CHAPTER – I

INTRODUCTION

1.1Background of the study

An organization employs different types of funding to run a business smoothly. Capital Structure is a composition of different types of financing employed by a firm to acquire resources necessary for its operations and growth. Capital Structure primarily comprises of long-term debt, preferred stock, and net worth. It can be quantified by taking how much of each type of financing a company holds as a percentage of all it's financing. Capital Structure is different from financial structure as this includes short-term debt, accounts payable, and other liabilities.

Most of the companies raises fund by equity or debt. Debt comes in the form of bond or long-term notes payable, whereas equity is classified as common stock, preferred stock, or retained earnings. Both the financing has advantages and disadvantages over each other. The founders hold the ownership rights and control of the company if they raise capital by debt. The company has to pay the principal and interest to the concerned debt holders. This privilege will be lost in equity, as the shareholders become an integral part of the company. Debt financing is easier and less expensive for small firms. Payment of interest on regular becomes burden for a company and reduces their earnings. There is no obligation in equity financing to repay the money. Shareholders take a chance on good ideas for better growth opportunities of the firm.

There are two main theories of capital structure:-

1.1.1 Trade Off Theory

This theory proposes to increase debt levels to balance interest to shield against the cost of financial distress. The company should keep on borrowing until the marginal tax advantage of additional debt is offset by the increase in present value of the expected costs of financial distress.

1.1.2 Pecking Order

Companies with higher earnings should take less debt, as they require less of funding requirements due to funding met by the internal resources. A high profit making company can generate internal cash to fund their new projects.

A balance between risk and return met by capital structure is known as the most favorable capital structure. A sound capital structure aims at minimizing the risk and maximizing the profit margins. It maximizes the price of the stock and minimizes the cost of capital at the same time.

Every business firm needs capital to operate business. The term 'capital' denotes the long term fund of the firms. The term capital structure is used to represent the proportionate relationship between debt and equity. Capital structure decision is significant managerial decision. It influences the shareholders return and risk. The market value of the share may be affected by the capital structure decision.

The term capital structure is used to represent the proportionate relationship between debt and equity. Equity includes paid up capital, share premium and reserve and surplus (retained earnings).

The capital structure decision is a significant managerial decision . It influences the share holder return and risk. Consequently, the market value of the share may also be affected by the capital structure decision. This decision will involved an analysis of existing capital structure and factors which will govern the decision at present. The new financing decision of the company may affect it's debt – equity mix. The debt equity mix has implications for the shareholders earnings and risk, which in turn , will affect the cost of capital and the market value of the firm.

Capital structure refers to the mix of long term sources of funds, such as debenture, long-term debt, preference share capital and equity share capital including reserves and surplus (i.e., retained earnings).

The sources of financing are usually grouped into debts and equity which normally characterize the firm's capital structure. Debt capital include all long-term borrowing incurred by the firm, while equity capital consists of long term fund provided by the firms owners, stock holders. On the other hand the borrowed capital or debt fund has a fixed charge irrespective to the earnings of the firm and the firm has to pay the fixed charge as interest periodically to the borrowed fund provider.

The success and failure of the industry mainly depends up on the ability of top management to make appropriate capital structure decision. Some companies do not plan their capital structure, and it develops as a result of the financial decision taken by the financial manager without any formal planning. These companies may prosper in the short-run, but ultimately they may face considerable difficulties in raising funds to finance their activities. With unplanned capital structure, these company may also fail to economize the use of their funds. Consequently, it is being increasingly

realized that a company should plan its capital structure to maximize the use of the funds and to be able to adapt more easily to the changing condition.

Capital structure is closely related concept linked to cost of capital and therefore, is important for capital budgeting decision. Changes in leverage result in change in level of returns and associated risk. Generally, increase in leverage result in increase return and risk. Whereas decrease in leverage result in decrease in return and risk as well as value of firm. Because of its effect on value, the financial manager must understand how to measure and evaluate leverage when attempting to create the best capital structure.

The concept of capital structure occupies an important place in the theory of financial management. Capital structure is the mix of debt, preferred stock and common equity with which the firm plans to raise capital. Firms should analyze a number of factors, and then establish a capital structure. Capital structure may change over time as condition change but at any given moment management should have a specific capital structure in mind. If the actual debt ratio is below the target level, debt should generally issue to raise capital, whereas if the debt ratio is above the target, equity should generally be issued. The firm should select capital structure, which will help in achieving the objective of financial management that is to maximize the value of equity shares. The Capital structure should be examined from the viewpoint of its impact on the value of the firm. It can be legitimately expected that if the capital structure decision affects the total value of the firm, a firm should select such a financing-mix as will maximize the shareholder's wealth. Such a capital structure is referred as the optimal capital.

Capital structure policy involves a trade-off between risk and return. Using more debt raises the risk borne by stockholders. However, using more debt generally leads to a higher expected rate of return on equity. Higher risk tends to lower a stock price, but higher expected rates of returns raise it. Therefore, the optimal capital structure must strike a balance between risk and return as to maximize the firm's stock price

1.2 Introduction of Jyoti Spinning Mills Ltd.

Joyti Spining Mills Ltd. (JSML) is one of the large-scale thread industries in Nepal. JSML is incorporated in Nepal at 13 magh. 2045 and its registered office is in Chorni VDC, Bara District as private Limited. Later it changes as public limited at 27th Shrawan 2046. It's prime objectives are to fulfill the domestic need of thread, cut down importers of thread and to help increase employment opportunities of people. The commercial production has been started from 28th March 1992. Indian company Laxmi machine workers Limited koymvtor, Swiss LUWA and Italy SAVIO, supplies the machinery and equipment. Annual capacities of these plants are 3300 Metric To. The authorized capital of the company is Rs.1000 million and called up capital is Rs.270 million and paid up capital is Rs.193.8444 million. The company has provided 825 people as a permanent and temporary job and 110 people on contact is in best of ten companies in comparison with Indian and Nepalese best companies.

The raw materials of the mills are cotton, fibers, polyester, viscose's fiber and acrylics fibers. Cotton is generally produced in Nepal and some are imported from India and Bangladesh. The remaining fibers are imported from India, Indonesia, Thailand and Italy. Raw materials being agriculture product can not be found in the same ratio through out the year and on the hand, there is no proper cultivation of such in Nepal.

The mill produces different types of threads. Which consumed inside the nation, the main consumers being textile mills?

1.3 Focus of the study

In most of the Nepalese companies, there is not the existence of debt in there capital structure. Only equity capital is the source of financing. While in some cases the proportion of debt is very high, this creates the excess burden to the firm. Most of companies have debt capital relatively higher than equity capital. Consequently, most of them are operating at losses. Hence it is clear that Nepalese companies do not take capital structure decision seriously. So this study is concerned with the analysis of the capital structure of Jyoti spinning mills Ltd. and its impact on risk and return. JSML is selected for the study because it is one of the large-scale threads producing industry in Nepal.

It has created in a large number of job opportunities. Most of the carpet industries in Nepal depend up on JSML for thread. JSML has created employment opportunities but it has not played a vital role for the economic development of the country. There may be many causes behind it. The causes may be external or internal.

The causes included by the external and internal environment are

Table : 1.1

Factors May affecting the Performance of JSML

External environment	**Internal environment**
i) Not well established government ii) Strike iii) Political Parties iv) Not sufficient employee training agency v) Socio-Cultural	i) Policies, Strategies ii) Organizational culture iii) Organizational structure iv) Capital structure

The table 1.1 shows the causes due to which JSML may not have played a vital role for the economic development of the country. Among them one of the main causes may be the inadequate structure of JSML. The study has been performed to highlight the current capital structure practices of JSML.

1.3. Statement of the problem

The capital structure concept has been the subject of controversy since the publication of Modigliani and Miller's classic paper in 1958 (Modigliani and Miller, 1958). There are many empirical works regarding the capital structure supporting and refusing the MM view and traditional view. The study by Barges (1963), Weston (1963), Wippern (1981) and Pandey rejected the MM hypothesis while Mamanda (1972) and Stiglitz (1974) study supported the MM hypothesis. Weston (1963) used MM's cost of capital for his sample of 59 utilities in 1959. He found that the regression co-efficient of leverage to be positive and significant. However multiple regression was run, the result is consistent with the traditional view. Barges (1963) used simple regression techniques to analyze the relationship between leverage and the average cost of capital, stock yield and debt equity ratio utilized cross section data of the three industries. Pandey (1981) computed multiple regression equation to test the validity of MM proposition and his result concluded that cost of capital is the function of capital structure.

There are some studies conducted in the capital structure management of different companies in Nepal . Adhikari (1991), Ghimire (1999) and Khatri (1989) tested the MM hypothesis on listed companies. They used multiple regression model to test MM propositions and found that the result support the traditional proportion.

Capital structure concept is not taken seriously in the Nepalese organizations, which results not the existence of optimal capital structure. Among the listed companies, some of them use debt capital while some use equity capital only. Athough the companies which do not have optimal capital structure are making profit that is another matter. They are making profit due to higher demand of their product or may be due to friendly environment but in reality they are paying higher cost for their capital.

Generally every business organization has their own policy to raise funds make capital structure because there is no any best way to make capital structure. It largely depends up on the company policy and its cost of capital.

There is one of the main mystery of success of the successful organization is the balanced (optimal) capital structure. All the decision maker about the capital structure know that mystery then the question may arise that (a) is the exiting capital structure decision significant ? (b) Whether the cost of capital structure declines with leverage? (c) How the leverage affects the cost of equity (d) Whether or not the capital structure decision affect the market value of shares ? (e) Is there impact of Capital structure of JSML on return and risk? To solve such problems, the management of the company should be aware of the importance of capital structure management. The purpose of this study is to analysis examined and make aware of the importance of capital structure management for Jyoti Spinning Mills Ltd.

1.5. Objectives of their study

The basic objective of this study is to assess the decision of capital structure of JSML and it's impact on risk and return on the basis of selected tools.

The other specific objectives of this study are as follow

- To know the impact of capital structure of JSML.
- To assess the decision of capital structure of JSML.
- To examine the capital structure of JSML.
- To assess the return of JSML.
- To analyze the impact of capital structure on risk and return of JSML.

1.6. Significance of the study

The decision of capital structure is a significant managerial decision. It influences the shareholder's return and risk. Consequently, the market value of the share is affected by decision of capital structure. The company has to plan its capital structure initially at the time of its promotion and subsequently, whenever funds have to be raised to finance its project. It is also important for concerned company, investor and researcher. It enables them to know the effects of exiting capital structure on the value of share, risk and return. if the exiting capital structure effect is positive on the value of share and risk and return then the exiting capital structure is optimal and if not, the study will help the management to change the exiting capital structure in near future. The study is also significant for the investor. The study will shed light in details on the exiting capital structure of JSML which will help the investors whether to invest in JSML or not ? Consequently the researcher will also be benefited by getting many inputs. They can take advantage of conceptual foundation of decision of capital structure as well as reliability of different aspect of its impact on risk and return.

1.7. Limitation of the study

This study is only concerned with "the capital structure decision and its impact on risk and return." It is partial study, for the study some limitations are to be considered as follows.

1. This study covers only five-year period from fiscal year 061/062 to fiscal year 066/067.

2. This study only focuses the capital structure, return and risk of Jyoti Spinning Mills Ltd.

3. Results and finding depends on validity and reliability of collected data.

4. Coefficient of Z-score is used as given by Altman.

1.8. Organization of the study

This thesis is organized into five major chapters.

Chapter – I

This chapter is introductory and organized as background, focus of the study, statement of the problem, objective of the study, significance of the study, limitation of the study and organization of the study.

Chapter – II

The second chapter consists the available literature review. It includes the review of books, review of related journals and thesis. The review of literature conducted in this chapter provide frame with help of which this study has been accomplished.

Chapter – III

This chapter is about the research methodology. It includes research design, nature and sources of data, population and sample and method of analysis. Method of analysis includes the tools applied to analyze and interprets the data.

Chapter – IV

This chapter is the major part of the study. In this chapter, the efforts has been made to analyze the capital structure decision and its impact on risk and return of JSML. This chapter consists of presentation and analysis of data by using different financial and statistical tools. Major findings are also included by this chapter in the last.

Chapter – V

This chapter is the last chapter and includes the summary, conclusion and recommendation of the study.

CHAPTER – II

Review of literature

2.1. Introduction

This chapter covers the review of literature. So far as the study is concerned, the analysis of decision of capital structures and its impact on risk and return with respect to Jyoti Spinning Mills Ltd. Some studies have undertaken by the management expert and students of MBA and MBS describing the decision of capital structure and its impact on risk and return. Therefore, the study has attempted to review useful bunch of literature relevant to the study as they provide ideas to input the data to analyses.

The basic pattern of capital structure can be simple or complex. Capital structure can be dealt with the three different level of complexity.

The static view

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

The comparative static view

The second level views capital structure as a comparative static proposition that yield different values for the cost of capital and capital structure, as some of the underlying parameters change. Thus changes in the existing asset structure, the quality of expected earning and the capital market conditions generate new equilibrium solution between the financing mix and the cost of fund.

The dynamic view

The third level views capital structure as a dynamic process of interdependent investment and financing decision that yield optimal values with in the constraints at the time and place where the decisions were made. Hence, the existing capital structure reflects the sequential decision of the past and as such it is no longer the active decision variable but rather the by – product of the continual process of matching sources and use of funds

2.2 The optimal capital structure

Most companies show some debt on their balance sheets, indicating that they are borrowing some of the money needed to finance assets. How much debt should a company use? For this the firm first analyses a number of factors and then establishes a target capital structure. This target may change overtime as conditions vary, but at any given moment the firms managements has a specific capital structure in the mind. If the actual debt ratio is below the target level, expansion capital will probably be raised by issuing debt, while stock will probably be sold if the debt ratio is over the target.

Capital structure policy involves a trade – off between risk and return: using more debt raises the riskiness of the firm's earning stream, but it also raises the expected rate of return on equity. Higher risk tends to lower the stock's price but a higher expected rate of return raises it. The optimal capital structure strikes that balance between risk and return which maximizes the price of the stock. This same optimal capital structure also minimizes the firm's over all cost of capital. (Weston & Brighan, n.d. : 591)

The optimal capital structure; the capital that will maximize the price of the firm's stock.

A judicious combination of debt and equity does affect the cost of capital as well as the total value of firm. "The capital structure is said to be optimum when the marginal real cost (explicit as well as implicit) of each available source of financing is identical" (Khan & Jain , 1999 :12.1). With an optimum debt and equity mix the cost of capital is minimum and the market price per share (or total value of the firm) is maximum.

In theory one can speak of an optimum capital structure, but, in practice, it is very difficult to design one. There are significant variations among industries as also among individual companies with in the same industry in respect of capital structure. This is so because there are a host of factor, both quantitative and qualitative, including subjective judgment of financial managers which determines the capital structure of firm. These factor are highly complex and can not fit entirely into a theoretical frame work.

2.3 Factors Affecting Capital Structure

Capital structure is the composition of long –term sources of funds i.e long-term debt, preference share capital and equity capital. The decision of Capital structure affects the value of firm, earning per share and cost of capital. So, the decision of capital structure is very important aspect of financial management.

All the actives of financial manager of the company should be motivated to maintain the optimal capital structure. Optimal capital is that mix debt and equity that maximize the value of the firm and earning per shares and minimizes of overall cost of capital of the firm. The management of the company should set a target capital

structure. The financial manager has also to deal with an existing capital structure. The company needs funds to finance its activities continuously. Every time when funds have to be procured, the financial manager weight pros & cons of various source of finance and selects most advantageous source keeping in view the target capital structure. Thus the decision of capital structure is a continuous one and has to be taken whenever a firm needs additional finances.

While maintain the target capital structure, the financial executive should consider various factors, which affect that target capital structure. Firms consider many factors, which can have the important, though difficult to measure bearing on the optimal capital structure. Some of those important factors, which affect the target capital structure, are as follows.

a) Control

In designing the capital structure, sometimes the existing management is governed by its desire to continue control over the company. This is particularly so in the case of the firms promoted by entrepreneurs. The existing management team not only wants control and ownership but also to manage the company, without any outside interference.

b) Flexibility

Flexibility is one of the most serious considerations in setting up the capital structure. Flexibility means the firm's ability to adapt its capital structure to the needs of the changing conditions. The company should be able to raise funds, without undue delay and cost, whenever needed to finance the profitable investments. It should also be in a position to redeem its preference capital or debt whenever warranted by the future conditions. The financial plan of the company should be flexible enough to change the

composition of the capital structure as warranted by the company's operation strategy and needs. It should also be economized the use of funds.

c) Market conditions

If the share market is depressed, the company should not issue common shares, but issue debt and wait to issue common shares till the share market revive. During the boom period in the share market, it may be advantageous for the company to issue shares at high premium. These will help to keep its debt capacity unutilized. The internal conditions of a company may also dictate the marketability of securities. For example, a highly leverage company may find it difficult to raise additional debt. Similarly, when restrictive covenants in existing debt- agreements preclude payment of dividends on common shares, convertible debt may be the only source to raise additional funds. A company may find difficult to issues any kind of security in the market merely because of its small size . The heavy indebtedness, low payout small size low profitability high degree of competition etc. cause low rating of the company, which would make it difficult for the company to raise external finance at favorable terms.

d) Flotation cost

Flotation cost is not a very important factors influencing the target capital structure of a company. Flotation costs are incurred only when the funds are externally raised. Generally, the cost of floating a debt is less than the cost of floating an equity issue. This may encourage a company to use debt then issue common shares. Flotation costs as a percentage of funds raised will decline with larger amount of funds. Therefore, it can be an important consideration in deciding the size of security issue. The company will save in terms of flotation costs if it raises funds through large issues of securities.

But a large issue can curtail company's financial flexibility. Also, the company should raise only that much of funds which can be employed profitably.

e) Marketability

Marketability means the readiness of investors to purchase a security in a given period of time and to demand reasonable return. Marketability does not influence the initial capital structure, but it is an important consideration to decide about the appropriate timing of security issue. The capital markets are changing continuously. At one time, the market favor debenture issues, and at another time, it may readily accept common shares issues. Due to changing market sentiments, the company has to decide whether to raise funds with a common shares issue or with a debt issue. The alternative methods of financing should, therefore, be evaluated in the light of general market conditions and the internal conditions of the company.

f) Size of the company

The size of the company may influence the availability of funds from different sources. A small company finds great difficulties in raising long-term loans. If it is able to obtain some long-term loan, it will be available at higher rate of interest and inconvenient terms. Small companies, therefore, depend on share capital and retained earnings for their long term funds. It is quite difficult for small companies to raise share capital in the capital markets. A large company has relative flexibility in designing its capital structure. It can obtain loans on easy terms and sell common shares, preference shares and debentures to the public. Because of the large size of issue, its cost of distributing a security is less than that for small company. The size of the firm has an influence on the amount and cost of funds, but it does not necessarily determine the pattern of financing.

g) Loan covenants

Restrictive covenants are commonly included in long-term loan agreement and debentures. Covenants in loan agreements may include restrictions to distribute cash dividends, to incur capital expenditure, to raise additional external finances or to maintain working capital at particular level. Therefore, a company while issuing debentures or accepting other forms of long-term debt, should ensure that a minimum of restrictive clauses, that circumscribe its financial action in future, are included in debt agreements.

h) Asset Structure

Asset structure influence the target capital in several ways. Firms with long-lived fixed assets, especially when demand for their output is relatively assured (for example, public utilities), use long-term mortgage debt extensively. Firms that have their assets mostly in receivables and in inventories whose value is dependent on the continued profitability of the individual firm (for example, those in whole sale and retail trade) rely less on long-term debt financing and more on short-term financing

i) Growth rate

The future growth rate of sales is a measure of the extent to which the earnings per share of a firm are likely to be magnified by leverage. If sales and earnings grow at rate of 8 to 10 percent a year, for example, financing by debt with limited fixed charge should magnify the returns to owners of the stock. However, the common stock of a firm whose sale and earnings are growing are favourable rate commands a high price; this favors equity financing. The firm must weigh the benefits of using leverage against the opportunity of broadening its equity base when its common stock prices are high.

j) Cash Flow Stability

Cash flow stability and debt ratios are directly related with greater stability in sales and operating earnings, a firm can incur the fixed charges of debt with less risk than when its sales and earnings are subject to substantial declined. When operating cash flow is low, the firm may have difficulty meeting its fixed interest obligations.

2.4 CAPITAL STRUCTURE APPROACHES

Though, the decision of capital structure theory are classified in different ways. But here they are not classified only discussed in chronological order of their development. these theories are

2.4.1 NET INCOME APPROACH

This approach is propounded by David Durand 1952. According to this approach, the decision of capital structure is relevant to the valuation of the firm. In other words, a change in the financial leverage will lead to a corresponding change in overall cost of capital as well as the total value of the firm. Basic assumptions of this approach are as follows :

(i) The corporate income tax does not exist.

(ii) The cost of capital is less than the cost of equity.

(iii) The cost of equity remains constant to the acceptable range of leverage.

(iv) The cost of debt remains constant to the acceptable range of leverage and

(v) The increasing leverage brings about no deterioration in the quality of net earnings so long as borrowing is confined to the amount below the acceptable limits

From the above assumption, overall cost of capital can be expressed as follows :

$$KO = X / V$$

Alternatively,

$$KO = Ke\ S / V + Kd\ B / V$$

Where,

KO = Over all cost of capital

X = Earning before interest and taxes

V = Total value of firm

Ke = Cost of equity

S = Market value of equity.

Kd = Cost of debt

B = Market value of debt

As the proportion of debt is increased in capital structure it causes the total value of firm to increase and the overall cost of capital decreased. The optimum capital structure would occur at the point where the value of firm is maximum and overall cost of capital is minimum. Under Net Income Approach the firm will have the maximum value and minimum cost of capital when it is all debt financed or as much as debt possible.

2.4.2 NET OPERATING INCOME APPROACH

This approach is propounded by David Durand . According to this approach that the capital structure of a firm is irrelevant. Any change in leverage will not lead to any change in the total value of firm as well as overall cost of capital. According to this approach there is nothing such as an optimum capital structure. Any capital structure is optimum. This approach suggests that any change in leverage leads to change in the cost of equity. This approach assumes that the equity holder feel higher degree of

financial risk and demand higher rate of return if the proportion of debt is increased in the capital structure.

The critical assumptions of this approach are:

(i) Cost of debt is constant.

(ii) Overall cost of capital also remains constant.

(ii) The market capitalizes the value of firm as whole.

(iii) The use of cheaper debt does not increase the value of firm and the advantage of increase in debt exactly offset by the increase in the cost of equity.

(v) Overall capitalization rate depends upon the business risk and it is independent to this capital structure.

$$Ke = Ko + (Ko – Kd) [B/S]$$

2.4.3 TRADITIONAL APPROACH

The traditional view, which is also known as intermediate approach, is a compromise between the net income approach and the net operating income approach. According to this approach the value of firm can be increased or decreased or the cost of capital can be reduced by a judicious mix of debt and equity capital. This approach clearly implies that the cost of capital decreases with in reasonable limit of debt and then increases with leverage. The cost of capital declines with leverage because debt capital is cheaper than equity capital with in reasonable, or acceptable, limit of debt. Under this approach, the manner in which the overall cost of capital reacts to change in capital structure can be divided into three stages:

(i) First stage

In this stage when debt is introduced in the firm's capital structure, as an result of use of cheaper debt, the firm's cost of capital decreases and the value of firm increases. In

other words, the debt used in the financial structure can be earned more than it's cost and surplus amount goes to the stockholders. The cost of capital increases slightly due to increased financial risk but it is negligible from the point of view of cost of capital.

(ii) Second stage

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

(iii) Third stage

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

2.4.4 Modigliani-Miller Approach (MM Approach):

Modigliani and Miller(1958) in their original position advocate that the relationship between leverage and cost of capital is explained by net operating income approach. They make a formidable attack on the traditional view by offering behavioral justification for having the cost of capital (Ko) remains constant throughout all degree of leverage (Van Horne, 2000 : 275). In views of Srivastava, M-M contended that the cost of capital is equity to the capitalization rate of a pure equity stream of income and the market values is ascertained by capitalizing its expected income at the appropriate discount rate for its risk class. The assumption regarding to their position I and II,

irrelevancy of cost of capital or the values of the firm with the capital structure are as follows.

1. Capital market is perfect where information relating investment freely accessible, there involves no transaction cost. In addition to this, investors are free to sell and buy the securities and they can borrow without any restriction at the same rate as corporation does. All investors are rational and no investor can influence the capital market.
2. The individual investors may have the different views as to the shape of the profitability the same.
3. The division of income between cash dividend and retained earnings in any period is a more detail.
4. Shares of firms in the same class are homogenous and perfect substitutes for each others.
5. Firms can be divided into equivalent return classes such that the return on the shares issued by any firm in any given classes is proportion to the return on the share issued by any others firm in the same class.

Proposition – I

The M-M proposition I states that the market value of a firm is independent of its capital structure. The reason is that the value of the firm is determined by capitalizing the net operating income at a rate for the firm risk class (M-M 1958). According to this proposition there is no relationship between the value of a firm and the way its capital structure is make up, and there is no relationship between the average cost of capital and capital structure.

Proposition – II

The proposition II states that the cost of equity rises proportionately with increase in the financial leverage in order to compensate in the form of premium for bearing additional risk arising from increased leverage.

Thus , the M-M theory in the tax contends that overall cost of capital as well as the value of the firms are independent of capital structure. The theory in a tax free is identical to the net operating income approach. It is also called the value of levered firm ($V_{L)}$ is equal to the value of an unlevered firm (Vu) in the same risk class i.e. V_L = Vu. With tax consideration MM theory reveals that its conclusion is identical to that of net income approach, which says that the value of a firm increases with every additional unit of debt financing. Such as , the theory suggests that it is always better to have maximum debt financing.

2.5 Leverage

"Operating leverage arises because the firm has fixed operating cost that must be covered no matter the level of production. If a high percentage of a firm's total operating cost are fixed, the firm is said to have high degree of operating leverage. Generally, increase in leverage results increase in return and risk. Where as decrease in leverage results in decreases return and risk.

The amount of Leverage in the firm's capital structure is the mix of long-term debt and equity maintained by the firm. There are three types of Leverage. Among this financial leverage is useful to analysis of capital structure decision" (Weston & Brigham, 1996)

2.5.1 Financial Leverage

Financial leverage relates the financing activities of a firm. The sources from which the funds can be raised by a firm, from point of view of the cost/charges, can be categorized into (i) those which carry a fixed charge, and (ii) those which do not involve any fixed charge. The sources of funds in the first category consist of various types of long-term debt. Including bonds, debentures and preference shares. Long-term debt carries a fixed rate of interest which is a contractual obligation for the firm. Although the dividend on preference share is not a contractual obligation, it is a fixed charge and must be paid before anything is paid to the ordinary shareholders. The equity holders are entitled to the remainder of the operating profits of the firm after all the prior obligation are met. The ability of a firm to use fixed financial charges to magnify the effects of charges in EBIT on the earning per share (Khan & Jain, 1999:10.7). In other words, financial leverage involves the use of funds obtained at a fixed cost in the hope of increasing the return to the shareholders. Favorable or positive leverage occurs when the firm earns more on the assets purchased with the funds, than the fixed cost of their use. Unfavorable or negative leverage occurs when the firm does not earn as much as the fund cost. Thus, the financial leverage is based on the assumption that the firm is to earn more on the assets that are acquired by the use of funds on which a fixed rate of interest /dividend is to be paid. The differences between the earnings from the assets and the fixed on the use of the funds go to the shareholders. In a way, therefore, use of fixed-interest sources of funds provides increased return on equity investment without additional requirement of funds from the shareholders. Financial leverage can be more preciously expressed in terms of the degree of financial leverage (DFL). The DFL can be calculated as follows:

DFL = percentage change in EPS / Percentage change in EBIT

"Higher level of risks is attached to higher degrees of financial leverage. High fixed financial costs increase the financial leverage, thus, financial risk. The financial risks refer to the risk of the firm not being able to cover its fixed financial costs. If the firm can not cover these financial payments, it can be technically forced into liquidation. Therefore the very existence of the business is at stake. Obviously, the financial manager should take into consideration all such factors while formulating the firm's financing plan in terms of the mix of various sources of long-term funds, viz. long-tem debt, preference shares, equity funds including retained earning"(Khan & Jain, 1999 : 10.10).

2.5.2 Financial leverage: Effect on the shareholders' return

The primary motive of the company is using financial leverage is to magnify the shareholders' return under favorable economic conditions. The role of financial leverage is magnifying the return of the shareholders is based on the assumptions that the fixed-charge funds can be obtained at a cost lower than the firms rate of return on net assets. Thus when the difference between the earnings generated by assets financed by the fixed-charges funds and costs of these funds is distributed to the shareholders, the earnings per share (EPS) or return on equity (ROE) increases. However, EPS or ROE will fall if the company obtains the fixed-charges funds at a cost higher than the rate of return on the firm's assets. It should, therefore, be clear that EPS and ROE are the important figure for analyzing the impact of financial leverage.

Earning per share (EPS) = Profit after tax / Number of shares

Return on equity = profit after tax / Net worth (book value of equity)

2.5.3 Financial leverage: Effect on share holders' risk

The variability of EBIT causes EPS to fluctuate with in wider ranges with debt in capital structure. That is, with more debt, EPS rises and falls faster than the rise and fall in EBIT. Thus, financial leverage not only magnifies EPS but also increases it's variability.

The variability of EBIT and EPS distinguish between two types of risk – operating risk and financial risk.

Operating risk

Operating risk can be defined as variability of EBIT (or return on total assets). It is an unavoidable risk.

Financial risk

The variability of EPS caused by the use of financial leverage is called financial risk. A totally equity financed firm will have no financial risk. But when debt is used, the firm adds financial risk. Financial risk can be avoided if a firm decided not to use any debt in it's capital structure.

Here, the study only includes financial risk because the operating leverage does not have the relation with financing.

An increase in debt increases both the expected value of EPS and it’s standard deviation or coefficient of variations. The relation between debt ratio and risk measured by standard deviation is always upward curvilinear.

Figure 2.1

Relationship between EPS and it's Standard Deviation

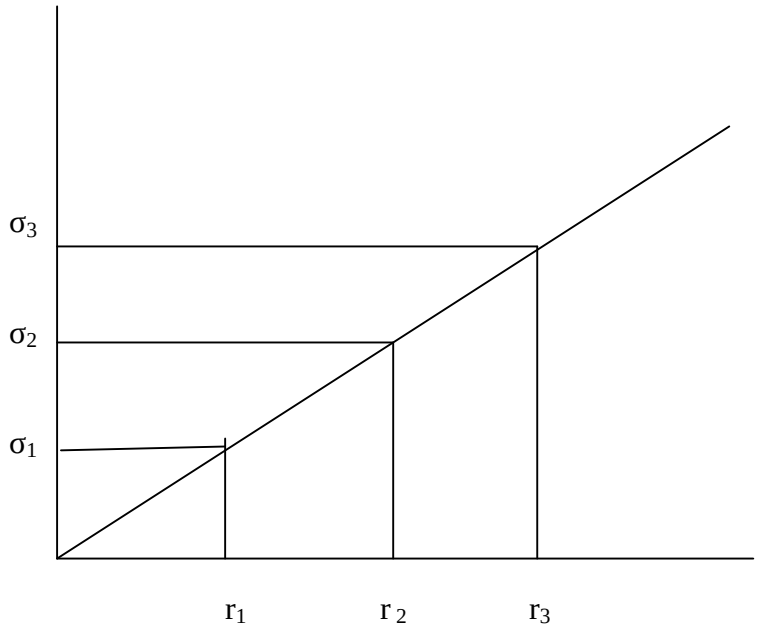

Fig. 2.1 shows the relationship of expected EPS and its standard deviation with debt r_1, r_2 and r_3 shows the expected earning and σ_1, σ_2 and σ_3 shows standard deviation. It is clearly indicated that debt increases both risk and return. Figure 2.5.3.1 shows that financial leverage adds to financial risk.

Cost of Capital

The items on the right side of a firm's balance sheet – various types of debt, preferred stock, and common stock- are called capital components. Any increase in total assets must be financed by an increase in one of more of these capital components. The cost of each component is call the components cost of that particular type of capital: debt, preferred stock and common equity are three major capital components. The following symbols identify the cost each.

Kd = Before tax cost of debt .

Kd (1-T) = Tax cost of debt.

Kp	=	Cost of preferred stock.
Ke	=	Cost of common equity.
WACC	=	The weighted average cost of capital.

Cost of debt, Kd(1-T).

The after tax cost of debt , Kd(1-T) is used to calculated the weighted average cost of capital, and it is the interest rate on debt, Kd, less the tax savings that result because interest is deductible. This is the same as Kd multiplies by (1-T), where T is the firm's marginal tax rate. The government pays part of the cost of debt because interest is deductible. The reason fore using the after-tax cost of debt in calculating the weighted average cost of capital is as follows. The value of the firm's stock, which the firm want to maximize, depends on after tax cash flows. Because interest is a deductible expenses, it produces tax saving that reduce the net cost of debt, making the after-tax cost of debt less than the before- tax cost.

Cost of preferred stock, Kp

The component cost of preferred stock used to calculate the weighted average cost of capital, Kp, is the preferred dividend, Dp, divided by the current price of the preferred stock, Pp.

Cost of preferred stock, Kp = Dp / Pp

No tax adjustments are made when calculating Kp because preferred dividend. Unlike interest on debt, are not deductible. Therefore, there is no tax saving associated with the use of preferred stock.

Cost of common equity, Ks

The cost of common equity is based on the rate of return investor require on a company's common stock. Note, through, that new common equity is raised in two ways: (1) by retaining some of the current year's earnings and (2) By issuing new common stock. Equity raised by issuing stock has a flotation coasts involved with new stock issues. Symbols Ks to designate the cost of retained earnings and Ke to designate the cost of common equity raised by issuing new stock , or external equity. Whereas debt and preferred stocks are contradiction obligations that have easily determined coasts, it is difficult to measure Ks. If a stock is in equilibrium, then it's required rate of return, Ks must be equal to its expected rate of return. Further, its required return is equal to a risk- free rate. Krf, plus risk premium, Rp. Where as the expected return on a constant growth stock is the stock's dividend yield, D1/Po plus its expected growth rate g .

Required rate of return = Expected rate of return.

Ks = D1/Po + g or,

Ks = Krf + Rp

The cost of external equity based on the cost of retained earnings, but increased for floating costs.

Cost of equity from new stock issue, Ke = D1/po (1-F) + g

Here F is the percentage of flotation cost required to sell the new stock. So, Po (1-F) is the net price per share received by the company.

Weighted Average Cost of Capital, WACC

Optimal capital structure defined as that mix of debt, preferred and common equity that causes its stock price to be maximized. Therefore, a value-maximizing firm will

determine its optimal capital structure, use it as a target, and then raised new capital in a manner designed to keep the actual capital structure on target over time. The target proportions of debt, preferred stock, and common equity, along with the costs of those components, are used to calculate the firm's weighted average cost of capital (WACC).

WACC = Wd * Kd (1-T) + Wp * kp + Wc * Ks

Here, Wd, Wp, and Wc are the weighted for debt, preferred, and common equity, respectively. The weights could be based either on the accounting values shown on the firm's balance sheet (book values) or on the market values of the different securities. Theoretically, the weights should be based on market values but if a firm's book value weights are reasonably close to its market value weights, book value weights can be used as a proxy for market value weights. Debts include both long term debt bank debt (Notes payable) also.

2.6. Determinants of Decision of Capital Structure

The decision of Capital structure affects the value of the firm, it's earning per share and overall capitalization rate of the firm. So, company should plan properly to establish a target capital structure. The target capital structure should affect the firm positively. While establishing the target/optimal capital structure firm first should identify the sources of funds and the understand about the advantages and disadvantages of each sources of funds. And the company should make a proper mix of those sources of funds while financing. Therefore, company should test the effect of various alternative sources of financing and should select the appropriate

combination or alternative financial plan, with the help of appropriate approach or technique.

The decision of Capital structure is one of the much crucial decision that a financial manager has to make as it affects risk, return and cost of capital and value of the firm. The capital structure will be planned initially when company is incorporated. The initial capital structure should be designed very carefully. The management of the company should set a target capital structure and the subsequent financing decisions should be made with a view to achieve the target capital structure. The financial manager has also to deal with an existing capital structure. (Pandey, 1998 : 650)

There are certain common, and often, conflicting considerations involved in determining. The methods of financing assets because the position of each company is different. Accordingly, the weight given to various factors also varies widely, according to conditions in the economy, the industry and the company itself. Above all, the freedom of management to adjust the mix of debt and equity accordance with these criteria is limited by the availability of the various types of debt to have an appropriate capital structure, but the debt may not be available to the company because the suppliers of the funds may think that it will involve too much financial risk for them. Consequently, the plans that management ultimately makes in the light of these considerations often involve a compromise between the desire and conditions imposed by the suppliers of funds. (Khan & Jain, 1999 : 12.1)

The company needs capital to finance its activities continuously, every time when capital is needed, the financial manager should test the advantages and disadvantages of various sources of finance and select the most advantageous source of capital. Thus the capital structure decision is a continuous process and it has to take whenever the

company needs additional funds. Financial manager can use various approaches while establishing appropriate capital structure.

The following must common approaches to decide about a firm's capital structure.

- EBIT – EPS Approach
- Cash Flow Approach
- Cost of capital and valuation Approach

a) EBIT- EPS Approach

This is a most common approach to establish an appropriate capital structure. This approach analyzes the impact of various financial plans on earning per share. This approach analyzes that what is the effect of debt or preferred stock financing on earning per share. The common goal of the companies is to maximize the shareholders' wealth i.e. earning per share. So, company should select that financial plan which maximizes the earning per share of the company.

The use of fixed cost sources of finance, such as debt and preference share capital to finance the assets of the company is known as financial leverage or trading on equity. If the assets financed with the use of debt yield a return greater than cost of debt, the earnings per share increases without an increase in the owners' investment. The earning per share also increases when the performance share capital is used to acquire assets. (Pandey, 1999 : 650)

Keeping in view the primary objective of financial management of maximizing the market value of the firm, the EBIT- EPS analysis should be considered logically as the first step in the direction of designing a firm's capital structure. The EBIT- EPS analysis shows the impact of various financing alternatives on EPS at various level of EBIT. This analysis is useful for two reasons (i) the EPS is a measure of a firm's

performance- given the P/E ratio, the larger the EPS, the larger would be the value of firm's share; and (ii) given the importance of EPS and the function of the EBIT-EPS analysis to show the value of EPS under various financial alternatives at different levels of EBIT. (Khan & Jain, 1999 : 12.2)

b) Cash Flow Approach

Cash flow analysis is another approach to establish an appropriate capital structure. It indicates the capital of the firm to pay fixed charges on the basis of its ability of cash generation. The fixed charges of a company include payment of interest, preference dividends and principal, and they depend on both the amount of senior securities and the terms of payment. The amount of fixed charge will be high if the company employs a large amount of debt or preference capital with short-term maturity. Whenever company thinks of raising additional debt, it should analyze its expected future cash flows to meet the fixed charges. It is mandatory to pay interest and return on the principal amount of debt. If a company is not able to generate enough cash to meet its fixed charge obligation, it may have to face financial insolvency.

The analysis of cash flow ability of the firm to service fixed charge is an important exercise to be carried out in capital structure planning in addition to profitability analysis. The exercise is of overwhelming significance in the context of the risk of bankruptcy. If a firm borrows more than its debt capacity and, therefore, fails to meet its obligations in future, the lenders may seize the assets of the company to satisfy their claims. Thus, the basic existence of the company would be endangered.(Khan & Jain, 1999 : 12.4)

It may be possible that the company's EBIT is adequate to cover its specific commitments, arising out of debt obligations; but, the firm may not have sufficient

cash to pay as its income is blocked within the firm in the form of higher inventory, receivables and/or sometimes purchases of fixed assets, particularly, when the company is growing one. In the absence of cash flow analysis, a company is otherwise profitability sound, would, in case of default, run into great difficulties. Thus cash flow analysis is an essential ingredients of any sound decision of capital structure.

One important ratio that should be examined while planning an optimum capital structure is debt servicing ratio. It indicates the number of times the fixed financial obligations are covered by the net cash inflow generated by the company. The greater the coverage ratio, the greater the amount of debt a company can use. However, a company with a small coverage can also employ a large amount of debt if there are not significant yearly variance in its cash inflows and a small probability of the cash inflows being considerably less to meet fixed charges in a given period. Thus, it is not the average cash inflows but the yearly cash inflows which are important to determine the debt capacity of a company. Fixed financial obligations must be met when due, not on an average and not in most years but always. This requires a full cash flow analysis.

c) Cost of Capital and Valuation Approach

Cost of capital and valuation is also another determinant factor of decision of capital structure. Cost of capital of difference sources funds is the required rate of return of suppliers of funds. The suppliers of fund require high rate of return if the risk associated with their investment is higher. Generally, the cost of equity capital is higher than other two method of financing because it has higher risk than the others do. On the other hand, the attachment of floatation cost on issue of new shares further

adds the cost and makes it more expensive source of financing. The cost of debt is little cheaper than preference and equity source of financing because suppliers of fund on debt assume highly depends upon the perception that has in the company. The high degree of leverage of a company adds more costs while raising further required fund by debt itself. Preference share capital posses both the characteristics of debt and equity capital and its cost of capital fall between these two extreme sources of financing. Preference share capital is cheaper than equity but more expensive than debt.

Debt capacity

Debt capacity is the amount which a firm can service easily even under adverse conditions; it is the amount that a firm should employ. There may be lenders who are prepared to lend the firm but the firm should borrow only if the firm can service debt without any problem. A firm can avoid the risk of financial distress if it can maintain its ability to meet contractual obligation of interest and principal payment. A high debt ratio is not necessarily bad if the firm can service high debt without any risk, it will increase shareholders' wealth. On the other hand , a low debt ratio can prove to be burdensome for a firm which has liquidity problem. A firm faces financial distress when it has cash flow problem.

Component of cash flows

The cash flow should be analysed over a long period of time, which can cover the various adverse phases, for determining the firm's debt policy. The expected cash flows can be categorized into three groups:

- Operating cash flows

- Non operating cash flows
- Financial flows

Operating cash flows

It relates to the operations of the firm and can be determined from the projected profit and loss statements. The behavior of sales volume, output price and input price over the period of analysis should be examined and predicted.

Non operating cash flows

It generally includes capital expenditure and working capital changes. During a recessionary period, the firm may have to specially spend for the promotion of the product. Such expenditures should be included in the non-operating cash flows. They are necessary to maintain the minimum operating efficiency.

Financial flows

It includes interest, dividends, lease rental, repayment of debt etc. They are further divided into: contractual obligations and policy obligations. Contractual obligations include those financial obligations, like interest, lease rentals and principals payments that are matter of contract, and should not be defaulted. A policy obligation consists of those financial obligations, like dividends, that are the discretion of the board of directors.

The cash flow analysis may indicate that a decline in sales resulting into profit decline or losses may not necessarily cause cash inadequacy. This may be so because cash may be released from permanent inventory and receivables. Also, some of the

permanent current liabilities may decline with fall in sales and profits. On the other hand, when sales and profits are growing the firm many face cash inadequacy as large amount of cash needed to finance growing inventories and receivables. If the profit decline due to increase in expenses or falling output prices instead of the decline in the number of units sold, the firm bay face cash inadequacy because its funds in inventories and receivables will not be released. The point to be emphasized is that a firm should carry out cash flow analysis to get a clear picture of its ability to service debt obligations even under the adverse conditions, and thus, decided about the proper amount of debt in the capital structure.

2.7 Review of empirical Works

The M-M first study (1958):- Franco Modigliani and Merton Miller, both recent Nobel Prize winners in financial economics said that the value of a firm is determined solely by its investment, or capital budgeting, decisions and therefore, how the firm is financed is “irrelevant”. Under the MM no tax case, the value of the firm V, and the firm’s opportunity cost of capital are not affected by the use of more or less debt financing . MM conclude in the no-tax case that there is no advantage of disadvantage to financing with common stock. Any “Saving” from debt financing are immediately offset by a higher return required by common stockholders (due to greater financing risk). Leaving the firm and its stockholders in the same position as before.

Thus, according to MM, the value of the firm does not change; rather, increased financial risk causes the stockholder’s required rate of return to increase. Accordingly, the opportunity cost of equity capital increases so that any apparent gain from using chapter debt financing is completely oddest. Both the value of the firm and its cost of

capital are independent of financial leverage in other absence of taxes. There is no optimal capital structure.

The M-M Second Study (1963), almost immediately after MM presented their no- tax case critics remained them that corporate taxes are a fact for firms. Because of corporate taxes and the fact that interest on debt is a tax- deductible expenses, the after tax cost 0 debt is less than the before tax cost of debt. The impact of interest on the amount of taxes actually paid by the firm is referred to as the interest tax shield. According to MM, debt financing has value because on an after tax basis it costs the firm less than equity. Therefore, the value of the levered firm VL, once corporate tax are introduced, is equal to the unleveled value of the firm, Vu, plus the present value of the interest tax shield.

The MM results once corporate tax is introduced. Note that financial risk still remaining and increases as debt is employed as signified by the rising cost of common stock. Even with this increase in the cost of equity, the presence of corporate taxes has the effect of subsidizing the use of debt; the result is that increases in financial leverage leas to increase in the total value of the firm and decrease in the firms overall opportunity cost of capital. As long as firms are profitable, and the government provides an incentive for using debt through allowing interest to be tax deductible, there is an advantage to using debt financing. The advantages lead to an increase in the values of the firm. Providing that the investment decisions of the firm are unaffected.

Altman (1968) study, he employed multiple discriminate analysis to predict bankruptcy, using various financial ratio. He found that five financial ratios were able to discriminate rather effectively between bankrupt and non-bankrupt companies, beginning up to 5- years prior to the bankruptcy event.

The Z –score model itself was the following.

$Z = 1.2 X1 + 1.4 X 2 + 3.3 X 3 + 0.6 X 4 + 1.0 X 5$

Where,

X1 = Working capital to total assets.

X2 = Cumulative retained earnings to total assets.

X3 = Earning before interest and taxes to total assets.

X4 = market value of equity to book value of total liabilities

X5 = Sales to total assets.

The Z ratio is the overall index of the multiple discriminate functions. Altman found that companies with Z-scores below 1.81 (including negative amounts) always went bankrupt, where as Z score above 2.99 represented healthy firms. Firms with Z-scores in between were sometimes misclassified, so this represents an area of gray. On the basis of these cut offs, Altman suggests that one can predict whether or not a company is likely to go bankrupt in the near future. This model is also known as zeta model.

Chakraborty (1977) has also conducted a study to investigate debt-equity ratio in the private corporate sector in India. He tested the relation of debt-equity ratio with age, total assets, retained earnings, profitability and capital intensive .He found that age, retained earnings and profitability were negatively correlated while total assets and capital intensity were positively related to dent-equity ratio. He also provided a

glimpse of the regional patters of debt-equity ratios in different industrial centers in India. He also attended a prediction equation for debt-equity ratio for each industry; Chakraborty also used a very simple methodology for calculating the cost of capital. He shows calculation of cost of capital for 22 firms. He found that cost of capital increased from 7.36 percent to 12.36 percent over years. The average cost of capital for all the consumer goods industry firms taken together was the highest while it was lowest for the intermediate goods firms. One of the reasons for this was attributed to the relatively low amount of debt used in the former industry than in the latter. An indirect attempt was also made to test the M-M hypothesis by plotting debt-equity ratios on the X-axis for 22 firms. The result showed almost a horizontal line parallel to the X-axis. The study also discussed environment factors influencing corporate debt-equity ratios & cost of capital in India.

Bhat (1980) paper concerned the impact of size, growth, business risk, dividend policy, profitability. Debts service capacity and the degree of operating leverage on the leverage ratio of the firm. The study used the multiple regression models to find out the contribution of each characteristic. Business risk (defined as earning instability), profitability, dividend payout and debt service capacity were found to be significant determinants of leverage ratio. The study used a sample of 62 companies from engineering industry.

Pandey (1984) study about the corporate manager's attitude towards use of borrowing in India revealed that the practicing managers generally preferred to borrow instead of using other sources of funds because of low cost of debt due to the interest tax deductibility and the complicated producers for raising the equity capital .

in the light of this finding, Pandey(1985) conducted another empirical study examine the industrial patterns, trend and volatilities of leverage and the impact of size , profitability and growth on leverage. For this purpose, data of 743 companies in 18 industrial groups for the period 1973-74 to 1980-81 were analyzed. It was found that about 72 to 80 percent of the assets of sample companies were financed by external debt, including current liabilities. Companies employed trade credit as much as bank borrowings. The level of leverage for all industries showed a noticeable increase after 1973-74. the study also indicated that classifying leverage percentages by the type of industry does not produce any patterns which may be regarded as systematic and significant. The trends and volatilities associated with leverage percentages also did not give any support to belief that the type of industry had an impact on the degree of leverage. It also revealed that there was some evidence of the tendency of large size companies to concentrate in the high level of leverage. But it is difficult to say conclusively that size has an impact on the degree of leverage since a large number of small firms were also did not show a definite structural relationship between the degree of leverage, on the one hard and profitability and growth on the other hard, although over time profitability and growth have improved and so has the degree of leverage. The majority of the profitability and growth groups of companies were concentrated within narrow bands of leverage.

2.8 Review of Thesis

There are various thesis work have been submitted in different aspect of manufacturing public and private industries. In which the decision of capital structure and its impact on risk and return are directly or indirectly linked with capital structure

analysis. Under this section some master's degree level thesis related to the studies has been reviewed as follow.

Dahal (2005), has studied on " Capital Structure Decision of Dabur Nepal Pvt. Ltd. and its imact on risk and return." The basic objective of this study was to asses the capital structure decision of Dabur Nepal Pvt. Ltd. and its impact on risk and return. He found that the financial risk of DNPL is very high. Eqyity capitalization rate is in decreasing trend. Total debt to total asset ratio is also in decreasing trend. Correlation between earning after tax and long-term debt is very low. The correlation between earning after tax and share holders' equity is 0.5645 which is moderate degree of positive correlated. The average interest coverage ratio is 2.63 times (after adjustment of depreciation), which indicates the poor debt service. So, he recommend to replace the debt by equity shares.

Mishra (2005), has carried out a study on " An analytical study of capital structure management of selected manufacturing companies". The study include three manufacturing company as a sample (Jyoti Spinning Mills Ltd., Nepal Lever Ltd. and Bottlers Nepal Ltd.). The main objective of this study was to analyze, evaluate and interpret the capital structure employed by samples. The study found that NLL is not using long-term debt for the last five years. BNL is equity based company while JSML is levered company. Due to high amount of accumulative loss, Share holders' equity of JSML showed negative value in most the study periods. BNL's long-term debt is higher that the share holders' equity in JSML. Hence, financial risk of JSML is very high. Overall cost of capital and equity capitalization rate (Ke) for JSML is negative than that of other two manufacturing companies. So, due to high long-term

debt to total debt ratio, JSML has to pay high amount of interest rate. The study recommend to retire the most of debt capital from its financial mix. The company JSML is bearing heavy loss due to high amount of interest payment.

Kadel (2006), made a research entitled " Capital Structure Management in Nepalese Enterprises ." The basic objective of this study was to examine the determinants of capital structure choice in Nepalese contest. The study found that total debt ratio for Banking, Manufacturing, Trading and Hotel sector enterprises is 83.09 %, 68.51 %, 55.42% and 68.94 % respectively. Long-term debt ratio is 1.68 %, 23.85 %, 41.20 % and 72.26 % while short-term debt ratio is 81.41 %, 44.66 %, 36.80 % and 27.74 % respectively to Banking, Manufacturing, Trading and Hotel sector enterprises. The pearson's correlation between variables shows that in Nepalese enterprise, average leverage is positively correlated with size, growth and risk while it is negatively correlated with non debt tax shield, asset structure, profitability, dividend pay out and debt servicing capacity. With respect to factor affecting capital structure, majority number of respondent stated that interest rate is major determinant factor of capital structure. Other major factors are tax rate, loan covenants, stability of sales and growth, flexibility and period of finance.

Baidya (2004), has carried out study on " Capital Structure Management of manufacturing listed in NEPSE." He selected five companies as sample. He found that DOL for AVUL, JSML and BNL is negative which shows the inefficient earning capacity of firms. In case of NLOL the DOL is very much which resembles the riskyness of the company, where as NLL has quite good average DOL which indicates the good situation of the company. The average DOL of JSML shows the

unsatisfactory performance of the company. The AVUL has average DFL less than 1 and BNL has the highest DFL among all the companies. There is no any consistent in the DOL and DFL for the same type of manufacturing industries. The book value per share of AVUL and JSML is negative. He suggest that NLOL should try to0 manage its DOL where as AVUL, JSML and BNL should try to increase their sales volume to improve the operating position.

Dhital (2004), has studied "capital structure decision and it's impact on risk and return HSIPL". The basic objective study was to test the relationship between capital structure and value of firm by analyzing the effect of financial leverage on return and risk. The researcher found that

- Capital structure of HSIPL is mainly depend upon retained earning.
- Total debt to total asset ratio is vary high. This is due to short-term debt.
- HSIPL has a excellent ability of interest coverage ratio. So, the company should try to reduce short-term debt and use long-term funds.
- Profit margin on sale is very poor.
- The return on total assets and return on net worth are not sufficient and profitability is also not sufficient.
- TD/TA ratio, I/C ratio, profit margin on sales return on total asset, total value EBIT,EAT and EPS of HSIPL is in increasing trends while long-term debt, LTD/E ratio and DFL are in decreasing trend.
- By the evaluation of simple and multiple regression results, earning variability is the measure of systematic risk can be reduced by increasing leverage, growth and I/C ratio . Size of HSIPL has no effect on the earning variability.

- Expected earning of HSIPL can be minimized by increasing the size of the company.

The researcher recommend HSIPL to improve profitability and expansion through cost control, value maximization through efficient business operation and at last to maintain proper liquidity.

After reviewing all Master Degree un published thesis, it was found that some researchers have done study on the topic entitled "capital structure management of selected companies" while some of them have done research work on the topic in entitled " decision of capital structure and it's impact on risk and return" but no body has tried to study the financial distress position of the concerned company. This research is different from others in the manner that this includes the analysis of financial distress position of JSML by using the Z – score model given by Altman. Z – score model is also known as Zeta model.

2.9 Research Gap

Research gap is the difference between previous works done and the present research work. There are many researchers conducted on the topic decision of capital structure on banks cottage and small scale industries etc. But there is no research conducted on Jyoti spinning mills ltd. This research is conducted on decision of capital structure and its impacts on risk and returns a case study of Jyoti spinning mills ltd. It is one of the large-scale thread industries in Nepal. JSML is incorporated in Nepal at 13 magh. 2045 and its registered office is in Chorni VDC, Bara District as private Limited. Later it changes as public limited at 27th Shrawan 2046. It’s prime objectives are to fulfill the domestic need of thread, cut down importers of thread and to help increase employment opportunities of people.

CHAPTER – III

Research Methodology

3.1 Introduction

It is significance to have appropriate choice of research methodology that helps to make this research study meaningful and more scientific. Therefore, appropriate methodology has been followed to meet this research include the research design, nature and sources of data population and sample and method of analysis of data

3.2 Research Design

The analysis of this study is based on certain research design keeping in the mind on the objective of the study. The main objective of the study is to analyze the impact of capital structure on risk and return of JSML. It emphasis on descriptive and analytical study of the collected data from profit and loss account and balance sheet over a period of time. Analysis with different financial and statistical tools has been conducted to fulfill the demand of objective.

3.3 Nature and Sources Data

This study is related to decision of capital structure and it's impact on risk and return. So, the main source of the data is secondary source. The other sources were concerned company, annual report and unpublished thesis. The secondary data were directly collected from Jyoti Firm by visiting account section.

3.4 Population and Sample

To get the information about capital structure decision and its impact on risk and return, more representative and comprehensive sample is selected for the wide coverage of population. There are 74 manufacturing companies in Nepal out of them JSML is selected on the basis of purposive sampling method.

3.4 Method of Analysis

Analysis is the careful study of available facts so that one can understand and draw conclusion from them on the basis of establish principles and sound logic. This is an important part in the research work. Therefore, collected data from secondary sources were presented in appropriate and suitable various form like table diagram and figure. The analysis has been done according to pattern and usefulness of data. Wide varieties of methodology have been apply according to the reliability and consistency of data.

Before using analytical tools to compare the results, the data containing in financial statements and progress report have been grouped and rearranged so as to make easy and effective comparison. To meet the ultimate purpose of the study, the analysis is divided into two heading. These are :

(I) Financial Tools.

(II) Statistical Tools.

3.5.1 Financial Tools

For the analysis of financial statement, ratio analysis is used as a technique to quantify the relationship between two set of financial data taken from either profit and loss account or balance sheet. In this study, ratio analysis and leverage is taken as financial

tools to analyses long term solvency position and risk of the business. The required financial ratios for this study are in detail as follows.

(I) Leverage ratio

It is also known as capital structure ratio. The ratios are the measure of long-term solvency of a firm. Capital structure generally refers to the composition of debt and equity component of overall capital of a firm. These ratios also provide some measure of risk of debt financing by the calculation of the coverage of fixed charge, in this study following ratio are to be calculated.

(a) Return on Assets

The ratio indicates the efficiency of total asset utilization. The higher ratio is preferable to lower ratio. The return indicate EBIT and asset included total fixed asset and current asset.

Return on Asset = EBIT / Total Asset

(b) Debt Equity Ratio

Debt equity ratio is used as a tool for analyzing financial risk both investors as well as by firm. A high debt ratio indicates greater contribution at a firm's financing by debt holders than those of equity holders.

$$\text{Debt –Equity ratio} = \frac{\text{Long –term debt}}{\text{Shareholders equity}}$$

(c) Debt to Total Capital Ratio

Debt to total capital ratio represents the relationship between long-term debt to total capital of the firm.

$$\text{Debt to total capital ratio} = \frac{\text{Long –term debt}}{\text{Total Capital}}$$

(d) Interest Coverage Ratio

The interest coverage ratio evaluates the debt serving capacity of a firm. It is calculated as

$$\text{Interest coverage ratio} = \text{EBIT} / \text{Interest}$$

The ratio calculated using this relation indicates the times that interest on debt capital is covered by earning before interest and taxes.

(II) Profitability Ratio

Profitability is the net end result of a number of corporate policies and decisions. It is essential factor that measures how effectively the firm is being operated and managed. In this study following profitability, ratios have been taken into consideration.

Other Calculated Financial Tools

- Degree of Financial Leverage.
- Overall cost of capital

3.5.2 Statistical Tools

Statistical tools are mathematical measure of various variables which helps to estimate or predict of unknown value of one variable with the help of other known variables, similarly, it helps to measure interrelationship of various variables. In this study following statistical tools are used for analysis of data and test of hypothesis.

- Average
- Standard deviation
- coefficient of variance
- Growth rate
- Regression analysis.

Other tools are also used when ever it needs.

3.5.2.1 Regression Analysis

The intent of this research is to estimate the impact of capital structure i.e. leverage on risk and return. Thus, this study is concerned with the relationship between the firms risk and return and its leverage. Here risk represents unsystematic risk of JSML i.e. earning variability of JSML while return is simply the expected earnings of JSML. This study has estimated the parameters of the following model.

Where,

E.VJ = Earning variability of JSML which represent unsystematic measure.

XJ = Expected earning of JSML which represents return measure

LJ = Measure of the JSML's leverage.

The method of analysis used in this study includes both simple and multiple regression model. Following models are used in this study.

Model I

In this model , the regression equation of E.VJ i.e. risk and XJ i.e. return on leverage is used to describe the variation in the values of risk and return for given change in leverage. E.VJ and XJ also regressed against each of the explanatory variables like growth and interest coverage ratio. Following simple regression equation are used:

$XJ = a_0 + b_1 LJ$

$XJ = a_0 + b_2 G$

$XJ = a_0 + b_3 I.C$

$E.VJ = a_0 + b_4 LJ$

$E.VJ = a_0 + b_5 G$

$E.VJ = a_0 + b_6 I.C$

Where,

XJ = Expected earning of JSML which represents return measure.

E.VJ = Earning variability of JSML which represents unsystematic risk measure.

G = Growth rate

LJ = Measure of JSML's leverage

I.C = Interest coverage ratio

a_o = E.VJ or XJ intercept

b_1…….b_6 are the slope of regression line respectively.

Model II

In this model, earning variability of JSML is regressed against leverage together with other explanatory variables. The theoretical statement of the model is that the earning variability i.e. risk depend on leverage, growth, interest coverage ratio. Symbolically represented as

E. VJ = *f* (lev. ,G, I..C)

The regression equation is

$E.VJ = a_0 + b_1 LJ + b_2 G + b_3 I.C$

The notation are same as above

Model III

In this model earnings of the firm is regressed against leverage together with other explanatory variables like growth, interest coverage ratio. The theoretical statement of the model is that earning would depend on leverage together with other explanatory variables like growth, interest coverage ratio. The equation of the model :

$X J = a_0 + b_1 LJ + b_2 G + b_3 I.C.$

The notations are similar as above

3.7.2.2. SPECIFICATION OF THE VARIABLES

The definitions of the variables used in regression analysis are briefly explained hereunder.

Return (X)

Here earning per share is considered as return, as it is important figure for analyzing the impact of leverage. It is dependent variable and is calculated by dividing the earning per share by the number of outstanding shares.

$XJ = EAIT / N$

Where,

EAIT = Earning after interest and tax

N = Number of common shares outstanding

Earning Variability

Here earning variability is considered as proxy for business risk in regression model. It also dependent variable and calculated by deducting mean return from return of corresponding years.

$$E.VJ = XJ - \bar{X}$$

Where ,

$\bar{X}$ = Mean return

Leverage (L)

In this model, long-term debt to equity ratio is used as measure of leverage.

Growth (G)

Growth in assets should normally followed by increase in the earning capacity of the business. At least it indicates the potentiality for increase in earning. This also determines the technological efficiency. Thus, it is taken as a proxy measure fir expected growth.

G = A-At / At

Where,

A = Total assets in cross- section year

At = Total assets in one year before cross section year

Interest coverage ratio (IC)

This ratio is considered as independent variable in the regression model. Interest coverage ratio is calculated in this study as.

Interest coverage ratio = EBIT / Interest

Where,

EBIT = Earning before interest and taxes

3.6 Research Variables

Research variables of the study are mainly related with the capital structure, cost of capital, risk of business and return, for capital structure mainly equity and debt capital is taken as research variables. For risk, standard deviation of the return is taken. For return, earning before interest and tax and EBIT and EAT is taken for calculation as the dependent variable.

CHAPTER – IV

PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION

The main purpose of analyzing the data is to change it from an unprocessed form to an understandable presentation. The analysis of data consists of organizing, tabulation and performing statistical analysis. The presentation of data is the basic organization and classification of the data for analysis. After data collection is completed the data will be in what researchers call "the raw from". It is necessary to arrange the data so that it makes easy to the researcher to analyze and so that it can later be presented to the readers of the thesis. Different types of data require different methods of analysis and presentation. After data is collected and coded, statically analyses are performed. The statistical analysis is one particular language, which describes the data. Conclusions, which are made suggesting that a certain hypothesis is supported by data, must also, be statistically significant.

In this chapter, the effort has been made to analyze "Capital structure decision and its impact on risk and return of JSML." For this, the major variables as well as the variable affecting capital structure and risk are to be considered for analysis. First we proceed with financial analysis and then statistical analysis. The financial analysis is done through calculating various financial ratios which shows the relationship between variables and capital structure. These analysis and presentations of data mainly focus to meet the objectives of the study. Which has already been described chapter one.

4.2. Analysis of business risk of the JSML.

Business risk is the risking of the company stock, if it user no debt. It is a function of the uncertainty inherent in projections of a firms return on investment. The business risk of a leverage free firm can be measured by the standard deviation of its ROE. Business risk depends on a number of factors which are as follows.

(i) Demand variability:-

The more stable the demand for a firm's products, other things holds constant, the lower its business risk.

(ii) Sales price variability:-

Stable sales price is less risky than highly volatile sales price.

(iii) Input cost variability:-

Firm whose input costs are highly uncertain are exposed to high degree of business risk.

(iv) The fixed cost (operating leverage):-

If the high percentages of costs are fixed, hence do not decline, when demand falls, then the firm is exposed to a relatively high degree of business risk.

For the analysis of the JSML business risk, we analyze the following factors.

1. Return on Assets.
2. Operating leverage
3. Sales and input cost variability.

4.2.1 Analysis of return on Assets:-

The return on assets ratio shows that assets utilization rate of the particular firm. The higher ratio is preferable to lower because of its higher efficient of mobilization of assets possessed by the firm. Total assets included the fixed assets and current assets

only. Intangible assets and fictitious assets are to be ignores. For the return, earning return on Assets = EBIT / Total assets.

Table: - 4.1

Return on Assets of JSML

Fiscal Year	**Total Assets**	**EAT**	**ROA**
061 / 062	781861255	-5292033	(0.0067)
062 / 063	1528335016	7049616.8	0.0046
063 / 064	757890128	20290470.4	0.0267
064 / 065	733734064	-40096536	(0.0546)
065 / 066	789390803	-75445835	(0.0955)
Average			(0.0251)
Standard Division			0.0508
Coefficient of Variance			100.99 %

Table 4.1 shows the return on assets of JSML. The ROA is fluctuating over the period of time. It has been found higher in 063 / 064 where as the lowest figure prevails in 063 / 064. The ROA of JSML found negative in 061 / 062 , 064/065, 065/066 and the reason behind it is political uncertainty, strike in the country and the main cause is that the carpet industry in the country has been totally affected by the politics and due to this some of them has been closed also. The average ROA is not even equal to one and it means that the firm is not being able to utilize the asset in efficient manner. The average ROA has been obtained as (0.0251) where as standard division is 0.0508. The standard deviation reveals that there is slightly (approximately not) variability of the ROA over the period the coefficient of variance of the understudied is 100.99 %.

For the analysis of ROA of the JSML, figure 4.1 is constructed. The figure shows the trend line of return on assets.

Figure 4.1

ROA of JSML

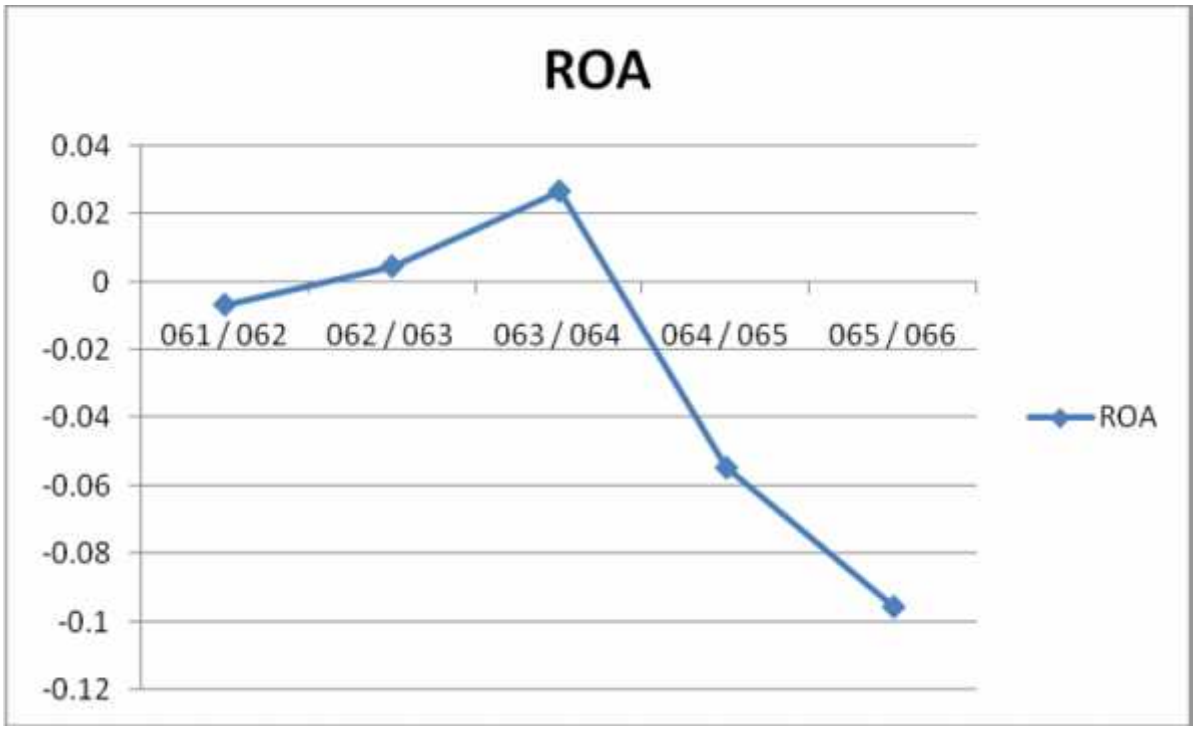

Figure 4.1 shows the variability of ROA from fiscal year 061/062 to 065/066. In FY 061/062 the return on assets is negative i.e (0.0067) and there after in FY 062\063 ROA is increased to 0.0046 and again in FY 063\065 it is increased to 0.0267 and there after it is in decreasing trend. In FY 065\066 ROA is negative due to very bad political situation of the country. The trend line of ROA shows that the variability in assets utilization is more. The coefficient of variation is 100.99%. Higher C.V. shows that the return on assets is more variable and less consistent.

In conclusion, actually the JSML uses 19 % cumulative preference share and 10 5 % long term debt. But the ROA is less than the cost of debt and cost of preference share. So the business risk of JSML is high.

4.2.2 Analysis of Operating leverage:-

Business risk depends in part on the extent to which a firm building fixed costs in to its operations. If fixed costs are high, even a small decline in sales can lead to large decline in ROE. So other things held constant, the higher a firm's fixed costs, the greater its business risk. Higher fixed cost is generally associated with more highly automated capital-intensive firms. If a high percentage of total cost is fixed, then the firm is said to have a high degree of operating leverage. A high degrees of operating leverage, other factors held constant, implies that a relatively small change in sales result in a large change in ROE. Degree of operating leverage is calculated by contribution margin divided by earning before interest and tax. Theoretically contribution margin means, difference between sales and variables cost. Here, variable cost included all the factory production cost.

DOL = CM / EBIT

For the analysis of DOL of JSML, table 4.2. is constructed. Table shows the degree of operating leverage in different fiscal year.

Table : - 4.2

Degree of operating leverage of JSML

Fiscal Year	**Contribution Margin**	**EBIT**	**DOL**
061 / 062	153060493	76879586	1.99
062 / 063	144243020	69030165	2.089
063 / 064	164389118	85523952	1.922
064 / 065	50411744	17123562	2.944
065 / 066	61766489	-21782455	-2.835
Average			1.222

Table 4.2 shows the degree of operating leverage of JSML since Fiscal Year 061 /062 to 065 / 066. The maximum degree of operating leverage in Fiscal year 064 / 065 and minimum in fiscal Year 065 / 066 is negative 2.835 times. In fiscal Year 065 / 066 company reveals negative degree of operating leverage because of political uncertainty, strike in the country and closed down of the some of the garment industries. Excepting this year all degree of operating leverage are positive and the variability of degree of operating leverage is so high. The average DOL is 1.22 times and standard deviation is 2.06. The higher C.V. 168.73 % shows that more variable and less consistent.

For the analysis of degree of operating leverage of JSML, Figure 4.2 is constructed. The figure shows the trend of operating leverage.

Figure:- 4.2

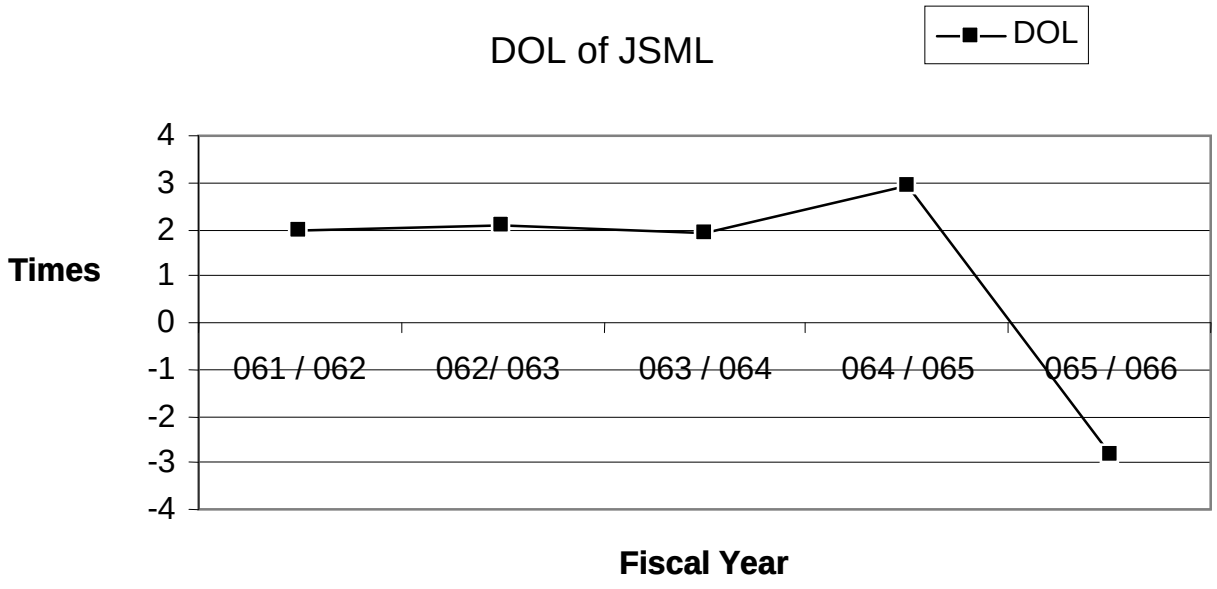

Fig. 4.2 shows the trend line for the FY 061\062 to FY 065\066. In FY 061\062 to 062\063 the trend line of DO1 is in increasing trend and there after FY 062\063 to

063\064 it is in increasing and decreasing trend respectively and show the negative value in fiscal year 065\066.

4.2.3. Analysis of Sales Revenue and Input cost:-

Variability in sales revenue and input affects the business risk. The more stable the demand for a firm's products, other things held constant, the lower its business risk. Firm whose products are sold in highly volatile markets are exposed to more business risk than similar firms whose output price are more stable. Firms whose input costs are highly uncertain are exposed to a high degree of business risk. Thus to analyze the position of these two variable of JSML is tabulated as follows table 4.3.

Table – 4.3

Sales Revenue and Input cost of JSML

Fiscal Year	**Cash and credit sales**	**Cost of goods sold**	**Other expenses related to goods sold**	**Total expenses**
061 / 062	725037305	571976812	158521847	730498659
062 / 063	718949917	574706897	135625997	730498659
063 / 064	855324956	690935838	141432963	832368801
064 / 065	730879506	680467762	139724883	820192645
065 / 066	772260638	710494149	138100717	848594866
C V	0.06702			0.16051
G.R.	1.847			3.28

Table 4.3 shows the cash and credit sales revenue and total input cost of JSML. The highest sales is in FY063/064 and lowest sales is in FY062/063. Total expenses is highest in FY065/066 and lowest is in FY062/063. The variability in sales revenue

and total expenses is higher. C.V. of sales is 0.067 and C.V. of total expenses is 0.16051. The average growth rate of sales is 1.85 % and the average growth rate of total expense is 3.28 %. The growth rate of sale is less than the growth rate of total expenses. Therefore, JSML has high degree of business risk.

Figure:4.3

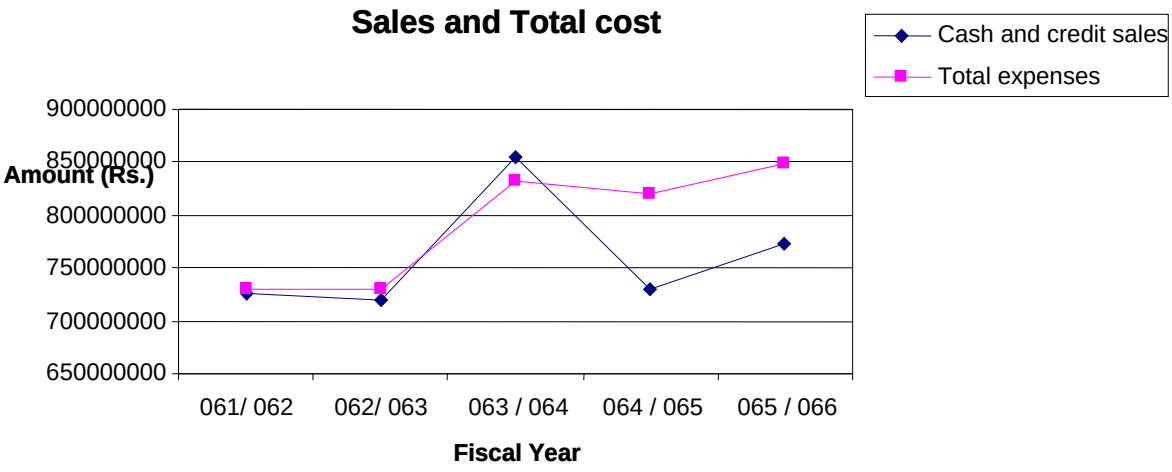

Figure 4.3 shows the trend line sales and total cost of JSML. In this figure, the total expenses is slightly increased up to FY 061/062 to 062/063 and total expense is decreased only in FY 063/064s but thereafter it is in increasing trend. Hence, it concludes that the business risk of JSML is higher.

4.3. Analysis of the financial risk of the JSML.

Financial risk is the additional risk placed on the common stockholders as a result of the decision to finance with debt. Conceptually, stockholder face a certain amount of risk that is inheriting in a firm's operations, this is its business risk, which is defined as the uncertainty inherent in projections of future operation income. If the firm user

debt (financial leverage) this concentrates the firm's business risk on its stockholder. This concentration of business risk occurs because debt holders, who receive fixed interest payments, bear none of the business risk.

For analysis of financial risk of JSML, we analyze following factor.

(1) Analysis of debt-equity ratio.

(2) Analysis of interest-coverage ratio.

(3) Analysis of degree of financial Leverage.

4.3.1. Analysis of debt equity ratio of JSML.

Debt –equity ratio is used as a tool for analyzing financial risk both by creditors as well by firm. A high debt equity ratio indicates greater contribution at a firms financing by debt holders than those of equity holders. This ratio expresses the relationship between debt capital and equity capital and reflects the relative claim of them on the assets of firm.

Debt-equity ratio = Long term debt / Shareholder equity.

Shareholder equity = Equity capital + preference capital + Undistributed profit

- Fictitious assets.

Another way to calculate debt-equity ratio is to relate total debt, instead of long-term debt, to the shareholder equity. Therefore, the relationship appears as:

Debt-equity ratio = Total debt / Shareholders equity.

Total Debt = Long term debt + short term debt.

JSML has employed three types of long-term source of fund. These are long-terms debt, preference share and equity share. In order to analyze the position of long-term debt and shareholder equity of JSML, table 4.4 has been constructed.

Table:- 4.4

Analysis of debt-equity ratio of JSML

Fiscal year	Shareholders equity	Long-term debt	Debt-equity ratio
061 / 062	-79498338	373465125	-4.697772738
062 / 063	-79894589	365285404	-4.57209191
063 / 064	21646388	379029656	17.51006477
064 / 065	58747505	368262175	6.268558554
065 / 066	-17117044	278068225	-16.2451078

Table 4.4 presents the debt-equity ratio of JSML for fiscal year 061/062 to 065/066. In FY 061/062, FY 062/063 and FY 065/066, the ratio is negative. It is because the equity share value is negative. In FY 063/064 and 064/065 the ratio is positive. This indicates that debt is 17.51 times more than equity in FY 063/064 and 6027 times more debt than equity in FY 064/065.

This ratio can also be analyzed in terms of total debt to equity ratio. Table 4.5 is constructed.

Table :- 4.5

Analysis of total debt to equity position in JSML

Fiscal year	Shareholders' equity	Total debt	Total debt to equity ratio
061 / 062	-79498338	863406782	-10.8606897
062 / 063	-79894589	852386666	-10.66889105
063 / 064	21646388	738290929	34.1068879
064 / 065	58747505	677093748	11.52548943
065 / 066	-17117044	675069879	-39.43846139

Table 4.5 presents to the total debt to equity ratio of JSML. This ratio is negative in the FY 061/062, FY062/063 and FY 065/066. In FY 061/062 the ratio is -10.86. this means that the value of equity is 10.86 times less than the value of debt and so on for

FY 062/063 and 065/066. In FY 063/064 this ratio is 34.11. This means that the value of debt is 34.11 times greater than the value of equity and so on for the FY064/065. Figure 4.4 present the trend line of debt to equity ratio and total debt to equity ratio.

Figure :- 4.4

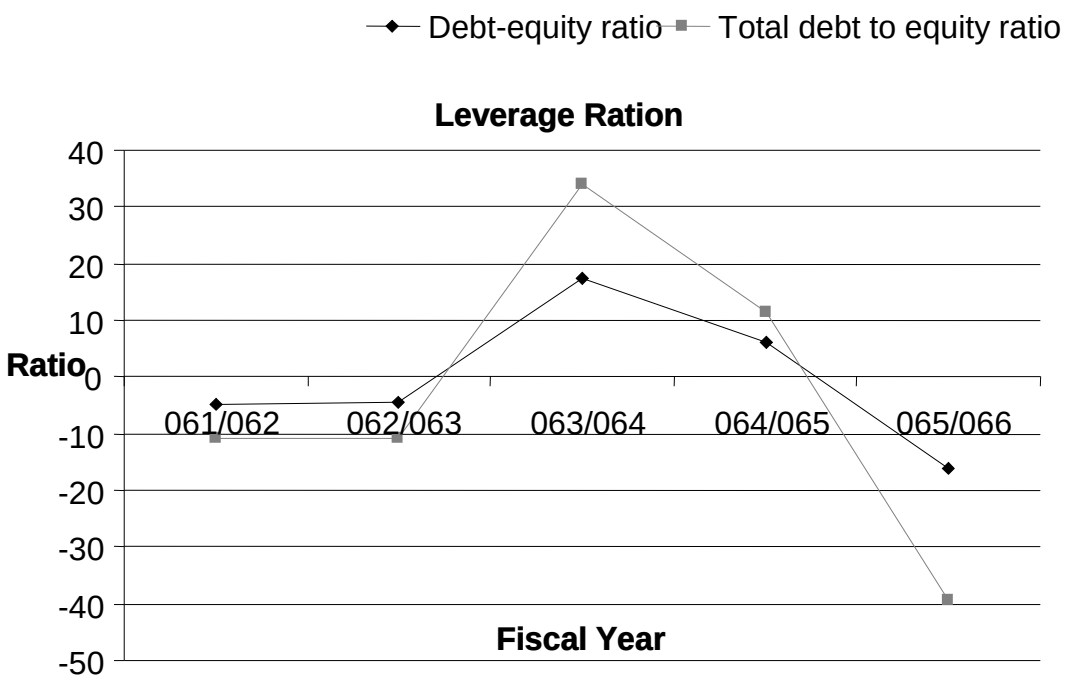

Figure 4.4 shows the trend of debt to equity ratio and total debt to equity ratio. These ratios are increasing dramatically. In the same fiscal year both the ratio shows the negative value. In the fiscal year 063/064 the total debt to equity ratio is higher than the debt to equity ratio. This indicates that the company is not able to raise debt and after this the ratio is decreasing and in negative trend. So, the financial risk of JSML is high.

4.3.2 Analysis of Interest coverage ratio of JSML:-

The interest coverage ratio is determined by dividing earning before interest and taxes (EBIT) by the interest charges. This ratio measures the extent to which operating

income can decline before the firm is unable to meet its annual interest costs. Failure to meet this obligation can bring legal action by the firm's creditors, possibility resulting in bankruptcy. For the analysis of interest coverage ratio of JSML, table 4.6 is constructed.

Table :- 4.6

Interest Coverage ratio of JSML

Fiscal year	**EBIT**	**Interest**	**I / C Ratio**
061 / 062	76879556	82171619	0.935597
062 / 063	69030165	60218144	1.14633498
063 / 064	85523952	60160864	1.421587828
064 / 065	17123562	57220098	0.29925782
065 / 066	-21782455	53663380	-0.4059091
Average			0.679373

Table 4.6 shows the interest coverage ratio for the fiscal Year 061 / 062 to Fiscal year 065 / 066 of JSML. In Fiscal Year 061/ 062 and in fiscal Year 064 / 065 the interest coverage ratio is less than one . It shows that the company can not pay its debt interest. The Interest coverage ratio in Fiscal Year 062 / 063 and 063/ 064 is greater than one which indicates that the company can pay its interest outstanding in this year. Due to strike called by different groups and political parties in fiscal year 065 / 066 the company shows negative interest coverage ratio. The average ratio is 0.679 times. This is concluded that operating income of the company doesn't meet the trends of interest coverage ratio of JSML.

Figure 4.5

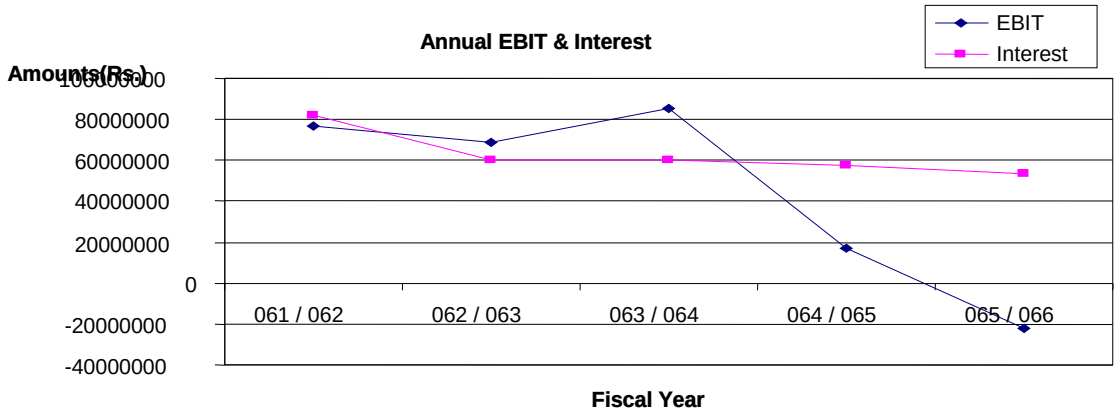

Figure 4.5 shows the trend of EBIT and interest for the FY 061/062 to 065/066. The trend of interest is higher in FY 061/062 and EBIT is increasing up to FY 063/064. But after this the EBIT trend decreases dramatically. This indicates that the company in average is not able to generate more earnings than its interest. So, the financial risk of JSML is high.

4.3.3 Analysis of degree of financial leverage of JSML:-

Financial leverage exits because of the use of fixed charge bearing securities, such as debt and preferred stock in the firm's capital structure. Therefore, financial leverage is defined as the potential use of debt and preferred stock to justify the effect of change in EBIT or EPS. It measured by the extent to which the assets of the firm are financial with debt or preferred stock or both. For the analysis of leverage of JSML, the table 4.7 is constructed.

Table :- 4.7

Degree of financial leverage and % change of JSML.

Fiscal Year	EBIT	Interest	EBT	DFL	% Change
061 / 062	76879586	82171619	-5292033	-14.5274199	_
062 / 063	69030165	60218144	8812021	7.833636	-1.53923105
063 / 064	85523952	60160864	25363088	3.371984	-0.56955058
064 / 065	17123562	57220098	-40096536	-0.427058	-1.1266488
065 / 066	-21782455	53663380	-75445835	0.2899848	-1.67902907

Table 4.7 shows the degree of financial leverage for fiscal year 061 / 062 to 065 / 066. In fiscal year 062 / 063 the degree of financial leverage is 7.833 times, which indicates that one percent change in EBIT will change 7.833 percent of EBT of company. In fiscal year this ratio is one and in fiscal year 061 / 062 and 064 / 065 the leverage is negative. In fiscal year 063/ 064, the leverage of this company is 3.37 times.

The figure 4.6 also analyzed the degree of financial leverage of the JSML.

Fig. 4.6

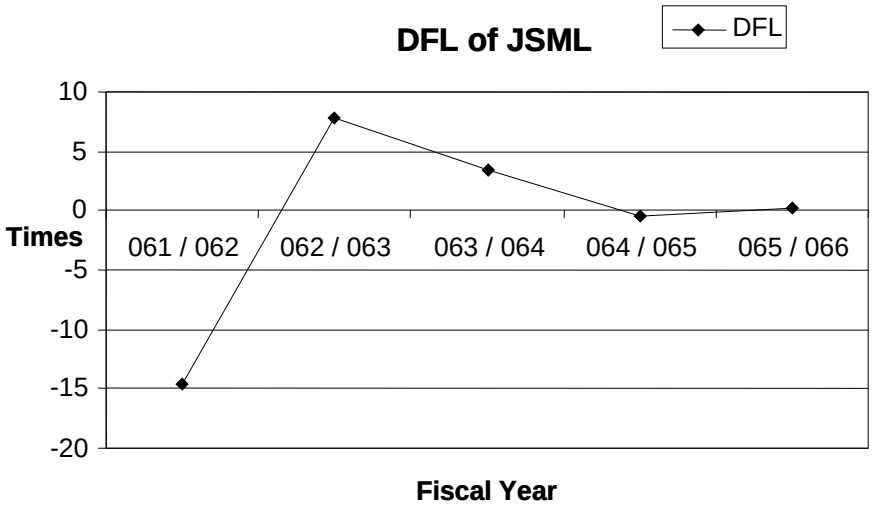

Figure 4.6 shows that the DFL is negative in FY 061/062 after that it is increased in FY 062/063 and thereafter decreased continuously. This indicates that the company EBIT can not cover the interest of debt. This is concluded that the financial risk of JSML is high.

4.4 Analysis of capital structure of JSML:-

Capital structure refers to the mix of long-term source of funds, such as debenture, long-term debt, preference share capital and equity share capital. As this study is mainly concerned with the impact of capital structure decision on risk and return. Here capital structure of JSML is analyzed under different approaches like net income approach and net operating income approach. The theories of capital structure are considered to measure the value of JSML. These approaches are considered to measures total value of firm, overall capitalization rate and equity capitalization rate of JSML as follows:

(I) Total value of JSML (Net income Approach).

(II) Overall capitalization rate (Net Income Approach).

(III) Equity capitalization rate (NOI Approach).

4.4.1. ANALYSIS OF TOTAL VALUE OF JSML :- (NET INCOME APPROACH)

The Net income approach supports the traditional theory of capital structure. This theory assumes that the cost of debt and cost of equity remains constant as changes in the firm's capital structure. A change in the capital strict use will lead to corresponding changes in the overall cost of capital as well as the total value of the firm. As the firm adds cheaper debt to its capital structure, its cost of capital declines because debt is less risky than equity. On the other hands the overall value of the form

increases. The total value of the firm is simply obtained by adding the value of debt and value of equity. JSML has taken loans from different sources at different interest rate so it is very difficult to calculate of debt. For analysis of value of JSML, the table 4.8 is constructed.

Table:- 4.8

TOTAL VALUE OF JSML

Fiscal Year	Long Term Debt	Net worth	Total value Of Firm	% Change
061 / 062	373465125	-79498338	293966787	_
062 / 063	365285404	-79894589	285390815	-0.029173
063 / 064	379029656	21646388	400676044	0.4039556
064 / 065	368262175	58747505	427009680	0.06572301
065 / 066	218068255	-17117044	260951211	-0.3888868

Table 4.8 shows that the total value of JSML for the fiscal year 061 / 062 to fiscal year 065 / 066. The total value decreased by 2.9173 percent and 38.89 percent in fiscal year 061 / 062 to 062 / 063 and 064 /065 to 065 / 066 respectively. And the total value increased by 40.39 percent and 6.572 percent in fiscal year 062 / 063 to 063 / 064 and 063 / 064 to 064 / 065 respectively. The highest value of JSML is Rs. 42,70,09,680/- in fiscal year 064 / 065. The lowest value of JSML is Rs.26, 09,51,211/- in fiscal year 065 / 066.

Figure 4.7 analyze the total value of JSML. The bar diagram shows the value of equity and debt and total value of the firm.

Figure:-4.7

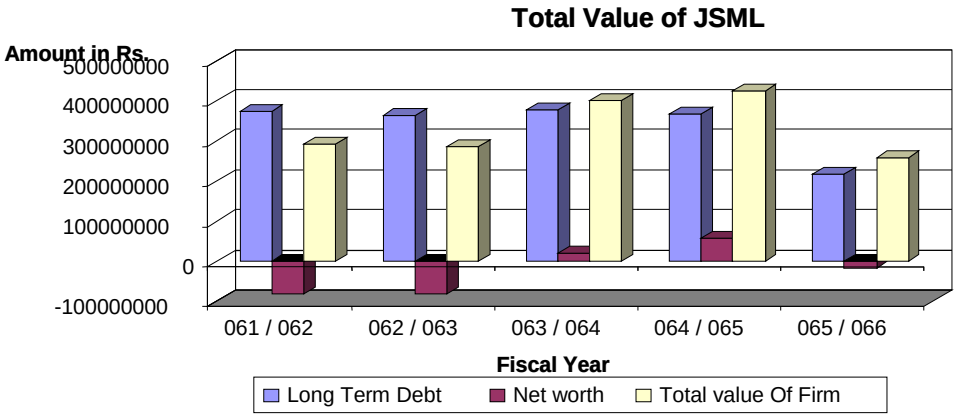

figure 4.7 shows the total value of firm from FY 061/062 to 065/066.in first two year the value of firm is lower but after that it is increased for another two FY 063/064 to 064/065 and thereafter it is in decreasing trend.

4.4.2 OVERALL CAPITALIZATION RATE: -(NET INCOME APPROACH)

The assumption of net income is that the use of debt does not change the risk perception of investor, as a result, the equity capitalization rate Ke, and the debt capitalization rate Kd, remains constant with change in leverage. Thus, according this approach, the higher use of cheaper debt lowers the overall capitalization rate of the firm and consequently increases the total value. Now by considering this implication in JSML the overall capitalization rate is calculated and presented as follows in table 4.9.

Table:- 4.9

OVERALL CAPITALIZATION RATE OF JSML

Fiscal Year	**EBIT**	**Total value of firm**	**Ko = EBIT / Total value of firm**
061 / 062	76879586	293966787	0.2615247
062 / 063	69030165	285390815	0.2418794
063 / 064	85523952	400676044	0.213449
064 / 065	17123562	427009680	0.0401011
065 / 066	-21782455	260951211	-0.083473
Average			0.1346962

The table 4.9 shows the overall capitalization sale of JSML. In fiscal year 061 / 062 the Ko = 26.15%. In Fiscal Year 065 / 066. The overall capitalization rate shows negative because the operating income of this year is negative. The average Ko is 13.47%. The maximum capitalization rate is 26.15% and the minimum Ko is 4.01%. Figure 4.4.2.1 analyzes the overall capitalization rate of JSML for the Fiscal Year 061 / 062 to Fiscal Year 065 / 066.

Figure:- 4.8

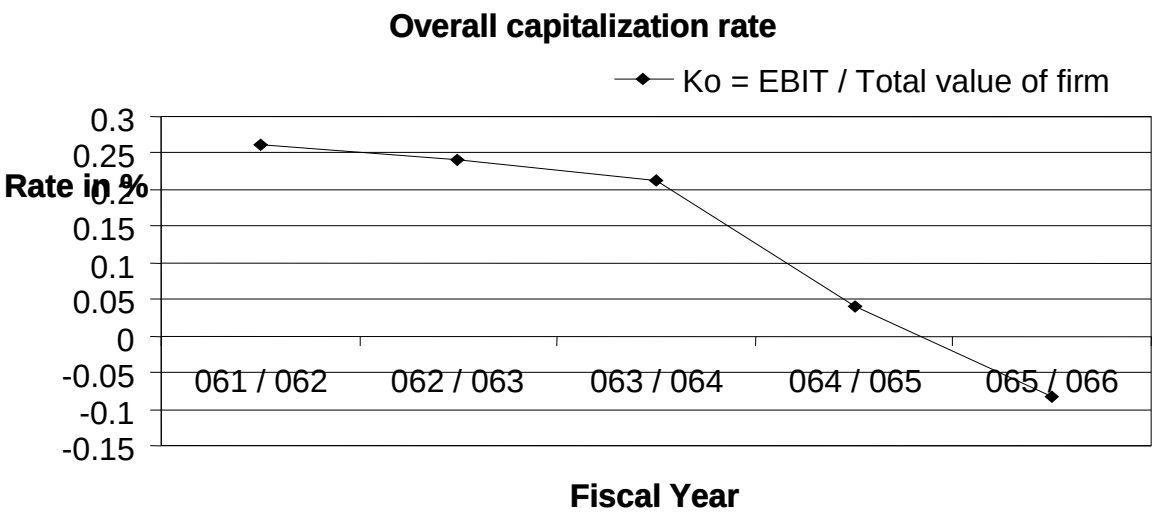

Figure 4.8 shows the trend line of overall cost of cost of capital for the FY 061/062 to 065/066. The overall cost of capital is in decreasing trend.

4.4.3. EQUITY CAPITALIZATION RATE (NOI APPROACH)

NOI approach is opposite to the net income approach. Any changes in leverage with not lead to any charges in the total value of the firm and the market price of a share as well as the overall cost of capital remain constant. According to net operating income approach, net operating income is capitalized at an overall capitalization rate to calculate the total market value of the firm deducted market value of debt from total market value of firm to obtain market value of equity.

The equity capitalization rate of JSML are calculated and presented as in table 4.10

Table:- 4.10

EQUITY CAPITALIZATION RATE OF JSML

Fiscal Year	EBIT	Market Value of Equity	Ke = EBT / MVE
061 / 062	-5292033	-79498338	0.0665678
062 / 063	8812021	-79894589	-0.11029559
063 / 064	25363088	21646388	1.1717007
064 / 065	-40096536	58747505	-0.6825232
065 / 066	-21782455	-17117044	1.27255938
Average			0.34601819

Table 4.10 shows the equity capitalization rate of JSML. The average equity capitalization rate is 34.60 %. This shows that the equity holder gain its equity value by 34.60 % per fiscal Year.

4.5. ANALYSIS OF FINANCIAL DISTRESS POSITION OF JSML

Financial analysis is the process of analyzing various item of financial statement of a firm to ensure its comparative strengths and weakness. Financial distress is the event of particular interest. Inventor in a company's common stock are concerned principally with present and expected future earnings and the stability of these earning about a trend as well as their covariance with the earning of other companies. Inventor would be concerned with its financial condition in so far as it affects the ability of the company to pay dividends and to avoid bankruptcy. For analysis of the financial distress position of JSML, we use the following ratio analysis.

(I) Working capital to total assets ratio (X1).

(II) Cumulative retain earnings to total assets ratio (X2).

(III) EBIT to total assets ratio (X3).

(IV) Equity value to total liabilities ratio (X4).

(V) Sales to total assets ratio (X5).

4.5.1 ANALYSIS OF WORKING CAPITAL TO TOTAL ASSETS.

For the analysis of working capital to total asset, working capital is taken as net working capital. Net working capital refers to the excess of current assets over current liabilities. Table 4.11 is constructed to analyses the JSML working capital to total assets ratio.

Table: - 4.11

WORKING CAPITAL TO TOTAL ASSETS RATIO OF JSML

Fiscal Year	**Working Capital**	**Total Assets**	**Working capital to Total Assets (XI)**
061 / 062	-25434748	781861255	-0.032531025
062 / 063	40651609	1528335016	0.026598624
063 / 064	137438503	757890128	0.181343572
064 / 065	203778088	733794064	0.277704736
065 / 066	147312846	789390803	0.18661586306
Average			0.1279463542

Table 4.11 shows the working capital to total assets ratio of JSML for the fiscal year 2061 / 062 to fiscal year 2065 / 066. In fiscal year 061 / 062, the working capital is negative and is -3.235% of total assets.

This shows that the company has mostly used short-term financial source to invest in current assets. Rest of the fiscal year working capital total assets ratio is positive. The average ratio is also positive. This indicates that the company has mostly used source of financing other than short-term financial sources in average.

4.5.2. ANALYSIS OF CUMMULATIVE RETAINED EARNINGS TO TOTAL ASSETS OF JSML.

This is the ratio of cumulative retained earnings in comparison to total assets. For the analysis of this ratio, we constructed table 4.12

Table:- 4.12

C.R.E TO TOTAL ASSETS RATIO OF JSML

Fiscal Year	Cumulative Retained earning	Total Assets	C.R.E. to Total Assets (X_2)
061 / 062	-5292033	781861255	-0.006768506
062 / 063	3519988	1528335016	0.002303152
063 / 064	28883079	757890128	0.038109849
064 / 065	-11213457	733794064	-0.015281476
065 / 066	-86659292	789390803	-0.109779961
Average			-0.01828

Table 4.12 shows the cumulative retained earnings to total assets ratio of JSML for the fiscal year 2061/062 to FY 065/066. In FY 061/062, this ratio is negative. Thereafter the ratio is positive and increasing continuously up to till FY 063/064. In FY063/064, this ratio is positive and 0.038 times of total assets. Thereafter this ratio is negative and decreasing continuously up to FY 065/066. The average ratio indicates that the total value of assets decreases by 1.82 % per fiscal year.

4.5.3. ANALYSIS OF EBIT TO TOTAL ASSETS RATIO OF JSML.

This ratio shows the relation between EBIT and total assets. Table 4.13 is constricted, to analyze the ratios. Total assets included the fixed and current assets of the firm. Intangible and fictitious assets are not included. This ratio shows the assets rate

utilization over the period. Higher percentage of ratio shows high efficiency of the assets utilization.

Table:- 4.13

EBIT TO TOTAL ASSETS RATIO OF JSML

Fiscal Year	EBIT	Total Assets	EBIT to total Assets (X3)
061 / 062	76879586	781861255	0.098328936
062 / 063	69030165	1528335016	0.0451669066
063 / 064	85523952	757890128	0.11284478955
064 / 065	17123562	733794064	0.0233350507
065 / 066	-21782455	789390803	-0.0275940065
Average			0.2520822763

Table 4.13 shows the EBIT to total assets ratio for the fiscal year 061 / 062 to 065 / 066 of JSML. In fiscal year 061 / 062, this ratio is 90.83 % . And there after the ratio is in decreasing and increasing trend. In the fiscal year 065 / 066 the ratio is negative. Average ratio is utilization rate is lower.

4.5.4. ANALYSIS OF EQUITY VALUE TO TOTAL LIABILITIES OF JSML

This ratio shows the value of equity in comparison of total liabilities. Equity value included preference share and equity and less fictitious assets, i.e. net worth of the firm. For the analysis, table 4.14 is constructed. Total liabilities included both long term debt and current liabilities.

Table: - 4.14

EQUITY VALUE TO TOTAL LIABILITIES OF JSML

Fiscal Year	**Equity value**	**Total Liabilities**	**Equity Value to total liabilities (X4)**
061 / 062	-79498338	863406782	-0.0920751837
062 / 063	-79894589	851386666	-0.093840545
063 / 064	21646388	738290929	0.0293195908
064 / 065	58747505	677093748	0.0867642112
065 / 066	-17117044	675069879	-0.025355958
Average			-0.0951878847

The table 4.14 shows the ratio of equity value to total liabilities for the fiscal year 061 / 062 to fiscal year 065 / 066 of JSML. In fiscal Year 061 / 062 and 062 / 063 the ratio is negative and thereafter in fiscal year 064 / 065 the ratio is only 2.93 % which indicates that the equity value is only 2.93 % of total liabilities. Equity value doesn't cover the total liabilities of the company. The average ratio is also negative.

4.5.5 ANALYSIS OF SALES TO TOTAL ASSETS OF JSML

This ratio indicates the firm's ability to generate sales based on its various assets, and relationship between the costs of goods sold of firms. By comparing assets to the cost of goods sold, this ratio shows how effective the firm is using these assets. The higher the ratio, other things being equal, the more effective the utilization. Alternatively, a low ratio may indicate that the firm needs to reevaluate overall strategies, marketing efforts and capital expenditure programmed. For the analysis of this ratio, table 4.15 is constructed.

Table: - 4.15

SALES TO TOTAL ASSETS RATIO OF JSML.

Fiscal Year	Sales	Total Assets	Sales to total assets (X5)
061 / 062	725037305	781861255	092732220756
062 / 063	718949917	1528335016	0.47041382254
063 / 064	855324956	757890128	1.12856062429
064 / 065	730879506	733794064	0.99602809815
065 / 066	772260638	789390803	0.97829951282
Average			0.90012485307

Table 4.15 shows the sales to total assets ratio for the fiscal year 061 / 062 to fiscal year 065 / 066 of JSML. The minimum ratio is 47.041 % in fiscal year 062 / 063. The highest ratio is 112.86 % in fiscal year 063 / 064. The average ratio is 90.01 %. By showing this ratio it is concluded that the firm has not been able to used the assets effectively. The average ratio is only 90.01 %, which is low.

4.6. Regression Analysis

Regression analysis attempts to establish the nature of relationship between variables i.e.; to study the functional relationship between the variables and thereby provide a mechanism for prediction. As already stated, our empirical test is concerned with the relationship between the dependent variable risk and return and independent variables like leverage and other related variables. Thus here both simple and multiple regression analysis are done.

4.6.1. Simple regression analysis of the variables

As simple regression analysis confined to the study of only two variables at a time, thus, different regression equations are set for analysis in model I. Here for the study purpose, two variables i.e.; return and risk in which return is assumed as dependent and many other variables like leverage, growth rate, interest coverage ratio as independent variables.

The regression analysis between the return as dependent variable and other variables as independent are tabulated, analyzed and interpreted as follows :-

Table: 4.16.

Simple Regression Analysis Results with Expected Return as dependent variables(Model I)

Model I	No. of observation	Constant(a_0)	Beta coefficient(b)	Coefficient of determination(r^2)
$XJ=a_0+b_1LJ$	5	-11.85	1.5096	0.07069
$XJ=a_0+b_2IC$	5	14.327	390296	0.9978
$XJ=a_0+b_3G$	4	14.1329	633.98	0.80058

From the result calculated in table 4.16 the calculated positive value of beta coefficient for the regression of expected return on leverage suggests that if leverage of the firm is increased by 1, its expected earnings will also increase by the same value of beta coefficient i.e. 1.5096. While the value of intercept of coefficient suggests that the expected return of JSML would be -11.85 if the value of leverage equals to zero. Similarly coefficient of r^2 suggest that only 7.069% of the variation of dependent variable 'return' has been explained by independent variable, leverage , on the other hand.

Finally, from the above analysis, it is quite clear that expected return has direct relationship with leverage.

While analyzing the regression result of return on growth rate, the positive value of beta coefficient indicates that increasing growth rate leads to increase in expected earning. The value of intercept of coefficient suggest that the expected return of JSML would be 14.327 if the growth rate is zero. The value of r^2 suggests that 99.78% of the variation of return has been explained by growth rate. Thus, it is obvious that there is direct relationship between return and growth.

In case of analysis of regression result of expected return on interest coverage ratio, the positive value of beta coefficient indicates that the expected return increase with increase in interest coverage ratio. The value of r^2 suggest that 80.058% of the variation of return has been explained by interest coverage ratio.

The regression analysis of risk i.e. earning variability as dependent variable and other variables as independent are tabulated, analyzed and interpreted as follows:

Table: 4.17

Simple regression analysis results with earning variability as dependent variable

Model	No. of observation	Constant(a_0)	Beta coefficient(b)	Coefficient of determination(r^2)
$E.VJ=a_0+b_4LJ$	5	0.5223	1.504	0.44204
$E.VJ=a_0+b_5IC$	5	-26.69	39.295	0.9979
$E.VJ=a_0+b_6G$	4	17.615	437.087	0.8642

The positive value of beta coefficient of the regression of earning variability on leverage suggests that if leverage of firm increases by 1 time, its earning variability will also increase by the value of beta coefficient i.e. by 1.504.

However, the value of intercept of coefficient suggest that the earning variability would be 0.5223 if the value of leverage equals to zero. Coefficient of determination suggest that 44.20% of the variability is explained by leverage.

In case of regression of earning variability on interest coverage ratio, beta coefficient is positive and there is direct relationship between the earning variability and interest coverage ratio. Coefficient of determination indicates that the degree of association between interest coverage ratio and earning variability is 99.79%.

While analyzing the regression result of earning variability on growth rate, the beta coefficient is very high i.e; 437.087 which indicates that if the growth of the firm increases by 1 times, its earning variability will also increase by the value of beta coefficient. However, the value of intercept coefficient suggest that the earning variability would be 17.615 if the value of growth rate equal to zero. Coefficient of determination suggest that 86.42 % of the variability is explained by the growth rate. Thus, it is clear that the degree of association between growth rate and earning variability is very high.

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4.6.2. Multiple Regression Analysis

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

greater accuracy. So, to avoid the biases and weakness of the simple regression equation, multiple regression is used.

Model II

In this model, earning variability of JSML, which is the measure of unsystematic risk, is regressed against leverage together with other explanatory variables like interest coverage ratio and growth rate. The regression result of model II is given in the following table.

Table: 4.18

Multiple Regression Result (Model II)

Regression equation: $E.VJ = a_0 + b_1 LJ + b_2 G + b_3 I.C$

Constant (a_0)	Beta coefficients			R^2
	b_1	b_2	b_3	
6.9376	0.693	333.554	15.894	1

The result in the table 4.18 clearly indicates that if leverage of JSML is increased by 1 times by holding other independent variable constant, its earning variability is also increased by 0.6916. Similarly, beta coefficients for growth rate and interest coverage ratio is positive which indicates that earning variability can be increased by increasing growth rate and interest coverage ratios. The value of coefficient of multiple determination R^2 as 1 tells that 100% of the total variation in earning variability is explained by this model.

Model III

In this model expected of JSML is regressed against leverage growth rate and interest coverage ratio. The regression result of model III is given in the following table:

Table: 4.19

Multiple Regression Result (Model III)

Regression equation: $XJ = a_0 + b_1 LJ + b_2 G + b_3 I.C$

Constant (a_o)	Beta coefficient			R^2
	b_1	b_2	b_3	
-43.0556	-0.0052	-54.713	42.36554	0.4296

The result in the table:4.19 clearly indicates that if leverage of JSML is increased by 1 time by holding other independent variable constant, its expected returns will be reduced by the value of 0.0052. Similarly if the growth rate increased the expected return will also decreased by the same value of b_2 but the beta coefficient of interest coverage ratio shows a positive impact on its expected return.

The value of coefficient of multiple determination shows that 42.96% of expected return can be explained by this model.

4.7. The Z-Score Model:-

Altman (1968) employed multiple discriminate analyses to predict bankruptcy, using various financial ratio. He found that five financial ratios were able to discriminate rather effectively between bankrupt and non-bankrupt companies, beginning up to 5 years prior to the bankruptcy event.

The Z-score model itself was the following.

Z = 1.2 X1 + 1.4 X2 + 3.3 X3 + 06 X4 + 1.0 X5

Where,

X1 = Working capital to total assets.

X2 = Cumulative retain earnings to total assets.

X3 = Earning before interest and taxes to total assets.

X4 = Market value of equity to book value of total assets.

X5 = Sales to total assets.

The Z ratio is the overall index of the multiple discriminate functions. Table 4.6.1 is constructed to test the JSML financial distress position on this model. The weights assigned to each X are same as Altman taken in his Z-score model.

Table :- 4.20
Analysis of Bankruptcy position of JSML

Fiscal year	**Working Capital to Total Asset (X1)**	**C.R.E. to Total Assets (X2)**	**EBIT to Total Assets (X3)**	**Equity to Total Liabilities (X4)**	**Sales to total Assets (X5)**	**Z-Score**
061 / 062	-0.033	-0.006	0.098	-0.092	0.927	0.701
062 / 063	0.026	0.002	0.045	-0.094	0.4704	0.5970
063 / 064	0.181	0.038	0.112	0.029	1.128	1.937
064 / 065	0.277	-0.015	0.023	0.086	0.996	1.435
065 / 066	0.186	-0.109	-0.027	-0.025	0.978	0.9435
Average						**1.122**

Altman found that companies with Z-score below 1.81 (including negative amount) always went bankrupt where as Z- score above 2.99 represented healthy firms. Firms with Z- score in between were sometimes misclassified. So this represents an area of grey. On the basis of these cutoffs Altman suggests that one can predict whether or not a company is likely to go bankrupt in the near future. This model is also known as

zeta model. As stated above, the JSML has average Z- score of 1.122. so the company is in bankrupt position. The firm has not meet the both limits of Z- score criteria as prescribed by Altman.

4.7 Major findings

From the above analysis, various points have been found and they are presented as below

(i) The average return on assets is negative i.e. (0.0251) and the coefficient of variance is 100.99 percent. The ROA is more varied in fiscal year 061/062.

(ii) The average DOL has been found 1.22 times. The standard deviation and coefficient of variance of DOL are 2.07 and 168.73 percent.

(iii) The highest long-term debt-equity ratio is 17.51 times in fiscal year 063/064 and the lowest is -16.245 times in fiscal year 065/0666. The equity values are negative in fiscal year 061/062 to 062/063 and in FY065/066.

(iv) The highest total debt to equity ratio is in FY 063/064 i.e., 34.11 times and the lowest is in FY 065/066 i.e., -39.44 times. And the C.V. and the growth rate of sale is 0.067 and 1.85 percent respectively where as the C.V. and the growth rate of total expenses is .16 and 3.28 percent respectively.

(v) The average interest coverage ratio is .697 times. This shows that the company is not able to pay its interest outstanding.

(vi) The financial ratio is fluctuating more over the period. The maximum ratio is 7.83 times and the minimum ratio is negative (i.e.,-14.527 times).

(vii) The highest value of JSML is Rs.427009680 in FY 064/065 and the lowest is Rs.260951211 in FY 065/066. It is also fluctuation more over the period.

(viii) The average capitalization rate is 13.47 percent and the maximum capitalization rate is 26.15 percent and minimum is -8.35 percent. The average cost of equity is 34.60 percent.

(ix) The average working capital to total assets ratio is 12.79 percent. This indicates that the company has mostly used sources of financing other than short- term financial sources.

(x) The average cumulative retained earning is in negative figure(i.e., -1.82). This shows that the total value of assets decreases by 1.82 percent per fiscal year.

(xi) The average EBIT to total assets ratio is only 5.04 percent which indicates that the total utilization rate is very lower. And the sales to total assets ratio varied from minimum 47.041 percent to maximum 112.86 percent . the average ratio is 90.01 percent.

(xii) The regression analysis of return indicates that if leverage of the firm increased by 1, the expected return also increases by 1.5096. Hence it clearly shows that there is a direct relationship between the expected return and leverage. And the regression analysis of earning variability (i.e. risk)indicates that if leverage of the firm increased by 1 time, its earning variability will also increase by 1.504.Hence it clearly shows that there is a direct relationship between leverage and risk.

(xiii) The average Z- score of the JSML has been obtained as 1.122. this indicates the financial distress position of JSML

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

Most of the public and private enterprises were established by foreign grants and loan in Nepal. However, the performance of these enterprises did not prove satisfactory. The success and failure of manufacturing industries mainly depends upon the ability of top management to make crucial financial decision. The decision of Capital structure is one of the most complexes in financial decision. Capital structure policy involves a tradeoff between risk and return. The optimal capital structure must strike a balance between risks and return as to maximum the firm's stock price. JSML is one of the large-scale thread industries in Nepal. The authorized capital of the company id Rs. 1000 million and called up capital is Rs. 270 million and paid up capital is Rs. 193.844 million. The basic objectives of the study are to high light the current practices of decision of capital structure and its impact on risk and return in Nepalese company. The objectives of the study are to analyze the capital structure of JSML, to assess the return of JSML and to analyze the impact of capital structure on risk and return of JSML. Time period, limited fund, and data secrecy limitation are considered. In research methodology, the financial tools and statistical tools are used.

The literature available related to the study is review of relevant books, journals, research, works and thesis. Reviewing of books, capital structure theories are known. These theories are net income approach, net operating income approach, traditional approach and M-M approach. According to net income approach, the firm will have the maximum value and the lowest cost of capital when it is all debt-financed or has

as much debt as possible. According to net operating income approach, as the cost of capital is same at all capital structures, every capital structure is optimum. According to traditional approach, the firm can increase the total value of the firm through thee judicious use of leverage and concluded that there is an optimal equal structure; M-M also concludes in the no-tax case that there is no advantage or disadvantage to financing with common stock. So there is no optimal capital structure. For the exist of corporate tax rate, M-M concluded that value of levered firm is equal to value of unlevered firm plus the present value of tax shield. Operating leverage arises when the firm has fixed operating cost. Financial leverage arises because of debt financing. Operating leverage affects the financing section of income statement, whereas financial leverage affects the financing section of income statement. According to M-M first study, the value of the firm does not change; rather, increased financial risk and there is no optimal capital structure. According to M-M second study, increase in financial leverage lead to increase in total value of the firm and decrease in the firms overall opportunity cost of capital because of existence of corporate tax rate. According to Chakraborty study there is a negative relationship between age, profitability and earnings but total assets and capital intensity are positively related with debt-equity ratio. Pandey study describes that practicing managers generally prefer to borrow instead of using other sources of funds because of low cost of debt due to interest tax deductibility. Another study conducted by pandey resulted that about 72 to 80 percent of the assets of sample company were financed by external debt including current liabilities.

Research methodology is the process of solving the problem about the arising problem. For the study, JSML is selected enterprises and period cover is FY061/062 to 065/066. The research design is descriptive. The major sources of data are balance

sheet and profit and loss account of JSML. Tabulated and calculated for analysis. The financial tools and statistical tools are used to analysis. For the financial tools, mostly ratio analysis is used. In statistical tools, mostly average, S.D. and C.V. and regression analysis is used. The main purpose of chapter IV is to present the data in understandable form and analysis and analysis these data according to the objective of the study. The business risk of the JSML depends on variability in return on equity, operating leverage, sales and input cost. The average operating leverage is 1.22 times. Sales revenue and input cost is more variable. The financial risk of the JSML depends on debt-equity ratio, interest coverage ratio and degree of financial leverage. The average interest coverage ratio is 0.679 times and degree of financial leverage is more variable. The total value of the firm is fluctuating more over the period and average overall capitalization rate is 13.46 %. The average equity capitalization rate is 34.60 % i.e. the firm gained its equity value 34.60 per fiscal year. The financial distress position of JSML is analysis on the basis of working capital to total assets ratio, cumulative retained earnings to total assets, EBIT to total assets, equity value to total liabilities and sales to total assets ratio. The average working capital to total assets ratio is 12.80 % i.e., the company uses mostly sources of financing other than short-term financial sources. The average cumulative retain retained to total assets ratio is -1.82 percent. That means the total assets decrease by 1.82 % per FY. The average EBIT to total assets ratio is 5.04 %. The average equity value to total liabilities is -1.9 %. The average sale to total assets of JSML is 9.00 % of total assets of the company.

5.2 CONCLUSION

The overall theme of the study has been concluded in the paragraph entitled conclusion. The average return on assets is 5.08 % and the coefficient of variance is 100.99 %. The ROA is more varied in the FY 061/062 to 063/064. The C.V. of DOL is 168.727 which is very high. The higher C.V. indicates that more variability and less consistence . the average sales revenue of JSML is Rs.760496464.40 and C.V. is 6.70 %. The growth rate of JSML sales is 1.847 and the growth rate of total expenses is 3.28 %. The growth rate of sales is lower than the growth of cost. The debt to equity ratio is fluctuating more over the period. In FY061/062, 062/063 and 065/066, this ratio is negative. It is because of the negative value of equity. The total debt to total equity ratio is also fluctuating more over the period. In FY 061/062,062/063 and 065/066 this ratio is negative. It is because of the equity value of the company is negative. The average interest coverage ratio is 0.679 times. That means , the JSML can not pay out it's debt interest. The DFL in FY062/063 is 7.83 times which is high. This ratio is also fluctuating more over the period. This ratio shows that JSML can not cover the interest liabilities. Total value of JSML is also fluctuating more over the period. It is hardly decreased in FY065/066. The company's net worth value is negative in FY061/062 to 062/063 and 065/066.The average overall capitalization rate of JSML is 13.46 % . The average equity capitalization rate of company is 34.60 %.this means that the JSML has gained its share value by 34.60 % per fiscal year. The net working capital is also fluctuating over the period. The average working capital to total assets ratio is 12.79 %. The average CRE to total assets ratio is 1.82 negative. The EBIT to total assets ratio also varying and average ratio is 5.04 %. The equity value to total liabilities of JSML is 8.67 % in FY 064/065 which is highest and more fluctuating over the period. In FY 061/062 to FY 062/063 and 065/066

these ratio is negative. The average equity value to total liabilities ratio is -1.90 % which is very low. Sales to total assets ratio of JSML is varying in each fiscal year. The average ratio is 0.9001 times. The study concluded that the financial position is in danger condition. JSML mostly depends up on domestic market and Indian market. The Z-score model conclude that the company is in financially distress position.

5.3 RECOMMENDATIONS

From the above finding and conclusion of JSM, JSML have lack of theoretical and practical knowledge regarding capital structure decision and its risk and return concept theories developed by the scholars have not have not able to attract the Nepalese industries. Thus, the overall capital structural of the JSML is in confusing state. Therefore, the study tries to recommend as follows.

(i) To redeem the cumulative 19 % preference share or try to convert it into equity share.

(ii) To meet with loan donor and financial institute and settle the interest outstanding and delay fine. And change the agreement with new loan at low interest rate.

(iii) Input cost of the JSML is depending on foreign exchange rate and foreign market. The G.R of input cost is higher than sales. So try to make agreement with input supplier at fixed price input cost.

At last not least, the study recommend that the company capital structure should be internally reconciled.

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Appendix - A

Jyoti Spinning Mills. Ltd

Balance Sheet (in Rs.)

Particulars	2061/02	2062/063	2063/064	2064/065	2065/066
Authorized Capital					
10000000 shares @ Rs.100 each	1000000000	1000000000	1000000000	1000000000	1000000000
Issued Capital					
1400000,Equity shares @ Rs.100 each	140000000	140000000	140000000	140000000	140000000
1300000,Preference shares @ Rs.100 each	130000000	130000000	130000000	130000000	130000000
Issued and Paid up Capital					
Equity Share Capital	134043900	134043900	134043900	134043900	134043900
Preference Share Capital	59800500	59800500	56740265	56141573	55722859
Long-Term Loan					
Long-term Loan	284654525	268391804	244389056	210783575	108868255
Debenture	88810600	96893600	134640600	157478600	169200000
Current Liabilities					
Short-term loan	200270083	249190909	205347713	234116172	319739784
Trade and other liabilities	274335198	223738735	137193576	56513658	56938737
Provisions	15336376	14171618	16719984	18201743	20323103
Total	1057251182	1046231066	929075094	867279221	864836638
Assets					
Fixed assets	501749209	476021641	450184502	436345440	411901927
Investment in marketable securities	6292082	6292082	6292082	6877082	3000000
Current assets	264236826	278561962	291352063	278493489	224574686
Pos tponed expenses	9583138	9569203	10061481	12078053	16429033
Profit and loss account	275389927	275786178	171184966	133485157	208930992
Total	1057251182	1046231066	929075094	867279221	864836638

Appendix-B

Jyoti Spinning Mills Limited
Profit and Loss Account(In Rs)

Particulars	061/062	062/063	063/064	064/065	065/066
Sales revenue	725037305	718949917	855324956	730873506	772260638
Less : Cost of goods sold	571976812	574706897	690935838	680467762	710494149
Gross Profit	153060493	144243020	164389118	50411744	61766489
Less: Selling & Adm. Expenses	35341532	34078041	39028758	39531552	40653690
Operating income	117718961	110164979	125360360	10880192	21112799
Add: Other business income plus income from insurance	169321	194998	2406936	49216603	888393
EBDIT	117888282	110359977	127767296	60096795	22001192
Less: Interest	82171619	60218144	60160864	57220098	53663380
EBDT	35716663	50141833	67606432	2876697	(31662188)
Less: Depreciation	41008696	41329812	42243341	42883233	43783647
EBT	(5292033)	8812021	25363091	(40006536)	(75445835)
No. of Shareholders out standing	1400000	1400000	1400000	1400000	1400000
Earning per share before tax i.e. (Earning before / n)	(3.78)	6.29	18.11	(28.58)	(53.89)

Appendix –C

Jyoti Spinning Mills Limited
Capital Structure Ratio of JSML

Fiscal year	Debt ratio	Debt-equity ratio	Short term fund to long term fund ratio
061/ 062	0.74736	-4.697772	0.353017
062 / 063	0.760188	-4.5720919	0.4456763
063 / 064	0.75387	17.5100647	0.3603768
064 / 065	0.760037	6.268558	0.41922671
065 / 066	0.759049	-16.245107	0.41641730

Appendix-D

Jyoti Spinning Mills Limited

Actual Capital Structure of JSML(In Rs.)

Fiscal Year	Share Capital			Debit Capital			Total Capital
	Equity Share	Preference Share	Total Share capital	Long-term debt	Short-term debt	Total debt	
2061/062	134043900	59800500	193844400	373465125	200270083	573735208	767579608
2062/063	134043900	59800500	193844400	365285404	249190909	614476313	808320713
2063/064	134043900	56740265	190784165	379029656	205347713	584377369	775161534
2064/065	134043900	56141573	190185473	368262175	234116172	602378347	792563820
2065/066	134043900	55722859	189766759	2786068255	319739784	597808039	787574798

Appendix- E

List of variables used in Regression Analysis

Year	L j	X j	G	IC	E . V j
061/062	-4.69777	-3.78	-	0.935597	8.59
062/063	-4.57209	6.29	-0.0148	1.1463349	18.66
063/064	17.51006	18.11	-0.01715	1.4215878	30.48
064/065	6.26855	-28.58	-0.03547	0.299257	-16.21
065/066	-16.2451	-53.89	-0.11344	-0.405909	-41.52