CHAPTER-1
INTRODUCTION

1.1 Background of the Study

The study of capital structure and profitability occupies an important place in the literature of finance. Capital structure has been the subject of study among scholars and practitioners for a long time. The fundamental issue is whether the companies manage planned capital structure or the observed capital structure is the result of random process determined by the historical profitability, investment options, dividend policy and capital market condition (Seppa, 2007). Capital structure which is defined as total debt to total assets at book value influences both the profitability and riskiness of the firm (Bos and Fetherston, 1993).

Capital structure plays a vital role in the real life of an enterprise. All the enterprises, whether they are government owned or private, profit or non profit enterprise have to make pertinent capital structure decision in identifying exactly how much capital is needed to run their operation smoothly. Generally capital can be acquired by the firm in two ways, equity and debt. Equity provides the ownership to the shareholder. On the other hand, the debt or borrowed fund has a fixed charge irrespective to the earnings of the firm and firm has to pay the fixed charge periodically to the debt provider.

Capital structure is the proportion of debt instrument and preferred and common stock on a company's balance sheet (Van Horne, 2006). Capital structure of a company refers to the make up of its capitalization (Varma and Agarwal, 1998). The capital structure concept has an important place in the theory of financial management. Capital structure refers to the way in which firm's assets are financed. It represents the entire right hand side of the balance sheet. In other words, it is the financing of the firm such as long term debt, preferred stock and common stock but it excludes all short term credit. Thus a firm's capital structure is only a part of its financial structure (Weston and Brigham, 1981). Capital structure policy involves a choice between risk and expected return (Brigham, 1984). Similarly in the words of Kulkarni (1983), capital structure is made of debt and equity securities which comprise a firm's finance

of its assets. It is the permanent financing of a firm, represented by the long term debt plus preferred stock plus net worth.

Capital structure is synonymous with the management of liabilities side of the balance sheet consisting of debt and equity securities, which provide funds for a firm. It refers to the way firm's assets are financed with. Prudent financial structure design requires answer to the following questions;

- What should be the maturity composition of the firm's source of fund?
- In what proportion should the various forms of permanent financing be utilized?

The first question refers to the division of short term and long term fund, which depends upon the asset structure of the firm. While the second question refers to the ratio of debt, preferred stock and equity to total assets, which implies capital structure management.

An important financial decision facing the firm is the choice between debt and equity (Glen and Pinto, 1994). The firm can issue dozens of distinct securities in countless combinations, but it attempts to find the particular combination that maximizes its overall market value (Brealey and Myers, 2000). The important aspect of capital structure management is to find out the proper mix of debt and equity that maximizes market price of share or minimize cost of capital.

Firm's financial decision involves the choice of an appropriate mix of different source of fund, namely ownership fund and outsider fund. A proper balance is necessary between debt and equity to ensure a trade off between risk and return to the share holders. A capital structure with reasonable proportion of debt and equity capital which can maximize the shareholders wealth and simultaneously can minimize the firm's cost of capital is called optimum capital structure.

The capital structure decision is crucial for the financial welfare of any business organization. The capital structure decision is at the centre of many other decisions in the area of corporate finance, these include dividend policy, project financing, issuing

of long term securities, financing of mergers, buyout and so on (Shah and Khan, 2007). A false decision about the capital structure may lead to financial distress and eventually to bankruptcy. Therefore capital structure decision is one of the vital decisions to be made by financial managers. The very objective of a corporate financial manager is to ensure the lower cost of capital and maximize the wealth of shareholders and capital structure is one of the effective tools of management to do so.

Quite a large strand of theoretical and empirical research has focused on the area of capital structure since the path breaking paper on capital structure by Modigliani and Miller (1958). Such as manufacturing firm (Long and Matliz, 1985; Titman and Wessels, 1988) electric utility companies (Modigliani and Miller, 1966), non profit hospitals (Wedig, 1988) and agriculture firms (Jensen and Langemeier, 1996). However, most of the studies have been carried out in developed economies and few studies exist on the capital structure of firms in developing economies. With these limited studies, it is not clear whether conclusions from theoretical and empirical research carried out in developed economies are valid for developing countries too or a different set of factors influence capital structure decision in developing countries.

Capital structure has attracted intense debate and scholarly attention in corporate finance. However, in the context of Nepal it has received a scant attention. The capital structure of the firm is still a relatively under explored area in the Nepalese context. Currently, there is no clear understanding on how Nepalese firms choose their capital structure and what factors influence their corporate financing behavior. Hence this study seeks to address two fold issues: the first is to provide an insight in to capital structure of listed hotels, manufacturing and trading companies of Nepal, and secondly to examine the relationship between capital structure and profitability.

1.2 Statement of the Problem

The capital structure concept has been the subject of controversy since the publication of Modigliani and Miller's classic paper in 1958. They hold the view that the cost of firm remains invariant to capital structure changes. On the other hand, the traditional proposition states that the cost of capital is the function of capital structure (Solomon, 1969). There are many empirical works regarding the capital structure supporting and refusing the MM view and traditional view. The studies by Barges (1963), Western (1963), Wippern (1966), Flath and Knoebear (1980) and Pandey (1981) rejected the

MM (1958) hypotheses while Hamada (1972) and Stiglitz (1974) study supported the MM hypothesis.

The controversy also exists with respect to the effect of corporate income tax on corporate debt policy. Modigliani and Miller (1966) observed significant effect of corporate income tax on corporate debt policy where as Roa and Roa (1975) did not observe the same. The later study showed that corporate income tax has not a significant but only a negligible effect on corporate debt policy. Among others, Sharma and Roa (1967) and Mishra (1978) observed positive effect of corporate income tax on corporate debt policy. Similarly, Harris and Raviv (1991) found that leverage increases with fixed assets, non debt tax shields, investment opportunities and firm size and decreases with volatility, advertising expenditure, and the probability of bankruptcy, profitability and uniqueness of the product.

Schwartz and Aronson (1966) and Remmers et al. (1974) showed that industrial influence is not a significant determinant of financial structure. However, Scott (1972) conversely provided the evidence in the support of significant industrial influence on capital structure and suggested that firm in different industries have different financial structure. Scott and Martin (1957) also came to the same type of conclusions.

Similarly, there is no unanimous finding as regards leverage and profitability. Different studies have come up with different findings. Debt affects profitability positively was indicated by Hurdle (1974), Petersen and Ranjan (1994), Joshua Abor (2005) but negatively in Gale (1972) and Bevan and Donbolt (2001). Thus, there is a need to check whether capital structure is important and whether it affects firms' profitability in the Nepalese enterprises or not. To sum up, the study deals with the following issues:

- Do the Nepalese hotel sector, manufacturing sector and trading sector enterprises have similar leverage and capital structure?
- What are the relationships between return on equity, short term debt, long term debt, total debt, sales and sales growth of hotel, manufacturing and trading sector enterprises of Nepal?
- Is capital structure management important in the Nepalese organization? Does it affect firm's profitability?

- Does higher leverage lead to better performance? Is there any relationship between leverage and financial performance?
- Whether conclusions from theoretical and empirical studies carried out in developed economies are valid for developing countries? Or a different set of factors influence capital structure decision in developing countries?
- Is Joshua Abor's model valid in an underdeveloped country like Nepal?
- What are the various properties of portfolio formed on leverage of Nepalese enterprises?

1.3 Objective of the Study

The major objective of this study is to analyze the effect of capital structure on profitability in the context of Nepalese enterprises. The specific objectives are as follows:

1. To test the relationship between capital structure and profitability in Nepalese enterprises.
2. To analyze the differences in capital structure of hotels, manufacturing and trading sector enterprises of Nepal.
3. To test the validity of the model developed by Joshua Abor in context of Nepal.
4. To analyze the properties of portfolio formed on leverage in Nepalese enterprises.

1.4 Organization of the Study

The study has been organized into five chapters, each devoted to some aspects of the study of capital structure and profitability. The titles of each of these parts are as follows:

Chapter One: Introduction

Chapter Two: Review of Literature

Chapter Three: Research and Methodology

Chapter Four: Analysis and Interpretation

Chapter Five: Summary, Conclusion and Recommendation.

The rationale behind this kind of study of organization is to follow a simple research methodology approach. The contents of each of the parts of this study are briefly mentioned here.

Chapter one deals with major issues to be investigated along with background of the study, statement of the problem and objective and scope of the study.

Chapter two is devoted to theoretical analysis and brief review of related literature which has been organized into four sections. Section one describes the conceptual framework which is basically concerned with the concept and theories of capital structures. Section two presents the review of empirical works on capital structure and section three is concerned with review of Nepalese studies on capital structure. And finally section four is devoted to concluding remarks.

Chapter three describes the research methodology employed in the study. This chapter deals with research design, nature and sources of data, selection of enterprises, methods of data analysis, specification of variables as well as limitation of the study.

Chapter four consists of presentation and analysis of data which deal with empirical analysis of the study. Section one presents the result of secondary data. Section two examines the analysis of the properties of portfolio formed on leverage by the Nepalese enterprises. Finally, section three presents the result of primary data analysis.

Lastly, Chapter five comprises the summary, conclusions and recommendations of the study. This chapter presents the major findings of the study and recommendations are made to Nepalese enterprises regarding capital structure decision.

CHAPTER-2
REVIEW OF LITERATURE

The review of literature provides basic foundations to this study. The various approaches employed in the study are, in fact, derived from the different literature surveyed in this part. This chapter therefore, is devoted to the conceptual framework and review of past studies on capital structure. It comprises of four sections: section one describes the conceptual framework which is basically concerned with the concept and theories of capital structures. Section two presents the review of empirical works on capital structure and section three is concerned with review of Nepalese studies on capital structure. Finally, section four is devoted to concluding remarks.

2.1 Conceptual Framework

Capital structure of a company refers to the make up of its capitalization. A company procures funds by issuing various types of securities i.e. ordinary shares, preferences shares, bonds and debentures. Before issuing any of these securities, a company should decide about the kinds of securities to be issued. In what proportion will the various kinds of securities be issued, should also be considered. However, in broader sense, capital structure includes all the long term capital resources including loans, bonds, share issues, reserves etc and the components of the total capital (Varma and Agarwal, 1998).

Capital structure should not be confused with capitalization. Capitalization is a quantitative aspect of financial planning as it refers to the total amount of securities issued by a company, while capital structure is concerned with qualitative aspect as it refers to the kinds of securities and their proportions. Capital structure is only a part of financial structure. Financial structure refers to the way firm's assets are financed with, and it includes short term debt and long term debt as well as share holders equity (Weston and Copeland, 1992).

Capital structure policy involves the choice between risk and return. Thus, optimal capital structure is determined as a trade off between the tax shield benefit of debt versus the cost associated with potential bankruptcy (Bringham, 1982). Capital

structure that maximizes the value of the firm is the one that financial manager should choose for the shareholders (Ross, Westerfield and Jafee, 1993).

The firm can issue dozens of distinct securities in countless combinations but it attempts to find the particular combination that maximizes its over all market value (Brealay and Myers, 1991). The capital structure decision focuses on the mix of long term financing sources used by the firm. However, this long term mix is affected by decisions about short term funding. Thus, the capital structure decision must consider the overall financing plan of the company, including the use of trade credit (Kaen, 1995).

The security mix affects the financial stability of the company. If a company fails in its effort in maintaining the security mix, it may affect its profitability. The main goal of the financial management is to maximize the wealth of the shareholders. In other words, it should protect and maximize the interest of the shareholders by maximizing the value of their stock. Taking this goal in mind, the financial manager will design the capital structure in such a way as to give the shareholders maximum possible return on their holdings.

Broadly speaking, there may be three fundamental patterns of capital structure in a new concern.

- Issuing only equity shares
- Issuing equity and preference share and
- Issuing equity and preference shares and bonds/debentures and or arranging long term loan from financial institutions

Which of the above patterns would be most suited to the firm is dependent upon multitudinous internal and external circumstances within which the firm operates but the main idea behind the decision shall be the maximization of shareholder's wealth.

2.1.1 Objectives of Capital Structure

In devising capital structure, the manager should bear in mind the following objectives:

1. Minimization of Costs

Capital cost of various sources of funds is not equal in all circumstances. One of the major objectives of a business enterprise is to raise funds at the lowest possible cost in a given set of circumstances in terms of interest, dividend and the relationship of earnings to the prices of shares. The management should aim at keeping the cost of issue at a minimum to maximize the returns to equity shareholders.

2. Minimization of Risks

Various risks are involved in business operation which has direct bearings on the capital structure of the company such as business risk, management risks, tax risk, trade cycle risks, purchasing power risks, interest rate risk, etc. This risk should be minimized by making adjustments in the components of capital structure.

3. Maximization of Return

One of the objectives of balanced capital structure is to provide maximum return to the real owners (equity share holders) of the company. It may be achieved by minimizing the cost of issue and cost of financing.

4. Preservation of Control

Generally equity shareholders have the control over the affairs of the company. Preference shareholders and the debenture holders have limited voting rights in matters affecting their interests. The capital structure should be designed so as to preserve the control of equity shareholders and to prevent the erosion of control from their hands. It requires proper balance between voting right and non voting right capital.

5. Proper Liquidity

Liquidity is necessary for the solvency of the company. A proper balance between fixed and the liquid assets should be maintained. Nature and size of the business helps to decide the ideal ratio of fixed and liquid assets.

6. Full Utilization

There must be a proper coordination between the quantum of capital and the financial requirements of the business so that full utilization of available capital may be made at minimum cost. Both the states of under capitalization and over capitalization are unwarranted to the health of industry.

2.1.2 Determinants of Capital Structure

There are different theories with different views regarding determinants of capital structure. However, some of the important determinants of capital structure are discussed below

1. Profitability

Corporate performance has been identified as a potential determinant of capital structure. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Ooi, 1999). However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits.

2. Growth

Applying pecking order arguments, growing firms place a greater demand on their internally generated funds. Consequentially, firms with high growth will tend to look to external funds to finance the growth. Firms would therefore, look to short-term, less secured debt then to longer-term more secured debt for their financing needs. Auerbach (1985) also argues that leverage is inversely related to growth rate because the tax deductibility of interest payments is less valuable to fast growing firms since they usually have non-debt tax shields. Michaelas et al. (1999) found future growth positively related to leverage and long-term debt, while Chittenden et al. (1996) and Jordan et al. (1998) found mixed evidence.

3. Tax

Different authors on capital structure have given different interpretations of the impact of taxation on corporate financing decisions. For instance Auerbach (1985) and MacKie-Mason (1990) studied the tax impact on corporate financing decisions. They concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. Graham (1996) on his part concluded that, in general, taxes do affect corporate financial decisions, but the extent of the effect is mostly not significant. Ashton (1991) confirms that any tax advantage to debt is likely to be small and thus have a weak relationship between debt usage and tax burden of firms.

4. Assets structure

Asset structure is an important determinant of the capital structure of a new firm. The extent to which the firm's assets are tangible and generic would result in the firm having a greater liquidation value (Harris and Raviv, 1991; Titman and Wessels, 1988). Studies have also revealed that leverage is positively associated with the firm's assets. This is consistent with Myers (1977) argument that tangible assets, such as fixed assets, can support a higher debt level as compared to intangible assets.

5. Size

Size plays an important role in determining the capital structure of a firm. Studies have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies (Smith and Warner, 1979; Ang and McConnel, 1982). Following the trade-off models of capital structure, large firms should accordingly employ more debt than smaller firms. According to Berryman (1982), lending to small businesses is riskier because of the strong negative correlation between the firm size and the probability of insolvency. Marsh (1982) and Titman and Wessels (1988) report a contrary negative relationship between debt ratios and firm size. Marsh (1982) argues that small companies, due to their limited access to equity capital market tend to rely heavily on loans for their funding requirements. Titman and Wessels (1988) further posit that small firms rely less on equity issue because they face a higher per unit issue cost. The relationship between firm size and debt ratio is, therefore, a matter for empirical investigation

2.1.3 Capital Structure Theories

In respect of capital structure decision of the firm, several capital structure theories have been developed over the period. Though these theories are classified in different ways, this section discusses them in chronological order of their development.

1. Net Operating Income Approach (NOI)
2. Traditional Approach (TA)
3. Modigliani and Miller's Approach (MM)

1. Net Operating Approach (NOI)

Net operating income (NOI) approach states the irrelevancy of leverage in case of overall cost of capital and value of a firm. Under NOI approach, the cost of equity is assumed to increase linearly with leverage. As a result weighted average cost of capital and value of the firm remains constant (Brigham and Johson, 1976).

NOI approach is based on the following assumptions:

- The market capitalizes the value of the firm as a whole.
- Overall capitalization rate depends on the business risk and it is at constant rate.
- Corporate income tax does not exist.

The critical assumption with this approach is that overall cost of capital (Ko) is constant, regardless of degree of leverage. An increase in the use of cheaper debt funds is offset exactly by the increase in the required equity return (Ke). Thus, the cost of capital of the firm (Ko) can not be altered through leverage and there is no one optimum capital structure (Van Horne, 2002).

2. Traditional Approach (TA)

The traditional approach of the capital structure theory is the intermediate approach of Net Income Approach and Net Operating income approach (Khan and Jain, 1999) and more sophisticated version of net income approach (Pandey, 1981). This theory contends that cost of capital (Ko) can be minimized and value of the firm (V) can be maximized with a judicial mixture of debt and equity. So, the optimal capital structure is possible for every firm.

The traditional approach is based on the view that

- Equity holders adjust their required rate of return proportionately for every unit of debt inclusion
- Debt holders are not really careful to the level of debt inclusion and do not demand any premium for leverage risk at least in the beginning
- The expected outcome of the behavior of equity and debt holder is the benefit of cheaper debt financing.

3. Modigliani and Miller Approach (MM Hypothesis)

Modern capital structure theory began in 1958, when Modigliani and Miller published what has been called the most influential finance article ever written (Brigham, Gapenski and Enrhardt, 2001).

Modigliani and Miller (1958) in their original position advocate that the relationship between leverage and cost of capital is explained by the net operating income approach (NOI). They make a formidable attack on the traditional proposition by offering behavioral justification for having the cost of capital (Ko) that remains constant through out all degree of leverage (Van Horne, 2002).

MM stated their hypothesis of capital structure based on the following assumptions:

- Capital market are perfect where information related to investment is freely accessible, there involves no transaction cost. All the securities are divisible infinitely. Investors are assumed to be rationale and to behave accordingly.
- The expected value of the probability distribution of expected earning for all the future period are the same as present operating earnings.
- Firms can be categorized into 'equivalent return' classes. All the firms within a class have the same degree of business risk.
- There is an absence of corporate income taxes.
- There are no retained earnings.

MM concentrates on the equilibrium state where no choice of finance method is relevant because of cost of finance is equal in all decisions. It is unrealistic to assume the existence of equilibrium position (Kuchhal, 1992). MM hypothesis can be explained by proposition I and II.

Proposition I

In this approach, MM argues that for firm in the same risk class, the total market value is independent of the equity combination and given by capitalizing the respected net operating income by the net approach to that risk class. The reason is that the value of the firm is determined by capitalizing the net incomes (EBIT) at the rate for the firm risk class (Modigliani and Miller, 1958). Thus there is no relationship between the value of a firm and the way its capital structure is maintained.

This proposition states that a company's weighted average cost of capital is determined solely by its investment, the value of these investment is unaffected by how the investment is financed (Keen, 1995).

Thus, two identical firms in all respect expect capital structure can not command the different value of the firm or cost of capital, arbitrage will take place which will enable investors to engage in personal leverage to restore equilibrium in the market place (Pandey, 1981)

Proposition II

This proposition is derived from proposition I and states that the expected rate of return on stock of company belonging the K^{th} class is the linear function of leverage. In other words, cost of equity rises proportionately with increase in the financial leverage in order to compensate in the form of premium for bearing additional risk arising from increased leverage.

Thus, MM hypothesis contends that overall cost of capital, as well as the value of a firm, is independent of capital structure. It is also called the value of levered firm (V_L) is equal to the value of unlevered firm (V_U) in the same risk class.

2.2 Review of Empirical Works

This section concerns with review of important empirical works, concerning capital structure since 1958 till 2008. Some important studies and their finding are presented in tabular form in chronological order. The review of literature is undertaken in five sections. The first section focuses on the review of empirical works carried out up to 1960s with their major findings. Similarly, the second section deals with the review of studies carried out during 1970s, third with the studies 1980s, fourth section with 1990s and finally fifth section deal with review of studies during 2000.

2.2.1 Review of Empirical Works during 1960s

The studies carried out up to 1960s were mainly clustered around the MM independent hypothesis and traditional theory of capital structure. The table 2.1 shows the major findings of studies conducted up to 1960s.

The first study was carried out by MM in 1958 in the American Electric Utilities and Oil Company. Their study concluded that cost of capital or value of firm is independent of the capital structure decision.

Immediately after the test of MM independent hypothesis in 1958, Barges (1963) tested the same hypothesis. Barge observed 61 rail roads, 63 department store companies and 34 cement producers. He used two approaches, direct test and yield test to examine the validity of the independent hypothesis. Direct tests were made to study the relationship between the average cost of capital and the total market value. While yield test were made to determine whether yield increase from zero debt up to some moderate debt range. Direct test result supported the traditional view where as yield test result neither supported nor contradicted the MM hypothesis.

Table 2.1: Description of Empirical Works during 1960s

Study	Area covered	Major findings
Modigliani and Miller (1958)	Test of MM independent hypothesis	Acceptance of MM hypothesis
Barges (1963)	Test of MM independent hypothesis	Rejection of MM hypothesis
Wippern (1966)	Test of capital structure theory	Acceptance of traditional theory
Miller and Modigliani (1966)	Test of tax advantage of leverage	Leverage is significant only for its tax advantage
Archer and Fasber (1966)	Determinants of cost of equity	Cost of equity is the function of size and growth of earning of the firms
Schcrartz and Aronson (1967)	Optimal financial structure for the different industry classification	Industrial influence on the capital structure
Peterson (1969)	Relationship between business risk and capital structure	Leverage varies directly with business risk
Gupta (1969)	Effect of size, growth and industry on financial structure of manufacturing companies	Significant effect of size and industry classification and insignificant effect of financial structure
Childs (1969)	Long term financing	Equity has dominant role in long term financing

Similarly, Wippern (1966) carried out the cross sectional analysis for the year 1956, 1958, 1961 and 1963 of 50 firms sampled from the different six industries. He concluded that shareholders wealth is enhanced by the firm's judicious use of fixed commitment of financing. The implication of this study is the rejection of the MM hypothesis and acceptance of the Traditional theory of capital structure.

Modigliani and Miller (1963) in correction of their original hypothesis concluded that leverage has a tax advantage and value of the firm can be maximized and cost of capital can be minimized, when equity financing is zero. MM (1966) tested tax advantage of leverage with the 63 samples of large electric utilities of USA for the year 1954, 1956 and 1957. In this test, they concluded that the leverage factor is significant only when the tax advantage is involved.

Archer and Farber (1966) studied the determinants of cost of equity and concluded that the cost of equity is basic function of size and growth of earnings of the firms. Similarly, Schwartz and Aronson (1967) revealed the effect of industrial classification on the capital structure of 32 firms sampled from the four broad classes of industry.

Peterson (1969) in his study of relationship between business risk and capital structure, showed the evidences contrary to the traditional view and concluded leverage varies with business risk. Gupta (1969) in his cross sectional analysis for the year 1961-62 of USA manufacturing corporations concluded the significant effects of the size and industrial classification on the financial structure and no significant effect of growth rate on leverage. Childs (1969) studied 125 USA industrial companies and found dominant role of equity in long term financing.

2.2.2 Review of Empirical Works during 1970s

The decade of 1970s was marked with empirical studies mostly directed in the area of capital structure of corporate finance. Most of the previous empirical studies were clustered around the tests of existence of an optimal capital structure. Where as the studies carried out during the decades of 1970s are almost concentrated around the cross sectional characteristics of an individual firm's capital structure especially fundamental determinants of financial structure (Martin, Cox and Mac Minn, 1988). The table 2.2 provides the area covered by the empirical studies and their major findings during 1970s.

Hamada (1972) provided the evidences in support of the MM hypothesis. Lev and Pekelman (1975) tested the validity of multi period adjusted model and concluded that the equity and debt effect on the current period of financial policy of the firms. Similarly, Kim et al (1979) suggested that weak evidences supporting the Clientele hypothesis of Miller. Remmers et. al. (1974) showed that industrial influence in not a significant determinant of financial structure in the United States, Norway and the

Netherlands. Where as, Scott (1972) conversely provides the evidence in the support of significant industrial influence on capital structure and suggested that firm in different industries have different financial structure. Scott and Martin (1975) also came to the same types of conclusion.

Ferri and Jones (1979) concluded only a slight statistical relationship between relative debt structure class and generic industry class. Belkoui (1975) studied 155 firms from 13 industries for the period of 1968 to 1973 and provided the evidence against the industrial influence on financial structure.

Table 2.2: Description of Empirical Works during 1970s.

Study	Area covered	Major findings
Scott (1972)	Industrial influence	Significant
Hamada (1972)	Test of MM hypothesis	Accepted
Hurdle (1974)	Influence of market power on financial pattern	Negative relation
Remmers et. al. (1974)	Industrial influence	No industrial influence in the USA, Norway and the Netherlands but significant influence in France and Japan
Leve and Pekelman (1975)	Validity test of multi period adjustment model	The beginning period of equity and debt affect the current financial policy
Belkaouli (1975)	Industrial influence of capital structure	No significant effect
Scott and Martin (1975)	Industrial influence in financial structure	Significant effect
Ferri and Jones (1979)	Relationship between firms financial structure and its industrial class, size, variability of income and operating leverage	Existence of relationship between states variance income
Kim et al (1979)	Test a Miller Clientele theory of leverage	Weak support of clientele hypothesis

Similarly, most of the *Indians studies* were done during the decade of 1970s are concerned with the cross sectional characteristic of industrial firm's capital structure. The table 2.3 presents Indian empirical studies during 1970s.

Rao and Rao (1975) found the negligible positive impact of corporate income tax on corporate debt policy of manufacturing sector in India. On the same way, Mishra

(1978) showed that the evidence in favor of the tax avoidance hypothesis for sugar, tobacco, trading industries and aggregate corporate sector of India.

Chakarborty (1975) examined the effect of firm's characteristics on capital structure and found negative association of debt, equity ratios with age, retained earnings, profitability, capital employed and corporate tax rate and positive association with size, profitability scaled by sales and capital intensiveness measured by gross fixed assets to sales. Rao (1979) in his study of public enterprises of Tamil Nadu showed that the adverse effect of profitability on debt equity ratio.

Table 2.3: Description of Indian Studies during 1970s

Study	Area covered	Findings
Rao and Rao (1975)	Effect of corporate income tax on corporate debt policy	Negligible effect
Chakraborty and Sen (1975)	Measurement of cost of capital	Computation of average cost of capital is not necessary
Chakraborty (1975)	Cost of capital and capital structure of private sector	Influence of firm's structure c characteristics exist
Pandey (1978)	Impact of debt on cost of equity	Inconclusive
Mishra (1978)	Effect of corporate income tax on capital structure	Positive effect
Rao (1979)	Effect of capital structure on profitability	Adverse effect
Pandey (1979)	Relationship of capital structure and cost of equity	Adverse effect

Chakarborty and Sen (1975) in spite of existing theory that contends the overall cost of capital as the benchmark against the rate of return of the project are rated and concluded that overall cost of capital is irrelevant in Indian context.

Pandey (1978) in his cross sectional analysis of 47 chemical, 32 cotton, 32 engineering and 20 electricity industries could not reach the conclusion on the impact of debt on cost of equity. Following year he made another study and drew the conclusion that the relationship between debt equity ratio and cost of equity is adverse. Thus, Indian studies support the impact of leverage on cost of capital.

2.2.3 Review of Empirical Works during 1980s

There are many studies carried out during 1980s on general trend of capital structure, industrial and firm's characteristic and impact of leverage on cost of capital. Most of studies are related to the agency cost and asymmetric information theory of capital structure. Similarly, large numbers of Indian studies were also conducted during 1980. Most of their studies are related with leverage and cost of capital. The empirical studies during 1980s are presented in the table 2.4.

Table 2.4: Description of Empirical studies during 1980s

Study	Area covered	Major findings
Flath and Knoeber (1980)	Test of MM hypothesis	Rejection
Bawen et al. (1982)	Industrial influence on leverage	Statistically significant
Bradley et al. (1984)	Impact of industry and firm's characteristics on leverage	Strong industrial influence, inverse association of leverage with volatility of firm's earnings. R&D and advertisement expenditure and positive association with non tax shield.
Taggart (1985)	General trend of capital structure in USA	Increasing trend in post war period
Long and Maltz (1985)	Effect of industry and firm's characteristics on leverage	Positive effect of fixed assets and profitability and negative effect of advertisement and R and D
Auebach (1985)	Effect of firm's characteristics on leverage	Insignificant effect on clientele tax rate, positive and significant effect of growth rate variance of earnings, but positive and insignificant effect of the rate of depreciation on leverage.
Kester (1986)	Effect of industry and firm's characteristics on leverage	Industrial influence, negative impact of growth opportunity on leverage
Kim and Sorensen (1986)	Effect of firm's characteristic on leverage	Positive effect of volatility and managerial equity ownership and negative effect on non debt tax shield, growth opportunities and size on leverage of the firm
Titman and Wessels (1988)	Determinants of capital structure	Negative effect of volatility non debt tax shield, profitability growth opportunities, size and uniqueness of leverage and positive effect on fixed assets on leverage
Wedig et al. (1988)	Determinants of capital structure of hospital	Statistically no significant influence of ownership on capital structure, negative association of leverage with volatility, negative and significant association of tax shield, negative association of volatility and positive and statistically significant of collateral value with leverage
Friends and Lang (1988)	Effect of firm's characteristics on capital structure	Positive effect of fixed assets and size, and negative effect of profitability,

		volatility and managerial ownership
Masuli (1988)	General trend of capital structure	Increasing trend
Friends and Hasbrowek (1988)	Determinants of leverage	Negative association of volatility, profitability, managerial equity ownership and positive association of fixed assets, size of the firm and liquidation value with leverage.

The works of Masuli (1988) and Taggart (1985) highlighted on the general trend of capital structure. Masuli showed that distributed profit account for about 22 percent of total sources of fund on non farms and non financial corporate sector business in 1986. Taggart (1985) in his study, General trend of capital structure in USA, concluded that there was increasing trend of leverage in USA since the Second World War. Taggart again found that debt was 45 percent of total sources of funds for USA non financial corporation.

Some of the studies during 1980s have also dealt with industrial influences on capital structure. Bawen et al. (1982), Kester (1986) and Bradley et al. (1989) found significant industrial influence on financial structure. Bradley et. al. (1984) concluded that regulated industries are the most highly levered firms.

The result showed that the studies of 1980s do not agree each other in respect to their findings except in the use of the relationship established between the fixed assets and leverage. Bradely at el. (1984), Kester (1986), Titman and Wessels (1988), Wedig (1988), Friend and Lang (1988) and friend and Hasbrouck (1988) concluded that the inverse impact of volatility of earnings on leverage. However, Anebach (1985) and Kim Sorensen (1986) found positive relationship between the volatility and leverage ratio.

Indian studies during 1980s are mostly concerned with the impact of leverage on cost of capital. Brief description of Indian studies are presented in the table 2.5.

Indian studies showed that the contradictory result on risk measured in term of business risk and debt equity ratio. Sharma (1983) and Chamoli (1985) concluded that the positive relationship between these two variables which is against the theoretical expectation. Garg (1988) suggested that the result in agreement with the theoretical relation existed between them.

Table 2.5: Description of Indian Studies during 1980s

Study	Area covered	Major findings
Bhat (1980)	Characteristics determinants of leverage	Leverage is not related with size, growth rate, degree of operating leverage and it is negatively related to dividend payout ratio and earning rate of debt service capacity of the firm
Pandey (1981)	Relationship between leverage and cost of capital, effect of leverage on cost of equity and effect of tax deductibility on cost of capital	Negative association of leverage with cost of capital, negative affection cost of capital after deduction of tax effect and in conclusive result on the effect of leverage on cost of equity
Sharma (1983)	Impact of firm's characteristics on chemical and pharmaceutical industry (1969-78)	(i) effect of profitability and age is negative and statistically significant (ii) effect of size, growth, business risk, and asset structure is positive and statistically significant expect to the effect of size (iii) overall cost of capital has strong negative linear relation with debt equity ratio at the lower range of debt equity level (iv) effects of debt equity on value of the firm is negative.
Matta (1984)	Industrial and firms characteristics of determinants of capital structure	(i)industrial influences on capital is significant (ii) the financial structure of small scale company is debt dominated especially by short term debt and large scale company are highly equity passed capital structure (iii) the rapidly growing companies are found to have equity dominated financing along with.
Srivastra (1984)	Test of MM valuation model	Rejection of MM model
Pandey (1984)	Attitude survey of practicing manager of India	(i) existence of optimum capital structure (ii) debt capital is prerecording to equity capital (iii) profitability quality of management and security were most important further for lending
Chamali (1985)	Patterns of financial mix of cement industry	(i) sector influence on capital structure (ii) debt equity ratio in private sector is high than public sector and is increasing trend in both the sectors (iii) debt capital and fixed assets and debt equity ration and debt coverage ratio are positively related
Pandey (1985)	Industrial and firm's characteristics and determinants of leverage	(i) leverage decision is independent to size, profitability, growth and industrial variation (ii) level of leverage is in increasing trend
Mall (1986)	Trend in capital structure in medium and large scale Pvt Ltd	(i) increasing trend in capital structure decision (ii) industrial influence (iii) negative correlation between debt equity ratio and profitability
Garg (1988)	Optimal capital structure along with determinants	(i) industrial influence is not strong determinants of capital structure (ii) impact of non debt tax on leverage is positive and significant (iii) impact of earning variability on leverage is negative and insignificant (iv) impact of assets structure is positive and highly significant (v) positive association between the cost of equity and use of debt insignificant.

Sharma (1983) and Mall (1986) found that the adverse relationship between the profitability and debt to equity ratio. Similarly, Sharma (1983), Chamoli (1985) and Garg (1988) showed that the evidence of direct association of debt equity ratio with assets structure of the firm. Sharma (1983) suggested that the positive relationship between debt equity ratio and growth rate while Matta (1984) found the negative relationship between them.

Among others, Pandey (1981) study is more concerned with the test of relationship between cost of capital and leverage, effect of leverage on cost of equity and effect of tax deductibility on cost of capital in Indian context. In a cross sectional analysis of 131 observation drawn from cotton, chemical, engineering and electricity industries in India for the year 1968, 1969, and 1970, the result was inconsistent with the conclusion of MM independent hypothesis.

2.2.4 Review of Empirical Works during 1990s

Studies during 1990s were concerned with various aspects of capital structure such as factors influencing capital structure decisions of all equity firms, information context of equity, signaling of entrepreneurs and so on. Brief reviews of Empirical studies during 1990s are presented in the table 2.6.

Agramal and Nagearajan (1990) provided the evidences that all equity firms have greater family involvement in corporate operation than in levered firms. And managers of all equity firms have a greater control of corporate voting right. Isareal et al. (1991) in their study, Information context of equity, concluded that Leverage is positively related with firm value. Kale et. al (1991) derived the functional relationship between business risk and optimal debt level in the De Angelo in U shape of the empirical cross section test for two years 1984 and 1985.

Table 2.6: Description of Empirical Works during 1990s

Study	Area covered	Major findings
Agrawal & Nagarajan (1990)	Factors influencing capital structure decision of all equity firm	(i) All equity firms have greater family involvement in corporate operation than levered firms. (ii) managers of all equity firms have greater control of corporate voting rights
Isreal et. al (1991)	Information context of equity	Leverage is positively

		related with firm value
Kale et al. (1991)	Relations between business risk and optimal debt level	Leverage is positively related with firm value
Kram et al. (1992)	Information context	The market reacts to change in financial leverage
Kim, Chen and Joc (1992)	Information contents	The market reacts to changes in financial leverage
Rajan and Ziglales (1995)	Capital structure analysis	(i) at an aggregate level, firm leverage is more similar across the G-7 (ii) leverage is the function of tangibility, market to book, size and profitability in the us companies
Levy and Lazarovichporat (1995)	Signaling of entrepreneurs participation	The larger proportion of enterprises participation in a project the higher its stock price.

Similarly, Levy and Lozarovichporat (1995) suggested larger proportion of entrepreneur participation in a project will result in higher stock price. Hull (1999) studied using 338 observations for 1970-1988.

2.2.5 Review of Empirical Works during 2000

Empirical studies during 2000 are presented in the table 2.7.

Both et al. (2001) and Chui et al. (2002) concluded that country factor and cultural factors are influenced on determinants of capital structure. Booth et al. (2001) found debt ratios in developing countries seem to be affected by the country factors such as GDP growth rates, inflation rates and development of capital market. On the same way, Chui et al. (2002) studied 5551 samples firms across 22 countries and concluded national culture affects corporate capital structure.

Mansi and Reeb (2002) suggested that firm having the average level of international diversification have about 52 basis points lower cost of debt financing and use approximately 30 percent debt in their capital structure. Allayannis, Brown and Klapper (2003) observed in their study that several unique factors as well as some common factors determine the use of different types of debt. It depends on the ability to manage the associated currency risk with risk management tools.

Abor (2005) evaluated the relationship between capital structure and profitability of listed firms on Ghana Stock Exchange during a five year period (1998-2002). This study revealed that short term debt is an important source of financing for Ghanaian firms, representing 85 percent of total debt financing. Regression results showed a significantly positive association between debt and return on equity. This suggests that profitable firms depend more on debt as their main financing option.

Carpentier (2006) found no evidence to support a significant relationship between the changes in debt ratios and the changes in value of firm. Similarly, Seppa (2007) conducted study on 260 Estonian non financial companies for the period 2002 to 2004. The sample companies were divided into small, medium and large companies. Correlation and regression model provided the evidence that financial companies in Estonia are driven by pecking order theory.

Likewise, the study of Amidu (2007) revealed that profitability, corporate tax, growth, asset structure and bank size influence bank's capital structure decision. The significant finding of this study is that, more than 87 percent of the banks' assets are financed by debts and out of this, short term debts appear to constitute more than three quarters of the capital of the banks. This highlights the importance of short term debts over long term debts in Ghanaian banks' financing.

Coleman (2007) observed that most of the microfinance institutions employ high leverage and finance their operations with long term debt. Similarly, highly leveraged microfinance institutions perform better by reaching out to more clients, enjoy scale economies and therefore are better able to deal with moral hazards and adverse selection enhancing their ability to deal with risk.

Table 2.7: Description of Empirical Works during 2000

Study	Area covered	Major findings
Booth et al. (2001)	Country factors and institutional factors	Systematic differences in the way these ratios are affected by country factors such as GDP, growth rate, inflation rate and development of capital market
Chui et al. (2002)	Determinants of capital structure	(i) national culture affects corporate capital structure.(ii) countries with high scores on the culture dimensions of "conservatism" and

		"mastery" tend to have lower corporate debt ratios
Mani and Reeb (2002)	Impact of firm international on debt financing	Firm international on is associated with a low cost of debt financing and higher debt usage and that the relation between firm international activity and debt financing is non monotonic.
Baker and Reeb (2002)	Market timing and capital structure	Fluctuations in market valuations have large effects on capital structure that persist for at least a decade, low leverage firm tend to be those that raised funds when their valuation were high
Allayannis, Brown and Klapper (2003)	Capital structure and financial risk	(i) Several unique factors as well as some common factors that determine the use of different types of debt. It depends on the ability to manage the associated currency risk with risk management tools
Abor (2005)	The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana	The study reveals a significantly positive relation between SDA and ROE, suggesting that profitable firms use more short term debt.
Carpentier (2006)	The valuation effects of long term changes in capital structure	Value of firm is independent with debt ratio.
Seppa (2007)	Capital structure decisions research in Estonian non financial companies	Capital structure decisions among Estonian non financial companies are driven by the pecking order theory.
Amidu (2007)	Determinants of capital structure of banks in Ghana: an empirical approach	Profitability, corporate tax, growth, asset structure and bank size influence banks' financing or capital structure decision.
Coleman (2007)	The impact of capital structure on the performance of microfinance	Most of the microfinance institutions employ high leverage and finance their operation with long term as against short term debt.
Abor (2007)	Industry classification and the capital structure of Ghanaian SMEs	Industry effect is important in explaining the capital structure of SMEs and there are variations in capital structure across the various industries.

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The regression model used in the study of Abor (2007) indicated that agriculture, pharmaceutical and medical industries depend more on long term and short term debt than the manufacturing sector. Similarly, information and communication, wholesale and retail trade sector are more likely to use short term credit than the manufacturing sector. Finally the study concluded that industry effect is important in explaining the capital structure and there are variations in capital structure across the various industries.

2.3 Review of Nepalese Studies

Empirical studies carried out in the context of Nepal are presented in table 2.8. Adhikari (1992), K.C (1994) and Poudel (1994) worked on the corporate finance and impact of leverage on value of the firm. Shrestha (1985) and Baral (1996) emphasized the determinants of capital structure in Nepalese public Enterprises (PES).

Adhikari (1991) tested MM hypothesis in five listed finance companies for the period of 1976/77 – 1988/89. He used multiple regression equation and found that the result support the traditional proposition. On the same way Khatri (1988), Ghimire (1999) and Shah (2002) tested MM hypothesis on listed companies. They used multiple regression models to test MM hypothesis and found the result supporting the traditional proposition.

Sah (2002) conducted study on 26 listed companies, 11 finance and 15 non finance sector enterprises. The result indicated that the cost of capital can be affected by the use of debt in the capital structure. The cost of equity increases as leverage increase.

Khanal (1992) worked on capital structure management of Nepalese companies. He selected samples from industrial public enterprises of Nepal and found that overall result was unsatisfactory. K.C (1994) studied on the financing of corporate growth of 37 large and medium size, and joint stock companies. In his study, he found significant positive relationship of long term debt with growth, age and tangible assets. Similarly, Paudel (1994) included 15 listed companies and 20 public enterprises covering ten year period (1982/83 -1991/92). He concluded that size, profitability, growth, collateral value and variability of earnings have influence on the capital structure.

Table 2.8: Description of Nepalese Studies

Study	Area covered	Major findings
Shrestha (1985)	Determinants of capital structure in Nepalese Public Enterprises	(i) neither there exists proper determinants nor standards are developed to justify the appropriateness of capital

		structure.(ii)public enterprises of Nepal are following ad hoc capital structure.
Adhikari (1991)	Test of MM hypothesis	Rejection of MM hypothesis
Khanal (1992)	Effect of leverage and capital investment and earning generation	Overall result was unsatisfactory
K.C. (1994)	Financing of corporate growth	Significant and positive relationship of long term debt with growth and tangible assets
Poudel (1994)	Industrial finance in Nepal	Growth measured by the annual compound growth of total assets, risk measured by the annual percentage variation in sales. Profitability measured by the ratio of earnings before interest and taxes to sales have no significant effect on the capital structure of both types of listed companies and public enterprises
Baral (1996)	Determinants of capital structure and trend in capital structure and cost of capital in public sector enterprises.	(i) Profitability, operating cash flow and debt services ratios are correlated significantly with the capital structure of trading public enterprise. (ii) the overall cost of capital in corporate enterprises show the lower expected rate of return on the investment of public enterprises in Nepal
Khatari (1998)	Test of MM hypothesis	Rejection of MM hypothesis
Ghimire (1999)	Test of MM hypothesis	Rejection of MM hypothesis
Sah (2002)	Test of MM hypothesis	Rejection of MM hypothesis
Baral (2004)	Determinants of capital structure: a case study of listed companies in Nepal	Size, growth rate and earning rate are significant determinants of capital structure.
Khadka (2006)	Leverage and the cost of capital: some tests using Nepalese data	Negative and insignificant relationship between leverage and the overall cost of capital.
Fago (2006)	The determinants of capital structure: an empirical evidence from Nepal	Net worth and net working capital are the major determinants of capital structure decision in Nepal.

Shrestha (1985) found in his study that neither there exist proper determinants nor standard are developed to justify the appropriateness of capital structure. So he argued that the public enterprises are following ad hoc capital structure and neither government nor pubic enterprises themselves are serious for the appropriate capital structure. Baral (1996) also worked on the study of capital structure and cost of capital of Nepalese Public Enterprises (PEs) on the data of 26 enterprises during 1980/81 to 1991/92. He found that profitability, operation cash flows and debt service are positively related to capital structure.

Baral (2004) studied capital structure of Nepalese manufacturing companies, commercial banks, insurance companies and finance companies. The study concluded out of seven examined explanatory variables; only size, growth and earning rate are statistically significant determinants of financial leverage. Khadka (2006) surveyed 15 listed Nepalese firms between the periods 1990 to 2005. The result of regression model showed a negative and insignificant relationship between leverage and overall cost of capital. His finding is inconsistent with traditional approach.

Fago (2006) worked on capital structure of 22 enterprises with the total of 124 observations. The results indicate that out of eight selected explanatory variables, the net worth and net working capitals are the signifcant determinants of capital structure decision in Nepal.

2.4 Concluding Remarks

Capital structure is a topic that has received much attention in the financial management area. However, despite the extensive body of literature surrounding the impact of capital structure on profitability, the question of optimal capital structure and determinants of capital structure still remains. In other words, the corporate capital structure has long been recognized as an unresolved economic puzzle. The controversy centers as whether or not capital structure matters. Due to complex nature of the problem, corporate capital structure has been a subject of considerable study particularly since the emergence of MM's classical work (Modigliani and Miller, 1958).

Some empirical studies indicated the statistically significant effect of capital structure on profitability while others did not. Similarly, Petersen and Ranjan (1994), Roden and Lewellen (1995), Hadlock and James (2002), Joshua Abor (2005) reported positive impact of debt on profitability while study of Hall and Weiss (1967), Gale (1972) and Titman and Wessels (1988) reported negative impact of debt on profitability. Therefore, effect of capital structure on profitability has been a controversial subject and has attracted intense debate in the literature of finance over the past four decades. However in context of Nepal, it has received a scant attention and there are rare studies conducted on capital structure and profitability. Viewed in this way, there is a need to carry a study to specify and validate the effect of capital structure on profitability. Hence this study is developed to test the relationship between capital structure and profitability in Nepalese enterprises

CHAPTER-3

RESEARCH METHODOLOGY

Research methodology is the procedure by which researcher go about their work of describing, explaining and predicting phenomena. In other words, research methodology describes methods and process applied in the entire aspect of the study. In this chapter, efforts have been made to present and explain the specific research design for the sake of attaining the research objective.

This chapter has been organizes into five sections. Section one presents the research design, while section two describes the nature, sources of data. Section three describes the selection of enterprises. Section four explains the methods of analysis employed in this study. Similarly, definition of key terms and limitation of the study are described in the last two sections.

3.1 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance (Kerlinger, 1986). The research design is an integrated frame that guides the researcher in planning and executing the research work (Wolf and Pant, 2005). This study follows descriptive research design. Although descriptive research can not predict and control condition and events, it contributes to science primary by building a foundation of facts upon which exploratory hypotheses may be constructed, by checking the validity of existing theories and by directing attention toward alternative hypothesis which better fit the facts (Van Dalen, 1962). Descriptive approaches have been adopted mainly for describing the situation and conduct a survey of opinions. Analytical approach has been followed to analyze the related data and the relationship among variables.

3.2 Nature and Sources of Data

This study is based on both primary and secondary data. In order to estimate the models used in the study, the required data have been taken from financial statements of listed companies by Nepal Stock Exchange Ltd. and profiles of listed companies published by the Security Board Nepal Ltd. Though there are 135 companies listed in

Nepal Stock Exchange Ltd, all of them do not provide scope for the study. On the other hand, many of the listed companies do not submit their financial statements to Nepal Stock Exchange Ltd leading to the absence of data. Therefore, only 22 companies are selected for the study as sample.

Primary data have been collected through structured questionnaire. The pro forma of structured questionnaire is presented in appendix. The opinions of fifty four respondents have been collected. Out of them eighteen respondents belong to manufacturing enterprises and thirty six respondents belong to non manufacturing sector enterprises viz. hotels, trading and finance which include accountants and financial executives of the company. The questionnaire schedule consisted of eleven closed end questions. The questions are concerned with major aspects of capital structure and profitability. Table 3.1 shows the percentage of collection from various sectors.

Table 3.1: Number of Questionnaire Distributed and Collected

Sectors	Number Distributed	Number Collected	Percentage of Collection
Manufacturing	25	18	72 %
Non Manufacturing	48	36	75 %
Total	73	54	74 %

3.3 Selection of Enterprises

The study is based on pooled cross sectional data of 4 hotels, 14 manufacturing and 4 trading sector enterprises from 2053/54 to 2062/63 with total of 160 observations. This is 16 percent of the total numbers of population observations. Table 3.1 shows name of enterprises and number of observations selected for the entire study.

Table 3.2
Name of Enterprises and Number of Observations Selected for the study

S.N	Name of the Enterprises	Year	Observations
Hotel Sector Enterprises			
1.	Yak and Yeti	2054/55 – 2061/62	8

2.	Soaltee Hotel	2054/55 – 2061/62	8
3.	Taragaun Regency Ltd	2059/60– 2061/62	3
4.	Oriental Hotel Ltd	2055/56 – 2061/62	7
Manufacturing Sector Enterprises			
1.	Ragupati Jute Mills	2055/56 – 2061/62	7
2	Khadya Udyog Ltd	2053/54 –2055/56 2057/58 - 2062/63	9
3.	Nepal Bitumen & Barrel Udyog Ltd	2054/55 – 2060/61	7
4.	Jyoti Spinning Mills	2056/57 – 2062/63	7
5.	Gorakhali Rubber Udyog Ltd	2056/57 -2062/63	7
6.	Shree Arun Vanaspati Udyog	2054/55 – 2061/62	8
7.	Shree Ram Sugar Ltd	2054/55 – 2059/60	6
8.	Fluer Himalayan Ltd	2054/55 – 2058/59	5
9.	Nepal Banaspati Ghee Ltd	5054/55 – 2062/63	9
10.	Birat Shoes Ltd	2053/54 – 2060/61	8
11.	Nepal Lube Oil Ltd	2053/54 – 2062/63	10
12.	Bottlers Nepal Ltd (Balaju)	2054/55 – 2062/63	9
13.	Bottlers Nepal Ltd (Terai)	2055/56-2056/57, 2058/59 – 2062/63	7
14.	Unilever Nepal Ltd	2054/55 – 2062/63	9
Trading Sector Enterprises			
1.	Salt Trading Corporation	2054/55 – 2061/62	8
2.	Bishal Bazar Company Ltd	2054/55 – 2061/62	8
3.	Nepal Welfare Ltd	2057/58 - 2061/62	5
4.	Nepal trading Ltd	2054/55 – 2058/59	5

Table 3.3 shows the total number of enterprise selected for the study

Table 3.3
Number of Enterprises Selected for the Study

S.N	Sectors	Numbers
1.	Hotel Sector Enterprises	4
2.	Manufacturing Sector Enterprises	14
3.	Trading Sector Enterprises	4
	Total number of selected enterprises	**22**

Table 3.4 show the total number of observations selected for the study

Table 3.3
Total Numbers of Observation Selected for the Study

S.N	Sectors	Observations
1.	Hotel Sector Enterprises	26

2.	Manufacturing Sector Enterprises	108
3.	Trading Sector Enterprises	26
	Total numbers of observations	**160**

3.4 Method of Analysis

The study, among others, attempts to estimate various econometric models to confirm the relationship between return on equity (ROE) and fundamental variables and to test the robustness of the results. The alternative statistical specifications as well as portfolios on leverage are also formed in each case where necessary in order to obtain the best possible results. The study examines the relationship of profitability i.e. return on equity with fundamental variables such as short term debt (SDA), long term debt (LDA), total debt (DA), sales (SIZE) and sales growth (SG) of Nepalese enterprises by estimating various models.

3.4.1 Econometric Model

The method of analysis employed in this study includes simple as well as multiple regression models. The regression models are based on pooled cross sectional data of 22 enterprises from 2053/54 to 2062/63 with total of 160 observations. A pooled cross sectional data approach is more useful than either cross-section or time-series data. One advantage of using the pooled cross sectional data is that, because of the several data points, degrees of freedom are increased and collinearity among the explanatory variables is reduced, thus the efficiency of economic estimates is improved.

Model I

In this model, return on equity is (ROE) is regressed against each of the selected explanatory variables such as short term debt, long term debt, total debt, sales and sales growth. The equations are:

1) $ROE = a + B_1SDA + E$
2) $ROE = a + B_1LDA + E$
3) $ROE = a + B_1DA + E$
4) $ROE = a + B_1SIZE + E$
5) $ROE = a + B_1SG + E$

Where,

ROE = Return on equity

SDA = Short term debt

LDA = Long term debt

DA = Total debt

SIZE = Log of sales

SG = Sales growth

E = Error term

Model II

This model is based on Joshua Abor (2005) study. In this model, return on equity is regressed against short term debt and other explanatory variables. Return on equity is taken as function of leverage, sales and sales growth.

The multiple regression equation of the model is

$$ROE = a + B_1SDA + B_2SIZE + B_3SG + E$$

Where,

ROE = Return on equity

SDA = Short term debt

SIZE = Log of sales

SG = Sales growth

E = Error term

Model III

This model is based on Abor (2005). In this model, return on equity is regressed against long term debt, sales and sales growth. Return on equity is taken as the function of long term debt, sales and sales growth. The multiple regression equation of the model is

$$ROE = a + B_1LDA + B_2SIZE + B_3SG + E$$

Where,

ROE = Return on equity

LDA = Long term debt

SIZE = Log of sales

SG = Sales growth

E = Error term

Model IV

This model is adapted from Abor (2005) study. In this model, return on equity is regressed against total debt, sales and sales growth. Return on equity is specified as dependent variable and total debt, sales and sales growth are specified as independent variables. The multiple regression equation of the model is

$$ROE = a + B_1DA + B_2SIZE + B_3SG + E$$

Where,

ROE = Return on equity

DA = Total debt

SIZE = Log of sales

SG = Sales growth

E = Error term

3.4.2 Correlation Analysis

In order to examine the possible degree of multiple collinearity among the regressors, Karl Person's Coefficient Correlation is computed. Correlation coefficient gives a preliminary idea of direction of the relationship between dependent and independent variables. Correlation is a measure of the relation between two or more variables. The measurement scales range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation, while a value of +1.00 represents a perfect positive correlation. A value of 0.00 or close to zero represents a lack of correlation.

3.4.3 Analysis of the Properties of Portfolio Formed on Leverage

The properties of portfolio are studied to examine the relationship between leverage and indicated financial variables of Nepalese enterprises. This part of analysis is based on pooled cross section analysis of 22 enterprises with 160 observations. This study sorts out all the sampled enterprises into 3 portfolios based on leverage of individual enterprises. Splitting enterprises into more than 3 portfolios reduces the sample sizes. For each enterprise the various measures such as liquidity ratio, profitability ratio, turnover ratio and earning ratio are computed. They are then classified according to portfolio formed and average ratios are computed respectively.

3.4.4 Others Statistical Tools

Mean

Generally, Mean indicates the measure of the middle of the set and denoted by ' « ' or ' $\overline{X}$. In other words, it is just the sum of all the observations divided by the number of observations. During analysis, mean or average have been used as synonymous to equal weighted mean.

Symbolically,

$$« X \frac{X}{N}$$

Where,

« = the population means variable 'X'

X = sum of all the observed value of 'X' variable

N = the total number of observations

Standard Deviation

Standard Deviation (SD) is the absolute measure of dispersion. It shows the degree of variation among the observations' value in the date set. Normally, higher the value of standard deviation higher the degree of fluctuation and higher will be the risk. In this study, standard deviation has been used to indicate the degree of fluctuation in respective variables.

Symbolically,

$$\pm = \sqrt{\frac{(X \; Z«)^2}{N}}$$

Where,

± = Standard deviation

X = Observation

« = population mean for observed value of 'X'

N = total number of observations

= sum of all values of $(X-«)^2$

3.5 Definition of Key Terms

1. Return on Equity (ROE)

Return on equity measures the firm's profitability in terms of return to equity shareholders. It is calculated by dividing net profit/loss after tax by shareholder's fund i.e. total share capital plus reserves plus surplus. A comparison of this ratio with that of similar firms will throw light on the relative performance and strength of the firm.

$$ROE = \frac{Net\ profit\ after\ tax}{Shareholder's\ fund}$$

2. Short Term Debt (SDA)

It is the ratio of short term debt to total assets. Short term debt is defined as the portion of the company's total debt repayable within one year. This includes bank overdraft, bank loan payable within a year and other current liabilities.

$$SDA = \frac{Short\ term\ debt}{Total\ assets}$$

3. Long Term Debt (LDA)

It is the ratio of long term debt to total assets. Long term debt is the company's total debt repayable beyond one year. This includes long term bank loans and other long term liabilities repayable beyond one year such as directors' loan, hire purchase and leasing obligations.

$$LDA = \frac{Long\ term\ debt}{Total\ assets}$$

4. Total Debt (DA)

It is the ratio of total debt to total assets. Total debt is the summation of short term debt and long term debt. This ratio measures the portion of firm's assets financed by debt capital.

$$DA = \frac{Short\ term\ debt + Long\ term\ debt}{Total\ assets}$$

5. Sales (SIZE)

In this study, the natural logarithm of sales in profit and loss account is used as a measure of the firm size. Sales represent trading sales only and it does not include miscellaneous sales. The latter is, however, nominal in most cases. SIZE has been included as a control variable in the regression model used in this study and is computed as

SIZE = Log (Sales)

6. Sales growth (SG)

Sales growth has been included as another control variable in the present study. Sales growth rate depicts the managerial and operational efficiency of enterprises. The growth rate indicates the possibility of increase in earnings capacity of business. It is calculated as

$$SG = \frac{S - S_1}{S_1}$$

Where,

SG = Sales growth

S = Total sales in cross section year

S_1 = Total sales in one year before the cross section year

7. Current Ratio (CR)

Current ratio represents short term business risk. It indicates the ability for payment of current debt from current assets. It is computed by dividing firm's current assets by current liabilities. Current assets include cash and those assets which can be converted into cash within one year such as marketable securities, account receivable, stock and prepaid expenses. Current liabilities include those liabilities which are to be paid by the firm within one year and include creditors, bills payable, accrued expenses, bank overdraft and income tax liability.

$$CR = \frac{Current\ assets}{Current\ liabilities}$$

8. Return on Assets (ROA)

It is the ratio of net profit/loss after tax divided by total assets of a firm. This ratio measures profitability in terms of relationship between net profit and total assets. It is calculated as

$$ROA = \frac{Net\ profit\ after\ tax}{Total\ assets}$$

9. Return on Capital Employed (ROCE)

It is the ratio of net profit/loss after tax divided by net capital employed. Capital employed comprises share capital plus reserve and surplus plus long term debt plus short term debt.

$$ROCE = \frac{Net\ profit\ after\ tax}{Net\ capital\ employed}$$

10. Assets Turnover Ratio (ATR)

It is the ratio of sales divided by total assets. This ratio indicates firm's efficiency in utilizing its resources to generate output. Assets turnover ratio is calculated as

$$ATR = \frac{Sales}{Total\ assets}$$

11. Earning Ratio (ER)

It is the ratio of earning before tax to total assets. It is computed as

$$ER = \frac{Earning\ before\ tax}{Total\ assets}$$

3.6 Limitation of the Study

The data problem is acute in Nepal. Even the financial statements of listed companies published by Nepal Stock Exchange are not readily available since they are treated as confidential. The computation of dependent and independent variables are based on accounting data prepared by the firms. There is no database, which has made it difficult to carry on any research in Nepalese enterprises.

This study does not cover all the Nepalese enterprises. It therefore, implies that the conclusions drawn are of a tentative nature and firm generalization should be avoided for the entire Nepalese enterprises. Similarly, each selected enterprises does not represent the entire industry in which it falls. But it does represent largely its industry groups.

Again the study period begins from 2053/54 only. The earlier years are not considered as it will decrease the number of enterprises to be selected for this study. The regression results are based on pooled cross section analysis of only limited observations for the selected hotel, manufacturing and trading sector enterprises.

CHAPTER-4

PRESENTATION AND ANALYSIS OF DATA

The relationship between leverage and profitability has been studied extensively in support for different theories of capital structure. There are various theories regarding the impact of leverage on profitability, with conflicting predictions. Debt affects profitability positively was indicated by Hurdle (1974), but negatively by Hall and Weiss (1967) and in Gale (1972).

Profitability tends to lend more support to Myers' 'Pecking Order' theory than to the theories based on agency costs or tax. In their analysis of the capital structures of UK companies, Michaelas et al. (1999) and Bevan and Danbolt (2001) find profitability to have a significant negative impact on gearing levels. Similarly, in their analysis of gearing ratios in the G7 economies, Rajan and Zingles (1995) find a significant negative relationship between profitability and the level of debt in all countries, including the UK. Similar results have also been found for the US by Toy et al. (1974), Kester (1986), and Titman and Wessels(1988).

Though there are numerous studies conducted in the field of capital structure and profitability in the developed countries, their applicability is yet to be tested and verified in the context of developing countries, mainly in Nepal. The study therefore attempts to find relationship between capital structure and profitability with reference to Nepal. The variables selected for the study are Return on Equity (ROE), Short Term Debt (SDA), Long Term Debt (LDA), Total Debt (DA), Sales (SIZE) and Sales Growth (SG). The dependent variable is ROE and independent variables are SDA, LDA, DA, SIZE and SG.

4.1 Presentation and Analysis of Secondary Data

The secondary data for the study were collected from the period of 2053/54 to 2062/63 with a total of 160 observations for 22 enterprises. The financial statements, mainly the profit and loss account and balance sheets published by Security Board

Nepal and Annual Report published by Nepal Stock Exchange Ltd. provided the data required to carry out the study.

4.1.1 Descriptive Statistics

Table 4.1 provides a summary of descriptive statistics with respect to both dependent and explanatory variables. This shows the average indicators of variables computed from the financial statements.

Table 4.1: Descriptive Statistics for Sample Mean and Standard Deviation for Hotel, Manufacturing and Trading Sector Enterprises for the period 2053/54 to 2062/63

Variables	Hotel	Manufacturing	Trading
Panel A: Mean			
Return on Equity (ROE) %	-12.62	-7.33	17.47
Short Term Debt (SDA) %	26.10	56.80	30.12
Long Term Debt (LDA) %	41.63	31.30	25.36
Total Debt (DA) %	67.74	88.11	55.480
Sales (SIZE)	8.48 m	8.24 m	7.84 m
Sales Growth (SG) %	-0.93	246.85	179.26
Panel B: Standard Deviation			
Return on Equity (ROE) %	25.47	144.69	21.06
Short Term Debt (SDA) %	12.56	54.56	16.34
Long Term Debt (LDA) %	26.68	31.53	29.36
Total Debt (DA) %	18.89	54.36	24.03
Sales (SIZE)	0.198 m	74.55 m	1.26 m
Sales Growth (SG) %	28.90	1681.62	852.62

Analysis from the pooled cross section data show that, return on equity (ROE) is the highest for trading sector with the mean 17.47 percent and standard deviation 21.06 percent. Average profitability ratio (ROE) is negative for both hotel and manufacturing sector with variability of 25.47 percent and 144.69 percent respectively.

Manufacturing sector enterprises appear to have the highest SDA and DA (56.8 percent SDA and 88.11 percent DA), followed by trading sector enterprises (SDA 30.12 percent and DA 55.48 percent). Hotel sector enterprises have the lowest SDA i.e. 26.1 percent and DA 67.74 percent. In terms of LDA, manufacturing sector has the highest variability with the mean 31.3 percent and hotel sector has the lowest variability with the mean 41.63 percent.

Hotel sector records the highest sales (SIZE) of Rs 8.48 million followed by manufacturing sector with sales of Rs 8.24 million. Trading sector enterprises have average sales of Rs 7.84 million and variability of 1.26 million. The fast growing firms were found to be the manufacturing firms with the highest 246.85 percent growth rate. Trading sector enterprises have growth rate of 179.26 percent while hotel sector enterprises have negative growth rate.

4.1.2 Correlation Analysis

In order to examine the possible degree of multiple collinearity among the regressors, correlation matrixes of the selected variables for hotel, manufacturing and trading sector enterprises are included in table 4.2**.** Correlation matrix gives a preliminary idea of the direction of the relationship between the selected variables.

With respect to hotel sector enterprises, higher positive correlations have been observed between LDA and DA, SIZE and SG, SDA and SIZE and higher negative correlations have been observed between ROE and DA, DSA and LDA, SIZE and LDA and SIZE and DA. Except for these, low correlations have been observed for all other variables. ROE is positively correlated with SIZE, SG and negatively correlated with rest of the variables. As regards SDA, a positive correlation has been observed with all the selected variables except for LDA and DA. Like wise LDA has positive correlation with DA and negative correlation with SIZE and SG. As for DA, negative correlation exists with both SIZE and SG. The result shows significant positive correlation between SIZE and SG.

For manufacturing sector enterprises, significant positive correlation has been observed between SDA and DA while negative correlations have been observed between SDA and SIZE and DA and SIZE. Except for theses, low degree correlation exists among all other variables. As regards ROE, a negative correlation has been observed with all the selected variables. Likewise, other variable SIZE follow suit. As for SDA, positive correlation exists with all the variables except for SIZE and LDA. For LDA, the result shows positive correlation with all the variables except for SG. As per DA, it is positively associated with SG but negatively associated with SIZE.

Table 4.2: Correlation Matrix of the Variables for Hotel, Manufacturing and Trading Sector Enterprises

Hotel Sector Enterprises (n = 26)						
Variables	**ROE**	**SDA**	**LDA**	**DA**	**SIZE**	**SG**
ROE	1.00					
SDA	-0.22	1.00				
LDA	-0.36	-0.77	1.00			
DA	-0.65	-0.42	0.90	1.00		
SIZE	0.38	0.43	-0.63	-0.60	1.00	
SG	0.41	0.08	-0.28	-0.35	0.58	1.00
Manufacturing Sector Enterprises (n = 108)						
Variables	**ROE**	**SDA**	**LDA**	**DA**	**SIZE**	**SG**
ROE	1.00					
SDA	-0.03	1.00				
LDA	-0.10	-0.30	1.00			
DA	-0.08	0.83	0.28	1.00		
SIZE	-0.03	-0.36	0.01	-0.35	1.00	
SG	-0.01	0.28	-0.11	0.22	-0.04	1.00
Trading Sector Enterprises (n = 26)						
Variables	**ROE**	**SDA**	**LDA**	**DA**	**SIZE**	**SG**
ROE	1.00					
SDA	0.54	1.00				
LDA	-0.39	-0.57	1.00			
DA	-0.11	-0.02	0.83	1.00		
SIZE	0.07	-0.03	0.65	0.77	1.00	
SG	-0.23	-0.13	-0.19	-0.32	-0.14	1.00

Note: "n" denotes number of observations.

With respect to trading sector enterprises, high magnitude of correlation coefficient between ROE and SDA, LDA and DA, LDA and SIZE, DA and SIZE has been observed where as high negative correlations have exist between ROE and LDA and SDA and LDA. Except for these, low degree correlations exist among other variables. ROE is positively correlated with other variables except for LDA, DA and SG. As regards SDA, a negative correlation has been observed with all the selected variables. Likewise other variable SIZE follow suit. As for LDA, high degree positive correlation has been observed with all the selected variables expect for SG. As per DA, the result shows positive association with SIZE but negative association with SG.

The result of correlation matrix presented that, the relationship between return on equity (the dependent variable) and leverage, other held constant, is negative in hotel, manufacturing as well as in trading sector enterprises. The results of this study are more similar to the results of earlier study by Hall and Weiss (1967), Gale (1972), Kester (1986), and Titman and Wessels (1988). These empirical studies also found leverage to have a significant negative impact on profitability.

4.1.3 Estimation of Simple Regression Results

The next aspect of the study is devoted to analyzing how Return on Equity (ROE) is related to fundamental variables. For the purpose, the average slopes were computed from pooled cross section linear regressions of return on equity (ROE) on various measures such as short term debt (SDA), long term debt (LDA), total debt (DA), sales (SIZE) and sales growth (SG). ROE has been specified as the dependent variable and the independent variables are specified as SDA, LDA, DA, SIZE and SG. The results are presented in table 4.3.

With respect to hotel sector, the computed regression equations show that all the beta coefficients have priori expected signs. However, only a few beta coefficients are found to be significant. Among others, the above results indicate that leverage ratios (SDA, LDA and DA) are negatively related to return on equity while SIZE and SG are all positively related. These results are consistent with multiple correlation analysis computed in table 4.2. As Return on Equity decreases, an increase can be noticed in leverage ratios while a decline can be noticed in SIZE and SG. The t-statistics suggest that the independent variables DA and SG are more significant and, therefore have higher predictive power than other variables. Similarly, the R squared (R^2) for DA and SG are 42.1 percent and 17.1 percent respectively. These indicate that about 42.1 percent and 17.1 percent of variation in dependent variable ROE has been explained by independent variables DA and SG respectively.

Under manufacturing sector, the results show that ROE has negative correlation with all the variables under study. Therefore, profitability for manufacturing sector is expected to increase with decline in SDA, LDA, DA, SIZE and SG. The results from t- statistics indicate that none of the fundamental variables are significant. Therefore, the variables selected for the study may not play an important role in determining

profitability for manufacturing sector. Likewise, the models estimated are generally poor as revealed by F statistics and coefficient of multiple determination (R^2).

Table 4.3: Estimated Relationship Between Return on Equity and Fundamental Variables

The results are based on pooled cross sectional data of 22 enterprises with 160 observations for the period of 2053/54 to 2062/63 by using simple regression equation. The model is, ROE = a + B_1 (independent variable) + E. Results for various subsets of independent variables are presented as well.

Sectors	Independent Variable	Constant (a)	Regression Coefficient	R^2	SEE	F
Hotel (n = 26)	SDA	-0.011 (-0.093)	-0.442 (-1.094)	0.048	0.254	1.198
	LDA	0.015 (0.173)	-0.340 (-1.870)	0.127	0.243	3.498
	DA	0.466 (3.171)*	-0.875 (-4.177)*	0.421	0.198	17.451
	SIZE	-4.302 (-2.094)*	0.492 (2.033)	0.147	0.240	4.133
	SG	-0.123 (-2.644)*	0.364 (2.224)*	0.171	0.237	4.948
Manufacturing (n = 108)	SDA	-0.034 (-0.170)	-0.068 (-0.265)	0.001	1.453	0.070
	LDA	0.067 (0.341)	-0.448 (-1.011)	0.010	1.447	1.023
	DA	0.120 (0.452)	-0.220 (-0.853)	0.007	1.449	0.727
	SIZE	0.355 (0.227)	-0.052 (-0.275)	0.001	1.453	0.076
	SG	-0.070 (-0.497)	-0.001 (-0.145)	0.000	1.454	0.021
Trading (n = 26)	SDA	-0.035 (-0.467)	0.697 (3.152)*	0.293	0.181	9.937
	LDA	0.245 (4.736)*	-0.278 (-2.060)*	0.150	0.198	4.243
	DA	0.226 (2.108)*	-0.092 (-0.519)	0.011	0.214	0.270
	SIZE	0.084 (0.312)	0.012 (0.339)	0.005	0.214	0.115
	SG	0.185 (4.401)*	-0.006 (-1.139)	0.051	0.209	1.298

Notes: 1. Figures in parentheses are t – values.
2. The sign * denotes that the results are significant at 5 percent level of significance
3." n" denotes number of observations.

With respect to trading sector, short term debt (SDA) and sales (SIZE) have individually and reliably positive influence on return on equity (ROE) while a reliably negative association exists between ROE and long term debt (LDA), total debt (DA),

sales growth (SG). The result of t – statistics revealed that the variables SDA and LDA have significant relationship with ROE and, therefore, have higher predictive power than other variables under study. Coefficient of multiple determination (R^2) for SDA and LDA are 29.3 percent and 15 percent respectively. These indicate that about 29.3 percent and 15 percent of variation in dependent variable (ROE) has been explained by independent variables SDA and LDA.

4.1.4 Estimation of Multiple Regression Results

After examining the correlation and simple regression analysis among the selected variables, the multiple regression analysis has been undertaken for the purpose of investigating the causality between dependent and independent variables. The multiple regressions open up several additional options to enrich analysis and make modeling more realistic compared to the simple regression.

For the purpose, the average slopes were computed from pooled cross section linear regressions of return on equity (ROE) on various measures such as short term debt (SDA), long term debt (LDA), total debt (DA), sales (SIZE) and sales growth (SG). ROE has been specified as the dependent variable and the independent variables are specified as SDA, LDA, DA, SIZE and SG. Three different models are developed to unravel the separate influence of leverage ratios on return on equity and their results are presented in table 4.4. The models are

1. $ROE = a + B_1SDA + B_2SIZE + B_3SG + E$
2. $ROE = a + B_1LDA + B_2SIZE + B_3SG + E$
3. $ROE = a + B_1DA + B_2SIZE + B_3SG + E$

With respect to hotel sector, the computed regression equations show that all the beta coefficients have priori expected signs. However, only a few beta coefficients are found to be significant. As regards Model 1, SIZE and SG have individually and reliably positive influence on ROE while a reliably negative association exists between ROE and SDA. Model 1 attempts to examine the separate influence of SDA, SIZE and SG on ROE. In model 2 and 3, SDA is replaced by LDA and DA respectively. The t – statistics suggest that the variables SDA and DA are more significant and, therefore, have higher predictive power. In other words, of the five variables considered, SDA and DA have higher explanatory power than other

variables as indicated by significant relationship between ROE and SDA, DA in model 1 and 3 respectively. Long term debt (LDA) is found to be weak in determining ROE in hotel sector. Coefficient of multiple determination (R^2) for the model 3 is 0.478. This indicates that about 47.8 percent of variation in dependent variable ROE is explained by independent variables DA, SIZE and SG.

Table 4.4: Estimated Relationship Between Return on Equity and Fundamental Variables

The results are based on pooled cross sectional data of 22 enterprises with 160 observations for the period of 2053/54 to 2062/63 by using multiple regression models. Results for various subsets of independent variables are presented as well.

Sectors	Model	Constant (a)	Regression Coefficients of					R^2	SEE	F
			SDA	LDA	DA	SIZE	SG			
Hotel (n = 26)	1	-4.975 (-1.934)	-0.878 (-2.20)*			0.598 (1.939)	0.156 (0.814)	0.346	0.220	3.887
	2	-0.589 (-0.186)		-0.224 (-0.971)		0.066 (0.180)	0.280 (1.371)	0.235	0.238	2.247
	3	2.462 (0.976)			-0.886 (-3.408)*	-3.408 (-0.819)	0.258 (1.543)	0.478	0.196	6.704
Manufacturing (n = 108)	1	0.639 (0.365)	-0.103 (-0.356)			-0.079 (-0.388)	-0.001 (-0.046)	0.002	1.466	0.075
	2	0.502 (0.319)		-0.460 (-1.022)		-0.052 (-0.273)	-0.002 (-0.264)	0.011	1.460	0.381
	3	1.200 (0.674)			-0.283 (-0.997)	-0.124 (-0.612)	0.001 (0.069)	0.010	1.460	0.364
Trading (n = 26)	1	-0.103 (-0.414)	0.675 (2.956)*			0.010 (0.351)	-0.004 (-0.848)	0.322	0.185	3.483
	2	-0.373 (-1.438)		-0.569 (-3.67)*		0.090 (2.519)*	-0.007 (-1.811)	0.413	0.172	5.155
	3	-0.134 (-0.443)			-0.497 (-1.754)	0.076 (1.480)	-0.008 (-1.645)	0.169	0.205	1.491

Notes: 1. Figures in parentheses are t – values.
2. The sign * denotes that the results are significant at 5 percent level of significance
3."n" denotes the number of observations

Under manufacturing sector, the results of multiple regression analysis show that all the calculated beta coefficients are negative except for variable SG in model 3. The results from t- statistics indicate that none of the selected variables are significant. Therefore, the variables selected for the study are found to be weak in determining ROE, since none of the model provided the significant relationship. Similarly, the models estimated are generally poor as revealed by F – statistics and coefficient of multiple determination (R^2).

With respect to trading sector, model 1 provides significant relationship between ROE and SDA. Similarly model 2 indicates the significant relationship between ROE and LDA and between ROE and SIZE. The t – statistics suggest that SDA and LDA are more significant and, therefore, have higher predictive power. Model 3 is found to be weak in determining ROE, since none of the selected variable provided the significant relationship with ROE. Coefficient of multiple determination (R^2) for the model 2 is 0.413. This indicates that about 41.3 percent of variation in dependent variable ROE is explained by independent variables LDA, SIZE and SG.

The result of multiple regression analysis presented that, the relationship between return on equity (the dependent variable) and leverage (DA), other held constant, is negative in hotel, manufacturing as well as in trading sector enterprises. This finding is in consistency with findings of Petersen and Rajan (1994), Roden and Lewellen (1995), Hadlock and James (2002) and Joshua Abor (2005).

4.2 Analysis of Properties of Portfolios formed on Leverage

This section of analysis is based on pooled cross sectional data analysis of twenty two enterprises with one hundred and sixty observations. This study sorts out all the sampled observations into three portfolios based on leverage (total debt to total assets). The smallest, intermediate and the largest leverage are contained in portfolios 1, 2 and 3 respectively. For each portfolio, mean and standard deviations are computed for the selected variables used in the study.

The table 4.5 shows properties formed on leverage and its relationship with various measures of liquidity, profitability, turnover and earnings ratios. The table among others reveals the following

Enterprises with higher leverage represent higher sales (SIZE). Average size of sales increased from 7.28 for the smallest portfolio to 8.34 for the largest portfolio. However the average sales of the smallest portfolio are less variable as compared to the largest portfolios.

Likewise, the liquidity ratio increased as we move from the smallest portfolio to the largest portfolio. This means, enterprises with higher leverage have high liquidity ratio. The average current ratio increased from 1.68 times for the smallest portfolio to 1.85 times for the largest portfolio. Similarly, the largest portfolio is more variable as compared to the smallest portfolio.

Table 4.5: Properties of Portfolios formed on leverage (DA/TA)

Portfolios	**1**	**2**	**3**
Based of Portfolio	**Smallest DA<30%**	**Intermediate 31% to 60%**	**Largest DA>60%**
PANEL A: MEANS			
DA (%)	25.32	45.31	77.21
SIZE (log)	7.28	8.48	8.34
LIQUIDITY			
CR (times)	1.68	1.89	1.85
PROFITABILITY			
ROE (%)	7.12	13.40	-23.33
ROA (%)	5.06	6.48	0.10
ROCE (%)	5.05	6.70	0.08
TURNOVER			
ATR (times)	0.48	1.08	0.97
EARNINGS			
EBT/TA (%)	8.62	8.66	1.83
PANEL B: STANDARD DEVIATIONS			
DA (%)	4.04	8.89	11.54
SIZE (log)	1.43	0.53	0.62
LIQUIDITY			
CR (times)	0.64	2.18	1.86
PROFITABILITY			
ROE (%)	14.98	18.19	165.15
ROA (%)	10.75	8.34	7.58
ROCE (%)	10.75	8.62	6.93
TURNOVER			
ATR (times)	0.47	0.79	0.93
EARNINGS			
EBT/TA (%)	13.19	10.66	8.74

Note: DA = Total Debt ROA = Return on Assets EBT= Earning before Tax
SIZE = Log of Sales CR = Current Ratio NP = Net Profit Ratio
ROE = Return on Equity ATR= Assets Turnover Ratio ROCE = Return on Capital Employed
TA = Total Assets

There is negative relation between leverage and profitability ratio. Enterprises with higher leverage have lower profitability ratios. All the profitability ratios (ROE, ROA and ROCE) declines as we move from the smallest portfolio to the largest portfolio.

ROE declined from 7.12 percent for the smallest portfolio to negative 23.33 percent for the largest portfolio. Similarly, ROA is 5.06 percent and 0.10 percent, ROCE is 50.5 percent and 0.08 percent for the smallest and the largest portfolio respectively. However in terms of variability, larger portfolios are more variable than the smallest portfolio.

Larger portfolios have higher turnover of assets. The total assets turnover ratio increased as the size of leverage increased. The total assets turnover ratio increased from 0.48 times for the smallest portfolio to 0.97 times for the largest. Therefore, enterprises with higher leverage seem to utilize its resources more efficiently in order to generate output. Similarly, the assets turnover ratio of larger portfolio is more variable than that of smaller portfolio.

The negative relationship is also noticed between leverage and earning ratio. Earning ratio declines from 8.62 percent for the smallest leverage portfolio to 1.83 percent for the largest. In other words, portfolios with larger leverage have lower earning ratio. However earning ratio is less variable for the largest leverage portfolio than for the smallest leverage portfolio.

The overall results suggest that liquidity, profitability, turnover and earning ratios do have some relation with total debt to total assets (leverage ratio).

4.3 Presentation and Analysis of Primary Data

For the purpose of this study, the questionnaire was distributed in August 2008 to financial executives of manufacturing and non manufacturing enterprises located in Kathmandu. Non manufacturing enterprises include hotels, trading, banks and manpower companies. Total of 54 usable questionnaires were received, out of which 18 were from manufacturing enterprises and rest i.e. 36 questionnaires were from non manufacturing enterprises.

The questionnaire mainly contained questions on major aspects of capital structure and profitability. The pro forma of structured questionnaire and their detail responses are all presented in Appendix. Different categories of respondents are selected for analyzing the difference in their opinion with respect to capital structure.

Background Information

The respondents were asked if company should employ debt over and above equity capital and the responses obtained are shown in table 4.6. Majority of respondents i.e. 61 percent stated that they should employ debt in the company. Thirty three percent of respondents agreed that they should not employ debt where as six percent of respondent were found to be unknown about it.

Table 4.6: Employment of Debt in the Company

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	18 (100)	15 (42)	33 (61)
b)No	0	18 (50)	18 (33)
c)Don't Know	0	3 (8)	3 (6)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Appropriate Debt Level

When asked about the appropriate debt level, 39 percent of the respondents agreed with option (c) i.e. 41 to 60 percent. Similarly, 33 percent of the respondents reported 21 to 40 percent and 17 percent reported less than 20 percent. The detail responses are presented in the table 4.7.

Table 4.7: Appropriate Debt Level

Options	**Manufacturing**	**Non manufacturing**	**Total**
a) < 20 %	0	9	9 (17)
b)21 to 40 %	9 (50)	9	18 (33)
c)41 to 60 %	6 (33)	15	21 (39)
d)>60 %	3 (17)	3	6 (11)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Alternatives for Financing Total Assets

The detail responses regarding the alternative source of financing total assets are presented in table 4.8.Majority of the respondents agreed that only seasonal variations should be financed by short term and the rest by long term funds. Similarly, 33 percent agreed that only fixed assets should be financed by long term funds and 6 percent opined that all assets should be financed by short term funds.

Table 4.8: Alternative Sources of Financing Total Assets

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)	0	0	0
b)	3 (17)	0	3 (6)
c)	6 (33)	27 (75)	33 (61)
d)	9 (50)	9 (25)	18 (33)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Current Debt Level

With respect to current debt level, majority of the respondents have debt level between 21 to 40 percent. Likewise, 33 percent have debt level between 41 to 60 percent and similarly, 11 percent have debt level less than 20 percent and greater than 60 percent. The details are presented in table 4.9

Table 4.9: Current Debt Level

Options	**Manufacturing**	**Non manufacturing**	**Total**
a) < 20 %	0	6 (17)	6 (11)
b)21 to 40 %	6 (33)	18 (50)	24 (44)
c)41 to 60 %	6 (33)	12 (33)	18 (33)
d)>60 %	6 (33)	0	6 (11)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Sources of Financing

The respondents were asked regarding the most dependable source of fund and the responses obtained are shown in table 4.10. Thirty three percent of the respondents depend upon bank, 28 percent depend upon equity shares, 22 percent depend upon retained earnings while 17 percent depend upon trade credit from the suppliers.

Table 4.10: Sources of Financing

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Bank	6 (33)	12 (33)	18 (33)
b)Retained Earnings	6 (33)	6 (17)	12 (22)
c)Trade Credit	3 (17)	6 (17)	9 (17)
d)Issuing Equity	3 (17)	12 (33)	15 (28)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Debt and Cost of Capital

The respondents were asked about the relationship between debt ratio and cost of capital and the details are presented in table 4.11. Majority (44 percent) of the respondents believe there is negative relationship between debt and cost of capital. Thirty nine percent believe that increase in debt level will not decrease cost of capital where as 17 percent of the respondents have no idea regarding the relationship between debt and cost of capital.

Table 4.11: Debt Level and Cost of Capital

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	3 (17)	21 (58)	24 (44)
b)No	9 (50)	12 (34)	21 (39)
c)Don’t Know	6 (33)	3 (8)	9 (17)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Debt and Market Price

With respect to debt and market price, majority (56 percent) of the respondents opined that market price increases with increase in debt level. Thirty three percent believe that increase in debt level will not increase market value while 11 percent of the respondents were found to be unknown about it. The details are shown in table 4.12.

Table 4.12: Debt and Market Price

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	15 (83)	15 (42)	30 (56)
b)No	0	18 (50)	18 (33)
c)Don't Know	3 (17)	3 (8)	6 (11)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Debt and Profitability

The respondents were asked regarding the relationship between debt and profitability and the responses obtained are presented in table 4.13. Fifty percent of the respondents believe that there is positive relationship between debt level and profitability that means profit increase with increase in debt level. But 33 percent disagree and believe there exist negative relation between debt and profitability while 17 percent were found to be unknown about it.

Table 4.13: Debt and Profitability

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	9 (50)	18 (50)	27 (50)
b)No	6 (33)	12 (33)	18 (33)
c)Don't Know	3 (17)	6 (17)	9 (17)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Tax and Capital Structure

With respect to tax and capital structure decision, majority (72 percent) of the respondents reported that tax issues have major influence on capital structure decision. Only 11 percent of the respondents reported that tax issues have no major influence on capital structure decision while 17 percent have no idea regarding it. The detail responses obtained are presented in table 4.14.

Table 4.14: Tax and Capital Structure

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	12 (67)	27 (75)	39 (72)
b)No	3 (17)	3 (8)	6 (11)
c)Don't Know	3 (17)	6 (17)	9 (17)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Tax and Debt Level

The respondents were asked how they will maintain their debt level if the tax rate on corporate profit were to increase and the responses obtained are presented in table 4.15. Sixty seven percent of the respondents reported that they will increase their debt level. Twenty seven percent reported that they will decrease the debt level and six percent reported that they will be indifferent regarding the debt level.

Table 4.15: Tax and Debt Level

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	12 (67)	24 (67)	36 (67)
b)No	6 (33)	9 (25)	15 (27)
c)Don't Know	0	3 (8)	3 (6)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Capital Structure redesign

The respondents were asked if they have redesigned their capital structure and the responses obtained are presented in table 4.16. Fifty percent of the respondents stated they have redesigned their capital structure. Similarly, thirty three percent stated that they have not restructured the capital structure and seventeen percent were observed to be unknown about it.

Table 4.16: Capital Structure Redesign

Options	**Manufacturing**	**Non manufacturing**	**Total**
a)Yes	12 (66)	15 (42)	27 (50)
b)No	3 (17)	15 (42)	18 (33)
c)Don't Know	3 (17)	6 (16)	9 (17)
Total	18 (100)	36 (100)	54 (100)

Note: figures in parentheses indicate percentage over total responses

Concluding Remarks

CHAPTER-5

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The capital structure decision is crucial for any business organization. The decision is important because of the need to maximize returns to various organizational constituencies, and also because of the impact of such a decision has on firm's ability to deal with its competitive environment. The capital structure of a firm is actually a mix of different securities. In general, a firm can choose among many alternative capital structures. It can issue a large amount of debt or very little debt. It can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps (Abor, 2005). It can issue dozens of distinct securities in countless combinations; however, it attempts to find the particular combination that maximizes its overall market value.

A number of theories have been advanced in explaining the capital structure of firms. Despite the theoretical appeal of capital structure, researchers in financial management have not found the optimal capital structure. The best the academics and practitioners have been able to achieve are prescriptions that satisfy short term goals.

This study examines the relationship between capital structure and profitability in Nepalese enterprises (hotel, manufacturing and trading). Its specific objectives are (i) to test the relationship between capital structure and profitability in Nepalese enterprises, (ii) to analyze the differences in capital structure of hotels, manufacturing and trading sector enterprises of Nepal, (iii) to test the validity of the model developed by Joshua Abor in context of Nepal and (iv) to analyze the properties of portfolio formed on leverage in Nepalese enterprises.

The effect of capital structure on the profitability of listed firms in Nepal is a scientific area that has not yet been explored in Nepalese finance literature. The study is based on secondary as well as primary data. With regards to secondary data, twenty two listed companies have been selected from various three sectors enterprises of Nepal, viz., 4 hotel sector enterprises, 14 manufacturing sector enterprises and 4

trading sector enterprises. These enterprises cover about 16 percent of total listed companies in the Nepal Stock Exchange Ltd. The necessary data for the study were collected from the period of 2053/54 to 2062/63 with a total of 160 observations. The financial statements, mainly the profit and loss account and balance sheets published by Security Board Nepal and Annual Report published by Nepal Stock Exchange Ltd provided the data required to carry out the study.

The primary data have been collected through structured questionnaire. It is based on the opinions of fifty four respondents out of them eighteen belong to manufacturing sector enterprises and thirty six belong to non manufacturing sector enterprises viz. hotels, trading, banks and manpower companies which include accountants and financial executives of the company.

For the analysis of the secondary data, this study is based upon descriptive statistics, multiple correlations, simple as well as multiple regression analysis and portfolio analysis formed on leverage. Descriptive approach has been adopted mainly for the conceptualization of the problem and Multiple Correlation, regression analysis for examining the direction of the relationship between the selected variables. Similarly, properties of portfolios were formed to examine the relationship between leverage, return on equity and other selected variables.

The major findings of the study may be summarized as under:

1. Majority of Nepalese enterprises have debt based capital structure. They have excess of debt over equity capital. The levered companies are therefore paying more than they can earn by the investment of debt capital and this has increased the possibility of bankruptcy.

2. Nepalese enterprises largely depend on short term debt (SDA) than long term debt (LDA) for financing their operation. The mean proportion of SDA for hotel, manufacturing and trading sector was found significantly higher than LDA. The fact revealed that Nepalese long term debt market is still underdeveloped and there is difficulty in accessing long term credit from financial institutions.

3. In Nepal, leverage ratio (DA) is negatively related to profitability for hotel, manufacturing and trading sector enterprises. The result of this study is consistent with the study of Hall and Weiss (1967) and Gale (1972). Hence, the impact of leverage on profitability is similar to the result of developed and developing countries.

4. In terms of profitability, trading sector seems to be the most profitable with a mean return of 17.47 percent. Hotel and manufacturing sector enterprises are incurring loss with negative average ROE of 12.62 percent and 7.33 percent respectively.

5. Hotel, manufacturing and trading sector enterprises all have high leverage ratio. Total debt to total assets ratios for hotel, manufacturing and trading sector are 67.74 percent, 88.11 percent and 55.48 percent respectively. This revealed the fact that Nepalese enterprises highly employ debt in their capital structure.

6. Descriptive analysis presented the fact that more profitable firms employ less debt. The most profitable sector that is trading sector has lower leverage ratio (DA) of 55.48 percent compared to manufacturing and hotel sector with 88.11 percent and 67.74 percent respectively. This finding supports the Pecking Order Theory of Myers (1984). The theory states that more profitable firms employ less debt since they are able to finance their investment opportunities with retained earnings.

7. Return on Equity (ROE) is negatively correlated to SIZE, only in the case of manufacturing sector enterprises. This indicates that with the increase in sales, ROE declines for manufacturing sector while the reverse holds true for hotel and trading sector enterprises.

8. Return on equity is positively correlated to SDA in case of trading sector enterprises but negatively correlated in hotel and manufacturing sector enterprises. This indicates that ROE for trading sector increases with increase in SDA, while the reverse hold true for hotel and manufacturing sector enterprises.

9. The t statistics suggested that out of five independent variables (SDA, LDA, DA, SIZE and SG) only few variables are statistically significant determinants of dependent variable ROE. Similarly, the variable significant in one sector was found insignificant in other sectors. Therefore, there is no one common variable that can be generalized in all the sectors. In hotel sectors, DA and SG are more significant where as SDA and LDA are more significant in trading sector.

10. Three different models were developed to examine the separate influence of leverage ratios on dependent variable, ROE. For hotel sector enterprises, the model 3 i.e. $ROE = a + B_1DA + B_2SIZE + B_3SG + E$ has more explanatory power than other models. The adjusted R square for this model is over 40 percent. Similarly for trading sector enterprises, the model 2 i.e. $ROE = a + B_1LDA + B_2SIZE + B_3SG + E$ has more explanatory power with adjusted R square over 40 percent. However for manufacturing sector enterprises, the variables selected are found to be weak and the models estimated are generally poor as revealed by coefficient of multiple determination (R^2).

11. The comparison of the smallest and the largest portfolio formed on leverage shows that the smallest portfolio has higher profitability and higher earning ratio but lower size of sales and lower liquidity and turnover ratio. In other words, the result of portfolio analysis indicates that leverage is positively related to size of sales, liquidity and turnover ratio while negatively related with profitability and earning ratio.

12. The intermediate portfolio formed on leverage has dominated the smallest and the largest portfolio in every aspect. Profitability ratio, turnover ratio, earning ratio and size of sales are higher for the intermediate portfolio. This fact revealed that Nepalese enterprises should employ 31 to 60 percent debt in their capital structure in order to get benefit from tax shield on debt.

13. Among others, the results of questionnaire revealed that debt and cost of capital are negatively associated while debt and market price are positively associated. The result, therefore, rejected the MM independent hypothesis and supported the Traditional hypothesis.

14. Regarding debt and profitability, majority of the respondents stated that there exist positive relation between debt ratio and profitability. This view supports the findings of Abor (2005).

5.2 Conclusion

This study concludes that debt has negative impact with firm's profitability. As debt level increases, profitability decreases. The results thus support findings of Hall and Weiss (1967), Gale (1972), Kester (1986), Titman and Wessels (1988) and Rajan and Zingles (1995) and contradict with the findings of Roden and Lewellen (1995), Hadlock and James (2002) and Joshua Abor (2005). Hence the major conclusion of the study is the negative relationship between debt and profitability.

5.3 Recommendations

Based on the analysis of data, the following recommendations have been offered:

1. Based on the empirical data, Nepalese enterprises have improper and ad- hoc capital structure. Most of the selected enterprises are highly levered. So, they should manage their existing capital structure. They should use the debt by evaluating the cost of effectiveness and possibility of bankruptcy.

2. The study revealed negative association between debt and profitability. Therefore, Nepalese enterprises should attempt to use minimum possible debt in designing their capital structure.

3. The hotel and trading sector enterprises should focus on increasing their SIZE or sales so that the shareholders' wealth can be maximized.

4. Trading sector enterprises should finance their capital requirement with short term funds so that value can be enhanced.

5. Enterprises should give proper attention to liquidity management while increasing the debt level because high liquidity leads to low profitability.

6. Future studies in this area should be extended to alternative domestic settings and also to alternative industries in both financial and service-oriented settings.
7. The parameters for evaluating profitability are not exhaustive. Future studies should fully explore the impact of other characteristics of capital structure and their association with profitability to gather a complete picture of the impact of this dimension.
8. The generalizations that can be made from these findings are limited, as tests were undertaken for only 22 enterprises. Moreover, the study is based on pooled cross sectional analysis with only 160 observations. Therefore, future studies should focus on examining the association of independent variables covered in this study across a longer time period.
9. Future studies should seek to re-test the instrument across alternative socio-political and economic settings both to test its validity and to make to refinements.
10. The methodology used in this study should be refined in future study to provide further insights.

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Appendix 1: List of Variables used in the Regression Analysis

company	year	ROE	SDA	LDA	DA	SIZE	SG
Yak and Yeti	2061/62	-3.25588	42.96137	17.10488	60.06626	8.485008	0
	2060/61	-1.6469	30.06663	29.57653	59.64316	8.543926	14.52976
	2059/60	-1.98736	24.58152	36.31006	60.89158	8.50607	-8.34753
	2058/59	-5.25072	29.07639	32.63683	61.71322	8.470332	-7.89949
	2057/58	7.079067	33.84329	29.34539	63.18869	8.661162	55.17785
	2056/57	13.64557	15.33492	49.26463	64.59956	8.683287	5.226381
	2055/56	14.02066	16.28356	43.78323	60.06679	8.682606	-0.15656
	2054/55	13.43335	15.39244	38.56062	53.95306	8.648195	-7.61769
Soaltee Hotel	2061/62	-50.8802	48.10576	23.04199	71.14775	8.453664	-36.1047
	2060/61	-16.237	40.50497	20.26374	60.76871	8.568827	30.36562
	2059/60	-11.7847	37.04393	18.45282	55.49675	8.477591	-18.9478
	2058/59	-16.627	36.45646	7.642282	44.09874	8.471748	-1.33655
	2057/58	5.096837	34.53788	2.113288	36.65117	8.684767	63.31253
	2056/57	11.24975	34.81061	3.723818	38.53443	8.720631	8.608366
	2055/56	14.76929	32.73462	11.65111	44.38573	8.746561	6.152558
	2054/55	14.1868	28.59632	18.82779	47.42411	8.739285	-1.66139
Taragaun Regency	2061/62	-87.0397	35.82003	58.60335	94.42338	8.469915	-46.2189
	2060/61	-52.4274	29.25384	60.61621	89.87005	8.518972	11.95847
	2059/60	-53.0535	41.32646	43.47048	84.79694	8.355255	-31.4065
Oriental Hotel	2061/62	-15.054	16.49745	87.24689	103.7443	8.333353	-4.91814
	2060/61	-12.8682	10.34475	87.39021	97.73497	8.3995	16.452
	2059/60	-24.3043	9.601989	83.22635	92.82834	8.246992	-29.6129
	2058/59	-22.3848	8.706948	75.04913	83.75607	8.251101	0.950449
	2057/58	-15.8848	8.987414	67.32135	76.30876	8.395952	39.58913
	2056/57	-31.4666	10.25132	72.19865	82.44997	8.322754	-15.5107
	2055/56	0.472107	7.727789	65.07367	72.80146	7.841725	-66.9652
Ragupati	2061/62	2.58496	20.72351	19.63781	40.36132	8.683447	
	2060/61	3.796673	19.23458	19.27829	38.51287	8.5825	-20.74
	2059/60	2.609166	14.76434	25.28452	40.04886	8.564268	-4.11126
	2058/59	2.953671	18.6073	24.66912	43.27641	8.625711	15.19733
	2057/58	0.521201	13.0131	28.30407	41.31717	8.469907	-30.1452
	2056/57	0.334118	11.70353	28.89666	40.6002	8.417126	-11.4437
	2055/56	0.245972	10.50443	30.59102	41.09545	8.32759	-18.63
Khadya Udyog	2062/63	-6.58671	21.63411	2.035881	23.66999	5.85263	-99.665
	2061/62	-3.8959	23.21044	2.905362	26.1158	5.823699	-6.44454
	2060/61	30.17757	26.35107	3.498188	29.84926	7.825732	9946.929
	2059/60	-12.2977	55.24595	1.126897	56.37285	8.064044	73.10593
	2058/59	1.455539	4.655131	48.42964	53.08477	8.232555	47.40436
	2057/58	0.734017	84.3773	68.41907	152.7964	8.165416	-14.3236
	2055/56	44.72242	49.71183	38.02218	87.73401	8.173631	1.9097
	2054/55	-12.5065	6.511367	88.79564	95.307	8.168891	-1.08552
	2053/54	-43.0727	9.420706	82.26122	91.68193	8.189368	4.827862
Nepal Bitumen	2060/61	16.88873	82.73929	0	82.73929	8.216638	6.480355
	2059/60	-48.5013	84.94852	0	84.94852	7.860292	-55.9795
	2058/59	4.404332	80.37434	0	80.37434	8.002628	38.7829
	2057/58	2.779046	79.4006	0	79.4006	7.939878	-13.4535
	2056/57	2.220879	37.0873	44.1011	81.18841	7.837121	-21.0697
	2055/56	5.608973	29.06852	52.1532	81.22173	8.008616	48.42071
	2054/55	16.83857	34.40508	41.00851	75.41358	7.814067	-36.1073

Jyoti Spinning	2062/63	-21.0829	10.35247	83.46473	93.8172	8.863846	1021.447
	2061/62	13.29413	20.58139	78.14322	98.72461	8.932131	17.02681
	2060/61	4.545925	31.26797	80.75909	112.0271	8.856699	-15.9442
	2059/60	-2.73004	37.50871	74.29127	111.8	8.86036	0.846705
	2058/59	-25.9062	42.99433	67.14226	110.1366	8.810732	-10.7986
	2057/58	-15.4263	58.08402	45.78932	103.8733	8.828071	4.073324
	2056/57	9.119198	56.00449	46.68718	102.6917	8.811777	-3.68248
Gorakhali	2062/63	23.35667	73.1798	84.748	157.9278	8.605325	-37.8347
	2061/62	26.43678	60.41344	83.38206	143.7955	8.532875	-15.3651
	2060/61	38.70668	49.99553	79.91174	129.9073	8.546075	3.086085
	2059/60	46.52719	41.53607	75.65964	117.1957	8.603133	14.04041
	2058/59	112.4632	38.58908	69.37216	107.9612	8.581113	-4.94398
	2057/58	-1312.48	33.60939	66.14899	99.75838	8.610462	6.991436
	2056/57	-65.8075	28.8654	60.56588	89.43127	8.59071	-4.44621
Shree Arun Vans	2061/62	-101.06	81.26768	41.84924	123.1169	8.782124	55.38682
	2060/61	-1.92946	92.62156	18.337	110.9586	8.809151	6.420952
	2059/60	-0.4971	88.4801	28.82765	117.3078	8.708826	-20.6266
	2058/59	-23.3179	87.29784	29.86597	117.1638	8.811779	26.75158
	2057/58	-1.80524	88.55118	35.1879	123.7391	8.560039	-43.9907
	2056/57	71.66171	86.93747	40.87959	127.8171	8.457223	-21.0806
	2055/56	8.031871	32.83094	78.4734	111.3043	8.573352	30.65585
	2054/55	1.64531	32.48451	71.476	103.9605	8.506238	-14.3186
Shree Ram Sugar	2059/60	-13.1343	37.53319	41.02021	78.5534	8.729794	67.32315
	2058/59	2.472588	28.60045	45.45211	74.05256	8.719333	-2.38004
	2057/58	10.34601	27.62307	47.47532	75.09839	8.816018	24.93523
	2056/57	-5.28718	15.34384	64.11749	79.46133	8.659779	-30.2152
	2055/56	-12.4923	3.207779	72.82822	76.036	8.588612	-15.1146
	2054/55	-7.66188	2.798073	70.4435	73.24157	8.590296	0.388405
Fluer Himalayan	2058/59	56.81035	154.9962	0	154.9962	7.12187	-96.5992
	2057/58	87.995	65.87519	58.97552	124.8507	7.294344	48.75553
	2056/57	624.513	50.03981	55.29519	105.335	7.137146	-30.3691
	2055/56	-94.2791	47.59609	42.91815	90.51424	7.035737	-20.8245
	2054/55	-0.7223	36.08089	42.22967	78.31056	5.972083	-91.3633
Nepal Banaspati Ghee	2062/63	-32.3488	333.203	1.582596	334.7856	5.896737	-15.9276
	2061/62	-22.2163	296.8125	4.478838	301.2914	5.886881	-2.24371
	2060/61	-56.7296	274.0465	7.219526	281.266	8.049009	14425.38
	2059/60	-57.7051	187.1055	4.527828	191.6333	8.354474	102.0529
	2058/59	-18.2999	161.7432	0	161.7432	8.625849	86.79919
	2057/58	-61.5406	151.927	0	151.927	8.392403	-41.5811
	2056/57	-58.0671	17.25066	120.2671	137.5178	8.146246	-43.266
	2055/56	-26.4342	10.5945	105.7777	116.3722	8.272344	33.68961
	2054/55	-12.5323	9.723896	92.03268	101.7566	8.196007	-16.119
Birat Shoes	2060/61	-70.6837	139.5777	51.73522	191.3129	7.491359	-80.2598
	2059/60	-59.1509	114.713	58.28572	172.9987	7.446425	-9.82918
	2058/59	-57.5001	88.47298	57.4529	145.9259	7.332079	-23.1482
	2057/58	-47.6329	66.90408	52.7695	119.6736	7.233536	-20.3002
	2056/57	-76.6642	105.4989	26.23981	131.7387	7.094225	-27.4413
	2055/56	-85.1899	79.43405	25.07253	104.5066	6.903907	-35.4819
	2054/55	-32.4186	8.682992	62.52572	71.20872	7.21739	105.8177
	2053/54	0.005992	9.567058	44.73874	54.30579	7.417116	58.38946
Nepal Lube Oil	2062/63	0.427129	72.66098	0	72.66098	8.172464	469.3089

	2061/62	7.50165	68.71467	0	68.71467	8.072263	-20.6039
	2060/61	0.750204	66.10631	0	66.10631	7.927948	-28.2726
	2059/60	10.67778	73.53567	0	73.53567	8.076098	40.65334
	2058/59	16.10369	66.85436	0	66.85436	8.133552	14.14421
	2057/58	-5.92206	37.36359	30.94126	68.30486	7.858678	-46.8962
	2056/57	11.03025	38.44908	27.60882	66.0579	8.030147	48.41203
	2055/56	23.74496	42.22513	17.50184	59.72696	8.030725	0.133221
	2054/55	14.97589	36.41076	25.1595	61.57026	7.935239	-19.7373
	2053/54	9.982014	50.19387	12.0011	62.19497	7.827546	-21.9619
Bottlers Nepal Balaju	2062/63	3.54287	26.27769	6.867916	33.14561	8.79367	824.9622
	2061/62	4.559063	23.47969	0	23.47969	8.788691	-1.13987
	2060/61	5.198349	19.62901	0	19.62901	8.800795	2.826403
	2059/60	2.745624	32.05378	0	32.05378	8.785083	-3.55316
	2058/59	6.984888	32.82818	0	32.82818	8.728755	-12.1643
	2057/58	5.381293	29.94722	0	29.94722	8.617605	-22.5805
	2056/57	8.596344	22.8123	0	22.8123	8.571456	-10.0811
	2055/56	10.34468	26.03176	0	26.03176	8.566582	-1.11593
	2054/55	10.86351	26.00639	0	26.00639	8.468081	-20.2925
Bottlers Nepal Terai	2062/63	-9.88247	37.24891	0	37.24891	8.54912	20.51426
	2061/62	3.894819	38.18587	0	38.18587	8.603491	13.33682
	2060/61	5.078255	34.45518	0	34.45518	8.635453	7.637048
	2059/60	6.411997	40.777	0	40.777	8.667863	7.748241
	2058/59	10.24006	44.43603	0	44.43603	8.664162	-0.84845
	2056/57	20.83814	76.04192	0	76.04192	8.64563	-4.17756
	2055/56	27.15159	43.79833	0	43.79833	8.628302	-3.91126
Unilever Nepal	2062/63	3.54868	76.7445	0	76.7445	9.167224	245.8776
	2061/62	87.21551	80.26005	0	80.26005	9.170719	0.807949
	2060/61	35.54996	57.8583	0	57.8583	9.182355	2.715438
	2059/60	25.99317	54.33324	0	54.33324	9.095074	-18.2064
	2058/59	12.23875	39.06818	0	39.06818	9.092037	-0.69694
	2057/58	19.8756	54.97897	0	54.97897	9.1878	24.67047
	2056/57	37.10712	48.4014	0	48.4014	9.237702	12.17638
	2055/56	47.53684	54.04022	0	54.04022	9.177159	-13.0124
	2054/55	59.27728	46.65368	15.27764	61.93132	9.076853	-20.6232
salt Trading	2061/62	3.170912	46.10399	10.11461	56.2186	9.341224	0
	2060/61	11.99125	19.06168	53.44891	72.51059	9.590947	77.71456
	2059/60	9.262766	16.67899	59.55693	76.23592	9.391112	-36.8803
	2058/59	5.346533	17.54489	53.11789	70.66278	9.273202	-23.7762
	2057/58	11.36732	21.97694	70.54212	92.51906	9.241334	-7.07532
	2056/57	-17.2077	26.06461	66.5686	92.63321	9.198782	-9.33312
	2055/56	8.233678	26.15682	67.75185	93.90867	9.265377	16.57225
	2054/55	12.18013	25.07598	68.33046	93.40644	9.240163	-5.64054
Bishal Bazar	2061/62	64.94313	57.82786	0	57.82786	7.788802	-96.463
	2060/61	53.17097	55.88945	0	55.88945	7.732183	-12.2229
	2059/60	55.42325	60.35646	0	60.35646	7.714862	-3.90983
	2058/59	34.47343	29.82441	0	29.82441	7.559848	-30.0182
	2057/58	34.04646	27.85911	0	27.85911	7.680559	32.04164
	2056/57	29.59246	34.98294	0	34.98294	7.647162	-7.4016
	2055/56	37.24731	38.89154	0	38.89154	7.564465	-17.3385
	2054/55	36.87227	35.56106	0	35.56106	7.558037	-1.46936
Nepal Welfare	2061/62	-3.83802	25.80244	0	25.80244	5.215098	-99.546

	2060/61	-6.47324	28.95505	0	28.95505	5.179661	-7.83566
	2059/60	-11.3044	24.41388	0	24.41388	5.275332	24.64394
	2058/59	-4.76981	15.38152	0	15.38152	6.920444	4316.844
	2057/58	14.69428	69.43118	0	69.43118	7.755666	584.2618
Nepal Trading	2058/59	5.205921	31.43106	32.22974	63.6608	7.623388	-26.2569
	2057/58	15.66016	20.56321	43.80215	64.36536	7.630987	1.765311
	2056/57	31.86119	15.05619	41.15742	56.2136	7.452529	-33.6958
	2055/56	16.80565	12.29888	20.66312	32.96199	7.45743	1.134918
	2054/55	6.443522	0	72.11781	72.11781	7.553602	24.78776

Appendix 2: List of Variables used in Formation of Properties of Portfolios

DA	SIZE	CR	ROA	ROCE	ATR	ROE	earnings
56.2186	9.341224	1.0597	1.38827	1.38827	0.611503	3.170912	1.962555
72.51059	9.590947	3.78318	3.296325	3.296325	1.759979	11.99125	4.430945
76.23592	9.391112	4.415099	2.201211	2.201211	1.078041	9.262766	3.241113
70.66278	9.273202	0.373852	1.568524	1.568524	1.103702	5.346533	2.149228
92.51906	9.241334	3.920492	0.850382	0.850382	1.405695	11.36732	1.244713
92.63321	9.198782	3.30335	-1.28187	-1.28081	1.329998	-17.2077	-1.28187
93.90867	9.265377	3.128762	0.517365	0.516373	1.804297	8.233678	0.792897
93.40644	9.240163	3.186106	0.859019	0.855093	1.906465	12.18013	1.27262
57.82786	7.788802	0.457167	27.17797	27.26611	0.662591	64.94313	37.14637
55.88945	7.732183	0.337373	23.45401	23.45401	0.623497	53.17097	32.01985
60.35646	7.714862	0.223953	21.97174	21.97174	0.50042	55.42325	30.27536
29.82441	7.559848	0.476344	24.19193	24.19193	0.450079	34.47343	37.68224
27.85911	7.680559	0.710816	24.56142	24.56142	0.681488	34.04646	35.2184
34.98294	7.647162	0.343456	19.24015	19.24015	0.612464	29.59246	28.13538
38.89154	7.564465	0.645008	16.47971	19.8227	0.50844	37.24731	22.86204
35.56106	7.558037	0.927816	17.24908	20.94817	0.532925	36.87227	23.1884
25.80244	5.215098	1.516849	-2.84771	-2.84771	0.044039	-3.83802	0
28.95505	5.179661	1.469208	-4.59891	-4.59891	0.037427	-6.47324	0
24.41388	5.275332	1.737069	-8.53621	-8.54254	0.046569	-11.3044	0
15.38152	6.920444	2.978645	-4.03614	-4.03614	1.812379	-4.76981	0
69.43118	7.755666	1.213022	4.491863	4.491864	3.997734	14.69428	0
63.6608	7.623388	3.158007	1.798178	1.831105	2.454716	5.205921	2.397569
64.36536	7.630987	4.820758	4.82486	5.069454	2.55018	15.66016	6.433145
56.2136	7.452529	6.59059	10.57997	11.83176	2.374321	31.86119	14.34572
32.96199	7.45743	8.05907	9.64523	10.67484	4.187603	16.80565	13.30376
72.11781	7.553602	0	3.683418	2.849124	5.204846	6.443522	4.911234
60.06626	8.485008	0.22176	-1.30019	-1.30019	0.285555	-3.25588	-1.30019
59.64316	8.543926	0.359283	-0.66464	-0.66464	0.320089	-1.6469	-0.42064
60.89158	8.50607	0.56146	-0.77722	-0.77722	0.280642	-1.98736	-0.77722
61.71322	8.470332	0.442316	-2.01033	-2.01033	0.248112	-5.25072	-1.98359
63.18869	8.661162	0.382808	2.551573	2.571305	0.35171	7.079067	3.228134
64.59956	8.683287	1.003777	4.830594	4.830594	0.382414	13.64557	6.100817
60.06679	8.682606	1.027856	5.598898	5.598898	0.458476	14.02066	7.09258
53.95306	8.648195	1.011205	5.697596	5.9124	0.473159	13.43335	7.133568
71.14775	8.453664	0.441447	-14.7421	-14.7241	0.454013	-50.8802	-14.7421
60.76871	8.568827	0.556236	-6.41125	-6.395	0.534595	-16.237	-6.41125
55.49675	8.477591	0.532284	-5.2799	-5.26411	0.419493	-11.7847	5.279897

44.09874	8.471748	0.530967	-9.329	-9.30979	0.463674	-16.627	-9.329
36.65117	8.684767	0.656585	3.244185	3.234413	0.7259	5.096837	4.09292
38.53443	8.720631	0.609534	6.972088	6.936716	0.795968	11.24975	8.65862
44.38573	8.746561	0.74518	8.25527	8.232173	0.801083	14.76929	10.20389
47.42411	8.739285	0.818177	7.536772	7.495596	0.799859	14.1868	9.38131
94.42338	8.469915	0.090884	-5.10227	-5.08775	0.091598	-87.0397	-5.10227
89.87005	8.518972	0.087322	-5.52664	-5.50399	0.098597	-52.4274	-5.52664
84.79694	8.355255	0.052232	-8.35096	-8.30631	0.066253	-53.0535	-8.35096
103.7443	8.333353	0.496094	-6.28849	-4.32148	0.181703	-15.054	-6.28849
97.73497	8.3995	0.924331	-5.13737	-3.73198	0.202251	-12.8682	-5.13737
92.82834	8.246992	0.786595	-9.63192	-7.27163	0.141332	-24.3043	-9.63192
83.75607	8.251101	0.852198	-8.63972	-7.06134	0.138992	-22.3848	-8.63972
76.30876	8.395952	0.921546	-5.8909	-5.19508	0.187275	-15.8848	-5.8909
82.44997	8.322754	1.22757	-8.15211	-7.52337	0.155634	-31.4666	-8.15211
72.80146	7.841725	1.121315	0.126527	0.127032	0.056798	0.472107	0.126527
40.36132	8.683447	1.492719	1.541636	1.541636	1.484196	2.58496	0
38.51287	8.5825	1.356321	2.334465	2.334465	1.245017	3.796673	0
40.04886	8.564268	1.707795	1.564224	1.564224	1.209946	2.609166	0
43.27641	8.625711	1.387123	1.711032	1.690653	1.354119	2.953671	0
41.31717	8.469907	1.57649	0.322073	0.312354	1.009188	0.521201	0.35428
40.6002	8.417126	1.793753	0.210311	0.20311	0.910342	0.334118	0
41.09545	8.32759	2.271622	0.154206	0.148578	0.737773	0.245972	0
23.66999	5.85263	1.735472	-5.02764	-5.02764	0.012696	-6.58671	-5.02764
26.1158	5.823699	1.5301	-2.87846	-2.87846	0.010786	-3.8959	-2.87846
29.84926	7.825732	1.534758	21.16979	21.16979	0.956879	30.17757	23.52199
56.37285	8.064044	0.933027	-5.36366	-5.36431	0.706994	-12.2977	-5.36366
53.08477	8.232555	11.20338	0.682869	0.682869	0.997988	1.455539	0.12402
152.7964	8.165416	0.901085	0.169875	0.096553	1.301321	0.734017	9.540003
87.73401	8.173631	1.531559	9.179279	8.478997	1.417809	44.72242	0
95.307	8.168891	9.6637	-3.90279	-3.08489	2.132219	-12.5065	0
91.68193	8.189368	7.022747	-13.007	-10.672	2.162947	-43.0727	0
82.73929	8.216638	1.068983	2.915115	2.915115	1.648218	16.88873	3.243485
84.94852	7.860292	1.027151	-7.30016	-7.30016	0.761255	-48.5013	-7.30016
80.37434	8.002628	1.097193	0.864379	0.864379	0.927643	4.404332	1.231775
79.4006	7.939878	1.080591	0.572467	0.572467	0.8815	2.779046	0.822264
81.18841	7.837121	2.31598	0.417783	0.417783	0.653547	2.220879	0.625397
81.22173	8.008616	2.882884	1.053268	1.053268	0.990274	5.608973	1.40635
75.41358	7.814067	2.198725	4.140001	4.140001	0.877639	16.83857	5.068238
93.8172	8.863846	3.727391	-5.55572	-4.62326	1.012697	-21.0829	0
98.72461	8.932131	1.892959	3.391565	2.729929	1.143745	13.29413	0
99.75838	8.610462	1.083449	-12.5627	-12.4734	0.48442	-1312.48	0
89.43127	8.59071	1.316356	-8.26568	-8.10427	0.430032	-65.8075	0
78.5534	8.729794	0.684497	-2.8183	-2.81799	0.474011	-13.1343	0
74.05256	8.719333	0.64565	0.64215	0.642	0.495103	2.472588	0
75.09839	8.816018	0.601904	2.58415	2.582197	0.623919	10.34601	0
79.46133	8.659779	1.487904	-1.35448	-1.289	0.402484	-5.28718	0
76.036	8.588612	3.610905	-3.58794	-3.425	0.429549	-12.4923	0
73.24157	8.590296	4.803528	-2.1489	-2.12157	0.424033	-7.66188	0
90.51424	7.035737	0.076947	-12.225	-11.8138	0.195747	-94.2791	-12.225
78.31056	5.972083	0.840406	-0.18247	-0.17618	0.018013	-0.7223	-0.18247
71.20872	7.21739	7.650279	-9.42223	-9.39658	0.284798	-32.4186	0
54.30579	7.417116	6.454788	0.002766	0.002753	0.50676	0.005992	0

72.66098	8.172464	1.23123	0.120273	0.119295	1.02295	0.427129	0.155708
68.71467	8.072263	1.260323	2.404612	2.386259	0.928521	7.50165	3.113061
66.10631	7.927948	1.268101	0.265632	0.26167	0.735947	0.750204	0.343893
73.53567	8.076098	1.167722	2.957274	2.921306	0.831296	10.67778	3.840617
66.85436	8.133552	1.250369	5.558342	5.483204	1.216134	16.10369	6.880407
68.30486	7.858678	2.223864	-1.87701	-1.87701	0.616318	-5.92206	-1.87701
66.0579	8.030147	2.162167	3.743899	3.743899	0.850435	11.03025	4.749309
59.72696	8.030725	2.024652	9.562816	9.562816	1.060607	23.74496	11.95352
61.57026	7.935239	2.282609	5.755196	5.755196	0.921229	14.97589	7.30073
62.19497	7.827546	1.630577	3.773704	3.773704	0.759522	9.982014	4.787118
33.14561	8.79367	1.582838	2.381068	2.372694	0.593147	3.54287	2.95349
23.47969	8.788691	2.415649	3.5616	3.505477	0.630331	4.559063	4.498884
19.62901	8.800795	2.573416	4.263695	4.194519	0.713	5.198349	5.07673
32.05378	8.785083	1.634925	1.865548	1.865548	0.587104	2.745624	2.86737
32.82818	8.728755	1.488982	4.691877	4.691877	0.516863	6.984888	5.547534
29.94722	8.617605	1.381642	3.769745	3.769745	0.43554	5.381293	4.782071
22.8123	8.571456	1.921722	6.635321	6.635321	0.442398	8.596344	7.717512
26.03176	8.566582	1.671533	7.651781	7.651781	0.453542	10.34468	8.774615
26.00639	8.468081	1.512459	8.038301	8.038301	0.40043	10.86351	9.989751
37.24891	8.54912	1.443374	-6.21221	-6.20539	0.845556	-9.88247	-6.21221
38.18587	8.603491	1.263794	2.524559	2.450927	0.64842	3.894819	3.048698
34.45518	8.635453	2.247711	3.415861	3.358113	0.754909	5.078255	4.332478
40.777	8.667863	1.904671	3.797377	3.797377	0.696971	6.411997	5.040708
44.43603	8.664162	1.836834	5.689785	5.689785	0.670851	10.24006	7.216714
76.04192	8.64563	1.912377	23.65556	12.47904	1.583187	20.83814	28.86219
43.79833	8.628302	1.758558	15.24473	15.25311	0.9339	27.15159	18.9169
76.7445	9.167224	0.999157	0.825263	0.825263	1.51961	3.54868	31.50055
80.26005	9.170719	1.010648	17.21629	17.21629	1.348152	87.21551	23.26704
57.8583	9.182355	1.332053	14.98136	14.98136	1.61941	35.54996	20.62134
54.33324	9.095074	1.383243	11.87024	11.87024	1.585883	25.99317	15.8043
39.06818	9.092037	1.788163	7.457295	7.457295	2.163445	12.23875	9.907694
54.97897	9.1878	1.357613	8.948201	8.948201	2.026514	19.8756	12.30163
48.4014	9.237702	1.482512	19.14675	19.14675	2.744948	37.10712	22.98955
54.04022	9.177159	1.198034	21.84783	21.84783	2.759957	47.53684	23.16935
61.93132	9.076853	1.144797	22.56608	22.56608	2.701501	59.27728	22.56608

Appendix 3

QUESTIONNAIRE

1. **Do you believe that the company should also employ debt over and above equity capital?**
   a) **Yes**
   b) **No**
   c) **Don't know**

2. **What do you think would be the most appropriate level of debt to be employed?**
   a) **< 20 percent of total assets**
   b) **21 percent to 40 percent of total assets**
   c) **41 percent to 60 percent of total assets**
   d) **> 60 percent of total assets**

3. **In your opinion how should a firm finance its total assets?**
   a) **All assets be financed by long term funds**
   b) **All assets be financed by short term funds**
   c) **Only the seasonal variations be financed by short term funds and rest by long term funds**
   d) **Only the fixed assets be financed by long term funds**

4. **What is your current level of debt to total assets?**
   a) **< 20 percent**
   b) **21 percent to 40 percent**
   c) **41 percent to 60 percent**
   d) **> 60 percent**

5. **Please indicate which source of fund your company generally depends upon?**
   a) **Bank**
   b) **Retained earning from profit**
   c) **Trade credit from suppliers**
   d) **Issuing equity shares**

6. **Do you think that increase in debt level will decrease cost of capital?**
   a) **Yes**
   b) **No**
   c) **Don't know**

7. **Do you think that increase in debt level will increase market price per share?**
   a) **Yes**
   b) **No**
   c) **Don't know**

8. **Do you think that increase in debt level will increase profit of the company?**
   a) **Yes**
   b) **No**
   c) **Don't know**

9. **Do you think tax issues have a major influence on capital structure decision?**
   a) **Yes**
   b) **No**
   c) **Don't know**

10. **If the tax rate on corporate profit were to increase, then how will you maintain your debt level?**
    a) **Increase**
    b) **Decrease**
    c) **No change**

11. **Have you ever restructured your company's capital structure?**
    a) **Yes**
    b) **No**
    c) **Don't know**