

IMPACT OF CAPITAL STRUCTURE ON FIRM'S PROFITABILITY OF LISTED MANUFACTURING COMPANIES

A Thesis

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CHAPTER I

INTRODUCTION

1.1 Background of the Study

In today's competitive and dynamic business world, financial decision plays a fundamental role in the firm's day to day performance and operations. Firm's financial decision affects almost all activities within the company. In the field of corporate finance, capital structure decision is the most debatable issue for all academicians and researcher.

The financial performance of a firm is generally evaluated in three main aspects. The first one is the productivity of the firm, secondly the profitability, a stage or the level of earnings from its daily activities is to be greater than cost of these activities and thirdly is the market premium, it is the level at which firm's book value is lower than its market value (Francis, 2002).

Investing and funding are two main decision areas in the company. The process in which the firm is funded by a mixture of debt and equity is called capital structure decision. When firm take the funding decision, the directors are interested in choosing the best capital structure for their company's i.e. optimal capital structure. Leverage decisions are also one of the important decisions and it is undertaken by the company administrative. Capitalization, leverage ratio, capital structure and financial structure all of them have the identical concept and are related with which kind of sources and amount of money that the firm has hired to construct them and buy assets (Barges, 2009).

The capital structure is defined as the mix of debt and equity that the firm uses in its operation. The capital structure of a firm is a mixture of different securities. Capital structure is the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both (Brigham and Gapenski, 2004). The term capital denotes the proportion of debt and equity in a company's balance sheet. It is usually difficult for business firms to identify the right combination of debt and equity. A firm can choose among many alternative capital structures. It can choose to either issue a large amount of debt or very little debt. It can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps. It can issue many distinct securities in countless

combinations; however, it attempts to find the particular combination that maximizes its overall market value (Brigham and Gapenski, 2004).

The capital structure plays an important role in the success of business entity. Capital Structure decision is crucial for any business organization as it plays important role in maximizing firm value and performance of a firm. Capital structure decision has also impact on the firm's ability to deal with competitive advantage. Every firm have their own capital structure design because they differ in financing decision and taking capital structure decision is tough work too as sometimes using higher level of debt is beneficial and sometimes higher equity is beneficial. Hence it should be design in a proper manner so that the cost is minimized and value of the firm is maximized.

Optimum Capital Structure is that structure where overall cost of capital is minimum and value of the firm is maximum. It is the best debt to equity ratio that maximizes the firm's value. It offers a balance between the ideal debt to equity range and minimize the firms cost of capital. This structure seeks to lower the cost of capital so that firm is less dependent on creditors and more able to finance its core operation. Weighted average cost of capital has to be calculated to determine the level of risk that makes the expected return on capital greater than the cost of capital (Bhattacharai, 2017).

Firm's capital structure decision can be viewed from the following theories: Modigliani-Miller theory, pecking order theory, and trade-off theory. The theory of business finance in a modern sense starts with the Modigliani and Miller (1958) capital structure irrelevance proposition. Before them, there was no generally established theory of capital structure. The debate about how and why firms choose their capital structure began in 1958, when Modigliani and Miller (1958) published their famous arbitrage argument showing that the market value of any firm is independent of its capital structure. Modigliani and Miller start their theory by assuming that the firm has a particular set of expected cash flows. When the firm chooses a certain proportion of debt and equity to finance its assets, what it has to do is to divide up the cash flows among investors. Investors and firms are assumed to have equal access to financial markets, which allows for homemade leverage. As a result, the leverage of the firm has no effect on the market value of the firm (Barges, 2009).

The term capital structure refers to the proportion of debt and equity capital, which has an important place in the theory of financial management. The financing decision of a firm relates to the choice of proportion of debt and equity to finance the investment requirement, of which a proper balance is necessary to ensure a trade off between risk and return to the shareholders. An optimal capital structure, which consists of reasonable proportion of debt & equity, can help to maximize the value of the firm and ultimately maximizing the shareholders wealth (Wipperfurth, 1996).

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MM stated that the firm's value is independent from their capital structure decision by assuming unrealistic assumption on the real world, such as no corporate taxes, no transaction cost and perfect capital market, however MM (1963) incorporated corporate taxes into their earlier assumption and they stated that optimal capital structure can be attained from 100% debt financing through getting tax saving advantage of using debt.

After the work of Miller (1958 & 1963), number of theories have been developed to explain optimal capital structure of the firms. Agency costs, Trade off theory, Pecking order theory are the most popular theories of capital structure. However both debt and equity finance have their own merits and demerits. The merits of debt financing are tax shield, disciplinary tools and cheapest source of financing , while bankruptcy cost and default risk are its disadvantage .In the case of equity share its advantage is that there is low probability of bankruptcy cost while no tax advantage costly and difficulty of controlling free cash flow are its disadvantages .

Firm can get the tax advantage from the use of high volume of debt but it is a risky too because higher the debt ratio the higher the interest rate will be. When the firm increases the volume of debt, interest expenses which is a fixed obligation also increases and if the firm is in its hard times then this fixed obligation will create the situation of financial distress and if its operating income is insufficient to cover interest charge then stockholder will have to make up the short fall and if they can't the firm may be forced into bankruptcy. So the capital structure decision should be design in proper manner.

Some financial analyst argue that capital structure can increase the value of firm if more and more leverage is added, where some believe that the value of the firm can be maximize by adopting an optimal capital structure. The relationship and impact of capital structure decision with the firm's performance and profitability were suggested in many theories, among them, MM theory (1958) and (1963), Agency cost theory (1976), and Trade off theory (1977) and Pecking order theory (1984) are famous.

Manufacturing sector refers to all the business activities involved in fabricating, assembling the components in finished products on a fairly large scale, or the activities of making things by industrial process. It is a key sector of all types of economy. The development of the manufacturing sector is crucial to attain prosperity, generate employment, alleviate poverty, promote trade and spur national growth.

In every economy, there are two types of environmental factor that are responsible for the success and failure of a business entity. Nepalese manufacturing sector is not different. It is composed of its internal and external environment. External environment constitutes the government policies, socio economic conditions, political system and geographical structure which are out of business concern. On the other

hand internal environment is situated within the organization and under the control of management. Financial aspect of the manufacturing concern is important part of internal environment.

Nepalese manufacturing company are not performing well. Many large company have been closed and some are about to close. Almost companies are able to earn profit but the margin of profit is very low. This sector has uneven growth over the years due to the longstanding weakness in the adoption of new technology, poor infrastructure, and shortage of power, stalled political process, difficult trading condition, global competition and global economic downturn.

Moreover manufacturing establishment in Nepal is primarily labor intensive and local raw material based. Government of Nepal has undertaken a number of policy initiatives and regulatory measures to strengthen the manufacturing sector for decades.

In the context of underdeveloped country like Nepal, industrial development plays a vital role to raise the standard of living of Nepalese people. Nepal continue to be a predominantly agriculture economy with around three fourth of its work force employed in the agricultural sector. Yet the method of agriculture is traditional, so agriculture cannot be fruitful unless there is a development of industry for agricultural development.

At Nepal stock exchange, there are eighteen real sector companies listed under the manufacturing and processing company. All the companies are not regularly traded in market. Only the companies regularly traded in line with the regulation of NEPSE are listed. Brief introduction of the companies which are taken for the sample are as follows:

(i) Bottlers Nepal Limited (Balaju)

Bottlers Nepal Limited is a public limited company with operation spanning over 38 years. This company was founded in 1979 and is based on Kathmandu Nepal. Bottlers Nepal limited operates a bottler of Coca cola range of soft drinks. Bottlers Nepal limited operated as a subsidiary of Coca cola Singapore Pte.Ltd.

This company is currently producing coke, sprite, and fanta and kinley soda. Coca cola Sabco group, one of the group companies, coca cola (Sabco) Asia ltd,

incorporated in Dubai, UAE is the major shareholder of the company and holds 54.16 %, Gorkha brewery Pvt. Ltd a corporate body registered in Nepal holds 22 % shares and the remaining 18.4 % shares of the company is with the Nepalese general public .The head office of this company is at Balaju, Kathmandu

(ii) Unilever Nepal Limited

Unilever Nepal Limited is a subsidiary company of the blue chip public limited manufacturing companies operating in Nepal. The Unilever Nepal limited manufactures personal care and hygiene products like soap, shampoo, toothpaste and detergents for domestic market as well as for export. Some of their famous products are sunsilk, lux, fair and lovely. This company is listed in NEPSE and its stock symbol is UNL.

The company' corporate office is located at the heritage plaza II C and D block, Kamaladi Kathmandu and its factory is situated at Basamadi, Hetauda.

(iii) Himalayan Distillery Limited

Himalayan distillery was established in 1985 A.D. as a private company registered under company act 2021, later on converted to public limited company in 2000. It has established itself as a leading alcoholic beverage manufacturing company. It offers wide varieties of best alcoholic products that come through its high tech process.

It has over 11.76 million liters of production capacity annually. It has been continuously engaging and persuading distributors, wholesalers and retailers by offering lucrative offers from time to time. It is located in Jawlakhel, Lalitpur.

1.2 Statement of the Problem and Research Questions

The capital structure decision is an empirical concern as well. Thus numerous scholarly papers examine the financing decision of public companies theoretically and empirically. Most of the studies undertaken in the field of corporate finance have tried to examine capital structure considering various determinants under different conceptual framework. However the conclusion of these studies is contradictory as the sample characteristics, methodology and data set used in the studies are different.

According to MM approach capital market are perfect. Under its assumption, there is a rational investor, homogeneous expectation, frictionless market and no corporate taxes. Thus this theory states that capital structure does not have any impact on the firm's profitability.

Trade off theory of capital structure states that a value maximizing firm will consider the tradeoff between the tax shelter provided by debt financing and cost of financial distress, meaning that firms select optimal capital structure by examining the net tax advantage of debt financing by comparing the advantages and disadvantages of debt financing (Barges, 2009).

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 are ruined by the excess burden of the cost of debt capital.

Generally every company has its own policy in determining capital structure for operating business activities. Some of the business use only equity capital, some use only debt capital and some combine both equity and debt capital. Therefore determination of capital structure largely depends upon the company policy and cost of capital. Most of the companies make low cost capital structures.

Unfortunately, there is no model for determining capital structure in the Nepalese business organization. In the initial period of any company, they want to use only equity capital and do not want to include debt in their capital due to high interest charges.

Many studies have been carried out in this topic in developed countries where economic conditions are stable. But in case of developing economy like Nepal where business environment is not stable there is frequent change in government policy, inflation rate is high, currency exchange rate is high, where company has to pay taxes on its revenue, the theory of MM approach may not hold true. So this study is carried out to find out whether the capital structure of the company affects the performance of the company.

The choice of the capital structure is a critical point for the firm's financial decision makers since it affects earnings before interest and tax and leads to change in market value of the firm and share value. The capital structure concept has been the subject of controversy since the publication of Modigliani and Miller classic paper in 1958. Since then a huge body of financial literature exists relaxing many of the assumptions of Modigliani and Miller paper. From that several competing theories of capital

structure were formed such as trade off theory, agency theory and pecking order theory.

In addition agency cost theory explains that one of the problems that cause conflict between managers and shareholders is free cash flow. Those companies having high profitability and free cash flow available in the hands of manager increasing of debts can be used as a tool of reducing the scope for managers until the resources of a company may not be misuse as a result of their individual interest (Weston and Brigham, 1996).

The trade off theory and agency cost suggests a positive relationship of profitability to leverage. According to the trade off theory, agency cost theory, taxes and bankruptcy costs push more profitable firms towards higher usage of debt. In the agency model of Jensen and Meckling (1976) Easter book (1984) and Jensen (1986), higher leverage helps to control agency problem. To avoid agency problem, profitable firms would employ higher leverage in order to pay out more cash (Weston and Brigham, 1996).

Furthermore Pecking order theory states that firms have a perfect hierarchy for financing decision that is first choice is to use internal financing next issues debt financing if internal source fund is not sufficient to finance the firm and equity finance should be the last resort of financing the firm.

According to the pecking order theory there is a positive relationship between growth and leverage since a high growth implies a higher demand for funds and *ceteris paribus*, a greater reliance on external financing through the preferred sources of debt. (Pandey, 2001). Thus pecking order theory suggests that the higher proportion of debt in the capital structure of the growing companies than that of stagnant one. Therefore, in order to achieve the above stated objective the research is sought to answer the following question;

1. What is the current status of capital structure of listed manufacturing companies in Nepal?
2. What is the firm's profitability?
3. What is the relationship between capital structure and firm's profitability?

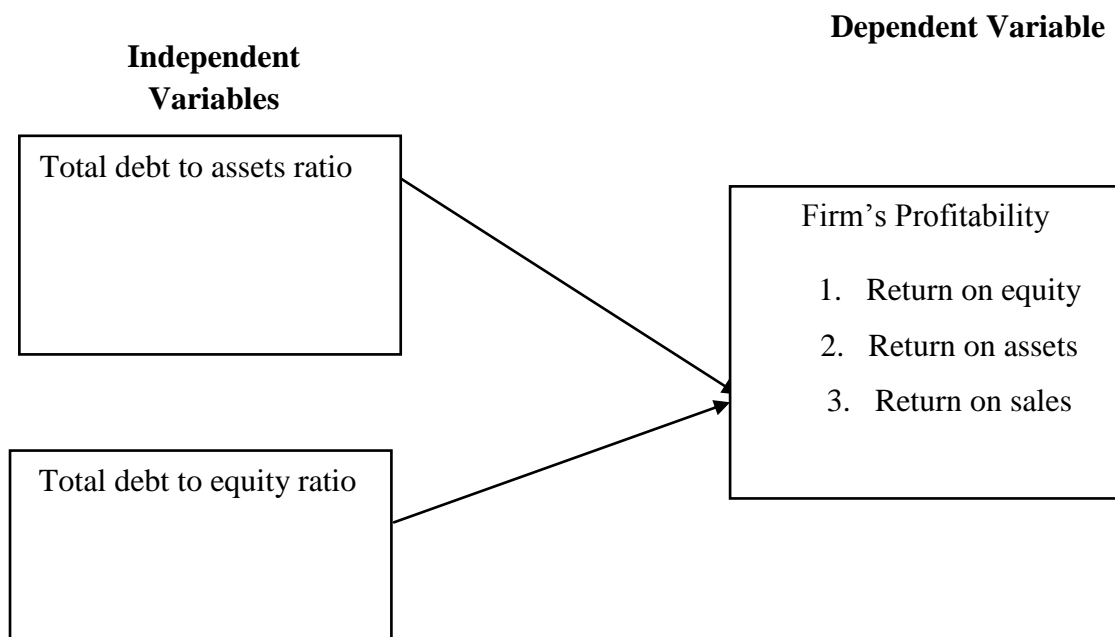
1.3 Objectives of the Study

The main objective of this study is to assess the impact of capital structure on the profitability of the manufacturing industries in Nepal. Furthermore the study aims to achieve the following specific objectives:

1. To determine the current status of capital structure of listed manufacturing companies in Nepal.
2. To assess the firms' profitability.
3. To identify the relationship between capital structures and the firms' profitability.

1.4 Conceptual Framework

Conceptual Framework of the Capital Structure Decision



The term capital structure means the proportion of different types of securities issued by a firm. The optimum capital structure is the set of proportion that maximize the total value of the firm. Capital structure refers to a company's sources of financing and its economic attributes. Capital structure is the equity and debt financing of company. Capital structure, some times known as financial plan, refers to the composition of long-term sources of funds, such as debenture, long-term debt, preference share capital and equity share capital including reserve and surplus (i.e. retained earnings).

1.5 Significance of the Study

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 formulate future strategies to do much better in their horizon.

Not only to the sampled companies, this study will also be beneficial to the other companies in the population. Further, the concerned scholars, academicians, investors, professionals may also be benefited from this study. This study will also help to inform the decision makers about the importance of capital structure management for their further success.

In Nepal, there are very little amount of researches and studies to go through regarding capital structure and its influence on firm's performance in case of manufacturing companies. It is important for the financial managers to make decisions regarding the investment or application or recruitment of the capital fund of or for the company as it determines the capital structure of the company. Capital structure is one of the important aspects of the company since it affects the company's profitability and determines the survival of the company in a long run.

The findings and recommendations of this research help the investor in making proper investment decisions. It also helps the financial managers to make important strategic decision on the debt-equity mix of the company. Academically, it make a value addition for the researchers as it would serve as base of further research on capital structures and its impact on profitability of the manufacturing industries.

The result of this study provide financial guidance to managers, business consultants and investors with the necessary techniques of combining debt and equity and being able to maximize company performance.

1.6 Limitation of the Study

The study is carried out using few number of manufacturing companies listed in Nepal stock exchange because a complete coverage of all manufacturing firms is not possible due to time and financial constraint.

1. There are total eighteen manufacturing companies listed on NEPSE out of which only three manufacturing companies are selected.

2. The study is based on only five years data of company annual report from 2069/70 to 2073/74.
3. This study concentrates on the impact of only capital structure on the firm's profitability of three manufacturing companies.
4. The result obtained by this study is based on only three manufacturing companies thus this study may not be applicable to all manufacturing companies.
5. This study is based on secondary data.

1.7 Organization of the Study

This research is organized into five chapters. They are

Chapter I Introduction

This chapter deals with the general background focus of the study, statement of the problem, objectives of the study, significance of the study, limitation of the study and chapter plan.

Chapter II Review of Literature

This chapter includes the review of books, journal, articles, reports, theses, researches and other relevant materials related to this topic.

Chapter III Research Methods

It includes research design, sources of data, population and sample, data collection, processing and analyzing procedures and statistical tools.

Chapter IV Results

This chapter analyzes and evaluates secondary data of listed manufacturing company with the help of different tools and techniques.

Chapter V Conclusion

This chapter deals with summary and conclusion of the study and recommendation is given to the concerned organization for its welfare. References and appendix have also been incorporated at the end of the study.

CHAPTER II

LITERATURE REVIEW

In this chapter the review of various books, research works and articles have been reviewed to make clear concept about the topic as well as to recall the previous studies made by the various researcher in the field of capital structure. Capital

structure has lots of arguments and counter arguments in literature among scholars and researcher.

This chapter is divided into two sections where one section covered definition of key concept and clarification of theories related with the study topic called theoretical literature review while the other section covered the idea of other researcher presented in their research report, journal and books related to this study called empirical literature review.

2.1 Conceptual Review

2.1.1 Concept of Capital Structure

The term 'capital structure' means the financial planning according to which the assets of an industry are furnished. "The term 'capital structure' means the proportion of different types of securities issued by a firm." The optimal capital structure is the set of proportion that maximized the total value of the firm (Weston, & Copeland, 1998).

Capital structure of a company consists of debts 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." (Wipperfurth, 1996). "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 or by ordinary shares carrying membership of the company and dividends at rates which depend upon profits" (Francis, 2002).

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

Capital is a scarce resource and much more essential to maintain smooth operation of any firm. The available capital and financial resources 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 firm can raise required fund by issuing various types of financial instruments. Investors and creditors being the key suppliers of capital, they hold greater 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 is uncertain 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 even though have the priority in payment of dividend before common shareholders but after debt holders (Barges, 2009).

Different sources of financing are used to finance current and fixed assets. The sources of financing may be short-term or long-term, but they are usually grouped in to debt and equity which represent the firms' financial structure. If leverage affects the cost of capital and value of the firm, an optimum capital structure would be obtained. The optimal capital structure is the combination of debt and equity that maximize the total value of the firm or minimize the weighted average cost of capital.

The capital structure is defined as the mix of debt and equity that the firm uses in its operation. The capital structure of a firm is mixture of different securities, in general a firm can choose among many alternatives capital structure (Abor, 2005).

Capital structure is the combination of long term sources of fund used in the business. It represents proportionate mix of various long term sources of financing. The long term sources of financing include long term debt, preferred stock and common stock including retained earnings.

2.1.2 Company Profitability

This is an outcome or result of company business operation and this result is the Company profit and performance is the direct result of managing various economic resources and of their efficient use within operational, investment and financing activities.

Profitability has been always given a topmost priority in the finance and accounting literature because it is the major goal of financial management as every firms aims to maximize their profit. In fact it is considered as the moral obligation to obtain the best possible return on investment for its stock holder (Jensen, 2002).

A business that is not profitable cannot survive only that business that is highly profitable has the ability to reward its owner with the large return on their investment. Profitability is the organization's ability to generate income and its inability to generate income is a loss. He further asserts that if the income generated than the input cost that is simply profitable but if the incomes are less than the input cost it reflects poor performance (Hall & Weiss, 1967).

Performance of firms is vital importance for investor, stakeholder and economy at large. For investor the return on their investment is highly valuable and well performing business can bring high and long term returns for their returns. Further more financial profitability of a firm will boost the income of its employees, bring better quality products for its customer and have better environment friendly production unit. Also more profit will generate employment opportunities and enhance the income of people.

2.1.3 Review of Capital Structure Theories

The capital structure of financial leverage decision should be examined from the point of its impact on the value of the firm. However there are two conflicting theories to show the relationship between the capital structure and value of the firm. Traditionalist believes that capital structure decision affects the value of the firm whereas Modigliani and Miller say capital structure does not affect the value of firm. In a broad sense, there are generally two theories relevancy theory and irrelevancy theory. Relevancy theory states that the combination of debt and equity decision affects the value of the firm; it means that the value of firm differs as per the change in combination of debt and equity. However irrelevancy theory states that combination of debt and equity decision doesn't affect the value of the firm.

Net Income Approach

It is also called relevancy theory of capital structure because the capital structure decision is relevant to the valuation of the firm. This theory suggests that change in leverage ratio affects the overall cost of capital and market value of the firm. There is no change in the attitude of the both stockholders and debt holders regarding their required rate of return in response to a change in debt equity ratio of the firm

According to this theory cost of debt is greater than cost of equity and cost of debt and cost of equity are fixed so when the percentage of debt increases, cost of equity decreases and value of the firm also increases.

The cost of debt capital and cost of equity capital remain unchanged when leverage ratio varies. Due to the limited degree of risk the debt holder's required rate of return is relatively cheaper than that of equity. In addition at constant cost of equity and cost of debt, the overall cost of capital declines with the increased proportion of debt in the capital structure or increment of debt results, lower overall cost of capital and higher value of the firm.

The net income approach is based on following assumption

1. Cost of debt is less than cost of equity ($k_d < k_e$)
2. The use of debt does not change the risk perception of investors.
3. There is no change in cost of debt and cost of equity.

According to this assumption, the increases in debt ratio magnify the earning per share. In the given capitalization rate, the increase in EPS makes an increase in market price of stock

$$MPS = \frac{EPS}{K}$$

Where,

MPS = Market price of stock

EPS = Earnings per share

K_e = Cost of equity.

In other words, the increase in debt ratio cause decline in overall cost of capital and decrease on overall cost of capital enhances the market value of the firms or company i.e.

$$V = \frac{NOI}{K_o} = \frac{EBIT}{K_o}$$

Where,

V = Market value of the firm

NOI = Net operating income

K_o = Overall cost of capital

Thus, a firm can maximize its market price of stock or value by achieving the optimal capital structure through judicious mix of debt and equity.

Net Operating Income Approach

It is also called irrelevancy theory of capital structure because capital structure decision is irrelevant to the valuation of the firm. It implies that the total value of the firm is unaffected by its capital structure. Any change in leverage ratio will not lead to any change in overall cost of capital as well as value of the firm

According to this approach cost of debt is greater than cost of equity and cost of debt is fixed but cost of equity is not fixed so the value of the firm and overall cost of capital remains constant. This approach suggest that a change in capital structure cannot change in value of the firm this is due to the fact that if the amount of debt is increases in total capital the shareholder would be subject to more risk and as a result the equity shareholder will demand more return for a higher risk undertaken by them. This will result in the higher cost of equity. The advantage of lower cost of debt will be counter balance by the higher cost of equity due to such balancing effect overall cost of capital would remain same and value of the firm will remain same. Net operating income has following assumptions (Jensen, 2002):

1. Cost of debt is assumed constant.
2. The change in the proportion of leverage affects the required rate of return on equity as financial risk changes.
3. Cost of equity changes linearly with the change in leverage
4. Overall cost of capital remains constant.

This approach suggest that both the earning per share and equity capitalization rate increases on same proportion with the increasing debt ratio, so the market price of stock remain unchanged on any leverage. The total market value of the company also remains unchanged, since as previously said that the net operating as well as overall

cost of capital does not vary with the leverage. The market value of the company is obtained as below:

$$V = \frac{\text{NOI}}{K_o}$$

Where,

V = Value of the firm

NOI = Net operating income

K_o = Overall capitalization rate.

At the extreme degree of financial leverage, hidden costs become very high and hence the firms 'cost of capital and its market value is not influenced by the use of additional cheaper debt fund (Chakraborty, 1977).

Thus this approach suggests that there is no optimal capital structure.

Traditional Approach

Ezra Solomon developed the traditional approach. It is also known as intermediate approach between Net income approach and Net operating approach. It assumes that there exists optimal capital structure and that a firm can increase its total value through the optimum use of leverage (Van Horn, 1999).

This is the combination of net income approach and net operating income approach. This approach suggests that if a proportion of debt is increased the total capital certain level overall cost of capital tends to decrease. If the proportion of debt is increased beyond the stated level and up to the next level the overall cost of capital would remain constant. If the proportion is increased for other the overall cost of capital tends to increase because of very high cost of debt.

According to this approach a firm can initially lower its cost of capital and increase its total value by using debt, though the investors raise the required rate of return on equity, the increase in the cost of capital does not offset entirely the benefit of using cheaper debt fund. As more leverage occurs, investors increasingly penalized the firms required equity return until eventually this effect more than offsets the use of cheaper debt funds (Aryal, 2017).

The assumptions of this approach are as follows:

1. Equity holders adjust their required rate of return proportionately for every unit of debt inclusion.
2. Debt holders do not really care for the level of debt inclusion and do not demand any premium for the leverage risk at least in the beginning.
3. The expected outcome of the behavior of equity holders is the benefit of cheaper debt financing causes the cost of equity and debt increases.

According to this approach, the manner in which the overall cost of capital reacts to change in capital structure can be divided into three stages (Friendman, 1959).

Stages I

The first stage of traditional approach begins with the introduction of debt in the total capital. Initially the cost of equity remains constant or rises slightly with the use of debt fund and it does not increase fast enough to offset the advantage of low cost debt. During this stage, the cost of debt remains constant or raises negligibly since the market views the use of debt as a reasonable policy. As a result the value of the firm will increase and overall cost of capitalization will fall with the increase in leverage. (Pandey, 2001)

Stage II

Once the firm reached certain degree leverage, further application of debt have a negligible effect on the value of the firm or the overall cost of capital. It is because increase in the cost of equity offset the advantage of low cost debt. Within the range of such debt level the value of firm will be maximum or the cost of capital will be minimum (Pandey, 2001).

Stage III

Beyond the acceptable limit of leverage, the value of the firm decreases with the leverage or the overall cost of capital increases with the leverage. This happens because the cost of equity increases by more than enough to offset the advantage of low cost debt (Pandey, 2001).

The overall effect of these three stages suggests that the cost of capital and value of the firm are the functions of leverage and there exist optimal capital structure.

Modigliani and Miller Approach

This approach is most widely accepted capital structure theory. In 1958, Franco Modigliani and Merton Miller established two propositions for the relation between a firm's capital structure, its market value and cost of capital. This approach is based on MM model without and with taxes.

1. Under MM approach without taxes

This theory is called capital structure irrelevancy theory, which means that in capital market without taxes, value of firm has not any effect on its capital structure. The argument is that the value of the firm depends on firms' earning and risk of its assets and not its capital structure which means value of levered firm is equal to value of unlevered firm.

This approach supports the relationship between leverage and cost of capital that is explained by NOI approach. It advocates that the values of the firm are not affected by capital structure and average costs of capital are also not affected by capital structure. It assumes that there are no transaction cost and no corporate tax. Under this approach value of firm will remain same no matter how is the proportion of debt and equity.

According to this approach value of levered firm is equal to the value of the unlevered firm. If the value of levered firm is higher than the value of unlevered firm or vice versa it will be compensated by arbitrage process i.e. it will reach in balance through the arbitrage process.

The MM cost of capital hypothesis can be best expressed in terms of their proposition I and II. However the following assumption regarding the behavior of the investors and capital market, the action of the firm and tax environment are crucial for the validity of MM hypothesis.

1. Securities are traded in perfect capital market.
2. Firms can be grouped in the homogenous risk class.
3. Dividend payout ratio is 100 percent
4. Corporate income tax doesn't exist.
5. Investors have homogenous expectation about expected future corporate earnings also the riskiness of their earnings.
6. The variance of return may differ from investor to investor.

Proposition: I

The MM proposition- 1 states that the market value of a firm is independent of its capital structure. It is because the value of the firm is determined by capitalizing the net operating income at a rate appropriate for the firm's risk class. It is identical to the NOI approach. The value of firm is obtained by

$$V = \frac{\text{NOI}}{K_o}$$

K_o

V = Value of the firm

NOI = Net operating Income

K_o = Risk Adjusted Capitalization rate

Proposition: II

The proposition II states that the cost of equity rises proportionately with the increase in the financial leverage in order to compensate in the form of premium for bearing additional risk arising from the increased leverage. In other words, for any firm either levered or unlevered in a given risk class the cost of equity is equal to the constant average cost of capital plus a premium of financial risk which is equal to debt equity ratio times the spread between constant average cost of capital and interest rate. It can be expressed as follows:

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

Where,

K_e = Cost of equity

K_o = Average cost of capital

K_d = Cost of debt or interest rate

D/E = Debt equity ratio.

2. Under MM approach with taxes

This theory stated that as company's debt ratio increases and pushes the cost of equity capital up but because of the corporate taxes subsidies of the cost of debt then the overall cost of capital falls. This model expand the first idea by including the risk of a firm to become bankruptcy after raising huge amount of fund using debt, they insisted

that using more debt increase the threat of bankruptcy for a company. Cost of equity ...of a company goes up because of a higher risk of using debt that the company has and shareholders perception about the future of the company on which they have invested. It can also be shown in proposition I and II.

Proposition I

As per proposition – I, the value of a firm is determined by capitalizing the net operating income before tax at a rate that is appropriate to its risk class. Where tax is considered, interest payment on debt makes a tax saving since interest is deducted from net income for the tax calculation. Thus the value of levered firm will be more by the present value of the debt tax shield than that of unlevered firm. In other word value of levered firm is equal to the value of the unlevered firm plus present value of debt tax shield. This can be shown in following equation

$$V_L = V_u + T \cdot B$$

Where,

V_L = Value of levered firm

V_u = Value of unlevered firm

T = Tax

B = Amount of Debt

Proposition II

It states that the cost of equity of levered firm rises with leverage ratio to compensate for the additional leverage risk while the cost of debt remain constant because the debt is assumed to be risk less (Pradhan, 1992). Accordingly the cost of equity is calculated as follows:

$$K_{el} = K_{eu} + (K_{eu} - K_d) (1 - T) D/E$$

Where,

K_{el} = Cost of equity of levered firm

K_{eu} = Cost of equity of unlevered firm

K_d = Cost of debt

T = Tax rate

D/E = Debt Equity ratio

It indicates that cost of equity increase with D/E ratio. On the other hand the tax deductibility of interest on debt lowers the cost of debt but still remains constant irrespective of debt – equity ratio. This reduction in the cost of debt as a result of tax saving outweighs the increased cost of equity, forcing the average cost of capital to

decline with every unit of additional debt financing. As a result the weighted average cost of capital of the firm does not remain unchanged when there is a change in D/E ratio. This can be seen in following equation.

$$K_{ol} = K_{el} (E_s / V) + K_D (1-T) D/E$$

Where,

K_{ol} = Overall cost of capital of levered firm

K_{el} = Cost of equity of levered firm

E = Equity amount

V = Total Value

T = tax rate

D/E = Debt equity ratio

Thus it can be concluded that MM Theory with taxes is identical

To NI approach, this says that the value of the firm increases with every additional unit of debt financing.

Trade off theory

In the trade-off theory firms weigh the costs of borrowing against the benefits of debt financing. The cost of borrowing includes interest payments and bankruptcy cost. The benefit of debt financing includes the tax deductibility of interest payments and the firm is equal to the value of unlevered firm plus the value of side effects, which include the tax shield and the expected costs due to financial distress (Brigham & Ehrhardt, 2005).

When a firm has zero or low levels of debt financing, the possibility of bankruptcy is low and immaterial. It is argued that the extensive use of debt increases the chances of bankruptcy of which creditors demand extra risk premium. He suggested that firms should not use debt beyond the point where the cost of debt becomes larger than tax advantage. As debt financing increases, the expected bankruptcy related costs increases and reduces the tax benefits of the debt

This theory states that there is an advantage for corporation to be finance with debt because of the balance between the tax benefit gained by corporation and cost of bankruptcy due to the risk of taking on more debt. The tax benefit occurs due to the interest deducted from before interest and tax earnings, which brings about tax advantage because taxable income become less and hence corporate tax payment for the company. The major benefit of debt financing is that it provides a tax shelter;

nevertheless the main disadvantage related with debt financing is the risk of bankruptcy (Brigham & Ehrhardt, 2005).

According to the trade off theory the optimal capital structure is the point where the marginal tax shelter is equal to marginal bankruptcy related costs. Therefore firm would prefer debt over equity up to the point where the probability of financial distress and bankruptcy costs starts to be important.

It was suggested that this theory could be applicable for larger firms which are more likely able to generate high profits but for the small firms they are less likely to have choose debt financing for the tax shield advantage (Van Horne, 2000).

On the other hand, firm with a stable revenue stream and sound asset base facing a lower risk of bankruptcy. This company can apply a moderately higher level of leverage in their capital structure.

Pecking Order Theory

Pecking order theory states that companies priorities their source of financing, first preferring internal financing then debt lastly equity as a last resort. It states that the firms have a prefer hierarchy for financing decision. The highest preference is to use internal financing before resorting to any form of external fund. Internal firm incur no floatation cost and require no additional disclosure of proprietary financial information that could lead to more severe market.

If the firm has to use external fund the preference is to use following order of financing sources

1. Debt
2. Convertible securities
3. Preferred stock
4. Common stock

Internal financing is mostly suggested by this theory because it is less costly as compared with external financing of debt and equity. Debt finance increases cost to the firms in terms of interest expenses while equity finance give out firm's authority.

Siro (2013) argued that firms would prefer internal source of finance as compared to expensive or costly external finance and therefore profitable firms that generate earnings are expected to use less debt than those that do not generate earnings.

The pecking order theory suggested a substitute interpretation of why companies select particular capital structure, famed as the pecking order theory. The pecking order theory is a priority order theory, which explains how companies select to get new funding for their future activities and growth. Asymmetric information between managers of a company and external investors is the key intrinsic supposition of the pecking order model. This means that management, which is supposed to act in the benefit of current shareholders, has knowledge of the true value of the existent assets and growth chances, while external investors are capable only to estimate these values and this called the asymmetric information. Hence, administration's actions related to funding are perceived as an indicative about the true value of the company.

When the internal financing are not enough to finance the proposed investment then company resort to debt financing. The next way of financing in the hierarchy is the issuance of preferred capital. The least preferred mode of financing is issue of equity. This is only reliable as a last option. Pecking order theory is a behavioral approach to capital structure.

Agency Cost Theory

Agency theory focuses on the behavioral relationship between the owners (principals) and those others (agents) who are engaged by the owners to perform tasks on behalf of the principal. Managers may resist high level of leverage if they feel that it places their jobs and income at risk .On the other hand shareholders, who can diversify away any company specific risks, prefer riskier projects.Neilson, (2004) suggests that management might pass up positive net present value projects when these benefits accrue primarily to bondholders. Other agency conflicts between bondholders and shareholders include asset substitution and claim dilution (Smith &Warner, 2009).

Agency cost theory states that leverage companies are better for their shareholders because debt level can be used as a monitoring tool for managers hence maximizes company performance by lowering agency cost. A significant amount of research during the last two decades has been dedicated to models in which capital structure is determined by agency cost. Agency cost is arising due to the conflict of interest.

Firstly conflict of interest between shareholders and manager begins because manager is not allowed to 100% of residual claims. Consequently the managers do not capture the entire gain from the profit enhancement activities but they do accept the entire

cost of these activities. The manager may hence put in less effort in value enhancement activities and may also undertake to maximize their private perquisites. (Jensen, 1986)

Secondly conflict also comes up between the interest of debt holders and equity holders. If an investment financed with debt yield high return equity holder are allowed to the gains. On the other hand if the investment fails, the debt holder experiences the losses due to limited liability of equity holder. As a consequence, equity holder may gain from investing in very risky project even if they are value decreasing value.

A firm can reduce the agency costs by increasing its reliance on debt financing. This reduces the need for equity financing, and therefore, avoids the associated agency costs. However, a corporation's ability to increasingly rely on debt financing is limited due to higher agency costs of debt resulting from the chance of the firm falling into financial distress. In addition to financial distress costs, claims of new debt holders are likely to dilute the claim of existing shareholders, and therefore require higher rates of return that are reflected in the firm's higher cost of capital.

Bankruptcy cost and capital structure

Various theories of capital structure are not attended to the existence of bankruptcy cost. In a perfect capital market, it is assumed that all company assets can be sold on their economic value without acquiring cost of liquidation. Nevertheless in actual situation such a liquidation cost, legal fees and administration are significant (Copeland and Western, 1992). Moreover assets may be sold at distress price below their economic value. Thus its net realizable value is less than economic value which is a dead weight loss to the system.

A company with leverage has a larger profitability of bankruptcy than firms with no leverage. Hence the cost of bankruptcy for firms with high leverage is higher is higher. However the cost of bankruptcy is not a linear function of leverage. When a company employs a low level of leverage in capital structure, bankruptcy risk is not considerable thus there is no influence of bankruptcy cost on corporate valuation until the threshold is reached. Conversely after a threshold level of leverage, bankruptcy becomes an existent threat (Copeland and Western, 1992).

Asymmetric Information

This is based on the principle that the managers have personal information about the characteristic of the flow back in a company or an investment opportunity. Thus capital structure is intended to reduce the inefficiencies caused by asymmetric information

Asymmetric information refers to the notion that firm insiders, typically the managers have better information than do market participants on the value of their firm's assets and investment opportunities. They further suggest that this asymmetric information has a great influence on the choice of capital structure. The greater the asymmetry in information between insiders and outsiders the greater the likely stock price reaction to a financing announcement.

If the company is funding new project by issuing equity, under pricing may be so strict that new investors capture more than the net present value of the new project, which result in a net loss to existing shareholder. In this case the project is rejected even though the net present value is positive (Chakraborty, 1977).

Signaling through Capital Structure

Some theories suggest that changes in capital structure have information content about the valuation of the firm. This theory gives explanation that capital structure changes are explicit signal about the firms valuation sent purposely by the management (Chakraborty, 1977).

An increase in the debt composition of the capital structure is commonly indicated as a signal of undervaluation of the firm. As the increased level of leverage is accompanied by a higher risk of bankruptcy increase level of debt implies the confidence of the management the future prospects of the firm.

On the other hand, an issue of equity is an indication that the firm is overvalued. The market interprets that the management has decided to issue equity because it is valued by the market. The market responds favorably to moderate increases in leverage and negatively to the new issue of equity (Chakraborty, 1977).

2.2 Review of Related Studies

Several empirical studies around the world have been conducted to measure the relationship between capital structure and company profitability

In most cases researcher come up with mixed results, some revealed a positive relationship between the variable other revealed the negative relationship while some

other shows the contradictory results between study variables. These type of result shows that the topic is still debatable hence it's high time to measure such relationship in Nepalese Manufacturing Company listed in Nepal stock exchange.

Ebaid (2009) studied the relationship between the different debt-equity combinations with company's performance. Multiple regression technique was used to find out the impact of debt policy on company's performance. Findings of the study reveal that both short-term debt and total debt are negatively related by return on assets. Capital structure including total debt (TTD) is not significantly related with Return on Equity and Gross profit margin (ROE and ROA). Findings of the study reveal that ROA and firm performance are negatively related.

Gill (2011) studied regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the American service and manufacturing firms. A sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 – 2007 was selected. The findings of this paper show also a positive relationship between short-term debt to total assets and profitability, long-term debt to total assets and profitability, and between total debt to total assets and profitability in the manufacturing industry.

Kaumbuthu (2011) carried out a study to determine the relationship between capital structure and return on equity for industrial and allied sectors in the Nairobi Securities Exchange during the period 2004 to 2008. Capital structure was proxy by debt equity ratio while performance focused on return on equity. The study applied regression analysis and found a negative relationship between debt equity ratio and ROE.

Odita (2012) used regression and Pearson correlation to analyze the impact of capital structure on firm performance in Nigeria. He used performance measure of return on assets and return on equity while capital structure measures were debt ratios and controlling variables of assets turnover, firm, size, age, asset tangibility and firm growth opportunity. His study results indicated a negative relationship and significant relationship between performance measure of return on assets and equity against debt ratio.

Shubita (2012) measured the relationship between capital structure and profitability of Jordan companies. The researcher used correlation and multiple regressions between

variables to reach the intended results. The researcher used ROE as performance variable against capital structure variable of short term debt to assets as independent variable. The study results showed a negative relationship between debt finance and profitability. Their findings implied that an increase in debt position is associated with a decrease in profitability of companies thus the higher the debt the lower the profitability of the firm. The researcher used only one performance measure of ROE to come up with conclusion.

Abbasali (2012) in Tehran used person correlation and multiple regression models to test the relationship between independent variable of debt ratio against dependent variable of return on assets and return on equity. Researcher also used controlling variables of assets turnover, firm size and assets tangibility and growth opportunity as other independent variable of the study. The result of this study indicated a negative relationship between debt ratio and financial performance. Also result indicated a significant positive relationship between assets turnover, firm size and asset tangibility and growth opportunity with financial performance measure.

Tan (2012) investigated the relationship between financial distress and company performance on 277 companies from eight East Asian economies for the period of 1997-1998 during the Asian financial crisis. The findings from this study affirm that high-leverage companies are anticipated to perform less comparative to low-leverage companies which imply a higher level of leverage leads to a higher probability of financial distress and deteriorate performance. Additionally, the crisis increases the negative link between financial distress and company performance.

Salim & Yadav (2012) examined the influence of capital structure on company financial performance for the two hundred and thirty seven Malaysian listed companies over the period of 1995-2011 using panel data analysis. The researchers used four performance metrics namely, earning per share, return on equity, Tobin's Q and return on asset as dependent variables and three measures for capital structure as independent variables namely, short term debt divided by total assets, long term debt divided by total assets and total debt ratios, while Size and growth used as control variables. The findings indicate that company performance ROA, ROE and EPS, adversely influence on long term debt ratio (LTD), short term debt ratio (STD) and total debt ratio (TD), while growth positively affects on financial performance for all

the sectors. In addition, Tobin's Q has a positive and significant impact on short term debt (STD) and long term debt (LTD).

Miheal (2012) in listed firm in Romania, his result indicated that there was a contradictory as they delivered both in favor of positive correlation and in favor of negative correlation between capital structure and firms performance. Due to this conclusion, it was not clear whether capital structure influenced performance or not, for that case the further study on this relationship has to be conducted.

Zuraidah (2012) in Malaysia measured the relationship between the capital structure indicators of short term debt, long term debt and total debt against performance indicators of return on assets and return on equity. Researcher used panel data of fifty eight firms from 2005 to 2010. The results of the study indicated that only short term debt and total debt had a significant relationship with return on assets and other capital structure variables had a significant relationship with return on equity.

Bundala (2012) on his study on investigating whether Tanzania listed companies practice Pecking order theory, Agency cost theory or Trade off theory. His results of the study revealed that there is a little support for pecking order theory that predicts significant positive slopes for growth rate, liquidity, dividend payout and assets tangibility variables and negative significant slope for profitability variables.

Leon (2013) was about the impact of capital structure on financial performance of the listed manufacturing firms in Srilanka. He used a panel data of thirty listed manufacturing companies from 2008 up to 2012 to measure the relationship between the variables. The data were analyzed and hypotheses were tested using correlation and regression analysis. The finding of his study revealed that there is a significant negative relationship between leverage and return on equity at the same time the relationship between leverage and return on assets showed no relationship.

Nasreem (2013) also tested the relationship between firm's capital structure and financial performance in Pakistan using a sample of eighty three companies listed in Karachi Stock Exchange. Researcher used debt to equity ratio as a measure of capital structure while other ratio like EPS, Price earnings ratio, operating profit margin, ROA and ROE were used as process for firm performance. After analyzing data using regression model, researcher found that financial performance of a company was

significantly affected by their capital structure and their relationship was negative in nature. Also capital structure showed a negative relationship with company market value.

Toraman (2013) examined manufacturing companies in Turkey and discovered the negative relationship between short term debt to total assets, long term debt to total assets and return on assets. He also discovered no significant relationship between total debt to equity ratio and return on assets. Researcher used regression model to measure the relationship between capital structure and company profitability using a sample of twenty eight manufacturing industries.

Alowwad (2013) in Saudi Arabia used regression technique to measure the relationship between the variable of capital structure against variable of firm performance and found that all levels of debt ratios had inverse relationship with firm performance indicators of return of assets, return on equity and profit margin.

Alom (2013) analyzed the effect of debt and equity funding (capital structure) on the financial performance in Malaysia by employing multiple regression analysis. The researchers used a sample of one hundred and thirty over the period 2001-2010. The findings show an adverse and statistical significant relationship between capital structure and companies performance.

Jaffna (2013) analyzed the impact of capital structure on financial performance of the listed trading companies in Srilanka. He used companies data listed in Srilanka stock exchange during 2006 to 2010 and came up with following results. He used correlation analysis and revealed that debt assets ratio and debt equity ratio and correlated with gross profit margin, net profit margin, return on assets and return on equity at significance level of 0:05 and 0.1. Finally their results concluded a positive relationship between capital structure and financial performance.

Chisti (2013) in listed companies in India discovered that debt to equity ratio of Indian listed companies was negatively correlated to profitability ratio. This empirical evidence shows only the negative relationship between the variables without showing the other sources of finance which is mostly preferred by Indian listed companies which might prove that applicability of capital structure theories.

Lavorskyi (2013) in Ukraine conducted a study on the impact of firm performance in Ukraine. Researcher used regression to measure the relationship between capital structure variable of leverage ratio against performance variable of return on assets, total factor productivity and EBIT margin. After analyzing the relationship researcher found that firm leverage was negatively affecting firm performance.

Tailab (2014) in America used a sample of thirty energy American firms for a period of nine years from 2005 to 2013 to test the effect of capital structure on profitability of energy. American firms found the negative relationship between debt ratios and performance variable on return on equity and return on assets. Researcher used multiple regression method to analyze his study data where 10% of ROE and 34% were predicted by independent variables of short term debt, long term debt, and total debt to equity ratio

Mireku (2014) in Ghana listed companies revealed that firms financial performance have negative relationship with leverage and depend more in internal source of finance thus supporting pecking order theory.

Kayode (2014) in Nigeria conducted a study in the effect of capital structure on firm performance in Nigeria using the panel data of ten companies from 2003 to 2012. Researcher used descriptive and regression technique to test the relationship between performance variable of return on assets and return on equity against capital structure variables of total debt to total assets, total debt to equity. In his study results he revealed that capital structure has negatively related to firm performance.

Adesina et.al (2015), studied found that capital structure has been found to have impact on firm's performance. Bank consolidation in Nigeria has increased bank equity capital against debt. This study aims to determine the impact of post consolidation capital structure on the financial performance of Nigerian quoted banks. The study used profit before tax as a dependent variable and two capital structure variable i.e. equity and debt as independent variables. The sample for the study consists of ten Nigerian banks quoted on the Nigerian stock exchange. The required data and information for the study were gathered from the published annual reports. Ordinary least square regression analysis of secondary data shows that capital structure has a significant positive relationship with the financial performance of

Nigerian banks. The researcher suggests that the management of quoted banks in Nigeria consistently use debt and equity capital in financing to improve earnings.

Shah (2016) studied the impact of capital structure on firm performance using 25 cement companies listed on Karachi stock exchange during 2009 to 2013. Descriptive statistics results show a poor performance by cement companies, because about 64.51 percent of total assets of cement companies are financed by debt. Based on the correlation results this study finds a negative relation between debt to assets and firm performance variables (GPM, NPM, ROA & ROE). It also indicates a positive relation between debt to equity and firm performance variables (GPM & NPM), whereas negative relationship between debt to equity and firm performance variable. (ROA & ROE). Besides, regression results reveal that there is a significant impact of capital structure on firms performance. based on empirical literatures and findings the study concludes that there is a significant impact of capital structure on firms performance. Although business companies generally depend on the debt capital therefore financial analyst and managers should be cautious while using debt as a source of finance, since there exist almost negative relationship between capital structure and firms performance.

Bhattarai (2017) the main purpose of the study is to examine the effect of capital structure on the performance of manufacturing company listed at the Nepal stock exchange. Secondary data of eight manufacturing companies were obtained from the published annual report and financial statement of the respective companies covering the 10 years. The result of the multiple regression analysis shows that capital structure has a significant negative relationship with the performance of the Nepalese manufacturing companies. In addition to capital structure, the firm performance is significantly positively associated to the firm size but negatively associated to the tangibility.

2.3 Research Gap

The relationship between capital structure and profitability cannot be ignored because the improvement in the profitability is necessary for the long-term survivability of the firm. Because interest payment on debt is tax deductible, the addition of debt in the capital structure will improve the profitability of the firm. Therefore, it is important to

test the relationship between capital structure and the profitability of the firm to make sound capital structure decisions.

Many researchers who tested the impact of capital structure on firms' profitability came up with contradictory results. Some discovered positive impact while some discovered negative impact and some revealed there is no any impact of capital structure on firm's performance. Because of this controversial result, researcher gets the chance to do further studies on this topic by testing the relationship between capital structure and firms profitability.

The lack of a consensus about what would qualify as optimal capital structure in the service and manufacturing industries has motivated researcher to conduct this research. Also in Nepal, there are few research held on this topic so it has high time to analyze and compare the results with the capital structure theories and see whether there is any relation between capital structure decision and firms profitability using listed manufacturing companies in Nepal Stock Exchange.

CHAPTER III

METHODS

This chapter explains the capital structure management of Nepalese listed manufacturing companies. Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, population and sample, nature and sources of data, data collection procedure and data analysis tools and technique.

3.1 Research Design

This study attempts critical analyses of manufacturing companies listed in NEPSE. It also analyzes the debt and equity positions in capital investments of related companies. In order to achieve the predetermined objectives of the study, secondary data have been used. This study tries to make comparison and establish relationship between two or more variables. So the research design of this study is descriptive.

3.2 Population and Sample

There are eighteen real sector companies listed under the manufacturing and processing company. So the population for the study consists of all the manufacturing company listed in NEPSE. Out of them three manufacturing companies are selected as samples using convenience sampling method. They are:

1. Bottlers Nepal Limited (Balaju) – BNL
2. Himalayan Distillery Limited – HDL
3. Unilever Nepal Limited – UNL

All the companies are not regularly traded in the market. Only the companies regularly traded in line with the regulation of NEPSE is selected as a sample for the study.

3.3 Nature and Sources of Data

This study is related to the capital structure and its impact on the firm's profitability so this study rely on accounting and financial report, hence this study is based on the secondary data. The raw secondary data are modified to some extent for the study purpose. The major sources of secondary data are: Brochure of concerned companies, Nepal Stock Exchange (NEPSE), Security Board of Nepal and website of the

company. All the collected data and information are properly synthesized, arranged, tabulated and calculated to reach at the realistic analytical synthesized.

3.4 Data Collection Procedure

Annual reports are collected by visiting the respective company located within the valley. The official websites are also used to gather information about the firm. In addition researcher make telephone calls to the respective respondent to further explain the purpose of the study and request for the financial statement. The various related journal, magazines, newspaper, articles and theses were reviewed.

3.5 Data Analysis Tools and Technique

The main purpose of analyzing the data is to clarify the unprocessed data in order to draw the conclusion form them. The method of analysis employed in this study consists of two method i.e. financial tools and statistical tools. The analysis is done according to the pattern and usefulness of the data.

3.5.1 Financial tools

To evaluate the performance of any organization financial tools are very important. The financial tools employed in this study are leverage ratio, profitability ratio.

Leverage ratio evaluates a company's debt level. Leverage ratio looks at how much capital comes in the form of debt or assesses the ability of a company to meet financial obligation. The most common leverage ratios are the debt to assets ratio and debt to equity ratio. In this study following leverage ratio is calculated.

1. Debt to total assets ratio

The debt to total assets ratio in an indicator of financial leverage. It shows the percentage of total assets that were financed by creditors, liabilities, debt. It is calculated as

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

2. Debt to equity ratio

The debt to equity ratio is used to measure a company's financial leverage. It indicates how much debt a company is using to finance its assets relative to the amount of value represented in shareholders' equity. It is calculated as

$$\text{Debt to equity ratio} = \frac{\text{Total debt}}{\text{Share holders equity}}$$

Profitability ratios are class of financial metrics that are used to assess a business ability to generate earnings compares to its expenses and other relevant cost incurred during a specific period of time. It gives final answers about how effectively the firm is being managed. In this study following profitability ratio are calculated.

3. Return on Sales (ROS)

It is a profitability ratio in relation with sales. It measures the combine effect of debt management, assets management and overall efficiency of the firm to earn profit. It is the percentage of net profit to total sales. It is calculated as

$$\text{ROS} = \frac{\text{Net income}}{\text{Sales}}$$

4. Return on total assets (ROA)

This ratio indicates how profitable a company is relative to its total assets. Return on assets illustrates how well management is employing the company's total assets to make a profit. The ROA is calculated by comparing net income to assets and it is expressed in percentage.

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

5. Return on equity (ROE)

This ratio indicates how profitable a company is by comparing its net income to its average shareholder equity. ROE measures how much the shareholder earned for their investment in the company. The higher the ratio the more efficient management is in utilizing its equity base and better returns to its investors. It is calculated as

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

3.5.2 Statistical tools

This study used mixed statistical tools i.e. both descriptive and inferential statistics for the purpose of analysis of the data.

Descriptive statistics – various descriptive statistics such as average, standard deviation, coefficient of variation has been used.

Inferential statistics - Inferential statistics such as regression and correlation analysis is used to analyze the relationship between the dependent and independent variable and also for the identification of effects of independent variable on dependent variable. Multiple regression models is used to examine the impact of capital structure on firms profitability of listed manufacturing companies

Model Specification

For ROA

$$Y = C + \beta_1 TD_{i,t} + \beta_2 EQ_{i,t} + \epsilon_{i,t}$$

For ROE

$$Y = C + \beta_1 TD_{i,t} + \beta_2 EQ_{i,t} + \epsilon_{i,t}$$

For ROS

$$Y = C + \beta_1 TD_{i,t} + \beta_2 EQ_{i,t} + \epsilon_{i,t}$$

Where,

C = Constant Coefficient (intercept)

B = Slope Coefficient of Independent variables

i = number of firms (5)

t = Time period

ϵ = Error Term

Software used – The secondary data collected is analyzed with the help of SPSS software and MS excel.

CHAPTER IV

RESULTS

In this chapter the effort has been made to analyze capital structure and its impact on the profitability of the selected manufacturing company. For this major variables affecting capital structure are considered for analysis. The analysis of data consists of organizing, tabulating and assessing financial and statistical result.

4.1 Data Presentation and Analysis

4.1.1 Analysis of Total Debt and Shareholder's Equity

This ratio measures the relative claims of outsiders and owner over the firm assets. The total debt to equity ratio indicates the relative contribution of debt capital and equity capital fund to the total investment. A high ratio shows the larger share of financing by the creditors, as compare to that of owners, creditors prefers low debt-equity ratio

Himalayan distillery has employed short term debt, long term debt and equity capital. Similarly bottlers Nepal hold equity capital and short term debt in huge portion and a very small portion of long term debt. Likewise Unilever employ equity capital and both short term and long term debt in small portion.

The D/E ratio is an important tool for the financial analysis to appraise the financial structure of the firm. This ratio reflects the relative claim of creditors and shareholders against the assets of the firm.

Total debt to total shareholder's equity ratios of three manufacturing companies during the study has shown in the table 4.1.

The table 4.1 shows that a high debt equity ratio has equally serious implications from the firm's point of view also a high proportion of debt in the capital structure would link to inflexibility in the operation of the firm as creditors would exercise pressure and interfere in management. Secondly such firm would be able to borrow only under very restrictive term and conditions. Further it would have to face a heavy burden of interest payments particularly in adverse circumstances when profit decline.

Table 4.1
Total debt to shareholder's equity ratio

Company Name	BNL	UNL	HDL
Years			
2069/70	0.09	0.72	1.03
2070/71	1.25	0.58	1.17
2071/72	1.45	0.57	1.33
2072/73	1.77	0.53	1.68
2073/74	1.95	0.49	0.70
Mean	1.30	0.58	1.18
C.V	56%	15%	31%

Source: Calculate from SPSS Software

A debt to equity ratio of 1 would mean that investor and creditor have an equal stock in the business assets. A lower debt to equity ratio usually implies a more financially stable business and is considered less risky.

The debt to equity ratio of BNL ranges from the 0.09-1.95 with the average mean of 1.30 and coefficient of variation is 56%. Similarly the debt to equity ratio of UNL ranges from the 0.49-0.72 with the average mean of 0.58 and coefficient of variation 15%. Likewise the debt to equity ratio of HDL ranges from the 0.70-1.68 with the average mean of 1.18 and coefficient of variation 31%.

Here the lowest mean is that of UNL with the low coefficient of variation and BNL has the highest mean and highest CV. Since lower debt to equity is preferable UNL is more financially stable business among BNL and HDL.

4.1.2 Analysis of Total Debt and Total Assets Ratio

This ratio is computed by dividing total debt of the firm by its total assets. The total debt of the firm comprises long term debt plus short term debt while total assets consist of current assets and fixed assets. It shows the percentage of total assets that were financed by creditors, liabilities, debt.

If total debt to assets equals 1 it means that the company has the same amount of liabilities as it has asset. A company with a total debt to assets of greater than 1 means that the company has more liabilities than assets. It is more risky A company with a

total debt to assets less than one shows that it has more assets than liabilities and could pay off its obligation by selling its assets if need arises. This is least risky

The total debt to total assets ratio of three manufacturing companies during the study has been shown in table 4.2.

Table 4.2
Total debt to total assets ratio

Company Name Years	BNL	UNL	HDL
2069/70	0.48	0.42	2.12
2070/71	0.56	0.37	1.77
2071/72	0.61	0.36	0.64
2072/73	0.64	0.34	0.68
2073/74	0.60	0.33	0.42
Mean	0.58	0.36	1.13
C.V	11%	10%	68%

Source: Calculate from SPSS Software

The table 4.2 shows that the debt to total assets ratio of BNL ranges from the 0.48-0.64 with average mean and coefficient of variation of 0.58 and 11% respectively. Likewise the debt to total assets ratio of UNL ranges from the 0.33-0.42 with the average mean of 0.36 and coefficient of variation of 10%. Similarly the debt to total assets ratio of HDL ranges from the 0.42-2.12 with average mean of 1.13 and coefficient of variation of 68%.

Among these three companies, UNL has the lowest mean and CV whereas HDL has highest mean with highest CV. Company with low total debt to assets BNL is preferable.

4.1.3 Return on Equity (ROE)

Return on equity measures the profit of shareholders from their investment. ROE can be given in table 4.3.

Table 4.3
Return on equity

Company Name Years	BNL	UNL	HDL
2069/70	17.82	205.49	12.02
2070/71	12.80	258.67	14.04
2071/72	(36.78)	285.72	16.06
2072/73	51.18	363.98	13.03
2073/74	0.86	480.29	21.21
Mean	9.18	318.83	15.27
C.V	346.06%	33.51%	23.83%

Source: Calculate from SPSS Software

The table 4.3 shows that condition of UNL for the study period, where net profit is increasing trend so ROE also in increasing trend. In the F.Y. 2069/070, ROE is 205.49, which increased by 53.19% and reached to 258.67 in the F.Y. 2070/071. Similarly, ROE for the F.Y. 2071/072 and 2072/073 and 2073/074 i.e. 285.72, 363.98, 480.29 respectively. The average ROE is 318.83 for the company. It has better ROE other selected manufacturing companies.

In the FY 2069/070, the ROE for BNL is 17.82. The ratios for the FY 2070/071, 2071/072, 2072/073 and 2073/074 are 12.80, (36.78), 51.18 and 0.86% respectively. ROE is negative in the FY 2071/072 in the study period which means there is no return on equity. Other fiscal year it has positive ROE that is good for shareholders. The average ratio is 9.18% for the entire study period.

In the FY 2069/070, the ROE for HDL is 12.02. The ratios for the FY 2070/071, 2071/072, 2072/073 and 2073/074 are 14.04, 16.06, 13.03 and 21.21% respectively. ROE are positive all the year in the study period which means there is positive return on equity. The average ratio is (15.27%) for the entire study period.

4.1.4 Return on Assets (ROA)

ROA measures the profitability as well as production power of assets in terms of generating sales revenue. The relationship between net profit and total assets give the return on assets.

Table 4.4
Return on Assets

Company Name	BNL	UNL	HDL
Years			
2069/70	3.56	17.21	15.41
2070/71	2.38	24.62	18.20
2071/72	(5.70)	26.70	12.50
2072/73	2.35	30.87	22.15
2073/74	2.36	36.95	28.37
Mean	0.98	27.27	19.33
C.V	209%	13%	32%

Source: Calculate from SPSS Software

The table 4.6 shows that the return on assets for UNL shows that the net profit and the ROA are in increasing trend in spite of the fact that the assets are fluctuating but net profit increasing. The ROA is 17.21% in the F.Y. 2069/070, which increased to 24.62% in the F.Y. 2070/071. The ratio increased to 26.70% in the F.Y. 2071/072; in the F.Y. 2072/073 is 30.87% it up to 36.95% in the FY 2073/074 only. The average ratio is 27.27% for the entire study period

The calculation of ROA for BNL shows that the net profit and the assets are in fluctuating trend in spite of the fact that the assets are increasing and decreasing. This clearly tells us that the productivity of the assets is not satisfactory for the company. The ROA is 3.56% in the F.Y. 2069/070, which decreased to 2.38% in the F.Y. 2070/071 and started decreasing subsequently. The ratio decreased to (5.70%) in the F.Y. 2071/072, it up to 2.35% in the F.Y. 2072/073 and to 2.36 in the year 2073/074. The average ratio is 0.98% for the entire study period.

The statistics relating to HDL are also positive, net profit of the company is in positive sign. The ROA is 15.41%, 18.20%, 12.50%, 22.15% and 28.37% in the F.Y., 2069/070, 2070/071, 2071/072, 2072/073 and 2073/074 respectively resulting an average ROA of (19.33%). This indicates the efficient productivity of the assets, because the company is in profit during almost all the years.

4.1.5 Return on Sales

Profit is the main 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 the sales revenue of the company; therefore, it is clearly known that the only way of increasing profit is the increase in sales volume. The table 4.5 illustrates the return on sale ratios for the manufacturing companies selected for the research.

Table 4.5
Return on Sales

Company Name Years	BNL	UNL	HDL
2069/70	0.057	0.13	0.02
2070/71	0.040	0.17	0.04
2071/72	(2.096)	0.14	0.06
2072/73	0.038	0.16	0.03
2073/74	0.029	0.17	0.21
Mean	(0.39)	0.154	0.08
C.V	247.35%	11.80%	102%

Source: Calculate from SPSS Software

The return on sale (profit margin) for UNL shows more or less constant net profit, sales revenue and profit margin. In the FY 2069/070, it is 0.13, which is increased by 0.17 in the FY 2070/071. It is decreased to 0.14 in the FY 2071/072, the profit margin decreased to 0.16 in 2072/073. It is increased by 0.17 in the FY 2073/074. The average ratio is 0.154 for the entire study period. It has ranged bet 0.13 and 0.17.

In the FY 2069/070, net profit margin of BNL is 0.057, which is decreased to 0.040 times in the FY 2070/071 and (2.096) in the FY 2071/072. The profit margin is increased by 0.038 in the FY 2072/073 and decreased by 0.029 in 2073/074. The average ratio is -0.39 for the entire study period. Over viewing at above calculation, it shows that there is more fluctuation in profit margin ratio.

The profit margin of HDL shows that sales are increasing trend during the entire study period. The net profit also decreased trend. In the FY 2069/070, net profit margin of HDL is 0.02, which is increased to 0.04 times in the FY 2070/071 and 0.06 in the FY

2071/072. The profit margin is decreased by 0.03 in the FY 2072/073 and increased by 0.21 in 2073/074. The average profit margin for the entire period is 0.08.

4.1.6 Correlation Analysis

The correlation is one of the most common and most useful statistical tools. It shows the degree of relationship between two variables. The value of correlation lies between -1 to +1. If calculation value of variables has positive then these variables are positively correlated with each other. It means one variable and other variable also increases in same direction. If calculation values have negative sign it means these variables are not correlated with each other. It means if one variable increases then other variable decreases with same proportion.

Here in this study the purpose of correlation analysis is to determine the empirical relationship between capital structure and firms profitability. Capital structure is a independent variable which will be measured by total debt to assets ratio and total debt to equity ratio. And profitability is dependent variable which will be measured by ROA, ROE and Net Profit.

Table 4.6
Correlation analysis

Variables	ROA	ROE	ROS	TDE	TDA
ROA	1.	.828** .000	.671** .006		
ROE	.828** .000	1 .	.848** .000		
ROS	.671** .006	.848** .000	1 .		
Total debt to total equity ratio		-.584* .034		1	
Total debt to assets ratio	.075 .791			.243 .383	1

Source: Calculate from SPSS Software

** Correlation is significant at the 0.01 level (2 tailed)

* Correlation is significant at the 0.05 level (2 tailed)

The table 4.6 summarizes the results of correlation analyses among the variables. The table 4.6 shows that ROA has positive relation with ROE that is 0.828, which

represents the strong degree of positive correlation between them; this correlation is significant at the 0.01 level of 2- Tailed test. Similarly ROA has positive significant relation with ROS at 0.01 levels that is 0.671.

ROE has positive relation with the ROS that is 0.848 which shows the strong degree of positive correlation. It represents that if ROE increases then ROS also increases. This correlation is significant at 0.01 level of 2-tailed test. From the table 4.2 it is clear that ROA has positive relation with ROE, ROS. Total debt to assets has a positive relation with debt to equity at 0.243 which shows the low degree of correlation among the variables.

4.1.7 Multiple Regression Analysis

The principle advantage of multiple regression analysis is that it allows us to utilize more of the information available to us to estimate the dependent variable. Sometime the correlation between two variables may be insufficient to determine a reliable estimation equation. Thus, if we add the data from more independent variables, we may be able to determine an estimation equation that describes the relationship with greater accuracy.

4.1.7.1 ROE as a Dependent variable

Table 4.7
ROE Model Summary

Model	R	R square	Adjusted R square	Standard error of estimate	Sig.
1	0.602	0.363	0.256	0.2187	0.046

Source: Calculate from SPSS Software

Independent variable – total debt to equity, total debt to assets

In the table 4.7 the R column represents the value of R, R can be considered to be one measure of the quality of the prediction of the dependent variable. Here the value of R is 0.602 this indicates a good level of prediction. R square column represents coefficient of determination which is the proportion of variance in the dependent variable that can be explained by the independent variable. Here the value of R square is 0.363 which means that 36.3 % variation in ROA is explained by total debt to equity and total debt to assets ratio and remaining 63.70% is explained by other factor.

Similarly adjusted R square is 0.256 which means 25.6% variation in ROA is explained by different behavioral factor after adjusting the degree of freedom and remaining 74.4% is explained by other factor. Model summary also indicates the standard error of estimate of 0.2187 which shows the variability of the observed value of ROA from regression line is 0.2187 units.

Statistical significance

The F ratio in the ANOVA table tests whether the overall regression model is a good fit for the data. The P value should be less than alpha value that is 0.05. If it is less than 0.05 then independent variable significantly predict the dependent variable otherwise independent variable doesn't significantly predict the dependent variable.

Table 4.8
ROE ANOVAs Table

Model	Sum of squares	Degree of freedom	Mean Square	F	Sig.
Regression	.326	2	.163	3.412	0.046
Residual	.574	12	.048		
Total	.901	14			

Source: Calculate from SPSS Software

In the ANNOVA table 4.8, the P value is 0.046 which is lesser than alpha value 0.05, this shows that independent variable total debt to equity and total debt to assets statistically significantly predict the dependent variable ROE. Therefore the model is a good predictor of the relationship between the dependent and independent variable. As a result the independent variables are significant in explaining the variance in ROE.

Coefficient Matrix

Table 4.9

ROE Coefficient Matrix

Model	Unstandardized Coefficient		Sig (P value)
	B	Standard Error	
(Constant)	0.626	0.133	0.001
Total debt to assets	-0.123	0.114	0.013
Total debt to equity	-0.225	0.110	0.046

Source: Calculate from SPSS Software

In the table 4.9 the standardized coefficient indicates how much the dependent variable varies with an independent variable when all other independent variable is held constant. Considering the effect of total debt to assets in table 4.2 the unstandardized coefficient of B is equal to -0.123 this means that there is negative relationship between them and for every increase in Total debt to assets there is decrease in ROE.

Similarly considering the effect of total debt to equity in above table the standardized coefficient of B is equal to -0.025 this means that there is a negative relationship between ROE and debt to equity ratio and for every increase in debt to equity ratio there is a decrease in ROE.

Each of these beta values has an associated standard error indicating to what extent these values would vary across different sample. Standard error of total debt to assets is 0.114 and standard error of total debt to equity is 0.110.

If the value in the column Sig is less than 0.05 then independent variable is making a significant contribution to the model. Here the calculated P value (sig) is less than 0.05. This indicated that alternatives hypothesis 1 has been proved. There is a significant relationship between capital structure and firm's profitability.

4.1.7.2 ROA as a Dependent variable

Table 4.10
ROA Model Summary

Model	R	R square	Adjusted R square	Standard error of estimate	Sig.
1	0.753	0.567	0.494	0.1136	0.007

Source: Calculate from SPSS Software

Independent variable – total debt to equity, total debt to assets

In the table 4.10 the R column represents the value of R, R can be considered to be one measure of the quality of the prediction of the dependent variable. Here the value of R is 0.753 this indicates a good level of prediction. R square column represents coefficient of determination which is the proportion of variance in the dependent variable that can be explained by the independent variable. Here the value of R square is 0.567 which means that 56.7 % variation in ROA is explained by total debt to equity and total debt to assets ratio and remaining 43.3 % is explained by other factor.

Similarly adjusted R square is 0.494 which means 49.4 % variation in ROA is explained by different behavioral factor after adjusting the degree of freedom. Model summary also indicates the standard error of estimate of 0.1136 which shows the variability of the observed value of ROA from regression line is 0.1136 units.

Statistical significance

The F ratio in the ANOVA table tests whether the overall regression model is a good fit for the data. The P value should be less than alpha value that is 0.05. If it is less than 0.05 then independent variable significantly predict the dependent variable otherwise independent variable doesn't significantly predict the dependent variable.

Table 4.11
ROA ANOVA's Table

Model	Sum of squares	Degree of freedom	Mean Square	F	Sig.
Regression	.203	2	.101	7.845	0.007
Residual	.155	12	.013		
Total	.357	14			

Source: Calculate from SPSS Software

In the ANOVA table 4.11, the P value is 0.007 which is lesser than alpha value 0.05, this shows that independent variable total debt to equity and total debt to assets statistically significantly predict the dependent variable ROA. Therefore the model is a good predictor of the relationship between the dependent and independent variable. As a result the independent variables are significant in explaining the variance in ROA.

Coefficient Matrix

Table 4.12
ROA Coefficient Matrix

Model	Unstandardized Coefficient		Sig (P value)
	B	Standard Error	
(Constant)	0.394	0.069	0.000
Total debt to assets	0.079	0.059	0.025
Total debt to equity	-0.225	0.057	0.002

Source: Calculate from SPSS Software

In the table 4.12 the standardized coefficient indicates how much the dependent variable varies with an independent variable when all other independent variable is held constant. Considering the effect of total debt to assets in table 4.2 the unstandardized coefficient of B is equal to 0.079 this means that there is positive relationship between them and for every increase in Total debt to assets there is increase in ROA.

Similarly considering the effect of total debt to equity in above table the standardized coefficient of B is equal to -0.025 this means that there is a negative relationship between ROA and debt to equity ratio and for every increase in debt to equity ratio there is a decrease in ROA.

Each of these beta values has an associated standard error indicating to what extent these values would vary across different sample. Standard error of total debt to assets is 0.059 and standard error of total debt to equity is 0.057.

If the value in the column Sig is less than 0.05 then independent variable is making a significant contribution to the model. Here the calculated P value (sig) is less than 0.05. This indicated that alternatives hypothesis 1 has been proved. There is a significant relationship between capital structure and firm's profitability.

4.1.7.3 ROS as a Dependent variable

Table 4.13
ROS Model Summary

Model	R	R square	Adjusted R square	Standard error of estimate	Sig.
1	0.723	0.523	0.444	0.0687	0.015

Source: Calculate from SPSS Software

Independent variable – total debt to equity, total debt to assets

In the table 4.13 the R column represents the value of R, R can be considered to be one measure of the quality of the prediction of the dependent variable. Here the value of R is 0.723 this indicates a good level of prediction. R square column represents coefficient of determination which is the proportion of variance in the dependent variable that can be explained by the independent variable. Here the value of R square is 0.523 which means that 52.3 % variation in ROS is explained by total debt to equity and total debt to assets ratio and remaining 47.70 % is explained by other factor.

Similarly adjusted R square is 0.444 which means 44.4 % variation in ROS is explained by different behavioral factor after adjusting the degree of freedom. Model summary also indicates the standard error of estimate of 0.0687 which shows the variability of the observed value of ROS from regression line is 0.0687 units.

Statistical Significance

The F ratio in the ANOVA table tests whether the overall regression model is a good fit for the data. The P value should be less than alpha value that is 0.05. If it is less than 0.05 then independent variable significantly predict the dependent variable otherwise independent variable doesn't significantly predict the dependent variable.

Table 4.14
ROS ANOVA's Table

Model	Sum of squares	Degree of freedom	Mean Square	F	Sig.
Regression	.062	2	.031	6.582	0.015
Residual	.057	12	.005		
Total	.119	14			

Source: Calculate from SPSS Software

In the ANOVA table 4.14, the P value is 0.015 which is lesser than alpha value 0.05, this shows that independent variable total debt to equity and total debt to assets statistically significantly predict the dependent variable ROS. Therefore the model is a good predictor of the relationship between the dependent and independent variable. As a result the independent variables are significant in explaining the variance in ROA.

Coefficient Matrix

In the table 4.15 the standardized coefficient indicates how much the dependent variable varies with an independent variable when all other independent variable is held constant. Considering the effect of total debt to assets in table 4.12 the unstandardized coefficient of B is equal to -0.067 this means that there is negative relationship between them and for every increase in Total debt to assets there is increase in ROS.

Table 4.15
ROS Coefficient Matrix

Model	Unstandardized Coefficient		Sig (P value)
	B	Standard Error	
(Constant)	0.254	0.042	0.001
Total debt to assets	-0.067	0.036	0.015
Total debt to equity	-0.089	0.035	0.025

Source: Calculate from SPSS Software

Similarly considering the effect of total debt to equity in table 4.15 the standardized coefficient of B is equal to -0.089 this means that there is a negative relationship between ROS and debt to equity ratio and for every increase in debt to equity ratio there is a decrease in ROS.

Each of these beta values has an associated standard error indicating to what extent these values would vary across different sample. Standard error of total debt to assets is 0.036 and standard error of total debt to equity is 0.035

If the value in the column Sig. is less than 0.05 then independent variable is making a significant contribution to the model. Here the calculated P value (sig.) is less than 0.05. This indicated that alternatives hypothesis 1 has been proved. There is a significant relationship between capital structure and firm's profitability.

4.2 Major Findings of the Study

Based on the data provided by the concerned companies the major findings of the study with respect to impact of capital structure on the firm's profitability are as follows:

1. The mean ratio of total debt to shareholders equity of selected manufacturing companies BNL, UNL and HDL are 130%, 58% and 118%. HDL has the highest mean ratio among the selected companies. High ratio indicates that the proportion of total debt is higher than shareholders equity. BNL has quite satisfactory debt/equity ratio compare with other companies.
2. High proportion of debt in the capital structure would link to inflexibility in the operation of the firms as creditors would exercise pressure and interfere in management. Furthermore such firm would be able to borrow only under very restrictive term and condition plus they have to bear heavy burden of interest payment.
3. Mean average of total debt to total assets ratio of BNL, UNL and HDL is 58%, 36% and 113%. The total debt to assets ratio of HDL is very high. The high ratio indicates that the creditor's margin of safety is very low or they have high risk and creditors' claims in total in total assets are very high. UNL has

mean average of total debt to assets ratio of 36%. It shows less than 50% of total assets from the creditors claim it is the positive benefit of the company compared to BNL and HDL.

4. The study found that condition of UNL regarding net profit is increasing trend so ROE also in increasing trend. The average ROE of UNL is 318.83 for the company. It has better ROE than other selected manufacturing companies. ROE for BNL is negative in the FY 2071/072 in the study period which means there is no return on equity. Other fiscal year it has positive ROE that is good for shareholders. The average ratio is 9.18% for the entire study period. Similarly ROE for HDL are positive all the year in the study period which means there is positive return on equity. The average ratio is (15.27%) for the entire study period.
5. The study found that the return on assets for UNL are in increasing trend in spite of the fact that the assets are fluctuating but net profit increasing. The ROA is 17.21% in the F.Y. 2069/070, which increased to 24.62% in the F.Y. 2070/071. The average ratio is 27.27% for the entire study period.
6. The return on sale (profit margin) for UNL showed the fluctuating trend. The average ratio is 0.154 for the entire study period. The average ratio of BNL is -0.39 for the entire study period. Over viewing at value, it shows that there is more fluctuation in profit margin ratio of BNL. The profit margin of HDL shows that sales are increasing trend during the entire study period. The average profit margin of HDL for the entire period is 0.08.
7. The calculated correlation value of return on assets has positive relation with return on equity, net profit and total debt to assets and negative relation with debt to equity. Similarly return on equity and net profit has negative relation with total debt to assets and total debt to equity. Shubita & Alsawalhah (2012) in their findings also come up with the same result that there is significant negative relationship between total debt and profitability. Similarly Lavorskyi (2013) on his study supports our findings and reveals that there is a negative relationship between capital structure and firm's profitability whereas Saifadin (2015) in his study impact of capital structure in profitability reveals a positive relation between total debt ratio and profitability which is contradictory from our findings.

8. Multiple regression analysis shows there is a negative relationship between total debt to assets & ROE and total debt to equity and ROE. ROA has positive relationship with total debt to assets which means for every increase in total debt to assets there is an increase in ROA. Similarly ROA has negative relationship with debt to equity ratio and for every increase in debt to equity ratio there is a decrease in ROA. Net profit has negative relationship with total debt to assets and total debt to equity. This result supports the conclusion of Duah Awuah (2015) and Zeitun and Tian (2007). Duah Awuah in his study reveals that Debt is negatively correlated to return on equity and Zeitun and Tian found that there is a positive relationship between total debt to assets and ROA and negative relationship between total debt to equity and ROA.

CHAPTER V

CONCLUSION

This is a last chapter of this study. In this chapter an attempt has been made to make a brief summary about the study, its conclusion and lastly recommendation which are useful to take corrective actions.

5.1 Summary

The capital structure is defined as the mix of debt and equity that the firm uses in its operation. The capital structure of a firm is a mixture of different securities. Capital structure is the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both. The term 'capital structure' means the financial planning according to which the assets of an industry are furnished. "The term 'capital structure' means the proportion of different types of securities issued by a firm." The optimal capital structure is the set of proportion that maximized the total value of the firm.

Manufacturing sector refers to all the business activities involved in fabricating, assembling the components in finished products on a fairly large scale, or the activities of making things by industrial process. It is a key sector of all types of economy. The development of the manufacturing sector is crucial to attain prosperity, generate employment, alleviate poverty, promote trade and spur national growth.

The main objective of this study is to assess the impact of capital structure on the profitability of the manufacturing industries in Nepal. Furthermore the study aims to achieve the following specific objectives: a) to determine the current status of capital structure of listed manufacturing, companies in Nepal, b) to assess the firms' profitability and c) to identify the relationship between capital structures and the firms' profitability.

Many researchers who tested the impact of capital structure on firms' profitability came up with contradictory results. Some discovered positive impact while some discovered negative impact and some revealed there is no any impact of capital structure on firm's performance. Because of this controversial result, researcher gets the chance to do further studies on this topic by testing the relationship between capital structure and firms profitability.

The lack of a consensus about what would qualify as optimal capital structure in the service and manufacturing industries has motivated researcher to conduct this research. Also in Nepal, there are few research held on this topic so it has high time to analyze and compare the results with the capital structure theories and see whether there is any relation between capital structure decision and firms profitability using listed manufacturing companies in Nepal Stock Exchange.

The research design of this study is descriptive. This study is related to the capital structure and its impact on the firm's profitability so this study rely on accounting and financial report, hence this study is based on the secondary data.

There are eighteen real sector companies listed under the manufacturing and processing company. So the population for the study consists of all the manufacturing company listed in NEPSE. Out of them three manufacturing companies are selected as samples using convenience sampling method. They are: Bottlers Nepal Limited (Balaju), Himalayan Distillery Limited and Unilever Nepal Limited.

This study is based on the impact of the capital structure decision on the firm's profitability. This study covered three listed manufacturing companies. They are Bottlers Nepal Limited, Unilever Nepal Limited and Himalayan Distillery Limited and data were collected for the five year period i.e. from 2069/70 to 2073/74. This study impact of capital structure on firms profitability has been prepared to fulfill the requirements of master of business studies.

Capital structure is the composition of debt and equity capital that comprises firms financing its assets and can be rewritten as the sum of net worth plus preferred stock plus long term debt. The capital structure plays an important role in the success of business entity. Capital Structure decision is crucial for any business organization as it plays important role in maximizing firm value and performance of a firm. Taking capital structure decision is tough work too as sometimes using higher level of debt is beneficial and sometimes higher equity is beneficial. Hence it should be design in a proper manner so that the cost is minimized and value of the firm is maximized.

Some financial analyst argue that capital structure can increase the value of firm if more and more leverage is added, where some believe that the value of the firm can be maximize by adopting an optimal capital structure. The relationship and impact of

capital structure decision with the firm's performance and profitability were suggested in many theories.

As per the objectives of these studies, it tries to determine the current status of manufacturing companies, identify the relationship between capital structure and firms profitability and examine the impact of total debt on firm's profitability. This study is based on both casual comparative research design and descriptive research design. The population for this study consists of all the manufacturing company listed in NEPSE and out of them three manufacturing companies has been selected as a sample. And this study use convenience sampling method. This study is completely based on secondary method of data collection and data has been obtained from firm's annual report as well as from the SEBON and for the data analysis it has use financial ratio, Pearson's correlation coefficient and multiple regression analysis.

Through the analysis it is found that HDL & BNL has high debt to equity ratio and UNL has low debt to equity ratio. Likewise HDL has high debt to total assets ratio, BNL has average debt to total assets ratio and UNL has low debt to total assets ratio.

The study found that condition of UNL regarding net profit is increasing trend so ROE also in increasing trend. The average ROE of UNL is 318.83 for the company. It has better ROE than other selected manufacturing companies. ROE for BNL is negative in the FY 2071/072 in the study period which means there is no return on equity. Other fiscal year it has positive ROE that is good for shareholders. The average ratio is 9.18% for the entire study period. Similarly ROE for HDL are positive all the year in the study period which means there is positive return on equity. The average ratio is (15.27%) for the entire study period.

The study found that the return on assets for UNL are in increasing trend in spite of the fact that the assets are fluctuating but net profit increasing. The ROA is 17.21% in the F.Y. 2069/070, which increased to 24.62% in the F.Y. 2070/071. The average ratio is 27.27% for the entire study period.

The return on sale (profit margin) for UNL showed the fluctuating trend. The average ratio is 0.154 for the entire study period. The average ratio of BNL is -0.39 for the entire study period. Over viewing at value, it shows that there is more fluctuation in profit margin ratio of BNL. The profit margin of HDL shows that sales are increasing

trend during the entire study period. The average profit margin of HDL for the entire period is 0.08.

From the correlation and multiple regression analysis it shows that ROA has positive relation with ROE, net profit and total debt to assets and significant negative relation with debt to equity. Similarly ROE has positive relation with net profit and negative relation with total debt to assets and negative significant relation with total debt to equity. Likewise net profit has negative relation with total debt to assets and negative significant relation with debt to equity. Through this analysis alternative hypothesis has been accepted.

5.2 Conclusion

This paper examined capital structure and its impact on the firm's profitability of three listed manufacturing companies for the period of five years i.e. from 2069/70 to 2073/74. Researcher analyzes the relationship between capital structure variable against profitability variables.

From this study it is concluded that UNL is performing well in comparison to BNL & HDL. Its total debt to assets ratio and total debt to equity ratio is low. The profit margin of the UNL is higher among all companies which indicate good earning capacity of the companies. Investors are getting more returns from their investment. UNL has borrowed a very little amount of debt. Whereas HDL has borrow huge amount of short term as well as long term debt. BNL has use only short term debt. Though higher volume of debt gives the tax advantage but excessive use of debt leads to higher interest expenses and in the times of financial distress company will go bankrupt.

After testing the relationship researcher reveals a mixed relationship between capital structure variables against profitability variables. ROA has positive relation with total debt to assets and significant negative relationship with total debt to equity. ROE has negative significant relation with total debt to equity and negative relation with total debt to assets. ROS has negative relation with total debt to assets and negative relationship with total debt to equity.

This study results reveal significantly negative relation between total debt and profitability. These findings imply that an increase in debt position is associated with

a decrease in profitability; thus, the higher the debt, the lower the profitability of the firm. Although the financial leverage provides tax benefits to the corporations, it increases default risk. When the firm increases the volume of debt, interest expenses which is a fixed obligation also increases and if the firm is in its hard times then this fixed obligation will create the situation of financial distress and if its operating income is insufficient to cover interest charge then stockholder will have to make up the short fall and if they can't the firm may be forced into bankruptcy.

5.3 Implications

Managing manufacturing companies can be a very difficult venture in Nepal in the face of deteriorating economic condition. Increased liberalized market, transportation difficulties, unstable government, power cut, high inflation rates are some of the problem which has to be overcome. Manufacturing company generally plays a crucial role in the economic development of every nation. One critical decision manufacturing company face is the debt/equity choice. Among others this choice is necessary for the profit determination of firms. Manufacturing companies should make their financing decision prudently in order to achieve competitive advantage in the industries and make superior profits.

Based on the major findings of the study of the selected manufacturing companies listed in NEPSE, the following recommendation are presented

1. An increase in the level of debt also increase the riskiness of companies so manufacturing companies should depend a lot on internal source of financing in order to increase their profitability. This kind of financing is less risky and more profit enhancing. The choice of debt financing should be a last resort.
2. Investors of listed manufacturing companies in Nepal should review the capital structure of companies before investing in them because the strength of a company capital mix determines the level of return.
3. An appropriate mix of capital structure should be adapted in order to increase the profitability of manufacturing companies. Finding reveals that debt has a negative relationship with profitability. In the case of higher debt profitability tends to decline it is due to the high interest charge

4. More companies in Nepal should put their financial information through NEPSE/ SEBON in order to allow investor to review their capital structure and attracts more investors in their companies.
5. The capital structure of the manufacturing companies are not consistent so the management should make more consistent and careful attention should be given to make optimal capital structure since it is important to maximize the value of the firm and minimize overall cost of capital.
6. The total debt amount of HDL & BNL are little huge so there is a need to reduce the debt capital to relief the company from the burden of exes fixed obligation.
7. UNL has properly and productively utilized its fund and assets. It is suggested to get more profit for BNL and HDL and have to focus on proper utilization of its assets and fund.

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