CHAPTER ONE

INTRODUCTION

1.1 General Background

Since the path breaking seminal paper by Modigliani and Miller (1985), the issue of capital structure has generated great interests in finance literature. It has provided a substantial boot in the development of the theoretical framework within which various capital structure theories has been developed. Based on very restrictive assumption of perfect capital market, homogenous expectations no taxes and no transaction casts, Modigliani and Miller concluded that financial leverage does not affect the firm's market value. In short capital structure is irrelevant to the value of firm or value of levered firm and value unlevered firm will be equal if they are identical in every respect except capital structure.

The study of capital structure attempts to explain the mix of securities and financing sources used by corporations to finance real investment (Myers, 2001. p. 81) In general, a firm can choose among many alternative capital structures. It can issue either equity or debt capital or a large amount of debt capital and vice versa. It can arrange lease financing use warrants issues convertible bonds and other hybrid securities. The firm can issue dozens of distinct securities in different combination: however, the rational attempt is to find the particular combination, which maximizes value of the firm.

The concept of optimal capital structure is also expressed by Myers (1984) and Myers and Maijul (1984) based on the nation of asymmetric information. The existence of information asymmetry between the firm and likely finance providers cause the relative cost of finance to vary between the different sources of finance. For instance, an internal source of finance where the funds provider is the firm will have more information about the firm than new equity

holders. The new equity holder will expect a higher rate of return on their investments. This means that it will cast the firm more to issue fresh equity share than using internal fund. Similarly, this agreement could be provided between internal finance and new debt holders. The conclusion drawn from the asymmetric information theory is that there is a hierarchy of firm preferences with respect to the financing of their investment (Myers and Mujluf, 1984). This peaking order theory suggests that firm will initially rely on internally generated funds, i.e., undistributed earnings, where there is no existent i.e., of information asymmetric, than they will turn to debt if additional fund are needed and finally they will issue equity to cover any remaining capital requirements. The order of preferences reflects the relative cast of various financing options.

The pecking order hypothesis suggests that firm is willing to sell equity when the market overvalues it (Myers, 1984; Chittenden et al., 1996) this is based on the assumption that managers act in favor at the interest of existing shareholder. As consequence, they refuse to issue undervalued shares unless the value of the growth opportunity. This leads to the conclusion that new shares will only be issued at a higher price than the imposed by the real market value of firm. Therefore, investors interpret the issuance of equity by a firm as signal of overpricing. If external financing is unavoidable, the firm will option for secured debt as opposed to risky debt and firms will only issue common stocks as a last resort. Myers and Mailu (1984) maintain that firms would prefer internal source to chastely external finance. Thus according to the peaking order hypothesis, firms that are pitiable and therefore generate high earnings are accepted to use less debt capital than those that do not generate high earnings.

In the Ross (1977) model, leverage signaling with investment fixed, the study illustrates that manager with an informational advantage have an incentive to signal their private information through their choice of debt level. Firms with lower expected cash flows find it more costly to incur higher level of debt

(because bankruptcy is more likely) than do firm with higher expected cash flows. Another fundamental signaling model is that of Leland and Pyle (1977), in which insider ownership provides the signal of firm quality. Under certain conditions, managers of high quality firms signal their type by retaining a high portion of ownership, and therefore finance with higher level of debt than managers of low-quality firms. Financing with debt allows a manager to retain a large ownership stokes in the firm, but the large equity stake is costly to a risk over manager. The fact that large equity stake is costly to manager of a high quality drives the incentive Compatibility of the signal. As in Ross (1977), the Leland and Pyle model predicts a positive correlation between firm quality and leverage.

Moreover, on balance in evidence from these studies lands supports to the negative impact of other firm specific variables. For example Bowen et al (1982) and Kim and Sorensen (1986) provide evidence on the negative relationship between non debt tax shield and leverage. Conversely, Bradley et al (1984). Titman and Wessels (1988) and Homaifar et al. (1994) fail to provide such a supports. There are also conflicting result in the relationship between size and leverage ferric and Jones (1979), Kim, Sorensen and Chung show that there is no systematic association between firm size and capital structure on the other hand, Homaifar et al. (1994) and Titman and Wessels (1988) report results that are consistence with the notion that large firms have higher debt ratio. There is also strong, empirical evidence for the view that there is a negative relation between profitability and debt ratio.

Though there are these findings in the context of developed countries, it is difficult to support which theory of capital structure is applicable to explain the capital structure management practices in Nepalese enterprise.

1.2 Statement of the Problem

Is there a way of dividing the company's capital base between debt and equity that can be expected to maximize firm value? And if so, what are the critical factors in determining the target leverage ratio for a given firm? The basic objectives of any study of capital structure is t o identify factors explaining the firms decision with respect to its financial leverage or to discuss existence of optimal capital structure .starting with Modigliani and miller(1958),the literature on capital structure has been expanded by many theoretical and empirical contributions. Much emphasis has been placed on releasing the assumption made by MM, in particular by taking in to account corporate taxes (Modigliani an Miller, 1963), personal taxes Miller (1977), bankruptcy costs (Stiglitz, 1972, Titman, 1984), agency cost (Jensenand Meckling, 1976), and information asymmetries (Myers, 1984).

The Modigliani-Miller Theorem stated that if the capital structure decision has no effect on the total cash flows that a firm can distribute to its debt and equity holders, the decision also will have no effect on the total value of firm's debt and equity in the absence of transaction costs. It implies that a manager who is contemplating whether it is cheaper to finance the firm primarily with junk bonds (that is very high-yield, high –risk debt) or with equity and perhaps a small amount of high quality debt should stop worrying. Neither financing decision is superior to the other.

The premise of the Modigliani miller theorem, that capital structure has no effect on cash flows, is not true in the real world. Because the interest in debt is tax deductible , the after tax cash flows of firms increase when they include more debt in their capital structure , leading firms to favor debt over equity financing .However ,the capital structure choice becomes more complicated when one consider personal as well as

corporate taxes . personal taxes tend to favor the use of equity in a firm's capital structure since a large portion of the returns on stock are taxed at a capital gains rate, which is generally more favorable than the ordinary tax that applies to interest income

Ross (1977) stated that the financial structure of a corporation provides the market information about the firm and the market value of firm increases with the level of the debt, This can be taken to mean that, if manager raise the level of the debt, then it is because their expectation for the future of the company permits it to meet its obligations, making it clear that the risk of insolvency is not relevant. Some authors, such as Leland and Pyle (1977), Heinkel (1982), and Haris and Ravi (1990), state that the value of the company and the size of the debt are positively correlated. Variations in company's level of debt will affect its market value, since the firm's change in capital structure transmits information about the future expectation of the company. for example ,an announcement of the reduction of the number of common stock in exchange for a debt offering has a positive effect in the market ,which becomes a negative effect when the reverse happens (Masulis,1983;cornell and Travlos,1989; Copeland and lee,1991).

Two main theories dominate currently the capital structure debate: the Trade off theory (TOT) and the pecking order theory. According to Stewart C. Myers, the trade-off theory indicates that firms seek debt levels that balance the tax advantage of additional debt against the costs of possible financial distress. The pecking order theory states that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditure.

With respect to empirical evidence regarding the factors explaining company leverage , many studies have been carried out in the united

states of America. The conclusion of these studies provide important result for exploring the capital structure of firms in depth, although the results cannot be considered conclusive. The factors established in these studies can be divided in two groups-those that show a positive relationship with debt, and those that show negative relationship.

Firm size has been one of the variables most commonly used in explaining a company's level of debt. The studies have made it clear that the size of the firm is positively related to its use of debt as a source of financing (Berges and Maravell ,1985; Crutchley and Hansen ,1989Gaver and Gaver,1993;Menendez Requejo ,1999). The large a firm is more information is expected to be available about it which reduce level of information asymmetries in the market, making it possible to obtain financial resources from lenders.

The tangible assets of a firm can be considered representative of the real guarantees that it can offer its creditors. The importance of those assets among total assets influences its level of debt , which rises with the increase of warrantees offered by the firm to satisfy its obligations arising from contacted debt (Mato, 1990;Chung,1993;Rajanand Zingales,1995;Menendez Requejo,1999).

The reputation of a firm may affect its leverage capability , since it reduces the conflict between the company and its lenders . Diamond(1989) concludes that , by fulfilling its payment obligations, a company enjoys a good reputation , which may be sufficient to eliminate conflicts with its creditors .Reputation can be measured by the age of the company (Dalla et.al.,1999 Andres Alonso et al.,1999) and it can be expected to have a positive relationship with debt . this is because companies with better reputations are more mature and better known in the market ,since as Myers (1977) points out ,the

companies that are most concerned about having a reputation for being honest are that expect to remain in the market for a long time.

On the other hand ,companies with greater opportunities for growth have a lower leverage ratio than those with lower growth opportunities ,since financing through share is mechanism that reduces that the problem of under investment associated by financing through debt .Myers (1977) states that faced with high debt levels and good growth opportunities ,an acting to protect shareholders , director would prefer not to carry out some positive investment projects if the profit find then way into the hands of bondholders . similar result are obtain by smith and Watts(1992) Chung(1993),Graver and Graver (1993),Rajan and Zingales (1995), Lang et al.(1996),Menendez Alnson (1999) and Menendez Requejo (1999),

The pecking order theory"(Myers, 1984;and Majluf,1984) is used to argue that because of management's preference for internal financing , companies with a higher volume of internal financing resort to leverage less frequently than those with a lower level of internally generates resources . In this sense, the relationship between the levels of debt resources must be inverse.

Still other argue that corporate managers making financing decision are concern primarily about the signaling effects of such decision – the tendency of stock prices to fall significantly in response to announcement of common stock offering(which can make such offerings quite expensive for existing shareholders) and to raise in response to leverage –increasing recapitalizations. Building on this signaling argument , Stewart Myers suggested that corporate capital structure are the largely unplanned outcomes of individual financing decisions in which managers follow a financial pecking order-financing rule in which retain earning are systematically preferred to outside financing ,and debt is preferred to equity when outside

funding is required. According to Myers, corporate managers making financing decision are not really thinking about a long-run target debt-equity ratio. Instead, they take the path of least resistance and choose what at the time appears to be the lowest-cost financing vehicle, generally debt, with little through about the future consequences of the choices.

In his 1984 presidents address to the American Finance Association in which he first presidential his peaking order theory, Myers referred to these conflicts among the different theories as the capital stricture puzzle. The greatest barrier to progress in solving this puzzle has been the difficulty of coming up with conclusive tests of the competing theories. Over 30 years ago, researchers in the capital market branch of the finance, with its focus on portfolio theory and assets pricing, began to developed models that predict the values of traded financial assets as a function of a handful of observable variables. The prediction generated by such models , after continuous testing and refinement ,have turned out to be remarkably accurse, from portfolio management to option pricing to the valuation of strategic investments. But empirical methods in corporate finance, especially with reference to capital structure, have lagged behind those in capital markets for several reasons.

First our model of capital structure decision is less precise than assets pricing models. Models of capital structure typically provide only qualitative or directional predictions. For example, the tax- based theory of capital structure suggest that companies with more non-interest tax shield (like depreciations, investment tax credits etc.) should have less debt in their capital structure but the theory does not tell s how much less.

Second most of the theories of capital structure are not mutually exclusive. Evidence consistent with one theory-for example the tax cased explanation generally does not allows us to conclude that another factor-say, the role of debt in reducing over investment in mature companies-is unimportant. In fact, it seems clear that taxes, bankruptcy costs (including underinvestment), and information cost all play some role in determining a firms optimal capital structure decisions.

Third many of the variables that we think affect optimal capital structure are difficult to measure. For example, signaling theory suggests that manager's private information about the company's prospects plays an important role both in their financing choices and in how the market responds to such choices. But since it is difficult to identify when managers have such proprietary information, it is not easy to test this proposition.

For all of these reasons and others, the state of the art in corporate finance is less developed than in asset pricing. But there has been considerable progress. Although we may never be able to pinpoint with certainty a company's value maximizing capital structure, we have learned a good deal about the nature of the tradeoffs between debt and equity, and between different kinds of debt. Therefore, every financial executive must consider these facts in making financing decisions.

A part from the above studies, the study by Rajan and Zingales (1995) stands out. They analyzed the level of debt in companies in G7 groups, reaching the conclusion that, in general, the debt level of companies in the United States is similar to that of companies in the other countries. The variables that help explain the corporate debt level in the USA are the tangibility of assets, investment opportunities, company size, and profitability. These factors are also relevant in explaining company capital structure in the other countries.

Based on the above, this study deals with following issues:

1. What type of capital structure policies have followed by Nepalese companied?
2. Are Nepalese firms Levered? If so, what extent? Are they similar to other developing countries and developed Countries.
3. What is the relationship of leverage with financial status?
4. What are the views of financial managers and academicians in respect of capital structure management of Nepalese enterprises?
5. Does the systematic risk, as typically measured by what is called beta-coefficient, ever affect your capital structure policy?
6. To investigate the extent to which the capital structure theories an explain capital structure choice by firms
7. What is the trend in depreciation tax shield line?
8. How has growth opportunities changed over time in Nepalese companies?

1.3 Objectives of the Study

The main objective of this study is to analyze the capital structure management of the Nepalese firms. The specific objectives are as follows:

- To examine the capital structure management practices in Nepalese firms.
- To measure the degree of sensitivity of various factors determining the capital structure of Nepalese firms.
- To examine the relationship of leverage with different financial status.
- To undertake an international comparison of debt ratios.
- To identify and analyzed the determinants of capital structure.
- To investigate the extent to which the capital structure theories can explain capital structure choice by firms.

- To examine the views of financial managers and academicians in respect of Capital structure management of Nepalese Enterprises.

1.4 Organization of the Study

This study has been organize in to five chapters as prescribed by the university

Chapter one:-	Introduction.
Chapter two:-	Review of literature.
Chapter three:-	Research in methodology.
Chapter four:-	Presentation and analysis of Primary and secondary data.
Chapter five:-	Summary conclusion and recommendation

Chapter one will consist introduction, statement of problem, objectives of the study, and organization of the study. Chapter two is basically concerned with the review at the literature relevant to the capital structure policy of the trading & mfg companies. Every study is based very much on the past knowledge. The post studies should not be ignored as it provides foundation to the present study. Therefore, this chapter has it own importance in this study. This chapter will include the findings at the review of related books, reports, articles and thesis. Chapter three relates to Researcher methodology and includes nature and source of data, data collection procedures, Methods of analysis and models. Chapter four is most important chapter of the study. In this chapter the data collected will be analyzed and presented. Chapter five is the financial chapter of the study. This is the summary of the whole study. The summary conclusion and recommendations from the study will be presented in the part.

CHAPTER TWO

REVIEW OF LITERATURE

Capital structure is one of the most controversial issue in corporate finance and it has received due attention of researchers since the prominent work of Modigliani and Miller (1958). Based on their theoretical framework, so many theories of capital structure have been contributed significantly. This chapter briefly reviews the literature, which provides basic foundation to this study. The various approaches employed in this study are derived from different literature surveyed in this chapter. The academic finance profession has found it difficult to come up with definitive answers to these questions. Over the past several decades, financial economists have worked to transform corporate finance into a more scientific undertaking, with a body of formal theories that can be tested by empirical studies of corporate and stock market behavior. But this brings to the most important obstacle to developing a definite theory of capital structure, designing empirical tests that are powerful enough to provide a basis for choosing among the various theories. This chapter has been organized two part i.e. conceptual framework and review of empirical study.

2.1 Conceptual framework

The capital structure refers to the composition of firm's capital with different sources of funds. However, the term capital structure and financial structure had been used interchangeably in finance literature. Though there is technical difference. The financial structure comprised of the total combination of equity capital, preferred capital, long term debt and short term debt/liabilities, whereas ,the capital structure excludes the short term debt /liabilities. The optimal capital structure is that combination of debt and equity, which maximizes the value of the firm. In this respect, the capital structure can be interpreted in terms of target capital structure to strike a balance between risk and return for maximizing the value of the firm using more debt raises the riskiness of the

firm's earnings streak. However, a higher debt ratio generally leads to a higher expected rate of return

In boarder perspective, the sources of the firm's capital can be classified into two basic categories, that is equity and debt. In one hand, the equity capital provides investors to control over the firm as owners. However the firm may not able to use only equity financing because the rational objective is to maximize the value of the firm. The cost of new equity would come across higher than existing one and since the risk pattern on equity is higher, the higher expected rate drives to sell equity in lower price in the market. On the other hand, the debt capital provides investors a certain fixed return and right to first claim over the liquidation. Raising debt capital is also advantageous to the firm in numerous ways. Firstly, interest is tax deductible, which lowers the effective cost of debt. Secondly, debt holders are limited to a fixed return (the coupon amount), so stockholders do not have to share profits if the business does have excess profit. Thirdly, debt holders do not have voting rights, so the stockholders can control a business however they are investing less money than would otherwise be required.

2.1.1 The irrelevance proposition

In, 1958, Modigliani and Miller laid 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 axes 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 affect the value of the firm so long as it does not affect the probability distribution of the total cash flows to the form. Much of the early literature is concerned with the proposition that the market value of a firm is unaffected by its financing decisions, and most of the early proofs use arbitrage arguments. The general idea is that if the financing decisions of a firm affect its market value, there are arbitrage opportunities that can be used to

produce costless instantaneous increase in wealth. Since the existence of such opportunities is inconsistent with equilibrium in a perfect capital market, one can conclude that the market value proposition, there are following common assumptions.

In 1958 Franco Modigliani and Merton H. miller (MM) addressed the capital structure issue in a rigorous, scientific fashion, and they set off a chain of research that continues to this day. 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 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 firm is established by capitalizing its expected net operating income (NOI= EBIT) at a constant rate that is appropriate for a firm's risk class.

Accordingly**,** $\mathbf{V_L = V_U = EBIT = WACC}$

Here VL and Vu designate the value of levered and unlevered firms in a given risk class, and the constant rate, WACC, is the required rate of return for an unlevered, or all equity firm.

Since value (V) is a constant, 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 MM's proposition 1 and is identical to the NOI approach.

1.MM proposition second states that as the firm's 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 inclusion of more debt in the capital structure will not increase in the value of the firm, because the benefits of cheaper 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 (1971) 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 increases as the degree of leverage increases and higher cost o equity offsets the advantage of using cheaper 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 Toward and optimal financing policy

Modigliani and Miller's (1958) seminal paper on corporate capital structure is founded upon a number of restrictive assumptions. Based on the assumptions of perfect capital market, no taxes, homogeneous exception and homogeneous risk class, riskless debt, and perpetual cash flows ,Modigliani and Miller concluded that value of the fir is independent to the leverage of the firm (MM proposition one). That is the market value of any firm is independent of its capital structure and is given by capitalizing its expected return at the rate of appropriate to its class (p.268). By the same token ,the average cost of capital to any firm is completely independent of its capital structure and is equal to the capitalization rate of a our equity stream of its class (pp. 268-9). Under the proposition second, they further state that the expected yield of a share of stock is equal to the appropriate capitalization rate pk for a pure equity stream in the class, premium related to financial risk (p.271). That is, the expected rate of

return on the stock of any company belonging to the same class is a linear function of leverage.

2.1.3 The trade of theory

The trade off theory of the capital structure suggest that a firm's target leverage is driven by three competing force: taxes, cost of bankruptcy (financial distress), and the agency conflict. Therefore, the firm seeks debt level that balances the tax advantages of additional debt against the costs of the possible financial distress and agency conflict. Therefore, a firm sets target leverage ratio and gradually moves toward it.

Taxes : After five years of their original work, in 1963, the Modigliani and Miller published article (Modigliani and Miller,1963) introducing the corporate tax, that is , relaxing the early assumption of no tax world'. Incorporating corporate taxes, they concluded the leverage would increase a firm's value because interest on debt capital is tax-deductible expenses (MM 1963). The increasing leverage ratio linearly increases the value of the firm. Hence, under the corrected version of MM proposition first, the value of levered firm is equals to the value of unlevered firm in the same risk class plus the gain from leverage that is the value of tax saving as a result of interest payment on debt capital.

Miller (1977) extended his work, deriving an expression or the gain from leverage when different tax rates are applied to corporate profit, personal earning from stocks and persona interest earnings. The study showed that the incentive to finance completely through debt disappears under a variety of tax regimes. Even in a world in which interest payments are fully deductible in computing corporate income taxes, the value of the firm, in equilibrium will still be independent of its capital structure '(p.262). Miller also suggested that clientele effects (whereby firms attract those investors that suit their degree of leverage) may reduce or negate the tax related gains from leverage for any single firm.

De Angelo and Masulis (1980) emphasize that the tax induced gains from leverage are reduced if a firm's expected income stream, against which interest expenses can be deducted, is less than the firm's total interest expenses. Importantly, they note that the presence of deductions from taxable income, other than interest payments, reduces the expected gains from leverage. These non- interest tax deductions are generally known as non debt tax shields for examples, depreciation on fixed assets and investment tax credits.

Bankruptcy costs: The use of debt in one hand provides the debt shield but by the same time the higher level of use of debt increases both bankruptcy and financial distress cost. The studies by Stieglitz (1972), Kraus and Litzenberger (1973) and Kim (1978) are regarded as prominent in bankruptcy cost aspect of capital structure theory. According to them, when a firm raises excessive debt to finance its operations, it may default on this debt. As the proportion of debt in the capital structure is increased the probability of bankruptcy also increases. However, it is not bankruptcy per se that is the problem. If the bond payments are not met when they become due and the bond defaults, the firm is simply transferred to the bondholders. However there are dead weight costs that arise in the case of corporate bankruptcy which come in from of direct and indirect deadweight costs. Direct out of pocket expenses for the administration of the bankruptcy process (legal fees and management time) are relatively small compared to the market values of the firms. However, there are economies of scale with respect to direct bankruptcy costs. While they seem of less important foe large firms, they can be substantial for small firms. Indirect bankruptcy costs can be significant for both large and small firms (Warner, 1977) one the firm runs into financial distress, it is obvious that the firm's investment policy changes, which results in a reduction of firm value. Most obvious, the firm may decide on shortsighted cutbacks in research and development, maintenance, advertising, and educational expenditures that ultimately result in lower firm values. Besides, bankruptcy hampers conduct with customers. They are usually lost because of both ear of impaired service and loss of trust.

2.1.4 Capital structure with financial distress and agency costs.

Financial distress occurs when promises to creditors are broken or honored difficultly .Sometimes financial distress leads to bankruptcy .Therefore, financial distress is costly. Investors known that levered firms may fall into financial distress, and they worry about it. That worry is reflected in the current market value of the levered firm's securities. The agency cost is associated with the use of debt, and it involves the relationship between firm's stockholders and its bondholders. In the absence of any restrictions, a firm's management would be tempted to take actions that would benefit stockholders at the expense of bondholders.

Because of the possibility that might try to take advantage of bondholders in any ways, bonds are protected by restrictive covenant. These covenants hamper the corporation's legitimate operation to some extent. Further, the company must be monitored to insure that the covenants are being obeyed, and the costs of monitoring are passed on to the stockholders in the form of higher debt costs. The costs of lost efficiency plus monitoring are called agency costs, and the existence of these costs increases the cost of debt to the firm and thus reduces the advantage of using leverage.

If the MM model with corporate taxes were correct, a firm's value would rise continuously as it moved from zero debt towards 100 % debt. In the valuation equation of MM, $V_L = V_u + TD$, V_L and TD is maximized if debt (D) is at a maximum. But if the financial distress costs and agency costs are considered, the result may be significantly different. Therefore, MM'S relationship between a firm's value and its use of leverage should look as follows.

$V_L = V_u + TD$ – (PV of financial distress costs) - (PV of agency costs).

2.1.5 Trade-Off theory of Capital structure

Both models, MM with corporate taxes and the Miller model after adjusting the effect of financial distress and agency costs can be described as Trade-off Model. The optimal capital structure can be found by balancing the tax shield benefits of using debt against the financial distress costs and agency costs of leverage, and hence the costs and benefits are traded off against one another. In other words, the trade- off theory determines an optimal capital structure by adding various imperfections, including taxes, cost of financial distress, and agency costs, but retains the assumptions of market efficiency and symmetric information.

Higher taxes on dividends indicate to use of debt capital (Modigliani and Miller 1958 and miller and schools 1978). Higher non-debt tax shields indicate less debt (De Angelo and Masulis 1980). Higher cost of financial distress indicates more equity. Short of bankruptcy, senior debt can force managers to forgo profitable investment opportunities (Myers 1977). Agency problem can call for more or less debt .Too much equity can lead to free cash flow and conflicts of interest between managers and shareholders (Jensen 1986). Too much debt can lead to assets substitution and conflicts of interest between managers and bondholders (Fame and Miller (1972) and Jensen and Meckling 1976.)

According to the trade- off model each firm should set a target capital structure that balances the costs and benefits of leverage, because such a structure will maximize the value of the firm. Financial managers often think of the firm's debt- equity decision as a tradeoff between interest tax shields and the costs of financial distress and agency costs. Of course, there is controversy about how valuable interest tax shield are and 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 shield ought to have high target debt ratio. Unprofitable

companies with risky, intangible assets ought to rely primarily on equity financing.

2.1.6 The pecking order Theory of financing Choices

The pecking-order theory of capital structure , developed by Myers and Mujluf (1984) starts with asymmetric information, indicating that managers know more about their companies prospects , risks , and values than do outside investors. In Myers and Mujluf (1984) and Myers (1984), outside investors rationally discount the firm's stock price when managers issue equity instead of riskless debt. To avoid this discount, managers avoid equity whenever possible. The Myers and Mujluf Mojel predicts that managers will follow a pecking order, using up internal funds first , then using up risky debt, and finally resorting to equity .In the absence of investment opportunities , firms retain profits and build up financial slack to avoid having to raise external finance in the future.

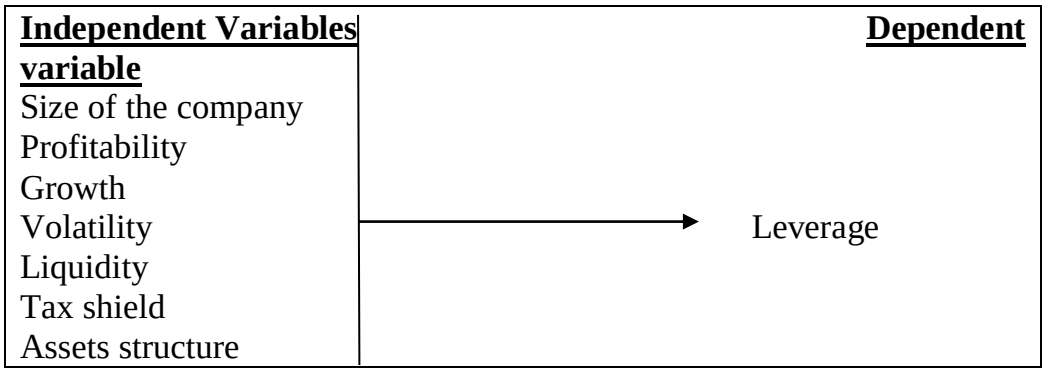
In transactions that take place in financial markets, one party to make correct decisions. The inequality of the information that each party has is called asymmetric information .For example, a borrower who takes out a loan usually had better information about the potential returns and risks associated with the investment projects he plans to undertake than does the lender. Lack of information creates problems in the financial system. Asymmetric information affects the choice between internal and external financing and between new issues of debt and equity securities. This leads to a pecking order, in which investment is financed first with internal funds, reinvested earnings primarily; then by new issue of debt ,and finally with new issue of equity.

2.1.7 Determinants of capital structure

Firms can use either debt or equity to finance their assets. Is one from better than the other? If so, should firms be financed either with all equity or all debt? Or if the best choice is some mix of equity and debt, what is the optimal mix? What sort of capital structure maintains balance between risk and profitability (return)? In respect to these issues of capital structure several theories have been proposed which suggest that firms select capital structures depending on attributes that determine the various costs and benefits associated with debt and equity financing. Different capital structure models yield a numbers of insights. Here, the attributes that different theories of capital structure suggest may affect the firm's debt-equity choice have been described. The firm specific variables or attributes, viz.; tax shields, asset structure, profitability, size, growth, volatility, liquidity and product uniqueness are considered as the key determinants of capital structure decisions. The attributes and their relation to determine capital structure choice are discussed below (Titman and Wessels 1988)

Besides the firm specific attributes described above, other firm specific attributes as well as macroeconomic factors, such as, economic growth rate, inflation rate, capital market development, government policies etc., also play important roles to determine the capital structure decision of the firms. The common practices of firm, the competencies of financial managers, age of incorporation, the availability of financing alternatives and other institutional context are some other determinants of capital structure. Research works in this regard are contributing to enrich the capital structure theories.

Figure 2 Schematic diagram of the Theoretical Framework



2.2 Review of major related studies

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

2.2.1. Review of Related Studies

Modigliani and miller (1958) used the cross- sectional data taken from 43 electric utilities during 1947-1948 and 42 oil companies during 1953. They estimated the weighted average cost of capital (WACC) as net operating cash flows after taxes divided by the market value of the firm .The financial leverage , measure as the ratio of the market value of debt to the market value of the firm , was considered as explanatory variable. When regressed the result were

Taggart (Jr.), presented an integrated model of corporate finance pattern. A study of financial firms during 1957-1972, on stock adjustment model observed that the level of sales had positive effect on liquid assets timing consideration appeared to exert a significant influence on corporate financing decision

(Taggart1997,1475); This study stated that when the debt equity ratio is below target, firms issue more bonds and less stock and when permanent capital is below the target firms issue more of both bond and stock . Further, Taggart concluded that bonds are substituted for equity issue when the stock market is depressed and market value of debt equity ratio is determinants of long term debt capacity (Taggart 1977,1483-84). Firms base their stock and bond issue decision and the need of permanent capital and their long term debt capacity (Taggart 1977,1483).

The major empirical studies on capital structure are summarized in table 2.1

Table 2.1

Empirical studies on capital structure

This table presents some major studies, area of study along with major finding which have reviewed in this study. In panel shows foreign studies. Panel B shows Nepalese studies

Study	Area	Major finding
Modigliani and Miller (1958)	Test of MM of independent hypothesis	Market value of any firm is independent of its capital structure (acceptance of MM hypothesis).
Weston (1963)	Test of MM independent hypothesis	Rejection of MM hypothesis, consistent with the existence of a gain to leverage, that is , that the tad shield on debt has value .
Taggart (1977)	Financing decision	Timing consideration and market movement have significant influence of issuance of securities.
Masulis (1980)	Exchange offer swap	Leverage increasing offer expropriated the wealth of debt holders by the stockholder.
Marsh (1982)	Financing decision and its determinants	Timing and market condition are different for debt issue and equity issue and size and assets have positive and risk has negative effect on leverage.
Bradely et al .(1984)	Determinants of capital structure	Strong industries influence; inverse relation of leverage with cash flows volatility and R and D and advertisement expenditure and positive relation with non debt tax shield
Titman and wessels (91988)	Determinants of capital structure	Product uniqueness and profitability have negative influence on leverage.
Friend and Lang (1988)	Impact of managerial self interest on capital structure	Management in close held corporations have higher ability and desire to adjust debt ratio, the level of debt decrease as the level of management investment in the firm.
Rajan and zingales (1995)	Capital structure determinants in G-7 countries	The factor influencing bank oriented country (USA) also effect capital structure decision on other advanced economic countries, assets structure and size have positive influence on leverage and profitability and growth have negative influence. ,

Booth et al. (2003)	Capital structure in developing countries	Developing countries are less levered, low long term debt, positive relation with size and assets structure, negative relation with profitability , macroeconomic and institutional context are important
Ozkan (2005)	Capital structure determinants and estimation technique and target adjustment to long run	GMM is the better estimation technique; speed of adjustment is high; positive influence of profitability, liquidity and non debt tax and negative influence of non debt tax shield on leverage.
Cassar and Holmes(2008)	Capital structure and Financing of SMEs	Profitability and assets structure have positive and growth has negative influence on leverage
Vasiliou et al.	Determinants of capital structure	Profitability has negative and assets structure and size have positive influence on leverage
Gaud et al .	Capital structure	Size and assets have positive and profitability
(2010)	Determinants and long –run adjustment process	Growth have negative influence on leverage , slow long- run adjustment process to target 24everage

Table 2.2 shows study on capital structure in Nepal

Shrestha (1985)	Capital structure in Pes	Low capital earning and unbalanced capital structure pattern
Shrestha (1993)	capital structure of listed firms	Listed firm are more levered, profitability and interest payment are serious issue
Pradhan and Ang (1994)	Finance function of firms	Working capital function is most important followed by capital structure function; Agency relation is least important ; firms prefer internal financing ; and tax has positive influence on debt ratio.
Pradhan (1994)	Financial distress in Nepalese firs	Govt . policies, problem of raw material , skilled manpower, and poor management are the major causes to financial distress.
K .C. (1994).	Financing of corporate growth	Positive relation of long term debt ratio with assets structure , growth and age
Ghimire (1999)	Capital structure and cost of capital	Profitability ,growth , non –debt tax shield, interest capacity ,and operating cash flows have positive relation with leverage and volatility has negative influence .
Poudel 1996)	Industrial financing in Nepal	Positive influence of size , growth have positive and profitability and assets structure have negative influence on capital structure.
Pradhan et al.	Financial distress in Nepalese public enterprises	Productivity, profitability , liquidity are deteriorated by financial distress.
Dinesh Prasad Gajurel(2010)	Capital structure management in Nepalese enterprises	Nepalese manufacturing companies use more debt than Non manufacturing (Trading and service) companies.
Aish malik (2011)	Capital structure Management in Nepal	Correlation between source and uses of fund for bank is Approximately +1 and -1

Taggart's study was more concerned with financing secession of how and when firm issue corporate securities. Therefore, his stud has not shed light on capital structure determinants.

Further ,Taggart concluded that bonds are substituted for equity issue when the stock market is depressed(p.1476) and market value of debt -equity ratio is determinants of long term debt capacity (pp.1483-84). Firms base their stock and bond issue decision on the need of permanent capital and their long-term debt capacity (p.1483)

Masulis study (1980) was concerned to exchange offers, or swaps. In an exchange offer or swap, one class of securities is exchanged for another and it does not simultaneously effect on the assets structure because of no cash involvements. For a sample containing 106 leverage- increasing and 57 leverage-decreasing exchange offers for the period 1963-1976, he found highly significant announcement effects. For the wall street journal announcement date and the following day, the announcement period return was 7.6 percent for leverage increasing exchange offer. He directly examined a sample of 18 nonconvertible debts with equal seniority. The announcement period return was observed -0.84 percent and it was statistical significant. He observed 3.3% two –day announcement return for a sample of 43 preferred- for –common stock exchange offers, and 3.6%return for 43 debts-for- preferred exchange offers.

From his cross-sectional study, he concluded that stock prices are positively related to leverage changes because again in value induced by debt tax shield and a positive signaling effect; and leverage increase induced wealth transfers across security classes with the greatest effect on unprotected convertible debt

Masulis findings were consistent with capital structure theories which explain that there is a valuable tax shield on increased leverage; debt holders' wealth is being expropriated by shareholders in leverage- increased offers ; and higher leverage is a signal of management's confidence in the future of the firm , however the empirical evidences were not strongly supported the bondholder expropriation hypothesis.

Bradley, Journal and Kim's study (1984) was more directed to the issue of capital structure determinants. In their study, they taken the sample of 851

firms (regulated and non-regulated) and tested three firm specific attributes (volatility, non –debt tax shield and intensity of R&D and adventure expenditure) for their impact on leverage ratio.

In methodological approach , they measured the volatility with deviation of the first difference in annual earnings before interest ,taxes and depreciation (EBITDA) scaled by the average value of the firm's total assets over the period .similarly , the non-debt tax shield was measured by the sum of annual depreciation charge and investment tax credit divided by the sum of annual earnings before interest, taxes and depreciation. And the intensity of the RYD and adventure expenses was calculated as sum of annual advertising and R&D expenses divided by the annual net sales.

In their cross section study of 20 years average measure of dependent and independent variables, they observed that the volatility was negatively related to leverage ratio; intensity of R&D and advertisement expenditure was also negatively related to leverage ratio ; non-debt tax shield was positively related to leverage ; and industry class was found very significant factor for debt-equity choice.

However their findings for volatility and financial distress cost were consistent to capital structure theory but the finding of no-debt tax shield was somewhat puzzling. In this regard, the authors said non-debt tax shields are an instrumental variable for the sociability of the firm's assets, with more securable assets leading to higher leverage ratios' (p.877).In their study they did not explained how the profitability determines the debt-equity choice.

Titman and Wessels (1988) introduced a factor – analytic technique for estimating the impact of unobservable attributes on the choice of corporate debt ratios. More comprehensively, the authors delineated appropriate proxies to firm specific attributes of capital structure determinants. In their study they incorporated eight independent variables, viz; collateral value of asset, non - debt tax shield, growth , product uniqueness, industry classification, size

,volatility ,and profitability as determinants of capital structure. With the dataset of 469 firms from 1974 to 1982, and using the maximum - likelihood method of estimation, they found that the product uniqueness and profitability were statistically significant and negatively related to leverage ratio. Their empirical estimate for product uniqueness supported that the firm that can potentially impose high cost on their customers, workers and suppliers in the event of liquidation as lower ratios (Titman,1982).

However the empirical findings were not conclusive because of statically not significant estimates, their paper has given the empirical regularities.

Friend and Lang (1988) study, examined 984 NYSE firms from 1979 to 1983 and examined managerial self interest on capital structure decision. They hypothesized that other things equal, management in closely held corporations would have higher unique risk than in publicly held firms and would have less constraints on its behavior so that a more negatively significant impact of its investment on debt should be obtained' (Friend and Lang (1988),272). To test this hypothesis, they classified the sample into two equal size groups – one is closely held and another is publicly held corporations depending upon the fraction of stock owned b managerial insiders.

In their econometric model , they incorporated asset structure (fixed to total asset ratio); profitability (EBIT/total assets);size (natural logarithm of total assets);market value of equity held by dominant managerial insider; fraction of equity held by dominant managerial insider having more than 10 % share ; and fraction of equity held by dominant non managerial stockholder who holds more than 10% share but not the officer or director as explanatory variables.

From their empirical estimates ,the authors observed that the debt ratio of close held and publicly held corporation with non managerial principal were observed 26% and 25%f respectively as opposed to 22%and 22% respectively in close held and publicly held corporation without non managerial principal

investors. They also found profitability and size were found positively related to leverage and risk was negative impact of market value and the fraction of equity held by dominant managerial insider and the fraction of equity held dominants to the leverage. In publicly held corporations this statistics was found less negatively related.

Rajan and Zingales (1995).In their study, investigated the determinants of capital structure choice by analyzing the financing decisions of the public firm in the major industrialized countries, the G7. Their cross sectional study was based on total 4557 non-financial firms from 1987 to 1991. They studied extent of leverage in different countries with different measures of leverage. As in earlier studies, they focused on four factors as determinants of capital structure, viz.; tangibility of assets, investment opportunities (growth), firm size and profitability. The basic econometric model they used to estimate cross–sectional determinants of capital structure was as follows:

Leverage [Firm i] = $\acute{\alpha}$ + β_1 tangible assets +β_2 market to book ratio +β_3 log sales +β_4 return on assets + β_4

However the authors used four proxies for leverage. On an average, they observed Germany and United Kingdom as lowest. The ratio of long term debt plus short term debt to total assets for Germany was 16%; for UK was 18% ;and for other countries the statistics was around 30 %. However the total leverage ratio (non equity liabilities to total assets) figures were significantly high for those countries, among others.

In their study the authors found that the tangibility of assets and the size were positively related to leverage and growth opportunities and profitability were negatively related to leverage. Italy was the cause of exception here any of these statistics were not statistically significant. They also observed that firm in which the state has a majority ownership appeared to have higher leverage (p.1735).

From their cross-sectional study the concluded that factors influencing capital structure in US f are important in other G -7countries, however the institutional context influences the capital structure decision. Leverage ratios they observed across the countries were not consistent early studies because of different measures of leverage, adjustment in accounting differences and varying in databases.

Perhaps the study of Boot et al.(2001) is first of its type, which focuses on capital structure in developing countries. By using new data set they assessed capital structure theory across the developing countries with different institutional structure. They analyzed capital structure choice of firms in 10 developing countries (India, Pakistan , Thailand, Malaysia, Turkey , Zimbabwe, Mexico, Brazil ,Jordan and Korea) by using both firm specific attributes and macroeconomic indicators . In their empirical model, leverage ratio as dependent variable was measured with three proxies; total debt ratio (total liabilities to total liabilities plus net worth), long term book- debt ratio (total liabilities minus current liabilities plus net worth),and long –term market –debt ratio (total liabilities minus current liabilities divided by total liabilities minus current liabilities plus market value of equity). The tax (average tax rate), business risk (standard deviation of EBIT), tangibility of assets (total assets minus current assets to total assets ratio), market –to –book ratio (market value to book value of equity) were used as firm specific explanatory variables whereas stock market value /GDP, liquid liabilities /GDP ,real GDP growth rate , inflation rate and miller tax term were used as macroeconomic explanatory variables.

By running separate models to test the significances of firm specific and macroeconomic variables, the authors arrived in following findings and conclusions:

Profitability was found the most successful independent variable and negatively related to leverage. In overall, the size and tangibility were

observed to be positively related with leverage ratio. The results of risk variable were mixed.

They also found that there was Miller tax advantage over equity in most of these developing countries (p.96).The statistic was significant.

The macroeconomic influences over capital structure were observed as , with some statistical limitations , all three measure of leverage ratio vary negatively with the equity market capitalization ; except for the long -term market-debt ratio , the debt ratios vary positively with the proportion of liquid liabilities to GDP (p.98); the real economic growth tends to increase total debt ratio and long-term book-debt ratio ; and higher inflation leads to decrease such ratios.

The debt ratio in developing countries was found comparatively lower than advance economy countries (G-7) and the long-term debt ratio was observed significantly lower in developing countries.

From their cross-country study , the authors concluded that the debt ratios in developing countries seem to be affected in the same way and by the same types of variables that are significant in developed countries however in developing countries , they have low long-term debt. Also, there are systematic difference in the way these ratios are affected by country factors, such GDP growth rates, inflation rates and the development of capital markets (p.118). They also noted that the origin of the country is as important as size to determine the leverage. However, their study has shed light on capital structure in developing countries. In their study there were some methodological limitations of data sources (p.199) and less significant of empirical estimates (p.118)

Other studies:

Some recent studies have focused country specific determinants of capital structure. Bhaduri (2005) studies the capital structure determinants of Indian

corporate sectors and found that growth, cash flows, size and product and industry characteristic were important determinants of capital structure , however the result of estimates were mixed for different models . Casser and Holmes (2008) examined the capital structure and financing for small and medium size enterprises of Australia and found that profitability , assets structure were negatively positively related and there was no consistency on risk estimates. The study further, concluded that factors affecting large firms are equally applicable to small and medium size firms .Vasiliou et al.(2009), their study of Greek firms found that assets structure and size were positively related to leverage and profitability was negatively related to leverage.

Gaud et al.(2005), following the same methodology of Ozkan (2010),studied 104 non-financial firm listed in Swiss stock exchange. They found size and asses structure positively related to leverage and profitability and growth were found negatively related to leverage. Financial distress cost was observed positive but statistically not significant. The speed of adjustment coefficient was observed less than 0.20

2.2.2. Review of Nepalese studies

There is scarcity of studies in Nepalese context. Most of the early studies were clustered around capital structure pattern of public enterprises. Shrestha (1985) in his study, by applying ratio analysis, observed that there were low capital earning and even unbalance pattern of capital structure in PES. Shrestha (1993) in her study of listed companies found that most of the companies were more levered however the profitability was negative and interest payment on debt was serious issue. She, further, concluded that most of the PEs has no transparent capital structure and company's adhockly determined their capital structure without realistic parameters.

Pradhan and Ang (1994), in their study, surveyed 78 major enterprises, including 24 public enterprise of Nepal , focusing on fiancé functions , sources and types of financing , effects of taxes on capital structure decision ,

financial distress and dividend policy . in their extensive survey of top level executives , the authors observed that working capital function was most important followed by capital structure decision function, whereas, the agency relation function was least important. They further observed that bank loan and retained earnings were the two most widely used sources of financing. The retained earnings were most preferred sources of financing because of its lower cost. This evidence is in line with pecking order hypothesis (Myers and Majluf, 1984). The average debt ratio was observed 38%. The authors also observed that there was no definite time to borrow and issue stock; however the enterprises preferred for bank loan at lower level of debt because of flexible in interest rate and loan covenant .The authors further observed that enterprise would increase the debt level I response to increase in tax rate .The respondents in their study signaled for target debt ratio. Bank loan was found as major sources of financing in case of shortage of cash. The default probability of the enterprises was found 14%.

Pradhan (1994), in his study of financial distress in Nepalese organizations observed that government policy , problem of raw materials , power, skilled labor and poor management were the major causes of financial distress. In his study, the signals of financial distress as perceived by the respondents were decline in capacity utilization, and decline in quality of products and services. The author further observed that persistent shortage of cash and default in payments to suppliers, employees; banks etc. were important symptoms of financial distress. The author suggested taking various steps such as to provide soft loan to industries under financial distress, to merge units under financial distress into healthy ones, to change management, and to make various institutional arrangements for industries under financial distress. In the same regard, the study by Pradhan et al. (2002) was analysis of financial distress cost in Nepalese public sector. The authors collected data from 1997 to1999 and used portfolio analysis and econometric analysis. The authors observed that more than 50% public enterprises were in loss; labor productivity and debt coverage ratios were deteriorated by increased financial distress; the

profitability and liquidity were lower in financially distressed enterprises; and the return on equity , liquidity , labor productivity and debt capacity were also lower in financially distressed enterprises. The authors further found that there was lack of legal frameworks to corporate restructuring. However, these studies were focused on financial distress (bankruptcy) aspect of capital structure; other aspects of capital structure remained unexplored.

K.C (1994) in his study of 37 large and medium size joint stock companies found significant positive relationship f long-term debt with growth , assets structure and age of incorporation (cit. from Baral,1999,p.112), in his study of 15 listed companies and 20 PEs for 1983-1992, concluded that size , profitability , growth , assets structure and cash flow variability have the influence on the capital structure (cit. from Baral,1999,p.112-113). He observed that size and growth were positively related to leverage for both listed companies and PEs. Baral(1996) in his study of capital structure and cost of capital of PEs by using Pearson's correlation analysis , found positive relationship of leverage with growth opportunities, profitability , non- debt tax shield (statistically not significant), interest coverage ratio and operating cash flows ; and negative relationship of leverage with business risk . He further concluded that the capital structures public enterprises are not sound; debt capital has not been raised to reap advantages of leverage.

Beside this, some authors have examined the relationship of capital structure and cost of capital, by using econometric models, of particular firm or comparative study across the firms or the industries. Among others , in comparative study between trading and manufacturing sector and banking and financial sector , Ghimire (1999) observed negative relationship of average cost of capital with leverage , size, growth, payout ratio and positive relationship with earning variability and liquidity in trading and manufacturing sector . However , he further observed positive relationship of average cost with leverage , growth, earning variability and liquidity and negative relation with

size and payout ratio in banking and financial section. Surprisingly, none of his estimates was statistically significant.

2.2.3. Concluding Remarks

The debt has tax shield value, which helps to maximize the value of the firm, ceteris paribus, is no more subject of debate in finance literature. However, how companies finance their financing requirements and what factors stimulate to prefer particular class of securities is one of the controversial issues. Different models of capital structure theories explain this cross- sectional variation from different perspective. In corporate finance, the academic contribution of Modigliani and Miller (1958, 1963) about capital structure irrelevance and the tax shield advantage paved the way for the development of alternative theories and a series of empirical research initiatives on capital structure. The alternative theories include the trade-off theory, the pecking order/asymmetric information theory and agency theory. All these theories have been subjected to extensive empirical testing in the context of developed countries, particularly the United States (US). A few studies report on international comparisons of capital structure determinants (Rajan & Zingales 1995; Wald 1999); and there are some studies that provide evidence on the capital structure determinants from the emerging markets of South-East Asia (Annuar & Shamsher 1993; Ariff 1998; Pandey, Chotigeat & Ranjit 2000; Pandey 2001). The recent focus of corporate finance empirical literature has been to identify some 'stylized' factors that determine capital structure.

Empirical literature on capital structure finds many variables as its determinants. For example, in a comprehensive comparative cross-country study, Rajan and Zingles (1995) find growth, tangibility (fixed assets to total assets ratio), and profitability and size is important determinants of capital structure. Many other studies (Castanias 1983; Bradley, Jarrell & Kim 1984; Titmaan & Wessels 1988; Barclay & Smith 1996; Pandey, Chotigeat & Ranjit 2000; Pandey 2001) also show risk and investment opportunity as important determinants of debt policy.

Profitability is an important independent variable that has an influence on capital structure. As per the asymmetric information hypothesis of Myers (1977) and Myers and Majluf (1984), firms, irrespective of their market power, would depend on internally generated funds for their expansion since external funds involve higher costs. This suggests a negative relationship between capital and profitability, which results of empirical studies support (Kester 1986; Friends & Lang 1988; titman & Wassels 1988; rajan and Zingales 1995; Michaelas, Chittenden & Poutziouris 1999). The alternative interest/tax shield hypothesis (Modigliani & Mille 1963) predicts a positive relationship between capital structure and profitability. Jensen (1986) and Williamson (1988) consider debt as a disciplining mechanism to ensure that managers pay out profits rather than building their personal empires. The Jensen's study predicts that more-profitable firms will employ higher debt and will implement a high-output strategy. Given these conflicting hypothesis, it is plausible to predict a non-linear relationship between capital structure and profitability. Firm at lower levels of profitability would employ more internal funds since external funds are expensive and non-debt tax shields (such as depreciaton) may be more than enough to take advantage of tax benefits (DeAngelo & Masulis 1980). According to Myers' option model and the pecking order hypothesis of Mayers and Majluf (1984), firms with high growth should use less debt. The trade-off theory also arrives at a similar prediction. According to Pandey (2004) Size and tangibility are found to have a positive influence; and growth, risk (systematic) and ownership have a negative influence on capital structure.

Based on the survey of literature some variables are identified as influencing factors determining firm's capital structure. These are: collateral value of assets, growth opportunities, profitability, asset structure, firm size, and volatility of income, and non debt tax shield which includes depreciation, tangibility, uniqueness, reputation, ownership structure, investment tax credit.

The notion of optimal capital structure as suggested by trade off theory advocates that the increasing debt in one hand increases the tax shield benefit

but on the other hand increasing debt increases bankruptcy costs and agency costs .Therefore, optimal capital structure exists in moderate level of leverage. From the behavioral aspect, pecking order theory advocates that managers prefer internal financing than debt and external equity. The empirical works in foreign countries reviewed above have supported either or both of these aspects. In case of Nepal , among other studies, Pradhan and Ang (1994) and Pradhan et al. (2002) studies were focused on financial distress(bankruptcy) aspect of capital structure and other aspect of capital structure remained to explore. There is also lack of study, which encompasses the relevance of capital structure theories in Nepalese context and factors influence on capital structure decision. This study, therefore test the capital structure hypotheses concerning capital structure determinants in Nepalese context. Furthermore, this study explores on capital structure pattern in Nepalese firms and shows some prospect for future financing decisions.

CHAPTER THREE

RESEARCH METHODOLOGY

Research methodology is important to carry out a research, which describes the entire methodological approaches employed in the study. Methodology refers to an overall plan for the collection and analysis of data. The methodology serves as a framework, which focuses on the data collection, methods, analyzing and evaluating data to derive the conclusion. Therefore , this chapter focuses on research design, nature and sources of data, selection of samples, method of analysis and the methodological limitations of this study and described in consecutive sections.

3.1. Research Design

Research design is the plan structure and strategy of investigation conceived so as to obtain answer to research question and control variables. The research design serves as a framework for the study, guiding the collection and analysis of the data. This empirical study attempts to analyze the capital structure patterns and determinants of Nepalese firms. It tries to analyze and describe the magnitude and direction of relationship between leverage (dependent variables) and firm specific attributes viz; non- debt tax shield, assets structure, profitability, firm size, growth opportunities and earning volatility (independent variables). This study is based on fact finding operation and surveys. Hence, this study has followed descriptive research design. Furthermore, it also follows the casual comparative research design as it seeks to determine the cause and effect relationship of dependent variable with independent variables.

3.2. Nature and Sources of Data

This study is based on accounting data of firms listed in Nepal Stock Exchange limited (NEPSE) for the period of 2004-2011. The required data have been collected from annual reports and financial statements of the firms available in securities Board (SEBO) database and NEPSE database. Hence, this study

mainly relies on secondary data. However some data have also been collected from primary sources. The opinions of financial managers; company secretaries, middle level business executives and directors have been surveyed by using direct personal interview schedule. The interview was conducted during March- April 2012 in Kathmandu.

Primary source

A questionnaire, consisting of 11 mixed questions relating to the capital structure or leverage, were distributed to 25 financial executives and persons who were somehow engaged in financial decision making of business firms and 25 to academicians. The structure questionnaire is as presented in the appendix. The respondents are not expected only from the enterprises that are selected for purpose of this study. The objective of information from primary source is to examine the views of the Nepalese financial executives and academicians relating to capital structure management in a firm .Therefore, the respondents are chosen from other than manufacturing sector also .The questionnaire has been distributed by visiting personally to the concerned respondents and collected after they are being filled.

Secondary sources

Secondary data consists of the abbreviated balance sheet and profit and loss account (income statement) of the selected enterprises for this study. Those required balance sheet and profit and loss account will be collected from either visiting to the concerned firms or Nepal Stock Exchange and Security Board of Nepal.

3.3. Selection of firms

Among the firms listed in NEPSE for the period of 2004 to 2011, bank, finance companies and insurance companies are excluded from the sample. This is motivated by the fact that such firms do not provide a good platform for study of capital structure.

Table 3.1

Firms Selected for the Study

This table shows the details of the organizations selected and period covered of this study analysis.

S.N.	Name of the listed companies	study period
1.	Bottlers Nepal ltd (Balaju)	2004-2011
2.	Nepal lube oil ltd	2004-2011
3.	Nepal Vanaspati ghee Udhyog ltd	2004-2011
4.	Nepal Bhitumin and Barrel Udyog	2004-2011
5.	Bishal bazar co. Ltd	2004-2011
6.	Salt Trading corporation.	2004-2011
7.	Soaltee Hotel Limited	2004-2011
8.	Nepal Doorsansar Company Ltd	2004-2011

3.4. Variables and Measures

Leverage : Following the Rajan and Zingales (1995),the ratio of book value of total debt to total assets is defined as leverage ratio and it is more appropriate definition of financial leverage (p.14290). Other two proxies are also considered in this study to analyze the debt composition on total capital structure viz.; the second proxy refers to the ratio of long term debt to total assets; and the third proxy refers to the ratio of short term debt to total assets. Therefore, leverage ratio (DR):

Total debt ratio (TD) =Total debt (short –term +long term)/Total assets

Long term debt ratio (LTD) = total long term /total assets

Short term debt ratio (STD) =Total current liabilities/Total assets

Table3.2

Variables and Their proxies

Variables	proxy Measures
Leverage Ratio	Total debt ratio (TD) =Total debt /Total assets Long term debt ratio(LTD)= total long term /Total assets Short term debt ratio (STD)=Total current liabilities/Total assets
Non-debt tax shield	Annual depreciation/ Total assets
Assets structure	(fixed assets +Inventories)Total assets
Profitability	EBIDTA/Total Assets
Size	In (sales)
Growth	Percentage change n sales
Volatility	Standard deviation of EBITDA.

Non-Debt Tax shield: As suggested by Titman and Wessels (1988), and following the ozkan (2001), the ratio of annual depreciation to total assets is taken as proxy for non debt tax shield. Therefore, Non debt tax shield (NDT) = Annual depreciation / Total Assets.

Assets structure: As suggested by Titman and Wesels (1988) an following the Gaud et al., (2005), the ratio of fixed assets plus inventory to total assets is considered as proxy for collateral assets .Therefore

Collateral assets structure (AS) = (fixed Assets + Inventories)/Total assets

Profitability : The ratio of earnings before interest, tax and depreciation, EBITDA to total assets is considered as proxy for profitability (Titman and Wessels, 1988; ozkan ,2001; and gaud et al., 2005).therefore ,

Profitability (PRO) = EBITDA/Total assets

Size: Titman and Wessels (1988) suggested natural logarithm of sales as indicator of size. In this study, as suggested by titman and Wessels (1988) the net sales have been taken. The net sales based on Rs. In Million have been transferred into natural log. Therefore

Size (SIZE) =ln (sales)

Growth : Many researchers have used ratio of book-to-market equity as proxy for the growth (Ozkan, 2001;and Gaud et al.,2005) but in this study due to the market value of equity is not available to most of the sample firms therefore as suggested by Titman and Wessels (1988), the growth rate of sales is considered as the proxy for growth . And it is simple arithmetic growth rate. Therefore,

Growth (GW) $=S_t - S_{t-1}$

Where

S_t =current year sales

S_{t-1}=previous year sales

Liquidity: As suggested by Ozkan (2001), the ratio of current assets to current liabilities has been chosen as proxy for liquidity. Therefore

Liquidity (CR) =Current Assets / Current liabilities

Volatility : As suggested by Titman and Wessels (1988), the proxy to the volatility is the standard deviation of the percentage change in operating income and it is the single value for the all years (Booth et al ., 2001,p.101).therefore,

Volatility (RISK) =Standard Deviation of EBITDA

Besides above variables, some other variables have also been used and they are described under respective method of analysis in section 5 below.

3.5. Data Presentation and Method of analysis:

Method of analysis is an important part in research work. The careful study of available facts for proper understanding of data and extraction of the conclusion from them on the basis of established principles and sound logic is Analysis.

The analysis of data requires a number of closely related operations such as establishment of categories, the application of these categories to raw data through collecting, tabulation and then drawing statistical interlays. On the basis of research problem and objectives of the study data and information needed is identified and collected. The collected data are properly processed and arranged in the form of the table for simplicity. Financial and statistical tools have been used for analysis and interpretation of arranged data. For this purpose, statistical tools such as Karl Pearson's coefficient of correlation and regression analysis have been calculated to see the relationship between various variables. Likewise, some financial tools such as ratio analysis and trend analysis have been used. For quantitative analysis and calculation of correlation and regression SPPS software is used.

3.6. Development of hypothesis

In this empirical study only seven of these variables non debt tax shield, tangibility of assets (assets structure), profitability, firm size, growth, liquidity

and volatility of cash flow are used as independent variables. Uniqueness of the product is dropped due to unavailability of proxy as suggested by titman and Wessels (1988) .The measurement of proxies for these independent variables and dependent variable are discussed in research methodology chapter.

Table 3.3

Testable hypotheses of capital structure determinants

Attributes	hypothesized sign to leverage	
	Trade of hypothesis	pecking order hypothesis
Non debt tax shield	_	
Assets structure	+	_
Profitability	+	_
Firm size	+	_
Growth	_	+
Liquidity	+	_
Risk	_	_

From the theoretical framework discussed above, based on trade off theory of capital structure the following hypotheses were developed for this study

Non debt tax shield is negatively related to the leverage. Larger the non-debt tax shield, the lesser will be the leverage (De Angelo and Masulis, 1980)

The tangible assets are positively related to the leverage. The higher the proportion of fixed tangible assets, the higher will be the leverage (De Angelo and Masulis, 1989)

Profitability is positively related to the leverage. There is positive relationship between profitability and leverage (Harris and Raviv, 1991; Rajan and Zingales 1995; Booth et al., 2001).

The firm size is positively related to the leverage .The size has a positive impact on the supply of the debt (Jensen, 1986; Easternbrook, 1986; Rajan and Zingales, 1995).

The growth opportunities are negatively related to the leverage. The firms with high growth opportunities are limited to use of debt as the case of bankruptcy (Titman and Wessels, 1998; Gaud et al., 2005).

The liquidity is positively related to leverage. The higher short-term debt tends to increase leverage ratio (Ozkan, 2001).

The cash flow volatility is negatively related to the leverage. Firms with relatively higher operating risk will have incentives to have lower leverage (Myers, 1977; DeAngelo and Masilis, 1980).

Nepalese firms are less levered and the long-debt ratio is low. Developing countries are comparatively less levered than developed countries and have substantially lower amount of long-term debt (DemirgueKunt and Maksimovic, 1999; booth et al .,2001)

3.7. Financial Analysis Tools:

To evaluate the performance of any organization financial tools are very useful to determine the strengths and weakness of a firm as well as its historical performance and current financial condition. Ratio is an important analytical tool to summarize the large quantities of data and to make quantitative judgments about organization. The financial tools employed in this study basically represent ratio analysis, leverage analysis and EBIT-EPS analysis and others.

Ratio Analysis:

Ratio Analysis is a useful tool for financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions and as relationship between two or more things. Therefore, it is used as an index or yards stick for evaluating the financial position and performance of a firm.

In the view of the various analysts of ratios, we may classify them into the following four categories:

i. Liquidity ratios
ii. Leverage or Capital Structure ratio
iii. Activity ratios
iv. Profitability ratio

- Liquidity ratios measure the firm's ability to meet current obligations.
- Leverage ratios show the proportions of debt and equity in financing the firm's assets. This ratio is also known as debt management ratio.
- Activity ratios also known as assets management ratios measures how effectively the firm is managing its assets.
- Profitability ratios measure the overall performance and effectiveness of the firm. It is the net result of a large number of policies and decisions. These ratios show the combined effects of liquidity, asset management (activity ratio), and leverage ratios on operating results.

3.8. Statistical Analysis Tools:

Many statistical stools are often employed in the analysis and interpretation of data as an aid to management and to meet the objectives of the study. Following statistical tools are used more systematically in this chapter:-

- Coefficient of correlation
- Regression Analysis

To avoid ambiguity, confusion and misunderstanding the key terms used in this study have been defined as follows:

Coefficient of correlation

The term correlation indicates the relationship between two such variables in which with changes in the values of one variable the values of other variable also change.

In this study, correlation coefficient is used to measure the relationship between the two variables of each type of companies. Here, the financial ratios are used to show their general relationship between them. The correlation coefficient is denoted by 'r' and can be calculated by using following formula:

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

Where, N = No. of observations of X and Y

ΣX = Sum of the observations in series X

ΣY = Sum of the observations in series Y

ΣX^2 = Square of the sum of the observations in series X

ΣY^2 = Square of the sum of the observations in series Y

ΣXY = Sum of the product of the observations in series X and Y.

Regression Analysis:

Regression analysis is used to develop an estimating equation that is mathematical formula that relates the known variable to the unknown variable.

It is a statistical tool used to determine the statistical relationship between two or more variables and to make estimation of one variable on the basis of other variable. 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. Averages are the measures, which condense a huge unwieldy data into single value which represents the entire data. It's value lies between two extreme observations, i.e. the largest and the smallest items. 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 variable affect the values of dependent variable estimate. In this study, regression coefficient is calculated for selected dependent and independent variable specified in the model. The formula for regression coefficient can be calculated as follows:

$$b = \frac{n\Sigma XY-(\Sigma X)(\Sigma Y)}{n\Sigma X^2-(\Sigma X)^2}$$

$$a = \frac{\Sigma Y-b(\Sigma X)}{n}$$

The equation of regression line is $Y= a + bX$

Where,

Y = Dependent variable

X = Independent variable

b = Slope of regression or Regression co-efficient

a = Regression constant

trend may be upward. On the other hand, though the present level may be satisfactory, the trend may be a declining one. Thus, trend analysis is of great significance to the study.

In this study, the different ratios related to capital structure have been used and analyzed. It has served as auxiliary on other different method of analysis. In this study, among others, following ratios has been used:

Return on assets = Net profit after tax /Total Assets

Time-interest earn ratio =EBIT/Interest

Current ratio=current assets / current liabilities

Assets turnover ratio =Total sales /Total asset

3.9. Definition of key terms

The annual report of the firms is in specific standard accounting format and some accounting conceptual differences are there in annual reports across the firms. However, the database of NEPSE has its own specific format .Therefore, it is better to define accounting key terms used in this study to avoid misunderstanding.

Sales: Sales means trading sales only and it does not incorporate miscellaneous income or income from other sources. In case of service firms, sales means income from specific service they are stand mainly to provide that particular service.

Operating income and Earnings before income and taxes: Operating income means before tax income except income from other sources where as EBIT simply refers to net earnings before interest and taxes.

EBITDA: This variable is EBIT plus depreciation, which simply measures the operating cash flow.

Fixed assets: The fixed assets of the firms consist of ordinary fixed assets like land and building, plant and machinery , fixture and furniture etc. it is the net fixed asset that is fixed assets after depreciation adjustment .The fixed assets used in this study excludes the investment and under construction capital expenditure.

Total Assets: Total assets are the sum of total fixed assets including investment and capital expenditure and current assets. The current assets incorporate general accounting variables inventories, receivables, cash and marketable securities and miscellaneous current assets

Long term debt: Long-term debt means secured and unsecured mid- term and long- term loan i.e. loan having more than one is term period. It includes bank loan and debentures. Long -term debt is also denoted as deferred liabilities.

Short-term debt: In this study, the total current liability is used as short-term debt, which includes loan and advances, creditors, misc. short-term liabilities and provision for taxation

Total debt: In this study total debt sum of long-term debt and short-term debt as described above

Depreciation: Depreciation means the annual depreciation on fixed assets.

3.10. Limitation of the study

This study holds some methodological and conceptual limitation, which are as follows:

- The data are collected from listed companies, and this study covers the period of 8year data from 2004 to 2011.
- The information from primary sources is based on the responses from 50 respondents only.

- This study mainly relies on the secondary data, which are collected from annual financial statements. Hence the study suffers from all those limitations that are associated with annual financial statements.
- For quantitative analysis, SPSS software programs have been used. Hence the limitations of these programs are inherent.
- There is abundant literature in capital structure theories including hundreds of empirical studies; this study was not able to review all those literature.
- This study is focused on determinants of capital structure and capital structure patterns. This study does not shed light on cost of capital, which is another most important parameter of capital structure theory.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

Capital structure decision involves the choice of optimal mix of debt and equity, which optimize the value of the firm under the given contextual or institutional framework. The firms may follow different approaches while managing capital structure. The capital structure theories provide basic guidelines in the respect however, a particular theory will not sufficient to deal with these issues. On one hand, macroeconomic scenario plays significant role, while on the other hand the internal firm specific factors are in the first instance.

For the presentation and analysis of secondary data this chapter is sub-divided into six sections. Section 1 of this chapter shows the descriptive statistics (Mean and standard deviation) of variables, while section 2 presents correlation coefficients. Section 3 analyzes the determinants of capital structure all the selected companies. Section 4 presents the determinants of capital structure in manufacturing companies only. Section 5 shows the determinants of capital structure in non-manufacturing companies only. Section 6 shows the concluding remarks.

4.1 PRESENTATION AND ANALYSIS OF SECONDARY DATA

4.1.1 Introduction

Both theoretical and empirical capital structure studies have generated many results that attempt to explain the determinants of capital structure of the firms. As a result of these studies, some of capital structure determinants have emerged. Titman and Wessels (1988) argued that the interpretation of results must be tempered by an awareness of the difficulties involved in measuring both leverage and the explanatory variables of interests

In order to determine which of the capital structure determinants are relevant in the Nepalese context, seven key variables as indentified by Titan and Wessels(1988), Rajan and Zingales (1995), and Bevan and Danbolt (2002) have been chosen. The selected explanatory variables are collateral value of assets; non-dent tax shield; growth opportunities firm size; volatility of earnings; profitability and liquidity. The study by Rajan and Zingales (1995) suggested that the level of leverage is positively related to size of the firms and tangibility of the assets while it is negatively related to profitability and the level of growth opportunity. The empirical studies however, have reported conflicting results. Korajczyk and Levy (2003) argued that both macroeconomic conditions and firm specific factors have an effect on firs financing choices. Antoniou et al, (2002) find the capital structure decision of firms is not only affected by its own characteristics, but also by its surrounding environment. The surrounding environment may affect the capital structure for different reason, such as. The deterioration or the improvement in the state of economy, the existence of a stock market and the size of banking sector.

The arguments put forth by Myers and Majluf (1984) suggested that the firms with assets that can be used as collateral may be expected to issue more debt. Thus, the positive relationship between leverage and collateral value of assets is expected. The higher the collateral value of assets, higher would be the leverage. DeAngelo and Masulis (1980) presented a model of optimal capital structure that incorporates the impact of non debt related corporate tax shield. They argued that tax deduction for depreciation and amortization are substitute for the tax benefits of debt financing. As a result, firm with large non debt tax shield relative to their expected cash flow include less debt in their capital structure thus a negative relationship between depreciation and leverage is expected.

The static trade-off theory of capital structure states that optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs such as bankruptcy .Um (2002) suggested that a high

profit level gives rise to a higher debt capacity and accompanying tax shields. Hence, it is expected that a positive relationship should exist between profitability and financial leverage. Firms with high levels of tangible assets will be in a position to avoid bankruptcy because of high level of tangible assets. Therefore, it is expected that the companies with high levels of tangible assets are less likely to default and will take on relatively more debt resulting in a positive relationship between tangibility and financial leverage.

While the majority of empirical studies in developed countries (Titman and Wessels,1988; Rajan and Zingales, (1995) find a positive relationship between tangibility and leverage, the empirical studies in developing countries find mixed relationship. For instance , whilst the work of Wwattanakantang (1999) in Thailand, and work of Um(2001) Korea report a positive relationship between tangibility and leverage , other studies such ad Booth et al ,(2001)in ten developing countries , and Huang and song (2002)in china find that tangibility is negatively related to leverage . It is argued, however, that this relation depends on the type of debt. Nuri (2000) argues that companies with a high fixed assets ratio tend to use more long term debt. Bevan and Danbolt (2000 and 2002) also find a positives relationship between tangibility and long term debt, whereas a negative relationship is observed for short term debt and tangibility.

As suggested by Titman and Wessels (1988), the cost associated with agency relationship is likely to be higher for firms in growth industries, which have more flexibility in their choice of future investments .the expected future growth should thus be negatively related to leverage of the firm.

A number of authors have suggested that leverage may be related to firm size. Ang, Chua, and McConnell (1982) provided evidence that bankruptcy costs appear to constitute a large proportion of a firm's value. It is also the case that relatively large firms tend to be more diversified and less prone to bankruptcy. These arguments suggest that large firm should be more highly leveraged.

Thus, greater the size higher would be the leverage and positive relationship is expected between size and leverage.

Antoniou et al,(2002) argued that the size of a firm is a good explanatory variable for its leverage ratio. Bevan and Danbolt (2002) also argued that large firms tend to use more debt,because they are regarded as being 'too big to fail'. The large firms are able to use more debt as compared to small firms. The empirical studies find mixed evidence. Wiwattanakantang (1999) ,Booth et al ,(2001), Pandey (2001), AL-Sakran (2001), and Huang and song (2002) find a significant positive relationship between leverage ratio and size of the firms in developing countries. While Rajan and Zingales (1995) find a positive relationship between size and leverage in G-7 countries, Titman and Wessels (1988) report a positive correlation between the size of the firm and the total debt ratio and the long term debt ratio. On the other hand, Bevanand Danbolt (2002) report that size is found to be negatively related to short term debt and positively related to long term debt.

Information Asymmetry theory of capital structure assumes that firm managers or insiders possess private information about the characteristic of the firm's return stream or investment opportunities, which is not known to common investors. In an attempt to explain some financing behavior that is not consistent with the prediction of static trade off theory (such as negative relationship between profitability and leverage), Myers (1984) emphasizes that internal funds and external funds are used hierarchically. Brealey and Myers (1984) have suggested that firms prefer raising capital, first from retained earnings, second from debt, and third from using equity. They also suggest that this behavior may be due to the cost of issuing new equity and the amount of retained earnings available to be retained should be an important determinant of leverage of the form. Firms with high profitability and retained earning use less amount of debt capital in their capital structure. Thus a negative relationship is expected between profitability and leverage

The agency cost theory of capital structure states that agency cost arise due to a conflict of interest between debt providers on one side and shareholders and managers on the other side (Jensen and Meckling,1976). Managers have the motivation to invest funds in risky business for shareholders interest, because if the investment fails, the lenders are likely to bear the cost as the shareholders have limited liability. The use of short term debt however may mitigate the agency problems as any attempt by shareholders to extract wealth from debt holders is likely to restrict the firm's access to short term debt in the immediate future.

Titman and Wessels (1988) point out that the cost associated with the agency relationship between shareholders and debt holders are likely to be higher for firms in growing industries hence a negative relationship and financial leverage is likely. Consistent with these predictions, Titman and Wessels (1988), Chung (1993), and Rajan and Zingales (1995) find a negative relationship between growth and the level of leverage on data from developed countries. Um (2001), however suggest that if a firm's level of tangible assets is low, the management for monitoring cost reason may choose a high level of debt to mitigate equity agency costs. Therefore, a negative relationship between debt and tangibility is consistent with and equity agency cost explanation (um, 2001).Um also argues that firm size may proxy for the debt agency costs (monitoring costs) arising from conflicts between managers and investors.

Many authors have included a measure of risk as an explanatory variable of the debt level (Titman and Wessels, 1988; Kremp et al., 1999; Booth at al., 2001). Leverage increases the volatility of the net profit. Firms that have high operating risk can lower the volatility of the net profit by reducing the level of debt. By so doing, bankruptcy will decrease, and the profitability of fully benefiting from the tax shield will increase. A negative relation between operating risk and leverage is also expected from a pecking order theory perspective; firm with high volatility of results try to accumulate cash during good years, to avoid under investment issues in the future.

Liquidity ratios may have a mixed impact on the capital structure decision. First, firms with higher liquidity ratios might support a relatively higher debt ratio due to greater ability to meet short term obligations when they fall due. This would imply a positive relationship between a firm's liquidity position and its debt ratio. On the other hand firms with greater liquid assets may use these assets to finance their investments. Therefore the firm liquidity position should exert a negative impact on its leverage ratio. Moreover, as Prowse (1990) argues, the liquidity of the company's assets can be used to show the extent to which these assets can be manipulated by shareholders at the expense of bondholders. Therefore, the positive effect of the liquidity position of the firm on its leverage ratio is expected.

4.1.2 Analysis of Secondary Data

This study is based on the secondary data, which have been collected from Nepal stock Exchange (NEPSE) and the Securities Board of Nepal. The required data for the selected companies covering a period of 8 years, i.e., from 2004-2011 have been collected from NEPSE. The sample contains 8 trading and manufacturing companies listed in the Nepal Stock Exchange. The available data have been arranged in pooled cross section in other to mitigate the effect of missing of data of some year in selected companies.

4.1.3 Descriptive Statistics Analysis

Since the descriptive statistics are powerful tools to have ideas of distributions of the variables, some of the most frequently used statistics, like minimum values, maximum values; mean and standard deviation, for the variables chosen in this study have been analyzed and presented in the table 1. Table 1 contains summary of descriptive statistic of the various variables chosen in this stud for the total period of 7 years from 2004-2011 of selected company

Table 4.1

Total debt to total assets ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	57	45	92	85	82	104	126	15	63	30
NKUL	19	16	16	15	18	13	16	18	16	8
STC	105	103	115	120	121	157	178	182	135	30
BBCL	15	15	15	13	14	15	16	15	15	0.76
NVGL	12	101	113	103	110	155	176	123	116	45
UNL	169	172	165	171	158	162	170	172	166	6
SHL	0.9	0.7	0.7	0.73	0.7	0.7	0.66	0.67	0.74	0.07
TRHL	62	61	63	53	44	49	41	49	53	8
Mean	55	64	73	70	68	82	93	72		
Sd.(σ)	54	54	55	56	53	66	75	71		

The average total leverage ratio is largest for UNL, followed by STC, NVGL, BNL, TGRH, NKUL, BBCL and SHL. And largest standard deviation for NVGL followed by BNL, STC, TGRH, UNL, NKUL, BBCL, and SHL. Similarly, the average total leverage ratio is lowest for SHL followed by BBCL, NKUL, TRHL, BNL, STC, NVGL and UNL.

Table 4.1 indicates that the total leverage ratio varies widely within the individual enterprises also. It varies from 15 percent to 126 percent for BNL, 13 percent to 19 percent for NKUL, 105 percent to 182 percent for STC, 13 percent to 16 percent for BBCL, 12 percent to 176 percent for NVGL, 158 percent to 172 percent for UNL, 0.6 percent to 0.74 percent for SHL and 41 percent to 63 percent for TRHL. Thus the variation in the ratio of total debt to total assets is lowest for SHL followed by BBCL, NKU, TGRH, BNL, STC, NVGU and UNL.

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 year. And the largest standard deviation is NVGL followed by BNL, STC, TRHL, NKUL, UNL, and BBCL.

Table 4.2

Long term debt to total assets ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	57	45	92	85	82	104	126	15	76	33
NKUL	122	120	110	120	110	127	185	209	138	35
STC	57	19	19	23	24	24	25	24	49	57
BBCL	0	0	20	3	11	8	15	10	8	7
NVGL	105	102	101	85	53	95	98	92	91	16
UNL	24	23	25	22	21	24	24	21	23	1
SHL	0.012	0.028	0.012	0.019	0.018	0.016	0.013	0.015	0.016	0.050
TRHL	50	48	50	51	43	46	41	46	47	3
Mean	39	32	59	46	45	47	54	59		
Sd.(σ)	40	38	66	61	54	59	73	78		

The long term debt to total assets ratio varies widely within the individual enterprises. Table 4.2 shows that it varies from 15 percent to 126 percent for BNL, 19 percent to 57 percent for STC, 0 percent to 20 percent for BBCL, 53 percent to 105 percent for NVGL 43 percent to 51 percent for TRHL. Thus variation in long term debt to total assets ratio is the lowest for BBCL, followed by SHCL, BNCL, STC, TGRH, NKU, and UNL.

The average long term debt ratio is largest for NKUL followed by BNL, STC, UNL, TRHL, SHL and BBCL. The standard deviation is largest for STC followed by NKUL, BNL, NVGL, BBCL, TRHL, UNL and SHL

When the ratio of long term debt to total assets is compared over a period of time, it may be seen that the ratio has increased in the majority of the selected enterprises in recent year. And the standard deviation is largest for STC followed by NKUL, BNL, NVGL, BBCL, TRHL and SHL.

Table 4.3

Short term debt to total assets ratios for the selected companies (%)

Name	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Mean**	**S.D.**
BNL	0.052	0.067	0.032	0.057	0.032	0.05	0.071	0.032	0.0129	0.021
NKUL	0	0	0	0	0	0	83	93	72	69
STC	72	64	79	76	74	101	103	113	86	17
BBCL	0	0.012	0.051	0.025	0.023	0.06	0.052	0.031	0.015	0.016
NVGL	9	7	7	5	8	7	6	5	7	1
UNL	71	75	75	83	92	109	101	121	91	17
SHL	0.006	0.003	0.005	0.006	0.005	0.00	0.005	0.006	0.005	0.009
TRHL	8	5	6	6	6	6	5	6	6	0.94
Mean	20	19	21	21	23	28	50	79		
Sd.(σ)	30	29	32	34	35	45	66	29		

The average short term debt ratio is largest for UNL, followed by STC, NKUL TGRHL, SHL, BNL, BBCL, and NVGL respectively. Table 4.3 indicates that the short term leverage ratio varies widely within the individual enterprises also. It varies from 0 percent to 93 percent for NKUL, 64 percent to 113 percent for STC, 5 percent to 9 percent for NVGL, 71 percent to 109 percent for UNL and 5 percent to 8 percent for TRHL. Thus the standard deviation in the ratio of short term debt to total assets is lowest for BNL, followed by BBCL, SHL, THRH, STC and NKUL respectively

When the ratio of short term debt to total assets is compared over a period of time, it may be seen that the ratio has increased in the majority of the selected enterprises in recent years. And the standard deviation is largest for NKUL followed by STC, UNL, NVGL, TRHL, and BNL.

Table 4.4

Natural logarithm of Sales for the selected companies (Rs '000)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	21	21	21	21	21	21	22	22	20	23
NKUL	20	20	20	20	20	20	20	21	20	13
STC	22	22	22	21	21	21	21	22	22	21
BBCL	18	18	18	18	18	18	18	16	18	68
NVGL	17	17	17	17	18	17	18	17	17	24
UNL	19	18	19	19	19	20	19	19	19	39
SHL	16	15	15	16	15	16	15	15	15	20
TRHL	15	15	15	16	16	15	15	15	15	14
Mean	19	19	19	19	19	19	19	18		
1Sd.(σ)	2.34	2.31	2.16	2.27	2.21	2.26	2.38	2.66		

The average firm size, one of the chosen variables as determinant of capital structure and measured as the natural logarithm of sales of the firms, have been

observed as the average sales is largest for STC, followed by BNL, NKUL,UNL, BBCL, NVGL, SHL and TRHL. Similarly the average lowest sales for SHL&TRHL followed by NVGL, BBCL, BNL, NKUL and STC

Table 4.5

Book value of FA to total assets ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	45	33	75	85	67	77	83	100	70	20
NKUL	85	69	87	87	98	100	147	160	106	27
STC	55	19	77	76	84	85	75	63	67	21
BBCL	60	58	59	62	54	59	79	45	59	9
NVGL	72	68	63	77	84	79	62	52	70	10
UNL	75	72	77	75	86	83	75	62	76	7
SHL	33	32	32	32	22	31	22	32	29	4
TRHL	53	58	59	55	52	62	29	21	49	14
Mean	60	53	66	69	69	72	74	71		
Sd.(σ)	16	21	16	17	23	20	33	38		

The average book value of fixed assets to total assets ratio is largest for NKUL (106 percent), followed by UNL (76 percent), NVGL (70 percent), STC (67 percent), BBCL (59 percent), TGRL (49 percent), and SHL (29 percent). Similarly, the average book value of fixed assets to total assets ratio is lowest for SHL followed by TRHL, BBCL, BNL, NVGL, UNL and NKUL

Table 4.5 indicates that the book value of fixed assets to total assets ratio varies widely within the individual enterprises also. It varies from 45 percent to 100 percent for BNL, 69 percent to 160 percent for NKUL, 55 percent to 84 percent for STC, 54 percent to 60 percent for BBCL, 62 percent to 84 percent for NVGL, 62 percent to 86 percent for UNL, 22percent to 33 percent for SHL and 21 percent to 62 percent for TGRH.

Table 4.6

Current assets to current liabilities ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	68	56	84	81	96	90	87	81	80	12
NKUL	86	81	85	87	87	85	79	82	84	3
STC	105	7	106	107	0	106	106	101	92	34
BBCL	110	114	113	114	112	109	115	101	111	4
NVGL	19	18	18	12	19	19	19	20	18	2
UNL	106	101	107	102	112	106	106	101	106	3
SHL	130	126	127	126	127	128	128	128	127	3
TRHL	23	23	23	27	26	27	29	21	25	2
Mean	81	79	83	82	71	84	83	79		
Sd.(σ)	38	39	38	38	45	37	37	37		

The current assets to current liabilities vary widely within the individual enterprises. Table 4.6 shows that it varies from 56 percent to 96 percent for BNL.79 percent to 86 percent for NKUL, 0 percent to 106 percent for STC, 12 percent to 20 percent for NVGL, and 21 percent to 29 percent for TGRL

Thus the standard deviation in the ratio of current assets to current liabilities is lowest for TGRL & NVGL followed by UNL, SHL, NKUL, BBCL, UNL and STC.

When the ratio of current assets to current liabilities compared over a period of time for individual enterprises, it may be observed that the ratio has declined in the majority of the selected enterprises in recent years. Thus the standard deviation of current assets to current liabilities ratio is lowest for NKUL followed by TRHL, STC, BNL, UNL, and BBCL.

Table 4.7

Percentage in total assets ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	-2	-2	-11	-13	9	4	-3.27	8	-1	8
NKUL	-2	-2	-2.5	-3	-3	-3.5	-1	8	-2	4
STC	1	1.5	4	4	1	-1.5	0	-2	-0.95	2
BBCL	43	40	39	36	45	2.9	25	84	39	21
NVGL	1	1.5	1.60	-4	3	-1.5	0	10	1.5	4
UNL	2	1	1.50	-3	1	-1.5	0	-1	0.9	1
SHL	62	65	65	63	81	74	63	64	69	7
TRHL	49	41	41	48	49	51	53	51	50	2
Mean	19	21	16	15	23	16	16	25		
Sd.(σ)	25	23	26	27	29	28	26	33		

The average percentage change in total assets ratio is largest for 69 percent of SHL, followed by TGRL (50 percent), BBCL (39 percent), NVGL (1.5 percent) UNL (0.9 percent), STC (-0.95), BNL (-1) and NKUL (-2 percent)

Table 4.7 indicates that the percentage change in total assets ratio varies widely within the individual enterprises also. It varies from -13 percent to 9 percent for BNL, -3.5 percent to 8 percent for NKUL, -2 percent to 4 percent for STC, 2.9 percent to 84 percent for BBCL, -4 percent to 10 percent for NVGL, -3 percent to 2 percent for UNVL, 62 percent to 81 percent for SHL and 15 percent to 25 percent for TGRH. Thud the standard deviation of percentage change in total assets ratio is lowest for UNL followed by TRHL, STC, NKUL, NVGL, BNL and BBCL.

Table 4.8

Depreciation to total assets ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	9	8	9	9	8.5	10	10	11	9	0.8
NKUL	50	5	5	5	5	5	7	7	11	15
STC	0.5	6	3	5	9.5	9	10	13	5	5
BBCL	3	4	3	4	4	5	8	4	4	14
NVGL	0.1	0.3	0.5	3	6	8	13	13	5	1
UNL	2	3	3	5	10	9	12.5	12	7	5
SHL	3	3	3	3	4	8	6	2	3	4
TRHL	22	22	21	1	21	2	2	1	11	10
Mean	11	6	6	4	8	7	9	8		
Sd.(σ)	16	7	6	2	5	3	3.5	4		

The average depreciation to total assets ratio is largest for TGRH & NKUL (11 percent) followed by (9 percent) for BNL, (7 percent) for UNL, (5 percent) for STC, and (3 percent) for SHL. Similarly the average depreciation to total assets ratio is lowest for SHL followed by NVGL, STC, UNL, BNL, and NKUL & TRHL.

Table 4.8 indicates that the depreciation to total assets ratio low difference within the individual enterprises also. It varies from 8.5 percent to 11% for BNL, 5 percent to 50 percent for NKUL, 0.5percent to 13 percent for STC, 3 percent to 8 percent for BBCL, 0.1 percent to 13 percent for NVGL, 2 percent to 12.5 percent for UNL, 3 percent to 8 percent for SHL and 1percent to 22 percent for TGRH. Thus the standard deviation in the ratio of depreciation to total assets is lowest for BNL followed by NVGL, SHL, STC, TRHL, BBCL and NKUL.

Table 4.9

Selling and administrative expenses to net sales ratios for the selected companies (%)

Name	2004	2005	2006	2007	2008	2009	2010	2011	Mean	S.D.
BNL	29	28	35	32	33	28	22	25	29	4
NKUL	27	25	28	30	29	32	27	25	28	2
STC	82	92	91	91	91	93	90	0	78	3
BBCL	25	19	23	21	26	29	43	38	28	7
NVGL	85	95	93	92	82	77	90	83	87	5
UNL	92	81	91	90	92	92	90	70	87	7
SHL	25	21	21	25	26	41	39	31	28	7
TRHL	39	30	31	29	35	32	31	29	32	3
Mean	51	49	52	51	51	53	54	38		
Sd.(σ)	28	31	31	31	29	27	29	25		

The average selling and administrative to net sales ratio is largest for NVGL & UNL (87 percent) followed by STC (78 percent), TGRL (32 percent), BNL (29 percent), and NKUL, SHL, BBCL (28 percent), respectively. Similarly the average selling and administrative expenses ratio is lowest for NKUL, BBCL, SHL, followed by BNL, TRHL, STC, NVGL and UNL.

Table 4.9 indicates that the selling and administrative expenses to net sales ratio vary widely within the individual enterprises also. It varies from 22 percent to 35 percent for BNL, 25 percent to 30 percent for NKUL, 0 percent to 93 percent for STC, 19 percent to 43 percent for BBCL, 77 percent to 95 percent for NVGL, 70 percent to 92 percent for UNL, 21 percent to 41 percent for SHL and 29 percent to 35 percent for TGRH. Thus the standard deviation in the ratio of selling and administrative expenses to net sales is lowest for NKUL followed by TRHL, BNL, NVGL, and BBCL, UNL &SHL is same.

4.1.4. Correlation coefficient

As a measure of relation, the statistical technical of correlation analysis is used in analyzing the data. Table 4.10 shows the correlation coefficients among variables. Total leverage has significant positive correlation with SANG and significant negative correlation with GROW. Among two significant correlations the GROW and SANG are significant at 1 percent level of significant with total leverage. The four variables among six explanatory variables do not report significant correlation with total leverage. These results suggest that these two variables may be major determinants of capital structure.

The long term leverage also has significant correlation among only five explanatory variables. It has positive significant correlation (1 percent LOS, two-tail) with TANG. The positive correlation is also reported with NDTS (5 percent LOS, two- tail). The negative correlation is shown with SIZE (1 percent LOS, two-tail).the negative correlation is shown with LIQUI (1 percent LOS, two-tail). And the negative correlation is shown with GROW (1 percent LOS two-tail). The one variable among six explanatory variables do not report significant correlation with long- term leverage. These results suggest that these five variables may be major determinants of capital structure.

The short term leverage has significant correlation among three explanatory variables. It has positive significant correlation with TANG (1 percent LOS, two tail) and SANG (5 percent LOS, two- tail). The negative correlation is shown with GROW (1 percent LOS, two- tail). The three variables among six explanatory variables do not report significant correlation with short term leverage. These results suggest that these three variables may be major determinants of capital structure.

As shown in the table 4.10, the bivarite correlation coefficients among explanatory variables are less than 0.638 (ie.not highly correlated). Thus multicollinearity problem may not be expected in prescribed regression models.

Table 4.10

Correlation coefficient of all sample companies (N=64)

variable	PROF								
	TL	LTL	STL	SIZE	TANG	LIQUI	GROW	NDTS	SAVG
TL	1								
LTL	-.018	1							
STL	.35**	.373**	1						
SIZE	.188	-.053**	.157	1					
TANG	.187	.638**	.581**	.086	1				
LIQUI	-.180	-.378**	.131	.083	-.161	1			
GROW	-.475**	-.537**	-.581**	-.073	-.753**	.164	1		
NDTS	.091	.110*	.010	.037	.148	-.177	.120	1	
SANG	.0725**	.140	.267*	.181	.110	-.218	-.364**	-.129	1

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

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

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

SIZE= Natural logarithm of sales.

TANG=Book value of fixed assets to Total assets

LIQUI=Current assets divided by current liabilities

GROW=Percentage change in total assets

NDTS= Depreciation divided by Total assets

SANG=Selling and administrative expenses/Net sales

4.1.5. Determinants of capital structure in all selected companies.

The regression results of all selected companies are presented in table 4.11This table shows the results of the three regression equation (three models) as described in methodology. The first measure of leverage is the TL (total debt divided by total assets) which represents by modal 1. The second measures of leverage is represented by LTL (long term debt divided by total assets) and shown as model 2. The third measure of capital structure is STL (short term debt divided by total assets) which is given in the form of model 3. As for the estimated results of total debt, long term debt and short term debt are concerned;

Table 4.11

Regression results-All sample Companies (N=64)

Independent variables	**Dependent variables**		
	Model-1	**Model-2**	**Model-3**
(constant)	**.374** **(1.046)**	**.104** **(.309)**	**-.826** **(-1.960)**
SIZEY	**.000** **(.670)**	**.000** **(-831)**	**0.000** **(.487)**
TANG	**-.447** **(-1.382)**	**1.057** **(3.477)**	**1.044** **(2.740)**
LIQUI	**.015**	**-.357**	**.433**

	(.105)	**(-2.738)**	**(2.649)**
GROW	**-.732** **(-2.598)**	**-.183** **(-.696)**	**-.493** **(-1.484)**
NDTS	**1.273** **(1.786)**	**-.184** **(-.275)**	**-.094** **(-.111)**
SANG	**1.314** **(6.358)**	**-.010** **(-.053)**	**.386** **(1.587)**
R^2	**614**	**.496**	**.476**
F	**15.088**	**9.366**	**8.614**

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

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

The SIZE, which represents the size of the firms, as measured by the natural logarithm of sales, has not statistically significant coefficient for total leverage, long term leverage and short term leverage. This result indicates that the TL, LTL and STL is not affected by the company SIZE.

To the extent that is the case, small firms are expected borrow less than large firms. Moreover, the informational asymmetries tend to be less severe for larger firms than for smaller firms and hence, large firm find it easier to raise debt finance. While the coefficient of company size is positive (0.000), it is not significant in the case of short term leverage and total leverage and long term leverage also.

The coefficient of liquidity (GROW) is not statistically significant in all three types leverage through the sign of the coefficient is as expected. This results indicate that the LIQUI situation is irrelevant in the use of debt by Nepalese samples sample companies.

The growth opportunity (GROW) variable is not significant in all three types of leverage through the sign of the coefficient is as expected. This results indicate that the growth opportunity is irrelevant in the use of debt by Nepalese sample companies.

The variables (NDTS) showed a negative sign (model-1 indicate positive sign) but the coefficient is not statistically significant in all type of leverage. This result indicates that the NDTS variable does not significantly affect the amount of debt used in the capital structure of Nepalese firms.

The SANG variable is not significant in all three types of leverage through the sign of the coefficient is as expected. This result indicates that the SANG variables does not significantly affect the amount of debt used in the capital structure of Nepalese firms.

4.1.6 Determinants of capital structure in manufacturing companies.

The level of debt capital used by the manufacturing companies in Nepal may be different from non manufacturing companies (ie. Companies within trading and hotel industries).The level at which assets of the manufacturing firms are financed by debt can be shown by using regression analysis. The regression coefficients of the determinants of manufacturing sample companies are presented in table 4.12

The size variables (Natural logarithm of sales) enter with negative sign for total leverage and along term leverage4 but the positive sign is reported for the short term leverage. The coefficient is not statistically significant in all type of leverage. Like in all sample companies case this result also indicates that the SIZE variable does not significantly affect the amount of debt used in the capital structure of Nepalese firms.

Table-4.12

Regression results-Manufacturing sample Companies (N=64)

Independent variables	Dependent variables		
	Model-1	Model-2	Model-3
(constant)	.0410 (0100)	-.024 (-.058)	-1.632 (-4.329)
SIZEY	-3.961E-05 (-.187)	-8.199E (-.382)	7.964E-05 (.410)
TANG	-.794 (-2.000)	1.580 (-3.654)	.821 (2.256)
LIQUI	.7000 (3.093)	-.837 (-3.654)	.771 (3.525)
GROW	-.481 (-.855)	-.274 (-.482)	-3.525 (-6.836)
NDTS	.442 (.529)	.661 (.782)	.232 (.303)
SANG	1.677 (6.273)	-.067 (-.247)	1.199 (4.896)
R^2	.704	.626	.849
F	9.917	6.966	23.495

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

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

The coefficient of TANG (Book value of fixed assets to total assets) variable showed positive sign (a positive sign was expected) for long term leverage and

short term leverage but the negative sign is reported for the total leverage. The coefficient is not statistically significant in all type of leverage like in all sample companies case this result also indicates that the TANG variable does not significantly affect the amount of debt used in the capital structure of Nepalese firms.

The coefficient of non-debt tax shield (NDTS) is positive for all leverage (a negative sign was expected). Unlike in all sample case the coefficient is not significant. This result indicates that non-debt tax shield (Depreciation divided by total assets) will not have significant effect use of debt capital in Nepalese manufacturing companies.

The coefficient of SANG or uniqueness is not significant for all three leverage though the (negative sign for LTL but positive sign is reported for the TL and STL. Though, uniqueness is considered as significant variable in all sample case, this variable does not affect the use of debt capital in manufacturing companies.

4.1.7. Determinants of capital structure in Non-Manufacturing companies

Debt capital used by the non manufacturing companies (i.e. companies within trading and hotel) has been analyzed separately. Table 4.13 present the regression coefficient of the non manufacturing sample companies (Trading and hotel companies) from running the previously specified models.

Table-4.13

Regression results-Non-Manufacturing sample Companies (N=64)

Independent variables	**Dependent variables**		
	Model-1	**Model-2**	**Model-3**
(constant)	**-2.305** **(-2.139)**	**1.268** **(.929)**	**-2.29** **(-2.883)**
SIZEY	**.184**	**-.052**	**.139**

	(3.232)	**(-.717)**	**(3.580)**
TANG	**-.298** **(-.757)**	**.317** **(.636)**	**-.261** **(-.970)**
LIQUI	**-.472** **(-2.941)**	**.225** **(-1.107)**	**-.141** **(-1.284)**
GROW	**-.031** **(-.063)**	**-.534** **(-.861)**	**.091** **(.272)**
NDTS	**1.733** **(2.030)**	**-.560** **(-.518)**	**.849** **(1.452)**
SANG	**.146** **(.573)**	**.417** **(1.293)**	**.201** **(1.151)**
R^2	**.819**	**.342**	**.820**
F	**18.853**	**2.165**	**18.986**

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

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

The SIZE, the size of the firm (as proxied by the natural logarithm of sales) is positive for total leverage and short term leverage but negatively related to long term leverage. The coefficient is not statistically significant for all three leverage. The evidence indicates that use of total debt, is not affected by the company size.

The coefficient of liquidity (LIQUI) is negative for total leverage and short term leverage but it is positive for long term leverage. None of the coefficients are statistically significant. It indicates that in non manufacturing companies the liquid does not affect the use of debt capital. The sign of the coefficient is positive in case of long term leverage but not statistically significant. This result is different to that of manufacturing sample companies case.

The coefficient of tangibility (TANG) is positive for long term leverage but it is negative for total leverage and short term leverage. None of the coefficient are statistically significant. This result is different from the result of all sample companies and the manufacturing companies. It indicates that in non-manufacturing companies the tangibility does not affect the use of debt capital.

The GROW; the growth opportunity variable is not significant in all three types of leverage. This result indicates that the growth opportunity is irrelevant in the use of debt by Nepalese trading and hotel sample companies. This result is not much different to that of all sample companies and manufacturing sample companies.

The coefficient of non-debt tax shields (NDTS) is positive for total leverage and short term leverage but it is negative for long term leverage. Like in manufacturing sample case the coefficient is not significant. This result indicates that non-debt tax shield (depreciation divided total assets) will not have significant effect use of debt capital in Nepalese trading, service and hotel companies.

The SANG or uniqueness variable is not significant for all three leverage and the coefficient of SANG is negative for all leverage. Like in manufacturing sample case the coefficient is not significant. This result indicates that SANG will not have significant affect use of debt capital in Nepalese non manufacturing companies.

4.1.8. Concluding Remarks.

This study presents the results of the study of capital structure management practices among Nepalese firms with special emphasis on determinants of capital structure. The study is based on data from the Nepal Stock Exchange (NEPSE) for the period of 8 years from 2004 to 2011 for four manufacturing and remaining non manufacturing companies. This study mainly deals with factors determining the capital structure management. The major findings of the study may be summarized as follows.

The empirical evidence based on ordinary least square of all sample companies indicates that SIZE is zero for all leverage. The zero coefficients indicate that the natural logarithm of sales does not affect the capital structure choice in Nepalese companies

For all sample companies, manufacturing companies, and non-manufacturing companies the growth opportunity (GROW) variable is not significant in all three types of leverage. This results indicate that the growth opportunity is irrelevant in the use of debt by Nepalese sample companies

The coefficient of TANG, LIQUI, NDTS and SANG variable also is not statistically significant for all type of leverage in all sample companies: this result indicate that the coefficient of TANG, LIQUI, NDTS and SANG variable is irrelevant in the use of debt by Nepalese sample companies.

4.2. PRRESENTATION AND ANALYIS OF PRIMARY DATA

This chapter is concerned with the analysis of primary data and presents the results of the survey on capital structure management practices in Nepal. The study is based on primary data analysis, which mainly deals with qualitative aspects of capital structure management, and has been accomplished by distributing the structured questionnaire to 30 practitioners working at executive levels of large enterprises and 20 academicians. The term practitioner includes those persons working in finance department of different enterprises at different capacities and academician includes persons involved in teaching profession in finance area. This study deals with the comparison of views expressed by practitioners and academicians with respect to major issues of capital structure management.

For the presentation and analysis of primary information, this chapter is divided into four sections: the first introduces the general background; the second describes the respondents' profile. The third reports the analysis of survey

results of the capital structure and financing practices in Nepalese Enterprises and the fourth draws the overall results together in a general conclusion (concluding remarks).

4.2.1. General Background

For the purpose of this study, the questionnaire consisting of 11 questions have been distributed to the practitioners involving in different organization at different capacities, similarly, the questionnaire consisting of 10 questions have been distributed to the academicians involving in teaching profession. The questionnaire includes the questions relating to capital structure management of and organization. The major objective of this study is to examine the views of practitioners and academicians on various aspects of capital structure management practices in Nepal and to examine whether there exist significant different views between practitioners and academicians with respect to the issues relating to the capital structure management in the organizations of Nepal

4.2.2. Respondents' Profile

The importance of examining the profile of respondents is three-folds. First, as the study aims to examine the attitude of management, some personal characteristics of the respondents could be important. For example, among other things, age may have a particular influence over the managers' attitude towards the degree of risk taken in their decisions. Second, as the decision is one of the most sensitive financial decisions an organization can face, managers' training and experience are bound to have a bearing on the quality of decisions taken. Third, by portraying the hierarchical position of the respondents, the quality of the responses can be appreciated further. This is particularly the case when the level of debt in the company's capital structure is

cited as a reason for companies' financial difficulties that led to going bankrupt.

4.2.2.1 Nature of Sample

Table 4.14 shows the nature of sample organizations. In aggregate the executives of 50 companies filled and returned the questionnaires. Out of them, 20 firms are from manufacturing companies, 15 firms are from educational institution, 9 firms are the trading companies and rest 6 firms are from the hotel companies.

Table 4.14

Line of business

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

Line of business	No of respondent	Percentage
Manufacturing	20	40%
Trading	9	18%
Hotel	6	12%
Educational institutes	15	30%
Total	50	100%

The tabulated figure indicates that more of respondents are from manufacturing companies and fewer responses received from hotel companies.

4.2.2.2 Position and Age

Table 4.15 shows the information regarding the position held by the respondents in their concerned enterprises. Out of total respondents,15 respondents (30%)are form academic field and 5 respondents (10%) are form

Director/managing Director, 8%general manager, 20% managers and 32% others. The others include consultants and chartered accountants conducting independent audits in their capacities. The Respondents serious interest in this study is evident from the key position held by them

Table 4.15

Position/ Age of Respondents

This table present the profile of respondents from the various Nepalese organizations, management institution and collage of various Universities of Nepal

Position	Number	Percentage
Directors /Managing Directors	5	10%
General Manager	4	8%
Manager	10	20%
Teachers	15	30%
Others	16	32%
Total	50	100%

4.2.2.3 Number of Employees

Table 4.16 shows that out of 50 sample companies 5 companies have employees more than 250. The majority of the companies (56%) of sample companies have employees in between 50 to100. Only two companies have less than 50 employees. The important point is that number of employees can be taken as the proxy for company size. The opinion survey on the issues of financial policy and capital structure decision is made from the executives of different size enterprises

Table 4.16

Number of Employees in Sample Companies

Employee range	Total employee	
	Number	Percent
below 50	2	4%
50 to 100	28	56%
100 to 150	8	16%
150 to 200	4	8%
200 to 250	3	6%
above 250	5	10%
Total	50	100%

4.2.3. Analysis of Survey Results

The results of the opinion survey on the various issues of the financial policies and capital structure in Nepalese enterprises are discussed in this section. . First issue taken over is the response to the question on whether the systematic risk, as typically measured by beta-coefficient, and ever affects capital structure policy. The results are presented in Table 4.17

Table 4.17

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	Practitioners		Academicians	
	Number	Percentage	Number	Percentage
Yes	15	50%	20	100%
No	12	40%	0	0
Do not Know	3	10%	0	0
Total	30	100%	20	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 a unique relationship between systematic risk and the rate of return that the market requires on securities. One application of this concept is a procedure for estimating the cost of equity using the Capital Assets Pricing Model (CAPM). Therefore, the systematic risk of the firm's assets must equal the systematic risk of the claims on assets and the beta coefficient f firm is the weighted average beta of all the claims on the assets of the firm. Based on this, it is obvious that the beta coefficient of the firm affects the capital structure of the firm.

On this ground, the respondents, both academicians and practitioners, are asked the question relating to the effect of beta coefficient and the capital structure of the firms. Hundred Percentages of the respondents from academicians agree that the beta coefficient affects the capital structure of the firm. However, 50 percentages of the respondents from practitioners agree that there exists the

relationship between beta coefficient and capital structure and beta coefficient affects the capital structure of the firm. But 12% do not agree on this and 10% of the respondents are unknown about it at all.

Financial leverage, the proportion of debt capital in the total capital in the total capital of the firms, is measured in different ways. To know how the leverage factors are measured in the Nepalese firms, the respondents were asked the question as to how do they 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, long term debt divided by sum of long term debt and equity , and earnings before interest and tax divided by interest expenses. The results are presented in Table 4.19

Table 4.18

Measurement of financial leverage

This table shows the response to the question 'How do you measure the degree of financial leverage?'

Measurement of degree of leverage	Practitioners		Academicians	
	Number	Percentage	Number	Percentage
Total liabilities divided by total assets	2	6.67%	3	15%
Long term debt divided by total assets	12	40%	11	55%
Long term debt divided by total equity	8	26.67%	6	30%
Long term debt divided by long term debt plus equity	8	26.67%	0	0

Earning before interest and tax divided by interest	0	0	0	0
Total	30	100%	20	100%

Table 4.18 The reveals that there are no consistent answers from both academicians and practitioners. Even within the practitioners there exist different views regarding the measurement of leverage in their capital structure. Among the academicians also there are different views in respect of ways of measuring the leverage in capital structure. The study has indicated that 26.67% of respondents from practitioners have been using the ratio of long term debt to total equity as a measure of leverage. However, 55% percent of the academicians are of opinion that the measurements of leverage as the ratio of long term debt to total assets.

With respect to optimal debt ratio to be followed by the firm the respondent were asked what should be the optimal debt ratio of the firm. The results are presented in Table 4.19.

Table 4.19

Optimal Debt Capital Ratio

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

Percentage of debt ratio	Practitioners		Academicians	
	Number	Percentage	Number	Percentage
Less than 20% of the total assets	0	0	0	0
20% to 40%of the total assets	18	60%	6	30%

40% to 60% of the total assets	12	40%	14	70%
Above 60% of the total assets	0	0	0	0
Total	30	100%	20	100%

From the survey it reveals that 40% of the respondents from practitioners are of opinion that the optimal debt ratio of the firm should be 40 to 60 Percentages of the total assets. The rest 60 percent of the respondents are of opinion that the debt ratio of the firm should be 20 to 40 Percentages of total assets. there is not even a single respondent who is of opinion that the debt ratio of the fir should be less than 20 percent or above 60 percent .the results indicate that the firms must use the debt capital but not excessively

With respect to practice of optimal capital structure management in the Nepalese firms, 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 the table 4.20.

Table 4.20

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 firma?

Responses	Number	Percentage
Yes	22	73.33%
No	8	26.67%
Total	30	100%

Out of the total respondents, 73.67 percentages of respondents said yes and the rest 26.67 percentage said no. It seems that all the Nepalese firms have no practice of capital structure management.

With respect to use of debt in the Nepalese firms, the practitioners are asked, "Do you have debt capital in your firm? The response given by them is presented in the table 4.21.

Table 4.21

Use of debt capital in Nepalese firms

This table shows the response to the question Do you have debt capital in your firms?

Responses	Number	Percentage
Yes	20	66.67%
No	10	33.33%
Total	30	100%

Out of the total respondents, 66.67 percentages of respondents said yes and the rest 33.33 percentage said no. It seems that all the Nepalese firms have use debt capital.

In order to test the degree of agreement/disagreement on the facts relating to the capital structure management in Nepalese firms, the respondents are asked, "How far do you agree/disagree with the following observations on corporate capital structure policy in Nepal?" The respondents are given the following facts.

I. **Capital structure of a firm affects its value.**
II. **Capital structure of a firm conveys future prospects.**
III. **Most of the firm does not pay attention in capital structure management decision.**

IV. Capital structure management is not a major function of financial managers of the firms

The summary of the scale given for each of the facts is presented in the table 4.22

Table 4.22

Observation on corporate capital structure policy as viewed by all respondents

This table shows the response to the question 'how far do you agree/disagree with the following observation on corporate capital structure policy in Nepal?"

S.N.	observation	Group	Scale value					Total response
			1	2	3	4	5	
1	Capital structure of a firm affects its value.	Profe. Acade.	18 20	12 0	0 0	0 0	0 0	30 20
2	Capital structure of a firm conveys future prospects.	Profe Acade.	5 5	25 15	0 0	0 0	0 0	30 20
3	Most of the firm do not pay attention in capital structure management decision	Profe Acade	0 0	0 2	0 1	26 17	4 0	30 20
4	High debt capital increases financial risk of business.	Profe Acade	8 12	22 8	0 0	0 0	0 0	30 20
5	Capital structure management is not a major function of financial managers of the firms.	Profe Acade	0 0	0 0	0 0	9 6	21 14	30 20
6	Top management's risk-taking propensities will affect the firm's capital structure	Profe Acade	6 16	24 4	0 0	0 0	0 0	30 20

7	Managers do not pay any attention towards the management of capital structure of a firm.	Profe Acade	0 o	0 4	0 2	23 14	7 0	30 20

Based on the summary of the table, it can be concluded that both professionals and academicians seem almost to be of the same opinion. For example, in respect of the fact "Capital structure of a firm affects its value". Out of 30 respondents from professionals 18 strongly agreed and the rest 12 only agreed. But all 20 from the academicians found to be strongly agreed with the fact. However, there exist slightly different views between the academicians and professionals in respect of the fact "managers do not pay any attention towards the management of capital structure of a firm" In respect of this fact, all the professionals seem to be disagreeing whereas there are some academicians who agree with this fact.

With respect to market price of shares, the respondents are asked do you think that capital structure (mix of debt capital and equity capital in total capital) affects the market price of shares. The results are presented in Table 4.23.

Table 4.23

Capital structure affects the market price of shares

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

Responses	Practitioners		Academicians	
	Number	Percentage	Number	Percentage
Yes	15	50%	16	80%
No	12	40%	4	20%
Do not Know	3	10%	0	0

Total	30	100%	20	100%

From the survey it reveals that 50%of respondents from practitioners are said yes capital structure affects the market price of shares and 80 %of respondents from academicians answered to yes. Another part 40%of respondents answered to know from practitioners and 20%of respondents from academicians answered to no. This table shows the response to the question 'in your opinion, which of the following purpose is most important of using debt?" The respondents are asked to given rank in order of their importance as 1= most important,2= second most important and so on

Table 4.24

Purpose of using debt capital

Purpose	Group	Rank assigned				Total responses	Weighted value	Mean weight	Overall rank
		1	2	3	4				
To reduce tax liability	Pract.	7	12	11	0	30	64	2.13	3
	Acade	5	13	2	0	20	37	1.85	2
To magnify return to shareholders	Pract	14	12	4	0	30	50	1.67	1
	Acad.	10	7	3	0	20	33	1.65	1
To reduce the agency cost	Pract.	0	0	0	30	30	120	4	4
	Acade	0	0	2	18	20	78	3.9	4
To maintain ownership control unchanged	Pract	15	5	10	0	30	55	1.833	2
	Acade	4	3	12	1	20	50	2.5	3

This table presents the views of respondents regarding the purpose of using debt capital. The respondents are asked which of the purpose is most important

of using debt. Based on the response from both the practitioners and academicians, first priority to magnify return to shareholders, second priority to maintain ownership control unchanged, and fourth priority to reduce the agency cost. The result is provided in the table 4.24.

This table shows the response to the question "if you have practice of determining the optimal captal structure in your firm, which of the following factors, do you think, are more important in determining optimal capital structure of the firm?"

Table 4.25

Determinants of capital structure

Determinants of capital structure	Group	Rank assigned					Total response	Weighted value	Mean weight	Overall rank
		1	2	3	4	5				
Collateral value of the assets	Profe	0	0	5	9	6	30	121	4.03	5
	Acade.	0	0	8	10	2	20	74	3.7	4
Non debt tax shield (tax saving from other than debt	Profe	0	4	16	10		30	126	4.2	5
	Acade.	0	11	3	6		20	75	3.75	4
Growth opportunities of business firms	Profe	4	6	12	8	0	30	84	2.8	3
	Acade.	9	6	5	0	0	20	36	1.8	1
Firm size	Profe	6	8	16	0	0	30	70	2.33	2
	Acade.	3	5	12	0	0	20	49	2.45	2
Fluctuation in income of business firm	Profe	15	6	9	0	0	30	54	1.8	1
	Acade.	8	5	7	0	0	20	39	1.95	1
Profitability of the business	Profe	14	8	5	3	0	30	57	1.9	2

firm	Acade.	3	7	6	4	0	20	51	2.55	3
Liquidity position of the firm	Profe Acade.	0 0	0 0	0 0	8 12	22 8	30 20	142 88	4.73 4.4	5 5

Above this table presents the views of respondents regarding the determinants of capital structure. The respondents are asked, "If you have practice of determining the optimal capital structure in your firm, which of the following factors, do you think, are more important in determining optimal capital structure of the firm?" In this respect the respondents are given the factors to be considered in determining the capital structure of the firm as collateral value of the assets, Non-debt tax shield (tax saving from other than debt), Growth opportunities of business firms, Fluctuation in income of business firm, profitability of the business firm, Liquidity position of the firm size.

Based on the responses from both the practitioners and academicians, it can be said that the most important factor in determining the capital structure is the fluctuation in income of the business firm and the least important factor is "the liquidity position of the firm". Both the practitioners and academicians have given rank 1 to the fluctuation in income of business firms and rank 5 to the liquidity position of the firms.

However, based on the overall rank given by both the practitioners/professionals and academician and the factors can be arranged in terms of their importance as "Fluctuation in income of business firm", Firm size, Growth opportunities of business firms, profitability of the business firm, Collateral value of the assets, Non debt tax shield (tax saving from other than debt) and Liquidity position of the firm.

4.2.4. Concluding Remarks

With reference to the primary data analysis, it sees a significant difference in the views expressed by practitioners/professional and academicians. The respondents are asked to express their views on the various questions relating to capital structure management of the business firms. Based on the analysis of the views expressed by them, it can be concluded that the views expressed by the academicians seem to be consistent to a great extent with various theories of financial management. But the views expressed by the practitioners found to be deviated from the theories to some extent.

In investing the variables related to company financial policies and determinants of capital structure, survey questionnaire were distributed through field visit method. Respondents' opinions were, analyzed and tabulated. Most of respondents were chief executives and general managers/managers. Majority of them have more than 10 years of working experience.

They are well educated. Thus, the responses on the financial issues can be considered useful to the analysis and derive conclusion.

First issue taken over is the response to the question on whether the systematic risk, as typically measured by beta-coefficient, and ever affects capital structure policy.

Even within the practitioners there exist different views regarding the measurement of leverage in their capital structure. Among the academicians also there are different views in respect of ways of measuring the leverage in capital structure. The study has indicated that 26.67% of respondents from practitioners have been using the ratio of long term debt to total equity as a measure of leverage.

From the survey it reveals that 50%of respondents from practitioners are said yes capital structure affects the market price of shares and 80 %of respondents from academicians answered to yes. Another part 40%of respondents answered

to know from practitioners and 20%of respondents from academicians answered to no. This table shows the response to the question ‘in your opinion, which of the following purpose is most important of using debt?” The respondents are asked to give rank in order of their importance as 1= most important,2= second most important and so on

Based on the responses from both the practitioners and academicians, it can be said that the most important factor in determining the capital structure is the fluctuation in income of the business firm and the least important factor is “the liquidity position of the firm”. Both the practitioners and academicians have given rank 1 to the fluctuation in income of business firms and rank 5 to the liquidity position of the firms.

However, based on the overall rank given by both the practitioners/professionals and academician and the factors can be arranged in terms of their importance as “Fluctuation in income of business firm”, Firm size, Growth opportunities of business firms, profitability of the business firm, Collateral value of the assets, Non debt tax shield (tax saving from other than debt) and Liquidity position of the firm.

CHAPTER –FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary

This study attempts to explain the capital structure management practices in the context of Nepalese enterprises. The background to the modern debate on capital structure derives from Modigliani and Miller (MM, 1958). They show the irrelevance of capital structure to the value of the firm. The logic of the Modigliani and Miller (1958) analysis is still accepted, despite the contradiction of their theoretical conclusions with empirical evidence. The reason is that they developed the theory based on many assumptions which, as in case of any theory, simplify the reality. The Modigliani and Miller perspective has been supported by other researchers such as Hamada (1969) and Stiglitz (1974). However, these conclusions are at variance with what one sees in the real world, where capital structure matters and banks would be extremely unwilling to finance a project entirely with debt capital.

Myers (1984) pointed out that financial economists have not hesitated to give advice on capital structure, even though how firms actually choose their capital structures remains a puzzle as the theories developed did not seem to explain fully actual financing behavior. This view is supported by Harris and Raviv (1991) who pointed out that numerous attempts to explain capital structure have proved to be inconclusive. The capital structure decision is even more complicated when it is examined in an under developed capital context, particularly in Nepal where markets are characterized by controls and institutional constraints.

Since the seminal work of Modigliani and Miller (1958), much subsequent research has been devoted to task of finding a coherent explanation for what influences the choice of capital structure. Traditional corporate finance models

suggest that firms choose optimal capital structures by trading off various tax and incentive benefits of debt financing against financial distress costs. While there is support for these trade off models in the empirical literature, other studies indicate that a firm's capital structure decisions are affected by several firm related characteristics such as future growth options, earnings volatility, profitability and control (Titman and Wessels, 1988; Glen and Pinto, 1994). Studies such as Jension and Meckling (1976); Williamson (1998); Harris and Raviv (1990); Rajan and Zingles (1995) have explained factors influencing capital structure from the perspective of asymmetric information and agency theory. One of the difficulties researchers face in these studies is that a firm may deviate from its target leverage ratio. These deviations arise because operating and financial decisions push leverage above or below the firm's target and transaction costs and market conditions may prevent immediate corrections.

It is notable that capital structure has been relatively ignored in the Nepalese studies. The effective management of liabilities is every bit as vital to the financial well-being of the firm as is the management of assets. A misguided financing decision can drag a firm toward bankruptcy as certainly as a misguided investment decision. To redress this neglect of liability management this study seeks to provide insight into the determinants of capital structure and financial policies of Nepalese enterprises.

In analyzing the issues related to capital structure, the study has undertaken the following methodology. The descriptive research design has been followed for conceptualization of the problem. For explaining the relationship between dependent and independent variables by analyzing determining variables on firms' capital structure, the causal-comparative research approach has been followed. The secondary as well primary data were collected for analysis. Altogether eight enterprises were selected for secondary data analysis. Pooled data collected from the secondary sources were analyzed. Three different regression models for capital structure were used for analysis. The separate

analysis is made for all samples, manufacturing companies sample and non manufacturing (trading, service and hotel) companies sample to obtain information how capital structure decision is affected by industry classification. Sixty four (64) observations were used for running multiple regression analysis for all sample analysis. For manufacturing companies 32 observations and for non- manufacturing (trading, service and hotel) companies 32 observations were separately used in running regression for these industries.

The primary data were collected from questionnaire issued to the financial executives of 50 sample companies of different industries. These were the sources of information to analyze, interpret and derive conclusion. Three capital structure measures used for study's dependent variables are: total leverage, long-term leverage, short-term leverage. The explanatory variables used in the regression models are: natural logarithm of sales, profitability, liquidity, assets tangibility, grows opportunity and non-debt tax shields.

The major findings are summarized as under:

1. The SIZE has not statistically significant for total leverage, long-term leverage and short-term leverage for all samples companies, manufacturing companies and non-manufacturing companies. This finding is similar to that of all sample companies results. The coefficient is negative for total leverage, long- term leverage and short-term leverage. The negative coefficient indicates that the larger non-manufacturing Nepalese firms borrow less amount of short-term debt.

2. The coefficient of TANG or tangibility has not statistically significant in all sample companies for total leverage, long term leverage and short term leverage. In manufacturing companies the coefficient of tangibility variable showed positive sign (a positive sign was expected) for long term leverage and short term leverage but the negative sign is reported for the total leverage. In non- manufacturing companies the coefficient of tangibility is positive for long term leverage but it is negative for total leverage and short term leverage.

3. Liquidity (LIQUI) coefficient is not statistically significant for all sample companies, manufacturing companies and non-manufacturing companies the coefficient is not statistically significant in all three types of leverage. In non-manufacturing companies and manufacturing companies the coefficient of liquidity is negative for long term leverage and positive for total leverage & short term leverage.

4. For all sample companies, manufacturing companies and non-manufacturing (trading and hotel) companies the growth opportunity (GROW) variable is not significant in all three types of leverage.

5. Non-debt tax shields (NDTS) variable is not significant in all types of leverage for all sample companies, manufacturing and non-manufacturing companies

6. For all sample companies, manufacturing companies and non-manufacturing companies the SANG or uniqueness variable is not significant in all three types of leverage.

7. Nepalese firms do not consider tax issue while making financing decision. Financing decisions are made using the information provided by own management and staff analysis, they do not have target debt ratio. They prefer internal funding followed by external debt, they do not strictly follow pecking order hypothesis.

8. They don't 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. The majorities of respondents use mix or depends on scale or no preference on funding sources. There is no significant any choice of funding sources of different maturity by the Nepalese firms.

9. Firms issue equity to fund major expansion but they issue debt to add to liquidity and to fund a major expansion. They do use some leverage in arriving

at their firm's debt-equity mix. The users of industry standards are simply more but are not significantly more than non-user. Further their firms does not subscribe to the concept of corporate debt capacity. Majority of the financial executives felt that systematic risk ever affects financial structure.

10. Nepalese financial executives pointed out that an excessive amount of debt would result in an increase of the cost of debt and would eventually results in the market price of their firm's stock price being adversely affected. Formulation of an appropriate corporate debt policy appears to be central part of the firm's financial management process in Nepalese firms.

11. Nepalese firms prefer book values in computing debt to equity ratio in their financing decisions. The results show that internal equity was ranked as first choice and convertible preferred stock stood as the last choice. Nepalese enterprises pay more importance in long-term survivability and financial independence in governing financial decisions.

12. Nepalese managers do devote more fraction of their time in their securities analysis. Nepalese financial executives were reluctant in deviating from the target capital structure and forgotten the growth opportunity. The projected cash flow of the assets to be financed stood the first choice by the Nepalese executives as the relevant factor in governing firm's financing decisions.

5.2. Conclusion

The major conclusion of the study is that firm size, tangibility, liquidity, grow, non –debt tax shield and SANG are the influencing factors in determining the capital structure in all sample companies. The study also concludes that Nepalese firms do not consider tax issue while making financing decision. Their financing decision 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 of the same interest rate. They

could not see their borrowing in industry terms. They don't make use of-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.

5.3. 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.

Based on the findings of this study the following are the recommendations.

1. The growth rate is negatively related to all types of leverage for all sample companies but the Coefficient is not statistically significant. It indicates that Nepalese growth firms do not prefer to borrow more debt. Hence it is recommended that even growth firms should make best use of leverage to maximize shareholders wealth.

2. In all sample case total leverage and short term leverage is negatively related to liquidity but long term leverage is positively related to liquidity. This result indicates that more liquid firm borrows less amount of total debt and short term debt but use more long term debt. It is recommended that more liquid firm should use more debt to take advantage of cheapest sources of funds.

3. The tangibility is positively related to long term leverage and short term leverage but negatively related to total leverage. In positive case, it indicates that firm having more tangible assets borrows more debt. It is recommended

that firm having less tangible assets should make best use of debt as debt is cheapest sources of funds.

4. In all sample case total leverage and short term leverage is positively related to liquidity but long term leverage is negatively related to liquidity. This result indicates that more liquid firm borrows less amount of total debt and short term debt but use more long term debt. It is recommended that more liquid firm should use more debt to take advantages of cheapest sources of funds.

5. The study revealed that the non debt tax shield is negatively related to long term leverage. It indicates firms having more non debt tax shield borrow less amount of debt. It seems that Nepalese firms are unable to take advantage of tax benefit from the use of debt. Nepalese firm should use debt capital in their capital structure and take the benefit of debt and reduce the tax liability.

6. Nepalese financial executives do not consider tax issue as a major influencing factor on their decisions. It reveals that they are not aware of the tax advantages on the use of debt capital. They are suggested to consider the tax issue in making financing decision

7. 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.

8. 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.

9. 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.

10. 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.

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A Survey of

Management's views on capital structure management in Nepalese Non – financial Enterprises

Questionnaire

This study is undertaken as in partial fulfillment of the course on thesis, degree in management, Tribhuvan University, Kirtipur. Your individual responses will be kept confidential and will be combined and presented in statistical form only. I would be grateful if you give few minutes to read and respond to this survey questionnaire.

Part –I

Respondent's Profile

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

Name of the Organization: ..... Total no. of Employees:……

Nature of Organization:……

Years of experience:……. Qualification:.....

Part-II [Questionnaire related to the factors that influence a company's capital structure]

1) Do you have debt capital in your firm? (Please make a tick mark)

(a) Yes (b) No

2) Use of proper amount if debt capital in business firm has no additional benefits to the firm, do you agree?

(a) Yes (b) No (c) Don't know

3) Do you think that capital structure (mix of debt capital and equity capital in total capital) affects the market price of shares?

(a) Yes (b) No (c) Do not know

4).what do you think about the optimal debt capital ratio in a firm ?(please make a tick mark)

(a) less than 20% of total assets

(b) 20% to 40% of total assets

(c) 40% to 60% of total assets

(d) Above 60% of total assets

5) is there practices of determining the optimal capital structure in your firm ?

(a) Yes (b) No (c) Don't know

6) In your opinion, which of the following purpose are most important of using debt capital? (Please make a rank in order of importance as 1 = most important, 2= second most important n so on.)

(a)To reduce tax liability
( )

(b) To magnify return to shareholders
( )

(c) To reduce the agency cost
( )

(d) To maintain ownership control unchanged
( )

7) Do you think that product market and / or industry class also influence the leverage ratio

(a)Yes (b) No (c) Don't know

8) Does the financial theory concept of systematic risk as typically measured by what is called beta coefficient ever affect your financial structure policy?

(a) Yes (b) No (c) Do not know

9) 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? (Make a tick mark)

(a)Total liabilities divided by total assets. (b)Long term debt divided by total assets.

(c)Long term debt divided by total assets (d) Long term debt divided by debt plus equity

(e)Earnings before interest and taxes divided by total interest

10) If u have practice of determining the optimal capital structure in your firm , which of the following factors , do you think, are more important in determining optimal capital structure in your firm ? Please rank in order of their importance as 1= most important, 2= second most important and so on..

(a) Collateral value of assets
( )

(b)Non-debt tax shield (tax saving from other than debt)
( )

(c)Growth opportunities of business
( )

(d)Firms size
( )

(e) Fluctuation in income
( )

(f) Profitability of business
( )

(g) Liquidity of position
( )

11) How far do you agree / disagree with the following observation on corporate capital structure policy in Nepal? (Please make a tick mark at the appropriate number as per following scheme:

1= strongly agree 2= Agree 3= Don't know

4= Disagree 5= strongly disagree

S.N.	Statement	1	2	3	4	5
1	Capital structure of a firm affects its value					
2	Capital structure of a firm conveys future prospects.					
3	Most of the firm do not pay attention in capital structure management decisions					
4	High debt capital increase financial risk of business					
5	Capital structure management is not a major function of financial managers of the firms					
6	Top management's risk-taking propensities will affect the firm's capital structure.					
7	Manager do not pay any attention towards the management of capital structure of a firm in our country.					