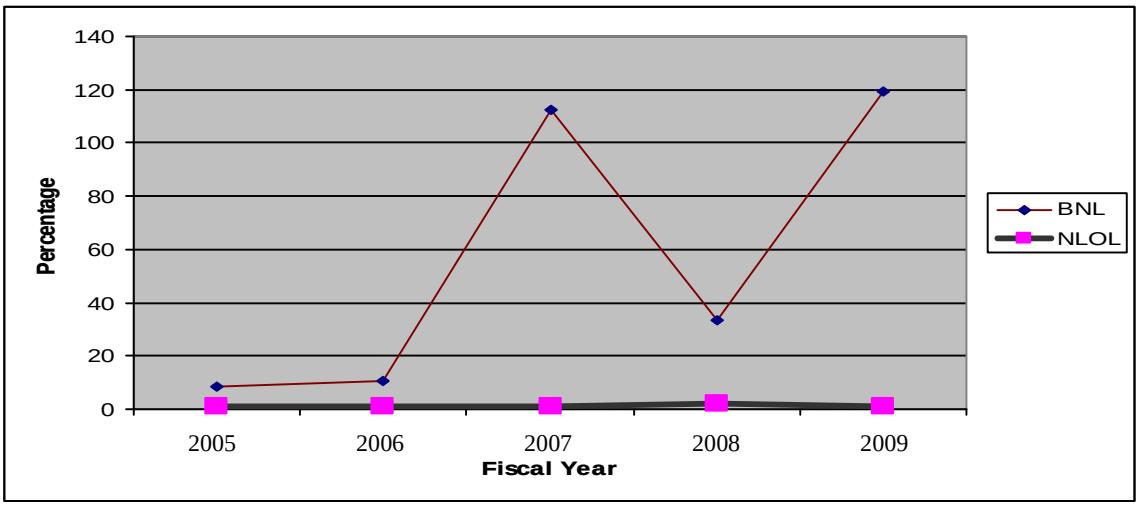
Source: Annual Reports of Shareholders (2005-2009)

The interest coverage ratios of manufacturing companies during the study period are presented in the above table. The interest coverage of BNL is 8.66, 10.47, 112.5, 33.20 and 119.5 for the year 2005 to 2009 respectively. Similarly, the interest coverage ratios for NLOL are 0.90, 0.86, 1.01, 2.12 and 1.04 for the year 2005 to 2009 respectively, which are very low.

In comparison between two manufacturing company the coverage ratio seems to be higher in BNL than NLOL. Since both companies being Unlevered firm high operating profit (EBIT) of BNL than NLOL has resulted it.

Figure 4.3

Analysis of Interest Coverage Ratio



4.1.3. Analysis of Return on Total Assets

Return on total assets is computed simply by dividing after tax by total assets on after tax basis. However, earning after tax (EAT) represents only residual income for shareholder. Therefore, it is conceptually on sound to use EAT to calculate return on total assets. Thus, here after tax an interest expense is added to EAT for the numerator of the ratio. This ratio measures the profitability of the total funds of manufacturing company. Thus, the ratio of return on total assets is calculated by taking five years balance sheet and P/L account of there manufacturing company as given below.

Table 4.4

Return on Total Assets (in %)

Years	BNL	NLOL
2005	5.82	0.72
2006	3.63	0.67
2007	5.19	1.09
2008	4.02	3.39
2009	3.29	5.55
Average	4.39	1.728
S.D	0.95	2.43
C.V	0.21	1.41

Source: Annual Reports of Shareholders (2005-2009)

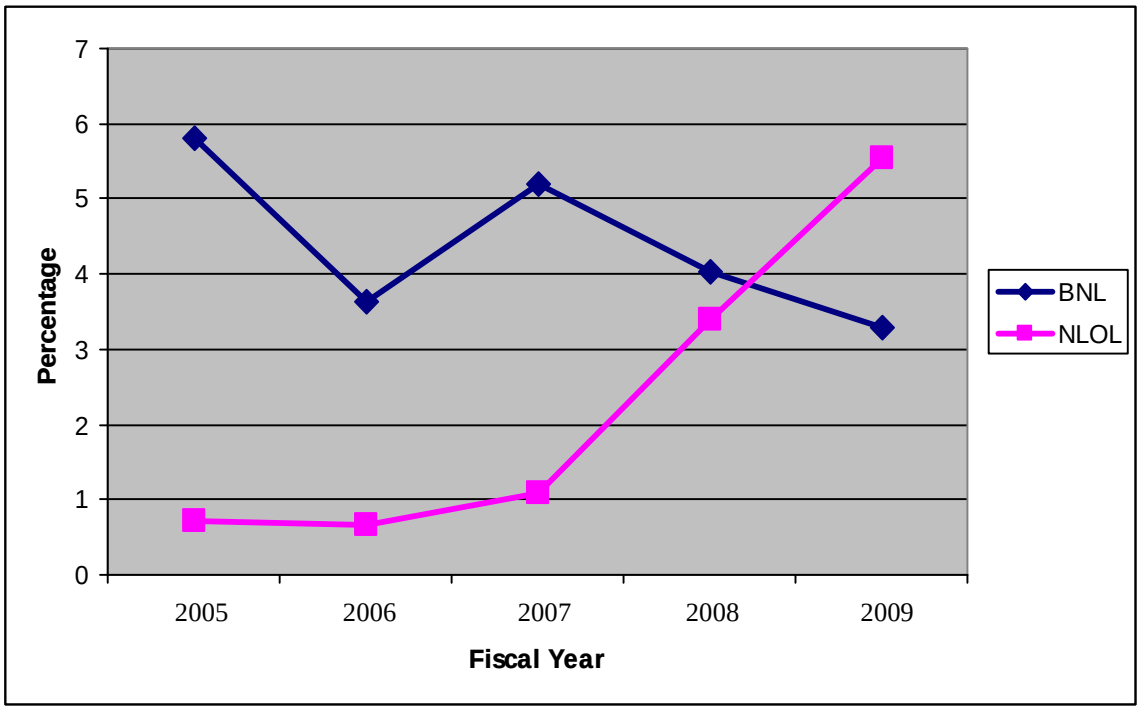
Table 4.4 shows the return on total assets ratio of two manufacturing companies. The return on total assets ratio of BNL are 5.82, 3.63, 5.19, 4.02, 3.29 in year 2005, 2006, 2007, 2008, 2009 respectively. The ratio shows that the net profit of the company is very low as compared to its total assets. The average return on total assets ratio of BNL is 4.39. The SD and CV are 0.95 and 0.21 respectively.

The return on total assets ratio of NLOL is 72, .67, 1.09, 3.39 and 5.55 in the year 2005, 2006, 2007, 2008 and 2009 respectively. The company has lower return as respectively to total assets. The company suffering loss in year 2005, 2006. The S.D and C.V of NLOL are 2.43 and 1.41 respectively.

ROA is higher in BNL compared to NLOL so the production power of asset in generating profit is higher in BNL than NLOL.

Figure 4.4

Return to Total Assets Ratio



4.1.4 Analysis Profit Margin Sales

Net profit margin on sales is computed simply by dividing net profit after tax by amount of sales. Net profit is obtained by subtracting operation expenses and income tax. From the gross profit, net profit after tax is given on the profit and loss account of each manufacturing company. This ratio of profit margin on sale indicates the firm capacity to with stand adverse economic condition. A manufacturing company with a high profit

margin ratio would be advantageous position to service in the face of falling selling prices, rising cost of production or declining demand for the production and vice verse. However, to analysis the position of profit margin on sales of the manufacturing company the following table is constructed.

Table 4.5

Profit Margin Ratio (in %)

Years	BNL	NLOL
2005	9	-.80
2006	4.20	-.72
2007	5.90	1.23
2008	5.60	2.96
2009	4	5.47
Average	5.74	1.63
S.D	1.79	2.37
C.V	0.31	1.45

Source: Annual Reports of Shareholders (2005-2009)

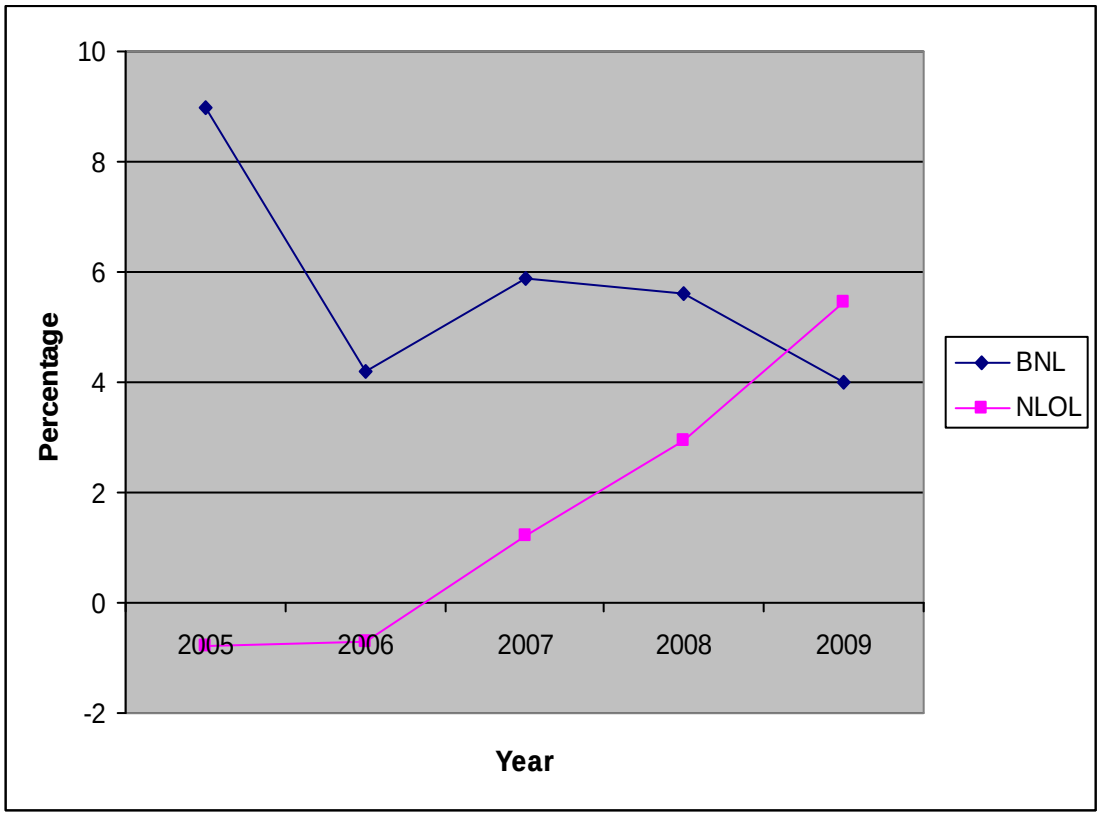
Table 4.5 show that the profit margin ratio of two manufacturing companies during the current study period. The average sales margin ratio of BNL is 5.74%. The Company must try to increase its profit. SD and CV are 1.79% and 0.31% respectively.

The average sales margin ratio of NLOL has negative, which indicate the company financial position is not good during the study period and SD and CV of NLOL are 2.37% and 1.45% respectively.

Profit margin is the main reason for the business operation. Two manufacturing companies have their own policy in earning profit. Profit margin of NL is greater than NLOL in average so the profit earning capacity of NLOL is less than that of BNL, which NLOL should increase by investing more in strategic plan of sales promotion.

Figure 4.5

Profit Margin Ratio



4.1.5 Analysis Returns on Equity (Return on Net Worth)

$$\text{ROE} = \frac{\text{Net Worth}}{\text{Common Equity (Net Worth)}} \times 100\%$$

The return or net worth ratio is the measure of productivity of shareholders fund. It carries the relationship of return to shareholders equity. The shareholder equity includes common share capital, preference share capital, reserve and surplus. The ratio is regarded as very important measure because it reflects exclusively the return on the other. As the common shareholders are residual owners in the real sense of the world. They assumed the maximum rise and have the highest stake in company. So to judge whether the firm has earned a satisfactory return for its common shareholders or not, following table is constructed.

Table 4.6

Return on Equity (ROE) (in %)

Years	BNL	NLOL
2005	25.05	-2.69
2006	13.17	-2.72
2007	19.39	4.45
2008	17.82	13.30
2009	12.80	21.08
Average	17.64	6.71
S.D.	4.50	9.29
C.V.	0.25	1.38

Source: Annual Reports of Shareholders (2005-2009)

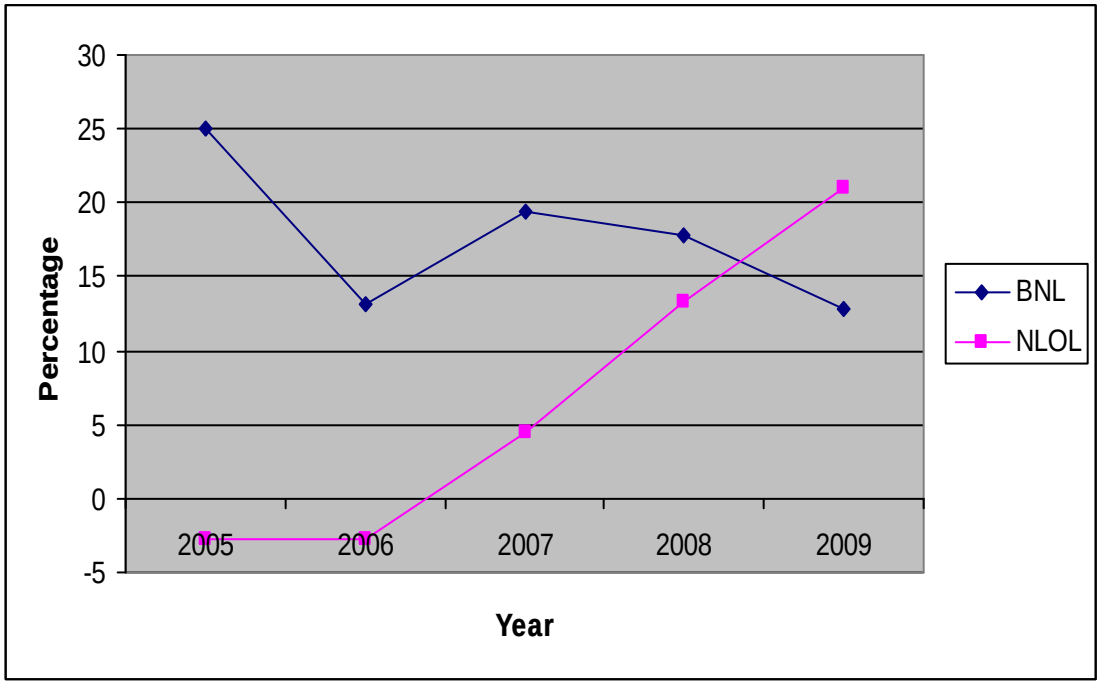
Table 4.6 show that the return on net worth ratio of BNL is 25.05, 13.17, 19.39, 17.82 and 12.80 in the year of 2005, 2006, 2007, 2008 and 2009 respectively. The average net profit to net worth ratio is 17.64, which indicate the sound financial position on BNL, SD and CV are 4.50% and 0.25 respectively.

The net profit to net worth ratio on NLOL is not better. The average net profit to net worth is 6.71. SD and CV are 9.29% and 1.38 respectively. CV is very high. This value clearly shows that the company is earning profit very low during the period 2005 and 2006.

In comparison between two manufacturing companies ROE for BNL is higher than NLOL in average. So the equity holder of BNL gains the higher return from their investments. Due to lower profit margin ratio, lower assets turnover ROE of NLOL is low.

Figure 4.6

Return on Equity



4.1.6 Analysis of Leverage

The company needs a huge amount of funds for operating its business activities and these funds are collected from various sources having different cost rate. On the way of profitability, the company can use equity capital. In the process of profit planning, it tries to increase the amount of profit but different kinds of Leverage advantage are considered. Generally, there are two types of Leverage.

- Operating Leverage
- Financial Leverage

The operating Leverage refers to the use of fixed charge bearing source for operating the firm while the financial Leverage measures the responsiveness of EPS to the change in EBIT.

a) Degree of Operating Leverage

Operating Leverage is a type of Leverage, which depend s on sales, variable cost and fixed cost. Operating Leverage defined as proportion between change in EBIT and change in Sales. The Operating Leverage can be measured as degree of Operating Leverage (DOL) in following table:

$$DOL = \frac{\%\ Change\ in\ EBIT}{\%\ Change\ in\ Sales}$$

Table 4.7

Degree of Operating Leverage of Nepal Lube Oil Ltd. (NLOL)

(Amount in '000)

Year	EBIT	%change in EBIT	Sales	%change in Sales	DOL
2005	11426	-	119151	-	-
2006	6259	-45.22	84713	-28.9	1.56
2007	9179	46.65	118103	39.42	1.183
2008	5398	-41.19	148752	25.95	(1.59)
2009	11624	115.339	184191	23.82	4.84

Table 4.8

Degree of Operating Leverage of Bottlers Nepal Ltd (BNL) (Amount in 1000)

Year	EBIT	%change in sales	Sales	%change in sales	DOL
2005	101043	-	604152	-	-
2006	105056	3.97	632114	4.63	0.86
2007	101354	-3.52	614739	-2.75	1.28
2008	98988	-2.33	621827	1.15	(2.03)
2009	38219	-61.39	634190	1.99	(30.89)

The degree of operating Leverage can be measured by the study of EBIT and sales revenue. When sales increase and cost remain same EBIT also increase. In that time, Leverage is constant. It effects to change in sales and EBIT. In above table we are calculating DOL of manufacturing companies.

Nepal lube Oil degree of Operating Leverage in Year 2005 is 1.56 which means 1% change in sales revenue will causes 1.56% change in EBIT. It shows that when sales are

decrease the profit rapidly then sales. In financial year 2006 degree of Operating Leverage is 1.186 which means 1% change in sales revenue causes 1.186% change in EBIT. It shows that when sales increase EBIT increase rapidly then sales. In FY 2007 degree of operating Leverage is (1.59).this means 1%change in sales revenue causes 1.59% change in EBIT. It shows that when sales decreased by 1%EBIT decrease by 1.59.In FY 2008,degree of operating Leverage is 4.84.This implies 1% change in sales causes 4.84% increase in EBIT.

Bottlers Nepal Ltd degree of operating Leverage in the FY 2005 is 0.86.It means 1%change in sales causes o.86% change in EBIT. It shows that huge increase in sales causes less increase in EBIT. In FY 2006 degree of Operating Leverage is 1.28.This implies 1% decrease in sales causes 1.28 decrease in EBIT. In FY 2007, degree of operating Leverage in (2.03).This shows 1% decrease in sales causes 2.03 decrease in EBIT. In the FY 2008, degree of operating Leverage is (30.85).This implies 1% decrease in sales causes 30.85 decrease in EBIT.

b) Degree of financial Leverage (DFL)

Degree of financial Leverage measures proportionate changes in EPS because of change in EBIT. The financial Leverage exit when the company has debt capital structure. The degree of financial Leverage is calculated and shown in following data.

Also it calculate

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

Table 4.9

Degree of Financial Leverage of Nepal Lube Oil Ltd.(NLOL)

Year	EPS	%change	EBIT	%change	DFL
2005	20.89	-	11.43	-	-
2006	1.51	-92.77	6.26	-45.23	2.05
2007	15.07	894.04	-9.18	46.65	19.16
2008	0.86	-94.29	5.4	-41.18	2.29
2009	11.63	1252.33	11.62	115.19	10.87

Table 4.10

Degree of Financial Leverage of Bottlers Nepal Limited (BNL)

Year	EPS	%change	EBIT	%change	DFL
2005	23.81	-	101.043	-	-
2006	19.40	-18.52	105.056	3.97	(4.66)
2007	17.822	-8.134	101.354	-3.52	2.31
2008	12.81	-28.12	98.988	-2.33	12.06
2009	(14.70)	-27.51	38.219	-61.39	0.45

Mentioned in above table DFL for Nepal Lube Oil Limited were 2.05 in the financial year 2005.EBIT and EPS both decrease. In shows that 1%decrease in EBIT decrease 2.05%decrease in EPS. In FY 2006, DFL is 19.16.EPS and EBIT both increase. Increase in EBIT of 1%causes increase in EPS by 19.16%.In the financial year 2007, both EBIT and EPS decrease. Decrease in EBIT of 1%causes decrease in EPS by 2.29%.In FY 2008, Nepal Lube Oil has attained increase in EBIT as well as EPS. Here 1% increase of EBIT causes 10.87%increase in EPS.

Bottlers Nepal Ltd, DFL for the financial year 2005 is (4.66). In the FY, EBIT has increased but EPS has decreased .Here 1%decrease in EBIT has causes 4.66%decrease in EPS. In the FY 2007, both EPS and EBIT has decreased. Here 1%decrease in EBIT has caused 2.31%decrease in EPS. In the FY 2008, both EPS and EBIT has decreased .Here 1%decrease in EBIT has caused 12.06% decrease in EPS. In the FY 2009, EPS in Negative.

4.2 Major Findings

The major findings of the study in respect of capital structure of the manufacturing companies are as follows.

- Average DOL of BNL is negative, which shows inefficient earning of the firm. In cases NLOL, DOL is positive but it is very low. Hence, BNL and NLOL should try to increase their sales volume to improve operating position of the firm.
- Average DFL of NLOL is higher than BOL which shows NLOL has higher financial risk in comparison to BOL.

- As the manufacturing companies has low debt equity ratio, it implies greater claims of owner than creditors. A high portion of equity provides a large margin of safety for them. The prospectus of company says that the debt equity ratio of the manufacturing company will not be more than 1:1. NLOL has more debt equity ratio. From the shareholder point of view, it is not better. Some companies who are not using debt in their capital structure will have to pay a large amount as tax as they do not get the opportunity of tax benefit on interest that will definitely decrease their profit also.

- Interest coverage ratio of NLOL has very low, but also in increasing trend. Moreover, interest coverage ratio of BNL has very high. It can improve the financial position. It has been improving its interest year by year. However, NLOL is unable to pay its interest from EBIT. Interest coverage ratio of measures the ability of the firm to meet its annual interest payments. So highest ratio shows that a firm can pay the interest easily. Therefore, the increasing ratio is favorable.

- ROA measures the return on all the firms' assets after interest and taxes increasing ratio is favorable. Average return on assets of NLOL has low ratio, which indicates that, the assets of these companies generating low profit.

- Profit margin on sales is the ratio of net income available to common stockholders on sales.. It shows that net profit is fluctuating and the profit margin ratio also decreasing whereas the sales on increasing. This indicates the company should make such policy to earn high amount of profit from the sale revenue by increasing operating efficiency.

- The ROE for BNL is higher than NLOL. The investors of the BNL are getting more returns from their investments. NLOL has lowest ROE on average, it means, it cannot give return to investors.

- There is negative relationship between NP and TD, NP and LTD and ROE and Debt ratio. So, the manager should maintain proper management of Capital Structure.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is summary of the study and it realized some suggestive package. It contains summary, conclusion and recommendation. Summary is brief study of introduction of whole study. Conclusions are made on the basis of analysis of relevant data by various tools. And recommendation forward for the best capital structure management for Nepalese manufacturing companies.

5.1 Summary

Development of industrial sector, amongst others, is equally essential for the rapid economic development of the country. Despite the role of the industrial sector in resolving issues regarding growing unemployment and rural poverty, the share of productive industrial sector in Nepal's Gross Domestic Product (GDP) is only in the range of 10 percent. Given the majority of population dependent on agriculture, need to create job option for them in non-agriculture sector through the development of the productive industry is imminent. This will help not only to solve the problem of unemployment and under employment but also stimulate the process of economic development of the country. As the effort of government alone is not enough for this to happen, the active role of private sector is indispensable in promoting domestic and foreign industrial investment.

Only establishment of industry is not sufficient but their successful operation is also necessary. Establishment and operation of industries need finance. The success and failure of business depends mainly upon the ability of management to make right financial decisions. Capital structure decision is one of the most complex area of financial decision making due to its interrelationship with other financial decision variable. In order to achieve the firm's goal of owner's wealth maximization. The financial manager must be able to assess the firm's capital structure and understand its relationship to risk, return and value.

Financial matter is at the center of each organization whether it is trading concern or an industry, the combination of sources of financing structure and cost of capital are measure factor affecting the calculation profitability and its financial strength. Capital structure is considered as that mix of debt and equity and to operate in long run prospect. A firm must concentrate in its proportion. A firm can raise required fund by issuing various types of financial instrument. Investors and creditors being the key supplier of

capital, they hold greater degree of risk and hence have claims over firms assets and cash flow. Similarly, debt holders are also a source of financial fund, they have risk considering firm's cash flow is uncertain, and there is probability that it may default in its obligations to pay off its interest and principle.

The main objective of this study is to examine capital structure of selected companies, their ability to service debt, effect of financial operating leverage on the capital structure position. To fulfill the purpose, the study follows the analytical and descriptive research design. The study has been undertaken to study and analyzed the capital structure of BNL and NLOL based on financial data of 2005-2009 using financial tools i.e., ratio analysis leverage analysis.

Two manufacturing companies are using equity and short term debt in their financial structure. However, long term debt has been used by BNL in 2009 in capital structure. NLOL has 4.14% of average DE ratio. Similarly BNL has 0.267% Hence DE ratio of NLOL is greater than BNL. This shows BNL has lower claim of outsider than equity holders from the analysis it is clear that BNL and NLOL are trying to be equity based companies by reducing their amount of debt.

BNL has utilized the resources efficiently than NLOL. Similarly BNL is good in relation to net profit to sales in comparison to NLOL. Interest coverage ratio of BNL is high it is due to high sales.

As per leverage analysis degree of operating leverage of BNL is negative and NLOL is positive hence both the firm needs to increase sales to improve operating position. Similarly, financial leverage which measure financial caused by use of debt, although debt is short term debt, NLOL has more financial risk than BNL.

5.2 Conclusion

This study is concerned with the study of capital structure management of two selected manufacturing companies, Nepal Lube Oil Limited and Bottlers Nepal Limited.

The major conclusion of the study is as follows.

- Profit margin on sales is the ratio of net income available to common stockholders on sales.Net profit margin of NLOL is more fluctuating than BNL. This indicates the company should make such policy to earn high amount of profit by increasing operating efficiency.

- Interest coverage ratio of NLOL has low but also in increasing trend. Moreover, interest coverage ratio of BNL has very high. It can improve the financial position. It has been improving its interest from EBIT, interest coverage ratio of measures the ability of the firm to meet its annual interest payments. Therefore, highest ratio shows that a firm can pay the interest easily.

- The average return on assets of NLOL has low ratio, which indicates that, the assets of these companies generating low profit.

- The Nepal Lube Oil Limited has lowest return on equity on average it means it cannot give return to investors.

5.3 Recommendations

Finally, after having an overall analysis of capital structure management of Bottlers Nepal Limited and Nepal Lube Oil Limited respectively. Following recommendation is made for the future handling and improvement of the companies.

- Both companies, Bottlers Nepal Limited and Nepal Lube Oil Limited does not use long-term debt. To maximize the value of share holders proper capital structure should be determine value maximization.

- It is suggested that NLOL and BNL should increase the debt proportion in financing its assets.

- The profit for BNL is not corresponding increasing as per the increase in sales. The BNL should make policy to earn high amount of profit from the sales revenue by increasing operating efficiency.

- Both the companies are highly dependent on short term debt, it should try to adopt long term source of debt to maximize return on assets.

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