CHAPTER -I

INTRODUCTION

1.1 General Background

A firm can raise required fund by issuing various types of financial instruments. Investors and creditors being the key supply of capital, they hold greater degree of risk and hence have claimed over firm's assets and cash flow. Similarly debt holders are also a source of financing fund and they have risk considering uncertain cash flow and there is probability that it may default in its obligations to pay off its interest and principle. In the other hand, if a firm issue preference share, those shareholders have the priority in payment of dividend before common shareholders but after debt holders. Since the percentage of preference dividend is fixed as the percentage of interest to debt, it is preferably paid off only after interest payment. Common shareholders are the owner of the firm; they are paid from cash remaining after all payment is being made.

The capital structure concept has an important place in the theory of financial Management. The financing decision of a firm relates to choice of proportion of debt and equity to finance the investment requirement. A proper balance between debt and equity is necessary to ensure a trade-off between risk and return to the shareholders. A capital structure with reasonable proportion of debt and equity capital is called optimal capital structure. However, it can be expected that the capital structure decision affect the total value of the firm should select such a financing mix. Which maximize the shareholder wealth? Optimum capital structure may define as the capital structure or combination of debt and equity that leads to the maximum value of the firm.

The sources of financing may be long term, and short term. Short –term sources of financing mature within one year or less whereas fund raised from long-term sources of financing can be used for several years. When a firm expands its business or activity, it needs capital. The term capital denotes the long-term funds of the firm. All of the items on the liabilities side of firm's balance sheet, excluding current liabilities, are sources of capital. The total capital can be divided into two components: debt capital and equity capital (Thapa and Gautam, 2066: 153).

Capital requires from the promotional stage up to the end of a business. No business can be operated without capital. So, capital is labeled as "Life Blood of Business." The capital can be collected from that various sources. The various sources are shares, debentures, public deposits, bank loan etc. The financial manager has thus to make decision about the source or their combination to raise such funds. A firm employs substantial amount of debt capital because of tax deductibility of interest payment, flexibility, and lower effective cost. Capital Structure decision is one of the most important decisions that are taken by the financial manager. It is because the capital structure decision affects weighted average cost of capital (WACC), value of the firm and risk position of the firm. For maximization of profit and maximization of shareholders wealth, optimal capital structure should be maintained. Therefore, the role of optimal capital structure is more significant for every business organization irrespective to their nature. The total capital can be divided into two components: Debt Capital and Share Capital.

The Capital Structure is made up of debt and equity securities, which comprises a firm's finance of its assets. It is the permanent source of financing represented by long term debt, plus preferred stock, plus net worth; the determination of the degree of liquidity of a firm is no simple task. In the long term run, liquidity may depend on the profitability of a firm but whether it services to achieve long run profitability depends to some extent on its capital structure. This term includes only long term debt and total stockholders' investment. It may be defined as one including both short term and long term fund (Western and Brigham, 2003: 493).

Debt Capital

Debt capital includes all long term borrowing incurred by the firm. Debentures, bonds, long-term loan etc are major sources of debt or borrowed capital. A firm employs substantial amount of debt capital because of tax deductability of interest payment, flexibility, and lower effective cost. However, excess amount of debt exposes high risk.

Equity Capital

Equity capital consists of the long-term fund provided by the firm's owners, the stockholders. In other words, equity capital includes common stock, paid in capital (share premium), reserve and surplus, and retained earnings (Gautam and Thapa, 2060: 234).

Industrial Development in Nepal

Industrial development is the essential element in the economic growth of developing countries. Almost all of the developed countries are in the age of industrialization to achieve a high economic growth of any country. It is well known that, the share of the developing countries in world trade is much smaller than that of the industrialized countries. Developing countries like Nepal must therefore concentrate on the most important means of stimulating and maintaining accelerated industrial growth. To achieve a high industrial growth of any nation, industrial sector should be developed and increased. But developing countries like Nepal have a problem of developing industrial sector. Such problems are raised in the form of many issues like industrial management, industrial policy, economic, political and social condition of the nation and so on. Step should be taken to accelerate industrial development in those countries where yet a little progress has been made. This should be done in such a way that the available potential is utilized to the utmost. Almost all of the developed countries have a better management system regarding industrial sector, good predictable capacity, should economic-political environment and promoting type of industrial policy. Industrial development is the main phenomenon of economy and developing countries like Nepal should develop industries as much as possible by providing entrepreneurial training, management system training, good industrial policy, guarantee of industrial security etc.

To develop the industrial sector of the nation, a separate industrial policy has been enacted by Nepal government as 'Industrial Policy 2049'. In the act provisions regarding registration and operation have been clearly mentioned. As per industrial policy, industries are classified into four classes based on how much fixed capital is used by industry. Such classification is:

- Traditional cottage industry: Related to art and culture, labour oriented, using local raw material.
- Small industry: Investment in fixed capital of upto Rs. 1 crore excluding traditional cottage industry.
- Medium size industry: Investment in fixed capital more than Rs. 1 crore and less than Rs. 5 crore.
- Large scale industry: Investment in fixed capital more than Rs. 5 crore (Industrial Act 2049, Sec. 4.3).

During the Second World War many industries like Morang Hydroelectric Supply Corporation, Morang Cotton Mills, Nepal Plywood and Bobbins Company, Birjung Juddha Match Factory, Raghupati Jut Mills, Morang Sugar Mills etc were established. Beside them paper, soap, furniture, oil, rice industries were also established. During 10 years (1936-1946 A.D.) altogether 63 industries were established with the investment of Rs. 7.20 crores but the Nepalese had invested only Rs. 20 lakhs. Unit 1951 A.D. 73 large-scale industries and 78 small-scale industries went on liquidation because those industries were not promoted with proper industries feasibility.

In 1951 A.D. (2007 B.S.) autocratic Rana Regime was overthrown and democracy was established. In 1956 A.D. Nepal initiated planned development. During the first five-year plan (2013-2018 B.S.), Industrial Policy 2014, Private firm Registration Act and Factory Worker Act 2016 were published and Nepal Industrial Development Corporation (NIDC) was established in 2016 B.S.

During second Three years' plan (2019-2022 B.S.) sugar, metal, handicrafts, hotels, matches, textiles. Biscuits and confectionary industries were established in private sectors while in public sectors Janakpur Cigarette Factory, Birjung Sugar Factory and Bansbari Leather and Shoes Factory were established.

During third five year plan (2022-2027 B.S.) rive mills, vegetables, beer, biscuits, confectionary, hotels etc industries were established in private sectors. In public sector brick and tile factory, agriculture; tools factory were established.

During fourth five year plan (2027-2032 B.S.) vegetable ghee, flourmill, soap, cold storage, bakeries etc industries were established in private sector while Hetauda and Balaju Textile industries were established in public sector. In this period new industrial policy and industrial Enterprises Act 2030 were enacted and Industrial Service Centre 2031 was established.

During fifth five-year plan (2032-2037 B.S.) industrial development sector was not satisfactory. Only three industries were established in public sector. In private sector, very few small-scale industries such as biscuit, flour, sugar, soap, textiles, polythene pipe, and insecticides were established. Security Exchange Centre 2033 was established and national industrial conference (2033) was conducted.

During sixth five year plan (2037-2042 B.S.), biscuits, sweets, shoes, etc industries were established in private sector. In public sector Lumbini Sugar Factory, Bhrikuty

Paper industry, Nepal Paper Industry, herbs Production and Processing Company Limited. Butwal Spinning Mills Limited, Nepal Oriented Magnetic and Nepal Metal Company were established.

During seventh five year plan (2042-247 B.S.), industries like woolen carpet, readymade garments, beer, distillery, cement, cigarette, soap etc were established in private sector while in public sector Udayapur cement Factory, industrial District management Ltd. and Economic Service Centre limited was established.

During eighth five-year plan (2049-2054 B.S.), HMG adopted liberal and competitive economic policies. As a result of this Industrial Policy 2049, Industrial Enterprises Act, 2050, were reviewed. During the plan period some 16 important industries such as Bansbari Leather and Shoes Factory, Harisidhhi Brick Factory, Balaju Textile Industry, Nepal Metal Industries, Seti Cigarette Factory, Raghupati Jut Mills and Agricultural Tools Factory etc were privatized. During this plan period drug, soap, detergent was established under foreign investment the main objectives of new policy are growth of industrial production and productivity, emphasis on export-oriented industries, development of employment generating industries and balanced development of all region of the country.

During ninth five-year plan (2054-2059 B.S.), it emphasized to continue the liberal economic policy. Through the plan's targets were to privatization 30 public enterprises, so far only 16 enterprises have been privatized and that too, mostly during the earlier plans, the objectives of ninth plan were to a) increase contribution of industrial sector in domestic production b) increasing the earnings and services of foreign exchange through the identification of commodities of competitive advantages, c) increase the production of processes goods through the arrangement of necessary infrastructure, and d) increases the income and purchasing power of people residing in rural areas with contribution of industrial sector in domestic production, through the cottage and small-scale industries. However, most of the objectives have not been fulfilled to the desired extent and the plan's target to attain 14 percent (in terms of industrial sectors contribution to GDP) at the end of the plan is unlikely to be met. The share of manufacturing in GDP went up form 6.8 percent in 1990/91 to 8.43 percent in 2001/02, an increment of 24 percent. Manufacturing sector is critical to the pursuit of sustained growth due to its potential to promote technological capacities,

advance the diversification of production and exports and to foster inter-social and inter-industry linkages.

During the tenth five-year plan (2059-2064), the year 2060 marks the 54th year of development assistance of Nepal and the 49th year of planned development exercise. Almost 20 years have passed since the Structural Adjustment Programmed (SAP) started and 12 years, since experimentation with the economic liberalization practices in Nepal. Despite all these strategies, desired level of development could not take place and only a limited success especially in the physical infrastructure transport, communication and energy has been achieved.

During the three-year interim plan (2064-2067), one of the main objectives was to reconstruct the physical infrastructure destroyed during the 10 year long conflict. Not and even a single enterprises has been established during the period. Out of 66 public enterprises, 36 are in operation where as 30 are collapsed or privatized. At present, a total of 482 firms and industries in 11 industrial areas located in various part of Nepal are in operation.

The objective set by the interim plan could not be achieved primarily because of weak industrial security, political instability, lockout, strike, huge power crisis and world wide economic crisis. These issues have become the major barriers for the industrial development of the nation. These adversities have widely affected the national economy at the same time.

Profile of Listed Manufacturing Companies Selected for the Study

Researcher has taken sample of two manufacturing companies listed in the NEPSE for the study which are summarized as below:

Bottlers Nepal Limited

BNL is one of the manufacturing and processing companies. It is established in 1979 AD under the company Act 1964 A.D. It is initially started as a private enterprise in 1985 by issuing shares to public. It was established with the objective of producing and bottling soft drinks under the brand name of Coca Cola Sabco Asia Ltd. The company also makes and sales soft drinks under the registered trademarks of Coca Cola managed by Dubai based Coca Cola Sabco Asia Ltd. The company is located at Balaju, Kathmandu; in an area covering 10.648 square meters of land and the

buildings of the company covers 5,828 squares meters. The company has been launching various types of promotional activities with financial and technical support from the Coca cola Sabco Asia Ltd. Dubai (BNL Annual Report 2003/04:21).

Share Capital of BNL

The BNL was started with an authorized capital of Rs. 30,250,000. In the initial period, its paid up capital was Rs.10, 500,000 of Rs.100 per share. Now the company has authorized capital of Rs.430,000,000, issued capital of Rs.370,000,000 and paid up capital of Rs.194,889,000 (BNL Audit Report: 2006/07:11).

Subsidiary Company of BNL

Bottlers Nepal (Tarai) Ltd. is operated as a subsidiary company of BNL, Balaju. BNL (Tarai) Ltd. was established in 1986 under the company Act, 1964 with the object of producing and bottling soft drinks under the brand name of Coke, Fanta and Sprite. The company is situated in Chitwan district. It is managed by Coca-Cola Sabco Asia Ltd., Dubai. The installed capacity of plant is 350 bottling per minute. BNTL belongs to 92% (nearly) of equity shares to holding company BNL, Balaju. The company has increased investment on the subsidiary company by acquiring additional shares from open market. The company's equity interest has increased to 91.78% after the new acquisition of shares in BNTL (BNL Audit Report 2010/11).

Product Line

BNL produces Coke, Fanta and Sprite in returnable glass bottle as well as non-returnable bottles. Upgrading the product lines, the company has already upgraded its 430 bottles per minute line to produce 175ml. package in returnable glass bottle. Considering the market demand, the company has also invested in pet line to produce 1.5 liter packages in non returnable bottles. The lines have commenced production and they have started sales of locally manufactured pet since the previous year. So, the company has been able to increase the production efficiency of the plant giving better outputs as compared to the previous year. The company is able to fulfill the market demand without any production constraints after the installation of new plant (BNL Audit Report 2010/11).

Unilever Nepal Limited

Unilever Nepal Limited (UNL) was formed as a subsidiary company of Hindustan Lever Limited, India. The factory is situated at Basamadi V.D.C. of Makawanpur district, which is about six kilometers far from Hetauda municipality, and its corporate office is situated at Heritage Plaza II, Kamaladi, Kathmandu. Unilever Nepal Limited was established in 1994 as a joint venture company between Hindustan Lever Limited, India and Nepali promoters under the company act 2021. It is the subsidiary company of foreign investment and technology transformation. A notice was issued dated on 18th February 2005 (2061/11/07) in the Kathmandu Post to inform all concerned about the change in the name of the company from Nepal Lever Limited, to Unilever Nepal Limited as per the approved decision taken by eleventh annual general meeting held on 13th December 2004 (2061/08/28) under the special resolution. The change in name has been approved by the company registrar office of Nepal government with effect from 9th February 2005 (2061/10/27) binding Unilever Nepal Limited to bear assume all the tax and other payable liabilities towards all the movable and immovable assets existing in the company's former name. the main objectives of the company is to manufacturing soaps, tooth paste, detergent, cosmetics, toiletries, oleaginous and other chemical products and marketed them in and outside the country under the brand name of the products of Hindustan Lever Limited. The register of this company is NIDC capital market limited which is situated as the Kamaladi, Kathmandu. The purpose of Unilever Nepal Limited is to meet the everyday needs of people everywhere to anticipate the aspiration of their customers and customers are to respond creativity and competitively with branded products and services, which raise the quality of life. Factory has been operating three shifts for all the seven days in weeks. The market of this company is focused on locally and presently in India.

1.2 Statement of the Problem

Capital structure concept is not taken seriously by the Nepalese companies. Therefore, optimal capital structure does not exist at all. Among the listed companies in the stock exchange very few are using the debt capital and contrary to this some of the companies ruined by the excess burden of the cost of debt capital. Some of the business use only equity capital, some use only debt capital and some combine both equity and debt capital. Therefore, determination of capital structure largely depends upon the company policy and cost of capital. The main problem of the study is the use

of huge portion of the short term debt in the capital structure in fluctuating trend of both companies Unilever Nepal Limited and Bottlers Nepal Limited.

This research is concentrated to find out these following questions:

- What capital structure are the selected companies using?
- What effects are on the cost of capital and share price of the Company?
- Is there proper capital structure management in the banks under study?

1.3 Objectives of the Study

The main objective of the study is to evaluate the capital structure management by the selected organizations. The specific objectives of the study are pointed out as under-

- To analyze the capital structure of Unilever Nepal Limited and Bottlers Nepal Limited.
- To examine the cost of capital and return on capital.
- To provide suggestions and recommendations for further improvements.

1.4 Significance of the Study

This study is concerned with the capital structure management of BNL and UNL. As very rare researches have been performed regarding this issue, it is expected that this study will significantly contribute towards the field of capital structure management in industrial sector. The manufacturing sector of Nepal is expanding day by day. In the recent days the nation is facing with lots of hurdles. In this situation the manufacturing sector is also running slowly. In this situation, this study will be helpful to the companies to overview their capital structure management and to the further strategies to do much better in their horizon. Most capital structure management analysis studies have been conducted on banking sector, but this studied capital structure management about two selected manufacturing companies listed in NEPSE. The concerned scholars, academicians, investors, professionals may also be benefited from this study. Further, this study will also help to inform the decision makers about the importance of capital structure management for the further success.

1.5 Limitations of the Study

Due to the lack of time, resources and knowledge the work is completed within the periphery of its limitation. Despite ample efforts on the part of the researcher this study is not free from limitation. This study also will have some limitations which will be as follows:

- Although there are 18 manufacturing companies listed in the NEPSE; this study has been confined to Unilever Nepal Limited and Bottlers Nepal Limited.
- The study considers about only capital structure management of Unilever Nepal Limited and Bottlers Nepal Limited.
- This study is heavily dependent on secondary data.
- Only last five years (FY 2007/08 to FY 2011/12) data and information are analyzed.

1.6 Organization of the Study

The study has been organized into five main chapters as follows:

Chapter One: Introduction- First chapter is the introductory part of the research, contains the introductory part of the study where the general backgrounds of the study the major issues to be investigated and the objectives of the study were presented.

Chapter Two: Review of Related Literature: Chapter two is related to review of literature which contains conceptual/theoretical framework, major studies in general and reviews of major studies in Nepal.

Chapter Three: Research Methodology: This chapter describes the research methodology employed in the study. It includes the research design, nature and source of data selection or enterprises, method of analysis, use of statistical tools. Limitations of the study and the definitions of the used terms.

Chapter Four: Data Presentation and Analysis - This chapter deals with the presentation and analysis of data. It consists of analyzing of capital structure of these two manufacturing companies in Nepal. It also includes major findings of the study.

Chapter Five: Summary, Conclusions and Recommendations- Chapter five is the concluding part of the research concludes summary of the study, conclusion of the study and recommendations for further improvements.

Finally, bibliography and appendixes have been incorporated at the end of the study.

CHAPTER II

REVIEW OF LITERATURE

To make the research more realistic, review of literature is required. In this chapter, review of various literatures has been done to clarify the concept of the topic as well as to examine the previous studies made by various researchers in the field of capital structure. It provides significant knowledge in the field of research. Thus, the review of books, research studies & articles has been used to make clear about the concept of capital structure management. Besides these this chapter highlights the literature that is available in concerned subjects as to my knowledge review of related reports for concerned bases, review of articles & relevant thesis.

2.1 Conceptual Framework

2.1.1 Capital Structure

The term "Capital Structure" means the financial planning according to which the assets of an industry are furnished. According to Lawrence D. Schell and Charles W. Haley, "The term 'Capital Structure' means the proportion of different types of securities issued by the firm. The optimal capital structure is the set of proportion that maximize the total value of the firm" (Schell and Haley, 1983: 339).

Financial structure refers to the way the firm's assets are financed; it is the entire right-hand side of the balance sheet. "Capital structure is the permanent financing of the firm, represented primarily by long-term debt, preference stock and common stock, but excluding all long-term credit. Thus a firm's capital structure is only a part of its financial structure" (Weston, Brigham, 1978: 663). "Within this framework of equating the rate of return and the cost of capital, capital structure is sough by using a proportion of debt such that the correct degree of trading on equity leading to financial leverage will cause the highest market value of the ordinary shares" (Kuchhal, 1977: 388). "Capital structure policy involves a choice between risk and expected returns" (Brigham, 1995: 425).

Capital structure of a company consists of debt and equity securities, which provide funds for a firm. "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 a firm, represented by long-term debt plus preferred stock plus net worth" (Kulkarni, 1983:

363). "Apart from short-term finance from creditors and banks, companies are usually financed either by long-term loans (debentures) carrying a fixed rate of interest on capital of by ordinary shares carrying membership of the company and dividends at rates which depends upon profits" (Francis, 1980: 192).

The basic pattern of capital structure can be simple or complex. A simple capital structure consists of equity share and preference shares. But a complex capital structure consists of multi securities as equity shares, preference shares, debentures, bonds etc.

The capital structure has many relevant dimensions. The financing mix is one of them. Other dimensions involve the investment decisions of the firm and the optimal use of leverage, within the constraints imposed by the internal and external environmental conditions. These conditions, in turn, affect the decision of the firm with respect to the timing of investment and financing transactions as well as the acceptable levels of risk and liquidity. Capital structure can be dealt with the three different levels of complexity.

a. The Statistic View

The static approach suggests that, according to the relevant information about the firm's assets structure, the quality of expected earnings and capital market conditions, management should obtain that mix of financial claims that minimizes the cost of capital. Hence capital structure is viewed as the active policy variable.

b. The Comparative Static View

The second level views capital structure as a competitive static proportion that yields different values for the cost of capital and capital structure, as some of the underlying parameters change. Thus changes in the existing assets structure, the quality of expected earning and the capital market conditions generate new equilibrium solution between the financing mix and the cost of funds.

c. The Dynamic View

The third level views capital structure as a dynamic process of interdependent investment and financing decision that yield optimal values within the constraints at the time and place where the decisions were made. Hence the existing capital structure reflects the sequential decision of the past and as such it is no longer the

active decision variable but rather the by-product of the continual process of matching sources and uses of funds.

2.1.2 The Optimal Capital Structure

The capital structure differs according to different types of industries. "There is no such thing as the model capital structure for all business undertakings. One way of planning the capital structure is to make it fit in to a model compiled from a number of different experiences that may have been drawn from the historical ratios of the firm." (Kuchhal, 1977: 390) "The optimum capital structure is the mix of finance in which the market value of each share is maximized or the average cost of capital is minimized. The value is maximized or the cost will be minimized when the marginal cost of each source of fund is the same. An optimum capital structure would be obtained at that combination of debt and equity that maximize that total value of firm (value of share plus value of debt) or minimizes the weighted average cost of capital." (Pandey, 1999: 227) "Up to a certain point debt added to the capital structure will cause the market value of or the firm to rise and the cost of capital to decline. However after the optimum point has reached any additional debt will cause the market value to decrease and the cost of capital increases." (Walker, 1976: 237) "Optimal capital structure can be properly defined as the combination of debt and equity and equity that attains the stated managerial goals maximization of the firms market value, and which minimizes the firm's cost of capital. As the existence of an optimum capital structure implies the simultaneous optimization of both the cost of capital and the firm's market value, it occupies a central position in the theory of financial management." (Phillippatos, 1974: 237) "The normative objective of the firm is maximizing stockholders wealth is to reduce the cost of capital to a minimum by continuing to raise long-term funds over time in the least 'expensive' ways." (Kreps and Watch, 1975: 411)

The overall cost of capital is minimized, theoretically at least, when the firm reaches its optimum capital structure. The optimum capital structure strikes a balance between the risk and return and thus maximizes the price of the stock. According to Ezar Soloman, "A firm has certain structure of assets, which offers net operating earnings of a given size and quality, and gives certain structure of rates in the capital market, there is some specific degree of financial leverage at which the market value of the firm's securities will be higher (or the cost of capital will be lower) than at any degree

of leverage." (Soloman, 1963: 92) "A firm has assembled an optimum mixture of source when the managerial cost of a dollar from any source is equal to marginal cost from any other." (Mummy, 1969" 115)

2.1.3 Factors Affecting Capital Structure

Capital structure of different types of firms caries widely. "There is no rigid formula to explain the temperaments. Managing directors or major shareholders may often be the major determining factor at any given time. The availability of and level interest rates and expectations as to future money availability and whether interest rates are through likely to rise of fall will be the important factors." (Ogley, 1981,: 95) "There are no hard and fast rules about the percentage of capitalization that should be represented by bonds and debentures and the part that should be of equity share and preference share. Factors affecting capital structure revolve principally around the adequacy and stability of earnings. The grater the stability of earnings the higher may be the ratio of bonds to stock in the capital structure also. The capital structure should be balanced with a sufficient equity cushion to absorb the shocks of the business cycle and to afford flexibility." (Gesternberg, 1962: 181) After a brief overview of the capital structure management we can point out the following factors, which affect the capital structure of any organization:

a. Market Conditions: Conditions in the stock and bonds market undergo both long and short-term changes, which can have an important bearing on a firm's optimum capital structure. For example, during the credit crunch in the winter of 1982, there was simply on market at any 'reasonable' interest rate for new long-term bonds rated. Low rated companies that needed capital were forced to go to the stock market of to the short-term debt market. Action such as this could represent permanent changes in target capital structure of temporary departures from stable targets, the important point; however, is the stock and bond market conditions do influence the type of securities used for a given financing.

b. Cost of Capital: Debt is usually least expensive because there is tax shield saving on interest where as the use of common stock is the most expensive. "The impact of financing decisions on the overall cost of capital should be evaluated and the criteria should be to minimize the overall cost of capital or to maximize the value of the firm." (Pandey, 1999: 264)

c. Firms Internal Conditions: The internal condition of a company also plays an important role in capital structure. According to Brigham's, "Suppose a firm has just successfully completed a research and development program and projects are not yet anticipated by investors and hence are not reflected in the price of stock. This company will not issue stock. It would prefer to finance with debt until the higher earnings materialize and reflected in the stock price, at which time it might want to sell an issue of common stock, retire the debt and return to its target capital structure." (Brigham, 1995: 473)

d. Growth Rate: Faster growing firms must rely more heavily on external capital. Rapidly growing firms tend to use somewhat more debt than companies of slower growth.

e. Stability of Sales: Stability, adequacy, volume and predictability of earnings determine the capital structure. The firms with stable sales would have high ratio of funded debt because they will not face difficulty in meeting their fixed commitments. The companies with declining sales would not employ debt or performance share capital, because they would not like to burden with fixed charges.

f. Cash Flow Ability of Company: To determine the debt capacity of a firm the cash flow of the firm under very adverse conditions, should be examined. A firm is conservatively financed if it is able to serve its fixed charges under any reasonably predictable adverse conditions. "It is not the average cash inflow but the yearly cash inflow which is important to determine the debt capacity of a company. Fixed financial obligations must be met when due, not on an average and not in most years but always." (Johanson, 1973" 216)

g. Flotation Cost: Flotation costs are incurred only when the funds are raised. The cost of floating a debt is less than cost of floating an equity issue. This may encourage a company to use than issue equity shares.

h. Assets Structure: Firms whose assets are suitable as securities for loans tend to use debt heavily. According to J. Batty, "Borrowed capital should not exceed a reasonable percentage of fixed assets." (Batty, 1963: 159) "Generally fixed assets are associated with long-term debts while current assets with short-term debts" (Chudson, 1965: 103)

i. Interest Rate Level: This affects choice of securities to be offered investors; high interest rate makes financing costly. When funds are obtained easily and cheaply, there is greater latitude for choice of type of security to be used.

j. Nature of Industry and Capital Requirements: The pattern of capital structure of the industry of which the firm is a part also a very important factor in determining the capital structure of the firm. The needs and financial conditions of a company have to be considered. If growth is only moderate, a re-investment of earnings will serve the purpose.

k. Control: If management has voting control over the company and is not in a position to buy any more stock, debt may be a choice for new financing. On the other hand, management group this is not concerned about voting control may decide to use equity rather than debt. An excessive amount of debt can also cause bankruptcy, which means a complete loss of control.

l. Flexibility: "The Company's desire for flexibility in future financing decision also affects the capital structure of the company." (Schwartzman and Ball, 1977: 65) Therefore the company should compare the benefits and costs of attaining the degree of flexibility and balance them properly.

m. Profitability: The firms with very high rates of return of investment use relativity little debt. Their high rates of return enable them to do most of their financing with retained earnings.

n. Taxes: Interest is deductible expenses while dividends are not deductible. Hence the higher a firm's tax rate, the greater is the advantage in using debt.

o. Leverage Effects: The Company with a high level of earnings before interest and taxes can make a profitable use of the high degree of leverage to increase return of the shareholders equity.

2.1.4 The Capital Structure Decision

Capital is a scare resource and much more essential to maintain smooth operation of any firm. The available capital and financial resource should be utilized so efficiently that it could generate maximum return.

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 film can raise required fund

by issuing various types of financial instruments. Investors and creditors being the key suppliers of capital, they hold grater degree of risk and hence have claims over firm's assets and cash flow. Similarly debt holders are also a source of financing fund and they have risk considering firm's cash flow if uncertain and there is probability that it may default if its obligation to pay off its interest and principle. In the other hand, if a firm issue preference share, even though have the priority in payment of dividend before common shareholders but after debt holders. Since the percentage of dividend is fixed as the percentage of interest to debt, it is preferably paid off only after interest payment. Common Shareholders are the owner of the firm; they are paid from cash remaining after all payment is being made. Since the common share i.e. equity fluctuation in the market more than the preference share and debt, there is more risk.

The above statement in brief that either fund is raised by debt or equity financing risk is associated in proportion of its uncertainty is being paid off. The required rate of return expected by investors according to the risk is cost of capital. Therefore a firm should try to obtain necessary fund at lowest cost. This cost of capital is fully dependent upon the proportion of debt and equity i.e. financial leverage, which is actually the capital structure used by the firm.

Capital Structure concept has important place in financial management theory. It is basically known as financial structure, financial plan or leverage. Financing decision of a firm, as the other financial decision, is concerned with shareholders wealth maximization. As capital structure refers to the proportion of debt and equity, a choice in proportion is actually financial decision in case of fulfill investment requirement. Therefore, it is a wise decision to select such a financing mix, which maximizes shareholders wealth.

"The capital structure is the combination of long term debt and equity, it is a part of financial structure i.e. comprised to the total combination of preferred stock, common stock, long-term debt and current liabilities. If current liabilities are removed from it we get capital structure." (Iqwal, 1979: 210)

Capital Structure is taken as a capitalization part of financing which includes only long term sources such as long-term debt, preferred and equity. Therefore it is a part of financial structure.

The nature of capital structure differs from company, which is directly guided, regulated and controlled by the management of the company. "However a reasonable satisfactory capital structure can be determined by considering relevant factors and analyzing the impact of alternative financing proposal on the earnings per share". (Prasanna, 1985: 176)

One of the financial manager's principle goals is to maximize the value of the firm's securities. For this purpose firm should select a financial mix/leverage, which will help in achieving the objective of financial management with a view to maximize the value of share. In order to attain this business goal, firm should select an appropriate capital structure.

"Given the objective to the firm to maximize the value of equity share, the share should select a financial mix/capital structure which helps in achieving the objective of financial management. If the capital structure decision affects the total value of the firm, a firm should select such financial mix that will maximize the shareholders wealth. Such capital structure is referred to as the optimum capital structure." (Khan and Jain. 1995: 473)

"The choice of firm's capital structure is a marketing problem. It is essentially concerned with how the firm decides to decide its cash flows into two broad components, a fixed component that is earmarked to meet the obligations towards debt capital and a residual component that belongs to equity shareholders." (Prasanna, 2001: 411)

The capital structure decision affects the overall cost of capital, total value of the firm and earning per share. Therefore it should be well planned. It aims to maximize value of firm and earning per share by minimizing cost of capital without effecting operating earning of the firm.

"An optimum capital structure would be obtained at the combination of debt and equity that maximize the total value of the firm or minimizes the weighted average cost of capital." (Pandey, 1995: 11)

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

related to the firms operations and of external factors that can affect the firm." (Soloman, 1996: 115)

The capital structure is rational judicious mix of debt, preferred stock and common stock. Therefore capital structure depends upon the efficiency of management in the rational estimation of capital mix. The financial manager should adhere in proper mixing of debt and equity that can maximize the value and minimizes the overall cost of capital of the firm. "There are four dimensional lists when thinking about capital structure decision." (Brigham, 1995: 451)

a. Taxes: If company is the tax paying and increase in leverage reduces the income tax paid by the company and increases the tax paid by their investor. If the company has large accumulated loss, as increase in leverage cannot reduce corporate tax, but does increase personal taxes.

b. Bankruptcy Cost: With or without bankruptcy, financial distress is costly. Other things equal, distress is more likely for the firm with high business risk. That is why such firms generally issue less debt.

c. Assets Type: The cost of distress is likely to be greater for firms whose value depends on growth opportunity of intangible assets. These firms are more likely to go for profitable opportunities and default occurs, their asset may be eroding rapidly. Hence, firms whose assets are weighted forward intangible assets should borrow significantly less on average their firms holding assets you can kick.

d. Financial Slack: In the long operating decisions than on financing. Therefore, you want to make sure your firm was in sufficient financial slacks, so that financing is quickly accessible when good investment opportunity arises. Financial slack is most valuable to firms that have ample positive NPV growth opportunity. That is another reason why growth companies usually aspire to conservative capital structure.

2.1.5 Assumptions of Capital Structure

The theories of capital structure makes certain assumptions to exhibit the influence of mix of debt if the capitalization on the valuation of the firm. These assumptions are for the sake of simplicity in explanation of the theories of capital structure. These are (Brighum, 1995: 611-612)

- Firms employ only two types of capital: Debt and Equity.

- The firm's total assets are fixed. But its capital structure can be changed immediately by selling debt to repurchase common stock or issuing common stock to pay off debt.
- Investors have the same subjective probability distribution of expected future operating earning for a given firm.
- The firm pays 100 percent of its earning as dividends.
- The operating earnings of the firm are not expected to grow.
- The business risk is assumed to be constant in independent of capital structure and financial risk.
- The corporate and personal income taxes do not exist.

In the theoretical analysis capital structure, the following basis symbols have been used:

- B = Total market value of debt.
- S = Total market value of stock.
- V = Total market value of firm. (B+S)
- Ke = Equity of capital.
- Kd = Cost of debt/Yield on the debt.
- Ko = Overall cost capital.
- I = Total amount of annual interest.
- EBIT = Earning before interest and taxes.

i. Cost of Debt (Kd) $= \frac{I}{B}$

ii. Cost of Equity (Ke) $= \frac{EBIT-I}{S}$ *or* $\frac{NOI-I}{S}$

iii. Overall cost of capitalization (Ko) $= \frac{NOI}{V}$ *Or* $Ko = Kd\,(\frac{B}{V}) + Ke\,(\frac{S}{V})$

iv. Value of the firm (V) = B+S

2.1.6 Theories of Capital Structure

The capital structure is a combination of long-term debt and equity; it is a part of financial structure thus, the financial decision of the firm relates to choice of proportion of debt and equity to finance the investment requirement a proper balance between risk and return to shareholders. However, it can be expected that if the capital structure decision effects the total value of the firm, a firm should selected such a

financing mix, which maximize the shareholders wealth. The optimal capital structure and its implication are more noticeable. Argument between those who believe that there is an optimal capital structure for each firm's and among those who believe in absence of such optimal capital structure for each firm begin late 1950's yet there is no resolution of the conflict.

In theory, "Capital Structure is composition of debt and equity that compromises a firm's financially of its assets. Both debt and equity is made after a companies of certain characteristics of each kinds of security of internal factor related to the firm's operations and of external factor that can affect the firm." (Hampton, 1986: 42)

Basically the theories of capital structure are distinguished in to six different groups:

- Traditional Theory
- Modigliani-Miller Theory
- Trade Off Theory
- Free Cash Flow Theory
- Pecking Order Theory
- Stakeholder Theory

a. Traditional Theory

The first theory is called "Traditional Theory" supporters of this theory believes that the lowest weighted average cost of capital (WACC) will maximize the firm's market value. This means the existence of an optimum relation between debts and equity but it is very difficult to reach the point. Although it is cheaper to finance with debt because after a certain level, the risks of nonpayment increases. In this case shareholders and debt financiers demand a higher compensation.

b. Modigliani-Miller Theory

In 1958, two prominent financial researchers, Franco Modigliani and Merton Miller (MM), showed that under certain assumptions a firm's overall cost of capital and therefore, its value is independent of the capital structure. The Modigliani-Miller theory states that if the capital structure decision has no effect on the each on the cash flows generated by a firm, the decision also will have no effect in the absence of transaction cost on the total value of the firm's debt and equity. This means that there is no relationship between a firm's market value and the capital structure. “Profitability of firm’s activities is the only factor that determines the market value

and the capital structure. This theory is based on the prefect capital market. The only market imperfections they admit are corporate taxes" (Van Horne, 1995: 122)

The assumptions of the Modigliani-Miller Theory are:

- Capital market is prefect
- Information is free of costs and widely available
- Here are no transactions cost of buying and selling securities
- All investors behave-rationally and have homogeneous expectations of a firm's earnings.
- Every firm has perpetual flows of money with equal time values.
- There are no personal or corporate taxes.

c. Trade Off Theory

The third theory is called the state trade off theory. The trade off between the costs and return of debt financing determines the optimum debt ratio. Firms consider this ratio as a target debt ratio, because this ratio will maximize the market value of firm. Myers assumes that firms need to adapt their capital structure to reach that ratio but an adaptation of the capital structure needs time costs and money. Therefore, it is possible that present temporary debt ratios differ from the target ratio.

d. Free Cash Flow Theory

In the contrary of the trade off theory, in which a firm strives after a maximization of the market value, the free cash flow theory presumes that there are enormous conflict of interest between shareholders and stakeholders. This implies that manager's decisions don't always maximize the market value of the firm. (Jensen, 1986: 324)

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

e. Pecking Order Theory

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

The first preference is given to the internal financing that is retained earnings. It is because it avoids the outside security of suppliers of capital and there is no flotation cost associated with the use of retained earnings. The next preference is also given to the straight debt. As explained in the previous section it is a good signal to the investors and help to raise the market price moreover, debt results in less intrusion into management by suppliers of capital and flotation costs are less than those other type of external financing. Next in order of financing preference is preferred stock which has some of the feature of debt. This is followed by the various hybrid securities, like convertible bonds. Finally the least desirable security to issue is straight equity. It is not only a method of financing but it is also likely to have adverse signaling effect. The following assumptions are made by this theory. (Myers, 1984: 592)

- Firms prefer internal ways to finance project.
- Firms adapt their target dividend payout ratio to available investment resources.
- Internal resources of a firm are fluctuating because of unpredictable fluctuations of profitability.
- When firms need extra resources, they prefer the safest way of getting funds: this means those firms prefer debt to convertible stock and common stocks.

The result of this pecking order theory is that a firm does not have a certain target debt ratio. The target ratio is dependent on the way a firm financed its project in the past. This theory also pays attention to costs of asymmetrical information and cost of bankruptcy.

f. Stakeholder Theory

Assume that not only investors have an interest in a firm. There are different groups of non-investor, stakeholders and some of them have a lot of influence in the financial policy of a firm. According to Cornell and Shapiro, financial structure also depends upon a firm's net organizational capital and on the nature of its stakeholders. (Cornell and Shapiro, 1987: 215)

2.1.7 Approaches to Capital Structure

The theory of capital structure is closely related to the firm's cost of capital. Many debates over whether an optimal capital structure exists are found in the financial

literature. Argument between those who believe there is an optimal capital structure for each form and among those who believe in the absence of such optimal capital structure being in late 1950's and there is yet no resolution of the conflict. Modiglini and Miller logically admitted that the value of the firm. On the other hand, according to the traditionalist's view, the value of the firm or the cost of capital is affected by the capital structure change. So, in order to understand how firms should adhere the target capital structure decision, it is important to have some idea of major elements of capital structure theory.

The history presents several theories on capital structure management. In order to analyze the capital structure of any company four theories are considered. These theories are:

- Net Income (NI) Approach.
- Net Operating Income (NOI) Approach
- Traditional Approach; and
- Modiglini-Miller (M-M) Theory
  - Without Tax
  - With Tax

a. Net Income (NI) Approach:

This theory is propounded by David Durand "The essence of the net income theory is that the firm can increase its value or lower the overall cost of capital by increasing the portion of debt in the capital structure." (Brigham, 1995: 614)

"The emphasis is on EBIT is to measure how the degree of leverage brings change in valuation of the firm. Assuming a constant equity capitalization rate the increase in cheaper debt funds lowers the weighted average cost of capital and there by raising the value of the firm and the increasing in debt may not be increasing risky." (Shrestha, 1981: 28)

A change in capital structure will lead to a corresponding change in overall cost of capital as well as the total value of the firm. As the firm adds cheaper source of debt to its capital structure, its cost of capital declines because debt is less risky than equity. On the other hand, the overall value of the firm increases. Thus, as the firm increases its leverage by increasing debt in capital structure, the overall cost of capital declines which ultimately increases the value of the firm.

"The crucial assumptions of this approach are" (Shrestha, 1981: 615)

a. The use of debt does not change the perception of investors, as a result, the equity-capitalization rate, Ke and the debt-capitalization rate; Kd remains constant with change in leverages.
b. The debt-capitalization rate is less that the equity-capitalization rate. (i.e. Kd<Ke)
c. The corporate income taxes do not exist.

"As the portions of the cheaper debt funds in the capital structure, increases the weighted average cost of capital decreases and approaches the cost of debt. Therefore as the firm increases its leverage by increasing its level of debt relevant to equity, the overall cost of capital is that it increases the value of the firm." (Van Horne, n d: 380)

Overall cost of capital can be expressed by following formula.

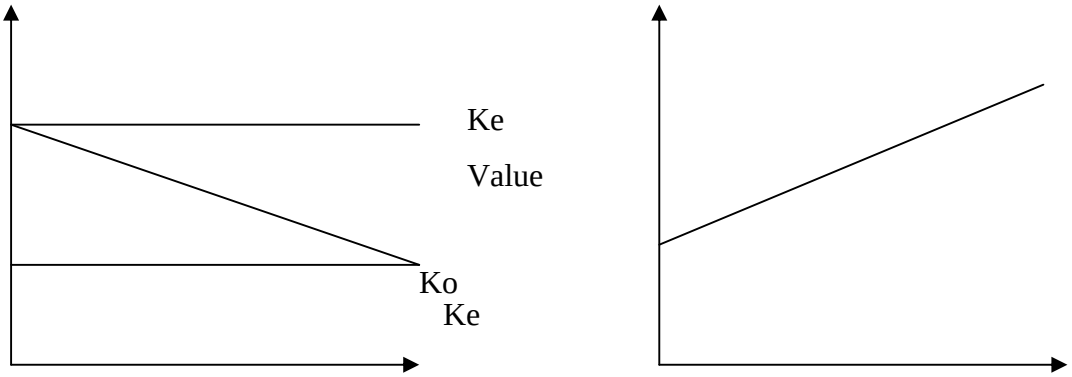
$$\textit{Overall cost of capital (Ko)} = \frac{\textit{Net Operating Income}}{\textit{Total Value of the Firm}}$$

$$\textit{Or} \qquad \frac{EBIT}{V}$$

As par assumptions of NI approach, Ke and Kd are constant and Kd is less than Ke. Therefore, Ko will decrease as B/V increases. Also, Ke = Ko when B/V = 0

This approach is graphically shown in the following figure,

NI Approach (Cost) **NI Approach (Value)**



From the above figure, 'Kd' is constant but 'Ko' is declining. So, under the NI approach the cost of capital will decline and value of the firm will increase with leverage. The optimal structure would occur at the point where the value of the firm is

maximize value at the lowest cost of capital since it is all debt financed of has as much as debt as possible.

"NI does not recognize that an increase in the proportion of debt in total capitalization result in higher risk. This is unrealistic. If loans are excessive, the equity shareholders would perceive increase in risk. They would sell their equity share. As a result, the market price of equity shares will down. Thus, the very objective of optimizing the value of the firm will be defeated. On this reasoning, NI theory is adequate for capital structure management." (Upadhyaya, 1985: 874)

"The significance of this approach is that a firm can lower its cost of capital continually and increase its valuation by the use of debt funds. Again, the critical assumption is that the firm does not become increasing more risky in the minds of investors and creditors as the degree of leverage is increased." (Van Horne, n d: 233)

b. Net Operating Income (NOI) Approach:

David Durand has proposed this approach. The NOI approach does not agree with NI approach. It is also known as modern theory or an independent hypothesis of capital structure. This theory assumes that the cost of debt and overall cost of capital remains constant with the form's financial leverage. However, as the firm increases its relevant debt level, the cost of equity capital increases. "The total value of the firm remains unaffected by its capital structure. Whatever benefits result from debt financing, it will offset by the rise in cost of equity capital with result that overall cost of capital remains unaffected for all the degrees of financial leverage and therefore, there is no optimal structure and investors are indifferent to change in capital structure". (Shrivastav, 1984: 874)

The assumption here is that the overall capitalization rate of the firm is constant for all degree of leverages.

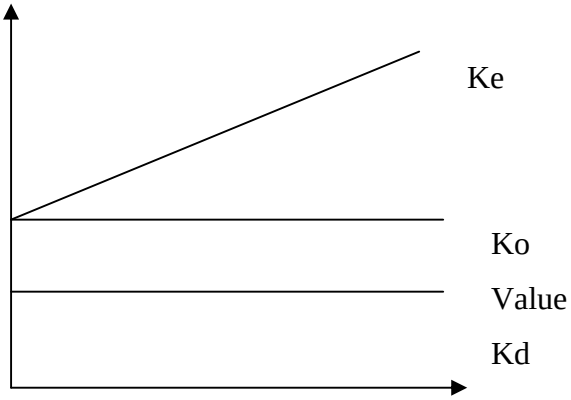
Assumptions if NOI Approaches: (Shrivastav, 1984: 617)

a. The market capitalizes the value of the firm as a whole. Thus, the split between debt and equity is not important.
b. The market uses an overall capitalization rate Ko, to capitalize the net operating income. Ko, depends upon the business risk. If the business risk is assumed to remain unchanged, Ke is constant.

c. The use of less costly debt fund increases the risk to the shareholders; this causes the equity capitalization rate to increase. Thus, the advantage of debt is offset exactly by the increase in the equity capitalization rate,Ke.
d. The debt capitalization rate, Kd is a constant.
e. The corporate income taxes do not exist.

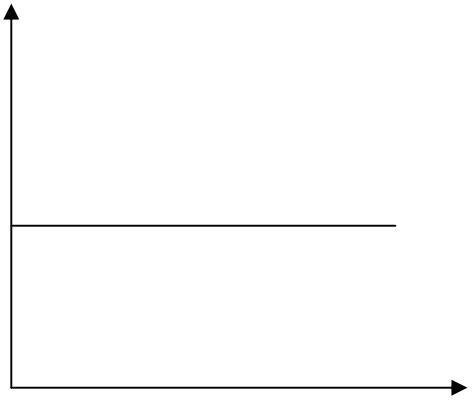
"Under NOI approach the capital structure selected is a more details since the value of the firm is dependent of the firm's capital structure. If the firm increases its use of financial leverage by employing more debt this is directly offset by an increase in the cost of capital." (Shrestha, 1981: 28)

NOI Approach (Cost)



Debt-Equity Ratio
(100% Equity D/E Ratio 100% Debt)

NOI Approach (Value)



Debt-Equity Ratio
(100% Equity D/E Ratio 100% Debt)

The above figure shows that Ko and Kd are constant and Ke increases with leverage. As Ko is constant, leverage is optimal. "At the external degree of financial leverage hidden cost becomes very high hence, the firms cost of capital and its market values are not influenced by the use of additional cheap debt fund." (Gitman and Pinches, P. 719)

This can be expressed as:

$$Ke = \frac{Ko+(Ko-Kd)}{B/S}$$

Or

$$Ke = \frac{Kd+Ko-Kd}{S/V}$$

"Like NI approach, the NOI also assumes a constant of Kd which means that the debt holders do not demand higher rate of interest for higher level of leverage risk. But, equity holders do react to higher leverage risk and demand higher rate of return for higher debt equity ratio." (Shrivastav, 1984: 618)

It is therefore reverse to NI approach. Any changes in leverage will not lead to any changes in the total value of the firm and the market price of a share as well as the overall cost of capital remains constant. The overall cost of capitalization rate and cost of debt remains constant but the cost of equity increases linearly with leverage.

Thus, this approach suggested that there is not any optimum capital structure. As the overall cost if capital is the same at all capital structure, every capital structure is optimal.

c. Traditional Approach

The traditional approach to valuation and leverage is moderate approach of NI and NOI approach. This theory assumes that there is an optimal capital structure and the firm can increase the total value of the form through the judicious use of leverage. This approach encompasses all the ground between the NI approach and NOI approach. This theory is also known as intermediate approach. The traditional view on the relationship between capital structure and the cost of capital that the firms cost of capital can be reducing by judicious mix of debt and equity capital and then an optimal capital structure exists for every firm.

"The more sophisticated version of the net income approach is contained in the traditional view. According to this approach, the value of the firm can be increased or the cost of capital can be reduced by a judicious mix of debt and equity capital." (Pandey, 1992: 313)

"In this approach the cost of capital decreases within the reasonable limit of debt and then increase with in the leverage." (Prasanna, n d: 356)

The main propositions of the traditional theory are: (Prasanna, n d: 356)

STAGE 1

In this first stage, the cost of debt (Kd) remains more or less constant up to a certain degree of leverage but rises thereafter at an increasing rate. It means the cost of equity (Ke) remains constant or rises slightly with debt. But it does not increase fast enough

offsets the advantage of low cost of debt. During this stage, the cost of debt (Kd) remains constant or rises negligibly. Since the market views the use of debt as a reasonable policy.

Thus, so long as debt is within acceptable limit and cost of equity and cost of debt remains constant, the value of the firm increases as constant rate.

STAGE 2

In this stage, once the firm has reaches a certain degree of leverage, increase in it have a negligible effect on the value of the firm. This is so because the increase in the cost of equity offsets the advantages of low cost of debt within that range or specific points, the value of the firm will be maximized or the cost of capital will be minimized.

STAGE 3

The overall cost of capital (Ko) as a consequence of the above behaviour of Ke and Kd.

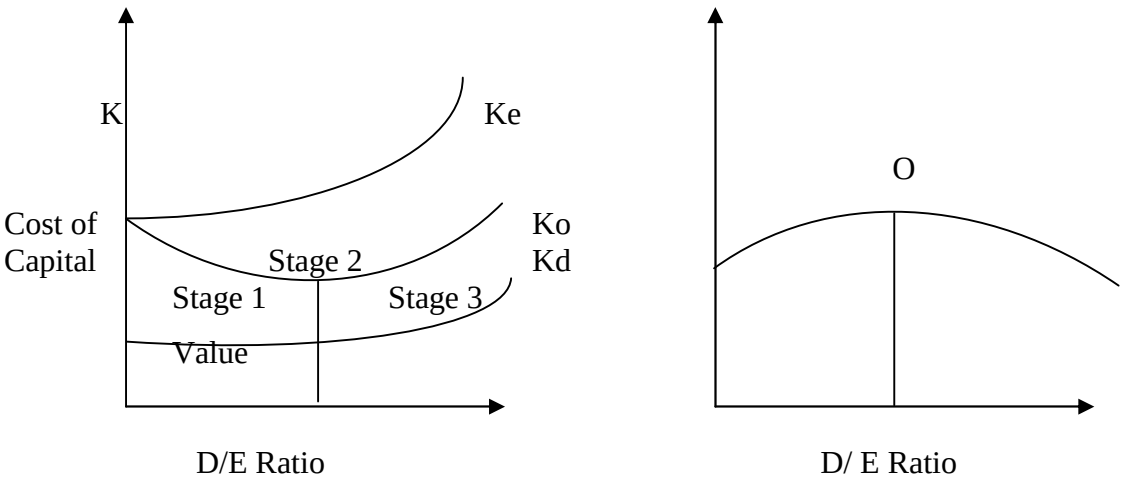
a. Decrease up to a certain point.
b. Remain more or less unchanged for moderate increase in leverage there after, and
c. Rises beyond a certain point.

After the certain level of leverage, the value of the increases with leverage or the overall cost of capital increases with leverage.

The cost of debt and equity will tends or rise as a result of increasing the degree of financial risks that will make to increase in the overall cost of capital.

The earning of the company will be faster from the use of additional debt. The overall effect of these three stages is to suggest that the cost of capital is a function of leverage. It declines with leverage and after reaching a minimum point or it would start rising under such a situation there is a precise point defines the optimum capital structure.

This fact is illustrated in the following figures:



According to this approach, there exists a particular capital structure that is better than any other for the firm. In the above figures, the debt equity ratio at the point 'p' results the overall cost of capital, which consequently maximizes the value of the firm. Therefore, the debt equity ration is relevant and optimal capital structure exists for the firm." (Prasanna, n d: 361)

"Thus the traditional position implies that the cost of capital is not independent of the capital structure of the firm and that there is an optimal capital structure, the marginal real cost of debt (explicit and implicit) is the same as the marginal real cost of equity in equilibrium. For degree of leverage, before that the point, the marginal real rate cost of debt exceeds that of equity." (Prasanna, n d: 237)

d. Modigliani-Miller (M-M) Theory

Till 1950s, it was believed that judicious mix of debt and equity capital i.e. financial leverage in the capital structure decreases the overall cost of capital, increases the value of the firm and helps in determining an optimal capital structure.

But in 1958, Franco Modigliani and Metron H Miller published a research paper, "The Cost of Capital, Corporation Finance and The Theory of Investment" and added another milestone on theory of capital structure.

This theory propounded by those two researchers is later known as M-M theory. The M-M theory is based on some assumptions, which are mentioned below: (Pandey, 1999: 687)

- Perfect capital market: This specifically means that (a) investors are free to buy or sell securities; (b) they can borrow without restriction at the same term

as the firms do; (c) they believe rationally. It is also implied that the transaction costs i.e. the cost of buying and selling securities do not exist.

- Homogeneous risk class: Firms can be grouped into homogeneous risk classes. Forms would be considered to belong to a homogeneous risk class if their expected earnings have identical risk characteristics. It is implied under the M-M hypothesis that firms within same industry constitute a homogeneous class.
- Risk: The risk of investors is defined in terms of the variability of the net operating income (NOI).
- No Taxes: M-M assumes that no corporate taxes exist. This assumption is relaxed later on.
- Full pay out: Firms distribute all net earnings to the shareholders i.e. a 100% pay out. M-M, in 1958 proposed that the theory without taxes and later, they relaxed the theory with tax considerations. So
    i. M-M theory without taxes.
    ii. M-M theory with taxes.

The following terminologies and notations are used in M-M theory.

- Levered firm: A firm that uses some percentage of debt in its capital structure.
- Unlevered firm: All equity-financed firms are known as unlevered firm.
- Risk Premium: Risk premium is that expected additional return by the equity holders for making a risky investment. In other words, it is the additional return demanded for the equity holder due to the inclusion of debt capital in firm's capital structure.

Notation:

a. KeU = The equity capitalization rate of an unlevered firm.
b. KeL = The equity capitalization rate of a levered firm.
c. Kd = The debt capitalization rate.
d. KoU = The overall capitalization rate of an unlevered firm
e. KoL = The overall capitalization rate of a levered firm.
f. VuL = Value of unlevered firm.
g. VL = Value of levered firm.
h. T = Corporate tax-rete.

i. M-M Theory (Without Tax)

This theory can be expressed in terms of the propositions I and II.

PROPOSITON 1

This proposition states that the market value of a firm is independent of its capital structure. M-M argues that, for firms in the same risk class, the total market value is independent of debt-equity mix and is given by capitalizing the net operating income (NOI) by the rate, appropriate to the risk class. This is their proposition 1 which is expressed as follows.

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

For an unlevered firm, $Ko = Ke$, so

$$VuL = \frac{NOI}{KoU} = KeU$$

And for a levered firm,

$$VL = \frac{NOI}{KoL}$$

According to this proposition, there is no relationship between the value of a firm and the way its capital structure is made up, nor there any relationship between the overall cost of capital and the capital structure. If there are rational investors, this proposition is correct because investors are willing to substitute personal or homemade leverage for corporate leverage, i.e. arbitrage (or switching) will take place to restore equilibrium in the market place.

PROPOSITION 2

This theory states that the cost of equity rises proportionately with the increase in the leverage in order to compensate in the form of premium for bearing additional risk arising from the increase in leverage. It assumes that only the equity holders adjust the capitalization rate for the degree of financial leverage risk. It means that Ke increases as debt-equity ratio increases. The Kd does not respond to change in debt-equity ratio and it remains constant.

The cost of equity capital for a levered firm (KeL) is equal to the cost of equity of an unlevered firm (KeU) plus risk premium equity to the difference between KeU and Ku multified by the debt-equity ratio.

KeL = KeU + (KeU - Kd) B/S

Since, KeU = KoU. So,

KeL = KoU = (KoU - Kd) B/S

This proposition shows the impact of financial leverage on the cost of equity. Due to the increase in leverage, the firm gets the benefit of cheaper debt, but the benefit is exactly offset by an increase in the cost of equity in the form of risk premium expected by shareholders against an increase in financial risk.

ii. M-M Theory (Without Tax)

Under M-M theory, the value if a firm is independent of its debt policy is based on the critical assumptions that the corporate income tax do not exists. But in reality, the corporate income taxes exist, and interest paid to debt holder as a deductible expenses. This makes debt financing advantageous. "In their 1963 article, M-M shows that the value of the firm will increase with debt due to the deductibility of interest charges for tax computation and the value of the levered firm will be higher than of the unlevered firm." (Pandey, 1999: 694). Thus, the value of a levered firm is equal to the value of unlevered firm plus the present value of interest tax-shield as shown below.

Symbolically,

VL = Vul + PV of interest tax shield

The value of unlevered fir, when corporate taxes exist is,

Vul = NOI (1-T) = NOI

Kou Keu

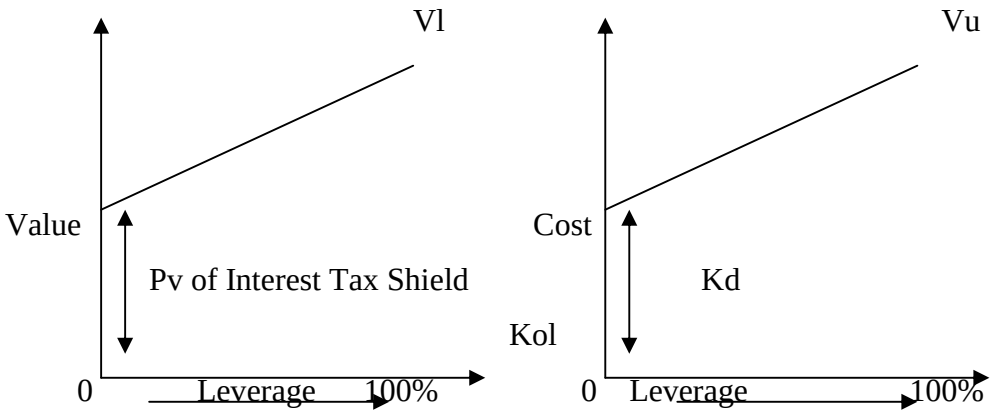
Where,

NI = Net income after tax

Also, when a firm is unlevered, *Kou = Kev.* Thus,

$$VI = \frac{NI+Dt}{Kev}$$

The above equation implies that, when corporate tax exists, the value of levered firm will increase continuously with debt. Thus, theoretically the value of the firm will be maximum, when it employs 100% debt. This can be shown as follows:



Because of the tax deductibility of interest charges, a firm can increase its value or lower overall cost of capital by using cheaper debt funds. Thus, the optimal capital structure is attained when employs 100 percent debt. But in practice firm doesn't employ large amount of debt, nor are the lenders ready to lend beyond the certain limit.

Why companies do not employ extreme level of debt or the lenders are ready to lend beyond the certain limit. Why companies do not employ extreme level of debt in practice? The reason behind it is that, the borrowing may involve extra costs (in addition to fixed interest cost) like cost of financial distress, which may offset the advantage of using debt. Another reason may be the personal taxes involved for lenders.

2.2 Review of Journals and Research work

2.2.1 Review of Journals

Shrestha (1993), has conducted a research work on *"Focus on Capital Structure of Selected and Listed Public Companies"*. The study used data from 19 companies, which covered different sectors such as manufacturing finance, utility service and other allied areas. It was found that most of these companies have debt capital relatively very high than equity capital. Consequently most of them are operating at the extent that payment of interest on loan which has been a serious issue. Most of these losses are after changing interest on loan. It has suggested that the government has to consider the public enterprises in evaluation the relationship between use of debt and its impact on overall earning of public enterprises. So, government should be sure in knowing how to use debt capital which will maximize return, it should

develop a suitable capital structure guideline to make public enterprises aware of its responsibility and to repay the debt schedules. Government has to analyze cost and risk return trade off. Thus capital structure needs to be made more determine by realistic analysis of cost. Lastly, she concluded that the policy makers have to be careful in developing the suitable capital structure guidelines in making public enterprises as well as listed companies to be aware of financial accountability.

Shrestha (1993), has conducted a research on *"An Analysis of Capital Structure in Selected Public Enterprises."* In this study Dr. Shrestha found that the selected public enterprises understudies have a very confusing capital structure since the corporation are not guided by objectives based financial plans and policies. In many instances adhocisum become the basis of capital structure and most of them want to eliminate debt of possible to relieve financial obligations. He has further pointed out that the debt equity ratios should neither be highly levered or create too much financial obligations that lies beyond the capacity to meet the target not should it be too low levered to infuse operational strategy to by pass responsibilities without performance. The calculating of equity capitalization rate is according to the given data providing in credible result in many cases, although they carry valid and meaningful result in some instances.

Arbor (2005), has conducted a research work on *"The Effect of Capital Structure on Profitability"* mentioned that the relationship between capital structure and firm has been the subject of considerable debate. Throughout the literature debate has centered on whether there is an optimal capital structure for an individual firm or whether the proposition of debt usage is irrelevant to the individual firms. Value the capital structure of firm concerns the mix of debt and equity the firm's uses in its operation Berkley and Myers contend that the choice of capital structure is fundamentally a marketing problem. According to Weston and Brigham, the optimal capital structure is the one that maximizes the market value of the firm's outstanding shares. The need balance gains and costs of debt financing emerged as a theory known as the static trade off theory by Myers. It values the company as the value of the firm if unleveled plus the present value of the tax shield minus the present value of bankruptcy and agency costs.

Weston (2008), has conducted a research work done by Weston, is *"A Test of Cost of Capital Proportion."* He made some important improvement in the cost of capital

model. He included firm size and growth as additional explanatory variables in his model. When he used M-M model, he found the regression, coefficient of leverage to the positive and significant. However, when the multiple regressions were run, he found that the correlation coefficient is significant and regression coefficient of leverage is negative and significant. When the influence of growth is isolated, leverage is found to be negatively correlated with he cost of capital. He concluded that the apparent lack of influence of leverage on the overall cost of capital. Observed by M-M's model, his results were found to be consistent with their results, i.e. cost of equity is the linear function of debt equity ratio.

2.2.2 Review of Related Thesis

Previous studies are reviewed in this section. It sis consists osf thesis and dissertations done by previous master level students as well as other research works related to the capital structure. In this section the following research work related to the capital structure. In this section the following research studies have been reviewed.

Dhakal (2004), has carried out a study on *"A Comparative Analysis of Capital Structure Management Between Nepal Bangladesh Bank Limited and Himalayan Bank Limited",* has the following objectives:

- To find out comparative position in capital structure between two banks.
- To analysis the various source of capital and determine their cost.
- To analyze the return on capital in relation to capital employed.
- To suggest the appropriate capital structure and profitability trend.
- To study capital adequacy ratio to measure strength of the capital base.

His thesis analyzes and studies the secondary data and major findings of this study are:

- The proportion of shareholders equity is found much lower in both the banks. On the basis of average of entire study period it is found that the proposition of shareholders equity of NBBL is higher than that of HBL. But the fluctuation of the proposition of shareholders equity is more in HBL as compare to NBBL.
- Higher total debt to total assets ratio of both banks shows that both banks are using maximum leverage, which might be dangerous to these banks.
- Higher overall capitalization rate of HBL in every year shows that HBL is more capable to utilize the value of the firm compare to NBBL.

Mishra (2005), has carried out a study on *"A Study of Capital Structure Management of Selected Manufacturing Companies"*. He used analytical tools ratio analysis, mean, standard deviation, coefficient of variance, correlation coefficient. The objectives of the study are as follows:

- To analyze cost of capital and return on capital in relation of the employed.
- To examine the capital structure and debt servicing capacity of the company;

From the study, following major findings were obtained:

- This study find average DOL is negative which shows the inefficient earning capacity of the firm. The average DFL is less than one. There is no any consistency in the DOL and DFL for the same types of manufacturing companies.
- Debt equity and interest coverage ratio for Jyoti spining mills Ltd. is negative as the company has negative equity. Interest coverage ratio is negative, its show that the company's earnings are not sufficient even to repay their interest. Due to the use of lower amount of debt, the profit margin for the Jyoti spinning shows negative, which indicates that the company is suffering loss during almost all the study period.
- ROA for Jyoti spinning is negative which indicate that the assets of the company are not generating profit. The higher P/E ratio indicates greater confidence of investor with its future.
- Average overall cost of capital and cost of equity of Jyoti spinning is negative and other Nepal lever Ltd. and Bottlers Nepal are positive. Correlation coefficient of debt and shareholder's equity for Jyoti spinning negative correlation but Nepal level and Bottlers Nepal are positive correlation. Correlation coefficient between EBIT and net profit for Jyoti spinning mills and Nepal liver Ltd. are negative correlation but Bottlers Nepal Ltd. is positive correlation.
- Correlation between EBT and net profit for Jyoti spinning mills and Nepal liver Ltd is positive correlation and Bottlers Nepal Ltd shows negative correlation. He concluded that the company's policy to increase current liabilities by replacing long tern loan is not according to the principle of capital structure management.

Pradhan (2008), has conducted a study on *"A Comparative Analysis of Capital Structure Management Between Nepal Bangladesh Bank Limited and Himalayan Bank Limited"* has the following objectives:

- To find out comparative position in capital structure between two banks.
- To analysis the source of capital and determine their cost of capital of NBBL and HBL.
- To measure the structure, risk and efficiency of the bank.
- To suggest measure to attain appropriate capital structure.

The research was conducted mainly on the basis of secondary data. The research findings of the study summarized as follows:

- All Joint Venture banks have used high percentage of total debt in raising the assets. The higher ratio constituted that the outsiders claim in total assets of the bank is higher than owners claim.
- The interest coverage ratio shows that all banks are able in paying interest. In comparison Himalayan Bank Ltd is operating efficiently in terms of interest coverage ratio.
- The private sector banks have been successful in increasing their deposits and credit portfolio is remarkable over the last few years. The figures also show that most of the banks have been cautious about loans and advances. The operating profit to Joint Venture bank has gone up, so have the provision for loan loss. In short, the banking sector in Nepal is somehow doing well even though it has to face a number of challenges during the past few years.

Shrestha, (2010), has conducted a study on *"Analysis of the Capital Structure of the Joint Venture Banks of Nepal"*, has the following objectives:

- To analysis the relationship of the capital structure and the cost of capital of the selected Joint Venture banks.
- To analyze the comparative capital structure of selected JVBs in terms of the financial and statistical tools.
- To analyze the profitability position of the banks.
- To provide suggestion and recommendations on the basis of analysis to impose the financial weakness of JVBs.

Her thesis analyzes and studies mainly secondary data. The research finding of this thesis summarized as follows:

- All JVBs has used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsiders claim in total assets of the banks is higher than owners claim. The financial risk of the SBI bank average degree of financial leverage constitutes 5.04 times which indicates the higher degree of financial risk.
- The NI approach implies that proportion of higher leverage consequently increase the value of the firm. This approach is well acquainted with this study as the value of the banks has increased in accordance to the increasing portion of leverage. The K_0 of five banks is positive even though the rate of return is in decreasing trend except Nabil Bank.
- The private sector banks have been successful in increasing their deposit and credit portfolio remarkably over the study period. The figures also show that most of these banks have been cautious about loans and advances. The operating profits of all the private sector commercial banks have gone up, so has the provision for loan loss. In short, the banking sector in Nepal is somehow doing well even though it has to face a number of hurdles during the past few years.

Dhakal (2011), has conducted a study on "*A study on capital structure management of selected commercial banks (with special reference to Himalayan Bank, Nepal SBI Bank, Everest Bank And Nepal Investment Bank Ltd.).* He used different financial tools such as: debt equity ratio, Debt Ratio, interest coverage ratio, price earning ratio, return on assets, return on shareholders equity, and he find capitalization rate. The objectives of the study are as follows:

- To analysis the capital structure of different five year period.
- To explain competitive position and the situation of the selected banks.
- To analyzes the combination of capital with long and short term debt and equity capital.

His findings can be summarized as follows:

- From the study bank are found to be highly levered. The companies financial mix accounts a higher proportion of debt and it is increasing every year. Most of the banks cannot manage the current assets.
- The interest coverage ratio during the study period was positive for all selected bank.

- In case of ROA and ROE, EBL has higher ratio than any other banks. Which indicated the EBL best bank among the selected banks.
- The average EPS of EBL and HBL higher than other selected banks and EPS of EBL is fund to be in increasing trend and EPS of other banks are fluctuating during the study period.
- The cost of banks are increasing, the main cause of cost increase may unskilled manpower, overstaffing, unsystematic arranged of material, level of unnecessary and expenses is high and misuse of the facilities and resources.
- The correlation coefficient of the variable of selected bank for the statistical analysis is found positive to each other. The coefficients are all statistically significant in more than average banks. A positive correlation means both of the variables are moving toward the same direction.

Malik (2012), has conducted a study on *"Capital Structure Management in Nepal."* Malik used different financial tools such as: interest coverage ratio, debt equity ratio, Debt Ratio, price earning ratio, return on assets, return on shareholders equity, and he find capitalization rate. The objectives of the study are as follows:

- To show the trend of composition of assets and capital structure
- To analyze the return on equity and assets
- To analyze the value of the firm
- To analyze the aggregate liability bearing capacity of the selected organization

His thesis analyzes and studies the secondary data, major findings of this study are:

- Being big financial houses NTC and NEA dominates other organization in volume related issues so the gearing of other organizations is not seen in the figure. Other than these houses don't have debt transaction during the sampled period too
- Comparatively, total loan liabilities to shareholders fund ratio of NIBL is highest, ratio of NABIL is in second position, NEA is in third position, HGICL is in forth position and NTC is in fifth position.
- Comparatively, total debt to total assets ratio of NIBL is highest, ratio of NABIL is higher, NEA is in third position HGICL is in forth position and NTC is in fifth position.
- Interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and other organization are seem very weak in the concern of interest expenses bearing.

Shrestha (2013), has conducted a study on *"A Study on Working Capital Management of Dairy Development Corporation"*. During his study, he had basically used the secondary data and mainly financial tools are embodied for analyzing the working capital management of DDC. He had derived following major findings from his study. The objectives of the study were as follows:

- To analyze the current assets and current liabilities and their impact and relationship to each other.
- To show the trend of composition of assets and capital structure.
- To analyze the return on equity and assets.
- To analyze the value of the firm.

Major findings of the study are as follows:

- The corporation's investment in the form of working capital has been increasing and DDC followed the conservative working capital policy with respect current assets management.
- The average investment in current assets is lower with respect to net fixed assets during this study period and DDC has no clear vision about the investment current assets portion. Cash and bank balance holds the second largest portion of the current assets and has fluctuating trend.
- Other major components of current assets i.e. inventories and receivables are in fluctuating trend. The company does not follow credit sales policy.
- The overall return position of DDC is negative, not in favorable condition. it is because of inefficient utilization of current assets, total assets and shareholders wealth.

2.3 Research Gap

There are various researches which have been done on the capital structure of manufacturing industries, hotel, banking and insurance sector but not many theses have been conducted on manufacturing companies. It has studies about two sample companies to suggested whole sector.

In this study secondary data are used to find out the problem faced by the manufacturing company in decision of capital structure & suggest them to overcome from such decision problem. I have used almost all the ratios have been applied to cover the analytical past and fulfill the objectives of the study. I hope this research will find out the problem faced by the manufacturing companies in decision of capital structure and suggest them to overcome from such decision problems.

CHAPTER III

RESEARCH METHODOLOGY

Research is a systematic method of finding out the solution to a problem whereas research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objective in view. This chapter which deals with the methods and procedure applied during the research work. The basic objective of the study is to analyze the capital structure management of Unilever Nepal Limited and Bottlers Nepal Limited. So, suitable research methodology as demanded by the study is followed. It consists of the research design, sources of data, data collection procedure, tools to be used to analyze the data, method of data analysis and definition of variables.

3.1 Research Design

Research design is the frame to solve research problem. Descriptive and analytical research design has been employed in the study. The various financial tools were used to measure the financial position. It includes the calculation of leverage ratio and others ratios and cost of capital as well. All these elements are covered in research design, which will be very essential to find out the desired resulting order to develop manufacturing industry in the country. This research is analytical study and descriptive in nature as it examines the "Capital Structure Management: with special reference to the listed manufacturing companies in Nepal".

3.2 Nature and Sources of Data

The data used in this study are basically secondary in nature but the required information is collected through discussion and interview with the key personnel. The secondary data are collected from financial statements, annual reports, broachers and the websites of the Unilever Nepal Limited and Bottler Nepal Limited.

3.3 Population and Sample

In this research work the population is the all listed manufacturing company listed in NEPSE. There are 18 manufacturing companies listed in Nepal Stock Exchange out of theme two manufacturing companies have chosen for this study on basis of purposive sampling method. The selected manufacturing companies are Unilever

Nepal Limited and Bottlers Nepal Limited. Details of the listed companies are presented in appendix.

3.4 Data Collection Procedure

In order to achieve the stated objectives of the study, both the primary and secondary data are used. Primary data were collected from the response of person, representing the company through the informal and formal discussion and interview with concerned person. Secondary data are collected from financial statement of Unilever Nepal Limited and Bottlers Nepal Limited and from the website of Nepal Stock Exchange. All the information were grouped at one place and analyzed thoroughly. After these financial tools are used to evaluate and examine capital structure management in the research process.

3.5 Analytical Tools Used

For data analysis proposes, data of five years were taken as sample from 2007/08 to 2011/12. These were analyzed financially and results are interpreted. This study analysis of capital structure of Unilever Nepal Limited and Bottlers Nepal Limited are the part of financial analysis. Tools used in this study are as follows:

3.5.1 Financial Tools

Financial tools help to analyze the capital structure. There are many financial tools, which are helpful to analyze the capital structure of firm. But our concern is limited to some financial tools that are directly concerned with the study of capital structure.

a. Ratio Analysis

The capital structure ratio is defined as financial ratios, which throw light on the long-term solvency of a firm. The major ratio used in this research is:

$$\text{Degree of Operating Leverage} = \frac{\%\ \text{Change in EBIT}}{\%\ \text{Change in Sales}}$$

$$\text{Degree of Financial Leverage} = \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in EBIT}}$$

$$\text{Long-Term Debt as a Percentage of Total Debt} = \frac{\text{Lomg-Term Debt}}{\text{Total Debt}}$$

$$\text{Debt Equity Ratio in terms of Long-Term Debt and Shareholders Equity} = \frac{\text{Lont-Term Debt}}{\text{Shareholders Equity}}$$

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

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

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

$$\text{Earning Per Share (EPS)} = \frac{\text{Net Income}}{\text{No of Shares}}$$

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

b. DU-Pont Analysis:

Return on Equity (ROE) = Profit Margin × Total Assets Turnover × Equity Multiplier

Or

$$= \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Tota Assets}}{\text{Equity}}$$

Or

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

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

c. Cost of Capital:

$$\text{Equity Capitalization Rate} = \frac{\text{Net Income}}{\text{Market Value of the Share}}$$

$$\text{Overall Cost of Capital} = \frac{\text{Net Operating Income}}{\text{Total Market Value of the Firm}}$$

All the necessary calculations and analysis have been made to arrive to the conclusion of the study.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

In this chapter the effort has been analyzed. The main objectives of the study are to present data and analyze them with the help of various tools. This is also one of the most important chapters for the study. In this chapter, it presents the following calculation of different ratios and their applications in analyzing the capital structure of manufacturing companies of Nepal listed in NEPSE. The data represent and analyses are in the tabular form.

4.1 Analysis of Leverage

Leverage results from the use of fixed cost assets or funds to magnify returns of the firm's owners. Changes in leverage result in changes in level of return and associated risk, whereas decreases in leverage result in decreased return and risk. Generally, there are two types of leverage. They are Operating Leverage and Financial Leverage.

The operating leverage is defined as the extent to which fixed costs arise from employing larger amount of capital, thus permitting the firm to operate with reduced labor and smaller variable cost.

Financial leverage refers to the firm's use of fixed-income securities such as debt and preferred stock and financial risk is the additional risk placed on the common stockholders as a result of using financial leverage.

1. Degree of Operating Leverage

Operating leverage is a way of measuring the business risk of the company. Degree of operating leverage is the percentage change in operating income associated with a given percentage change in sales. The operating leverage can be measured as the degree of operating leverage (DOL) in the following table also can be calculated.

$$\text{Degree of Operating Leverage (DOL)} = \frac{\%\ \text{Change in EBIT}}{\%\ \text{Change in Sales}}$$

Table 1

Degree of Operating Leverage

(Amount in Rs.)

Company	F.Y.	EBIT	Change in EBIT	% Change	Sales	Change in Sales	% Change	DOL
UNL								
	2007/08	298.34	2.84		1818.53	383.59		
	2008/09	422.17	123.83	41.51	2144.59	326.06	15.20	2.73
	2009/10	532.67	110.5	26.17	2625.83	481.24	18.33	1.43
	2010/11	639.86	107.19	20.12	3055.07	429.24	14.05	1.43
	2011/12	742.27	105.12	18.12	4021.09	966.42	13.12	1.41
Average								**1.72**
BNL								
	2007/08	38.21	-63.82		634.19	12.36		
	2008/09	49.23	11.02	28.84	746.58	112.39	17.7218	1.63
	2009/10	131.89	82.66	167.91	1002.72	256.14	34.3084	4.90
	2010/11	360.36	228.47	173.23	1588.15	585.43	58.3842	2.97
	2011/12	370.56	322.12	184.32	1872.17	284.12	17.88	3.29
Average								**1.38**

Source: Annual Reports of UNL and BNL

The degree of operating leverage can be measured by the study of EBIT and sales revenue. When sales increases and cost remain same EBIT also increases. In that time leverage is constant. It effects to change in sales and EBIT in the above table; we are calculating DOL in different manufacturing companies. In the above table the calculation of DOL for UNL is 2.73 in F.Y 2008/09, 1.43 in F.Y 2009/10 and again 1.43 in F.Y 2010/11, in FY 2011/12 is 1.41 indicating that 1% change in sales will affect the change in EBIT by 2.73%, 1.43%, 1.43%, 1.41% respectively in F.Y 2007/08 to 2011/12.

In case of BNL, the DOL is 1.63% in F.Y 2008/09, 4.90% in F.Y 2009/10, 2.97% in F.Y 2010/11 and 3.29 in F.Y 2011/12 indicating that 1% change in sales will affect the change in EBIT by1.63%, 4.90%, 2.97%, 3.29% respectively.

2. Degree of Financial Leverage

Degree of financial leverage measures the financial risk of a firm. It is defined as the firms ability to use fixed financial charges to magnify the effects of change in EBT on the firms EPS. The degree of financial leverage is the percentage change in earning available to common shareholders (EPS) associated with a particular percentage change in EBIT. The financial leverage exists when the company has debt capital in

the composition of capital structure. The extra amount of investment by debt capital can be measured only with the help of financial leverage. The degree of financial leverage is calculated and shown in the following table:

$$\text{Degree of Financial Leverage (DFL)} = \frac{\%\ \text{Change in EPS}}{\%\ \text{Change in EBIT}}$$

Table 2

Degree of Financial Leverage

(Amount in Rs.)

Company	F.Y.	EPS	Change in EPS	% Change	EBIT	Change in EBIT	% Change	DFL
UNL								
	2007/08	285.72	27.06		298.34	2.84		
	2008/09	363.99	78.27	23.32	422.17	123.83	41.51	0.56
	2009/10	482.29	118.3	26.36	532.67	110.5	26.17	1.01
	2010/11	626.19	143.9	29.84	639.86	107.19	20.12	1.48
	2011/12	778.22	125.03	31.22	789.21	107.1	20.18	1.82
Average								**3.12**
BNL								
	2007/08	-15.55	-28.41		38.21	-63.82		
	2008/09	17.14	32.69	-210.22	49.23	11.02	28.84	-7.29
	2009/10	10.53	-6.61	-38.56	131.89	82.66	167.91	-0.23
	2010/11	91.08	80.55	764.96	360.36	228.47	173.23	4.42
	2011/12	92.09	1.01	1.09	420.21	59.55	16.5	4.12
Average								**1.21**

Source: Annual Reports of UNL and BNL

As mentioned in the above table, the calculation of DFL for UNL in the F.Y. 2007/08 to 2011/12 are 0.56, 1.01, 1.48 and 1.82 respectively each year, which indicates a change in EBIT by 1% will affect the EPS by 0.56%, 1.01%, 1.48% and 1.82% up to F.Y. 2011/12 from 2007/08 respectively.

The DFL for BNL in the F.Y 2007/08 to 2011/12 is -7.29%, -0.23%, 4.42%, 4.12% respectively which indicates the change in EBIT by 1% will affect the EPS by 4.42% and 4.12% respectively. However, the DFL in the company try to streamline these things; otherwise, it can think about changing its capital structure to get reliable condition of the company. The DFL in the F.Y. 2008/09 is (7.29) and in 2009/10 is (0.23), which indicates if EBIT decreases by 1% EPS will also decreases by 7.29% and 0.23% respectively.

According to the calculation of DFL of selected manufacturing companies do not show any positive signal. None of the companies' DFL has consistency. Negative DFL is not a good sign.

c. Long-Term Debt as a Percentage of Total Debt

It is measured by dividing the Long-Term Debt (LTD) by Total Debt (TD). Long-Term Debt as a percentage of Total Debt shows the proportion of LTD on the TD of the company. The calculation of LTD as a percentage of TD is presented in the following table:

Table 3

Long-Term Debt as a Percentage of Total Debt

(Amount in Rs.)

Company	F.Y.	Long-Term Debt	Total Debt	LTD as a % of Total Debt	Change
UNL					
	2007/08	0	767.77	0	0
	2008/09	0	814.57	0	0
	2009/10	0	507.23	0	0
	2010/11	0	552.45	0	0
	2011/12	0	612.11	0	0
Average				0	
BNL					
	2007/08	0.00	807.24	0	
	2008/09	200.00	707.99	28.25	28.25
	2009/10	140.67	735.55	19.12	-9.12
	2010/11	79.96	844.32	9.47	-9.65
	2011/12	55.67	912.11	6.10	-3.37
Average				12.588	

Source: Annual Reports of UNL and BNL

From the analysis of the data for UNL, it is obvious that there is no LTD in the capital structure during the research period, which means that the TD is composed of short-term debt, which is in variable trend. The LTD as a percentage of TD ratios is in zero position as there is no any use of LTD by the company.

From the above table, LTD as a percentage of TD is in F.Y 2007/08 to 2011/12 is 0%, 28.25%, 19.12%, 9.47%, 6.10% respectively each year.

Normally, the short-term debt matures within one financial year and the borrower should repay the amount along with the outstanding interest within a year. The company should be in a position of repaying the borrowed amount in a short period of

time, it should manage the required amount to repay the short-term loans whether the company is in profit or not. For this reason, the company should concentrate in collecting the amount, which will definitely interrupt its smooth operating and ultimately it will affect its profitability. Therefore, the companies using huge amount of short-term source as total debt may give proper attention towards this fact.

d. Debt Equity Ratio in Terms of Long-Term Debt and Shareholders Equity

This ratio is obtained by dividing the long term debt by shareholders equity, which can be used to analyze the debt equity ratio of the firm. The following table shows calculation of debt equity ratio in terms of long term debt and shareholders equity.

Table 4

Debt Equity Ratio in terms of Long-Term Debt and Shareholders Equity

(Amount in Rs.)

Company	F.Y.	Long-Term Debt	Shareholders Equity	LTD as a % of Shareholders Equity	Change
UNL					
	2007/08	0	234.79	0	0
	2008/09	0	270.68	0	0
	2009/10	0	687.87	0	0
	2010/11	0	830.04	0	0
	2011/12	0	960.02	0	0
Average				**0**	
BNL					
	2007/08	0	488.76	0	
	2008/09	200	482.18	41.48	41.48
	2009/10	140.67	539.82	26.06	-15.42
	2010/11	79.96	628.81	12.72	-13.34
	2011/12	47.67	782.81	6.09	-6.63
Average				**17.27**	

Source: Annual Reports of UNL and BNL

The above calculation shows that the debt equity ratio in terms of long-term debt and shareholders equity for UNL is zero. The company is not using long-term debt so, UNL is unlevered company. In F.Y 2007/08 the BNL is not using long-term debt so the debt equity ratio is zero. The ratio in F.Y 2008/09 to 2011/12 is 41.48, 26.06 and 12.72, 6.09 respectively. It has the debt equity ratio on an average is 17.27, which means that the long-term debt is 17.27% of equity capital in an average.

e. Debt to Total Assets Ratio

The amount of debt used for financing the assets of the company is measured by the debt to total assets ratio. A higher debt to total assets ratio indicates that the creditors have the greater claim on total assets then the owners have higher the ratio, the greater than firm's financial risk and vice versa. Asset equal to total liabilities this ratio is also called debt to total capital ratio. The debt to total assets ratio for the selected manufacturing companies is calculated and presented in the following table.

Table 5

Debt to Total Assets Ratio

(Amount in Rs.)

Company	F.Y.	Total Debt	Total Assets	Total Debt/Total Assets	Change
UNL					
	2007/08	767.77	1002.55	76.58	
	2008/09	814.57	1085.25	75.06	-1.52
	2009/10	507.23	1195.09	42.44	-32.61
	2010/11	552.45	1382.49	39.96	-2.48
	2011/12	592.24	1432.14	41.34	1.38
Average				**63.29**	
BNL					
	2007/08	807.24	1256.01	64.27	
	2008/09	707.99	1190.17	59.49	-4.78
	2009/10	735.55	1275.36	57.67	-1.81
	2010/11	844.32	1473.13	57.31	-0.36
	2011/12	914.21	1582.31	57.77	0.96
Average				**54.48**	

Source: Annual Reports of UNL and BNL

The debt to total assets ratio for UNL shows the 76.58%, 75.06%, 42.44% and 39.96 and 41.34% of total assets financed by debt in the F.Y 2007/08 to 2011/12 respectively. The average ratio for the entire period was 63.29%.

From the above table we can see that the total debt of BNL is fluctuating whereas the total assets are increasing except in year 2008/09 and the ratio is also fluctuating. About 50% of total assets are financed by debt capital. As we know from the data presented previous that BNL is using LTD as well in the composition of total debt. The debt to total assets ratio of BNL for the F.Y 2007/08 to 2011/12 are 64.27, 59.49, 57.67, 57.31 and 57.77 each year respectively. The average ratio is also 54.48.

From the above calculation both companies are heavily depending on debt to financing their assets also. Although UNL has no LTD but it is using huge amount of

short-term debt. So, both companies should try to reduce the amount of debt financing on assets, as it would lead to the company to liquidation.

f. Shareholders Equity to Total Assets

This established a relationship between shareholders equity and total assets. Shareholders equity to total assets ratio inform us about this proportion of total assets of the company financed by the ownership capital. This ratio can be calculated by dividing the shareholders equity by the total assets as shown in the table below:

Table 6

Shareholders Equity to Total Assets Ratio

(Amount in Rs.)

Company	F.Y.	Shareholders Equity	Total Assets	Shareholders Equity/Total Assets	Change
UNL					
	2007/08	234.79	1002.55	23.42	
	2008/09	270.68	1085.25	24.94	1.52
	2009/10	687.87	1195.09	57.56	32.62
	2010/11	830.04	1382.49	60.04	2.48
	2011/12	930.06	1482.11	62.65	2.71
Average				**38.78**	
BNL					
	2007/08	488.76	1256.01	38.91	
	2008/09	482.18	1190.17	40.51	1.60
	2009/10	539.82	1275.36	42.33	1.81
	2010/11	628.81	1473.13	42.69	0.36
	2011/12	789.11	1511.29	52.21	9.52
Average				**47.31**	

Source: Annual Reports of UNL and BNL

From the calculation of ratio between shareholders equity and total assets of UNL shows its increasing tendency. The shareholders equity and total assets are increasing for the time of study. The ratio is 23.42 in the F.Y 2007/08 indicating that 23.42% of assets are financed through equity capital and ratio is increasing in the F.Y 2008/09 the ratio is 24.94. In the F.Y 2009/10, 2010/11 and 2011/12 the ratios are 57.56, 60.04 and 62.65 respectively. The ratio is increasing which means that the company is increasing the equity capital for financing its assets. The average ratio of shareholders equity to total assets for UNL is 38.78 that tell us that in an average the input of equity for the assets is 38.78%.

The calculation of the above table tells us that BNL the shareholders equity to total assets ratio is in fluctuating trend. Both shareholders equity and total assets are not

constant. In the F.Y 2007/08 the ratio between total shareholders equity and assets is 38.91 that mean 38.91% of total assets financed by the shareholders equity. The ratio increases to 40.51 in the F.Y 2008/09, 42.33 in the F.Y 2009/10, 42.69 in F.Y 2010/11 and 2011/12 is 52.21. The average ratio for BNL for the research period is 47.31. The overall analysis and calculation indicate that the assets are financed by debt capital more than the equity capital.

g. Interest Coverage Ratio

The interest coverage ratio is calculated with the help of profit and loss account of the company by which the company can analyze its own capability for the payment of fixed charges. Coverage ratio is one of the parts of capital structure and leverage ratio. It is concerned with the firm's capacity to pay fixed charge bearing source of financing. Interest coverage ratio is a part of coverage ratio, which is calculated and presented in the following table.

Table 7

Interest Coverage Ratio

(Amount in Rs.)

Company	F.Y.	EBIT	Interest	Interest Coverage Ratio	Change
UNL					
	2007/08	298.34	1.06	281.45	
	2008/09	422.17	0.13	3247.46	2966.01
	2009/10	532.67	0.027	19728.52	16481.06
	2010/11	639.86	1.62	394.98	-19333.50
	2011/12	742.21	1.26	589.05	194.07
Average				**4848.29**	
BNL					
	2007/08	38.21	8.88	4.30	
	2008/09	49.23	20.79	2.37	-1.93
	2009/10	131.89	26.19	5.03	2.67
	2010/11	360.36	20.39	17.67	12.64
	2011/12	420.31	23.01	18.26	0.59
Average				**9.52**	

Source: Annual Reports of UNL and BNL

The interest coverage ratio for UNL during the period is fluctuating. The payment of interest is lesser so, the ratios are on a higher side. The ratios are 281.45, 3247.46, 19728.52, 394.98 and 589.05 times for the F.Y 2007/08 to 2011/12 respectively. From the above calculation, the company is sufficient to repay the interest charge. The average ratio is 4848.29. In the year 2009/10 there is minimum amount of interest

payment, which highly maximizes the interest coverage ratio and it causes the higher average of interest coverage ratio. From the calculation of the interest coverage ratio of BNL presented in the above table, it is clear that EBIT is fluctuating highly during the study period. The ratios for the F.Y 2007/08 to 2011/12 are 4.30, 2.37, 5.03, 17.67 and 18.26 respectively. The average interest coverage ratio of BNL is 9.52. There is high interest coverage ratio of UNL because the company had not used the long-term debt; it causes the minimum interest coverage ratio.

h. Profit Margin

Profit is the ultimate target for any business organization. The company can find out its profitability with the help of profit margin ratio. The profitability is directly related to sales revenue of the company; therefore it is clearly known that the only way of increasing profit is the increase in sales volume. The following table illustrates the profit margin ratio for the manufacturing companies selected for the research.

Table 8

Profit Margin

(Amount in Rs.)

Company	F.Y.	Net Income	Sales	Profit Margin	Change
UNL					
	2007/08	263.06	1818.5	14.47	
	2008/09	335.12	2144.6	15.63	1.16
	2009/10	444.04	2625.8	16.91	1.28
	2010/11	576.53	3055.1	18.87	1.96
	2011/12	681.72	3912.72	17.42	-1.45
Average				**16.66**	
BNL					
	2007/08	-30.31	634.19	-4.78	
	2008/09	33.41	746.58	4.47	9.25
	2009/10	20.53	1002.7	2.05	-2.43
	2010/11	177.50	1588.15	11.18	9.13
	2011/12	188.32	1820.12	10.34	-0.84
Average				**4.652**	

Source: Annual Reports of UNL and BNL

The sales volume of UNL is increasing each year and the profit margin is also increasing except in F.Y 2007/08. Similarly, the ratio for the succeeding five fiscal years is 14.47, 15.63, 16.91 and 18.87 & 17.42 respectively. The average profit margin ratio is 16.66 for the company. On the light of the above data, we can

conclude that the F.Y 2010/11 is the best year from the point of view of profit margin ratio of the company.

The profit margin ratio of BNL for F.Y 2007/08 to 2011/12 is -4.78, 4.47, 2.05, 11.18 and 10.34 respectively, which indicates that the company is earning a profit of -4.78% 4.47%, 2.05%, 11.18% and 10.34% from its sales. Net profit margin in F.Y 2007/08 is -4.78, which means the company bears loss in that fiscal year. The negative profit margin is because of its net loss or negative net profit. The profit margin decreases to 2.05 in the F.Y 2009/10 and in F.Y 2010/11 it increases rapidly up to 11.18%. All of it is due to its fluctuating net profit. The fluctuating situation of the company tells us about the inefficiency on smooth running of the business, which the management of the company should try to eliminate such problem for success in long run. The company should make such policy to earn high amount of profit from the sales revenue by increasing operating efficiency. The profit margin ratio for BNL is 4.652 on an average.

i. Earning Per Share

Earning per share is the ratio by which one can understand the return available to the shareholders from their investments, because EPS measures the earning available to shareholders on per share basis. As a commonly used ratio for the study of capital structure, it is used in the calculations, which have been done for two manufacturing companies selected for the research. The following table shows the EPS for the selected companies for the study:

Table 9
Earning Per Share

(Amount in Rs.)

Company	F.Y.	Net Income	No of Share	EPS	Change
UNL					
	2007/08	263.06	0.9207	285.72	
	2008/09	335.12	0.9207	363.99	78.27
	2009/10	444.04	0.9207	482.29	118.30
	2010/11	576.53	0.9207	626.19	143.90
	2011/12	621.13	0.9207	674.63	48.44
Average				**486.56**	
BNL					
	2007/08	-30.31	1.948887	-15.55	
	2008/09	33.41	1.948887	17.14	32.69
	2009/10	20.53	1.948887	10.53	-6.61
	2010/11	177.5	1.948887	91.08	80.54
	2011/12	183.3	1.948887	94.05	2.97
Average				**39.45**	

Source: Annual Reports of UNL and BNL

The condition of UNL is quite satisfactory then BNL for the study. It has average EPS 403.37, which is pretty good. The EPS for the F.Y 2007/08 is 285.72, 363.99, 482.29, 626.19 and 791.12 respectively for the rest of following four years. The increasing EPS due to increasing net profit attracts shareholders to invest more money. Table presented above shows that the EPS of BNL is fluctuating during the study period. The EPS for the F.Y 2007/08 is -15.55 which is 94.05 in FY 2011/12. The EPS in the F.Y 2008/09 to 2011/12 is 17.14, 10.53, 91.08 and 94.05 respectively. The average EPS for the shareholders of the company is 39.282. Net profit of BNL of the final year of research period maximizes the earning per share of this year and average EPS of research period as well.

The EPS is directly proportional to the net profit of the company, as the net profit increases the EPS also raises. Therefore, the companies should give a proper attention towards their operation to earn adequate amount of profit

j. Price Earning Ratio (P/E Ratio)

The P/E ratio indicates the times earning per share are covered by its market price. The P/E ratio represents the amount which investors are willing to pay each rupee of the earning. The calculation of P/E ratio for the selected companies is presented as:

Table 10

Price Earning Ratio

Company	F.Y.	Market Price Per Share (in Rs.)	Earning Price Per Share (in Rs.)	P/E Ratio	Change
UNL					
	2007/08	3400	285.72	11.90	
	2008/09	4100	363.99	11.26	-0.64
	2009/10	4250	482.29	8.81	-2.45
	2010/11	4149	626.19	6.63	-2.19
	2011/12	4372	721.18	6.062	-0.56
Average				**8.93**	
BNL					
	2007/08	500	-15.55	-32.15	
	2008/09	700	17.14	40.84	72.99
	2009/10	700	10.53	66.48	25.64
	2010/11	700	91.08	7.69	-58.79
	2011/12	700	96.96	7.22	-0.47
Average				**18.16**	

Source: Annual Reports of UNL and BNL

From the above calculation the P/E ratio of UNL in F.Y 2007/08 to 2011/12 is 11.90, 11.26, 8.81, 6.63 and 6.062 respectively. It is fluctuating in nature during the research period. P/E ratio increases up to 11.90 in F.Y 2007/08. In next year it decreases to 11.26 and again it decreases to 8.81, 6.63 and 6.062 for the F.Y 2009/10 and 2011/12 respectively. It is decreasing continuously from F.Y 2007/08 due to increase in EPS more rapidly than the market price of share (MPS) of the company. The average P/E ratio is 8.93. The decreasing P/E ratio indicates the bad situation of the company. This indicates the shareholders will lose if they sell their equity in the prevailing market price during that year.

The P/E ratio for BNL is in fluctuating trend during the study period. The P/E ratio for F.Y 2007/08, which is -32.15, the negative figure in F.Y 2007/08. In F.Y 2008/09 the ratio increased to 40.84 and again it increases to 66.48, which is the highest ratio during the study period. It indicates that the shareholders can get 66.48 times more than EPS if they sell their shares at the existing market rate. In Final year of research period it goes down to 7.22 which reveal that the company is loosing the attention of its investors.

4.2 DU-Pont System Analysis

The DU-Pont system of ratio is widely used by the financial management to make classified assessment of firm's profit margin, total assets turnover ratio and equity multiplier. It also shows various activities by which these ratios indicate to determine profitability. For the first time, DU-Pont Corporation, USA, used the DU-Pont system. DU-Pont system helps to find out the cause of changing ROE, ROA and profit margin. We evaluate ROE and ROA for the selected companies of Nepal.

a. Return on Equity (ROE)

The profit of shareholders from their investment is calculated by return on equity. It can be used as a measuring rod of companies from the point of view of the investors. It can be calculated by using the following formula

ROE = Profit Margin × Total Assets Turnover × Equity Multiplier

$$= \frac{\text{Net Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Shareholders Equity}}$$

$$= \frac{\text{Net Profit}}{\text{Shareholders Equity}}$$

The following table shows the calculation the calculation of ROE for the selected companies for the study:

Table 11

Return on Equity

Company	F.Y.	Net Income (in Rs.)	Shareholders Equity (in Rs.)	ROE (in Rs.)	Change
UNL					
	2007/08	263.06	234.79	112.04	
	2008/09	335.12	270.68	123.81	11.77
	2009/10	444.04	687.87	64.55	-59.25
	2010/11	576.53	830.04	69.46	4.91
	2011/12	662.9	960.80	68.99	-0.47
Average				**87.77**	
BNL					
	2007/08	-30.31	488.76	-6.20	
	2008/09	33.41	482.18	6.93	13.13
	2009/10	20.53	539.82	3.80	-3.13
	2010/11	177.5	628.81	28.23	24.42
	2011/12	182.51	762.82	23.92	-4.31
Average				**11.34**	

Source: Annual Reports of UNL and BNL

From the above table ROE for UNL in F.Y 2007/08 is 112.04 indicating that 112.04% return on its shareholders equity. The ROE for F.Y 2008/09 to 2011/12 is 123.81, 64.55, 69.46 and 68.99 respectively each year. From above data we can observe that ROE for the company is decreasing each year. Whether the net profit and shareholders equity both are increasing each year but the shareholders equity increases rapidly than the increase in net profit, it results the decreasing trend of ROE.

The calculation ROE for BNL shows that the ROE is in fluctuating nature trend because of the fluctuation in net profit of the company. ROE for BNL in F.Y 2007/08 to 2011/12 is -6.20, 6.93, 3.80, 28.23 and 23.92 each year respectively. ROE is negative in year 2007/08 because in this year the company was on loss of Rs. 30.31 million. The ROE goes up to 6.93 from the negative figure in F.Y 2008/09 from F.Y

2007/08. Again it decreases to 3.80 in F.Y 2009/10 due to reduction in net profit and increase in shareholders equity. And in final year of study period i.e. F.Y 2011/12 it decreases to 23.92. Results the average ROE for the company during the research period is 11.34. From the final year figure we can say that the company should paid the attention to the shareholders investment. On the basis of this result the investor can be assure for their investment.

b. Return on Assets (ROA)

The profitability as well as production power of assets in terms of generating sales is measured by the ROA. The relationship between net profit and total assets is analyzed by the ROA. The following table shows the ROA for the manufacturing companies listed in NEPSE selected for the study:

Table 12

Return on Asset

(Amount in Rs.)

Company	F.Y.	Net Income	Total Assets	ROA	Change
UNL					
	2007/08	263.06	1002.55	26.24	
	2008/09	335.12	1085.25	30.88	4.64
	2009/10	444.04	1195.09	37.16	6.28
	2010/11	576.53	1382.49	41.70	4.54
	2011/12	662.12	1419.49	46.64	4.94
Average				**36.52**	
BNL					
	2007/08	-30.31	1256.01	-2.41	
	2008/09	33.41	1190.17	2.81	5.22
	2009/10	20.53	1275.36	1.61	-1.20
	2010/11	177.5	1473.13	12.05	10.44
	2011/12	188.21	1582.13	11.89	-0.16
Average				**5.19**	

Source: Annual Reports of UNL and BNL

The ROA for UNL shows that the increasing trend. ROA for the company in F.Y 2007/08 is 26.24 and it increases next year to 30.88 in FY 2008/09. 2009/10 to 2011/12 is 37.16, 41.70 and 46.64 each year respectively, which is quite good for the company. Net income is increasing each year so; the ratio is also in increasing trend. The increasing trend of ROA is the good message to the management for their assets

utilization capacity. The average ROA for the company is 36.52. The ROA measures the earning power and utilization of assets of the company.

The calculation of ROA for BNL is not satisfactory because of its irregular nature. ROA in 2008/09 it is 2.81 and it again decreases to 1.61 due to the reduction in net profit and increase in total assets. It increases rapidly in final year of research period to 11.89 due to the higher increase in net profit, and it results the 5.19 average ROA for the company. The fluctuation in ROA may creates serious problem for the company it is not treated in time. Although there is some improvement in final year figure which carries some happiness for the management of the company.

4.3 Cost of Capital

Cost of capital is one of the most important dimensions on analyzing the efficient use of capital. For this reason, overall cost of capital and equity capitalization rate of selected manufacturing companies have been preformed.

a. Equity Capitalization Rate

Equity is one of the sources of capital that has its own cost and it is called as the cost of equity (Ke). A large amount of equity means the higher change of Ke. Earning before tax divided by market value of shares derives the equity capitalization rate (Ke) for this study purpose. The following table shows the calculation of equity capitalization rate (Ke) for the selected companies:

Table 13
Equity Capitalization Rate **(Amount in Rs.)**

Company	F.Y.	Net Income	Market Value of Share	Ke %
UNL				
	2007/08	263.06	3400	7.74
	2008/09	335.12	4100	8.17
	2009/10	444.04	4250	10.45
	2010/11	576.53	4149	13.90
	2011/12	652	4982	13.08
Average				**10.668**
BNL				
	2007/08	-30.31	500	-6.06
	2008/09	33.41	700	4.77
	2009/10	20.53	700	2.93
	2010/11	177.5	700	25.36
	2011/12	182.12	700	26.02
Average				**10.604**

Source: Annual Reports of UNL and BNL

The above calculation shows us the equity capitalization rates for the selected manufacturing companies for five years. The equity capitalization rate tells us about the cost paid to the equity in spite of using the funds. The equity capitalization rate (Ke) is fluctuating as the above table indicating. The cost of equity for UNL is higher than BNL and constantly increased as well except in F.Y 2007/08. The equity capitalization rate for UNL in F.Y 2007/08 to 2011/12 is 7.74, 8.17, 10.45, 13.90 and 13.08 respectively. It is increasing every year. The average equity capitalization rate for UNL is 10.668. Similarly, for BNL equity capitalization rate in F.Y 2007/08 to 2011/12 is -6.06, 4.77, 2.93, 25.36 and 26.02 respectively. The rate in F.Y 2007/08 is negative because of the negative figure in net income this year. The rate increases extremely to 26.02 in F.Y 2011/12 from 25.36 in previous fiscal year 2009/10. It has the average equity capitalization rate is 10.604.

b. Overall Cost of Capital (Ko)

The overall capitalization rate means the cost of overall capital collected by the company from various sources. In this research, Ko is calculated as per the NI approach. Overall cost of capital can be expressed by following formula:

$$\text{Overall cost o capital (Ko)} = \frac{\text{Operating Profit}}{\text{Total Value of the Firm}}$$

Or

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

As per the assumption of NI approach Ke, and Kd are constant and Kd is always less than Ke, therefore, Ko will decrease as B/V increases. Also, Ke = Ko when B/V = 0

The following table shows the overall cost of capital for the two manufacturing companies listed in NEPSE selected for the study.

Table 14

Overall Cost of Capital

(Amount in Rs.)

Company	F.Y.	EBIT	Value of the Firm	Ko %
UNL				
	2007/08	346.62	4166.48	8.32
	2008/09	433.25	4916.41	8.81
	2009/10	563.65	4756.42	11.85
	2010/11	725.8	4700.15	15.44
	2011/12	821.29	4800.13	17.11
Average				**12.306**
BNL				
	2007/08	-59.84	1307.41	-4.58
	2008/09	49.23	1208.41	4.07
	2009/10	56.65	1436.23	3.94
	2010/11	248.83	1544.24	16.11
	2011/12	342.82	1694.12	20.23
Average				**7.954**

Source: Annual Reports of UNL and BNL

The above table shows the calculation of overall capitalization rate of the sample manufacturing companies listed in NEPSE. The above figure tells us about the overall capitalization rate of two companies. For the both companies the overall capitalization rate is in very fluctuating trend. The average Ko for UNL and BNL is 12.306 and 7.954 respectively. UNL has the highest Ko, which indicates that the company can give less amount of profit compared to BNL. the company make effort to trim down the overall cost of capital (Ko) to secure high percentage of return for collected capital reducing the debt capital is one of the best way of reducing the overall cost of capital,

4.4 Major Findings of the Study

All the calculated ratios for the five years of the study since 2007/08 to 2011/12 are presented in the comparative ratio calculation which is shown in the table below:

- The average of DOL for UNL and BNL are 1.72 and 1.38 respectively. As compare to the UNL and BNL, the DOL for UNL is quite good. The higher DOL indicates the riskyness of the company.
- The average DFL of UNL is 3.12 times whereas for UNL is 1.21 times only. This shows the UNL has greater DFL than UNL.

- The average of long-term debt as a percentage of total debt for UNL is zero, which means UNL has no long-term debt. For BNL long-term debt as a percentage of total debt in average is 12.588.
- The average ratio between debt and total assets is above 50 for the UNL and BNL both i.e. 63.29 and 54.48 respectively. This situation indicates that the debt amount is comparatively high for assets financing as per the figure of the ratio.
- The average ratio between shareholders equity and total assets for UNL is 38.78 and for BNL is 47.31. Those figures indicate that more than 50 percent of assets are financed through the outsider's fund.
- The interest coverage ratio for UNL and BNL is 4848.29 and 9.52 respectively. Due to the lower amount of debt, the coverage ratio for UNL is very high.
- The profit margin of the BNL does not show a good picture during the study period, whereas the UNL has satisfactory profit margin. The profit margin for UNL is higher than BNL, which indicates the good earning capacity of the company by selling its products.
- Earning per share of UNL seems to be higher than that of BNL. EPS for UNL and BNL are Rs. 486.56 and Rs. 39.45. So, the investors can be attracted by the proposal of UNL
- The BNL has the higher value of P/E ratio than UNL for the study. For any company, the higher P/E ratio indicates the greater confidence of investors with its future.
- The average ratio of return on equity for UNL and BNL is 87.77 and 11.34. This indicates the investors of UNL are getting more return from their investments.
- The average return on assets for UNL and BNL is 36.52 and 5.19. The average ROA is higher for the UNL, which indicates that the good production power of assets and well utilization of assets to generate the return.
- The equity capitalization rate for UNL and BNL is 10.668 and 10.604. The above figure shows that the equity capitalization rate for UNL is higher than the rate of BNL.

- For the calculation of overall capitalization rate, we can see that the UNL has higher average value of Ko because, BNL is a levered company. Ke is also higher in an average for UNL between two manufacturing companies listed in NEPSE. The use of less costly debt fund increases the risk to the shareholders; this causes the equity capitalization rate to increase.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with summary and conclusion drawn from the analysis of preceding chapter. Then based on the finding and conclusion we recommend certain measure for further improvement. With the help of some financial and statistical tools, the researcher has tried to capital management system of concerned companies. This study may be helpful for management of the capital to initiate the action to achieve the desired result.

5.1 Summary

This study is based on capital structure management of two selected manufacturing company listed in NEPSE named Unilever Nepal Limited and Bottlers Nepal Limited. The necessary data on capital structure and related variables were collected for the period 2007/08 to 2011/12 AD for this purpose of the study.

The brief introduction of this study has been already presented in the first chapter. In the second chapter the available literature about the capital structure management has been reviewed. Research methodology has explained in the third chapter. And the available data have been presented and analyze in the fourth chapter. This is the last chapter of this study. This chapter summarizes the whole study. The main objective of the study is to draw the major findings and conclusion and forward the recommendation for the better capital structure management of Nepalese manufacturing companies.

In the first chapter brief introduction of the study has been already presented. The research problem and objective of the study is also included here. The conceptual framework, different view of different writers, books and journals and articles has been dealt in the review of literature section. As per the objective of this study, it tries to analyze the relationship between debt, equity and other variables of manufacturing companies to provide suggestion on the basis of major findings. To fulfill this purpose, the study follows the analytical and descriptive research design. Research design presents nature and sources of data, data collection procedure, tools to be used and definition of variables. Presentation and analysis of data is carried out in the fourth chapter.

Average DOL for UNL and BNL are 1.72 and 1.38. The UNL has higher DFL. UNL has no long-term debt so; long-term debt to total debt and debt equity ratio in terms of long-term debt is zero. For BNL average long-term debt to total debt ratio is 12.588 and debt equity ratio is 17.27 in average. Debt to total assets ratio is above 50% for the both of the companies. Shareholders equity to total assets ratio for BNL is higher than UNL. BNL has more owners' capital than UNL. The average interest coverage ratio is 4848.29 times for UNL whereas BNL has only 9.52 times, which is more than the ratio of BNL because it has minimum amount of interest due to no long-term debt in its debt capital. Profit margin of UNL is higher. Return on equity and return on assets of UNL is better than BNL. Earning per share of UNL is higher than the earning per share of BNL. The P/E Ratio is higher for BNL than UNL for the study. Equity capitalization rate and overall cost of capital both are higher for UNL than BNL during the study period.

5.2 Conclusion

The average of DOL for UNL is 1.72 and for BNL 1.38. The same type of manufacturing industries, there is huge difference in DOL. BNL has the negative operating leverage which is harmful for the company. Negative leverage results the negative effect on EBIT if there is increase in sales. The average DFL for UNL is 3.12 and for BNL 1.21 both of the companies consistency in the DFL. The company should concentrate on reconstruct their structure of capital which company has negative DFL.

There is no long-term debt in the capital structure of UNL during the research period which means that the total debt is composed of short-term debt which is in a variable trend. BNL also has less amount of long-term debt than the short term debt in its capital structure which will generate more risk for the company. Huge amount of short term debt may derive the organization to the position of liquidation.

The average ratio of debt to total assets for UNL is 63.29% and for BNL is 54.48%. The overall analysis and conclusion indicates that the assets financed mainly by the outsiders' fund. As compare to UNL, BNL has a good proportion of owners and outsiders fund for financing the assets.

The interest coverage ratio for UNL during the study is 4848.29 times which very high than that of BNL. Due to no use of long-term debt UNL has minimum amount of interest, it causes the highest interest coverage ratio. The average ratio of profit margin for UNL is 16.66%. The ratio is fluctuating during the study period due to the

inconsistency in sales revenue and in net profit. The average profit margin ratio for BNL is 4.652 which are not too satisfactory for the company. Earning per share of UNL seems to be higher than that of BNL. So, the investors can be attracted by the proposal of UNL. For any company the higher P/E ratio indicates the greater confidence of investors with its future. The BNL has the value of the P/E ratio than UNL for the study.

Return on equity for UNL is higher than BNL. The investors of UNL are getting more return from their investments. The average return on assets is higher for the UNL indicating the good production power of assets. From the calculation of overall capitalization rate, we can see that the UNL has the higher average value of Ko. Equity capitalization rate is also higher in an average for UNL.

5.3 Recommendations

The concept of capital structure has not received much attention in the Nepalese manufacturing companies while designing the capital structure. Based on the major findings of the study of the sample manufacturing companies listed in NEPSE, the following recommendations are presented for the UNL, BNL and for whole manufacturing companies in Nepal.

- The UNL and BNL should try to access Long-Term sources of debt, which will be less costly for them rather than relying heavily in short term debt.
- Current liability of both companies has been increasing. Increase in current liabilities would affect the liquidity aspect of the company short term borrowing is more risky because short term interest rates are more volatile than longer rates. Therefore it is recommended to maintain a proper capital structure by including long-term debt also.
- As per the increase in sales the profit for BNL is not correspondingly increasing. From the sales revenue the BNL should make policy to earn high amount of profit by increasing operating efficiency.
- Due to the higher amount of operating cost of production, BNL is unable to earn satisfactory level of profit as compare to sales revenue. To increase in the level of profit the company should minimize the administrative and other operating expenses.

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ANNEX-I

LIST OF LISTED MANUFACTURING COMPANIES IN NEPSE

S.N.	Name of Companies	Listed Date
1.	Raghupati Jute Mill Ltd.	17/06/1988
2.	Butwal Spinning Mills Ltd.	14/11/1988
3.	Gorakhakali Rubber Udhyog Ltd.	08/03/1991
4.	Bottlers Nepal Limited (Balaju)	11/05/1986
5.	Nepal Lube Oil Ltd.	14/12/1986
6.	Nepal Vanaspati Ghee Udhyog Ltd.	05/06/1988
7.	Jyoti Spanning Mills Ltd.	27/09/1991
8.	Arun Vanaspati Udhyog Ltd.	16/12/1991
9.	Bottlers Nepal (Tarai) Ltd	07/11/1991
10.	Harisiddhi Brick and Tile Fac. Ltd.	05/05/1994
11.	Birat Shoe Ltd. (Ord)	25/10/1994
12.	Unilever Nepal Limited	22/09/1994
13.	Nepal Khadya Udhyog Ltd.	25/11/1994
14.	Shree Bhrikuti Pulp and Paper Ltd.	01/06/1997
15.	Fluer Himalayan Limited	03/09/1997
16.	Shree Ram Sugar Mills Ltd.	18/04/1999
17.	Nepal Bitumin and Barrel Udhyog	10/05/1999
18.	Himalayan Distillery Ltd.	21/03/2003

Source: Annual Trading Report 2011/12 (Nepal Stock Exchange Ltd.)

ANNEX-II

CALCULATION

Degree of Operating Leverage

(Amount in Rs.)

Company	F.Y.	EBIT	Change in EBIT	% Change	Sales	Change in Sales	% Change	DOL
UNL								
	2007/08	298.34	2.84		1818.53	383.59		
	2008/09	422.17	123.83	41.51	2144.59	326.06	15.20	2.73
	2009/10	532.67	110.5	26.17	2625.83	481.24	18.33	1.43
	2010/11	639.86	107.19	20.12	3055.07	429.24	14.05	1.43
	2011/12	742.27	105.12	18.12	4021.09	966.42	13.12	1.41
Average								**1.72**
BNL								
	2007/08	38.21	-63.82		634.19	12.36		
	2008/09	49.23	11.02	28.84	746.58	112.39	17.7218	1.63
	2009/10	131.89	82.66	167.91	1002.72	256.14	34.3084	4.90
	2010/11	360.36	228.47	173.23	1588.15	585.43	58.3842	2.97
	2011/12	370.56	322.12	184.32	1872.17	284.12	17.88	3.29
Average								**1.38**

EBIT = Sales – Variable Cost – Fixed cost

$$\text{DOL} = \frac{Contribution\ margin}{EBIT}$$

Degree of Financial Leverage **(Amount in Rs.)**

Company	F.Y.	EPS	Change in EPS	% Change	EBIT	Change in EBIT	% Change	DFL
UNL								
	2007/08	285.72	27.06		298.34	2.84		
	2008/09	363.99	78.27	23.32	422.17	123.83	41.51	0.56
	2009/10	482.29	118.3	26.36	532.67	110.5	26.17	1.01
	2010/11	626.19	143.9	29.84	639.86	107.19	20.12	1.48
	2011/12	778.22	125.03	31.22	789.21	107.1	20.18	1.82
Average								**3.12**
BNL								
	2007/08	-15.55	-28.41		38.21	-63.82		
	2008/09	17.14	32.69	-210.22	49.23	11.02	28.84	-7.29
	2009/10	10.53	-6.61	-38.56	131.89	82.66	167.91	-0.23
	2010/11	91.08	80.55	764.96	360.36	228.47	173.23	4.42
	2011/12	92.09	1.01	1.09	420.21	59.55	16.5	4.12
Average								**1.21**

$$\text{EPS} = \frac{Earning\ available\ to\ common\ shareholder}{No.\ of\ common\ shares}$$

$$DFL = \frac{EBIT}{EBT}$$

Long-Term Debt as a Percentage of Total Debt

(Amount in Rs.)

Company	F.Y.	Long-Term Debt	Total Debt	LTD as a % of Total Debt	Change
UNL					
	2007/08	0	767.77	0	0
	2008/09	0	814.57	0	0
	2009/10	0	507.23	0	0
	2010/11	0	552.45	0	0
	2011/12	0	612.11	0	0
Average				0	
BNL					
	2007/08	0.00	807.24	0	
	2008/09	200.00	707.99	28.25	28.25
	2009/10	140.67	735.55	19.12	-9.12
	2010/11	79.96	844.32	9.47	-9.65
	2011/12	55.67	912.11	6.10	-3.37
Average				12.588	

Long-Term Debt to Total Debt = $\frac{Long\ Zterm\ debt}{Total\ debt}$

Debt Equity Ratio in terms of Long-Term Debt and Shareholders Equity

(Amount in Rs.)

Company	F.Y.	Long-Term Debt	Shareholders Equity	LTD as a % of Shareholders Equity	Change
UNL					
	2007/08	0	234.79	0	0
	2008/09	0	270.68	0	0
	2009/10	0	687.87	0	0
	2010/11	0	830.04	0	0
	2011/12	0	960.02	0	0
Average				**0**	
BNL					
	2007/08	0	488.76	0	
	2008/09	200	482.18	41.48	41.48
	2009/10	140.67	539.82	26.06	-15.42
	2010/11	79.96	628.81	12.72	-13.34
	2011/12	47.67	782.81	6.09	-6.63
Average				**17.27**	

$$\textbf{Long-Term Debt to Shareholder's Dquity} = \frac{Long\ Z term\ debt}{Shareholder's\ equity}$$

Debt to Total Assets Ratio

(Amount in Rs.)

Company	F.Y.	Total Debt	Total Assets	Total Debt/Total Assets	Change
UNL					
	2007/08	767.77	1002.55	76.58	
	2008/09	814.57	1085.25	75.06	-1.52
	2009/10	507.23	1195.09	42.44	-32.61
	2010/11	552.45	1382.49	39.96	-2.48
	2011/12	592.24	1432.14	41.34	1.38
Average				**63.29**	
BNL					
	2007/08	807.24	1256.01	64.27	
	2008/09	707.99	1190.17	59.49	-4.78
	2009/10	735.55	1275.36	57.67	-1.81
	2010/11	844.32	1473.13	57.31	-0.36
	2011/12	914.21	1582.31	57.77	0.96
Average				**54.48**	

Debt to Total Assets Ratio = $\frac{Total\ debt}{Total\ assets}$

Shareholders Equity to Total Assets Ratio

Company	F.Y.	Shareholders Equity	Total Assets	Shareholders Equity/Total Assets	Change
UNL					
	2007/08	234.79	1002.55	23.42	
	2008/09	270.68	1085.25	24.94	1.52
	2009/10	687.87	1195.09	57.56	32.62
	2010/11	830.04	1382.49	60.04	2.48
	2011/12	930.06	1482.11	62.65	2.71
Average				**38.78**	
BNL					
	2007/08	488.76	1256.01	38.91	
	2008/09	482.18	1190.17	40.51	1.60
	2009/10	539.82	1275.36	42.33	1.81
	2010/11	628.81	1473.13	42.69	0.36
	2011/12	789.11	1511.29	52.21	9.52
Average				**47.31**	

Shareholder's Equity to Total assets ratio = $\frac{Shareholder's\ equity}{Total\ assets}$

Interest Coverage Ratio

(Amount in Rs.)

Company	F.Y.	EBIT	Interest	Interest Coverage Ratio	Change
UNL					
	2007/08	298.34	1.06	281.45	
	2008/09	422.17	0.13	3247.46	2966.01
	2009/10	532.67	0.027	19728.52	16481.06
	2010/11	639.86	1.62	394.98	-19333.50
	2011/12	742.21	1.26	589.05	194.07
Average				**4848.29**	
BNL					
	2007/08	38.21	8.88	4.30	
	2008/09	49.23	20.79	2.37	-1.93
	2009/10	131.89	26.19	5.03	2.67
	2010/11	360.36	20.39	17.67	12.64
	2011/12	420.31	23.01	18.26	0.59
Average				**9.52**	

Interest coverage ratio = $\frac{EBIT}{Interest\ charge}$

Profit Margin

(Amount in Rs.)

Company	F.Y.	Net Income	Sales	Profit Margin	Change
UNL					
	2007/08	263.06	1818.5	14.47	
	2008/09	335.12	2144.6	15.63	1.16
	2009/10	444.04	2625.8	16.91	1.28
	2010/11	576.53	3055.1	18.87	1.96
	2011/12	681.72	3912.72	17.42	-1.45
Average				**16.66**	
BNL					
	2007/08	-30.31	634.19	-4.78	
	2008/09	33.41	746.58	4.47	9.25
	2009/10	20.53	1002.7	2.05	-2.43
	2010/11	177.50	1588.15	11.18	9.13
	2011/12	188.32	1820.12	10.34	-0.84
Average				**4.652**	

Net Profit Margin = $\frac{Net\ income}{Sales}$

Earning Per Share

(Amount in Rs.)

Company	F.Y.	Net Income	No of Share	EPS	Change
UNL					
	2007/08	263.06	0.9207	285.72	
	2008/09	335.12	0.9207	363.99	78.27
	2009/10	444.04	0.9207	482.29	118.30
	2010/11	576.53	0.9207	626.19	143.90
	2011/12	621.13	0.9207	674.63	48.44
Average				**486.56**	
BNL					
	2007/08	-30.31	1.948887	-15.55	
	2008/09	33.41	1.948887	17.14	32.69
	2009/10	20.53	1.948887	10.53	-6.61
	2010/11	177.5	1.948887	91.08	80.54
	2011/12	183.3	1.948887	94.05	2.97
Average				**39.45**	

$$\text{EPS} = \frac{Earning\ available\ to\ common\ shareholder}{No.\ of\ common\ shares}$$

Price Earning Ratio

Company	F.Y.	Market Price Per Share (in Rs.)	Earning Price Per Share (in Rs.)	P/E Ratio	Change
UNL					
	2007/08	3400	285.72	11.90	
	2008/09	4100	363.99	11.26	-0.64
	2009/10	4250	482.29	8.81	-2.45
	2010/11	4149	626.19	6.63	-2.19
	2011/12	4372	721.18	6.062	-0.56
Average				**8.93**	
BNL					
	2007/08	500	-15.55	-32.15	
	2008/09	700	17.14	40.84	72.99
	2009/10	700	10.53	66.48	25.64
	2010/11	700	91.08	7.69	-58.79
	2011/12	700	96.96	7.22	-0.47
Average				**18.16**	

$$\textbf{P/E ratio} = \frac{MPS}{EPS}$$

Return on Equity

Company	F.Y.	Net Income (in Rs.)	Shareholders Equity (in Rs.)	ROE (in Rs.)	Change
UNL					
	2007/08	263.06	234.79	112.04	
	2008/09	335.12	270.68	123.81	11.77
	2009/10	444.04	687.87	64.55	-59.25
	2010/11	576.53	830.04	69.46	4.91
	2011/12	662.9	960.80	68.99	-0.47
Average				**87.77**	
BNL					
	2007/08	-30.31	488.76	-6.20	
	2008/09	33.41	482.18	6.93	13.13
	2009/10	20.53	539.82	3.80	-3.13
	2010/11	177.5	628.81	28.23	24.42
	2011/12	182.51	762.82	23.92	-4.31
Average				**11.34**	

$$\textbf{ROE} = \frac{Net\ income}{Shareholder's\ equity}$$

Return on Asset

(Amount in Rs.)

Company	F.Y.	Net Income	Total Assets	ROA	Change
UNL					
	2007/08	263.06	1002.55	26.24	
	2008/09	335.12	1085.25	30.88	4.64
	2009/10	444.04	1195.09	37.16	6.28
	2010/11	576.53	1382.49	41.70	4.54
	2011/12	662.12	1419.49	46.64	4.94
Average				**36.52**	
BNL					
	2007/08	-30.31	1256.01	-2.41	
	2008/09	33.41	1190.17	2.81	5.22
	2009/10	20.53	1275.36	1.61	-1.20
	2010/11	177.5	1473.13	12.05	10.44
	2011/12	188.21	1582.13	11.89	-0.16
Average				**5.19**	

$$\textbf{ROA} = \frac{Net\ income}{Total\ assets}$$

Equity Capitalization Rate

(Amount in Rs.)

Company	F.Y.	Net Income	Market Value of Share	Ke %
UNL				
	2007/08	263.06	3400	7.74
	2008/09	335.12	4100	8.17
	2009/10	444.04	4250	10.45
	2010/11	576.53	4149	13.90
	2011/12	652	4982	13.08
Average				**10.668**
BNL				
	2007/08	-30.31	500	-6.06
	2008/09	33.41	700	4.77
	2009/10	20.53	700	2.93
	2010/11	177.5	700	25.36
	2011/12	182.12	700	26.02
Average				**10.604**

$$\textbf{Ke} = \frac{Net\ income}{Market\ value\ of\ share}$$

Overall Cost of Capital

(Amount in Rs.)

Company	F.Y.	EBIT	Value of the Firm	Ko %
UNL				
	2007/08	346.62	4166.48	8.32
	2008/09	433.25	4916.41	8.81
	2009/10	563.65	4756.42	11.85
	2010/11	725.8	4700.15	15.44
	2011/12	821.29	4800.13	17.11
Average				**12.306**
BNL				
	2007/08	-59.84	1307.41	-4.58
	2008/09	49.23	1208.41	4.07
	2009/10	56.65	1436.23	3.94
	2010/11	248.83	1544.24	16.11
	2011/12	342.82	1694.12	20.23
Average				**7.954**

$$\textbf{Ko} = \frac{EBIT}{Value\ of\ the\ firm}$$