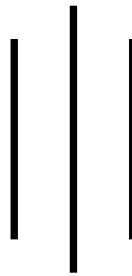


**CAPITAL STRUCTURE AND ITS IMPACT  
ON RISK AND RETURN ANALYSIS  
(A CASE STUDY OF DABUR NEPAL PVT. LTD.)**

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**A Thesis Submitted to:  
Office of the Dean,  
Faculty of Management  
Tribhuvan University**



**In partial fulfillment of the requirement for  
Master's Degree in Business Study (MBS)**

**Ramshah Path, Kathmandu,  
April, 2009**

## **RECOMMENDATI ON**

**This is to certify that the thesis submitted**

**by**

**Mr. Rajendra Aryal**

**Entitled**

**CAPITAL STRUCTURE AND IT'S IMPACT ON RISK AND RETURN**

**ANALYSIS**

**(A Case Study of Dabur Nepal Pvt. Ltd.)**

has been prepared as approved by this department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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## **VIVA VOCE SHEET**

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**CAPITAL STRUCTURE AND IT'S IMPACT ON RISK AND RETURN  
ANALYSIS**

**(A Case Study of Dabur Nepal Pvt. Ltd.)**

And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for

**Master's Degree in Business Studies (M.B.S)**

**Viva-Voce Committee:**

Head of Research Department: .....

Member (Thesis supervisor): .....

Member (External expert): .....

Date:.....

## DECLARATION

I hereby declare that the work reported in this thesis entitled “**Capital Structure and its Impact on Risk and Return Analysis: A Case Study of Dabur Nepal Pvt. Ltd.**” submitted to Office of Dean, Faculty of Management, Tribhuvan University is my original work done in the form of partial fulfillment of the requirement of Master of Business Studies (M.B.S.) under the guidance and supervision of Mr. Achyut Raj Bhattarai of Shanker Dev Campus.

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## LIST OF ABBREVIATIONS

CA	Current Assets
CL	Current Liability
DNPL	DAbur Nepal Private Limited
EBIT	Earning Before Interest and Tax
EBT	Earning Before Tax
EPS	Earning Per Share
F/Y	Fiscal Year
i.e.	that is
kd	Cost of Debt
ke	Cost of Equity
Ltd.	Limited
N/A	Not Available
NI	Net Income
NIA	Net Income Approach
NIO	Net Operating Income
P/E	Price Earning Ratio
Tab.	Tabulated
Va.	Value

## **CHAPTER – I**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Only establishment of industry is not sufficient but their successful operation is also necessary. Establishment and operation of industries need finance. The success and failure of Business depends mainly upon the ability of management to make right financial decisions. Capital structure decision is one of the most complex area of financial decision making due to its interrelationship with other financial decision variable. In order to achieve the firm's goal of owner's wealth maximization. The financial manager must be able to assess the firm's capital structure and understand its relationship to risk, return and value.

For the optimal capital structure, the analysis of risk and return on various leverage positions is essential. The risk of bankruptcy depends to an important extent on the operating risk or business risk and return on equity depends on operating efficiency. Thus, the optimal debt/equity mix depends on the nature of the business and therefore on the nature of investment that the company makes. But the capital structure decision in addition these variables is influenced by several other variables viz. nature of the company capital market situation, interest of the management and investors to control, liquidity position and operating efficiency of the company, company act and regulation etc. if a judicious decision of capital structure is made taking consideration various factor it will be a thing to maximize the value of the company.

Obviously, there are various source of capital which differs in nature and cost associated with them. The successes of any business also largely depend upon the capital structure. It is simply the relationship between various long term forms of the financing such as debenture preference share capital and equity share capital. Financing the firms asset is a very crucial problem in every business and as a general rule there should be a proper mix of debt and equity

capital in financing the firms assets. Though the capital structure cannot affect the total earning of the firms, it generally affects the earning available to equity share holders. In managing the value of shareholder wealth.

A balanced capital structure is the prerequisite for successful business organization but it is lacking in almost all companies in Nepal. The capital structure of Nepalese company is of diverse nature, as no company seem to have followed a particular capital structure policy. Some of the companies are using only equity capital and some are using both debt and equity irrespective of maximization of the firm.

## **1.2 Introduction of Dabur Nepal Pvt. Ltd.**

Dabur Nepal Pvt. Ltd. is a first manufacturing base overseas for Dabur Nepal is the third largest and most modern manufacturing base for Dabur group. DNPL is a Indian Joint Venture Company Promoted by Dabur Indian Pvt. Ltd. It was established in the year 1989 and began it's commercial operation the year 1993. The authorized capital of the company is Rs.140 millions. Dabur Indian has 80% share of the company where as 20% share is with domestic investors. The company produces fast moving consumer goods and herbal health care products. The company is currently employing 340 employees in which around 290 employees are Nepali.

Dabur came into Nepal Planning a new business, with targeted local sales of Rs.50 million per annum. After experiencing a tremendous increase in business volume, the company is new expanding It's operation into newer field and forging alliances with a number of organization both local as well as foreign and investing generally in producing packing material for it's product besides expanding production of It's original line of herbal and non-herbal products. The reason, unlimited scope for the business of herbal product in Nepal.

From the internal business of 50 million p.a. targeted from local sales the turnover of the company rose tremendously over the year because of huge

exports to India. As a result the company now contributes 12% in Nepal's total export. Now Dabur Nepal is planning to start exporting direct to third countries. In order to give life to its plan of direct exports to third countries, DNPL has begun expanding and increasing its production capacity on its existing range of products. At present Dabur Nepal is using about 1200 MT per year of locally collected raw material that includes Sunthi, Jamar seeds, Pipla, Taxus accata, menthe etc. within three to four years DNPL plans to increase the locally collected raw materials consumption to around 2000 MT per year. However, DNPL does not process the raw materials into finished products. In Taxus Baccata leaves, Dabur Nepal processes it up to third stage and exports an extract to its consumer for future processing. Similarly, Dabur Nepal doesn't wholly produce chyanwanprash the major ingredient in chawanprash is not available in sufficient quality in Nepal.

### **1.3 Statement of Problem**

The effect of capital structure on risk and return is a controversy, conflicting opinions have been expressed on this issue. In fact this issue is one of the most continuous areas in the theory of finance and perhaps more theoretical and empirical work has been done on this subject than on any others (Panday, 1992:47). Traditional corporate finance models suggested that firms choose optimal capital structure by trading off various taxes and incentive benefits of debt financing against financial distress cost. In other words the risk and return is the function of capital structure (Solomon, 1969:42). Therefore studies devoted to capital structure have been so important in literature of finance.

Given that a firm has a certain structure of assets which offers net operating earnings of given size and quality and given a certain structure of rates in the capital markets, is there some specific degree of financial leverage at which the market value of firm security will be higher cost of capital will be lower than the other degree of leverage. Capital structure has been long recognized as an unresolved economic problem which requires a rational solution if the prevailing

economic model of corporate is to continue. The controversy centers on whether or not capital structure matters. Due the complex nature of this problems capital structure has been a subject of considerable study particularly since the emergency of classical work. (Modigliani and Miller 1958:247-278).

They hold the view that risk and return is not affected by capital structure. Against the MM's hypothesis traditionalists argue that capital structure decision affected risk and return. There are many empirical works regarding the MM views and traditional views some of the rejected the MM hypothesis while some of them supported the MM hypothesis. The study is especially concerned with examining the following position.

- What is impact on risk and return by making capital capitals structures decision?
- It fluctuating the profit margin due to the cause of change in it's capital structure?
- What are the relationship among leverage size of capital employed, total assets and earning variability of DNPL?
- How far Dabur Nepal Private Limited been able to maintain appropriate capital structure?

#### **1.4 Objectives of the Study**

The basic objectives of the study is to assess the capital structure decision of Dabur Nepal Private Limited and its impact on risk and return on the basis of selected financial tools.

The other specific objectives of the study are as follows:

1. To analyze the cost of capital.
2. To study the profitability position.

3. To assess the debt servicing capacity.
4. To examine the relationship between EAT and Total debt, debt equity ratio and ROE and debt ratio and ROE.

### **1.5 Focus of the Study**

The economic development of a country is likely to be handicapped with out accelerating the pace of economic growth by the way of industrialization. It is the backbond of every country in the present age of globalization. The technology Nepalese companies are suffering different problem by external environment as well as internal operation. Maintaining an optimal capital structure is a main challenge to solve to the overall cost of capital total value of the firm and earning per share. In long run it affects sales stability assets structure, operating leverage growth rate, profitability, tax liability, control position, management attitude, market condition, firm's internal condition, financial flexibility, cash flow, management preferences timing and solvency.

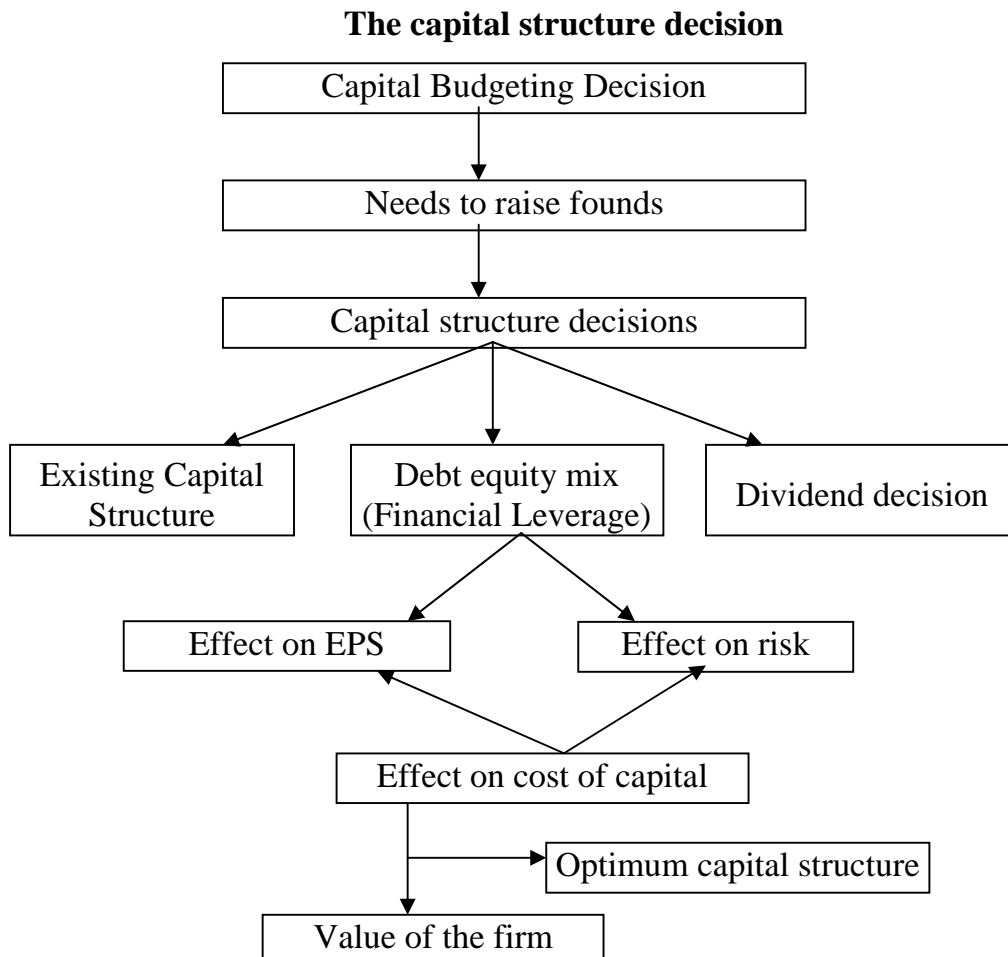
Among the various empirical contradictions the cross-sectional relationship between capital structure and risk and profitability of the firm has been found extensively studied in the world. The capital structure concept has been the subject of controversy since the publication of Modigliani and millers classic paper is 1958 (Ghimire, 1993) there are many empirical works regarding the capital structure supporting and refuting the MM'S view and traditional view. The study by barges (1963) western (1963), Wippern (1963), Flath and Knoebar (1981) and Pandey rejected the MM hypothesis while Hamla (1972) study supported the MM hypothesis.

There are some studies conducted in the capital structure management of the different companies in Nepal. Adhikari (1991), Ghimire (1999) and Khatri (1989) were tested MM hypothesis and found that the result support the traditional proportion.

To maximize the use of funds and to be able to adopt more easily to the changing condition.

### 1.6 Significance of the Study

The capital structure decision is a significant managerial decision. It influences the shareholders risk and return. Consequently the market value of the share is affected by capital structure decision. The company has to plan its capital structure initially at the time of its promotion and subsequently whenever funds have to be raised to finance its projects. It is also important for concerned company, investors and researcher. The process of capital structure decision making is known below:



Source: IM Pandey, Financial Management Vikash Publishing House (Pvt.) Ltd. New Delhi, 1987 Edition Page 675.

## **1.7 Limitation of the Study**

This study attempts to evaluate capital structure decision of Nepal's leading manufacturing company in the sector of herbal product, Dabur Nepal private limited. The following are the limitations of this study.

- ) This whole study is based on secondary data such as financial statements, annual reports and websites of the company concerned.
- ) Analysis is mostly based on the tools developed in context of efficient market conditions.
- ) The study to fulfill the requirement of a master degree in business study, so the study cannot cover all dimensions of the subject matter and resources and time period will also limit the study.
- ) The gathered data are not tried to verify.

The main limitations are the time constraints, financial problems, lack of research experience and lack of recent information.

## **1.8 Scheme of the Study**

This study is divided into five chapters. The first chapter deals with introduction, which includes general background, focus of the study, statement of the problem, objective of the study, limitations of the study and scheme of the study.

The second chapter deals with the review of the literature, which includes conceptual setting and review of previous studies.

The third chapter deals with the research methodology. It contains the research design, period covered, population and sample, sources, types of data, processing procedure and tools for analysis.

The fourth chapter deals with the data presentation and analysis on the basis of financial statement annual report and websites of the companies concern.

The fifth chapter or last chapter present major findings, conclusion followed by recommendations for the future package of plan of action.

## **CHAPTER – II**

### **REVIEW OF LITERATURE**

The purpose of reviewing the literature is to develop some expertise in one's area, to see what new contributions can be made, and to receive some ideas for developing a research design. This chapter broadly discussed about conceptual frame work of capital structure and related studies.

#### **2.1 Conceptual Framework of Capital Structure**

Capital structure is the combination of the long term sources of funding i.e. preferred stock common stock that are used to finance the firm. Similarly, capital structure is the mix of long term debt and equity maintained by the firm. Optimum capital structure can be defined as the mixed of debt and equity which will maximize the market value of a company.

Theoretically the financial manager should plan an optimum capital structure for his company the optimum capital structure is obtained when the market value per share is maximum or the average cost of capital is minimum. The value of the firm will be maximized or the cost will be minimized when the marginal real cost of each source of funds is the same. The optimal capital structure is justified by analyzing the solvency of the company. The long term solvency is measured by various capital structure ratios. The capital structure ratios indicate whether the firm has resorted to an optimal financing mix or it is highly or lowly levered.

This section is devoted to discuss briefly about the theoretical concept regarding the theories of capital structure and financial leverage.

#### **2.2 Types of Capital**

##### **2.2.1 Common Stock**

Common stock holders of a corporation are it's residual owners, their claim to income and assets comes after creditors and preferred stock holder's have been

paid in full. As a result, a stock holder's return on investment is less certain than the return to leader or to a preferred stock holder. On the others hand, the share of a common stock can be authorized either with or without par value. The par value of a stock is merely a stated figure in the corporate chapter and is of little economic significance. A company should not issue stock at a price less than par value because stockholders who brought stock for less than par value would be liable to creditors for the difference between below par prices they paid and the par value (Van Horne: 1997:560).

The equity share capital is the ownership capital does not carry any special or preferential rights in the payment of annual dividend or repayment of capital. The rate of dividend on such capital is not fixed. Dividend on equity capital is paid out of the residual profits left after paying interest on debenture and preference share divided. Similarly, equity shareholders are paid at the time of winding up of the company only after all the prior claims have been settled. Therefore, equity shareholders are the real risk bearer. But they share in the increasing profit of the company. They also enjoy voting rights in the management and control of the company.

### **2.2.2 Preferred Stock**

Preference share capital carries certain special rights or priority rights. Firstly, dividend at a fixed rate payable on these shares before any dividend is paid on equity shares. Secondly, at the time of winding up of the company, capital is repaid to preference shareholders prior to the return of equity capital.

### **2.2.3 Debentures**

Debenture are certificates issued by a company acknowledging debt a specified amount to the person named in it. Debenture includes debenture stocks, bonds, and any other securities of company representing a loan amount. Therefore a periodic payment of interest at the specified rate is to be paid on debenture. Apart from the interest the principle amount is also refunded to the holders,

which is known as redemption of debenture. Thus, the capital with fixed interest charge is called debt and the payment of interest as well as principle on debt is an obligation of the firm that must be paid before any remaining profit after taxes is available for shareholders. (Copeland and Weston. 1990:567). The use of debt or leverage at once provides the potential of increasing the shareholders earning as well as creating the risk of loss of them. Therefore, debt is the two edged sword.

### **2.3 Capital Structure Theories**

The use of debt as a source of capital or leverage affects the cost of capital and the value of the firm. The optimum capital structure would be obtained at that combination of debt and equity that maximize the total value of the firm or minimize the weighted average cost of capital. However, all scholars do not accept the existence of the optimum capital structure. There is two extreme views i.e. Net income approach and net operating income approach and a middle position i.e. traditional approach. Another important theory in capital structure is propounded by Modigliani and miller, which called M-M approach.

#### **Definition**

In our analysis of capital structure theories following basic definition are used:

S = Market value of ordinary shares

B = Market value of debt/bond

V = Total Market value of the firm (S+B)

E = Excepted net operating income (NOI) i.e. earning before interest and taxes (EBTI).

F = Annual Interest charge i.e.  $K_b \cdot B$ .

E = Earning available to common stock holders (EACS)

$k_e$  = equity capital rate

$k_i$  = debt capitalization rate

$k_o$  = overall capitalization rate

The capitalization rates or cost associates with the different earning streams and the value of different securities can define as follows

Debt:

Debts capitalization rate ( $k_i$ ) =  $F/B$  ----- (i)

Market value of debt (B) =  $F/K$  ----- (ii)

Equity

Equity Capitalization rate ( $k_e$ ) =  $E/S$  ----- (iii)

or ( $k_e$ ) =  $EPS/PO$  ----- (iv)

Market value of ordinary shares

i.e. Equity (S) =  $E/k_e$  ----- (v)

Weighted average cost of capital

Overall capitalization rate  $K_o$  =  $O/V$  ----- (vi)

The overall capitalization rate is weighted average of the cost of equity and cost of debt.

Thus, expressed as:

$$K_o = k_i \frac{B}{B+S} + k_e \frac{S}{B+S}$$

$$K_o = k_i \frac{B}{V} + k_e \frac{S}{V} \text{ --- (vii)}$$

### 2.3.1 Capital Structure Matters: The Net Income Approach

Net income approach suggests that there exist optimum capital structure. Its main hypothesis is that as leverage increase cost of capital decrease and total

value of the firm increases. In other words, affirms can lower the overall cost of capital by increasing the proportion of debt in the capital structure.

This approach is propounded by David Durand in 1952. This theory assumes that the cost of debt and cost of equity remain constant as they change in the firm's capital structure. A change in the capital structure will lead to a corresponding change in the overall cost of capital as well as the total value of the firm. As the firms add cheaper debt to its capital structure, the overall cost of capital declines which ultimately increases the value of the firm.

The calculation is simplified by following table:

'O' = Net operating income

'F' = Total Interest ( $k_i, B$ )

'E' = Earning available to commons share holders ( $O-F$ )

' $k_e$ ' = Equity capitalization rate

'S' = Total market value of equity ( $E/k_e$ )

'B' = Total market value of debt

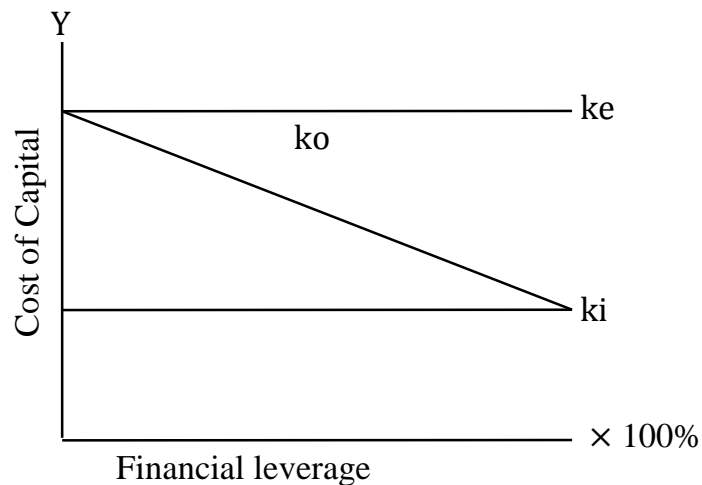
'V' = Total value of firm ( $S+B$ )

' $k_o$ ' = Overall capitalization ( $O/V$ )

According to net income approach, both the cost of debt ( $k_i$ ) and the cost of equity capital ( $k_e$ ) are assumed to be independent of leverage: that is they are constant regardless of how much debt the firm uses. if debt is cheaper than equity, and if  $k_i$  and  $k_e$  are constant then the average cost of capital ( $k_o$ ) must decline as the firm uses more and more of the cheaper debt. Further this cost of the capital decline causes increase in the value of the firm.

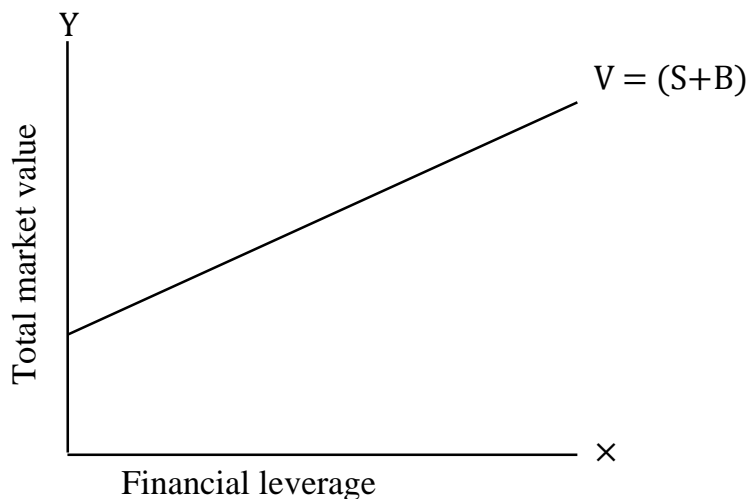
Graphically, the effect of leverage on the firm of capital and the effect of leverage on the total market value of the firm is shown below.

**Figure 2.1: The effect of leverage on the cost capital**



The net income approach  $k_e$  and  $k_i$  are assumed not to change with leverage. As the proportion of debt is increased in the capital structure, being loss costly, it causes weighted average cost of capital to decrease. the optimum capital structure would occur at the point where the value of the firm is increase and overall cost of capital is decrees.

**Figure 2.2: The effect of leverage on the total market value of the firm**



The net income approach's hypothesis is that as leverage increase, cost of capital decreases and total value of the firm increases. In other words, it can be said that the firm can increase it's value or lower the overall cost of capital by increasing the proportion of debt in the capital structure.

### 2.3.2 Capital structure does not matter: Net operating income approach

Another approach to the valuation of the earning of a company is known as the net operating income approach. It suggest that there doesnot exit optimum capital structure. The main hypothesis of this approach is that the market value of the firm is not affected by the capital structure change. With this approach the overall capitalization rate O, as well as the cost of the debt funds  $k_i$ , stays the same regardless of the financial leverage employed. How ever the required return on equity,  $k_e$  increases linearly with financial leverage measured as BIS (Van Horne, and John, 1997, P. 471).

#### Table 2.2

'O' Not operating income

'Ko' Overall capitalization

'V' Total Value of the firm ( $O/k_o$ )

'B' Market value of debt

'S' Market value of stark ( $V - B$ )

The earning available to common share holders, is simply net operating income (O) minus interest payments.

i.e.  $E = O - K_i \cdot B$ .

The implied require rate of return on equity is,  $k_e = \frac{E}{S}$

Alternatively, the implied required rate of return can be defined as follows:

$$k_e = k_o + (K_o - k_i) \frac{B}{S} \text{ ----- (viii)}$$

The equation indicates that, if  $k_o$  and  $k_i$  are constant,  $k_e$  would be increased linearly with debt - equity ratio  $B/S$ .

The effect of financial leverage on the value of the firm and cost of capital under NOI approach further illustrated graphically in following figures:

**Figure 2.3: The effect of leverage on cost of capital (NOI approach)**

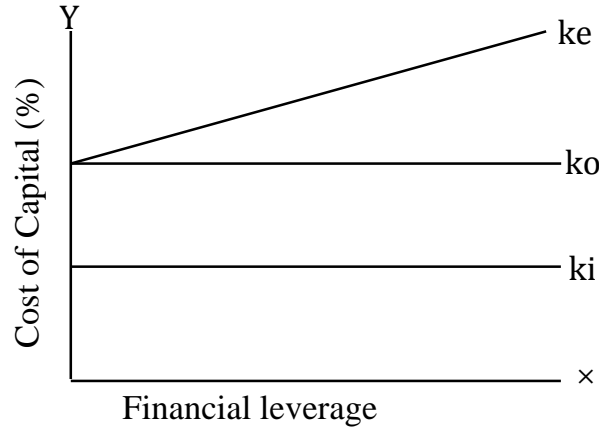
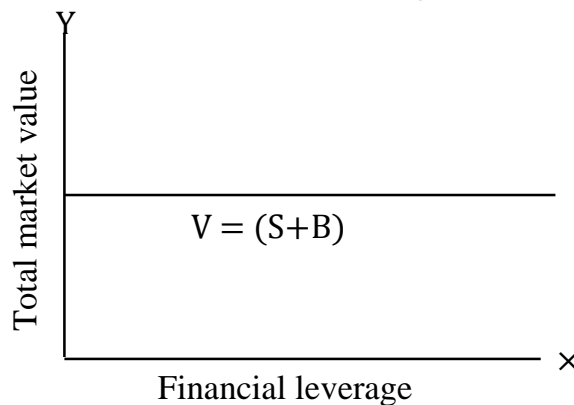


Figure 2.3 shows that  $k_o$  and  $k_i$  are constant and  $k_e$  increases with leverage continuously. As the average cost of capital,  $k_o$ , is constant this approach implies that there is not any unique capital structure. In other words this means that as the cost of capital is the same at all capital structures, every capital structure are optimum.

**Figure 2.4: The effect of leverage on value of the firm**



The figure 2.4 indicates that whatever will be the leverage, the value of the firm remains constant the change in ratio of the debt and equity does not effect at the total value of the firm.

### **2.3.3 Existence of optimum capital structure: The Traditional Approach**

The preceding discussion show that the Net income approach and the Net operating income approach are two extremes in capital structure theory in regard the weighted average cost of capital and total value of the firm. The NI approach takes the position that use of debt in the capital structure will always affect the overall cost of capital and total valuation while the NOI Approach argues that capital structure is totally irrelevant.

The traditional view is an intermediate approach which compromise between the Net income approach and the net operating income approach. The traditional approach to capital structure assumes that there is an optimum capital structure and the management can increase the total value of the firm through the judies use of financial leverage. This approach clearly implies that the cost of capital decreases with in the reasonable limit of debt and the increase with leverage. Thus, an optimum capital structure exists and occurs when the cost of capital is minimum where the value of firm is maximum. Although investors raise the required rate of return on equity with increase in leverage, the increase in 'ke' does not entirely offset the benefit of using cheaper debt funds. The statement that debt funds are chapter then equity funds carries the clear implication that the cost of debt plus increased cost of equity, together on a weighted basis will be less then the cost of equity which existed on equity before debt financing (Alexander, 1963 P.11)

According to the traditional position, the manner in which they overall cost of capital reacts to changes in capital structures can be divided in to the three stages.

#### **1. First stage increasing value**

In the first stage, the equity capitalization rate ( $k_e$ ) rises only after a certain level of leverage and not before or rises slightly with debt. so that the use of debt does not necessarily increase the 'ke' and this slight increase in ke may not be so high as to neutralize the beuefit of using cheaper fund in other word, the advantage arising out of the use of debt is so large that even after allowing for

higher  $k_e$ , the benefit of use of the cheaper sources of found are still available. As result, the value of the firm  $v$ , increases while overall cost of capital falls with increasing leverage.

Under the assumption that  $k_e$ , remain constant within the acceptable limit of debt, the value of the firm will be:

$$\begin{aligned}
 v &= S+B \\
 &= \frac{O - K_i \cdot B}{K_e} + \frac{K_i \cdot B}{K_i} \\
 &= \frac{O - K_i \cdot B}{K_i} + B \\
 &= \frac{O}{K_e} + \frac{(K_e - K_i) B}{K_e} \text{ --- (ix)}
 \end{aligned}$$

Thus, so long as  $k_e$ , and  $k_i$  are constant, the value of the firm  $v$  increases at a constant rate.  $\frac{K_e - K_i}{K_e}$ , as the amount of debt increases.

When, the equation (ix) is solved for overall capitalization rate,  $k_o$ , we get,

$$k_o = \frac{O}{v} = k_e - (K_e - K_i) \frac{B}{v} \text{ --- (x)}$$

This implies that, with  $k_e > k_i$ , the average cost of capital will decline leverage.

## 2. Second Stage: Optimum Value

Once the firm reached a certain degree of leverage, increase in leverage have a negligible effect on the value, or the cost capital of the firm. This is so because the increase in the cost of equity due to the added financial risk exactly offsets the advantage of low cost debt. Thus within the rank or at the specific point.

The value of the firm will be maximum or cost of capital will be minimum (Pandey, 1995 P. 684).

### **3. Third Stage: Declining Value**

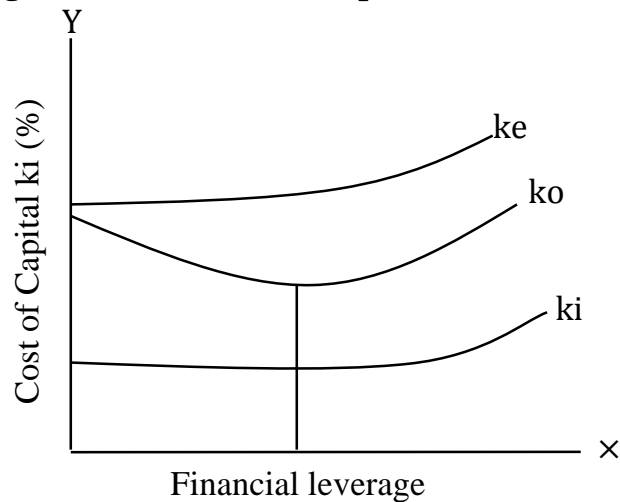
If the amount of debt is increased further beyond of the acceptable limit, then the firm would become very risky to the creditors who would like to be compensated by a higher return such that  $k_i$  will rise. The use of debt beyond a certain point will. Therefore have effect of rising the weighted average cost of capital and conversely the total value of the firm.

#### **Overall Effect**

Thus, the overall effect of these three stage suggest that the cost of capital in the junction of leverage. Up to a point, the use of debt will favorably effect the value of firm, beyond the point, use of debt will adversely effect it. At the level of debt-equity ratio, the capital structure is an optimum capital structure. At the optimum capital structure, the marginal real cost of debt define to include both implicit and explicit will be equal to the real cost of equity. For the debt-equity ratio before that level the marginal real cost of debt would be less than that of equity capital, while beyond that level of leverage, the marginal real cost of debt would exceed that of equity. Thus, there would according to traditional view, be an optimum capital structure (Khan and Jain 1990, P. 511).

The manner in which the overall cost of capital reacts to change in capital structure can be presented graphically as follow.

**Figure: 2.5: The cost of capital behavior (Traditional View).**



The figure 2.5 is represents the cost behavior of traditional view of capital structure. According to this view cost of equity  $k_e$  assumed to rise at an increasing rate with leverage and cost of debt  $k_d$  is rise only after significant debt or leverage has occurred. In beginning average cost of capital declines with leverage. After a certain point the increase in  $k_e$  will more than offsets of the use of cheaper debt fund and  $k_o$  begins to rise. Therefore the optimal capital structure is that point where  $k_o$  is at minimum point as in above figure. The traditional approach considers that the cost of capital is not an independent phenomenon of capital structure. There is an optimal capital structure of the firm.

### **2.3.4 Irrelevance of Capital Structure: The Modigliani-Miller Approach**

The Modigliani-Miller (M-M) hypothesis is identified with the net operating income approach. M-M argue that, in absence of taxes, a firm's market value and the cost of capital remains invariant to the capital structure changes (Pandey, I.M. 1995, P. 686). In their 1985 article, they provide analytically sound and logically consistent behavioral justification in favor of their hypothesis and reject any other capital structure theory as incorrect. This approach based on the following assumptions:

- i. Perfect competitive market environment information relating to investment is freely accessible. No transaction cost investors are

free to sell and buy the securities and they can borrow without any restriction. All investors are rational and no investor can influence the capital market.

- ii. Originally MM hypothesis assumed the no tax world. But this assumption was put aside in 1963.

(Modigliani and Miller, American Economic Review, June 1966:433-443)

**Basic Proposition**

There are three basic proposition of the M-M approach, but M-M hypothesis can be best explained in term of their proposition I and II.

Proposition I (Without Taxes).

M-M argues that, for firms, in the same risk class the total market value is independent of the debt-equity mix and is given by capitalizing the expected net operating income by the rate appropriate to that risk class (Modigliani and miller, 1969, P. 226). This is then proposition I. In equation this can be expressed as follow.

Value of firm = Market value of equity + Market value of debt.

= Expected net operating income/Expected overall capitalization rate.

i.e  $V = S + B = O / K_o$  ----- (xi)

Proposition I can be expressed in term of the firms overall capitalization rate  $k_o$  which is the ratio of the net operating income (EBIT) to the market value of the securities. That is

$$k_o = \frac{O}{S+B} = \frac{O}{V} \text{-----(xii)}$$

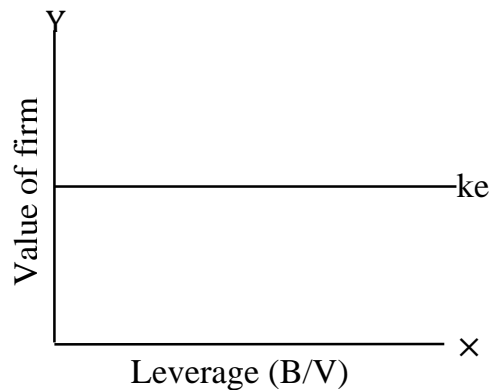
$k_o$ , can also be expressed as

$$k_0 = k_e \frac{S}{S+B} + k_i \frac{B}{S+B}$$

$$= k_e \frac{S}{V} + k_i \frac{B}{V} \text{ --- (xiii)}$$

It means  $k_0$  is the weighted average of the expected rate of return of equity and debt capital of the firm. Since the cost of capital is defined as the expected net operating income divided by the total market value of the firm, and since M-M conclude that the total market value of the firm is unaffected the financing mix, it follows that the cost of capital is independent of the capital structure and is equal to the capitalization rate of a pure-equity stream of its class (Pandey, 1995 P. 688). The cost of capital under M-M proposition I is shown in the following figure which clears the average cost of capital is constant and is not affected by leverage.

**Figure: 2.6 Value of Firm (Under M-M proposition)**



**Arbitrage Process**

The simple principle of proposition I is that two firms alike in every respect except capital structure must have the same total value, if not arbitrage will be possible, and its occurrence will cause the two firms to sell in the market at the same total value. M-M further maintain that this situation can not continue, for arbitrage will drive the total value of the two firms together. M-M argue that by investing in un-levered company, investor in levered company are

able to obtain the same dollar return with no increase in financial risk. Moreover theory are able to do so with smaller investment outlay (Modigliani and Miller 1990, 59-95).

Because investors would be better off with the investment requiring the lesser outlay, they would sell their share in levered company and buy shares in un-levered company. These arbitrage transactions would continue until leveret company share increased in price enough to make the total value of the two firms identical.

The action of number of investor undertaking similar arbitrage transaction will lead to drive up the price of un-levered company and increase its  $k_e$ . This arbitrage process will continue until there is no further opportunity for reducing one's investment outlay and achieving the same dollar return. At this equilibrium, the total value of the firm must be same. As a result, their overall capitalization rate,  $k_o$  also must be same. The principle involved is simply that investors are able to reconstitute their former positions by offsetting changes in corporate leverage with changes in personal leverage (Van Horne, P. 271). As a result investment oppertunities available to them are not altered by change in the capital structure of the firm.

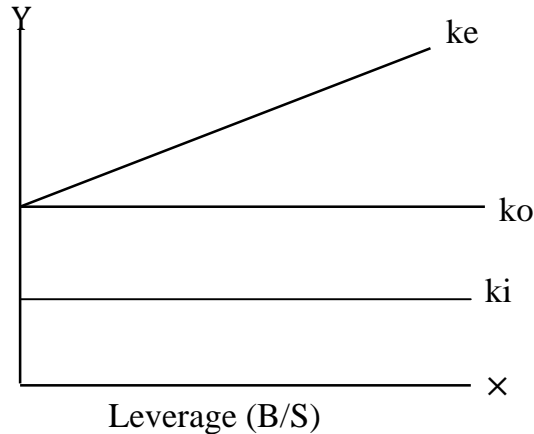
The proposition I state that the cost of equity raises proportionately with the increase in the financial leverage in order to compensate in the from of premium for bearing additional risk arising from the increased leverage (Pradhan, P. 362-363) in other words it says that the cost of equity of levered firm ( $k_{eL}$ ) equal to the cost of equity when un-levered ( $k_{eU}$ ) plus a risk premium that depends upon the differences between  $k_{eU}$  and  $k_i$  multiplied by the ratio of debt equity. It is as follows:

$$\begin{aligned}
 K_{eL} &= K_{eU} + \text{Risk premium} \\
 &= k_{eU} + (k_{eU} - k_i) B/S \text{ -----(xiv)}
 \end{aligned}$$

When company is un-levered  $k_o = k_e$  because company uses only equity funds hence equation (xiv) is also expressed as:

$$k_{el} = k_o + (k_o - k_i) B/S \text{----(xv)}$$

**Figure 2.7 cost of capital under the M-M proposition I.**



The above figure indicates that higher the B/S ratio higher is the cost of equity ratio. It means the cost of equity,  $k_e$  is a linear function of leverage, measured by market value of debt to equity, B/S. Thus, leverage will result not only in more earning per share to shareholders but also increased cost of equity. The benefit of leverage is exactly taken off by the increased cost of equity, and consequently, the firm's market value will remain unaffected.

The crucial part of M-M hypothesis is that  $k_o$  will not rise even if very excessive use of leverage is made. This conclusion could be valid if the cost of borrowings,  $k_i$  remains constant for any degree of leverage, but in practice  $k_i$  increase with leverage beyond a certain acceptable or reasonable level of debt. However M-M maintain that even if the cost of debt,  $k_i$  is increasing, the weighted average cost of capital, will remain constant. They argue that when  $k_i$  increase at a decreasing rate and may even turn down eventually. When  $k_i$  increases with debt,  $k_e$  will become less sensitive to further borrowing. The reason for this is that debt-holder in extreme situation on the firm's assets and bears some of the firm's business risk. Since risk of shareholders is transferred to debt-holders  $k_e$  declines.

### 2.3.5 Relevance of Capital Structure: The M-M Hypothesis under Corporate Taxes

With tax consideration, the theory process that the value of the firm increases will the inclusion of debt in the capital structure. The reason is that interest paid on debt deductible for tax purpose and it reduces the tax liabilities. This means that after tax net income increases by the amount of tax benefit resulting in an increase in the value of the firm by the same amount. In M-M article published in 1963, also they show that value of the firm will increase with debt due to the deductibility of interest charges for computation and the value of the levered firm will be higher than of the un-levered firm (Modigliani and Miller, 1990, P. 433-443).

#### Proposition II (With Taxes)

As proposition I, the value of the firm is determined by capitalizing the net operating income (before tax) at a rate that appropriate to its risk class. When tax is considered the value is determined by capitalizing the net income after tax instead of net operating income (O).

$$\text{i. e. } V = \frac{O(1-t)}{K_0} = \frac{NI}{K_0} \text{ ----- (xvi)}$$

Thus, the proposition I stress that the value of an un-levered firm is the NI capitalized at the rate of appropriate to its risk class, such as

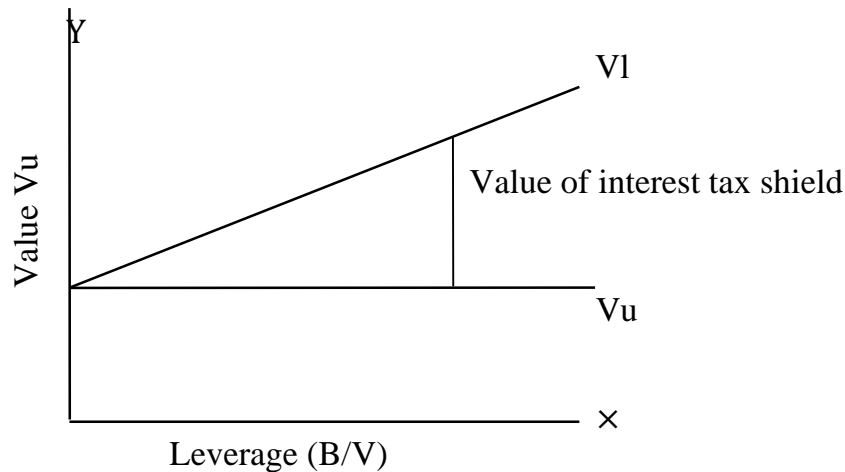
$$V_u = \frac{O(1-t)}{k_{ou}} = \frac{O(1-t)}{k_{eu}} = \frac{NI}{k_e} \text{ ----- (xvii)}$$

Because of the deductibility of interest on debt the value of levered firm (VL) increase by amount of tax saving. Hence, VL equal to Vu plus tax saving. (Pradhan, P. 364).

$$VL = Vu + B.TC \text{ ----- (xviii)}$$

Thus, M-M proposition I with taxes indicates  $V_L > V_U$  and suggested that a firm's value rises continuously as it moves from zero to hundred percent (0 to 100%) debt. This is clearly shown in following figure 2.8.

**Figure 2.8: Value of levered firm.**



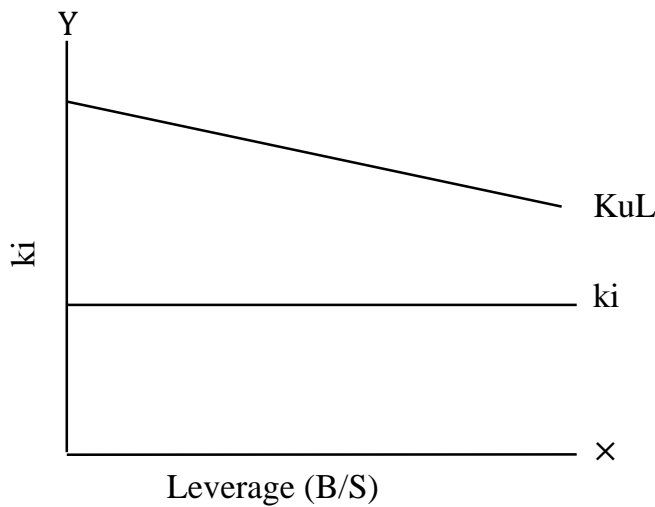
As M-M proposition II stress that the cost of equity of levered firm ( $K_{eL}$ ) rises with levered ratio to compensate for the additional levered risk while the cost of debt remains constant, because of the debt is assumed to be risk less. Accordingly, with tax consideration the cost of equity is calculated as follows:

$$K_{eL} = k_{eu} + (k_{eu} - k_i) (1-t) B/S \text{ ----- (xix)}$$

The tax deductibility of interest on debt lower the cost of debt but still remains constant irrespective of debt equity ratio. Thus, this reduction in cost of debt as result of tax saving outweighs the increased cost of equity. Forcing the overall capitalization rate ( $K_o$ ) decline with every unit additional debt financing. As result, weighted average cost of capital of the firm does not remains un changed when there is a change in B/S ratio. This can be seen from the way of calculation of weighted average cost of capital ( $k_o$ )

$$K_{oL} = K_{eL} \frac{S}{V} + k_i(1-t) \frac{B}{V} \text{ ----- (xx)}$$

**Figure 2.9: Cost of capital of the levered firm**



The figure 2.9 indicates that as the cost of equity increase with the B/S ratio the overall capitalization rate decreases continuously until it reaches to the level of cost of debt at 100% debt financing.

Thus, the M-M's 'tax corrected' view suggested that, because of the tax deductibility of interest charges a firm can increase its value or lower its cost of capital continuously with leverage. Thus the optimum capital structure is reached when the firm employs 100% debt. But the observed experience does not entirely support this view. In practice firms do not employ large amounts of debt not are lenders ready to lend beyond certain limit.

Thus, M-M suggests that firm would adopt a target debt ratio so as not to violate the limit of the debt level imposed by lenders.

#### **2.4 Factors Affecting a Target Capital Structure**

Capital structure is the composition of long-term source of funds i.e. long-term debt, preference share capital and equity share capital. Capital structure decision affects the value of firm, earning per share and cost of capital. So, the capital structure decision is very important aspect of financial management. Optimal capital is mix of debt and equity that maximize the value of the firm and earning per share and minimizes overall cost of capital of the firm.

While maintaining the target capital structure firms should consider many factors. These are important and may be difficult to measure. Some of these important factors, which affect the target capital structure, are as follows (Pandey, 1993:725)

#### **2.4.1 Size of the Company**

The size of the company is an important determinant of the sources of funds. For the large and well-known companies has relative flexibility in designing its capital structure. It can obtain loans at easy term and sell common shares. Preference share and debenture to public. Because of the large size of issue, its cost of distributing a security is less than that for a small company. The sources of capital for a small company are constrained by many factors. There are not many opportunities available to collect necessary fund through capital market and even if they raised fund, the cost on such capital will be very high in comparison to large corporation. Similarly, the collection of fund through bet for small company cost very high because lender will feel that it is very risky. Thus, size of the firm has an influence on the amount and the costs of funds.

#### **2.4.2 Stability of Sales**

A firm whose sales are relatively stable can safely taken on more debt and incur higher fixed charges the company with unstable sales. The firm with stable sales will have stable EPS and thus, can employ a high degree a leverage as they will not face difficulty in meeting the fixed commitments. This likely fluctuations in sales increase the business risk. A small change in EPS. As a result, the shareholders perceive a high degree of financial risk if the company employs debt.

#### **2.4.3 Growth Rate**

A rapidly growing firm tends to use somewhat more debt than slower growing companies. The growth firms may usually employ a high degree of leverage. Companies with declining sales would not employ debt or preference share

capital in their capital structure, as they would find difficulty in meeting their fixed obligation.

#### **2.4.4 Operating Leverage**

A firm with less operating leverage is better able to employ financial leverage because the interaction of operating and financial leverage determines the overall effect of declines in sales on operating income and net cash flows.

#### **2.4.5 Taxes**

Interest is deductible expenses, and deductions are most valued by firms with high tax rates. Hence, the higher a firm's corporate tax rate, the greater the advantage of using debt.

#### **2.4.6 Profitability**

A firm with very high rates of return on investment uses relatively little debt. Although there is no theoretical justification for this fact on practical explanation is that very profitable firms such as IBM and kodak simply do not need debt financing. Their high rate of return enables them to do most of their financing with retained earning.

#### **2.4.7 Market Conditions**

Conditions in the stock and bond market undergo both long and short run changes that can have an important bearing on the firms optimal capital structure. Therefore, low rated companies, which needed capital forced to go to the stock market or the short term debt market regardless of their target capital structures.

#### **2.4.8 Management Attitude**

If the absence of proof that one capital structure will lead to higher stock prices than another management can exercise its own judgment about proper capital

structure. Some management tends to be more conservative than others use less debt than the average firms in the industry.

#### **2.4.9 Control**

The effect of debt versus stock on a management control position can influence capital structure. If management has voting control over the company and is not in a position to buy more stock debt may be a choice debt for new financing. On the other hand, management group that is not concerned about voting control many decide to use equity rather than debt. An excessive amount of debt can also causes bankruptcy which win mean a complete loss of control.

#### **2.4.10 Assets of structure**

Firms whose assets are suitable as security for loans tend to use debt rather having general purpose assets, which can be used by many business make a good collateral, where as special purpose assets do not thus real state companies are usually highly leverage where as companies involved in technological research employ less debt.

These are the main factors affecting that target capital structure other factors like nature of the company, internal condition, financial flexibility flotation costs, capacity of raising funds, agency cost, cash flow ability, external risk assessment, etc. should also be considered while making capital structure decision.

#### **2.5 Leverage**

The term 'leverage' results from the use of fixed cost assets or fund to magnify returns to the firm's owners changes in leverage result in changes in level of return and associates risk. Generally, increase in leverage results in increase in return and risk, whereas decrease in leverage results in decrease return and risk. The amount of leverage in firm's capital structure is the mix of long-term debt and equity maintained by the firm.

The three basic types of leverage can be defined with leverage to the firm's income statement. These are operating leverage, financial leverage and total leverage which are clearly labeled in following General income statement format:

**Table 2.4**

**General Income Statement Format and Types of Leverage**

Operating	Sales revenue
Leverage	Less: Cost of goods sold
	gross profit
	Less: Operating expenses
Total Leverage	Earning before interest and tax (EBIT)
	Less: Interest
	Net profit before tax
Financial Leverage	Less: Taxes
	Net profit after tax
	Less: Preferred stock dividends
	earning available to common stockholders.
	Earning per share (EPS)

From above table, it is clear that operating leverage is concerned with the relationship between the firm's sales revenue and it's operating interest and taxes or EBIT. While financial leverage is concerned with the relationship between the firms earnings before interest and tax (EBIT) and it's earnings per share of common stock. Our study is combined with only financial leverage.

### **2.5.1 Financial Leverage**

Financial leverage result from the presence of fixed financial cost in the firms income stream. It can be defined as the potential use of fixed financial cost to magnify the effect of changes in earning before interest and taxes on the firm's earning per share. The two fixed financial cost normally found on the firm's income statement are:

- Interest of debt and
- Preferred stock dividend

These changes must be paid regardless of the amount of EBIT available to pay them.

The effect of financial leverage is such that an increase in the firms EBIT result in a greater than proportional increase in the firm's earning per share while a decrease in the firm's EBIT result in a more than proportional decrease in EPS.

#### **Measuring the degree of financial leverage (DFL)**

The degree of financial leverage is the numerical measure of the firm's financial leverage. It can be computed in fashion similar to that used to measure the degree of operating leverage. It can be derived by using following formula.

$$D.F.L = \frac{EBIT}{EBT}$$

Whenever DFL is grater than 1, there is financial leverage.

### **2.6 Review of Related Studies**

The objective of review of related studies is to gain knowledge about what the previous researchers have identified and recommended solving the excising

problem in the related filed of study. This part has been sub divided in three parts namely review of journals review of articles and review of related thesis.

### **2.6.1 Review of Journals**

Different scholars different part of the world have carried out numerous theoretical as well as an empirical works. But leading theoretical and empirical works. But leading theoretical and empirical works have been engaged out from USA since the publication of M-M independent hypothesis.

#### **The Modigliani and Miller Study**

In the study done by Modigliani and Miller they used the previous work of 'Allen and Smith' in support of their independence hypothesis. In first part of the work M-M tested their proportion I, the cost of capital is irrelevant to the firm's capital structure by correlating after tax cost of capital with leverage. They found that the correlation co-efficient is statically insignificant and positive in sign. In the second part of their study they tested their proposition II the expected yield on common share is a linear function of debt to the equity ratio.

Modigliani and Miller the second study in correlation of the original hypothesis (1963) concluded that the leverage has a tax saving and value of the firms can be maximized when the leverage measured by  $DL=VL=1$ . Thus in other words cost of capital can be minimized when equity financial is zero.

They tested this tax saving of leverage in 1963 A.D. with 63 samples of the large electric utilities of USA for the years 1954, 1956 and 1957 A.D. In this test they concluded that the leverage is significant factors because of the tax advantage involved in it.

Roy L. Simerly professor California state university, has conducted a research and published an article "Re-thinking capital structure" in the field of capital structure management. According to him the prevailing theory of capital

structure, which emphasize on optimum capital structure is incomplete. Because he urge researchers in financial management have not found the optimum capital structure. Use of leverage is one way to improve the performance in some circumstance but it fails to concenter the complexities of competitive environment or long term survival need of the organization. He examined the economic performance of over 700 firms across 31 industries. He ranked in ordering of industries based on the degree of environmental dynamism. He found that the firms in high level of dynamism were more successful if they have low level of debt. In other words debt is negatively related to profit in these industries. The result of this study seen a serious challenge to the traditional capital structure literature.

Van Horn (1999) has also presented controversial decision about capital structure. According to this decision, financial signaling occurs when capital structure changes convey information to security holders. It assume symmetric information between management and stockholders. Management behaviour results in debt issue being regarded as good news by investors and stock issues as bad news.

### **2.6.2 Review of Articles**

Rima D. Shrestha (1999) in his article "*Focus on capital structure*" (selected and listed public companies) found that in Nepalese public enterprise the definition of capital structure is not a problem but what matters is the problem of putting the definition of capital structure into practice. As for instance public enterprises as well as listed public limited companies have higher debt-equity Mix. As a result their liabilities have increased together with higher fix charges due to failure to utilize borrowed capital properly. Thus, the market circle investors often express dissatisfaction for not getting expected return as per commitment made by the listed companies in the prospectus to the investing public. This is even very serious in government owned companies.

The author clearly suggested that the capital structure of both selected public enterprises and listed companies have high proportion of debt mix with equity. Most of them have to face high interest burden on one side and increasing accumulated losses on the other hand. She further suggested to the government that it is important to monitor the use of debt and its impact on the overall earning of enterprises.

I.M. Pandey (1998), the Professor of Indian Institute of Management, Ahmedabad has also studied about capital structure. According to him, under favourable economic conditions the earning per share increases with leverage. But leverage also increases the financial risk of the shareholders. As a result, it can not be stated definitely whether or not the value of the firm will increase with leverage. Further he has said if the value of firm can be affected by capital structure which maximizes the market value of the firm. Pandey further added there exist conflicting theories on the relationship between capital structure and the value of the firm. On the context of capital structure, Pandey has argued that the capital structure decision of the firm can be characterized as a choice of that combination of debt and equity. Which maximizes the market value of the firm. He has supported the traditional approach that the cost of equity declines with leverage at an acceptable range of debt and then starts to increase with increasing debt in capital.

Mr. M.K. Shrestha (1985), in "*Analysis of capital structure of selected public enterprises*" concluded that the capital structure of those enterprises were quite confusing. This is because those enterprises were not guided by the objective based financial plans and policies. Most of them, to relieve financial obligations debts are eliminated. It was further added that the calculation of equity capitalization rate and overall capitalization rate has been given very fantastic results in many cases. The use of NI and NOI approach in those were rather academic practice than providing valid. The debt equity ratio was improperly determined and the contribution of the debt procurement of assets was very insignificant and suggested that debt equity ratio neither should be highly

levered to create too much financial obligation that lies beyond capacity to meet nor should it be much low to infuse operational lethargy to pass responsibilities without performances. The aid donor strategies should be properly taken in to considerations as the inflow of foreign government and international financial decision institution credit has dominant influence in the capital structure.

Franco Modigliani and Miller, on their study of debt equity composition stated that, the impact of the additional debt in a tax less and economically perfect world the total market value of the company's debt plus equity should not be charged as debt is sustained for equity. Although expected earning per share will increases as debt is sustained by equity (or additional financing is done with debt rather equity) this effect is exactly offset by the markdown in the company's price/earning ratio. The markdown occurs because the additional debt exposes the common stockholder to an extra financial risk.

### **2.6.3 Review of Related Thesis**

Under this section various maters level dissertation related to this study have been reviewed. These are as follows:

Devkota, Monica is (2002) on his study "*An analysis of capital structure of Necon Air Ltd*" the main objectives of this study are:

- To analyze various ratios, correlation coefficient and capital structure approaches related to the leverage.
- To find out the debt service capacity, growth rate and capital structure approach.

For this study she found that debt service capacity of the company is highly positive, position of debt is higher so most of the assets were financed by the debt capital. The relationship between debt ratio and NOI is significant and these is no significant relationship between EBIT and interest, company is

operating in the risky condition, EPS is in fluctuating trend, revenue generation is normal.

Dhital Rajipa (2004) had conducted a study on "*A Capital structure decision and its impact and risk and return analysis of Hulas Still Industry Private Limited*". The main objective of this study are:

- To examine the relationship between capital structure and profitability of the company.
- To suggest the appropriate capital structure for the Hulas Still Industries Private Limited.

For this study, he found that debt equity ratio of the company very poor. The long term debt to total assets ratio indicate that loans are not fully secured with assets. The HSIPL should try to reduce short term debt and use more long-term funds.

A study conducted by Upreti, Gyanendra in (2005) entitled "*A study on capital structure decision and its impact on risk and return of Bottlers Nepal Limited*". The main objectives of this study are:

- To analyze the related variable of capital structure, determining risk and return.
- To evaluate the capital structure of BNL with respects to its net worth.
- To experiment the relationship between the capital structure and value of BNL.

For this study, he found that long term debt to debt ratio was higher than the general acceptable level. The debt servicing capacity of company was not satisfactory due to negative I/C ratio. The return on capital employed and debt servicing capacity also was not satisfactory due to negative earning. The overall capitalization rate was also negative firm. Main suggestions are:

Capital structure should well planned operating efficiency and earning power should improve, market share should expand and expenditure, should control.

Ranjit, Saajau (2007) had conducted a study on "*Capital structure of manufacturing company of Nepal.*" The main objectives of this study are:

- To decide the proportion of equity capital debt capital to make the capital structure balance and maximizes the shareholders wealth.
- To examine the dynamics of the capital structure of Nepalese manufacturing companies.
- To examine about the correlation between long-term debt and net worth capital.

For this study, he found that these company are highly unlevered, debt equity ratio of these companies are consistent in nature. Thus, suggested the minimizes the industrial risk and try to maintain leverage position.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

Research methodology is composed of two words research and methodology. Research is a systematic and organized effort to investigate a specific problem that needs a solution (Sekavan, 1992). This process of investigation involves a series of well thought out activities gathering, recording, analyzing and interpreting the data with the purpose of findings answer to the problem. Thus, the entire process by which we attempt to solve the problem is called research (Wolf and Pant, "Social science research and thesis writing" second edition, 1999, first print, 2000, A. 203). While methodology is the research method used to test the hypothesis.

Thus, research methodology is the way to solve systematically about the research problem. It refers to the various sequential steps to adopt by a researcher is studying a problem with certain objectives.

In view (C.R. Kothari, "Research Methodology" method and techniques new Delhi: Wiley Eastern Pvt. 1989). For this purpose, the research is exploratory as well as analytical. In order to accomplish the objective of the study, the research methodologies have been designed on the basis of secondary data by using useful financial and statistical tools. The research methodologies have been designed on the basis of secondary data by using useful financial and statistical tools. The research methodologies adopted in this study are discussed in the following manner. This chapter is composed of five sections.

- Population and Sample
- Nature of and source of data
- Method of analysis and interpretations
- Specification of the study
- Limitation of the study

### **3.1 Research Design**

The analysis of this study based on certain research design. Selection appropriate research design is necessary to meet the study of objectives. It emphasizes on descriptive and analytical study of collected data as of profit and loss account and balance sheet over a period of time and it gives digestion on the improvement of the capital structure. Comparatively this study has been designed as an descriptive analytical design. The study gives some measurable suggestion to strengthen the capital structure management.

### **3.2 Sources and Types of Data**

This study based on secondary data. Thus, secondary data re-extensively used in this study. The raw secondary data are modified. To some extent for the study purpose. Mostly, data are collected from balance sheet, income statement and profit and loss account of Dabur Nepal Private Limited. Some others necessary data used in this study, have also been supplemented from auditors general reports and various related journals in management and other publication. To some extent, necessary primary data are also collected by interviewing related Dabur Nepal managers and others personnel.

### **3.3 Data Collection Technique**

The sources of data used in this studies are basically secondary in nature. It constitutes mostly the annual reports which compress balance sheet and profit and loss account statement. Information has also been supplemented from various publications of Nepal stork Exchange Ltd. Department of Industry, Central Bureau of Statistics and Federation of Nepalese chamber of commerce and industry.

Besides these, however, primary data are also derived to some extent through observation cross sections, frequent visits and discussions with general and financial managers of the concerned companies.

### **3.4 Data Analysis Tools**

The method of analysis employed in this study consists of two types of analytical tools and technique.

- a. Financial tools
- b. Statistical tools

#### **3.4.1 Financial Tools**

The financial tools employed in this study basically represent ratio and analysis leverage analysis, EBIT-EPS analysis and others.

##### **3.4.1.1 Ratio Analysis**

Ratio analysis is the powerful tools of financial analysis: Financial ratio represent the relationship between two accounting figures, expressed mathematically. Ratio analysis is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial condition can be determined (M.Y. Khan and P.K. Jain, Op.cit P.80).

An analysis of the firm ratio is generally the first step in financial analysis. In financial analysis a ratio is used as an index or Yardstick for evaluating the financial position and performance of a firm. A ratio indicates quantitative relationship which can be in turn used to make qualitative judgments. The ratio analysis is very important tool for the credit analysis and security analysis of a firm. Ratio analysis is very useful analytical technique to raise pertinent questions on number of managerial issues VIZ. profitability of the firm, trend of management liquidity position etc.

##### **Leverage Ratio**

Leverage ratio means measures the contribution of financing by owners compared with financing provided by the out siders. They also provide some

measure of the risk of debt financing by the calculation of the leverage of fixed charges. In this study, following leverage ratios have been calculated.

a. Long term debt to equity

Long term debt to equity ratio reflects the relative claims of creditors and shareholders against the assets of the firm. It is calculated

$$D/E \text{ ratio} = \text{Long term debt} / \text{Shareholders equity}$$

b. Debt to total capital ratio

The relationship between creditors funds and owners capital can also be expressed in terms of 'debt to total capital ratio'. One approach is to relate the long term debt to the permanent capital of the firm. It is calculated as:

$$\text{Debt to total capital ratio} = \text{long term debt} / \text{permanent}$$

'Permanent capital' consists of shareholders equity as well as long term debt.

c. Total debt to total assets ratio

Total debt to total assets ration indicates that what percentage of debt capital has been used for acquiring. It is as the similar indication to some what of the D/E ratio.

$$TD/TA \text{ ratio} = \text{Total debt} / \text{total assets.}$$

d. Interest coverage ratio

This ratio is the calculated to find out the ability to meet interest obligations interest coverage ratio is one of the most conventional coverage ratios which measure the relationship between what is normally available from operation of the firm and the claims of the out siders. It is used to test firms debt servicing capacity. It is calculated by.

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

## Liquidity Ratio

Liquidity ratio measure the ability of the firm to meet its current obligations. In this study, current ratio is calculated by liquidity ratio. The current ratio of a firm indicates the extent of liquidity or lack of it to the firm. It is computed by dividing current assets by current liabilities.

Current ratio = current assets/current liabilities

## Profitability ratio

Profitability ratios give answers how effectively the firm is being managed. In this study following profitability ratios are calculated:

### a. Profit margin on sales

The profit margin on sale is computed by dividing net income after taxes by sales.

Profit margin on sales = net income/sales

### b. Return on total assets

It is also known as 'return on investment' or ROI on before tax basis.

Return on total assets = EBIT/Total assets

While on after tax basis, because of the tax shelter benefit of interest, we add the after tax interest expenses to net income for the numerator of the ratio.

Return on total assets ratio  $\frac{\text{Net income} + \text{interest} (1 - t)}{\text{Total Assets}}$

### c. Return on net worth (ordinary shareholder's equity)

The ratio of net profit after taxes to net worth measures the rate of return on the stockholders investment. It is computed by dividing EAT with net worth. Here net worth represents only equity capital.

## EBIT-EPS analysis

EBIT-EPS analysis is one of the widely used financial tools that is used to examine the effect of financial leverage by analysis the relationship between earning before interest and tax (EBIT) and earning per share (EPS) Essentially the method involves the comparison of alternatives methods of financing under various assumptions as the EBIT (J.C. Van Horne OP.cit. P. 654). In this study, following format is used for EBIT-EPS analyses.

Profit before interest, tax, depreciation and provisions .....	
Less: Interest .....	
Profit before tax depreciation and provisions .....	
Less: Depreciation .....	
Profit before tax and	
Provisions .....	
Less: Provision for housing .....	
Less: Provision for bonus .....	
Net operating margin (Profit before tax) .....	
Less: Tax @ 20% .....	
Earning Available to common	
Shares holders (EACS) .....	
No. of common share holders (n) .....	
EPS = EACS/N .....	

Other calculated financial tools.

) Degree of financial leverage

### 3.4.2 Statistical Tools

Many statistical tools are often employed in the analysis and interpretation of data as an aid to management and managerial decisions. Following statistical tools are used more systematically in this chapter.

#### ) Correlation analysis

Other tools are also used as and when they are felt necessary.

Definition of the terms.

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

#### 1. Long term debt

The long term debt refers to the debt used by the company for a long period of time. Here long term means the time of one year and above.

#### 2. Total debt

The debt implies that capital which is total of all short term and long term loan.

#### 3. Total assets

It is the total of current and fixed assets.

#### 4. Capital employed

Capital employed may be defined as non current liabilities plus owner's equity.

#### 5. Share holder's equity

It includes common shareholders equity plus preference shareholder equity.

## **CHAPTER - IV**

### **PRESENTATION AND ANALYSIS OF DATA**

This chapter, the effort has been made to analyze impact of capital structure on risk and return of Dabur Nepal Pvt. Ltd. For this the major variables as well as the variables affecting capital structure are considered for analysis. The analysis of data consists of organizing, tabulating and assessing financial and statistical result. In this chapter first proceeds with financial analysis by tabulation and then, at last with stastical analysis. The financial analysis is done through presentation of data and calculating various financial ratios, which reflects the relationship variables affecting capital structure used for analysis are short-term debt long term debt total debt equity capital, Earning Before Interest and Tax (EBIT), interest Earning Per Share (EPS), sales total assets and other related variables are also used if they necessary.

#### **4.1 Analysis of Capital Structure of Dabur Nepal Pvt. Ltd. (DNPL)**

Capital structure analysis refers to the composition of source of funds. Source of funds composed of short and long term debt, preference share capital and equity share capital. Many theories developed in the field of financial management to explain about the capital structure of the firm. In chapter - II some of the important theories of capital structure have been reviewed. Dabur Nepal is not listed in Nepal stock exchange. It has not issue its share to the public here researcher mainly concerned to revaluated capital structure composition and its impact on risk and return of Dabur Nepal Pvt. Ltd.

Study of capital structure is concerned with analyzing the capital composition of the company. Capital is the permanent source of financing of the firms, representing primarily by long term debt, preferred stock and common stock. But short term loan also to be show to revealed clear picture of the capital structure of the firm. The capital composition of the Dabur Nepal Pvt. Ltd. Is presented in table 4.1.

**Table 4.1**  
**Capital Structure Composition of Dabur Nepal Pvt. Ltd.**

Rs. in Thousand

Year	Equity		Short term loan		Long term loan		Total
	Rs.	%	Rs.	%	Rs.	%	
2059/60	589945	34.91	512034	30.30	587700	34.78	1689679
2060/61	672137	37.11	731238	40.38	407700	22.51	1811075
2061/62	757701	55.55	584845	42.88	21492	1.58	1364038
2062/63	769686	55.33	600484	43.17	20789	1.49	1390959
2063/64	775382	56.25	553467	40.2	49620	3.55	1378469
Average	712970.2	47.83	596413.6	39.386	217460.2	12.78	1526844

Source: Annual report of Dabur Nepal Pvt. Ltd.

From the table 4.1 it is revealed that the capital structure is composed by short term loan long term loan and shareholder equity. In year 059/60 total capital is Rs. 1689 million. Where 30.30% is short term loan, 34.78% is long term loan and 34.91% is equity in that amount. In the last year of study (063/64) total capital is Rs. 1526 million. This amount is composed by short term loan long term loan and equity 40.2%, 3.55% and 56.25% respectively. In average total capital is 1526 million.

This figure is graphically presented in figure 4.1

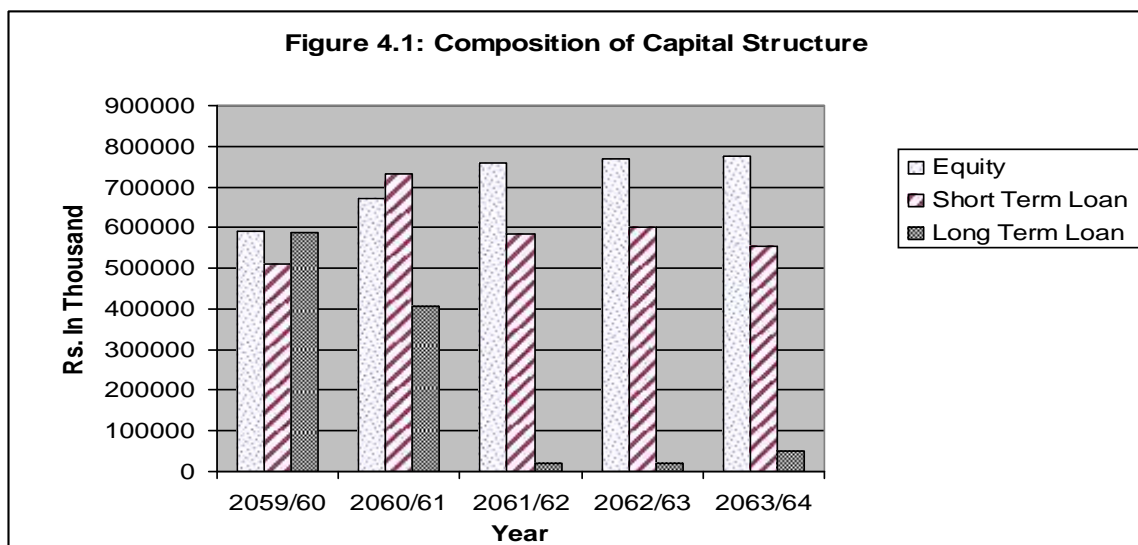


Figure 4.1 show that share holder equity is slightly increasing year by year short term debt is in fluctuating tern around the average long term debt is decreasing.

#### 4.1.1 Analysis of Debt Composition

Short term and long term debt is the sources of funds. Company should pay interest for the use of debt capital. Debenture holders do not get the voting right or can not control of firm directly. They are creditors of the firm not the owners. But there are some advantages of debt financing. Under M-M Model the value of the firm increases which debt. Under this assumption value of the firm is the maximum at 100 percent debt financing. Companies can get the advantage of tax shield benefit from debt financing. The comparative position of short and long-term debt of Dabur Nepal Pvt. Ltd. is presented in the table 4.2.

**Table 4.2**  
**Composition of Debt**

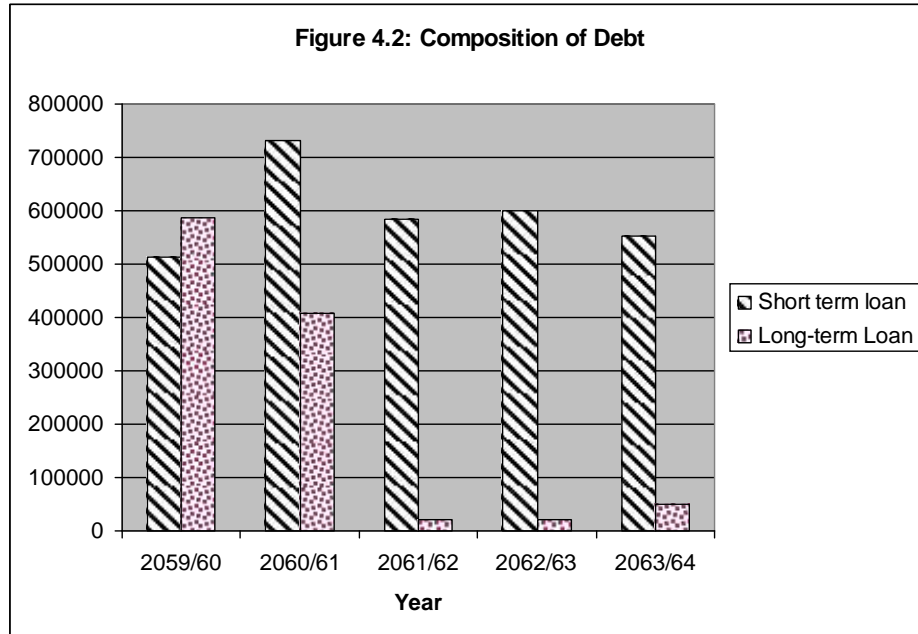
Rs. In Thousand

Year	Short term loan	Percentage (%)	Long-term Loan	Percentage (%)	Total debt
2059/60	512034	46.6	587700	53.44	1099734
2060/61	731238	64.2	407700	35.80	1138938
2061/62	584845	96.5	21492	3.54	606337
2062/63	600484	96.7	20789	3.35	621273
2063/64	553467	91.8	49620	8.2	603087
Average	596413.6	79.2	217460.2	20.87	813873.8

Source: Annual report of Dabur Nepal Pvt. Ltd.

The average long term debt of Dabur Nepal Pvt. Ltd. is about 217 million which is less than the long term debt of fiscal year 2059/60 and 2060/61 and is greater than the long term debt of reaming sampled years. In last year (2063/64) of the study 91.8% short term and only 8.2% is long term loan in

average 79.2% is consist of short term and 20.87% is long term loan in total loan composition. Generally more short term loan is consider risky in the context of solvency of the company.



From the figure 4.2 it is clear that the long term debt is major proportion up to 2059/60 later year it is decrease. Short term loan is around average in the study period.

#### 4.2 Ratio Analysis

The important financial tool for analysis of capital structure ratio analysis. It is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial condition can be determined. Financial ratios can be classified in to liquidity ratio, profitability ratio leverage or capital structure ratio, turnover ratio or activity ratio etc. But our study based on following ratios that are directly or indirectly related to the capital structure of the firm. The detailed analysis of these ratios has been done in the following pages.

#### 4.2.1 Analysis of Debt and Shareholders Equity

The ratio of borrowed funds and owner's capital is a popular measure of the long-term financial solvency of firm. In usual, the debt/equity ratio is the ratio of long-term debt to total equity. Here debt equity ratio is computed by simply dividing total debt of the firm by shareholders equity. Where total debt includes short-term debt plus long-term debt and shareholders equity includes equity share capital and past-accumulated profits only because our samples company don't use preference share capital.

The D/E ratio is an important tool for the financial analysis to appraise the financial structure of a firm. This ratio reflects the relative contribution of owners and creditors share of financing.

It also reflects that the creditors claim is higher against the assets of firm or not. The low D/E ratio has just opposite implications. Thus in table 4.3 these ratios are presented in quantitative term to show the movement of the trend from fiscal year 059/60 to 063/64 of Dabur Nepal Pvt. Ltd.

**Table 4.3**  
**Total Debt to Equity of Dabur Nepal Pvt. Ltd.**

Rs. In Thousand

Year	Total debt	Shareholder equity	Ratio	Change %
2059/60	1099734	589945	1.86	-
2060/61	1138938	672137	1.69	(17.0)
2061/62	606337	757701	0.80	(89.0)
2062/63	621273	769686	0.81	1.0
2063/64	603087	775382	0.78	(3.0)
Average	813873.8	712970.2	1.19	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

The calculated in table 4.3 clarifies that the Dabur Nepal Pvt. Ltd. has decreasing trend of D/E ratio. Fiscal year 2059/60 debt to equity ratio is 1.86:1

which is highest among five years. After words D/E ratio is 1.69:1, 0.80:1, 0.81:1, and 0.78:1 in fiscal year 2060/61, 2061/62, 2062/63 and 2063/64 respectively. The above calculated ratios shows that the ratio is 2061/62, 2062/63 and 2063/64 are less than average ratio and debt to equity ratio of fiscal year 2059/60 and 2060/61 are greater than of average ratio. The greater ratio implies that the higher claim of creditors then the owner of the company. The average D/E ratio of Dabur Nepal Pvt. Ltd. Is 1.19:1, which implies that the claim of creditors stronger than that of owner of the company. Therefore it was suffering by the higher amount of interest on debt in previous two years of the study period. But this ratio has decreasing trend. The D/E ratio of last year 2063/64 is 0.78:1 only, which can be assumed as minimum level. Generally 1:1 debt to shareholders equity can be considered as an appropriate level of debt equity ratio. Beside these, no doubt those both high and low debt/equity ratios are not desirable what is needed is the ratio which strive a propor balance between expected return against increased risk.

#### **4.2.2 Analysis of Debt to Capital Employed Ratio**

The relationship between debt and capital employed has also important role to maintain an optimum capital structure. This relationship tells about the proportion of debt share holders found in the capital structure. Especially this relationship point out the contribution of debt in the capital employed by the company. Where debt denotes all these debts and capital employed represents all debt and shareholders fund of the company. Again share holders fund is composed of share capital, reserve and surplus or accumulated profit of the firm. We can analyze this relationship by simply dividing total debt by the capital employed of the company. This ratio is also known as debt to permanent capital ratio. Where permanent capital means total assets minus current liabilities, same as capital employed.

The debt to capital employed ratio presented in the table 4.4.

**Table 4.4**  
**Debt to Capital Employed Ratio**

Rs. In Thousand

Year	Total debt	Capital Employed	Ratio	Change %
2059/60	1099734	1689679	0.65	-
2060/61	1138938	1811075	0.63	(2.0)
2061/62	606337	1364038	0.44	(19.0)
2062/63	621273	1390959	0.45	1.0
2063/64	603087	1378469	0.44	(1.0)
Average	813873.8	1526844	0.52	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

According to the table 4.4 ratio of debt to capital employed in year 2059/60 is 65%. It means about 65% contribution of debt exists in the capital employed or the remaining portion i.e. 35% is contributed by shareholders fund. Similarly, this ratio decreased to 63% and 44% in year 2060/61 and 2061/62 respectively. Debt to capital employed ratio is in decreasing trend. It has decreased to 45% and 44% in year 2062/63 and 2063/64 respectively. The average ratio of debt to capital employed of Dabur Nepal Pvt. Ltd. is 52%.

The greater proportion of debt shows the greater claim of debt holders in to the form. The higher ratio indicates the higher burden of company to pay interest expenses. It may be a cause of decreasing responsibilities from the side of owners. The interventions of creditors may increase. From the above analysis, it is found that Dabur Nepal Pvt. Ltd. has moderate debt to capital employed ratio. This implies that borrowed fund i.e. debt has satisfactory proportion. In the permanent capital of Dabur Nepal Pvt. Ltd.

#### **4.2.3 Analysis of Long-term Debt to Total Debt Ratio**

The relationship between long term debt and total debt has decisive impact on the financial structure of the company. This relationship implies that what percentage of total debt covered by long-term debt of the firm. Generally firms

use short-term debt as well as long-term debt. Current liabilities and provision are also occurred during the operation of the firm. The relationship between the long term debt and total debt can be analyzed by simply dividing long-term debt by the total debt of the firm. Where total debt includes all types of borrowed fund and current liabilities and provisions. In this relationship the role of current liabilities is very important. If the firm uses short term loans in the large amount and occur current liabilities and provision in the large amount, the percentage of long-term debt on total debt will be low and vice versa. Higher the ratio of long term debt to total debt indicates the higher claim of long-term debt holders up on the total debt and lower the ratio indicates the higher portion of short-term loan and current liabilities in the total debt of the firm. The higher or lower the amount of short-term loan and current liabilities is depends up on the liquidity of the firm. The comparison will be clear from the table 4.5.

**Table 4.5**  
**Long-term Debt to Total Debt Ratio**

Rs. In Thousand

Year	Long term debt	Total Debt	Ratio	Change %
2059/60	587700	1099734	0.53	-
2060/61	407700	1138938	0.36	(17.0)
2061/62	21492	606337	0.04	(32.0)
2062/63	20789	621273	0.03	(1.0)
2063/64	49620	603087	0.08	(5.0)
Average	217460.2	813873.8	0.21	

Source: Annual report of Dabur Nepal Pvt. Ltd.

The calculation shows that the ratio of long-term debt to total debt is 0.53 in fiscal year 2059/60. This means the contribution of long-term debt in total debt is 53% and the remaining portion is contributed by the current liabilities. This ratio of Dabur Nepal Pvt. Ltd. decreased to 8% in fiscal year 2063/64. The company has 21% of average long term debt to total debt. The total debt to

long term debt ratio of the company is decreasing trend. Composition of long-term and short-term debt in the beginning year of analysis is satisfactory but trend of increasing current liabilities should not good message for shareholders. Increasing trend of current liabilities makes current obligation high. It may bring difficult condition for day to day operation of the company.

#### 4.2.4 Long-term Debt to Total Capital Ratio

This ratio is computed by simply dividing the long-term debt of the firm by its permanent capital permanent capital here represents the equity capital plus long-term debt. The long-term debt to permanent capital ratios of Dabur Nepal Pvt. Ltd. is calculated and presented in table 4.6.

**Table 4.6**  
**Long-term Debt to Total Capital of Dabur Nepal Pvt. Ltd.**

Rs. In Thousand

Year	Long term debt	Permanent Capital	Ratio Long-term debt % of permanent	Change
2059/60	587700	1177645	49.90%	-
2060/61	407700	1079837	37.76%	(12.15%)
2061/62	21492	779193	2.76%	(35.00%)
2062/63	20789	790475	2.63%	(0.13%)
2063/64	49620	825002	6.01%	(3.38%)
Average			19.81%	

Source: Annual report of Dabur Nepal Pvt. Ltd.

Above table shows debt-equity ratio in fiscal year 2059/60 the long-term debt to total capital ratio is 49.90% and 37.76%. 2.76%, 2.63% and 6.01% in fiscal year 2060/61, 2061/62, 2062/63 and 2063/64 respectively. In fiscal year 2059/60 long-term debt to total capital ratio is higher and lowest ratio in fiscal year 2062/63 i.e. 2.63%. An arbitrary rule is that long-term debt should not be more than 67% of the permanent capital. However it depends at the

characteristics of an industry. But here, the average ratio of long-term debt to total capital is low according this rule.

#### 4.2.5 Liquidity Ratio

It is essential for a firm to be able to meet its obligations as they become due. Liquidity ratio measure the firm's ability to meet current obligations. Both high liquidity and lack of liquidity are not good for business. The current ratios are calculated Dabur Nepal Pvt. Ltd. taking five years balance sheet and presented in table 4.7.

**Table 4.7**  
**Current Ratio of Dabur Nepal Pvt. Ltd.**

Rs. In Thousand				
Year	Current Assets	Current Liabilities	Current Ratio	Change
2059/60	1289065	442998	2.91:1	-
2060/61	1434.166	467668	3.07:1	0.16
2061/62	1460852	880619	1.66:1	(1.41)
2062/63	1434291	957829	1.50:1	(0.16)
2063/64	1523394	1174968	1.30:1	(0.20)
Average			2.08:1	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

The above table clarifies that Dabur Nepal Pvt. Ltd. has fluctuating trend of current ratio. During the study period it is ranging from minimum 1.30:1 in fiscal year 2063/64 to maximum 3.07:1 in fiscal year 2060/61. The trend of this current ratio is decreasing from 2059-2064. The average current ratio is 2.08:1 as a conventional rule, a current ratio of 2:1 is considered to satisfactory. Thus from above analysis current ratio of Dabur Nepal Pvt. Ltd. is good except of fiscal year 2061/62, 2062/63 and 2063/64. That means the company is in the balance condition of liquidity and it can pay its short term bill in time from this point of view.

#### **4.2.6 Interest Coverage Ratio**

This ratio is also known as 'time interest earned ratio'. This ratio measure the debt serving capacity of a firm is so far as fixed interest on long-term loan is concerned. Interest coverage ratio is designed to relate the interest charge of a firm to its ability to service them. It is simply the ratio of earning before interest and taxes for a particular reporting period to the amount of interest charges of a period. This ratio measures the extent to which earning can be decline without resultant financial embarrassment to the firm because of inability to meet annual interest costs. It should not that this ratio use the concept of net profit before tax because interest is tax deductible. So the tax is calculated after paying interest on loan. This ratio as the name suggests. Show how many times the interest changes are covered by EBIT out of which they will be paid. In other words it indicated the extent to which a fall in EBIT is tolerable in the sense that the ability of the firm to serve its debt would not adversely affected.

In order to analyze the debt serving capacity of a firm. It is necessary to analyze the EBIT and interest, which can be analyzed through interest coverage ratio. From the point of view of creditors, the larger the coverage ratio, the greater the ability to offer assured payment of interest to the creditors. The interest coverage ratio is useful to measure long-term debt serving capacity of the firm. In this way it is better to use fixed interest changes of firms which is payable way it is better to use fixed interest change of firm, which is payable due to the use of long term debt. But the limited data provided by the concerned companies invite a problem. As a result it is unable to classify the amount of interest relating to short-term and long-term loans. So the analysis interest coverage ratio is based on the total amount should pay by the firm whether that is relating to long term as well as short term loan.

This interest coverage ratio of Dabur Nepal Pvt. Ltd. is calculated and presented in table 4.8 to measure the Dabur Nepal Pvt. Ltd's debt servicing capacity.

**Table 4.8**  
**Interest Coverage Ratio of Dabur Nepal Pvt. Ltd.**

Rs. In thousand

Year	EBIT	Interest	Interest Coverage ratio	Change %
2059/60	318766	128467	2.48:1	-
2060/61	264217	121533	2.17:1	(31.0%)
2061/62	245194	85475	2.87:1	70.0%
2062/63	123649	63169	1.96:1	(91.0%)
2063/64	99034	73406	1.35:1	(61.0%)
Average	210172	94410	2.17:1	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

The computed interest coverage ratio of Dabur Nepal Pvt. Ltd. In above table shows that the debt servicing capacity of the company is in consistent level. It is 2.48:1 in fiscal year 2059/60 and 1.35:1 in last year 2063/64. The average ratio is 2.17:1 which means even if Dabur Nepal Pvt. Ltd.'s EBT declines to the present level the net profit available for servicing the interest on loan would still be equivalent to the claims of the creditors.

#### **4.2.7 Profit Margin on Sales**

Net profit margin on sales is computed simply by dividing net profit after tax amount of sales. Net profit is obtained by subtracting operating expenses and income tax from the gross profit. This ratio of profit margin on sales indicates the firm's capacity of with stand in adverse economic conditions. A firm with as high profit margin ratio would be in an advantageous position to service in the face of falling selling prices, rising costs of production or declining demand for the product and vice-versa. Thus, to analyze the position of profit margin on sales of Dabur Nepal Pvt. Ltd. the table 4.9 is presented.

**Table 4.9****Profit Margin on Sales of Dabur Nepal Pvt. Ltd.**

Rs. in Thousand.

Year	EAT	Sales	Profit on Sales %	Change %
2059/60	164299	2764962	5.94%	-
2060/61	115084	2699505	4.26%	(1.68%)
2061/62	121273	3017702	4.02%	(0.24)
2062/63	45343	2728790	1.66%	(2.36)
2063/64	12128	3227023	0.37%	(1.29)
Average			3.25%	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

From the observation that profit margin ratio of Dabur Nepal Pvt. Ltd. is the highest in fiscal year 2059/60 among five years operation period as earning after tax is 5.94% of sales revenue. This ratio is 0.37% in fiscal year 2063/64 which is the lowest of all five years ratios. To comparing profit margin on sales in not the satisfactory level because of the standard is 15. The average profit on sales is only 3.25% Due to the various reasons this margin is decreasing in low rate. The company should be concern to it and need to more effort to earn more profit to grow the company on long lasting. However the sales figure is increasing but profit margin is in opposite side. It means it's operating and other cost is increasing which reduces the profit margin.

**4.2.8 Return on Total Assets**

Return on total assets is computed simply by dividing earning after tax by total assets on after tax basis. But earning after tax (EAT) represents only residual in come for shareholders. Therefore it is conceptually unsound to use EAT to calculate return on total assets. Thus, here after tax interest expenses is added to EAT for the numerator of the ratio, this ratio measures the profitability of the total funds/investments of Dabur Nepal Pvt. Ltd. Thus, the ratio of return on

total assets is calculated by taking five years balance sheet and profit and loss account of Dabur Nepal Pvt. Ltd. as given in table 4.10.

**Table 4.10**  
**Return on Total Assets of Dabur Nepal Pvt. Ltd.**

Rs. in Thousand

Year	EAT+I	Total Assets	Return on Total Assets %	Changes %
2059/60	292766	2130783	13.74%	-
2060/61	236617	2278743	10.38%	(3.36%)
2061/62	206748	2238618	9.24%	(1.14%)
2062/63	108512	2344257	4.63%	(4.61%)
2063/64	85534	2550424	3.35%	(1.28%)
Average			8.27%	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

From table 4.10 it obvious that percentage return on total assets of Dabur Nepal Pvt. Ltd. is ranging from minimum of 3.35% is fiscal year 2063/64 to maximum of 13.74% in fiscal year 2059/60. The trend of ROA is decreasing and on average 8.27%. The company is gaining moderate ROA ratio that means it is utilizing satisfactory use of its assets in operating the business. in first three years of the studied period the percentage of ROA is greater than average and in last two years it is slightly low the average which shows it's efficiency to utilizing the total assets is decreasing. However the overall efficiency is still good.

#### **4.2.9 Return on Net Worth (Common Share Holder)**

The return on net worth ratio is the measure of productivity of share holders funds. It carries the relationship of return to shareholders equity. The shareholders equity includes common share capital, preference share capital and reserves and surplus. But Dabur Nepal Pvt. Ltd. Has not issued preference share capital. Thus for Dabur Nepal Pvt. Ltd. Both ratio of return on net worth and return on common shareholder's equity are the same. The ratio is regarded

as very important measure because it reflects exclusively the return on the owners. As the common shareholders are the residual owners in the real sense of the word, they assume the maximum risk, and have the highest stake in company. So, to judge whether the firm has earned a satisfactory return for its common shareholders (equity share holders) or not, table 4.11 is constructed.

**Table 4.11**  
**Return on Net Worth (Common Share holders Equity) of Dabur Nepal Pvt. Ltd.**

Rs. in Thousand

Year	EAT	Net Worth	Return on Net Worth (%)	Change %
2059/60	164299	589945	27.85%	-
2060/61	115084	672137	17.12%	(10.73%)
2061/62	121273	757701	16.01%	(1.12%)
2062/63	45343	769686	5.89%	(10.11%)
2063/64	12128	775390	1.56%	(4.33%)
Average			13.68%	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

From the study of above table it is clear that the trend of return on net worth is decreasing year to year from 2059/60 to 2063/64. The return on net worth is 27.85% in 2059/60 fiscal year while only 1.56% in last year 2063/64. In last two years it is low than average that is 13.68%. The average return on net worth 13.68% is good but its decreasing trend would discourage shareholders to get the higher return which they are getting from last few years.

The ratio indicates how well the firm has used the resources of the common shareholders original owners of the company. It gives the satisfaction or dissatisfaction to the shareholders about company performance and their management. So to provide maximum satisfaction to its owners the company should earn more return on net worth.

#### 4.2.10 Analysis of Total Debt to Total Assets Ratio

The relationship between creditors fund and owners capital can also be the expressed in terms of another leverage ratio. This is debt to total capital ratio. This type of capital structure ratio is a variant of debt equity ratio. This can be calculated in different way. One approach of calculating the debt to capital ratio is to relate the total debt to total assets of the firm. The ratio of total debt to total assets generally called the debt ratio, measure the percentage of total fund provided by coeditors. Total debt includes current liabilities and all loans. This debt to total assets ratio can be calculated by simples dividing total debt by the total assets of the firm. Total assets include all types of assets. In constrict to the creditors performance for the low debt ratio, the owner may seek high gearing. If the debt ratio is too high, there is a danger for encouraging irresponsibility on the part of the owners. The stake of owner can become so small that speculative activity, if it is successful, will yield a substantial percentage return to the owner, if the venture is unsuccessful, however the only, a moderate loss is incurred by the owners because their investment is small. The debt ratio or total debt to total assets ratio on DNPL calculated on below. And the calculated ratio can be present in table 4.12 and interpret in the following way.

**Table 4.12**  
**Total Debt to Total Assets Ratio**

Rs. in Thousand

Year	Total debt	Total assets	Ratio	Change %
2059/60	1099734	2130783	0.52	-
2060/61	1138938	2278743	0.50	(2.0)
2061/62	606337	2238618	0.27	(23.0)
2062/63	621273	2344257	0.27	0
2063/64	603087	2550424	0.24	(2.0)
Average			0.36	

Source: Annual report of Dabur Nepal Pvt. Ltd.

The above calculated ratios of DNPL shows that the decreasing trend of total debt to total assets on the fiscal year 2057/58 it is 0.52 which implies that the claim of the creditors in the assets of the company is 52% and the remaining 48% only is the claim of shareholders. And in the fiscal year 2060/61, 2061/62, 2062/63 and 2063/64 the 50%, 27%, 27% and 24% of total assets is financed by outsider fund respectively. The company has the 36% average debt ratio where in three fiscal year 2061/62, 2062/63 and 2063/64 the total debt to total assets ratio is below the average ratio. And in the remain sampled fiscal year the ratio is greater than the average ratio of the company. This ratio indicates that the creditors claim on total assets of the company is lower than the owners claim.

#### **4.2.11 Analysis of EBT to EBIT Ratio**

The relationship between EBT and EBIT shows the decisive impact of interest burden in the earning before tax. Earning before interest and tax (EBIT) is the operating profit of the company from which the company has to pay for creditors as interest and government as tax. Interest amount is the expenses of the company and also the income of creditors. If the creditors income i.e. interest is high the owners income will be low and vice versa. So, the company should reduce one's return in order to increase the return of others.

According to the above description, we can find out the burden of interest expenses of the company by using the ratio of EBT to EBIT. We can calculate the ratio of EBT to EBIT simply dividing EBT by EBIT of the company. This ratio measures the interest burden of the company. If the ratio of EBT to EBIT is high the burden of interest expenses will be low and vice versa. The higher ratio increase of positive EBT and EBIT is preferable. It shows that the burden of interest is low. Similarly, the lower the ratio indicates the higher burden of interest to the company, which can not assumed as good signals. The loan funds are the fixed expenses to the creditors. The lower ratio of EBT to EBIT indicates the higher expenses to the fixed income securities of creditors.

Therefore company should try to reduce to expenses on interest to maximize the return of owners.

**Table 4.13**  
**EBT to EBIT Ratio**

Rs. in Thousand

Year	EBT	EBIT	Ratio	Change %
2059/60	222572	318766	69.82	-
2060/61	166882	264217	63.16	(6.66)
2061/62	186805	245194	76.19	13.03
2062/63	70737	123649	57.21	(18.98)
2063/64	29975	99034	30.26	(26.95)
Average			59.32	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

The EBT to EBIT ratio of DNPL in fiscal year 2059/60 is 69.82% which implies that 69.82% of EBIT of DNPL transferred as EBT: the remaining portion i.e. 30% of EBIT constituted as interest amount. Likewise, the ratio of EBT to EBIT of DNPL increased to 76.19% in fiscal year 2061/62. This information the decreased in interest expenses from 30% to 24% from fiscal year 2059/60 to 2061/62 of EBIT. This is going towards a preferable signal for the company. Again the EBT to EBIT ratio is 63.16%, 57.21% and 30.26% in fiscal year 2060/61, 2062/63 and 2063/64 respectively. The average EBT to EBIT ratio of DNPL is 59.32%. the average ratio of EBT to EBIT of DNPL greater than the ratios of fiscal year 2062/63 and 2063/64 and less then the ratio of remaining sample years.

#### **4.2.12 Analysis of EAT to Total Debt Ratio**

The EAT to total debt ratio indicates the relationship between the net profit of the company and creditors funds of the company. Company borrow funds from the creditors to finance on assets. On behalf of using that fund, company has to pay certain amount as interest to the creditors of the company. If the creditors

fund is greater than the owner's capital, the company has to bear the larger burden of interest expenses. If the company does not use borrowed fund, it has not any burden to pay interest. But the financing without any debt fund also can be assumed as good. Because the proper mix of owners capital and creditors fund results an appropriate capital structure of the firm. So firms use debt capital and bear the interest expenses. In this way the EAT to total debt ratio can be helpful to measure the debt removing capacity from the profit of the company.

A higher ratio of EAT to total debt indicates the strong debt removing capacity of the firm and vice versa. If company want to remove or reduce the borrowed fund from its existing capital structure, it has to be paid the loan for to the creditors from its net profit. Therefore if the firm has higher net profit the ratio will also be high and indicates the higher capacity of removing or reducing the debt capital. So this ratio is an important tool of analyzing relationship between EAT to total debt. The calculation of ratio of EAT to total debt of DNPL has been presented in the P table 4.14.

**Table 4.14**  
**Presentation of EAT to Total Debt Ratio**

Rs. In thousand

Year	EAT	Total Debt	Ratio	Change %
2059/60	164299	1099734	14.94	-
2060/61	115084	1138938	10.10	(4.84)
2061/62	121273	606337	20.00	9.90
2062/63	45343	621273	7.30	(12.70)
2063/64	12128	603087	2.01	(5.29)
Average			10.87	

Source: Annual report of Dabur Nepal Pvt. Ltd.

The EAT to total debt ratio of DNPL is 14.94% in fiscal year 2059/60. This shows that the DNPL can reduce it's total debt by 14.94% from it's earning

after tax in this year. The ratio decreased to 10.10% in fiscal year 2060/61. Again the ratio is 20% in 2061/62, 7.30% in 2062/63 and 2.01% in 2063/64. The average EAT to total debt ratio constitutes 10.87% which implies that the company can remove its total debt by 10.87% from its net profit on an average. This ratio does not show the strong debt removing capacity of DNPL. The average ratio of EAT to total debt is less than the ratio of fiscal year 2059/60 and 2061/62 and greater than the ratio of remaining sampled year. The higher debt employing condition of DNPL may be because of lower EAT to total debt ratio.

### **4.3 Analysis of Leverage**

Leverage refers to the use of special force of power to have more than normal results from a particular action. It also refers to as effectiveness power, or ability. But in the area of finance the term leverage has special measuring. It is used to describe the firm's ability to use fixed cost funds to magnify the return to its owners or shareholders. So, leverage refers to the employment of an asset or fund for which the firm pays the fixed costs or fixed return or it can be defined as the firm's ability to use fixed cost assets or funds to magnify the return to its owners.

Leverage refers to the often-favourable condition of having a stable element of cost support a wide range of profit values. It implies that results a large change in income. It may be maintained that the leverage may occur in varying degrees. The higher the degree of leverage, the higher is the risk. i.e. the possibility of higher rate of return to the shareholders (Munankarmi First Edition:122).

There are three types of leverage, operating leverage, financial leverage and combined leverage. The measurement of leverage are based on the functional relationship between the certain income statement items. Where operating leverage is the function of fixed cost, contribution margin and sales volume financial leverage is the relationship between EBIT and EBT and combined

leverage is the combined effect of operating leverage and financial leverage. The operating leverage indicates the impact of changes sales on operating income and financial leverage exist when the capital structure of the firm comprises debt capital. So, financial leverage is the relevant issue of this study. The financial leverage is related to the capital structure of the firm. Therefore only about the financial leverage is explained in this section.

#### **4.3.1 Analysis of Financial Leverage**

The use of fixed charges source of funds, such as debt and preference capital along with the owner's equity in the capital structure, is described as financial leverage. Financial leverage exists when the capital structure of the firm comprises debt or funds from other sources carrying fixed charges. Debt capital carries some fixed charges i.e. interest. Financial leverage explains the relationship between earning before interest and taxes and net profit of the company. As such, with the existence of fixed charge leverage, a change in operating profit (EBIT) leads to the large change in earning before taxes (EBT). If the firm does not use fixed charges bearing securities, a change in EBIT will be accompanied by a similar change in EPS. The degree of financial leverage measure a proportionate change in EPS as a result of given charge in EBIT. Thus, degree of financial leverage is the relationship between operating profit and interest charges.

Debt ratio, debt to equity ratio and interest coverage ratio are the main measure of the financial leverage. These ratios are already explained in the previous ratio analysis section of this study. In this section, the degree of financial leverage is explained below.

Degree of financial leverage can be calculated by using either EBIT and EBT or EBIT and EPS. In this analysis the first one is taken in to account. Because of tax policies are changeable in Nepal. So, for the comparative analysis and uniformity, degree of financial leverage has been calculated by EBIT divided

by EBT. The comparative degree of financial leverage of DNPL can be presented in the following table 4.15.

**Table 4.15**  
**Presentation of Degree of Financial Leverage**

Rs. In Thousand

Year	EBIT	EBT	D.F.L.	Charge
2059/60	318766	222572	1.43	-
2060/61	264217	166882	1.58	0.15
2061/62	245194	186805	1.31	(0.27)
2062/63	123649	70737	1.75	0.44
2063/64	99034	29975	3.30	1.55
Average			1.87	

Source: Annual Report of Dabur Nepal Pvt. Ltd.

The trend of DFL of DNPL reveals that it has fluctuating trend. The degree of financial leverage of DNPL in fiscal year 2059/60 is 1.43 which implies that one percent change in EBIT leads to one hundred forty three percent change in EBT. The DFL of DNPL increase to 1.58 increased by 15% in fiscal year 2060/61 and but it decreases to 1.31 times in fiscal year 2061/62 but it has increased 1.75 times in fiscal year 2062/63 again increased 3.30 times in fiscal year 2063/64. Whereas the average financial risk for the DNPL is 1.87.

#### **4.4 Correlation Analysis**

The correlation co-efficient is denoted by 'r' and indicates the direction of relationship between variables. In other words, correlation is the relationship between (or among) two or more variables (only one variable dependent and one or more variables independent). Correlation analysis is defined as the statistical technique which measure the degree of relationship (or association) between among the variables. Correlation analysis does not tell any thing about cause and effect relationship. There are three types of correlation: simple partial and multiple. But our concern is only the simple correlation. A method

of measuring correlation is called Pearson's coefficient of correlation. In this analysis, the correlation coefficients between earning after tax (EAT) and total debt, debt ratio and ROE, D/E ratio and ROE, and D/E ratio and ROA are analyzed.

#### 4.4.1 Correlation between Total Debt and Earning After Tax (EAT)

Total debt is a source of financing other than equity capital of the company. And earning after tax (EAT) i.e. net profit is the income available for share holders of the company. It is an actual earning earned by a company for actual shareholders after payment of the interest and tax. If the earning of the company is high the earning per share will also be high. The relationship between total debt and earning after tax (EAT) has been analyzed by the Karl Pearson's correlation coefficient formula. Researcher try to measure where increase or decrease in total debt effect in earning after tax or not. The calculated correlation coefficient has been shown in the following table 4.17.

**Table 4.16**  
**Correlation between total debt and Earning After Tax (EAT)**

Rs. In Thousand

Year	EAT	Total Debt
2059/60	164299	1099734
2060/61	115084	1138938
2061/62	121273	606337
2062/63	45343	621273
2063/64	12128	603087

Correlation coefficient = 0.69

See Calculation in Appendix I.

The correlation between earning after tax and total debt of DNPL is 0.69. This figure shows that there is positive correlation between these variables. This value or r is not vary close to than 1. So we can conclude that the total debt and

EAT of DNPL has moderate positive correlation between these variable 0.69 implies only 69% on earning after tax dependent on total debt.

#### 4.4.2 Correlation between Debt Equity Ratio and ROE

Debt to equity ratio measure the proportion of borrowed funds in comparison to shareholders equity. Where return on equity indicates the profit percentage available for shareholders. Here, correlation of D/E ratio and ROE is calculated and presented in table 4.18.

**Table 4.17**  
**Correlation between Debt Equity Ratio and ROE**

Rs. In Thousand

Year	D/E Ratio	ROE
2059/60	1.86	0.27
2060/61	1.69	0.17
2061/62	0.80	0.16
2062/63	0.81	0.06
2063/64	0.78	0.02

Correlation Coefficient = 0.8

See Calculation in Appendix II.

As table 4.18 correlation coefficient between D/E ratio ROE revealed 0.8. Where 1 is aught most positive correlation. Calculated figure 0.8 is near about the perfect positive correlation. That means D/E ratio and ROE are positively correlated. Any change in D/E ratio can affect the ROE of the company.

#### 4.4.3 Correlation between Debt Ratio and ROE

Deb ratio is the relationship between creditors fund and owners capital. It measures the percentage of total funds provided by creditors. Asset includes all types of assets. Here, debt ratio is obtained by dividing total debt by total asset. Return on equity (ROE) is the percentage of net profit or earning after tax in

comparison of shareholders equity. The correlation between debt ratio and EOE is presented in table 4.19 as under.

**Table 4.18**  
**Correlation between Debt ratio and ROE**

Rs. In Thousand

Year	Debt ratio	ROE
2059/60	0.52	0.27
2060/61	0.50	0.17
2061/62	0.27	0.16
2062/63	0.27	0.06
2063/64	0.24	0.02
Correlation Coefficient		0.82

See Calculation in Appendix III.

From the table 4.19 the correlation coefficient of debt ratio and ROE is revealed 0.82 where 1 is the perfect positive correlation. The calculated figure is near about perfect positive correlation. That means the debt about perfect positive correlation. That means the debt ratio and return on equity has positive correlation i.e. increase or decrease in debt ratio can affect the return on equity.

#### **4.5 Major Findings**

Based on the data provided by the concerned company, the following major findings can be drawn capital structure composition:

Capital structure is composed by equity, short term loan and longterm loan. Average total Capital of the analysis period is Rs. 1526 million out of this total capital 47.83% is equity 39.38% is short-term loan and 12.78% is long term loan.

## **Debt Composition**

Average total debt is Rs. 813 million in the analysis period. Where short term debt is 596 million (79.2%) and long-term debt is 217 million 20.8% short term loan is in increasing and long-term loan is in decreasing trend.

## **Important ratios**

Total debt total asset ratio 0.36 or 36% in average of analysis period. Total debt to equity ratio is 1.19. Deb to capital employed ratio is 0.52 and long-term debt to total debt ratio is 0.21 in average of analysis period.

Some other ratio analysis has been examined. according to these analysis liquidity ratio is 2.08:1 in average. Average interest coverage ratio is 2.17:1 profit margin on sales is 3.25%. Return on total assets is recorded 8.27% return on shareholder equity is 13.68% and EBT to EBIT ratio 59.32% average of 5 years period.

## **Financial Leverage**

Financial leverage is 1.87 in average in the analysis period. The trend is fluctuating.

## **Correlation analysis**

Correlation between EAT and total debt 0.69 likewise. Correlation between debt ratio and ROE 0.82. Again correlation between debt equity ratio and ROE is 0.8.

## **CHAPTER - V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

The intent of this study is to analyze the capital structure and its impact on risk and return of DNPL. The brief introduction of this study has been already presented in the first chapter. In the second chapter the available literature about the capital structure management has been reviewed. Research methodology has explained in the third chapter and the available data have been presented and analyzed in the fourth chapter.

This is a last chapter of the study, in this concluding chapter, an attempt has been made first to make present summary of the study, then conclusion of the analysis and some recommendation which are useful to take corrective action from the side of DNPL.

#### **5.1 Summary**

This study capital structure decision of Dabur Nepal private limited and its impact on risk and return has been prepared to fulfill the requirements of Master's of Business Studies (MBS) mainly this study is based on the data provided by the concerned company. While starting this study, one main issue has taken, is there any impact on return by decision of capital structure. To justify this statement some objectives of the study has been made. To fulfill the mentioned objectives various tools have been used and analysis has been made. To conclude this study, the whole study has been divided into five chapters of different aspects. The summary of the study can be presented in the following paragraphs.

First chapter provides the brief introduction of this study. Dabur Nepal Pvt. Ltd. Is a leading company in this sector. That is so why this company is chosen to study. Statement of problems, objective of the study, significance and limitation of the study is highlighted in this chapter. The effort has been made to analyze impact of capital structure on risk and return of Dabur Nepal Pvt.

Ltd. For this the major variables as well as the variables affecting capital structure are considered for analysis.

The literature related to the capital structure decision and its impact on risk and return have been reviewed in second chapter. In this chapter, the theoretical review and empirical review. i.e. review of related studies has been presented separately. From the theoretical review section, we may take advantages of conceptual foundation of capital structure decision as well as reliability of different aspects of its impact on risk and return. Similarly, by reviewing some previous studies, many inputs can be taken also take advantage from this section. From this chapter we can conclude that, all the theories of capital structure are not properly applicable in the DNPL context and almost all previous studies conducted by previous master's level students has almost some conclusion. Third chapter explains about the methodology of this study. Mostly the secondary data are used in this study. This study covers the five years data of DNPL. Descriptive and analytical research design has been used in this study. Financial as well as statistical tools are used. This includes capital structure analysis, ratio analysis, leverage analysis, correlation analysis and trend analysis.

Data are presented and analyzed the fourth chapter, data analysis tools mentioned in the third chapter is used to analyze the data in this chapter. Various ratios that are related to the capital structure of the firm, correlation analysis between two variables leverage analysis etc. have been used to evaluate the capital structure. Even though different capital approaches can not be used because of the unavailability of market value data. For this chapter we can conclude the DNPL fifth chapter is the concluding chapter. This chapter explains about the overall conclusion of this study. Summary, conclusion and recommendation are presented separately.

## **5.2 Conclusion**

Following conclusion have been drawn as the basis of analysis.

## **Composition of Capital Structure**

Capital structure composed by short-term loan, long-term loan and share holders equity. In year 2059/60 total capital is 1689 million where 30.30% is short-term loan 34.78% is long term loan and 34.91% is equity in that amount. In the last year of study 2063/64 total capital is 1378 million this amount is composed by short term loan, long term loan and equity 40.2%, 3.55% and 56.25% respectively. In average total capital 1526 million. The long term debt is in drastically decreasing trends. Short term debt is in fluctuating but around the average. Share holders equity is slightly-increasing year by year. Long term loan is consider good for profitability and financially safe than short-term loan but DNPL has left only a nominal long term loan in source of capital composition of debt.

Long-term debt is major proportion up to 2059/60. It is decreased drastically in later year. Short-term loan is around average in the study period. The average long-term debt of DNPL is 217 million. In year 2062/63 96.7% short-term and only 3.35% is long-term loan. In average 79.2 is consist of short-term and 20.8 is long-term loan in total loan composition. Generally, more short-term loan is consider risky in the context of solvency of the company. Composition of long-term and short-term debt in the beginning year of analysis is satisfactory. Increasing trend of current liabilities makes current obligation high.

## **Total Debt to Total Assets Ratio**

The total debt of total assets ratios of DNPL shows the fluctuating trend on the fiscal year 2059/60 52% which implies that the claim of the creditors in the assets of the company is 52% and the remaining 48% only is the claim of share holder's. And in the fiscal year 2060/61, 2061/62, 2062/63 and 2063/64 the 50%, 27%, 27% and 24% of total assets is financed by outsiders fund respectively. The company has the 36% average debt ratio. The ratio indicates that the creditors claim on total assets of the company is lower than the owners claim.

### **Trend of Debt to Equity**

Dabar Nepal Pvt. Ltd. has decreasing trend of D/E/ ratio in fiscal year 2059/60 debt to equity ratio is 1.86:1 which is highest among five years. After wards D/E ratio is 1.69:1, 0.80:1, 0.81:1 and 0.78:1 is fiscal year 2060/61, 2061/62, 2062/63 and 2063/64 respectively. The average D/E ratio of DNPL is 1.19:1 which implies that the claim of creditors is stronger than that of owners. But the D/E ratio of fiscal year 2062/63 is 0.81: only which can be assumed on satisfactory level. Generally 1:1 debt to shareholders equity can be considered as an appropriate level of debt-equity ratio.

### **Debt to Capital Employed Ratio**

Ratio of debt to capital employed in fiscal year 2059/60 is 0.65 it means about 65% contribution of debt exists in the capital employed or the remaining portion i.e. about 35% is contributed by shareholders fund. Similarly this ratio decreased to 63% and 44% in fiscal year 2060/61 and 2061/62 respectively. Debt of capital employed ratio is in decreasing trend. It has 45% and 44% in fiscal year 2062/63 and 2063/64 respectively. The average ratio of debt to capital employed of DNPL is 52%.

The greater proportion of debt shows the greater claim of debt holders into the firm. The higher ratio indicates the higher burden of company to pay interest expenses. The interventions of creditors may increase. From the above analysis, it is found that DNPL has moderate debt to capital employed ratio. This implies that burrowed fund is in satisfactory proportion in the permanent capital of DNPL.

### **Interest Coverage Ratio**

The interest coverage ratio of Dabar Nepal Pvt. Ltd. is 2.48:1 in fiscal year 2059/60 and 1.35:1 in 2063/64. The average ratio is 2.17:1. It shows that the debt servicing capacity of the company is in profit margin on sales consistent level.

From the observation of profit margin ratio of Dabar Nepal Pvt. Ltd. it is highest in fiscal year 2059/60 among five years operation period as earning after tax is 5.94% of sales revenue. This ratio is 0.37% in fiscal year 2063/64 which is the lowest of all five years ratios. This profit margin on sales is not the satisfactory level because of the standard is 15. The average profit on sales is only 3.25% how ever the sales figure is increasing every year but profit margin is in opposite side. It means its operating and other cost is increasing which reduces the profit margin.

### **Return on total Assets**

Return on total assets of Dabar Nepal Pvt. Ltd. is in range from minimum of 3.35% in fiscal year 2063/64 to maximum of 13.74% in fiscal year 2059/60. The trend of ROA is decreasing and on average 8.27% the company is gaining moderate ROA ratio that means it is utilizing satisfactory use of its assets in operating the business.

### **Return on Net Worth**

Return on net worth is decreasing year to year from 2059/60 to 2063/64. The return on net worth is 27.85% in 2059/60 fiscal year while only 1.56% in last year 2063/64. The average return on net worth 13.68 is good but it's decreasing trend would discourage the shareholders.

### **Liquidity ratio**

Both high liquidity and lack of liquidity are not good fro business. Dabar Nepal Pvt. Ltd. has used more long term debt in previous year is comparison to short term debt. During the study period current ratio is ranging from minimum 1.30:1 in fiscal year 2063/64 to maximum 3.07:1 is fiscal year 2060/61. The trend of this current ratio is decreasing from 2059 to 2063 the average current ratio is 2.08:1 as conventional rule, a current ratio of 2:1 is considered to be satisfactory. The company is in the balance condition of liquidity.

### **EAT to Total Debt Ratio**

The EAT to total debt ratio of DNPL 14.94% in fiscal year 2059/60 again, 10.10% in 2060/61 20% in 2061/62, 7.30% in 2062/63 and 2.01% in 2063/04. The average EAT to total debt ratio constitutes 10.87%. This implies that the company can remove its total debt by 10.87% from its net profit on an average. This ratio does not show the strong debt removing capacity of DNPL.

### **Financial Leverage**

The trend of DFL of DNPL reveals that it has fluctuating trend. The degree of financial leverage of DNPL in fiscal year 2059/60 1.43 again 1.58 in 2060/61, 1.31 in 2061/62, 1.75 in 2062/63 and 3.30 in 2063/64. Where as the average financial risk for the DNPL is 1.87 which implies that one percent change in DFL leads to one hundred eighty-seven percent change in EBT.

### **Correlations**

In this study, the correlation co-efficient between earning after tax (EAT) and total debt, debt ratio and ROE, D/E ratio and ROE are analyzed. Correlation between total debt and net profit (EAT):- The correlation between EAT and total debt of DNPL is revealed 0.69. Where it is the perfect positive correlation. Therefore calculated figure 0.69 can be considered only moderately correlated. Correlation between those variables 0.9 implies only 69% on earning after tax dependent on total debt.

Correlation between debt ratio and ROE:- the correlation coefficient of debt ratio and RoE is 0.82. The calculated figure is near about perfect position correlation.

Correlation between debt equity ratio and ROE: Correlation coefficient between D/E ratio and ROE is revealed 0.8. This figure is near about the perfect positive correlation. That means D/E ratio and ROE are positively correlated.

### **5.3 Recommendations**

Based up on the above mentioned issued and constraints some recommendation have been made. These guidelines would help in taking prompt decision in relation to the capital structure management for justifying the constraints these recommendations are presented below.

#### **Maintain Debt Service Capacity**

Debt service capacity of DNPL is found weak in this way DNPL is suggested to maintain sound debt service capacity. This is possible by reducing the interest expenses. So, recommended to DNPL for maintain sound debt service capacity.

#### **Maintain Debt Removing Capacity**

The debt removing capacity of DNPL is low. This capacity is low due to the lower earning of the firm in relation to the total debt of the company. To maintain the sound debt removing capacity of this firm; it is necessary to either reduce the amount of debt (mainly short-term debt) or increase the value to earning after taxes. So DNPL recommended maintaining the sound debt removing capacity of the company to maintain believes of the creditors as well as its owners.

#### **Reduce Expenditure**

From the analysis of profit margin on sales the profit margin has declined drastically in the final year of the study period. Thus the company should control the administration expenses.

DNPL is bearing high amount of interest expenses. As a result, the return of the firm is not satisfactory. So, the company is recommended to minimize interest expenses by using cheaper debt to increases EBT.

### **Improve in Operating Efficiency and Earning Power**

It is seemed from the analysis of return on total assets that though the company is performing well however it is not satisfactory. The return on total assets is declining year by year. Thus it is suggested to improve the operating efficiency, which would ultimately result in better earning power of the company.

### **Well Planned Capital Structure**

It is found that DNPL is unable to plan it's capital structure properly because debt equity ratio of DNPL is not satisfactory. Due to this reason, EPS may not be maximize so, we recommended to DNPL to plan and maintained capital structure by analyzing the possible alternative financial plans.

After the overall study of the capital structure of the firm, financial condition of the company is satisfactory. The earning position of the company is still good. It is better to conduct the further research and to modernize the company with the latest plant with modern technology, which could reduce the labour cost. Save time and provides the product with better quality and more in quantity in less time.

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## APPENDICES

### APPENDIX - I

#### Calculation of Correlation EAT and Total Debt

EAT $X_1$	Total Debt $X_2$	$X_1^2$	$X_2^2$	$X_1 \cdot X_2$
164	1099	26896	1207801	180236
115	1139	13225	1297321	130985
121	606	14641	367236	73326
45	621	2025	385641	27945
12	603	144	363609	7236
$\Sigma X_1 = 457$	$\Sigma X_2 = 4068$	$\Sigma X_1^2 = 56931$	$\Sigma X_2^2 = 3621608$	$\Sigma X_1 \cdot X_2 = 419728$

Let, us denote EAT to  $X_1$  and Total Debt to  $X_2$

Now,

$$r = \frac{n \Sigma X_1 \cdot X_2 - (\Sigma X_1)(\Sigma X_2)}{\sqrt{n \Sigma X_1^2 - (\Sigma X_1)^2} \cdot \sqrt{n \Sigma X_2^2 - (\Sigma X_2)^2}}$$

Here,  $n = 5$   $\Sigma X_1 = 457$ ,  $\Sigma X_2 = 4068$ ,  $\Sigma X_1^2 = 56931$ ,  $\Sigma X_2^2 = 3621608$ ,

$$\Sigma X_1 \cdot X_2 = 419728$$

$r = ?$

$$r = \frac{5 \times 419728 - (457 \times 4068)}{\sqrt{5 \times 56931 - (457)^2} \sqrt{5 \times 3621608 - (4068)^2}}$$

$$= \frac{239564}{275.33 \times 1248.76}$$

$$= \frac{239564}{343821.09}$$

$$r = 0.69$$

## APPENDIX - II

### Correlation between debt equity ratio and ROE

D/E ratio $X_1$	ROE $X_2$	$X_1^2$	$X_2^2$	$X_1 \cdot X_2$
1.86	0.27	3.459	0.073	0.502
1.69	0.17	2.856	0.030	0.287
0.80	0.16	0.64	0.0256	0.128
0.81	0.06	0.656	0.0036	0.048
0.78	0.02	0.6084	0.0004	0.0156
$X_1$ 5.94	$X_2$ 0.68	$X_1^2$ 8.2194	$X_2^2$ 0.1326	$X_1 \cdot X_2$ 0.9806

Let, us denote D/E ratio to  $X_1$  and ROE  $X_2$

Now,

$$r = \frac{n \sum X_1 \cdot X_2 - (\sum X_1) \cdot (\sum X_2)}{\sqrt{n \sum X_1^2 - (\sum X_1)^2} \cdot \sqrt{n \sum X_2^2 - (\sum X_2)^2}}$$

$$r = \frac{5 \times 0.9806 - (5.94 \times 0.68)}{\sqrt{5 \times 8.2194 - (5.94)^2} \sqrt{5 \times 0.1326 - (0.68)^2}}$$

$$= \frac{0.864}{2.411 \times 0.4483}$$

$$= \frac{0.864}{1.08}$$

$$r = 0.8$$

### APPENDIX - III

#### Correlation between debt ratio and ROE

Debt ratio $X_1$	ROE $X_2$	$X_1^2$	$X_2^2$	$X_1 \cdot X_2$
0.52	0.27	0.2704	0.0729	0.1404
0.50	0.17	0.25	0.0289	0.085
0.27	0.16	0.0729	0.0256	0.0432
0.27	0.06	0.0729	0.0036	0.0162
0.24	0.02	0.0576	0.0004	0.0048
$\Sigma X_1$ 1.8	$\Sigma X_2$ 0.68	$\Sigma X_1^2$ 0.7238	$\Sigma X_2^2$ 0.1314	$\Sigma X_1 \cdot X_2$ 0.2896

Let, us denote debt ratio to  $X_1$  and ROE  $X_2$

Now,

$$r = \frac{n \Sigma X_1 \cdot X_2 - (\Sigma X_1) \cdot (\Sigma X_2)}{\sqrt{n \Sigma X_1^2 - (\Sigma X_1)^2} \cdot \sqrt{n \Sigma X_2^2 - (\Sigma X_2)^2}}$$

$$r = \frac{5 \times 0.2896 - 1.8 \times 0.68}{\sqrt{5 \times 0.7238 - (1.8)^2} \sqrt{5 \times 0.1314 - (0.68)^2}}$$

$$= \frac{0.224}{0.615 \times 0.441}$$

$$= \frac{0.224}{0.271}$$

$$r = 0.82$$