CHAPTER: - ONE

INTRODUCTION

1.1 General Background

The capital structure concept has an importance place in the theory of financial management. Financial structure refers to the way for firm's assets are financed. It is entire right hand side of the balance sheet. Capital structure is the financing of the firm represent primarily by long term debt, preference share and common stock, but excluding all short term credit. Thus, a firm's capital structure is only a part of its financial structure. Capital structure policy involves a choice between risk and expected return. Capital structure of company consists of debt and equity securities, which provide fund for a firm on the same way capital structure made of debt and equity securities, which comprise a firm's finance of its assets, it is a permanent finance of a firm represented by long term debt plus preferred stock plus net worth.

The term capital structure refers to the proportion of debt and equity capital. Thus, the financing decision of a firm relates to choice of proportion of debt and equity to finance the investment requirement. A proper balance between debt and equity is necessary to ensure of trade off between risk and return of these financing. A capital structure with reasonable proportion of debt and equity, capital is called optimal capital structure.

Decision making is a process of choosing among alternatives. Alternative having minimum cost with reasonable return to other is acceptable. The cost of capital refers to the discount rate that would be used in determine the present value of the estimated future cash proceeds and eventually deciding whether the projects worth under taking or not.

The term of capital structure means the financial planning according to which the assets of the company are furnished. The term capital structure means the proportion of different types of securities issued by a firm where the firm must should have to make pertinent capital structure decision in identifying exactly how much capital is needed to run their operations smoothly. Generally, fund is acquired by the firm two ways, equity and debt. Equity provides the ownership

fund of the shareholders and the debt or borrowed fund high a fixed charge irrespective to the earning of the firm. Which, has to pay the fixed charge periodically to the debt provider? However, it does not matter whatever the source of fund used by company, ultimately it is supply of fund in return there is need of some benefits in term of dividend or fixed interest charge to fund provider.

The capital, which can be collected from the owners of the organization, is called equity capital. It provides ownership of the firm to its shareholder, who will get a return as per the profitability capacity of the company when they made capital investment. Actually, it is not compulsory to pay return in fixed rate of equity shareholders. The second and the major source of borrowing the fund of capital is debt. In which we pay certain amount as the investment for it. Whatever gets firms profit or not. Sometimes higher debt increases the bankruptcy cost also due to the fact, if the operating earnings of the company is insufficient to pay interest on debt, the company must pay it even by selling the fixed assets. Thus, both debt and equity capital has their own value in the financial mix. By good proportion combination of the firm arise the optimal capital structure. Through two sources of funds debt and equity together represent a capital structure of the firm. But while changes occur in the proportion of debt and equity is considering whole value as it is, it certainly affected to the total value of the firm. Thus every firm must determine the point at which the value of firm would be highest and the cost of the capital is lowest such point is called optimal capital structure which is the standard necessary required of the firm.

Rajan and Zingales (1995) conceptualized the most important departures from the Modigliani and Miller assumptions that make capital structure relevant to a firm’s value. Thus, there exist theories of capital structure, but very little is known about their empirical relevance. Although much research in the area of capital structure has been completed, the puzzle of how firms make capital structure decisions is considered one of most significant unresolved problems in finance (Brealey and Myers, 1988). Despite the theoretical appeal of capital

structure, researchers in financial management have not found the optimal capital structure. Further the lack of a consensus about what would qualify as optimal capital structure has necessitated the need for this study.

The capital structure is one of the most complex areas of financial decision making due to its interrelationship with other financial decision variables (Gitman, 2001) and is crucial for any organization because of the need to maximize returns to various organizational claimants and also because of the impact such a decision has on a firm's ability to deal with its competitive environment. It also appears from theories of capital structure that the optimal use of debt and equity result into reduction in overall cost of capital that maximizes the value of firm because of gain and cost of leverage. If the cost of capital can be minimizes via some judicious mixture of debt and equity financing than the financing decision can maximize the value of the firm (Copeland and Weston, 1992). Thus, the firm should strive to use optimal level of capital structure as part of its value maximization objective. In this background, a study devoted to expose more facts about determining factors of capital structure may be rewarding one and this study is one additional attempt in this direction.

1.2 Statement of the Problem

Previous studies on determinants of capital structures attempted to define the optimal capital structure for firms from various perspectives, such as bankruptcy costs (Berger et. al.1995), agency theory (Jensen and Meckling, 1976; Smith and Warner1979), and asymmetric information (Mayers and Majluf, 1984). Even if there exists the factors affecting capital structures, one cannot truly affirm an optimal capital structure in practice. A broad range of issues have also been discussed in empirical studies that focus on determinants of capital structures, such as firm characteristics, company strategy, or managing decision. A review of previous studies reveals that the following factors from firm characteristic affect capital structure are: firm size (Myers and Majluf, 1984), profitability (Myers and Majluf, 1984), non-debt tax shields

(Modigliani and Miller, 1958; DeAngelo and Masulis, 1984), Collateral value of assets (Mayers, 1977), operating risks (Mayers 1977), dividend policy (smith and Warner, 1979). Among these factors, firm size, collateral value of assets is positively correlated to capital structure, whereas profitability is negatively correlated to leverage. The non- debt tax shields, operating risk and dividend policy may have either positive or negative correlation.

The capital structure has been the subject of controversy since the publication of Modigliani and Millers (1958). Analysis of capital structure in selected public enterprises (Shrestha, 1985). They hold the view that cost of capital to firm remains invariant to the capital structure changes on the other hand the traditional belief is that the cost of capital is the function of capital structure. Many empirical studies exist supporting the M.M. and traditional view. The capital structure concept has become very important since the publication Modigliani and Millers classical proper 1958 (Ghimire 1999, p3). They hold the view, that the cost of a firm remains invariant to capital structure changes. On the other hands, the traditional proposition is that the cost of capital is the function of capital structure (Solomon 1963). There are many empirical studies exist supporting and refuting the M.M. and traditional view. In his study used simple regression techniques to analysis the relation between the average cost of capital and leverage and stock yield and debt equity ratio utilized cross section data of the four different industries. However the multiple regression was run, the result is consistent with traditional view. Similarly by using British data of three unregulated industries such as davenport (1971, 137-162), Wipperh (1966, 615-633) and Sharma and Rao (1969,673-677) study are presented by first one tries to test M-M cost of capital proposition and regression equation were estimated and his result supported the traditional view, second one also conducted a test of the relationship between leverage and cost of capital and concluded that shareholders wealth can be enhanced by a judicious use of debt financing and lastly in respect of M.M. hypothesis and conclude that the cost of capital is affected by debt apart from its tax advantages. Respectively, (Panday, 1981) compute the multiple regression

equation to test the validity of M.M. Proposition and his results concluded that cost of capital is the function of capital structure investment.

1. What is the structure of debt ratios in Nepalese enterprises?
2. What is the trend in depreciation tax shield line?
3. How has growth opportunities changed over time in Nepalese enterprises?
4. How does the tax adjustment stock yield is effected by leverage, size of capital employed, growth in total assets, dividend payout ratio, earning variability and liquidity ratio of Nepalese enterprises?
5. What are the relationships among leverage, cost of capital, size of capital employed, growth in total assets, dividend payout ratio, earning variability and liquidity ratio of Nepalese enterprises?
6. Is there proper relationship between capital structure and cost of capital in the context of Nepalese trading and manufacturing companies?
7. Do the Nepalese investors purchase the stock rationally?

1.3 Objective of the Study

The major objective of the study is to analyze the capital structure in Nepalese enterprises of Nepal. The following are the specific objectives:

1. To examine the size and structure of capital structure ratios over time.
2. To analyze the structure of key financial ratios in relation to capital structure.
3. To examine the relationship of debt ratios with non-debt tax-shield, growth opportunities, profitability and liquidity.
4. To analyze the factors affecting capital structure.
5. To examine the capital structure management practices in Nepalese enterprises.

1.4 Organization of the Study

This study has been organized into the five chapters. The first Chapter is an Introduction. This chapter covers general background of the study, statement of the problem, objectives of the study, organization of the study. Second Chapter is related with the conceptual framework and review of Literature, theories of capital structure, review of Nepalese studies, concluding remarks. Third Chapter is concerned with research methodology includes research design, nature and sources of data, selection of enterprises, methods of analysis, hypothesis and models, limitation of the study. Fourth Chapter is background of enterprises, analysis of secondary data, analysis of primary data, concluding remarks. Last Chapter is last chapter in my research and is concerned with output of thesis as summary, conclusion and recommendation.

CHAPTER: - TWO

REVIEW OF LITERATURE

Capital structure is the theory of finance. One of the main questions of considerable significance is whether there exists the optimal capital structure or not, and, if it exists what factors determine such level of capital structure. The need for developing the capital structure theory to provide answer to these important questions cannot be disregarded. In this context, to provide explanation to these questions, the number of theories of capital structure and empirical studies has been advanced in the finance literature hitherto. The purpose is to develop some expertise in one's area, to see what new contribution can be made, and to receive some idea for developing a research design. It is also a way to avoid investigating problems that have already been definitely answered (wolff and panta wos). A review of these theories and related empirical studies is important because it provides the basic foundation to the study of capital structure in Nepalese context.

2.1 Conceptual or Theoretical Framework

Generally the term capital structure is referred to represent the proportionate relationship between the different forms of financing; it refers to the composition of firm's capital structure with different sources of funds. Some time the distinction is made between the term 'financial structure and capital structure'. The term financial structure is used to represent the way a firm's finances its total assets that cover entire capital and liability side. Whereas the term capital structure is used to indicate the composition of long term sources of funds, such as debenture, long term loan, preference capital, and equity capital including the reserves and surpluses, and excluding the short term debts. Defined this way, it appears that capital structure is part of the financial structure. However, short term debt, in my cases, are also used us substitute for long term debt for financing the long term activities. This short term debt also provides leverage benefits to shareholders and involves risk and return like the long term debts. The short term debt has also been used as the capital structure

measure by several studies. Therefore, both terms may be used interchangeably.

Firm may use any proposition of these different sources of funds. But, the fundamental question arises as to which sources and proportion of capital should be used so that the firm value can be maximized. Because of the fact that there is risk and return against the use of debt, the firm should strive to employ optimal capital structure. Such as optimal capital structure result prom form trading off between the risk and return of debt financing that leads to the overall cost of capital to minimum and value of firm to maximum. When firm employs more debt in the capital structure, the firm can enjoy a higher rate of return on their capital structure then that the is earned by its total capital by using its fixed income sources of funds, given that the rate of fixed income is less than overall rate of return on the firms overall capital. Contrarily, such use of debt results in increased financial risk to the shareholders. The use of fixed income sources of funds creates increase commitment to pay fixed charges first, which causes return on equity to be more uncertain and increase in probability of insolvency. In this way, the increase returns and increase risks to leverage reaches at equilibrium point where optimal capital structure results. Therefore, the major issue of the capital structure remains, basically, in the use of different sources of funds, namely debt and equity and interest of the holders of these capital shareholders and debt holders.

Theories of Capital Structure

The capital structure concept has an important place in theory of financial management. The term, capital structure, also known as financial structure or financial plan or leverage. The financial decision of the firm is of the tool for achieving firm's objective of shareholders wealth maximization. The term capital structure refers to the proportion of debt and equity capital. Thus, the financial decision of a firm related to choice of proportion of debt and equity to finance the investment requirement a proper balance between risk and return to the shareholders. However, it can be expected that if the capital structure

decision affects the total value of firm, a firm should selected such a financing mix, which maximized the shareholders wealth. The optimal capital structure and its implication are more noticeable. Argument between those who believe that is an optimal structure for each firm and among those who believe in the absence of such optimal capital structure for each firm and among those who believe in the absence of such optimal capital structure began late 1950s and there is yet no resolution of the conflict (Necon air, 2002).

In theory, capital structure can affect the value of the company by affecting either its expected earnings or the cost of capital or both, which it is true that financing mix can affect the total earning of firms as they are determined by the investment decision, it can affect the share of earnings belonging to the shareholders. But the leverage cans large influence the value of firm through the cost of capital.

2.1.1 Modigliani-Miller (MM) Approach

The modern theory of capital structure began with the celebrated paper of Modigliani and miller published in 1958 (Harris and Raviv, 1990). It is an alternative approach to the cost of capital which argues that, in the absence of corporate income tax, the cost of capital and the market value of a concern is independent of the capital structure. This approach is identical with the net operating income theory. The NOI approach does not provide operational justification for the irrelevance of the corporate capital structure, while MM approach provide operational justification for the constraint overall cost of capital and, therefore, the total value of the company. The hypothesis gets support from the presence of arbitrage in the capital markets.

Arbitrage Process

Arbitrage is an act of buying assets/securities in one market (at lower price) and selling it in another (at a higher price). Consequently, equilibrium is restored in the price of securities in different markets. Essentially, the arbitrage process is the purchase of securities whose price are lower and sale of securities whose prices are higher ,in related markets which are temporarily out

of equilibrium. It is a balancing operation and implies that securities cannot sell at different prices.

Basic Propositions

There are basic proposition of the MM models.

1. The overall cost of capital and the total market value of a company are independent of its capital structure. The total value is given by capitalizing the expected stream of operating earnings at a discount rate appropriate for its risk class.
2. MMs proposition II states that, for any company in a given risk class, the cost of equity capital, is equal to the constant average cost of capital, plus a premium for financial risk, which is equal to debt–equity ratio times the spread between the constant average cost of capital and the cost of debt capital. The cost of equity capital increase in a manner to offset exactly the use of a relatively chapter source of funds, i.e. debt capital.

The cut-off rate for investment decision making is completely independent of the way in which an investment is financed.

Irrelevance Proposition Theory

In 1958, Modigliani and Miller is an important foundation for a positive theory of capital structure by developing the implications of market equilibrium for optimal debt policy. They demonstrated that given the firm's investment policy and ignoring taxes and contracting costs, the firm's choice of financing policy does not affect the current market value of the firm. Their capital structure irrelevance proposition demonstrates that the firm's choice of financing policy cannot affects the value of the firm so long as it does not affect the probability distribution of the total cash flows to the firm. Substantial controversy followed, centered in large part on which of the peripheral assumptions are important to the validity of the theorem. Joseph Stieglitz (1969, 1974) argues that in addition to a perfect market, the critical assumption is that bonds issued by individuals and firms are free of default risk.

Much of the early literature is concerned with the proposition that the market value of affirm is unaffected by its financing decisions, and most of the early proofs use arbitrage arguments. The general if a firm affect its financing decisions of a firms affect its markets value. There are arbitrage opportunities that can be used to produce costless instantaneous increase in a perfect capital market, one can conclude that the market value of a firm is unaffected by its financing decisions. In all of the arbitrage proofs of the markets values proposition, there are following common assumptions.

1. There are no transaction costs.
2. There are only two types of securities debt and equity.
3. There are no corporate or personal income taxes and no bankruptcy costs.
4. Issuing debt to repurchase the stock or issuing stock to pay off the debt can change the leverage ratio.
5. There exists 100 percent dividend payout ratio. In other words, all the incomes available to share holders are paid out as dividend.

In 1958, Franco Modigliani and Miller addressed the capital structure issue in a rigorous, scientific fashion, and they set off a chain of research that continue to the firm's investment policy and ignoring taxes and contracting costs, the firms choice of financing policy does not affect the current market value of the firm. Their capital structure irrelevance proposition demonstrates that the firm's choice of financing policy cannot affect the value of the firm so long as it does not affect the probability distribution of the total cash flows to the firm.

The value of any firms is established by capitalizing its expected net operating income (NOI=EBIT) at a constant rate that is appropriate for a firms risk class.

Accordingly, $V_L=V_U=$ EBIT/WACC

Here, V_L and V_U designate the value of levered and unlevered firms in a given risk class, and the constant for an unlevered, or all equity firm.

Since, value (V) is a constant, and then under MM theory, the value of the firm is independent of its leverage. This also implies that the weighted Average cost of capital to any firm, levered or not, is completely independent of its capital

structure and equal to the cost of equity to an unlevered firm in the same risk class. This is known as MMs proposition I and is identical to the NOI approach.

MM proposition II states that as the firms use of debt increases, its cost of equity also raises, and in a mathematically precise manner. Taken together, the two MM propositions imply that the conclusion of more debt in the capital structure will not increase the value of the firm, because the benefits of chapter debt will be exactly offset by an increase in the cost of equity. Thus, MM theory states that in a world without taxes, both the value of firm and its cost of capital are unaffected by its capital structure.

Another theory of capital structure, suggested by David Durand, is the Net operating income (NOI) approach. The NOI approach assumes that the equity holders want to compensate for higher leverage risk with higher rate of return. With this assumption, this approach suggests that the cost of equity increase as the degree of leverage increase and higher cost of equity offsets the advantage of using chapter debt fund resulting no effect at all on weighted average cost of capital. The NOI approach to the valuation argues that the overall capitalization rate and cost of debt remain unchanged irrespective of change in leverage. The essence of this approach is that the capital structure decision of the firm is irrelevant. Any change in leverage will not lead to change in total value of the firm and the market price of share.

2.1.2 Towards and Optimal Financing Policy

Modigliani and Miller (1963) argued that since the corporate tax allows the deduction of interest payment in calculation tax able income, the more debt in the capital structure, the lower the corporate tax liability, the higher after tax cash flows, and the greater the market value of the firm.

Miller (1977) argues that tax advantage of debt is exaggerated by considering the corporate profit in solution from personal income taxes. He argues that the corporate tax advantage of debt is offset by personal tax rules on investor debt income that are higher than tax rate on investor equity income. In additional,

Brennan and Schwatj(1978) also argue that the corporate tax advantage of debt is lower because the interest tax shield is lost if the firm goes through bankruptcy and liquidation. Furthermore, DeAngelo and Massulis(1980) argue that substitute tax shield, such as investment tax credit, also reduce the corporate tax advantage of debt.

MMs original work, published in 1958, assumed a zero corporate tax rate. In 1963, they published a second article that included corporate tax effects. With corporate income tax, they concluded that leverage will increase a firm's value, because interest on debt is a tax deductible expense, and hence more of a leveraged firms operating income flow through to investors. The MM propositions when corporation are subject to income tax follow.

Proposition I

The value of levered firms is equal to the value of an unlevered firm in the same risk class plus the gain from leverage. Which is the value of the tax saving and which equals the corporate tax rate times the amount of debt the firms uses.

Therefore, $V_L=V_U+TD$

The important point here is that when corporate taxes are introduced, the value of the levered firm exceeds that of the unlevered firm by the amount TD.

Proposition II

The cost of equity to a levered firm is equal to the cost of equity to unlevered firm in the same risk class plus a risk premium whose size depends on the differential between the cost of equity and debt to an unlevered firm, the amount of financial leverage, and the corporate tax rate.

Therefore, $K_{SL}= K_{SU} + (K_{SU} – K_d) (1-T) (D/S)$

2.1.3 Trade-Off Theory of Capital Structure

The preceding arguments of corporate tax effect of MM, which contend that capital structure matters and the presence of financial or bankruptcy costs led to the development of "Trade-off –theory" of capital structure. Modigliani and

Miller (1958) tried to bring the theory closer to reality by incorporating the existence of the corporate income tax, however, they were at fault and they had to correct the findings (Modigliani and Miller, 1963). They agreed with a positive value of the tax shield in the case when the paid interests are the tax deductible expenses, whereas dividends are not. In this case the value of the firm is equal to the value of the unleveled firm plus the present value of the tax shield. However, if the benefit of the tax shield is admitted, the optimal capital structure is achieved when the firm if financed entirely by debt. It is not a result supported by empirical evidence. Therefore, there should be also some disadvantages of using debt financing. Costs associated with debt financing in case of the trade-off theory are the costs of financial distress. Therefore, the value of the firm is equal to the value of the unleveled firm plus the present value of tax shields minus the present value of the costs of financial distress. When leverage is low, the benefits of the tax shield on additional debt outweigh the increasing costs of financial distress. In general, trade off theory predicts that firm maintains a target debt equity ratio that maximized the firm value by minimizing the cost of prevailing market imperfection. Brigham and Ehrhardt (2004) states, in trade-off model, optimal capital structure can be visualized as a trade-off between the benefit of the debt (the interest tax shelter) and the cost of debt (the cost of financial distress or bankruptcy & agency costs). The theory claims that the trade-off between the losses and gains of borrowings, holding the firm assets and investment constant, determines the optimal debt ratio. The firm substitute debt for equity or equity for debt until the value of the firm is maximized.

According to the trade off model is firm should set a target capital structure that balance the costs and benefits of leverage, because such a structure will maximize the value of the firm. Financial manager often think of the firms debt equity decision as a trade-off between interest tax shields and the cost of financial distress and agency costs. Of course there is controversy about how valuable interest tax shield are what kinds of financial troubles are most threatening. This trade off theory of capital structure recognizes that target debt

ratio may vary from firm to firm. Companies with safe tangible assets and plenty of taxable income to tax shield ought to have high target debt ratio. Unprofitable companies with risky, intangible assets ought to rely primarily on equity financing.

2.1.4 Pecking Order Theory

The pecking order theory would indicate that the profitability of a firm affects its financing decision. If it issues debt, this means that the firm has an investment opportunity that exceeds its internally generated funds. So, changes in the capital structure often serves as a signal to outsiders about the current situation of the firm as well as the managerial expectations concerning future earnings. This is called the signaling theory. The debt offering is believed to reveal information the management of a firm is expecting about future cash flows if it will cover the debt costs. However, the bankruptcy fears still impact the signal and intensify the cost of this signal. Such conclusions are supported by results of most empirical works for example, Asquith and Mullins (1986) and Eckbos (1986)–that documented a positive effect on stock prices when leverage increases while leverage decreasing announcement have a negative effect.

In their pioneering work, Myers and Majluf (1984) showed that. If investors are less well informed than current firm insider about the value of the firm's assets, then equity may be mispriced by the market, if firms are required to finance new projects by issuing equity. Under pricing may be so serve that new investors capture more than the NPV of the new project, resulting in a net loss to existing shareholders. In this case the projects will be rejected even if its NPV is positive .this under investment can be avoided if the firm can finance the new project using a security that is not so severely undervalued by the market. For example, internal fund and /or riskless debt involve no undervaluation, and therefore, will be preferred to equity by firms in this situation. Even (not too) risky debt will be preferred to equity.

Brennan and Kran (1987), Noe (1988), and Constantinides and Grundy (1989) cast doubt on the pecking order theory. These papers enrich the set of financing choices that a firm may make when faced with the situation modeled by Myers and Majluf(1984). They concluded that firms do not necessarily have a preference for issuing straight debt over equity and that the underinvestment problem can be resolved through signaling with the rich set of financing options.

Donaldson (1963) reaches a similar conclusion of resorting to external financing only if financing cannot be generated internally which supports the pecking order theory of capital structure. According to him capital structure choice depends on the firm's investments opportunities and its profitability. Highly profitable firms might be able to finance their growth by using retained earnings and by maintaining a constant debt ratio. In contrast less profitable firms will be forced to resort to debt financing. Hamaifar et al. (1994) and Titman and Wessels (1988) report results that are consistent with the notion that larger firms have higher debt ratios. There is also strong empirical evidence for the profitability and debt ration that supports of Kester (1986) and Rajan and Zingales (1995) lend strong support for the negative relationship of profitability and debt.

The pecking order theory explains the inverse relationship between profitability and debt ratio.

1. Firms prefer internal financing.
2. They adapt their target dividend payout ratio to their investment opportunities, while trying to avoid sudden changes in dividends.
3. Sticky dividend policies, plus unpredictable fluctuation in profits and investment opportunities, mean that internally generated cash flow is sometimes more than capital expenditures and at other times less. If it is more, the firm pays off the debt or invests in marketable securities. If it is less, the firm first draw down its cash balance or sells its marketable securities, rather than reduce dividends.

4. If external financing is required, firms issue the safest security first. That is, they start with debt, than possibly hybrid securities such as convertible bonds, then perhaps equity as a last resort. In addition, issue cost are lest for internal funds, low for debt and highest for equity. There is also the negative signaling to the stock market associated with issuing equity, positive signaling associated with debt.

2.1.5 Agency Cost Theory

Jeusen and Meckling (1976) developed the capital structure theory based on the different agency cost and argued that an optimal capital structure can be obtained by trading off the agency related costs and benefits. In modern business, separation of owners and business may create the conflicts between agents and principal. If the parties in agency relationship are utility maximizes, there is good reason to believe that agency may not always act in the best interest of principal & conflict arise. Thus, such conflicting interest between principal and agency, and equity holders and debt holders create agency costs. The cost arising from the conflict of interest of the agency principals and equity holders-debt holders are of two types: the agency costs of equity and agency costs of debt. According to the agency cost theory of capital structure, optimal capital structure exists when total agency cost $A_L(E)$ in the firm in minimal. Total agency cost is defined by $A_L(E) = A_{SO}(E) + A_B(E)$.Whereas, $A_{SO}(E)$ is the outside equity agency costs incur due to conflict between management and equity holders, $A_B(E)$ is defined the debt agency costs due to the conflict between debt holders and equity holders, $E = s_O / (s_O+B)$, so, is the outside equity held by anyone outside the firm, B is debt held by anyone outside the firm. The optimal capital structure is attainable where the agency cost $A_t(E)$ becomes minimum. Thus, this theory advocates that there is optimal capital structure.

The agency costs arise from two agency relationships- (1) between shareholders (owners) and debt holders, and (2) between shareholders (owners)

and managers (non-owners), both being based on information asymmetry. Conflict between shareholders and debt holders is described by Jensen and Meckling (1976). They come up with the arguments of why the probability distribution of a firm's cash-flows is not independent of its capital structure. In reference to their study, when a company is highly levered, owners have incentives to engage in highly risky projects that will increase their wealth if they are successful but that will prejudice debt holders if they are not. In other words, higher risk increases the upside for stockholders while the downside must be absorbed by the firm's creditors. As a consequence, it becomes necessary to establish control devices in debt contracts. Conflict between debt and equity investors in the case when there is a risk of default is well documented by Myers (1977). He points out that when a firm is likely to go bankrupt, shareholders may have no incentives to provide new capital, and even it is invested in the projects with a positive net present value. The reason is that the shareholders pay all costs, whereas some part of returns may be captured by debt holders. On the other hand, some models show that the incentives of levered shareholders to engage in risky projects are reduced. For example Diamond (1989) introduces a model which is based on reputation. He analyzes the joint influence of adverse selection (different types of firms) and moral hazard (conflict between shareholders and debt holders) problems.

A different reputation-based model is built by Hirshleifer and Thakor (1992). They have analyzed the situation in which a manager may manipulate investment policy of the firm in order to develop a personal reputation for high ability.

The conflict between shareholders (owners) and managers (non-owners) is a classical principal-agent relationship. It is assumed that managers have some scope for pursuing their own interests at shareholders' expense because of asymmetric information and that it is the costly mechanisms imposed by principals upon agents in order to prevent these self-interest-performances of

theirs that create the costs. Managers have incentives to act in their own interest which may result in actions against the owners' interests.

The concept of agency costs into the area of capital structure management. The contribution revolves around of concept that Jensen labels "free cash flow". Free cash flow is cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital (Jenson, 1986).

Jensen then puts forth that substantial free cash flow can lead to misbehavior by manager and poor decisions that are not in the best interest of the firm's common stock holders. In the other words managers have an incentive to hold on to the free cash flow and have fun with it, rather than using the cash in the form of higher cash dividend payments. This leads to what Jensen calls his "control hypothesis" for debt creation. By levering up, the firm's shareholders will enjoy increase control over their management team. For example, if the firm issues new debt and uses the proceeds to retire the outstanding common stock, then management is obligated to pay out cash to service the debt-this simultaneously reduces the amount of free cash flow available to management with which to have fun.

Debt Financing and Agency Problems

In agency cost models, financing decisions affect value of the firms because they produce behavior of manager of the firms that affects profitability. Thus, Jensen and Mecking (1976) argue that higher leverage allows a firms manager to hold a larger fraction of its common stock. This reduces agency problems by aligning the manager's interests more closely with the interests of other stock-holders. Jensen (1986) argues that leverage also enhances value by forcing the firms to payout resources that managers might otherwise waste on bad investment. On the other hand, Fama and Miller (1972) and Jensen and Meckling (1976) suggest that leverage increases the incentives of stockholders to make risk investment that shift wealth from bondholders but do not maximize the combined wealth of security holders. Myers (1977) suggests that

leverage can cause firms to under invest because the gains from investment are shared with the firms existing risky bonds.

Agency theorists have long recognized that the separation of ownership and control common in most corporations creates conflicts of interest between a firm's managers and shareholders. These conflicts (agency problems) arise because managers have the opportunity to use the assets of the firms in ways that benefit themselves personally but decrease the wealth of the firm's shareholders. Examples of this type of opportunistic behavior by managers include consuming an excessive amount of pecks, shrinking of their responsibilities, and investing in negative net present value (NPV) projects that offer personal diversification benefits that firms managers. Amihud and Lev (1981) Friend and Hasbrouck (1988) believe that some of these opportunistic behaviors results because many managers have large proportions of their personal wealth invested in their firm's common stock and in firms-specific human capital. Because their personal wealth is heavily invested in their employers, these managers will lose a large part of the personal wealth if their employer goes bankrupt. Risk-averse managers may seek to mitigate this risk by acting to reduce the bankruptcy risk of the firm. Friend and Hasbrouck (1988) suggest that one way to accomplish this is to use less than the optimal amount of debt in the firm's capital structure. Further, the greater the proportion of personal wealth is that managers have tied up in the form of common stock and firm-specific human capital and greater their incentive to minimize the use of debt in the firm's capital structures.

2.2 Review of Major Empirical Works

Review of related empirical works is a way to discover what other research in the area of problem under study has uncovered. It specifies the way to avoid investigating problem that has already been definitely answered. Thus, considering the importance of the related past studies, this chapter summarizes the empirical evidence concerning a firms capital structure.

Ever since publication of Modigliani and Miller (1958) seminal paper, scholars have carried out number of empirical studies on the capital structure issues must of these empirical studies have been carried out and published in the USA and other developing and least-developed market context. The review of all empirical works, which are available in finance literature, is not possible within the scope of this study. Therefore, only the review of related empirical literature on capital structure has been carried out in this study. The review has been undertaken by classifying the literature under different periods in which the literature on MM hypothesis is presented first. Additionally, the review of literature in Indian and Nepalese context has been carried out.

Literature Related to MM Hypothesis

In their article, MM showed that, given a company's investment policy, and not taking taxes and transaction costs into account, the choice of financial policy does not affects the current markets value of the company that means is an idealized world without taxes, the value of a firm is independent of the debt equity mix. In order to prove their first and second irreverence proposition, they have used the data of 43 large electric utility and 42 oil companies that has been used by previous researches Allen (1954) and smith (1958). MM proved the first proposition i.e. market value of any firms is independent to its capital structure and is given by capitalizing its expected return at the rate appropriate to the risk class and the second proposition i.e. the expected rate of return on stock of any company belonging to the same class is liner function of leverage. Some of the studies concentrated on testing MM hypothesis are presented in Table 2.1.

Table 2.1

Review of major empirical works

Studies	Topic	Major finding
MM (1958)	Test of MM independent hypothesis	Acceptance of MM hypothesis.
Dohaldson (1961)	Debt capacity theory	The financing hierarchy similar to pecking orders (the implied rejection of MM hypothesis).
Weston (1963)	Test of MM hypothesis	Rejection of MM hypothesis.
MM (1963)	Test of tax advantage on leverage.	Acceptance of tax advantage on leverage.
Peterson (1969)	Test of relationship between business risk and capital structure.	Capital structure varies with the business risk.
Hamada (1972)	Test of MM hypothesis	Accepted of MM hypothesis.
Flath and Knoeber (1983)	Test of MM hypothesis	Rejection of MM hypothesis.
Marsh (1983)	Test of firm size and capital structure	Positive relationship between firm size and capital structure.
Auerbach (1985)	Test of firm size and capital structure	Positive relationship between firm size and capital structure.
Titman and Wessels (1988)	Test of firm size and capital structure	Negative relationship between firm size and capital structure.
Lowe and Taylor (1998)	Test of profitability and leverage	Positive relationship between profitability and leverage.

However, their studies have been criticized on many grounds. The unrealistic assumption was criticized much. Beside, the selection of firm's i.e. oils companies and electric utilities display diverse characteristics which violate the assumption of same risk class required by both assumptions. The business toward irrelevance proposition by use of same denominator in both dependent and independent variables has also been pointed out by Baryes (1963). Futher business may also occur from the exclusion of other variables in their regression model in their study.

Review of Empirical Works Up to 2000s

The Modigliani and Miller (1958) theory is based on many assumptions which, as in case of any theory, simplify reality. Modigliani and Miller (1958) tried to bring the theory closer to reality by incorporating the existence of the corporate income tax, however, they were at fault and they had to correct the findings (Modigliani and Miller, 1963). They agreed with a positive value of the tax shield in the case when the paid interests are the tax deductible expenses, whereas dividends are not. In this case the value of the firm is equal to the value of the unleveled firm plus the present value of the tax shield. However, if the benefit of the tax shield is admitted, the optimal capital structure is achieved when the firm if financed entirely by debt. Donaldson (1961) conducted a study on the debt capacity of selecting 25 selected American manufacturing companies comprising the industries researches, machine tools, baking and biscuits, rubber, chemical and drugs. It study drew the conclusion on financing behavior of the firm that is more valid in the real world situation. According to its conclusion firms prefer financing through internally generated funds first. Myers (1984) theory of pecking order has its root to Donaldsons conclusion. The implication of the Donaldsons finding is that profitability, dividend, investment plan, the capital market condition, and structure of firm's asset affect the capital structure of the firm which is against the MM proposition. A study devoted to test the relationship between business risk and the capital structure in the manufacturing firm was conducted by Peterson (1969). Based on the data of the 1947-56, the study found that the capital structure, as measured by the ratio of senior to junior capital at book value, then by ratio of senior to junior capital at market value and finally by ratio of fixed changes to earning power, directly varies with risks, as measured by the coefficient of variation of the rate of return on total capital.

The negative relationship between the earning variability and capital structure has also been theorized on logic that increase in leverage increases the profitability of bankruptcy and high volatility of earnings increase the uncertainty in meeting its obligations. But the empirical studies have shown the

contradictory results. Peterson (1969) has shown the positive relation of leverage and business risk. Toy et al. (1974) finds positive and highly significant relation between risk and leverage in case of Norway, Japan and U.S. and positive but insignificant relation in case of Netherlands. However, consistent with the theory, the studies of Taub (1975) and Carleton and Silberman (1974) found negative relation between risk and leverage. Such contradiction among the different researcher some showing positive and some showing negative relationship between risk and leverage have left this theory inconclusive. Beside there exist contradiction on the finding of other studies as to how these variables are related to capital structure.

The contradictions in the results are even stronger in the empirical studies conducted during the 1980s and 1990s. The many of the empirical research during this 1980s were conducted under agency cost theory of Jenson and Meckling (1976), the incentive signaling approach of Ross (1977) and Lyland and Pyle (1977) framework. Beside, the studies have also been carried out to examine the various determinants of capital structure at the same time. The positive relationship between firm size and capital structure was found by Marsh (1983), Friend and Lang (1988), and Friend and Hasbrouck (1988) while negative relationship was found by Kester (1986), Kim and Soren (1986) and Titman and Wessels (1988). Similar disagreement in case of relationship of growth opportunities with leverage was observed by the studies. Auerbach (1985) and Kester (1986) find positive while Kim and Soren (1986) and Titman and Wessels (1988) find negative relationship between growth opportunities and leverage. DeAngelo and Masulis (1980) developed the developed a model of optimal capital structure which incorporated the impact of corporate and personal tax; and the non debt related tax shields. They argue that firms can use other non-interest item such as depreciation, tax credit, and pension funds to reduce corporate tax payments. These are the substitutes for the tax benefits of debt financing. Therefore, firms that have higher non debt tax shields are likely to use less debt. In support of the arguments of DeAngelo and Masulies (1980), the studies of Kim and Soren (1988) find negative relations of non debt tax

shield with leverage. However, the finding of Bradely et al. (1984) and Aubach (1985) did not support this argument. Therefore the empirical finding s are mixed regarding the effect of non debt tax shield on capital structure. Since the firms with volatile earnings are regarded as riskier, it is argued that the firms with high earning volatility should not be highly levered as they tend to default its obligations. As a result, the negative relationship between the earning variability and capital structure may be expected. This logic has been supported by the finding of Bradely et al.(1984), Kester (1986), Titman and Wessela (1988), Friend and Lang and Friend and Hasbrouck (1988), and Wedig, et al. (1988).

Rajan and Zingales (1995) carried out of comparative study of G-7 countries capital structure determinants in. In an attempt to find out whether capital structure in other countries related to the factors similar to those appear to influence the capital structure of US firms, Rajan and Zingales (1995) investigated on the determinants of capital structure choice by analyzing the financing decision of public firm in the G-7 countries. For the study, they used the data base of Global vantage for the year 1987-1991 focusing on the largest economies where there are sufficient firms to make comparison meaningful. The firms selected for the study were non financial firms of the G-7 countries. They found that the factors identified by previous studies as correlated in the cross section with firm leverage in the United States, are similarly correlated in other countries as well. However, despite the finding of similarity in leverage across the G-7 countries, researchers are skeptic about the findings and suggest for the further researches in the area.

In support of the hypothesis of DeAngelo and Masulis (1980), the studies of Cele, Noe, and Ramirez (1991), Jensen, Solberg and Zorn (1992), Chairella et al. (1992), Shenoy and Koch (1996) and Hirota (1999) found negative relationship between non debt tax shield and leverage while the opposite evidence have been provided by Chaplinsky and Niehaus (1990), Chang and Rhee (1990) and Dawns (1993). The risk variable, as represented by the volatility of earnings of the firm, influence on capital structure has also been

contradictory. Some of the evidence reported that higher the risk or earning volatility higher is the debt ratio of the firm (Chang and Rhee, 1990; Lowe et al., 1994; Jordan et al., 1998; and Kale et al., 1998).conversely, the studies provided the evidence that leverage decrease as the risk or the earning volatility increase (Thies and Klock, 1992; Jenson et al., 1992; Dawns, 1994; Chehab, 1995; and Hirota, 1999).

The studies provide contradictory evidences regarding the growth influence on the capital structure. Chang and Rhee (1990), Thies and Klock (1992), Chiarella, Pham, Sim and Tan (1992), Dawns (1994), Chatrath (1994) and others concluded that growth variable is positively related to the firms leverage where as Chaplinsky and Niehaus (1990), Lowe et al. (1994), Rajan and Zingales (1995), and Michel, Chittengen, and Poutziouris, (1999) and other concluded that growth variable is negatively related to the leverage. The similar disagreement has also been found on the influence of profitability on capital structure. Supporting the pecking order hypothesis, the negative relationship between profitability and leverage has been reported by Rajan and Zigales (1995), Barclay and Smith (1999),Micheal et al. (1999), Hirota (1999) and others.

Review of Empirical Works During 2000s

The capital structure has been considerable number of empirical studies undertaken in recent years, which examined the traditional capital structure determinants. Among the traditional determinants of capital structure size, growth, profitability, risk, assets structure are the major variables examined in these literatures. The major recent studies are: Bevan and Donbold,2000; Pandey,2001; Casser and Holmes,2003; Both et al.2001; Casser and Homes, 2003; Frydenberg,2003; and leverage and size(Bevan& Donbold,2000; Pandey,2001; Both et al.2001; Antoniou et al.2002; Frank & Goyal, 2004 and Haung &Song,2002). Some of the studies concentrated on capital structure studies are presented in table 2.2.

Table 2.2

Review of major studies during 2000s

Studies	Sample and period	Major finding
Bevan and Donbold (2000)	1054 non financial listed UK firms over the time period from 1991-1997.	Positive and highly significant relationship between long term debt and the level of growth opportunities in both 1991 and 1997. Significant positive relationship between company size and long term debt while significant negative relationship between company size and short term bank.
Casser and Holmes (2003)	Final sample of 1555 Australian firms for 1995-1998.	Assets structure, profitability and growth are important of capital of capital structure and financing. Profitability measures by ROA are negative and significant.Growth is positive for all dependent variables and significant for leverage, short-term leverage and outside financing. Coefficients of risk are positive for all capital structure measured assets structure and leverage relation found to be negative.
Frydenberg (2003)	1450 Norwegian manufacturing companies for 1990-2000.	The lag debt level has positive and significant influence on today's debt level the fixed assets appear to be significant and positive. The ROA coefficient is found to be negative and significant. Non debt tax shield has negative coefficient while the size variables has positive coefficient.
Fan et al. (2003)	S344 firs of eleven industries from 39 countries over 1991-2000.	The evidence indicates that the institutions factor mainly the legal and tax systems clears affects capital structure choices across countries. The present of information intermediaries is associated with lower leverage.
Frank and Goyal (2004)	Observations of US publicly traded firms excluding financial firms for samples years 1950-2000.	This study examines the relative importance of many factors in the leverage decisions of publicly trade U.S. firms from 1950 to 2000. The finding are the most reliable factor are median industries leverage (+effect on leverage), market-to-book ratio (-), collateral (+), profit (-), dividend paying (-), lag of assets (+), and expected inflation (+). Industry subsumes a numbers of smaller effects.
Haas and peters (2006)	Panel dataset for non-government owned firms in ten central and Eastern European countries during 1990s	Profitability and age are found to be the most robust determinants of forget capital structure across countries. There is a significant negative relationship between profitability for get leverage in the total sample regression, as well as in 6 out of 10 country regression. The negative coefficient point to information asymmetries and substantial external financing previous in the overall regression, as well as in all individual country regressions, as enters positively and significantly.

A recent strand of empirical literature has applied the survey instrument to rigorously confront preciseness views with the finance theory. The most firms

study in this field is Graham& Harvey (2002). In this their study the other analysis the practice of corporate finance within a sample of 392U.S. CFOs, by focusing on the relevance of importance theoretical factors in capital structure choice, as well as in cost of capital estimates and capital budgeting Graham &Harvey (2002) comprehensive survey questionnaire can tainted nearly 100 questions and explored both capital budgeting and capital structure decisions in depth. Researchers mailed the survey to the CFOs to all (1998) fortune companies and also faxed surveys to 4440 firms. Their analysis is based on the 392 returned completed surveys, which represented 9% of the respondent representing a wide variety of firms and industries. The study explored on different aspects of corporate practice that are consistent with finance theory and provide great deal of understanding of corporate decision making by analyzing the CFOs responses in the context of various company characteristics, such as size, P/E ratio, leverage, credit rating, dividend policy, and industry relationship between corporate financial choices and managerial factors such as managements stock ownership, age, tenure and education.

The general findings of the researches are that the practice of corporate finance are both reassuring and puzzling. Researchers finding on the capital structure are somewhat surprising and the informal criteria such as financial flexibility and the credit rating were the most important factors in setting the debt policy and EPS dilution was the biggest reasons for companies, reluctance to issue the equity shares. The earnings and cash flow volatility, insufficient internal funds, level of interest rates, transactions cost and product market concerns were also fund as other important factors to influence the debt decision. On one hand the researchers' generalized interpretation of the result is that there is moderate evidence that companies follow the trade off theory of capital structure by setting and attempting to adhere to target debt ratios while on the other hand, the importance of financial flexibility and equity under valuation in capital structure decision provide support for pecking order hypothesis. The finding of this study are based on the opinion of corporate practitioners of the developed markets, which provide good understanding in to the corporate financing

practices in the developed markets. But, the results of this study may not hold well in the developing market context.

Bancel and Mittoo (2004) examine capital structure policies of 87 CFOs from 16 different European countries with the objectives of exploring into theory and practice of capital structure. Due to the limited sample size, these authors do not present country-specific results and where as Graham and Harvey surveyed both publicly listed and private firms, Bancel and Mittoos sample exclusively consists of public firms. Financial flexibility, credit rating and tax advantage of debt are the most important factors influencing the debt policy while the earning per share dilution is the most important concern in issuing equity. Evidence also supports that the level of interest rate and the share price are important considerations issues selecting the timing of the debt and equity issues respectively. In many respect, the finding of this study is similar to that of Graham and Harvey (2002). So the researchers propose to compare the responses of European managers with those of the U.S. in Graham and Harvey (2002) as well as across countries based on the English, French, German and Scandinavian law.

Other important study of this kind has been conducted by Brounen et al. (2004) on capital structure policy in Europe. Their study presents the results for a sample of 313 CFOs' responses from four European countries; UK, Germany and France. The sample included both public and private firms and had sufficient number of representation from each country. This particular study has been designed in similar set up to Graham and Harvey (2002) approach, which allowed researchers to compare whether the results are valid outside U.S. their results shoe financial flexibility to be the key factors when determining their debt structure, a result which corroborates previous studies from the US and 16 countries samples (Graham and Harvey, 2002; and Bancel & Mittoo, 2004). In line with Graham and Harvey (2002) the study finds evidence which moderately supports the static trade-off theory in each of the four countries that is confirmed by the important of a debt ratio in general, but also specifically by tax effects and bankruptcy costs.

However, there is disagreement in the studies regarding the direction of relationship of other determinants with capital structure. For example the positive relationship of growth variables with the leverage has been shown by Bevan Donbolt (2000) and Frydenbeg (2003) which the negative relationship has been shown by Antroniou et al. (2000). Similarly, Pandey (2001) reports the negative relations of risk with leverage while Casser and Holmas (2003) reports this relation positive. Booth et al. (2001) observes the mixed effects of risk on the leverage. Assets tangibles as measured by the proposition of fixed assets to total assets has been found to be negatively related by study of Pandey (2001) and Casser and Homes (2003) while it is found to be positively related by study of Bevan and Donbolt (2000) and booth et al (2001) among others, the relation of non debt tax shield with the leverage was found to be negative by Frydenberg (2003). In addition, the lag leverage was also found positive and significantly related to leverage.

Among the possible reasons for such in consistent empirical results would be the differences in country, industrial factors, sample size and period. In this regards, Antonious et al. (2002) pointed out that the effects of possible determinants of capital structure are country-specific. Similarly, Fan et al. (2003) reported that the institutional factors mainly the legal and tax system clearly affects capital structure choice across countries. Similar finding has also been reported by Hall el al. (2004) in their study of four thousands Europeans SMEs. They found that there is variation in the SME capital structure, its determinants and effect of these determinants on capital structure between countries. However, Booth et al. (2001) has the different view. There conclusion is that the variables that are relevant for explaining the capital structure in the United States and European countries are also relevant in developing countries, despite the profound differences in the institutional factors across these countries.

Haas and Peeters (2006) examine the capital structure dynamics of central and Eastern European firms to get a better understanding of the quantitative and qualitative development of the financial systems in this region. The dynamic

model was applied to microeconomic data for six countries for 1993-2001. They find that during the transition process, firms generally increased their leverage lowering the gap between the actual and the target leverage. Profitability and age are the most robust determinants of capital structure targets. Although banking system development has in general enable firms to get closer to their leverage targets, information asymmetries between firms and banks are still relatively large. As a result, firms prefer internal finance above bank debt and adjust leverage only slowly.

2.3 Review of Major Nepalese Studies

The related studies that have been made into Nepalese enterprises and related as well as relevant to this study have been reviewed under this sub-section of thesis. These major studies that have been done in the past by Nepalese scholars during the different time periods from 1985 to2007 are presented into table 2.3 and there are closely related to this research work about capital structure managements.

Table 2.3
Major Nepalese studies on capital structure

Nepalese studies	Topic	Major findings
Shrestha (1985)	Analysis of capital structure in selected public enterprises.	Very imbalance and confusing capital structure.
Khanal (1992)	Capital structure of industrial public enterprises.	Capital investment and earning were not correlated, debt equity ratio and financial performance also bad thus most of PEs in loss.
Shrestha (1993)	Capital structure selected and listed public companies.	Most of them have no transparent capital structure and these companies are adhoc determined the capital structure without realistic parameters.
Sherpa (2007)	Corporate capital structure and its determinants a case of Nepal.	Capital structure is finding in relation to the variation of sample size, study period and measurement of variables.
Bhattarai (2007)	Determinants of capital structure in Nepalese evidences	Capital structure is depends on sample size, liquidity position, profitability situation and attitudes of shareholders.

Sherpa (2007) The capital structure the major determinants is the total debt are the liquidity and assets tangibility having negative impact; long term debt are the size, profitability, risk, assets tangibility, and no debt tax shield with positive influenced, and short-term debt are size, assets tangibility and liquidity with negative influence and non debt tax shield with positive influence. Long term debt is negatively determined by profitability while positively determined by assets tangibility. The firms in smaller size portfolios have their total debt negatively explained by liquidity and asset tangibility while firms in larger size portfolios have their total debt negatively explained by profitability and positively by asset tangibility and non debt tax shield. Asset tangibility, non debt tax shield and liquidity explained long term debt positively in firms of smaller size portfolios while it is negatively explained by profitability and positively by asset tangibility, non debt tax shield, and liquidity. Similarly the short term debt of the smaller as well as larger size portfolios is fund to be explained by the asset tangibility and liquidity of the firm with significant and negative impact. In addition, short term debt of the large size portfolios is also significantly explained by size & profitability. Total debt of the firms of least profitable portfolios has been influenced positively by size of the firm and negatively by asset tangibility and liquidity where as it is influenced negatively by size, asset tangibility, and liquidity and positively by profitability and non debt tax shield of firms of more profitability portfolios. Long term debt of the less profitability firm has been explained significantly and positively by the size, asset tangibility and liquidity. The positive and significant impact of asset tangibility and non debt tax shield on long term is found in most profitable firm category. Asset tangibility and liquidity of the firm found to have negative and significant impact on short term debt of all profitability portfolios. However, the manner these determinants have influenced various leverage measures differ in many respects. Such differences in empirical finding in relation to previous study may be attributed to the variation on sample size, study period, and measurement of variables, Sherpa (2007).

Shrestha (1985) analyzed the capital structure in selected public enterprises which focused on providing the conceptual base and the determinants of capital structure. The study calculated the cost of equity and weighted average cost of capital taking consideration the net operating income and net income approach respectively. The capitalization rate and EBT were found very poor and inconsistency. The research study also used the various ratios for the analysis of capital structure and found a very imbalance capital structure. By this study, it was found that neither there exists proper determinants nor standards are developed to justify the appropriateness of capital structure so shrestha argues that the public enterprises are following adhoc capital structure and neither government nor public enterprises themselves are serious for the appropriate capital structure. Interest obligation seems to argue financial burden to the existing public enterprises. Maintaining an optimal capital structure become a ticklish problem on the public enterprises since there is no reliable basis as yet developed to ensure sound capital structure. A study concludes that the selected public enterprises under this study have a very confusing capital structure since the corporations are not guided by objective based financial plans and policies. Finally, it has suggested that the debt equity ratio should neither highly levered to create too much financial obligation that lies beyond capacity. Under this, various master's level dissertations related to this study have been reviewed.

(Khanal 1992) concluded that capital investment and earning were not related. Most of the public enterprises were in loss position (Khanal 1992). Debt equity ratio was not satisfactory. Financial performance of these companies was not good. Lastly, Khanal (1992) suggested that the management should reduced government subsidy and donation. They should improve their performance efficiency. Capital investment and earning were not correlated, debt equity ratio and financial performance also bad thus most of PEs in loss.

Shrestha (1993) conducted a study on the capital structure of selected listed public companies. Data used from 19 companies and study had covered different sectors manufacturing, finance, utility service, and other allied area. It had found that most of these companies have debt capital relatively very higher

than equity capital consequently most of them are operating losses to the extent that payment charging interest on loan. It has suggested that the government has considered in public enterprises is that of evaluating the relationship between use of debt and its impact on overall earning of public enterprises. So, government should be sure in knowing how return will be maximized by using debt capital. It should need to develop a suitable capital structure guideline to make public enterprises. It should need to develop a suitable capital structure guideline to make public enterprises swore of its responsibility to repay the debt schedules. The other thing that needs to be made publicity transparent that government money is not a cost less found. Government has to analyze, cost and risk return off. Thus, capital structure needs to be made more determinate by realistic analysis of the cost. In last, it also concluded that most of public enterprises have no transparent capital structure without realistic parameter. Thus, policy makers have to be careful in developing suitable capital structure guidelines in making accountability. From the review of above empirical works, it can be seen that stadium specific to the relationship between capital structure and cost of capital is almost non-existent in Nepal, Shrestha (1993).

Bhattarai (2007) in his study concluded that firm size, profitability, liquidity, tangibility are the most influencing factors in determining the capital structure in manufacturing firms whereas firm size, liquidity, profitability age (reputation) are influencing factors in capital structure decisions in non-manufacturing (trading, service and hotel) firms. The study also concludes that Nepalese firms do not consider tax issue while making financing decision. Their financing decisions are made using the information provided by own management and staff analysis, they do not have target debt ratio. Though, they prefer internal funding followed by external debt, they do not strictly follow pecking order hypothesis. Likewise they have no a policy of maintaining spare debt capacity. Further they could borrow more at the same interest rate. They could not see their borrowing in industry terms. They don't make use of off-balance sheet financing techniques. Nepalese firms issue equity to fund major expansion but they issue debt to add to liquidity and to fund a major expansion.

Nepalese enterprises pay more importance in long-term survivability and financial independence in governing financial decisions**.** The financial policy and decisions perspective it is concluded that the Nepalese corporate capital structure is influenced mainly by firm size, profitability, liquidity, tangibility, reputation (AGE), uniqueness (SANS), and non-debt tax shield (NDTS). The variables considered as influencing in determining capital structure of developed capital market realities are also considered as influencing variables in Nepalese context too.

2.4 Concluding Remarks

Most of the studies appeared the finance literature has attempted to further explain the capital structure by looking into several determinates of capital structure under different theoretical framework. Some of the recent studies have also focused on exploring the link between capital structure theory and the corporate practice. The review of several relates studies indicate that there is no agreement in the results of these studies. For example, the tangibility or the collateral assets, size, profitability, growth, risk of the firm, non-debt tax shields, liquidity, industrial classification and many other firm related variables are found to be significant in determining the capital structure of the firm. However, the finding regarding how these variables are related with and affects to capital structure has remained as unresolved issues. These variables have been found important in many contexts such as in the context of USA, Europe, Australia, Japan and some other Asian countries. The similar findings appeared also in the Indian context. But, the direction and significance of impact these variables on leverage were found varied across firm, industry and country. Few studies in the Nepalese context also find more or less the similar contradictory results as in the studies of other countries. Beside, the review has also revealed many other variables as the likely influential variables in the determination of capital structure. The review of studies reveals additional qualitative factors such as financial flexibility, credit rating, earning and cash flow volatility, insufficient internal founds among others as factors influencing the capital

structure decision. Therefore to conclude the capital structure issue has been remained highly contentions in the field of finance. The determinants of capital structure vary greatly across different firms.

There are the several factors that determine the capital structure of the firms. These factors are collateral value of assets, growth opportunities, profitability, firm size, and volatility of income and non debt tax shield that includes depreciation, investment tax credit. The empirical studies have shown that the leverage is positively related with collateral value of assets and size of the firm whereas; it is negatively related with growth opportunities, volatility, profitability and non debt tax shield.

CHAPTER: - THREE

RESEARCH METHODOLOGY

The basic objectives of this study as described in the introductory chapter are to examine the management of capital structure of Nepalese enterprises. To achieve the above -mentioned objective, appropriate research methodology has to be followed. Therefore in this chapter, focuses have been made on research design, nature and sources of data, selection of enterprises and method of analysis.

3.1 Research Design

The analysis of this study is based on certain research design. Research design means definite procedure and technique which guides in studying profound ways for research viability. So selection of appropriate research design is necessary to meet the study objectives of any research. It emphasizes on descriptive and analytical study of the collected data on profit and loss account and balance sheet over a period of time and it gives suggestion on the improvement of the capital structure. So this study is based on description and analytical research design.

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Using quantities and qualitative analysis method carries out this study. Mostly, the secondary data have been used for analysis. The discussion and personal interview with concerned employees of the industry are not used for qualitative analysis.

Research may be defined as the objectives and systematic methods of finding solution to a problem i.e. systematic collection, recording, analysis, interpretation and reporting of information about various facts of a phenomenon under study. In other word, research refers to the systematic method consisting of enunciating the problem, collecting factors of data, analyzing the facts critically and reaching conclusion based on them.

Hence, the research design adopted in this study is descriptive type on it is based on fact finding operation surveys.

3.2 Nature and Sources of Data

This study has been made mainly from the secondary data analysis as well as primary tools of data collection and analysis as per the research need to fulfillment of the main objective of research. The necessary data and information have been collected from different sources covering a period of six year 2006 to 2011. It excludes bank, finance company and other financial institutions from the sample. This study does not cover each of the Nepalese Trading and manufacturing enterprise because of the data problem. All data in this study are compiled from the financial statements and annual reports of the enterprises

Office of the Accountant brings out the official annual reports, which contain the profit and loss account, balance sheets of the trading and manufacturing company of Nepal. Similarly, the manufacturing and trading organizations are listed in stock exchange submit their annual financial report to the Securities Board of Nepal (SEBON). These organizations compile these data in their own format. The necessary data on capital structure and other related variables used in this study are collected mostly from these reports. The balance sheet as published in these reports, gives information debt and equity. Similarly, the profit and loss account gives data on trading sales and expenses. The annual report also gives the breakdown of these items.

Secondary data which are obtained through published annual reports of sample firms contain the annual report of the auditor general office (AGO) 2006 to 2011. Annual report of concerned limited and security exchange board of Nepal are the major sources for secondary data. All listed company is required to submit their corporate annual report within a specific period of time as prescribed by the security exchange act and regulation. Despite the legal provisions many listed companies fail to submit annual report to security board.

3.3 Selections of Enterprises

Only 5 non- financial companies are selected as sample. Much like in other capital structure research, banks and financial companies are excluded in the sample. These companies are generally guided by directives of central bank in designing there capital structure. The listed non-financial companies thus constitute the population. The random sampling technique is adopted in selecting the companies as sample. The period covered for the study is 2006 to 2011 but vary depending on the availability of data.

Table 3.1

Enterprises Selected for the Study

Ser. No	Name of the Company	Nature of Industry	Period Covered [Year]	Observations
1	Salt Trading Corporation Ltd	Trading	2006-2011	6
2	Bishal Bazar co. Ltd.	Trading	2006-2011	6
3	Nepal Khadya Udhyog Ltd.	Manufacturing	2006-2011	6
4	Gorakhakali Rubber Udhyog Ltd.	Manufacturing	2006-2011	6
5	Bottlers Nepal Ltd.	Manufacturing	2006-2011	6

3.4 Method of Analysis

The major tool employed for the analysis of this study is the ratio analysis that established the quantitative or numerical relationship between two variables for the financial statements. Beside this, the statistical tools have also been used. These tools are elaborated in detail in the following.

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

3.5 Hypotheses and Model

Studies embarking on analyzing the factors in relation to the amount of debt in the capital structure of the companies do not seem to have reached conclusive results. Their findings are either contradictory, or statistically insignificant. For

example, while the correlation of factor can be positive in one study it can be negative in another. Furthermore, what could be applied to developed countries might not be applicable to less developed nations. Relative to the subject matter of this study, the empirical literature suggests a number of factors that may influence the financial structure of companies. As argued by Titman and Wessels (1988) and Harris and Raviv (1991), the choice of the underlying explanatory variables is fraught with difficulty. This is why different researchers have considered different key variables in their respective studies. However, most of the published studies have considered company size, profitability, liquidity, growth opportunities, non-debt tax shields, and business risk are possible determinants of the capital structure choice.

Profitability

Due to the tax deductibility of interest payments, it is argued that highly profitable companies tend to have high levels of debt (Modigliani and Miller, 1963). However, Myers and Majluf (1984) argued that as a result of asymmetric information (pecking - See Biais and Casamatta (1999), Shin and Stulz (2000) and Yanagawa (2000) - order hypothesis), companies prefer internal sources of finance. In other words, higher profitability companies tend to have lower debt levels and higher retained earnings. Relative to this theory, Kester, 1986, Titman and Wessels (1988), and Michaeles et al. (1999) find leverage to be negatively related to the level of profitability. The hypothesis is thus formulated as: the level of (1) total leverage, (2) long-term leverage, and (3) short term leverage are negatively related to profitability.

Liquidity

In market-oriented economies managers tend to prefer internal liquidity. Indeed, when firms have close ties with their banks (bank-oriented) and hence information asymmetry could be reduced to its minimum level, managers' need for internal liquidity tends to be less important. In other words, a negative relationship between liquidity and leverage is expected in market-oriented

economies. Indeed this result is supported by the empirical findings of Ozkan (2001), Antoniou (2002) and others. The hypothesis is: the levels of (1) total leverage, (2) long-tem leverage, and (3) short term leverage are negatively related to liquidity.

Growth Opportunities

Myers (1977) argued that due to information asymmetries, companies with high leverage ratios might have the tendency to undertake activities contrary to the interests of debt- holders (under-invest in economically profitable projects). Therefore, it can be argued that companies with growth opportunities tend to have low leverage ratios. The empirical evidence regarding the relationship between leverage and growth opportunities is, at best, mixed. While Titman and Wessels (1988), Chung (1993) and Barclay et al. (1995) find a negative relationship, Kester (1986) does not find any significant relationship. Ross (1977) concludes that investors take larger levels of debt as a signal of higher quality and that growth opportunities and leverage are thus positively related. According to Modigliani and Miller (1958), as interest payments on debt are tax-deductible, firms with enough taxable income have an incentive to issue more debt. It must also be pointed out that higher corporate tax rates reduce firms' internal funds and increase their cost of capital. In other words, higher taxes might decrease the formation of fixed capital and demand for external funds (Kremp et al., 1999). Consistent with empirical studies (e.g., Titman and Wessels, 1988; Chung, 1993; and Barclay, Smith and Watts, 1995), the percentage change in total assets is used as an indicator of growth opportunities.

The agency theory predicts a negative relationship between growth and leverage. Due to the high degree of information asymmetry in Nepal and hence banks demand higher risk premiums (higher rates of interest) on their investment (loans), a strong negative relationship is expected between growth opportunities and leverage. Thus, the hypothesis is: the levels of (1) total

leverage, (2) long-tem leverage, and (3) short term leverage are negatively related to the level of growth opportunities.

Non-Debt Tax-Shields

The basic point about corporate tax is that the firm will exploit the tax deductibility of debt interest payments to reduce its tax bill. Therefore, firms that have other tax shields, such as depreciation deductions, have less need to exploit the debt tax shield. Indeed, if a firm in this position issues excessive debt, it may become "tax-exhausted" in the sense of having potential tax shields which it is unable to use. Ross (1985) explains that firms face a decline in the expected value of their interest tax savings as outstanding non-debt tax shields increase. There is a further effect that arises from the risk of bankruptcy. This is a result of the increased likelihood of bankruptcy occurring at higher debt levels. For low leverage levels, the marginal tax shield value is positive since it can be fully employed to reduce the company's overall tax liability. For higher leverage levels, the marginal advantage of debt is negative as a result of the increased probability that the potential tax shield from an extra quantity of leverage will be partially or totally lost through bankruptcy. These arguments would all suggest that there should exist a negative relationship between debt and non-debt tax shields. However, arguments also exist for a positive relationship between leverage and non-debt tax shields. Scott (1977) and Moore (1986) suggest that firms with substantial non-debt-tax shields invariably have considerable collateral assets which can be used to secure debt; and secured debt is less risky than that which is unsecured. Overall then, these arguments suggest that the expected effects of non-debt-tax-shields on the supply of debt by firms are not known a priori. Firms with lower investment related tax shields (holding before-tax earnings constant) will employ greater debt in their capital structures (DeAngelo and Masulis 1980).They argue that non-debt tax shields are substitutes for a debt related tax shield and therefore the relationship between non-debt tax shields and leverage should be negative. Kim and Sorensen (1986) declare that DEPR has a significantly negative

coefficient. This is consistent with the notion that depreciation is an effective tax shield, and thus offers the tax shield benefits of leverage. A negative relationship between non-debt tax shields and leverage is supported by Chaplinsky and Niehaus (1993), Wald (1999), Wiwattanakantang (1999), and Huang and Song (2002). On the other hand, Bradley et al. (1984) report a positive relationship. In view of the discussion just cited the depreciation divided by total assets is used in order to proxy for non-debt tax shields in this study. The hypothesis is: relationship between non-debt tax shields and (1) total leverage, (2) long-tem leverage, and (3) short term leverage should be negative.

Mean ($\overline{X}$)

The most of the popular and widely used measure representing the entire data by one value is what most laymen call an "average" and what the statisticians call the arithmetic mean its value is obtained by adding together all items and by dividing this total by the number of items. The mean value of ratios of study period all the enterprises have been calculated to compare their results.

Standard Deviation (S.D.)

The standard deviation measures the absolute dispersion of distribution. The greater the amount of dispersion the greater the standard deviation and the greater will be magnitude of deviation of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of series; a large standard deviation means just the opposite. Standard deviation is extremely useful in judging the representatives of the mean. In this study standard deviations of ratios of all the public enterprises has been calculated to analyze and compare the dispersion within and in between the series of ratios of the companies.

Coefficient of Correlation

Coefficient of correlation (r): it is the statistical tool that can be used to describe the degree to which one variable in linearly related to another. The

coefficient of correlation measures the degree of relationship between two sets of sigma. Among the variables methods of finds out coefficient of correlation, the correlation coefficient is applied in the study. The result of coefficient of correlation is always between +1or -1 when r = +1. It means then is perfect relationship between two variables and vice versa. When r=0. It means then is no relationship between two variables.

The correlation coefficient:

$$r = \frac{N\sum XY - \sum X.\sum Y}{\sqrt{N\sum X^2 - (\sum X)2}\sqrt{N\sum Y^2 - (\sum Y)2}}$$

Where,

N= Number of period observations

X, Y, =Financial variables

Regression Analysis

Regression analysis is statistical tool, which is used to determine the statistical relationship between two or more variables and to make estimation of one variable on the basis of the other variables. It is to understand here that 'a' constant indicates the mean or average effect on dependent variable of all the variables omitted from the model. Similarly, the regression coefficient 'b' of each independent variable indicates the marginal relationship between variables and value of dependent variable, holding constant the effect of all other independent variables in the regression model. In other words, the coefficient describes how changes in independent variables affect the value of dependent variables estimate. In this study regression coefficient is calculated for selected dependent and independent variables specified in the model, which is presented below.

$$Y_C = a + bx$$

Where,

$$b = \frac{N\sum XY - \sum X.\sum Y}{N\sum X^2 - (\sum X)2}$$

$a = y - bx$

N = Number of paired observations

3.6 Limitation of the Study

This study is conducted using limited samples due to financial constraints. The study focuses on the firms from non-financial industries. This study has not incorporated the information separately for listed and non listed companies, private and public companies, and industries wise analysis, firm size wise analysis, de-composition analysis of gearing measures in the study. Likewise the industry factors, macro environment factors, inter-country factor are not considered in the analysis. Other issues such as capital structure and cost of capital, capital structure and profitability, capital structure and firm value are not incorporated in the study.

This study aims to review capital structure of Nepalese enterprises of Nepal. But due to the time and constrain, the study does not cover the entire concern of financial management of the companies. The secondary and primary data utilized by this report are the annual financial statement of the last six year available from the companies. The research has following limitations.

1. The study is based on secondary data and primary data. So, the accuracy of research based on the accuracy of records kept by Nepalese enterprises.
2. The study has been confined to only five listed companies of NEPSE.
3. The research covers only six years period from 2006 to 2011. So it has a time constraint, experience and lack of recent information.
4. The unavailability of various references and resources with sophisticate computer programs are other main limitations.

The published data and oral explanations given by the shareholders and other staff of the company have been assumed true and correct.

CHAPTER: - FOUR

PRESENTATION AND ANALYSIS OF DATA

Capital structure plan refers to the composition of long term debt, preference share capital and equity share capital including reserve and surplus. In other words, capital structure is the composition of debt and equity that comprises a firm financing of its assets. Both debt and equity are used in most large corporations. Many theories are developed to explain about the capital structure of the firm. Some important theories of capital structure are MM approach, towards and optimal financing policy, trade off theory, pecking order theory and agency cost theory. All these theories are based upon the market value concept. These are developed in the developed economic condition.

Many studies have been conducted over the last three to four decades on the issue of capital structure. Some indicated that capital structure affects on cost of capital, while others did not indicate so. Those, who advocated that capital structure affects cost of capital are mainly by Barges (1963), Weston (1963), Modigliani and Miller (1966), and Sharma and Ray (1968) those who advocated that capital structure does not affect cost of capital are mainly by Modigliani and Miller (1958), Hamoda (1972) and Miller (1977).

4.1. Analysis on Secondary Data

There are many studies in the field of capital structure and cost of capital in the developed countries. Their applicability is yet to be verified in the context of under-developed country like Nepal. This study empirically analyzes the data taken from the two sectors; manufacturing and trading sectors. As mentioned on the third chapter the different models of statistic used for the data analysis purpose. Hence, in this section basically those data are analyzed which are obtained from the secondary sources.

4.1.1. Total Leverage

The second category of financial ratios is leverage ratios. The long term creditors would judge the soundness of a firm on the basis of the long term financial strength measured in term of its ability to pay the interest regularly as well as repay the installment of the principal on due dates or in one lump sum at the time of maturity. The long term solvency of a firm can be examined by using leverage or capital structure ratios. The leverage ratios may be defined as financial ratios which throw light on the long term solvency of a firm as reflected in its ability to assure the long term creditors with regard to (1) periodic payment of interest during the period of loan and (2) repayment of principal on maturity or in predetermined installment at due date. The total leverage ratio of the sample companies and its effects has been shown in table no. 4.1.

Table: 4.1

Ratio of total debt to total assets for the selected enterprises (%)

year / company	2006	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	103.1	115.4	120.1	121.1	160.9	178.6	133.2	26.99
BNL	44.7	85.3	82.2	104.3	126.4	15.4	76.38	18.81
NKUL	64.8	102.3	110.9	127.6	187.6	209.5	134.4	49.08
BBCL	67.3	60.8	42.9	66.9	109.5	70.2	69.6	19.98
GRUL	178.3	174.8	172.4	191.6	179.4	177.5	179	6.09
$\overline{X}$	92.4	107.7	105.7	122.3	152.8	130.2		
S.D.	46.85	38.19	42.85	40.56	30.19	74.36		

Where,

STCL= Salt Trading Corporation Limited

BNL= Bottlers Nepal Limited

NKUL= Nepal Khadya Udhyog Limited

BBCL= Bishal Bazar Company Limited

GRUL= Gorakhkali Rubber Udhyog Limited

Table 4.1 indicates that the total leverage ratio varies widely within the individual enterprises also. It varies from 103.1 percent to 178.6 percent for STCL, 15.4 percent to 104.3 percent for BNL, 68.4 percent to 209.5 percent for NKUL, 42.9 percent to109.5 percent for BBCL and 177.5 percent to 191.6 percent for GRUL. Thus the standard deviation in total leverage ratio is lowest for GRUL followed by BNL, BBCL, STCL and NKUL. The average ratio of total leverage computed across the years has slowly increased over a period of time. It increased from 92.4 percent in 2006 to 130.2 percent in 2011. Then the standard deviation in the total leverage computed across the years has fluctuated over a period of time. When the ratio of total leverage is compared over a period of time for individual enterprises, it may be observed that the ratio has increased in the majority of the selected enterprises in recent years.

4.1.2. Long Term Leverage

The long term debt i.e., liabilities that should be paid into the long term time horizon and its relative proportion into the value of firms assets is denoted by the long term leverage ratio. As the ratio indicates the mathematical relationship in between two variables; here, this long term leverage ratio shows the relationship of long term debt or liabilities of the firms in comparison with its total assets. The relationship between long term debt and total assets has a decisive impact on the financial structure of all five companies under study. The use of high amount of LTD in the total assets represents high degree of long term obligation of the firm. The funds collected from LTD should be utilized in the long term assets as they provide return on investment over a long period of time. The long term leverage ratio of the sample companies and its effects has been shown in table 4.2.

Table: 4.2

Ratio of LTD to TA for the selected enterprises (%)

Year / Company	2006	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	18.77	16.47	22.93	24.22	24.22	24.63	21.87	3.12
BNL	9.27	-	27.09	18.80	11.66	1.08	11.32	9.50
NKUL	68.40	102.3	110.99	127.59	187.57	209.52	134.3	49.08
BBCL	-	-	-	-	-	10.09	1.68	3.76
GRUL	94.10	92.91	88.04	92.72	88.59	83.73	90.02	3.60
$\overline{X}$	38.11	42.34	49.81	52.67	62.41	65.81		
S.D.	36.63	45.62	42.25	44.77	69.68	77.41		

Table 4.2 indicates that the long term leverage ratio varies widely within the individual enterprises also. It varies from 16.47 percent to 24.63 percent for STCL, 1.08 percent to 27.09 percent for BNL, 68.40 percent to 209.52 percent for NKUL, 10.09 percent for BBCL and 83.73 percent to 94.10 percent for GRUL. Thus the standard deviation in the long term leverage ratio is lowest for STCL followed by GRUL, BBCL, BNL and NKUL. The average long term leverage is largest for NKUL (134.39 percent) followed by GRUL (90.02 percent), STCL (21.87 percent), BNL (11.32 percent) and BBCL (1.68 percent).then the standard deviation is largest for NKUL (49.08 percent), followed by BNL (9.50 percent), BBCL (3.76 percent), GRUL (3.60 percent) and STCL (3.12 percent). The average ratio of long tern leverage computed across the years has slowly increased over a period of time. It increased from 38.11percent in 2006 to 65.81 percent in 2011. Then the standard deviation in the long term leverage computed across the years has slowly increased over a period of time. It increased from 36.63 percent in 2006 to 77.41 percent in 2011. When the ratio of long term leverage is compared over a period of time for individual enterprises, it may be observed that the ratio has increased in the majority of the selected enterprises in recent years.

4.1.3. Short Term Leverage

The relationship between creditors' funds and owners' assets can also be expressed in term of another leverage ratio. This is the short term debt to total assets ratio. Short term leverage of the firm comprises a part of current liabilities. The total assets consist of permanent capital plus current liabilities. While there is no doubt that current liabilities are short term and the ability of a firm to meet such obligations is reflected in the liquidity ratio, their amount fluctuates widely during a year and interest payments on them are not large, they should form part of the total outside liabilities to determine the ability of a firm to meet its long term obligations for a number of reasons. This ratio reflects the relative claims of creditors on owner's assets of the firm. The short term leverage ratio of the sample companies and its effects has been shown in table no. 4.3.

Table: 4.3

Ratio of STL to TA for the selected enterprises (%)

Year / Company	2006	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	64.50	78.90	75.81	74.05	101.92	103.80	83.16	14.61
BNL	35.47	85.21	55.11	85.51	114.78	143.19	86.56	35.60
NKUL	-	-	-	-	183.37	393.28	96.11	148.81
BBCL	32.12	28.61	13.99	44.07	79.40	44.83	40.50	20.24
GRUL	68.29	81.92	84.38	98.91	90.78	93.76	86.34	9.81
$\overline{X}$	40.08	54.94	45.86	60.51	114.05	155.77		
S.D.	24.83	34.45	33.42	35.26	36.59	122.82		

Table 4.3 indicates that the short term leverage ratio varies widely within the individual enterprises also. It varies from 64.50 percent to 103.80 percent for STCL, 35.47 percent to 143.19 percent for BNL, 183.37 percent to 393.28 percent for NKUL, 13.99 percent to 79.40 percent for BBCL and 68.29 percent to 98.91 percent for GRUL. Thus the standard deviation in the short term

leverage ratio is lowest for GRUL followed by STCL, BBCL, BNL, and NKUL. The average short term leverage is largest for NKUL (96.11 percent), followed by BNL (86.56 percent), GRUL (86.34 percent), STCL (83.16 percent) and BBCL (40.50 percent). Then the standard deviation is largest for NKUL (148.81 percent), followed by BNL (35.60 percent), BBCL (20.24 percent), STCL (14.61 percent) and GRUL (9.85 percent). The average ratio of short term leverage computed across the years has slowly increased over a period of time. It increased from 40.08 percent in 2006 to 155.77 percent in 2011. Then the standard deviation of short term leverage computed across the years has slowly increased over a period of time. It increased from 24.83 percent in 2006 to 122.82 percent in 2011. When the ratio of short term leverage is compared over a period of time for individual enterprise, it may be observed that the ratio has increased in the majority of the selected enterprises in recent years.

4.1.4. Liquidity Ratio

Liquidity of the firm may also have an impact on the capital structure decision, contrary to the evidences of positive relationship between fixed assets and leverage, the relationship between liquidity and leverage may be expected to be negatively related. The higher liquidity of firm may imply that companies with higher level of unutilized and un-invested fund may avoid use of debt in their capital. In addition, not only they avoid use of debt; rather tend to retire the existing debt and other short term obligation with the unutilized funds. Beside, funds in the form of excess liquidity may be used by the firms to finance new projects. This avoids the debt borrowing for new projects. All these actions due to higher liquidity in the firm result into firm's capital structure to be equity dominated. Empirical studies have also shown the negative relation of liquidity with debt level (Lowe et el., 1994; Shenoy & Koch, 1996; and Jordan et al., 1998). This study hypothesizes the negative relationship between liquidity and leverage. The liquidity for this purpose has been measured by dividing the

current assets by current liabilities. The liquidity ratio of the sample companies and its effects has been shown in table no. 4.4.

Table: 4.4

Ratio of current assets to current liabilities for the selected enterprises (%)

Year / Company	2006	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	107.5	102.7	107.2	-	106.2	106.8	88.4	39.6
BNL	158.3	81.5	95.8	89.9	86.6	80.9	98.8	27.1
NKUL	85.8	89.3	86.7	89.9	89.7	82.5	87.3	2.7
BBCL	53.8	70.9	56.8	153.02	112.6	183.8	105.2	49.5
GRUL	65.9	51.4	50.9	44.2	58.4	45.9	52.8	7.4
$\overline{X}$	94.3	79.2	79.5	75.4	90.7	99.9		
S.D.	36.8	17.3	21.9	51.2	18.9	46.2		

Table 4.4 indicates that the liquidity ratio varies widely within the individual enterprises also. It varies from 102.7 percent to 107.5 percent for STCL, 81.5 percent to 158.3 percent for BNL, 82.5 percent to 89.9 percent for NKUL, 53.8 percent to 183.8 percent for BBCL and 44.2 percent to 65.9 percent for GRUL. Thus the standard deviation in the liquidity ratio is lowest for NKUL followed by GRUL, BNL, STCL and BBCL. The average liquidity ratio largest for BBCL (105.2 percent) followed by BNL (98.8 percent), STCL (88.4 percent), NKUL (87.3 percent) and GRUL (52.8 percent). Then the standard deviation is largest for BBCL (49.5 percent) followed by STCL (39.6 percent), BNL (27.1 percent), GRUL (7.4 percent) and NKUL (2.7 percent). The average ratio of liquidity before 2009 has slowly decreased then after increased over a period of time. Then the standard deviation of liquidity ratio computed across the years has fluctuated over a period of time. When the ratio of liquidity is compared over a period of time for individual enterprises, it may be observed that the ratio has increased in the majority of the selected enterprises in recent years.

4.1.5. Non-Debt Tax-Shield

The basic argument of corporate tax theory of capital structure is that the firm will exploit the tax deductibility of the debt interest payments to reduce its tax bills. If this is the case, then the firms that have other non-interest tax shields items, such as depreciation, tax credit, pension fund, have less need to exploit the debt tax shield. In fact, if a firm in such position issues excessive debt, it may become "tax-exhausted" in the sense of having potential tax shields which it is unable to use. DeAngelo and Masulis (1980) postulate that the marginal corporate tax savings from an additional unit of debt declines as the non-debt tax shields increase. This is a occurring at higher debt levels. These arguments suggest that there should be negative relationship between debt and non-debt tax shields. To test the hypothesized relationship the non-debt tax shield has been measured by taking the total annual depreciation charge to fixed asset as used by Titman and Wessel (1988) as proxy for non-debt tax shield. . The non debt tax shield ratio of the sample companies and its effects has been shown in table no. 4.5.

Table: 4.5

Ratio of depreciation to total assets for the selected enterprises (%)

Year / Company	2006	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	0.64	2.96	5.12	9.55	9.55	11.79	6.60	3.99
BNL	8.26	8.91	8.86	9.57	10.46	10.85	9.49	0.92
NKUL	4.78	5.65	5.43	5.33	7.38	7.39	5.99	1.02
BBCL	4.40	4.60	3.67	5.43	7.67	3.94	4.95	1.34
GRUL	5.71	4.81	4.59	4.15	3.28	5.20	4.62	0.77
$\overline{X}$	4.76	5.39	5.53	6.81	7.67	7.83		
S.D.	2.46	1.97	1.77	2.29	2.48	3.07		

Table 4.5 indicates that the non debt tax shield ratio varies widely within the individual enterprises also. It varies from 0.64 percent to11.79 percent for STCL, 8.26 percent to 10.85 percent for BNL, 4.78 percent to 7.39 percent for

NKUL, 3.67 percent to 7.67 percent for BBCL and 3.28 percent to 5.71 percent for GRUL. Thus the standard deviation in the non debt tax shield is lowest for GRUL followed by BNL, NKUL, BBCL and STCL. The average non debt tax shield is largest for BNL (9.49 percent) followed by STCL (6.60 percent), NKUL (5.99 percent), BBCL (4.95 percent) and GRUL (4.62 percent). Then the standard deviation is largest for STCL (3.99 percent) followed by BBCL (1.34 percent), NKUL (1.02 percent), BNL (0.92 percent) and GRUL (0.77 percent). The ratio of non debt tax shield computed across the years has slowly increased over a period of time. It increased from 4.76 percent in 2006 to 7.83 percent in 2011. Then the standard deviation of non debt tax shield computed across the years has before 2009 decreased than after slowly increased period of time. When the ratio of non debt tax shield is compared over a period of time for individual enterprises, it may be observed that the ratio has increased in the majority of the selected enterprises in recent years.

4.1.6. Profitability Ratio

Profitability of the firm has been another independent variable extensively examined in the empirical studies. It is commonly believed that higher the profitability, higher would be the proportion of equity than debt in capital structure of a firm. This is because there is strong tendency for reserves to be large in case of profitable firm. So, it seems that firms with higher profit will be able to finance projects with internally generate funds (retained earnings) rather than depending on the debt financing. This may not be the case for non-profitable firms, which may have to dependent on the external financing. According to the pecking order theory (Myers, 1984), the profitability is expected to be negatively related to capital structure level since the internally generated funds serves as the sources of capital for profitable firms. The profitability ratio of the sample companies and its effects has been shown in table no. 4.6.

Table: 4.6

Ratio of EBIT to B.V. of total assets for the selected enterprises (%)

Year / Company	2006	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	9.91	10.86	3.95	11.03	13.85	21.08	11.78	5.12
BNL	4.53	-2.99	7.59	9.19	40.52	44.79	17.27	18.39
NKUL	-15.5	44.26	20.27	16.58	40.68	28.29	22.43	19.68
BBCL	71.99	62.24	44.39	47.22	80.44	50.58	59.48	13.29
GRUL	0.84	-2.12	-3.37	-6.30	0.70	6.23	-0.67	3.93
$\overline{X}$	14.35	22.45	14.57	15.54	35.24	30.19		
S.D.	30.05	26.25	16.76	15.56	27.39	16.06		

Table 4.6 indicates that the profitability ratio varies widely within the individual enterprises also. It varies from 3.95 percent to 21.08 percent for STCL, -2.99 percent to 44.79 percent for BNL, -15.53 percent to 44.26 percent for NKUL, 44.39 percent to 80.44 percent for BBCL and -6.30 percent to 6.23 percent for GRUL. Thus the standard deviation in the profitability ratio is lowest for GRUL followed by STCL, BBCL, BNL and NKUL. The average profitability is largest for BBCL (59.48 percent) followed by NKUL (22.43 percent), BNL (17.27 percent), STCL (11.78 percent) and GRUL (-0.67 percent). Then the standard deviation is largest for NKUL (19.68 percent) followed by BNL (18.39 percent), BBCL (13.29 percent), STCL (5.12 percent) and GRUL (3.93 percent). The average ratio of profitability computed across the years has slowly increased over a period of time. It increased from 14.35 percent in 2006 to 30.19 percent in 2011. Then the standard deviation of profitability computed across the years has slowly decreased over a period of time. It decreased from 30.05 percent in 2006 to 16.06 percent in 2011. When the ratio of profitability is compared over a period of time for individual enterprise, it may be observed that the ratio has fluctuated in the majority of the selected enterprises in recent years.

4.1.7. Growth Opportunities

Growth of the firm may also have influence on the capital structure level of firm many studies have examined growth variables as one of the important independent variable of capital structure. The growing firms often need to expand their fixed assets. The higher credit standing coupled with the increasing demand of output tempts growing firms to practice trading on equity to a much greater extent than is possible for slow growing firms. Therefore, fast growing companies rely more heavily on external capital, especially on the use of debt. According to the pecking order theory, the growing firms may not have adequate retained earnings and go for debt as against to equity. The trade off theory suggested positive relation because high growing firms try to maintain the target debt ratio as the retained earnings increases for these firms. However, this study measures growth of the firms as the percentage change in total assets from the last year assets figure. The opportunity growth ratio of the sample companies and its effects has been shown in table no. 4.7.

Table: 4.7

Ratio of percentage change in total assets for the selected enterprises (%)

Year / Company	2007	2008	2009	2010	2011	$\overline{X}$	S.D.
STCL	-4.08	-2.07	-1.57	0	-2.18	-1.98	1.31
BNL	-12.9	9.25	-3.97	-3.27	7.79	-0.63	8.23
NKUL	-20.8	-4.78	-3.89	-11.9	-0.89	-8.44	7.14
BBCL	17.61	45.26	2.95	-25.2	84.29	24.99	37.37
GRUL	6.51	7.23	-3.92	17.87	7.29	6.99	6.89
$\overline{X}$	-2.74	10.98	-2.08	-4.49	19.26		
S.D.	13.65	17.95	2.68	14.17	32.77		

Table 4.7 indicates that the growth opportunity varies widely within the individual enterprises also. It varies from -4.08 percent to zero percent for STCL, -12.96 percent to 9.25 percent for BNL, -20.77 percent to -0.89 percent

for NKUL, -25.16 percent to 84.29 percent for BBCL and -3.92 percent to 17.87 percent for GRUL. Thus the standard deviation in the growth opportunities is lowest for STCL followed by GRUL, NKUL, BNL and BBCL. The average growth opportunities is largest for BBCL (24.99 percent) followed by GRUL (6.99 percent), BNL (-0.63 percent), STCL (-1.98 percent) and NKUL (-8.44 percent). Then the standard deviation is largest for BBCL (37.37 percent) followed by BNL (8.23 percent), NKUL (7.14 percent), GRUL (6.89 percent) and STCL (1.31 percent). The average ratio of growth opportunities computed across the years has fluctuated over a period of time. Then the standard deviation on the growth opportunities computed across the years has slowly increased over a period of time. It increased from 13.65 percent in 2007 to 32.77 percent in 2011. When the ratio of growth opportunities compared over a period of time for individual enterprises, it may be observed that the ratio has decreased in the majority of the selected enterprises in recent years.

Where,

TL= total leverage= total debt/ total assets

LTL=long term leverage= long term debt/ total assets

STL=short term leverage= short term debt/ total assets

Liquidity=current assets/ current liabilities

Growth opportunities= % change in total assets

Non debt tax shield= depreciation/ total assets

Profitability= EBIT/ BV of total assets

Correlation Coefficients

The relationship between the selected dependent and independent variables has been shown in table 4.8 with the help of correlation coefficients. Correlation coefficient is that statistical tool which helps to determine the nature and direction of the relationship among variables. Before reporting the results of model estimation, it is useful to determine the degree of correlation between the variables as it would facilitate the analysis of regression also. However, the precaution is needed in the analysis of the correlation as the pearsons

correlation assumes the variables to be linearly related. Higher the non-linear relation, higher would be the chances of misinterpretation of the association between variables. Thus no cause and effect relationship may be indicated by higher coefficient of correlation. The correlation coefficient of the sample companies and its effects has been presented in table 4.8.

Table: 4.8

Correlation coefficient of sample companies

Variables	TL	LTL	STL	LIQUI	GROW	NDTS	PROFY
TL	1						
LTL	0.688**	1					
STL	0.517**	0.472**	1				
LIQUI	-0.354	-0.263	-0.097	1			
GROW	-0.233	-0.197	-0.131	0.223	1		
NDTS	-0.013	-0.140	0.304	0.031	-0.318	1	
PROFY	-0.384*	-0.250	0.001	0.238	0.121	0.073	1

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

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

Dependent variables:

TL= Total Leverage = Total debt / Total assets

LTL= Long Term Leverage = Long Term Debt / Total assets

STL= Short Term Leverage = Short Term Debt / Total assets

Independent variables:

LIQUI= Liquidity = Current Assets / Current Liabilities

GROW= Growth Opportunities = Percentage change in Total Assets

NDTS= Non-Debt Tax-Shields= Depreciation / Total Assets

PROFY= Profitability= EBIT / B.V. of Total Assets

The correlation analysis is used for analyzing relationship among different variables. Total leverage has negative correlation with liquidity, growth, NDTS

and profitability. Only the three variables among four explanatory variables show insignificant correlation with the dependent variable of total leverage. It also indicates negative correlation with profitability. These results have been found that the profitability is major determinants of capital structure among others. Similarly, the long term leverage has no significant correlation with these explanatory variables. It finds the negative correlation with all variables as selected. The short term leverage is the positively correlated with the non-debt tax-shield and profitability and negatively correlated with the variables of liquidity and growth opportunities.

Determinants of Capital Structure in Nepalese Enterprises

Table 4.9 is concerned with the regression analysis of all the selected companies (trading and manufacturing). It also presents the regression results of various regression equations of leverage on explanatory variables. In addition, t-values of each of regression coefficients are also provided to have the information regarding the significance of the coefficients. Table 4.9 contains the regression results for three manufacturing and two trading companies. The regression analysis has been made the period of 2006 to 2011. Hence, this table shows the regression relationship of all five selected companies on the basis of variables liquidity, growth opportunities, non-debt tax-shield and profitability to analyze leverage ratios i.e. total leverage, long term leverage and short term leverage. The regression result of the sample companies and its effects has been presented in table 4.9.

Table: 4.9

Regression result on selected enterprises

dependent variables / independent variables	Model-1 (TL)	Model-2 (LTL)	Model-3 (STL)
(constant)	151.341	92.168	44.358
	(5.692)	(2.935)	(0.365)
Liquidity	-0.273	-0.182	-0.210
	(-1.243)	(-0.703)	(-0.524)
Growth	-0.384	-0.548	-0.046
	(-0.919)	(-1.113)	(-0.060)
NDTS	-3.783	-7.420	8.236
	(-1.212)	(-2.012)	(1.498)
Profitability	-0.639	-0.402	0.018
	(-2.026)	(-1.079)	(0.030)
R-square	0.498	0.417	0.104
F	4.767	3.428	0.722
R	0.706	0.645	0.322
S.E.	40.7206	48.0999	74.8434

The relationship between the level of debt and four explanatory variables representing liquidity, growth opportunities, non-debt tax-shield and profitability has been examined using ordinary least square regressions. Baven and Danbolt (2002) point out that capital structure studies examining the determinants of leverage based only on total debt may disguise the significant difference between long term debt and short term debt. Therefore, in line with Baven and Donbolt (2002), this study decomposes debt into short term debt and long term debt and the leverage considered are: short term debt to total assets ratio, long term debt to total assets ratio and total debt to total assets ratio.

Table 4.9 presents the regression analysis of data from Nepalese enterprises where the four explanatory variables are regressed on three different leverages separately. The regression coefficients of liquidity with respect to total

leverage, long term leverage and short term leverage are found to be negative in Nepalese enterprises. This indicates the bigger firms in using more debt. The liquidity variables has a negative sign in all companies (-0.273, -0.183, -0.210 for the total leverage, long term leverage and short term leverage respectively).

The results of Titman and Wessels (1988), Booth et al., (2001) and Baven and Danbolt (2002) have shown that there exists positive relationship between firm size and leverage when the leverage is measured as total debt to total assets. Liquidity position of a firm as a determinant of capital structure decision may have mixed impact. Theoretically, firms with higher liquidity may be in a position to pay the short term debt when they fall due and supports to use relatively higher debt in their capital structure. This would imply a positive relationship between leverage and liquidity position of the firms. On the other hand, firms with high liquidity position may use these assets to support the investment that imply less use of debt and it is expected to have negative correlation between leverage and liquidity position of the firm.

The growth opportunities variables have negative signs in all selected companies (-0.384, -0.548, -0.046 for the total leverage, long term leverage and short term leverage respectively). The growth opportunities variable is not significant in all three types of leverage though the sign of the coefficient is as expected. This result indicates that the growth opportunity is irrelevant in the use of debt by Nepalese sample companies. Hovakimian et al., (2001) suggests that stock price increases are usually associated with improved growth opportunities, leading to a lower debt ratio. The cost associated with agency relationship is likely to be higher firms in growing industries. As a result, the expected future growth should be negatively related to long term debt levels. But, the results show that the long term debt ratio of Nepalese enterprises is positively related to growth of the firms which is consistent with the previous studies.

The coefficient of non-debt tax-shields is found to be positive with the short term leverage but negative with total leverage and long term leverage. This result indicates that increase in non-debt tax-shield will reduce the use of long

term debt in Nepalese enterprises. This result is similar to that of the Tychon (1997) for the Belgian case. DeAngelo and Masulis (1980) have presented a capital structure model where non-debt tax-shields serve as a substitute for the interest expenses that are deductible in the calculation of corporate tax. This suggests that tax deductions for depreciation are substitutes for the tax benefits of debt financing. As a result, firms with large non-debt tax-shield (depreciation) relative to their expected cash flows use less debt in their capital structure.

The profitability variable has a negative sign in selected companies (-0.639, -0.402 for the total leverage and long term leverage respectively) and positive sign with short term leverage (i.e.0.018). According to pecking order theory, firms prefer using internal sources of financing first, then debt and finally external equity obtained by stock issues. All things being equal, the more profitable the firms are, the more internal financing the firm will have, and therefore, a negative relationship between leverage and profitability is expected. This relationship is one of the most systematic findings of the empirical literature (Haris and Raviv, 1991; Booth et al., 2001).

4.2. Analysis on Primary Data

The analysis of primary data and presents the results of the survey on capital structure management practice in Nepal. The study is based on primary data analysis, which mainly deals with qualitative aspect of capital structure management, and has been accomplished by distributing the structured questionnaire to 50 respondents of large Nepalese enterprises. The term respondent includes those persons working in finance department of different enterprises at different capacities. This study deals with the comparison of views expressed by respondents with respect to major issues of capital structure management.

For the purpose of this study, the questionnaire consisting of 12 questions have been distributed to the respondents involved in different organizations at different capacities. The questionnaire includes the questions relating to capital

structure management of an organization. The major objective of this study is to examine the views of respondents on various aspects of capital structure management practices in Nepal and to examine whether there exist significant differences in the views of respondents with respect to the issues relating to the capital structure management in the Nepalese organization.

The respondents of this study generally relates to the following nature of business. They have held the different posts and jobs in their organizations are mentioned below. The respondent's positions in the enterprises are described on table 4.10.

Table 4.10

Respondents' positions in the enterprises

This table presents the profile respondents from the various Nepalese organizations, management institutions and collages of various Universities of Nepal.

Position	Number	percentage
General manager	4	8
Financial manager	6	12
Line manager	10	20
Academicians	20	40
Others	10	20
Total	50	100

Table 4.10 provides the information regarding the positions held by the respondents in their concerned enterprises. Out of total respondents, 4 respondents (8 percent) are from General Manager, 6 respondents (12 percent) are from Financial Managers, 10 respondents (20 percent) are from Line Managers, 20 respondents (40 percent) are from academicians and 10 respondents (20 percent) are from others. The others include consultants and chartered accountants conducting independent audits in their capacities. The respondent's serious interest in this study is evident from the key positions held by them. In the case of measurement of line of business the table 4.11 has been presented below.

Table 4.11

Line of business

This table shows the line of business from where the data has been collected for this study.

Line of business	Number	percentage
Manufacturing	20	40
Banking	6	12
Trading	14	28
Hotels	4	8
Others	6	12
Total	50	100

Table 4.11 provides the respondents selected for this study are from various line of business. Out of the total respondents, 20 respondents (40 percent) are from manufacturing sector, 6 respondents (12 percent) are from banking sector, 14 respondents (28 percent) are from trading sector, 4 respondents (8 percent) are from hotel and tour and 6 respondents (12 percent) are from others. In the case of measurement of relationship between cost of capital and debt the table 4.12 has been presented below.

Table 4.12

Relationship between cost of capital and debt

This table shows the response from the respondents to the question "is there any relationship between use of debt capital and overall cost of capital of a firm?"

Response	Number	Percentage
Yes	42	84
No	8	16
Total	50	100

With respect to relationship between debt capital and cost of capital, there exists a slightly different view of respondents. Out of the total respondents, 84 percent have accepted that there is relationship between cost of capital and debt capital and 16 percent do not accept the relationship between cost of capital

and debt capital. In the case of measurement of systematic risk-beta the table 4.13 has been presented below.

Table 4.13

Systematic Risk-Beta

This table shows the response to the question "does the systematic risk, as typically measured by what is called beta-coefficient, ever affect your capital structure policy?"

Responses	Number	Percentage
Yes	37	74
No	10	20
Do not know	3	6
Total	50	100

The systematic risk of the firm depends on the types of the assets it has employed, which is measured by its beta coefficient. There is unique relationship between systematic risk and the rate of return that the market requires on securities affects the capital structure of the firm. But 20 percent do not agree on this and 6 percent of the respondents are unknown about it at all. In the case of measurement of optimal debt capital ratio the table 4.14 has been presented below.

Table 4.14

Optimal debt capital ratio

This table shows the response to the question "what do you think about the optimal debt capital in a firm?"

Percentage of debt ratio	Number	Percentage
Less than 20 percent of total assets	0	0
20 percent to 40 percent of the total assets	22	44
40 percent to 60 percent of the total assets	28	56
Above 60 percent of total assets	0	0
Total	50	100

With respect to optimal debt ratio to be followed by the firm the respondents are asked what should be the ratio of the firm. In this regards the respondents are asked, "What do you think about the optimal debt capital in a firm?" from

the survey it reveals that 56 percent of the respondents are of opinion that the optimal debt ratio of the firm should be 40 to 60 percent of the total assets. The rest 44 percent of the respondents are of opinion that the debt ratio of the firm should be 20 to 40 percent of the total assets. There is no even a single respondent who is of opinion that the debt ratio of the firm should be less than 20 percent or above 60 percent. The results indicate that the firms must use the debt capital but not in excessively. In the case of measurement of measurement of financial leverage the table 4.15 has been presented below.

Table 4.15

Measurement of financial leverage

This table shows the responses to the question "how do you measure the degree of financial leverage?"

Measurement of degree of leverage	Number	Percentage
Total liabilities divided by total assets	3	6
Long term debt divided by total assets	18	36
Long term debt divided by total equity	20	40
Long term debt divided by LTD plus equity	9	18
Total	50	100

Financial leverage, the proportion of debt capital in the total capital of the firms, is measured in different way. To know how the leverage factors are measured in the Nepalese firms, the respondents are asked the question "how do you measure the degree of financial leverage?" and the respondents are given the options of four different mostly used measures of leverage namely, total liabilities divided by total assets, long term debt divided by total assets, long term debt divided by total equity and long term debt divided by sum of long term debt and equity. Even within the practitioners there exist different views regarding the measurement of leverage in their capital structure. The study has indicated that 40 percent respondents have been using the ratio of long term debt to total equity, as a measure of leverage, 36 percent respondents have been using the ratio of long term debt to total assets as a measure of

leverage, 18 percent respondents have been using the long term debt to ling term debt plus equity as a measure of leverage and 6 percent respondents have been using the ratio of total liabilities total assets as a measure of leverage. In the case of measurement of practice of optimal capital structure the table 4.16 has been presented below.

Table 4.16

Practice of optimal capital structure

This table shows the response to the question "do you have practice of determining the optimal capital structure in your firm?"

Response	Number	Percentage
Yes	35	70
No	15	30
Total	50	100

With respect to practice of optimal capital structure management in the Nepalese enterprises, the practitioners are asked, "do you have practice of determining the optimal capital structure in your firm?" the response given by them is presented in table 4.16. Out of the total respondents, 70 percent respondents said 'Yes' and rest 30 percent respondents said 'No'. It seems that all the Nepalese firms have no practice of capital structure management. In the case of measurement of action towards optimal capital structure the table 4.11 has been presented below.

Table 4.17

Action towards optimal capital structure

This table shows the response to the question "given an attractive new growth opportunity that could not be taken without departing from your target capital structure, what action you suggest to your firm most likely to take?"

Response	Number	Percentage
To far go the growth opportunity	0	0
To deviate from the target leverage	32	64
To cut the dividend	14	28
To sell off the other assets	4	8
Total	50	100

Table 4.17 relates to the response on action towards the optimal capital structure when the firms need additional capital. In this respect the respondents are asked, "Given an attractive new growth opportunity that could not be taken without departing from your target capital structure, what action you suggest to your firm most likely to take?" in such situation the option expressed by respondents are found to be different. 64 percent of the respondents are of opinion that the firm should deviate from the target capital structure if required. 28 percent suggest cutting the dividend and the rest 8 percent suggest to sell off the other assets. No one suggest forgoing the opportunities. In the case of measurement of effects of capital structure on the market price the table 4.18 has been presented below.

Table 4.18

Effects of capital structure on the market price

This table shows the response to the question, "do you think that capital structure affects the market price of share?"

Response	Number	Percentage
Yes	35	70
No	10	20
Do not know	5	10
Total	50	100

The views of respondent about the effects of capital structure to the market price has been analyzed for this, the question "do you think that capital structure affects the market price of share?" has been asked to them. As their response to this question by the respondents 70 percent of them are viewed as 'yes' option which means they opinioned that capital structure affects the market price of the company. And, due the changes on capital structure market price of related company may fluctuate on the other side. 20 percent among 100 and 10 among 100 are viewed there is no any relation and do not aware about it. In the case of measurement of tax rate on corporate profit the table 4.19 has been presented below.

Table 4.19

Tax rate on corporate profit

This table shows the response to the question "if these tax rate on corporate profit is increased which the following action would you undertake"

Response	Number	Percentage
Increase the debt level	12	24
Decrease the debt level	27	54
Do not change in debt level	11	22
Total	50	100

How the tax rate on corporate profit influences the decision taken by the companies regarding using of debt to their capital structure has been analyzed from the views expressed by the selected respondents which has been presented in to the table 4.19. According to this table majority of the respondent viewed as if the increment in tax rate on corporate profit is made then it affects to the use of debt level and companies are taken the decision of decreasing debt level. Almost 54 percent of respondents are viewed as the increasing rate of tax to the corporate profit reduces the use of debt capital. Against them only 24 percent are viewed that increasing tax rate on corporate profit also increasing the use of debt level. Other remaining respondents are taken the decision of being indifference about the use of debt. In the case of measurement of firm target debt to total assets ratio the table 4.20 has been presented below.

Table 4.20

Firm target debt to total assets ratio

This table shows the response to the question "please indicate whether your firm has target optimal debt to total assets ratio?"

Response	Number	Percentage
Target	28	56
Actual	14	28
Not yet determined	8	16
Total	50	100

The above table 4.20 shows the options of the selected respondents about target debt to total assets ratio. To observe views of them, the question "please indicate whether your firm has target optimal debt to total assets ratio?" has been asked. For answering this question options are actual, target, and yet not determined given. Among these all of selected respondents 56 percent are viewed as they have set optimal debt structure on target level and 28 percent are applying into the actual practices. Remaining 16 percent are said that they are still not set the optimal debt structure. So, this figure indicates that only the few companies are having the practice of optimal debt to total assets although they have using debt capital. In the case of measurement of importance of using debt capital the table 4.21 has been presented below.

Table 4.21

Importance of using debt capital

This table shows the response to the question "in your opinion, which of the following purposes is most important of using debt capital?"

Response	To reduce tax liability		To magnify return to shareholders		To reduce agency cost		To ownership control unchanged	
	Number	%	Number	%	Number	%	Number	%
Less important	7	14	8	16	18	36	12	24
Important	24	24	11	22	14	28	10	20
Mod. important	11	22	9	18	10	20	8	16
Most important	20	40	22	44	8	16	20	40
Total	50	100	50	100	50	100	50	100

The table 4.21 has been trying to find the objectives of using debt capital to capital structure of Nepalese enterprises. For this purpose the question, "in your opinion, which of the following purposes are most important of using debt capital?" has been asked and selected options of the using debt is rank them into priority basis of objectives. As the views are shown into the table 4.21, the reasons behind the using of debt capital have been analyzed. Those reasons are

viewed more important behind the use of debt capital to the company's capital structure are taken as the major objectives of using debt capital to the firm. There four reasons are given to rank as the most important, moderate important, important and less important. As the respondents gives priority to the options of to reduce tax liability, to magnify return to shareholders and to maintain ownership control unchanged are taken as highly important for the purpose to obtain which Nepalese enterprises are using debt capital although they are using it to reduce agency cost and to achieve other secondary objectives too.

4.3 Concluding Remarks

This chapter has been entirely devoted to analyze patterns on capital structure management of Nepalese enterprises. The various determinants of capital structure have been identified from the review of various capital structure theories and relevant literature. In an effort to study the capital structure in Nepalese context, the study examine empirical variables namely as growth opportunities as measured by change in total assets, profitability as measured by ROA, non-debt tax-shield as measured by proportion of depreciation amount scaled by total asset and liquidity of the firm as measured by current assets to current liabilities as explanatory variables of capital structure measures namely the total leverage, long term leverage and short term leverage. Analysis is carried out by using correlation coefficient and regression analysis across the different sub-samples created on the basis of trading and manufacturing company and the portfolios formed on the basis of size and profitability of firm. This analysis provided many insights into the capital structure pattern and its determinants of Nepalese enterprises. Results have been found to be largely assorted with respect to cross section of industry groups and portfolios and various model estimated. Different explanatory variables examined are found to exert impact on the various capital structure measures, viz. total debt, long term debt and short term debt, in a different

manner. The empirical results on pattern and determinants of capital structure provide the mix evidence as against the priori hypothesis.

The least profitable firms are found to be using more debt of all kinds. As the portfolio increased, i.e. more profitable, the leverage measures found to decline except the slight increase in short term debt in most profitable portfolio. The difference between the long term and total debt has been large in all case also compared to other countries. The relationship and explanatory relation of independent variables with leverage are found to vary greatly across models estimated, industry groups and portfolios.

In this chapter to analyze the capital structure management of Nepalese enterprises, seven variables are identified and their analyses have been done. They are total leverage, long term leverage, short term leverage, profitability, non-debt tax-shield, liquidity, and growth opportunities. The mean and standard deviation of all these variables are calculated to measure the year wise as well as company wise average ratio and their deviation or risk. Hence, the year wise analysis has been made to draw the effects of these seven variables in case of all the Nepalese enterprises as a whole on the capital structure management. Similarly, the company wise calculation/ data present the individual analysis of all these seven variables and their effects to capital structure management. Among these seven variables total leverage, long term leverage and short term leverage are dependent and remaining all the four variables, liquidity, non-debt tax-shield, profitability, and growth opportunities are independent in the nature. The correlation and regression analysis also have been made to find out their relationship as well as dependency to each other.

The analysis of the capital structure pattern is solely based on the historical data, which may not offer the full fledged insights as to what other factors out of sight may describe the corporate capital structure decision. Only the few traditionally and empirically tested of capital structure management may not give the full depiction of capital structure. Many other factors, which are difficult to empirically measure, may have influence on corporate capital structure decision. The way such variables are anticipated to influence the

capital structure may also substantially differ from firm to firm. Moreover, the firm's decisions to financing may be influenced by the executive's perception, knowledge and behavioral characteristics of the firm leading to differences in the capital structure composition, resort to types of financing and many other issues with in an industry. Thus, to gain more insights into different aspects of capital structure issues and factors affecting financing, including the debt factors, this study also carried out a study of respondents of the various strata of listed companies of Nepal.

CHAPTER: - FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The term of capital structure means the financial planning according to which the assets of the company are furnished. The term capital structure means the proportion of different types of securities issued by a firm where the firm must should have to make pertinent capital structure decision in identifying exactly how much capital is needed to run their operations smoothly. The capital, which can be collected from the owners of the organization, is called equity capital. It provides ownership of the firm to its shareholder, who will get a return as per the profitability capacity of the company when they made capital investment. The major source of borrowing fund of capital is debt. It also appears from theories of capital structure that the optimal use of debt and equity result into reduction in overall cost of capital that maximizes the value of firm because of gain and cost of leverage.

Modigliani and Miller propositions were used as the focal point of carrying out of empirical analysis. The M-M proposition I is that the capital structure does not affect the cost of capital to the firm and proposition II describes the behaviors' of earning yield with financial risk and states that the earning yield required by the investors is an increasing linear function of leverage. In connection with their propositions they made some assumptions regarding investor's attitude towards financial risk arising from the use of debt in capital structure of the firm. On the other hand, the traditional view is that the cost of capital to the firm is affected by its capital structure. In their study , they conclude by considering the corporate tax that the capital structure of the levered company excess only by the present value of tax shield than the capital structure of unlevered firm.

The major objective of the study is to analyze the capital structure in Nepalese enterprises of Nepal. The following are the specific objectives are: to examine the size and structure of capital structure ratios on time, to analyze the structure

of key financial ratios in relation to capital structure., to examine the relationship of debt ratios with non-debt tax-shield, growth opportunities, profitability and liquidity, to analyze the factors affecting capital structure, to examine the capital structure management practices in Nepalese enterprises.

This study is based on the historical data collected from the financial statement of the firms and reports maintained at the SEBON and corporate annual reports. For the purpose of analyzing the capital structure management, the various financial ratios have been used. The leverage measures, as dependent variables namely total leverage, long term leverage and short term leverage have been computed and regressed on the explanatory variables profitability, non-debt tax-shield, and liquidity and growth opportunities of the firm. These variables have been measured as ratios and percentage change. The selection of these independent variables is primarily guided by the review of previous empirical studies in the context of some developed and developing countries. The analysis of association of variables has been made by deriving the pearsons' correlation coefficients. The analysis of multiple regressions estimated for each model has been made to study about of capital structure. This study is also carried out a survey of Nepalese corporate executives, mainly the corporate finance officer$_{(s)}$ CFOs, to study about various behavioral aspects of capital structure issues from the managerial perspective. For this purpose, the questionnaire containing 12 questions was designed. The final questionnaires were distributed to 50 practitioners. Analysis of the response has been made for total sample and various respondents' categories based on the demographic characters.

This study covers five major manufacturing and trading enterprises of Nepal from both private and public sectors. For the purpose of the study, necessary data on debt and other related variables were collected for the period 2006 to 2011. The financial statements mostly the profit and loss account and balance sheet published in the Auditor General Report, financial statement of listed companied companies published by the Nepal Stock Exchange Limited, compilation statement of Nepal Stock Exchange and annual report of sample

companies provide the data required to complete this study. This study has used correlation coefficient, regression analysis and financial ratio analysis to accomplish the objective. It has also used total leverage, long term leverage, short term leverage, profitability ratio, non-debt tax-shield, and liquidity ratio and growth opportunities to analyze the capital structure in Nepalese enterprises.

The major findings of this study are summarized as below:

1. For the purpose of this study, the data has been collected for 6 years from 2006 to 2011 pertaining to 5 different firms listed in the Nepal stock exchange. In addition, majority of the respondents of this study are financial manager academicians and those who are responsible in financial decision making of the firms. The majority respondents are from trading and manufacturing companies, various universities, colleges and institutions, teaching the finance course and few consultants.
2. Among all selected enterprises NKUL is the most levered firm that has the highest average of total leverage ratio with the highest fluctuation. Similarly, for the industry level at the year of 2010 has been indicated as the mostly debt using year in capital structure with more consistent.
3. The highest mean of the long term leverage of NKUL has been134.30 percent with the highest deviation on its use in capital structure among selected five enterprises. In the industry level year 2011 has been indicated as most levered year in case of using long term debt in capital structure.
4. In case of short term leverage, NKUL has been largest average ratio for the period of six year. This ratio has indicated that 96.11 percent total assets could be claimed by the short term creditors. The some company has highest fluctuation in the in the use of short term debt. In case of evaluation from the year wise, Nepalese enterprises have been using of short term debt mostly in the year 2011.

5. The liquidity ratio of BBCL has been shown on the highest on the average which indicates that 105.20 percent of all current liabilities have been covered by the current assets of this company with highest fluctuation. Same company has the lowest ratio in year 2006 i.e.53.8 percent and the highest ratio of 153.02 percent in the year of 2009. While evaluating the same liquidity ratio for all Nepalese enterprises at the year of 2011 the highest liquidity ratio on average has been located i.e. 99.9 percent almost both current assets and current liabilities are equal.
6. On the average, the BNL has the highest depreciation expenditure. This company has lost the 9.49 percent of its all total assets on depreciation expenditure for the all research period of six years. For all Nepalese enterprises 7.83 percent of all selected company's total assets value as depreciation expenses as the highest deprecation out off year in 2011.
7. The highest ratio of EBIT to TA of GRUL has been presented as the highest ratio. GRUL has 59.48 percent of total assets as EBIT on average during the study. It means this company is most capable firm among selected five companies to earn EBIT with efficiency. For all industry the highest ratio of EBIT to TA has reached at pick on the year 2010 on average.
8. BBCL has the highest fluctuation or change on the value of total assets with the percentage change of 24.99 percent with highest standard deviation this indicates that it has the highly market risk on its total assets. In case of industry evaluation Nepalese enterprises have got the maximum change on their assets valuation on the year of 2008 i.e.10.98 percent with standard deviation of 17.95 percent. But in case of market risk the year 2011 has been seen as the highest risky year for assets evaluation.
9. While evaluating the capital structure of Nepalese enterprises from the primary data, it has been found that all selected companies are levered

which indicates that almost all Nepalese enterprises are using debt capital and equity capital into capital structure of their companies.

10. Capital structure decisions are dynamic in nature and should be modeled as such. In this regards, the speed of adjustment towards optimal capital structure is measured and found that the speed of adjustment in our country to be positive and very high than those for the United States and UK.
11. In respect of effect of leverage on return to shareholders, the some is found to be positive. The positive relationship indicates that the return to the shareholders have been increased with the increased in leverage. The relationships found in the firm are negative. The coefficients found are not statistically significant.
12. Among the several capital structure management of Nepalese enterprises, as suggested by the theories and previous studies in developed countries, four different variables namely, profitability, non-debt tax-shield, liquidity, and growth opportunities are considered in this study. All the variables, except growth, seem to be significant variables in the capital structure management in the Nepalese enterprises. The effects of growth found to be insignificant variable in the capital structure management in the Nepalese firms.
13. To test the consistency in the views of respondents in respect of the various assertions of capital structure management, a questionnaire survey of 50 respondents is carried out. It is found that the views expressed by them are not consistent. However, majority's views seem to be consistent.
14. In the case of portfolio formation and analysis, it turned out that larger total leverage, long term leverage, short term leverage, liquidity, non-debt tax-shield, and profitability and growth opportunities.

Conclusions

The major conclusion of this study is that the non-financial listed firms of Nepal have used highest total debt level compared to the G7 countries (Rajan and Zingales, 1995) and ten other developing countries (Booth et al. 2001). However the proportion of long term debt in firms of Nepal as far less than that is used by firms in these countries. Nepalese firms having more liquidity have used the less debt of all kinds in their capital structure. The firms with large volume of sales, higher fixed assets, more profit, and higher non-debt tax-shield have used more long term debt. But, use of short term and long term debt is less in firms with higher sales volume and higher proportion of fixed assets. The larger firms have more growth opportunities; high assets tangibility has more profitability, more non-debt tax-shield, and less liquidity; and more profitable firms has higher risk and higher non-debt tax shield.

The study also concludes that growth opportunities and profitability were found to be negative correlated with the leverage in Nepalese enterprises. The liquidity and non-debt tax-shield were found to be positive. The results suggest that although different factors affect the capital structure of the firms, they are not the only influences on the capital structure of these firms. Rather, these financial sectors will work together with management perceptions, beliefs and attitudes towards external source of finance together with general market conditions influence the capital structure of the Nepalese firms.

Recommendations

Many enterprises have been running with excessive debt capital. Surprisingly, there are enterprises that have been running even with negative net worth. In general terms, theoretical approaches, the pecking order and the trade off theories do not appear to help explain the financial behavior of Nepalese firms. Given the nature of their activities, there is an implied suggestion that no ideal capital structure exists for these firms.

The findings of these studies reveal different results in respect of relationship between variable determining the capital structure with degree of leverage in

trading and manufacturing sectors. Among the variables, profitability, growth opportunities of the firms and non-debt tax-shield have revealed the different results in trading and manufacturing sectors. However, the result observed results of trading sector is more consistent with the theory and previous empirical research compared to the result of manufacturing sectors. The reasons of differences seem to be investigated in the further studies.

In respect of speed of adjustment towards the optimal capital structure, the same is found to be very high in Nepalese firms. Most of the empirical evidence of the studies conducted in USA, UK, and even in Asian countries has shown the rate of adjustment towards the optimal capital structure. Base on these, in developing a sensible approach to capital structure strategy, the chief finance officer (CFO) of the Nepalese firms should start by thinking about the company's target capital structure that is expected to minimize tax and contracting costs. The target ratio should take into the consideration factors such as company's projected investment requirements, the level and stability of its operating cash flows, its tax status, the expected loss in value from being forced to defer investment because of financial distress, and the firm's ability to raise equity capital on short notice without excessive dilution.

If the company is not correctly at or near its optimal capital structure, the chief financial officers should come up with a plan to achieve the target debt ratio. For example, if the firm has too much debt capital, it can reduce leverage by rising funds through equity source to redeem the debt capital. Alternatively, a firm with too much debt capital in its capital structure may choose to delay an equity offering or issues convertibles in order to reduce or avoid the cost of issuing securities that it perceives to be undervalued.

In respect of effect of dependent and independent variables, the study reveals the positive relationship between them. Which suggests that the return to shareholders can be increased with the increase in debt capital, which is consistent with both theory, and empirical evidences as well. As the debt or leverage is an important variable, the financial officers should consider this fact in their financial planning. In addition, in Nepalese enterprises, the effect of

leverage on cost of capital found to be negative. Which indicates the use of debt capital reduces the cost of capital. The financial managers, therefore, should consider using the debt capital to the optimal level so that the cost of capital could be minimized.

In this study, regression equation techniques financial ratios with leverage have been used to analyze the data. Many other techniques are available that can be used in the study of capital structure management of the business firms. Factors analysis, cluster analysis, and many other higher mathematical tools can be applied in the study of capital structure management. In additional to this, only seven variables as suggested by the theories and some empirical evidences are considered in this study. There may be more variables than considered in this study affecting the capital structure and there may be some other exclusive variables. In other study the capital structure policy more accurately in future, these facts should be considered.

It recommended future studies should be directed towards using factors analysis and cluster analysis to examine the capital structure management in Nepalese enterprises. Throughout the analysis of this study, both debt and equity were measured in book values, instead of market value. Therefore, it would be better if future researches could use market values of debt and equity to obtain more precise results.

This study is based only on trading and manufacturing industries and there is a need for conducting similar studies in the context of other industries as well. Hence, future studies should concentrate on industries other than trading and manufacturing with large sample size.

Finally, variables are chosen from the previous empirical studies undertaken in the developed countries and theoretical consideration. There may be some other variables affecting the capital structure of the companies' specific to Nepal future studies could be useful if they can incorporate these variables too.

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APPENDIX: - I

QUESTIONNAIRE

Respondent's profile

Name of the respondent (optimal): ……. Age: ……

1. **Do you have debt capital in your firm?**
   a. **Yes** b. **No**
2. **Is there any relationship between use to debt capital and overall cost of capital of a firm?**

a. Yes b. No (please specify the relationship and effect)

3. **Does the financial theory concept of "systematic Risk" as typically measured by what is called "beta coefficient" ever affect your financial structure policy? (please make a tick mark)**

   a. Yes b. No c. Do not know

4. **What do you think the optimal debt capital ratio in a firm?(please make a tick mark)**
   a) **Less than 20 percent of total asset.**
   b) **20 percent to 40 percent of total assets.**
   c) **40 percent to 60 percent of total asset.**
   d) **Above 60 percent of total assets.**
5. **How do you measure the degree of financial leverage (I.e. proportion of debt capital in the total capitalization of a firm) used by a firm?**
   a) **Total liabilities divided by total assets.**
   b) **Long term debt divided by total assets.**
   c) **Long term debt divided by equity.**
   d) **Long term debt divided by debt plus equity.**
6. **Do you have practices of determining the optimal capital structure in your firm?**

   a. Yes b. No

7. **Given an attractive new growth opportunity that could not be taken without departing from your target capital structure, what action you suggest to your firm most likely to take?**
   a. **To far go the growth opportunity**
   b. **To deviate from the target leverage**
   c. **To cut the dividend**
   d. **To sell off the other assets**
8. **Do you think that capital structure (mix of debt capital and equity capital in total capital) affects the markets price of share? (please make a tick marks)**

   a. Yes b. No c. Do not know

9. **If the tax rate on corporate profit is increased which of the following action would you undertake**

a) **Increase the debt level.**
b) **Decrease the debt level.**
c) **Do not change in debt level.**

10. **Please indicate whether your firm has target (optimal) debt to total asset ratio?**

    a. Target b. Actual c. not yet determinants

11. **In your opinion, which of the following purpose are most important of using debt capital?**

    a) **To reduce tax liability**
    b) **To magnify return to share holders**
    c) **To reduce the agency cost**
    d) **To maintain ownership control un changed**

12. **Use of amount of debt capital in business firm has no additional benefits firm, do you agree?**

    a. Yes b. No c. Do not

APPENDIX:-II

Multiple Regressions for Total Company

Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	0.706[a]	0.498	0.394	40.72062

a. **Predictors: (constant), Profitability, short term leverage Growth, liquidity, NDTS**

ANOVA[b]

Model	Sum of Squares	d.f.	Mean Square	F	Sig.
1. Regression	39525.553	5	7905.111	4.767	0.004[a]
Residual	39796.062	24	1658.169		
Total	79321.615	29			

a. **Predictors: (constant), profitability, Short Term Leverage, Growth, Liquidity, NDTS**
b. **Dependent Variable: Total Leverage**

Coefficients[a]

Model	Unstandardized	Standardized		

	coefficients		coefficients	t	sig
	B	Std. Error	Beta		
1 (constant)	151.341	26.587		5.692	0.000
Short term leverage	0.384	0.109	0.539	3.532	0.002
Liquidity	-0.273	0.220	-0.191	-1.243	0.226
Growth	-0.384	0.417	-0.145	-0.919	0.367
NDTS	-3.783	3.123	-0.195	-1.212	0.237
Profitability	-0.639	0.315	-0.304	-2.026	0.054

a. Dependent variable: Total Leverage

APPENDIX:-III

Multiple Regressions for Total Company

Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	0.645[a]	0.417	0.295	48.09991

a. Predictors: (constant), Profitability, short term leverage Growth, liquidity, NDTS

ANOVA[b]

Model	Sum of Squares	d.f.	Mean Square	F	Sig.
1. Regression	39659.566	5	7931.913	3.428	0.018[a]
Residual	55526.430	24	2313.601		
Total	95185.997	29			

a. Predictors: (constant), profitability, Short Term Leverage, Growth, Liquidity, NDTS
b. Dependent Variable: Long Term Leverage

Coefficient[a]

Model	Unstandardized coefficients		Standardized coefficients	t	sig
	B	Std. Error	Beta		
1. (constant)	92.168	31.405		2.935	0.007
Short term leverage	0.432	0.129	0.542	3.294	0.003
Liquidity	-0.182	0.259	-0.116	-0.703	0.489
Growth	-0.548	0.493	-0.190	-1.113	0.277
NDTS	-7.420	3.689	-0.349	-2.012	0.056
Profitability	-0.402	0.372	-0.174	-1.079	0.291

a. Dependent variable: Long Term Leverage

APPENDIX:-IV

Multiple Regressions for Total Company

Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	0.322[a]	0.104	-0.040	74.84337

a. **Predictors: (constant), Profitability, Growth, Liquidity, NDTS**

ANOVA[b]

Model	Sum of Squares	d.f.	Mean Square	F	Sig.
1. Regression	16173.782	5	4043.446	0.722	0.585[a]
Residual	140038.26	24	5601.530		
Total	156212.04	29			

a. **Predictors: (constant), Profitability, Growth, Liquidity, NDTS**
b. **Dependent Variable: Short Term Leverage**

Coefficient[a]

Model	Unstandardized coefficients		Standardized coefficients	t	sig
	B	Std. Error	Beta		

1	**(constant)**	**44.358**	**48.054**		**0.923**	**0.365**
	Liquidity	**-0.210**	**0.402**	**-0.105**	**-0.524**	**0.605**
	Growth	**-0.046**	**0.767**	**-0.012**	**-0.060**	**0.953**
	NDTS	**-8.236**	**5.498**	**0.302**	**1.498**	**0.147**
	Profitability	**0.018**	**0.580**	**0.006**	**0.030**	**0.976**

a. Dependent variable: Short Term Leverage

APPENDIX:-V

Correlation coefficient

Variables	**TL**	**LTL**	**STL**	**LIQUI**	**GROW**	**NDTS**	**PROFY**
TL	**1**	**0.688****	**0.517****	**-0.354**	**-0.233**	**-0.013**	**-0.384***
LTL	**0.688****	**1**	**0.472****	**-0.263**	**-0.197**	**-0.140**	**-0.250**

STL	**0.517****	**0.472****	**1**	**-0.097**	**-0.131**	**0.304**	**0.001**
LIQUI	**-0.354**	**-0.263**	**-0.097**	**1**	**0.223**	**0.031**	**0.238**
GROW	**-0.233**	**-0.197**	**-0.131**	**0.223**	**1**	**-0.318**	**0.121**
NDTS	**-0.013**	**-0.140**	**0.304**	**0.031**	**-0.318**	**1**	**0.073**
PROFY	**-0.384***	**-0.250**	**0.001**	**0.238**	**0.121**	**0.073**	**1**

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

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