

**Capital Structure of Commercial Banks in Nepal**  
**(Comparative Study of Listed Commercial Banks)**

**A Thesis**

**Submitted By:**

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**A Thesis**

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Tribhuvan University

## **RECOMMENDATION**

This is to certify that the thesis

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A Comparative Study of Listed Commercial Banks of Nepal**

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# DECLARATION

I hereby declare that the work reported in this thesis entitled “*Capital Structure of Commercial Banks in Nepal: A Comparative Study of Listed Commercial Banks*” submitted to the Hari Khetan Multiple Campus, Birgunj is my original work done in the form of partial fulfillment of the requirements for the Master Degree in Business Studies under the supervision and guidance of Dr. Alok Dutta, Lecturer of Hari Khetan Multiple Campus, Birgunj.

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## Table of Content

<b>Content</b>	<b>Page No</b>
Recommendations	
Viva Voice Sheet	
Declaration	
Acknowledgement	
Table of Content	
List of Tables	
List of Charts	
Abbreviations	

### Chapter I

#### INTRODUCTION

1.1	Background of the Study.....	1
1.2	Focus of the Study .....	3
1.2.1	Nabil Bank Ltd .....	3
1.2.2	Himalayan Bank Ltd.....	4
1.2.3	Nepal Investment Bank Ltd.....	4
1.3	Statement of Problem.....	5
1.4	Objective of the study .....	6
1.5	Significance of the study .....	7
1.6	Limitation of the study.....	7
1.7	Organization of the study .....	7

**Chapter II**  
**REVIEW OF LITERATURE**

2.1	Conceptual Framework.....	9
2.1.1	Financial Structure.....	10
2.1.2	Approaches to Capital Structure.....	14
2.1.3	Traditional Approach .....	17
2.1.4	Net Income Approach .....	20
2.1.5	Net Operating Income Approach (NOI).....	22
2.1.6	Modigliani-Miller Approach (MM approach).....	25
2.1.7	Financial Leverage.....	30
2.2	Review of Basel Committee.....	30
2.3	Review of Articles.....	32
2.4	Review of Previous Thesis.....	36
2.5	Research Gap .....	38

**Chapter-III**  
**RESEARCH METHODOLOGY**

3.1	Introduction.....	28
3.2	Research Design .....	28
3.3	Sources and Nature of Data.....	28
3.4	Population and Sample.....	29
3.5	Data Analysis Tools.....	41
3.5.1	Financial Tools .....	41
3.5.1.1	Ratio Analysis.....	41
3.5.1.2	Profitability Ratio.....	46
3.6	Statistical Tools .....	47
3.6.1	Correlation Coefficient (r).....	47
3.6.2	Probable Error (P.E).....	48
3.6.3	Standard Deviation.....	49

**Chapter IV**  
**DATA PRESENTATION AND ANALYSIS**

4.1	Capital Structure Analysis.....	51
4.1.1	Debt Equity Ratio .....	51
4.1.2	Long Term Debt to Capital Employed Ratio .....	54
4.1.3	Long Term Debt to Total Debt Ratio .....	57
4.1.4	Interest Coverage Ratio.....	60
4.1.5	Return on Share Holders' Equity.....	63
4.1.6	Earning Per Share (EPS) Analysis.....	66
4.1.7	Dividend Per Share (DPS) Analysis .....	68
4.2	Analysis of Financial Leverage .....	70
4.3	Correlation Analysis .....	72
4.4	Simple Regression Analysis.....	73
4.5	Major Findings.....	74

**Chapter V**  
**SUMMARY, CONCLUSION AND RECOMMENDATION**

5.1	Summary.....	77
5.2	Conclusions .....	78
5.3	Recommendations.....	79

**Bibliography**

**Annexes**



## **List of Tables**

<b>Table No</b>	<b>Table's Name</b>	<b>Page No</b>
1	Comparative Debt – Equity Ratio	52
2	Comparative Long Term Debt to Capital Employed Ratio	55
3	Comparative Long Term Debt to Total Debt	58
4	Interest Coverage ratio	61
5	Return on Shareholder's Equity	64
6	Comparative Earnings Per Share	66
7	Comparative Dividend per Share	68
8	Degree of Financial Leverage	70
9	Correlation Coefficient	72
10	Regression Analysis	73

## List of Figures

<b>Figure No</b>	<b>Figure's Name</b>	<b>Page No</b>
1	The effect of Leverage on Cost of Capital under Traditional Theory	20
2	The effect of leverage on cost of capital	22
3	The effect of leverage on Total market value of the firm	22
4	The effect of leverage on cost of capital	24
5	The effect of leverage on value of the firm	24
6	The cost of capital under the MM hypothesis	27
7	Behavior of $k$ , $k_d$ and $k_s$ under M-M hypothesis	29
8	Comparative Debt – Equity Ratio	53
9	Comparative Long Term Debt to Capital Employed Ratio	56
10	Comparative Long Term Debt to Total Debt	59
11	Interest Coverage ratio	62
12	Return on Shareholder's Equity	66
13	Comparative Earnings Per Share	67
14	Comparative Dividend per Share	69
15	Degree of Financial Leverage	71

## **ABBREVIATIONS**

CRR	Cash Reserve Ratio
C.V.	Coefficient of Variation
DDC	District Development Charge
EBIT	Earning Before Interest Tax
EPS	Earning Per Share
Etc	Etcetera
F.Y	Fiscal Year
i.e	That is
Ltd.	Limited
MBA	Masters in Business Administration
MBS	Masters in Business Studies
NBL	Nepal Bank Limited
NIBL	Nepal Investment Bank Limited
NABIL	Nabil Bank Ltd.
HBL	Himalayan Bank Ltd.
NRB	Nepal Rastra Bank
NTC	Nepal Telecom
P.E	Probable Error
PEs	Public Enterprises
ROA	Return on Assets
S.D.	Standard Deviation
SWOT	Strength, Weakness, Opportunity and Threat
T.U.	Tribhuvan University
US\$	United States Dollar
VAT	Value Added Tax

**Questionnaire:**

1. What is the proportion of debt & equity capital in your bank's capital structure?
2. Do you think your Bank's cost of capital is optimal?
3. How is the debt servicing capacity of your Bank?
4. How is the impact of capital structure on profitability of your bank?
5. What is the ratio of the dividend & interest that your shareholders & debenture holders are receiving /paying since seven years?
6. Do you think that the policy adopted by your bank need reform?
7. What are your bank's future wealth –creating investment?
8. What are the sectors in which your bank invests at most and at least?
9. What type of deposit schemes are launched by your bank?
10. What types of loan and advances schemes are launched by your bank?
11. Is any investment been done for public welfare purpose and how?
12. How the Capital Structure is managed by your bank?
13. How do the external environmental factors affect the capital positioning of your bank?
14. What are the main difficulties and obstacles encountered during formulation of bank's capital structure?

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

The development of any country can't be imagined without economic activities. The development of the banking system is one of the grounds of economic development. So, to solve problems relating to economic development, development of banking system is necessary. The growth of banking in Nepal is not so long. Some crude banking operations were in practice even in ancient times. In Nepal goldsmiths and moneylenders was the ancestors of bank. During the tenure of Ranodip Singh, an office named "Tejarath Adda" was established in the year 1933 B.S. in Kathmandu valley, which played a vital role in the banking system. It helped the public by providing credit facilities at a very low rate. It provided credit especially on collateral of gold and silver. It ran successfully for four decades. Hence, the establishment of Tejarath Adda could be regarded as the foundation stone of banking in Nepal.

After the establishment of Nepal Bank Ltd., in the year 1938 A.D., under "Nepal Bank Act, 1938 A.D."(1994 B.S.), an institutional banking system came into existence. Thus in today's modern economic world, banking sector is considered as economic backbone of any developing country. Every banking function has strong impact on overall economic growth. Basically, banking is considering as the reservoir for deposits whether it is small or large scaled. Further the banks play a vital role in channelizing the deposits to productive outputs like investment on capital sectors or other productive areas. But today's world doesn't accept banking as just a venue for deposits or withdrawal so new banking concept has emerged out as commercial banks.

The commercial banks are established to improve people's economic welfare and facility, to provide loan to the agriculture, industry and commerce and to offer banking services to the people and the country. In Nepal there are many commercial banks and they are Nepal Investment Bank Ltd., Standard Chartered Bank Ltd., Nabil

Bank Ltd., Himalayan Bank Ltd., Laxmi Bank Ltd., Lumbini Bank Ltd., Kumari Bank Ltd., Siddhartha Bank Ltd., Nepal Credit and Commerce Bank Ltd etc which have been providing the banking service with international standard. At present, there are 26 commercial banks.

They are the intermediaries between the deficit and surplus of financial resources. In other words, these financial institutions act as an intermediary between the individuals who lend and those who borrow. Due to this extra ordinary function of commercial banks we cannot ignore its verve in the economic development in the country like ours. They collect the scattered saving of many persons, government establishments and business units and place them into productive channels. They make funds available through their lending and investing activities to borrowers, individuals, business firms and government establishments. They assist both the flows of goods and services from the government. Thus, a bank needs capital to carryout financial transaction and the nature of total capital that is required for any business is called capital structure.

In business necessary capital can be accumulated by issuing different types of securities. The company management should know what sorts of and how many securities is to be issued for the collection of total capital. In other words, capital collection denotes the composition of loan and share that is needed for any company or firm. The main sources of capital are shares, short term and long term loans. Thus, capital accumulation plays an essential role in acceleration of the economic growth of nations. But the capacity of saving in the developing country is quite low with a relatively higher marginal propensity of consumption. As a result developing countries are badly trapped into the vicious circle of poverty. The basic problem of these countries is raising the level of saving and investments. In order to collect the enough saving and put them into productive channels, financial institutions like banks are necessary.

Capital structure refers to the combination of long-term sources of funds, such as debentures, long-term debt, preference share capital and equity share capital including reserves and surpluses. In other words, it refers to the proportion of debt and equity capital. A perfect balance between debt and equity is required to ensure the trade-off between risk and return. Capital structure represents the relationship among different kinds of long-term sources of capital and their amount. A firm raises long-term capital through the issue of common shares and sometimes by preference shares. The capital structure decisions are taken by financial manager because the capital structure decision affects weighted average cost of capital (WACC), value of the firm and risk position of the firm. Therefore, a firm should try to find out the structure which minimizes the WACC and risk and maximizes the value of the firm. Thus, the optimal capital structure is the combination of debt, preferred stock and common equity that minimizes the WACC. At the capital structure where the WACC is minimized, the value of the firm is maximized. As a result, the minimum cost of capital structure is called optimal capital structure. Hence, it maximizes shareholders wealth and minimizes the firm's cost of capital.

## **1.2 Focus of the Study**

Banking in this era has a new meaning and dimension, which is now offering many extra services rather than just accepting deposits and granting loans. So, here a brief introduction of three banks is given which is useful to finish research work smoothly.

### **1.2.1 Nabil Bank Ltd**

Nabil Bank Ltd. is the first joint venture bank with Dubai Bank Limited in Nepal which was established on 12<sup>th</sup> July 1984. Its main objective is to introduce modern banking services. The bank commenced with the team of about 50 staff members and Rs. 28 million as capital. Today the Bank has established itself as the Bank of 1<sup>st</sup>

choice. It is the largest bank in terms of the network and number of branches amongst the commercial banks with a wide network of ATMs and offerings including a range of diversified service products.

### **1.2.2 Himalayan Bank Ltd (HBL)**

Himalayan Bank Ltd. was established in 1993. It was the joint venture bank promoted by a group of prominent businessmen, bankers and financial institutions with Habib Bank Limited of Pakistan. The bank possesses a healthy foreign currency deposit portfolio that provides good returns. The Bank's loan portfolio comprising of a healthy mix of diversified sectors stands at Rs. 20.18 billion, whereas the deposit portfolio of the banks stands at Rs. 31.84 billion which is one of the biggest portfolio of the country.

### **1.2.3 Nepal Investment Bank Ltd (NIBL)**

Nepal Investment Bank Ltd. (NIBL) was previously known as Nepal Indosuez Bank Ltd. It was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital) was Credit Agricole Indosuez, a subsidiary of one the largest banking groups in the world. This owns 50% of its structure by a group of companies, 15% by Rastriya Banijya Bank, 15% by Rastriya Beema Sansthan and 20% by general public. Its main objectives are:

- ) To develop a customer oriented service culture with special emphasis on customer care and convenience.
- ) To develop innovative products and services that attracts our targeted customers and market segments.
- ) To continue to develop products and services that reduces their cost of funds.
- ) To maintain a high quality assets portfolio to achieve strong and sustainable returns and to continuously build shareholders' value.
- ) To explore new avenues for growth and profitability.



This thesis focuses on the capital structure of Nabil Bank Ltd, HBL and NIBL and focuses on other aspects such as management, profit functions, banks performance etc. Therefore, this thesis tries to evaluate various aspects of capital structure as earning per share of bank, cost of capital, share holder's equity etc.

### **1.3 Statement of the Problems**

Nepal is facing numerous problems due to lack of capital. Merchants, moneylenders and goldsmiths are the ancestors of modern banks. They conduct some banking activities. They used to extend loans to the people on the collateral of land, house and precious metals which worsen the economic condition of the poor people. Due to unskilled labor and capital Nepal remains in extreme poverty. So, a financial institutions, like banks need capital to carryout financial transactions. A bank can't be imagined without capital. A bank collects capital. The sources from which capital is collected i.e. by issuing shares or by taking loans are the main sources of bank capital. The capital can be classified into equity capital and share capital. The capital received from shares, which is invested in the company by the shareholders, is legally considered the property of the bank.

Capital structure means the nature or the structure of total capital that is required for any business. The total sum of equity capital and borrowed capital is known as capital structure. The main sources of capital are common shares, long term debt, preference share capital, debentures and retained earnings. We know that major portion of the capital comprises of owners fund and creditors fund. The owners expect dividend and appreciation in the share price whereas creditors expect interest and return of the fund at the mentioned time. So the capital structure of the firm is important factor in determining the success of the firms. The firm is successful if it can optimize its capital structure and the capital is optimal when the overall cost of capital of the firm is minimized and profitability is maximized.

A great deal of controversy has been developed between financial theorists and corporate manager on whether the capital structure affects the value of the firm or not.

So, there is number of capital structure theories proposed by different personalities. Traditionalist argues that capital structure is relevant factor for valuation of the firm. They can be maximized by adopting optimal capital structure which contended proper mix of debt and equity. On the other hand, Modigliani and Miller argue that in perfect capital market, capital structure does not affect value of the firm.

According to the NOI approach, net operating income is capitalized at an overall capitalization rate to obtain the total market value of the firm. In other words, cost of equity increases linearly as debt increases in the capital structure. The use of debt does not affect the value of the firm as the benefit of debt capital is just offset by the increase in the cost of equity. Likewise, M-M hypothesis states that there is no level optimal capital structure. They support the NOI approach by providing logically consistent behavioral justifications in its favor. Between the two extreme views, we have the middle position of intermediate version advocated by the traditional writers. Thus, there exists an optimum capital structure at which the cost of capital is low. But the logic of this view does not seem very sound. The M-M position changes when corporate taxes are assumed.

Therefore, the problems that are identified help to answer the following questions:

- ) What are the capital structures used by the commercial banks?
- ) What is the debt servicing capacity of the commercial banks?
- ) What is the relationship between Debt equity ratio, Long term debt, Debt ratio, Return on Assets and Return on Equity?
- ) What is the linear relationship of ROE and Dividend Payout ratio with Debt equity ratio of sample banks?

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

The main objective of the study is to analyze capital structures of Nabil Bank Ltd, HBL and NIBL. Other objectives are listed below:

- ) To examine the capital structure of sampled four banks in different time period.

- ) To examine the impact of capital structure on profitability.
- ) To analyze effect of capital structure on ROE and Dividend payout Ratio.

### **1.5 Significance of the Study**

The study has been done in reference to the periodical performance of Nabil Bank Ltd, HBL and NIBL. The study has tried to focus on capital structure of the bank so the study could be significant in revising the bank capital structure for past six years at a glance. The study could be beneficial to investors, financial manager and future researchers.

### **1.6 Limitations of the Study**

This study is based on secondary data extracted from financial reports and published sources of the bank. Though there are many financial institutions they play significant role in economic development by accepting deposits and granting loans. This thesis has been initiated with view of tracing out different aspect of capital structure of the bank. The study covers seven years data. The recommendation of the study focuses on the accuracy of data. But whole study based on comparative study of three leading banks. Due to inaccessibility of sufficient information, lack of time and money constraints limit this study.

### **1.7 Organization of the Study**

The entire study is divided into five chapters. Brief information of what each chapter contains is given below.

## **Chapter I**

The introduction chapter contains general background of bank. It also discusses about focus and significance of study, statement of problem, objectives of study, limitation of the study and organization of study.

## **Chapter II**

This chapter deals with the review of literature which consists conceptual framework, the concept of commercial banks, its roles, and a review of previous thesis too.

## **Chapter III**

It is concerned with research methodology. It includes research design, sources of data, population and sample and method of analysis.

## **Chapter IV**

This is the heart of the chapter as it is concerned with presentation and analysis of relevant data and information. In order to find out the true picture of the capital structure based on annual reports of sample banks and NRB reports. Thus, this chapter is concerned with the findings of the analysis.

## **Chapter V**

This chapter summarizes the overall picture of the study, conclusion and recommendation for improvement in the future.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

The main purpose of review of literature is to develop some expertise in one's area, to see what new contribution can be made and to receive some ideas for developing a research design. The previous studies can't be ignored because they provide the foundation to the present study. In order to accomplish the objectives of the study, the chapter includes review of relevant concepts, assumptions, books and journals as well as major findings of previous studies of the relevant field are included in precise manner. So this study intends to find the impact of theories of capital structure of commercial banks. Thus to have feedback this chapter focus on the conceptual Frame work, review of articles and review of previous thesis.

#### **2.1 Conceptual Frame Work**

Capital structure refers to the combination of long term sources of funds, such as debentures, long term debt, preference share capital and equity share capital including reserves and surplus (Pandey; 1999: 18). Capital structure represents the relationship among different kinds of long-term sources of capital and their amount. A firm raises long-term capital through the issue of common shares, sometimes accompanied by preference shares. Retained earnings or surpluses too form a part of capital structure. Different kinds of external financing i.e. preference shares as well as the borrowed capital carry fixed return to the investors. According to Erza Soloman, the optimum capital structure and its implications as: optimum leverage can be defined as that mix of debt and equity which will maximize the market value of the claims and ownership interest represented on the credit side of the balance sheet (Solomon; 1969: 132).

The optimal capital structure is the combination of debt, preferred stock and common equity that minimizes the weighted average cost of capital. In other words, it maximizes

the value of the company and the wealth of its owners and minimizes the company's cost of capital which in turn increases its ability to create investment

opportunities. It increases the economy's rate of investment and growth by increasing the firm's opportunity to engage in future wealth –creating investment.

Capital Structure refers to the relationship among various long term forms of financing which includes mainly three types securities i.e. equity shares, preference shares and debenture (Pandey; 1998: 258-259). It is sometimes known as financial plan, refers to the composition of long term sources of funds such as debentures, long term debt, preference share capital and equity share capital including reserves and surplus.

#### 2.1.1 Financial Structure

Financial structure refers to the composition of all sources and amount of funds collected to use or invest in business. In other words, financial structure refers to the 'Capital and Liabilities side of Balance Sheet'. Therefore, it includes shareholder's funds, long-term loans as well as short-term loans. It is different from capital structure as capital structure includes only the long-term sources of financing while financial structure includes both long term and short-term sources of financing. Thus, a firm's capital structure is only a part of its financial structure.

#### Features of Optimal Capital Structure

The optimal capital structure is the combination of debt and equity that maximizes the price of the firm's stock. It maximizes shareholders wealth and minimizes the firm's cost of capital. There are also some other features of optimal capital structure, which are as follows:

**1. Return:** The capital structure of the company should be most advantageous. Subject to other considerations, it should generate maximum returns to the shareholders without additional cost to them.

**2. Risk:** Optimal capital structure should be less risky. The use of excessive debt threatens the solvency of the company. Company should use debt to that extent up to which debt does not add significant risk, otherwise its use should be avoided.

**3. Flexibility:** The capital structure should be flexible. Flexibility in capital structure helps to grab market opportunity as company can raise required funds whenever it is needed for profitable investment opportunities. It also helps to reduce costs i.e. cost of debt and preferred stock when fund raised from debt and preferred stock are no more required in the business.

**4. Capacity:** The capital structure should be determined within the debt capacity of the company and this capacity should not be exceeded. The debt capacity of a company depends on its ability to generate future cash flows. It should have enough cash to pay creditors' fixed charges and principal sum.

**5. Control:** Control power is the one of the most concerned part for the management. Management always wants to maintain control over the firm. The capital structure should involve minimum risk of loss of control of the company. Issue of excess equity shares to new investors may bring threats to the control by existing manager.

### **Factors Affecting Capital Structure / Financial Structure Decisions**

The factors affecting capital structure decisions while designing the optimal capital structure decisions are as follows:

**1. Sales stability and growth rate:** A firm whose sales are relatively stable can use more debt and incur higher fixed charges than a company with unstable sales. As far as growth rate is concerned, other things remaining the same, faster-growing firms

must rely more heavily on external capital. Thus, rapidly growing firms tend to use somewhat more debt than slower growing companies.

- 2. Management attitudes:** Since no one can prove that one capital structure will lead to higher stock prices than another management can exercise its own

judgment about the proper capital structure. Some management tends to be more conservative than others, and thus use less debt than the average firm in their industry, whereas aggressive managements use more debt in the quest for higher profits.

- 3. Lender attitudes:** Lender attitudes frequently influence capital structure decisions. In the majority of cases, the corporation discusses its capital structure with lenders and rating agencies and gives much weight to their advice. If management wants to use leverage beyond norms for the industry, lenders may be willing to accept such debt increases.

- 4. Cost of capital:** A firm should use the sources having lower cost. Component cost of capital comprises using costs and issuing costs i.e. floatation costs. Hence, floatation cost of various kinds of securities should be considered while raising funds. The cost of floating a debt is generally less than the cost of floating equity and it may persuade the management to raise debt financing.

- 5. Asset structure:** Firms whose assets are suitable as security for loans tend to use debt rather heavily. General purpose assets that can be used by many businesses make good collateral, whereas special purpose assets do not. Thus, real estate companies are usually highly leveraged, whereas companies involved in technological research are not.

- 6. Operating leverage:** firms having lower degree of operating leverage can take higher degree of financial risk and use more debt to increase profit. Interaction of operating



and financial leverage determines the overall effect of a change in sales on operating income and net cash flows.

- 7. Growth rate:** Other things the same, faster-growing firms must rely more heavily on external capital. Further, the flotation costs involved in selling common stock exceed those incurred when selling debt, which encourages rapidly growing firms

to rely more heavily on debt. At the same time, however, these firms often face greater uncertainty, which tends to reduce their willingness to use debt.

- 8. Taxes:** Interest is a deductible expense, and deductions are most valuable to firms with high tax rates. Therefore, the higher a firm's tax rate, the greater the advantage of debt.

- 9. Profitability:** One often observes that firms with very high rates of return on investment use relatively little debt. Although there is no theoretical justification for this fact, one practical explanation is that very profitable firms such as Intel, Microsoft, and Coca-Cola simply do not need to do much debt financing. Their high rates of return enable them to do most of their financing with internally generated funds.

- 10. Interest rates:** At certain point of time, when the general level of interest rates is low, the use of debt financing might be more attractive; when interest rates are high, the sale of stock may become more appealing.

- 11. Flexibility:** Capital structure of a firm should be flexible according to the needs of the changing conditions. It should be possible to raise additional funds without much of difficulty and delay whenever is needed. A firm should arrange its capital structure in such a manner that it can substitute one form of financing by another.

**12. Control:** The effect of debt versus stock on a management's control position can influence capital structure. If management currently has voting control (over 50 percent of the stock) but is not in a position to buy any more stock, it may choose debt for new financings. On the other hand, management may decide to use equity if the firm's financial situation is so weak that the use of debt might subject it to serious risk of default, because if the firm goes into default, the managers will almost surely lose their jobs. However, if too little debt is used, management runs the risk of a takeover. Thus, control considerations could lead to the use of either debt or equity, because the type of capital that best protects management will vary

from situation to situation. In any event, if management is at all insecure, it will consider the control situation.

**13. Nature and size of the firm:** Nature and size of the firm influences its capital structure. A public utility concern has a different capital structure as compared to other manufacturing concerns. Public utility concerns may employ more of debt because of stability and regularity of their earnings. On the other hand, a concern which cannot provide stable earnings due to the nature of the business will have to rely mainly upon owned capital as it is very difficult for them to raise long term loans at a reasonable rate of interest, while a large company can arrange long term loans at reasonable terms and can issue equity and preference shares to the public.

**14. Period of finance:** The period during which the finances are required is an important factor to be kept in the mind while selecting an appropriate capital mix. If the finances are required for a limited period say seven years, debentures should be preferred to shares. In case funds are needed on permanent basis, equity share capital is more appropriate.

**15. Legal requirements:** The government has issued certain guidelines for the issue of shares and debentures. The legal restrictions are very significant as they lay down a framework within which capital structure decision has to be made.

### **2.1.2 Approaches to Capital Structure**

There are number of capital structure theories proposed by different individuals which also create some controversy due to different concepts of capital structure theory hold by different personalities. This is the area in which several theoretical and empirical works have been done by different personalities. Capital structure theories developed so far revolve around the question of existence of the optimal capital structure. Most of the theoretical and empirical debuts so far are revolved around the maximization of the value of firms through the judicious composition of its debt and equity fund. Net

income (NI) approach and Traditional theory of capital structure claims that there is the existence of the optimal capital structure. They contend that proper mix of debt and equity can maximize the value of the firms. Whereas, net operating income (NOI) approach and M-M hypothesis contend that capital structure is irrelevant to the value and cost of capital of the firm. According to the NOI approach, cost of equity increases linearly as debt increases in the capital structure. The use of debt does not affect the value of the firm as the benefit of debt capital is just offset by the increase in the cost of equity. (Ezra Solomon, 1969) Likewise, M-M hypothesis states that there is no level optimal capital structure. They support the NOI approach by providing logically consistent behavioral justifications in its favor. Between the two extreme views, we have the middle position of intermediate version advocated by the traditional writers.

This section is developed to discuss briefly about the theoretical concept regarding the theories of capital structure and financial leverage. All the approaches are based on some common assumptions, which are as follows:

#### **Basic Assumptions and Definitions:**

1. The two types of capital which the firms employed are long term debt and shareholders' equity.

2. There are no personal and corporate income taxes.
3. The firm's total assets remain constant. Only degree of leverage can be changed by selling debt to repurchase common stocks or selling shares to retire debt.
4. All investors have the same subjective probability distribution of expected future operating earnings (EBIT) for a given firm, that is, investors have homogeneous expectations.
5. The net operating income (EBIT) of the firm is not expected to grow or decline over time.
6. The firm's business risk is constant over time and is independent of its capital structure and financial risk.
7. The firm is expected to continue indefinitely.

In addition to above assumption, we can develop the following relations:

) Debt

$$\text{Cost of debt } (k_d) = I / B$$

$$\text{Value of Debt } (B) = I / k_d$$

Where,

I=Total interest payments.

B=Total market value of debt.

) Equity or common stock

$$\text{Cost of equity } (k_e) = D_1 / P_0 + g \quad D_1 / P_0 \quad \text{EPS} / P_0 \quad \text{NI} / S$$

Where,

$D_1$ =Expected dividend per share.

$P_0$ =Current price per share.

$g$ =Growth rate.

EPS=Earnings per share.

NI=Net income available to equity holders.

) Value of stock

$$S = NI / k_e$$

Where,

S=Value of stock

NI = Net income available to equity holders.

$k_e$  = Cost of equity

) Overall or Weighted Average cost of capital

$$k_0 = WACC = W_d * k_d + W_e * k_e$$

$$\text{Or, } k_0 = k_d (B / B+S) + k_e (S / B+S)$$

Where,

$k_0$  = Overall capitalization rate

$k_d$  = Cost of debt

$k_e$  = Cost of equity

) Value of the firm

$$V = B + S$$

$$\text{Or, } V = I/k_d + NI/k_e$$

Where,

V = Total market value of the firm.

B = Total market value of debt.

S = Total market value of equity.

NI = Net income available for equity holders.

I = Total interest payments.

### 2.1.3 Traditional Approach

The traditional view of capital structure which is also known as an intermediate approach is a compromise between the Net Income Approach and the Net Operating Income Approach. It states that when a company starts to borrow, the advantages and the disadvantages. The cheap cost of debt, combined with its tax advantage, will cause the WACC to fall as borrowing increases. However, beyond this threshold debt ratio, both debt and equity costs begin to rise sharply, and this increases more than offset the advantages of cheaper debt. At high gearing the cost of debt also rises because the chance of the company defaulting on the debt is higher (*i.e.* bankruptcy risk). So at higher gearing the WACC will increase.

According to this view, the value of firm can be increased or the cost of capital can be reduced by a judicious mix of debt and equity capital, and that an optimum capital structure exists of every firm. This approach very clearly implies that the cost of capital decreases within the reasonable limit of debt and then increases with leverage (Barges; 1983:44). Thus, an optimum capital structure exists, and it occurs when the cost of capital is minimum or the value of firm is maximum.

The statement that debt funds are cheaper than equity funds carries the clean implication that the cost of debt plus the increased cost of equity together on the weighted basis will be less than the cost of equity which existed on the equity before debt financing. That is the weighted average cost of capital will decrease with the use of debt up to a limit.

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

### **First Stage: Increasing Value**

The first stage starts with the introduction of debt in the firm's capital structure. In this stage, the cost of equity ( $K_e$ ) either remains constant or rises slightly with debt because of the added financial risk. But it does not increase fast enough to offset the advantage of low cost debt (Soloman; 1969: 139). In other words, the advantage arising out of the use of debt is so large that, even after allowing for higher cost of equity, the benefit of the cheaper sources of funds are still available. As a result the value of the firm ( $V$ ) increases as the overall cost of capital falls with increasing leverage.

During this stage cost of debt ( $K_d$ ) remains constant or rises only modestly. The combined effect of all these will be reflected in increase in market value of the firm and decline in overall cost of capital ( $K_0$ ).

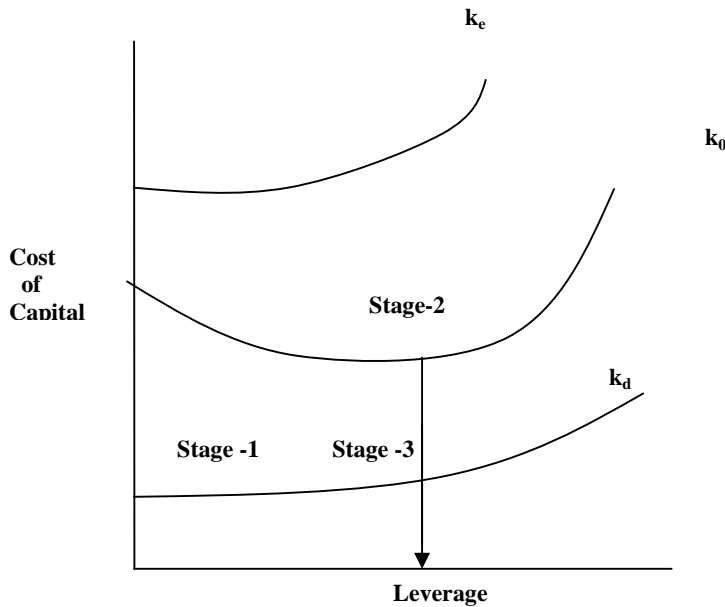
### **Second Stage: Optimum Value**

In the second stage, further application of debt will raise cost of debt and equity capital so sharply as to offset the gains in net income. Hence, the total market value of the firm would remain unchanged. While the firm has reached a certain degree of leverage, increase in it has a negligible effect on the value of the firm or overall cost of capital of the firm (Pandey; 1999:358). The increase in the degree of leverage increases the cost of equity due to the added financial risk that offsets the advantage of low cost debt. Within the range of such debt level or at a specific point, the value of the firm will be maximum or the cost of capital will be minimum.

### **Third Stage: Declining Value**

Beyond the acceptable limit of leverage, the value of the firm decreases with the increase of the leverage or the overall cost of capital increases with the additional leverage. This happens because investors perceive a high degree of financial risk, which increases the cost of equity by more than enough to offset the advantage of low cost debt. The overall effect of these three stages is to suggest that the cost of capital is a function of leverage,

i.e. first falling and after reaching minimum point or range it would start rising. The relation between cost of capital and leverage is graphically shown in figure below.



**Figure: 1**

***The effect of Leverage on Cost of Capital under Traditional Theory***

In figure 1, it is assumed that  $k_e$  rise at an increasing rate with leverage, whereas  $k_d$  is assumed to rise only after significant leverage has occurred. At first, the weighted cost of capital,  $k_0$ , declines with leverage because the rise in  $k_e$  does not entirely offset the use of cheaper debt funds. As a result,  $k_0$  declines with moderate use of leverage. After a point, however, the increase in  $k_e$  more than offset the use of cheaper debt funds in the capital structure, and  $k_0$  begins to rise. The rise in  $k_0$  is supported further once  $k_d$  begins to rise. The optimal capital structure is point X thus the traditional position implies that the cost of capital is not independent of capital structure of the firm and that there is an optimal capital structure.

**2.1.4 Net Income Approach**



According to net income approach, the cost of debt capital and the equity capital remains unchanged when leverage ratio varies. It exist positive relationship between capital structure and valuation of firm and change in the pattern of capitalization bring about corresponding change in the overall cost of capital and total value of the firm.

Thus, with an increase in the ratio of debt to equity, overall cost of capital will decline and market price of equity stock as well as value of firm will rise. The converse will hold true if ratio of debt to equity tends to decline. The approach assumes no change in the behavior of both stockholders and debt holders as to the required rate of return in response to a change in the debt-equity ratio of the firm. They want to invest since debt holder are exposed lesser degree of risk, assumed of a fixed rate of interest and are given preferential claim over the profit and assets, the debt holders' required rate of return is relatively lower than that of equity holders. So, the debt financing is relatively cheaper than equity. For this reason, at constant cost of equity ( $k_e$ ) and cost of debt ( $k_d$ ), the overall cost of capital ( $k_0$ ) declines with the increased proportion of the debt in the capital structure. This suggests that higher the level of debt, lower the overall cost of capital and higher the value if firm.

**Assumptions of this approach are:**

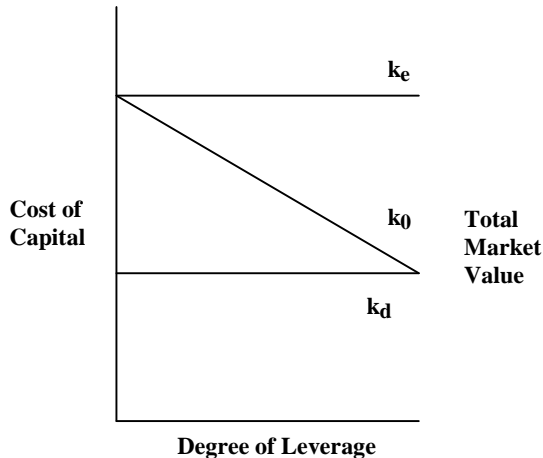
1. Change in leverage does not change the risk position of investors; as a result the cost of equity and cost of debt remain constant with changes in leverage.
2. The cost of debt rate is less than the cost of equity.
3. Overall cost of capital decreases as leverage increases.

The firm can achieve optimal structure by making judicious use of debt and equity and attempt to maximize the market price of its stock (Durand; 1959:91).

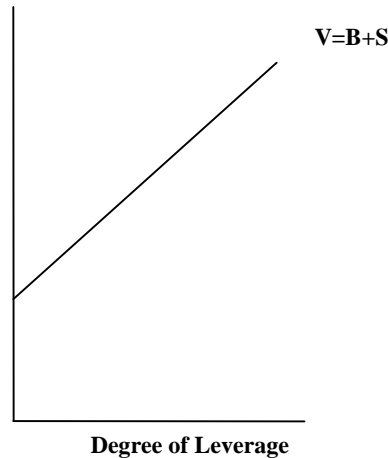
In sum, as per NI approach, increase in ratio of debt to total capitalization brings about corresponding increase in total value of firm and decline in cost of capital. On the

contrary, decrease in ration of debt to total capitalization causes decline in total value of firm and increase cost of capital. Thus, this approach is appeared as relevancy theory.

Graphically, the effect of leverage on the firm's cost of capital and the total market value of the firm is shown below:



*Figure: 2*  
*The effect of Leverage on Cost of Capital*



*Figure: 3*  
*The effect of leverage on Total Market Value of the Firm*

Figure 2 shows a continuous decrease in  $k_0$  with the increase in debt-equity ratio, since any decrease in  $k_0$  directly contributes to the value of the firm. It increases with the increase in the debt-equity ratio (figure 3). Thus the financial leverage, according to the NI approach is an important variable in the capital structure decision of a firm. Under the NI approach, a firm can determine an optimal capital structure. If the firm is unleveled the overall cost of capital will be just equal to the equity capitalization rate.

In brief, the essence of the net income approach is that the firm can lower its cost of capital by using debt. The approach is base on the crucial assumption that the use of debt does not change the risk perception of the investor. Consequently, the interest rate of debt ( $k_d$ ) and the equity capitalization rate ( $k_e$ ) remain constant to debt. Therefore, the increased use of debt results in higher market value of shares and as a result, lower overall cost of capital ( $k_0$ ).

### 2.1.5 Net Operating Income Approach (NOI)

NOI approach is capitalized at an overall capitalization rate to obtain the total market value of the firm. This approach is diametrically opposite from the NI approach with respect to the assumption of the behavior of equity holders and debt holders. The

essence of this approach is that the leverage/capital structure decision of the firm is irrelevant (*Khan & Jain; 1997:481*). The overall cost of capital is independent of the degree of leverage; any change in leverage will lead to change in the value of the firm and the market price of the shares. Net operating approach is slightly different from NI approach, unlike the NI approach in NOI approach, the overall cost of capital and value of firm are independent of capital structure decision and change in degree of financing. Leverage does not bring about any change in the value of firm and cost of capital.

Under NOI approach, the Net operating income, i.e. the earnings before interest and tax (EBIT), instead of net income is taken as the base. Like the NI approach, the NOI approach also assumes a constant rate  $k_d$ , which means that the debt holders do not demand higher rate of interest for higher level of leverage risk. However, unlike the assumption of NI approach, NOI approach assumes that the equity holders do react to higher leverage risk and demand higher rate of return for higher debt-equity ratio (*Pandey; 1999:31*). This approach says that the cost of equity increases with the debt level and the higher cost of equity offset the benefit of cheaper debt financing, resulting no effect at all on Overall Cost of Capital ( $k_0$ ).

**The NOI approach is based on the following assumptions:**

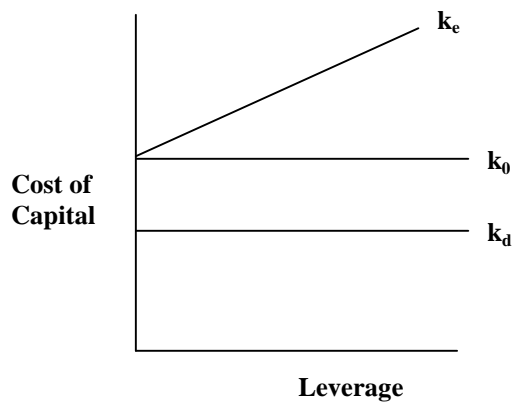
1. The market capitalizes the value of the firm as a whole. Thus, the split between debt and equity is not important.

2. The market use an overall capitalization rate,  $k_0$  to capitalize the net operating income,  $k_0$  depends on the business risk. If the business risk is assumed to remain unchanged,  $k_0$  is constant.
3. The use of less costly debt funds increases, the risk of shareholders. This causes the equity-capitalization rate to increase. Thus, the advantages of debt are offset exactly by the increase in the equity capitalization rate,  $k_e$ .
4. The debt-capitalization rate  $k_d$  remains constant.
5. The corporate income taxes do not exist.

The function of  $k_s$  under NOI approach can be expressed in equation as follows:

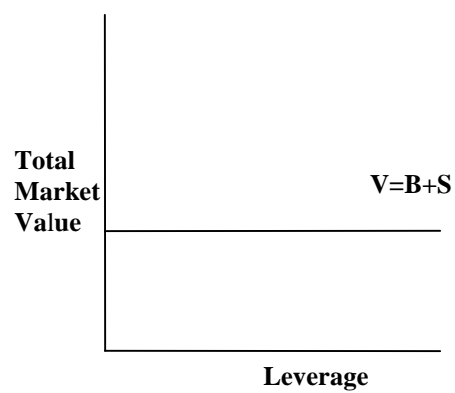
$$k_s = k + (k - k_d)(B/S)$$

The relationship between financial leverage and  $k_0$ ,  $k_e$ , and  $k_d$  has been graphically depicted in following figures.



*Figure: 4*

*The effect of Leverage of Cost of Capital*



*Figure: 5*

*The effect of Leverage on value Of Firm*

In the figure 4, it is shown that the curve  $k_0$  and  $k_d$  are parallel to the horizontal x-axis and  $k_s$  are increasing continuously. This is because  $k_0$  and  $k_d$  remains constant under all the circumstances but the  $k_e$  increases with the degree of increase in the leverage (*Gitman; 1998:791*). Thus, there is no single point or range where the capital structure is optimum. It is known obviously from figure 4 that under the NOI approach, as low cost of debt is

used, its advantage is exactly offset by increase in cost of equity in such a way that the cost of capital remains constant. By this, value of the firm also remains constant. At the extreme degree of financial leverage, hidden cost becomes very high hence the firm's cost of capital and its market value are not influenced by the use of additional cheap debt fund.

### **2.1.6 Modigliani-Miller Approach (MM approach)**

Franco Modigliani and Merton Miller (MM) addressed capital structure in a rigorous, scientific fashion and they set off a chain of research that continues of this day (Franco Modigliani and Merton H. Miller; June 1958:261). MM hypothesis is identical with net operating income approach. In other words, MM approach supporting the net operating income approach, argues that, in the absence of taxes, a firm's market value and the cost of capital remain invariant to the capital structure changes. They provide analytically sound and logically consistent behavior justification in favor of their hypothesis. MM contend that cost of capital is equal to the capitalization rate of pure equity stream of income and the market value is ascertained by capitalizing its expected income at the appropriate discount rate of its risk class. MM position is based on the idea that no matter how you divide up the capital structure of a firm among debt, equity and other claims, there is a conversion of investment value. The MM cost of capital hypotheses can be best expressed in terms of their proposition I and II (*Modigliani & Miller; 1958:261- 297*). However, the following assumptions regarding the behavior of the investors and the capital market, the actions of the firms and the tax environment are crucial for the validity of the MM hypothesis.

1. Stocks and bonds are traded in perfect capital markets. This assumption implies that there are no brokerage costs and that investors (both individuals and institutions) can borrow at the same rate as corporations.
2. All present and prospective investors have identical estimates of each firm's future EBIT i.e. investors have homogeneous expectations about expected future corporate earnings and riskiness of those earnings.
3. Business risk can be measured by  $\sigma_{EBIT}$ , and firms with the same degree of business risk are said to be in homogeneous risk class.
4. The debt of firms and individuals is riskless, so the interest rate on debt is the risk-free rate.
5. The firm is a zero-growth firm with an expectationally constant EBIT and its bonds are perpetuities.

## **Basic Propositions**

### **Proposition I**

The value of any firm is established by capitalizing its expected net operating income (NOI or EBIT) at a constant rate i.e. overall cost of capital which is appropriate for the firm's risk class. In other words, MM argues that, for 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 the risk class. This is their proposition I (*Pandey; 1999:34*). In equation this can be expressed as follows:

$$V_L = V_U = \text{EBIT(NOI)} / \text{WACC}(k_0)$$

$$\text{Or, } V_U = \text{EBIT} / k_{sU}$$

Where,

$V_L$  = Value of levered firm.

$V_U$  = Value of unlevered firm.

EBIT = Earning before income rate and tax.

NOI = Net operating income.

WACC = Weighted average cost of capital.

$k_0$  = Cost of capital.

$k_{sU}$  = Required rate of return for an unleveled firm.

Proposition I can be expressed in terms of the firm's overall capitalization rate,  $k$ , which is the ratio of Net operating income (EBIT) to the market value of all its securities, i.e.;

$$k = \text{NOI} / S + B$$

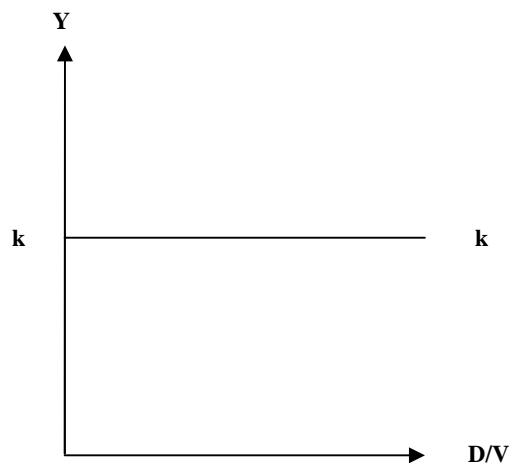
or,  $k = \text{NOI} / V$

$k$  can also be expressed as

$$k = k_e(S) / (S+B) + k_d(B) / (S+B)$$

It means  $k$  is the weighted average of the expected rate of return on 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 MM conclude that the total market value of the firm is unaffected by 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.

The overall cost of capital function as hypothesized by MM is shown in figure below:



**Figure: 6**

***The cost of capital under the MM hypothesis***

Thus two firms identical in all respects except for their capital structure cannot command different market values nor have different cost of capital (*Pandey; 1999:37*). But if there is discrepancy in the market values or the cost of capital, arbitrage will take place, which will enable investors to engage in personal leverage to restore equilibrium in the market.

**Proposition II**

The cost of equity to a levered firm,  $k_{dL}$ , is equal to the cost of equity to an unlevered firm in the same risk class,  $k_{sU}$  and a risk premium whose size depends on both the differential between an unlevered firm's costs of debt and equity and the amount of debt used. In other words, the proposition II states that the cost of equity rise proportionately with the increase in the financial leverage in order to compensate in the form of premium for bearing additional risk arising from the increasing leverage. The equation for the cost of equity can be derived from the definition of the average cost of capital.

$$K_{sL} = k_{sU} + \text{Risk premium}$$

$$\therefore k_{sL} = k_{sU} + (k_{sU} - k_d)(D/S)$$

Where,

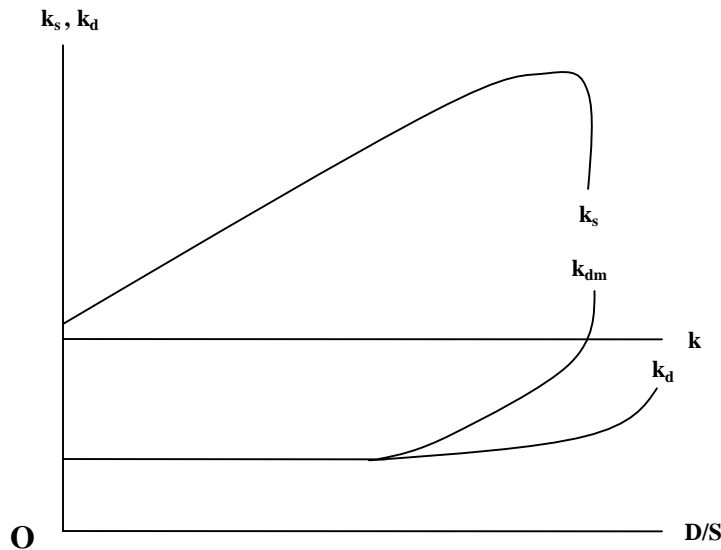
D = Market value of the firm's debt.

S = Market value of the firm's equity.

$K_d$  = Constant cost of debt.



The above equation states that for any firm in a given risk class the cost of equity,  $k_s$ , is equal to the constant average cost of capital,  $k$ , plus a premium for the financial risk, which is equal to debt-equity ratio times the spread between the constant average cost of capital and the interest rate. As the proportion of debt increases, the Cost of Equity increases continuously even though  $k$  and  $k_d$  are constant. The crucial part of the MM hypothesis is that  $k$  will not rise even if very excessive use of leverage is made. This conclusion could be valid if  $k_d$  remains constant for any degree of leverage. But in practice,  $k_s$  increases with leverage beyond a certain acceptable level of leverage. However, MM maintains that even if  $k_s$  is a function of leverage,  $k$  will remain constant as  $k_s$  will increase at a decreasing rate to compensate. This can be shown as:



**Figure: 7**  
**Behavior of  $k$ ,  $k_d$  and  $k_s$  under M-M hypothesis**

It is clear from the figure that cost of equity ( $k_s$ ) will increase till the marginal rate of interest ( $k_{dm}$ ) is below the cost of capital and as soon as the marginal rate of interest cuts the Cost of Capital,  $k_s$  will start falling (*Pandey; 1999:37*).

### **MM's Arbitrage Proof**

Arbitrage is the act of buying an asset or security in one market and selling simultaneously in another. Modigliani and Miller used an arbitrage proof to support their propositions. They showed that, under their assumptions, if two companies differed only in the way they are financed and in their total market values, then investors would sell shares of the higher-valued firm, buy those of the lower-valued firm, and continue this process until the companies had exactly the same market value. This restores equilibrium in markets which are temporarily out of equilibrium. It implies that a security cannot sell at different prices. The total value of homogeneous firms that differ only in respect of leverage cannot be different because of the operations of arbitrage. The essence of arbitrage is that the investors are able to

substitute personal or homemade leverage for corporate leverage. The behavior of the investors will have the effect of:

- Lowering the price of shares of the firm whose shares are being sold.
- Increasing the share price of the firm whose shares are being purchased. This arbitrage proves will continue until the value of the two firms become equal.

### **2.1.7 Financial Leverage**

Financial leverage involves the use of funds obtained at fixed costs in the hope of increasing the return to stockholders. Weston and Brigham (*Weston and Brigham; 1981:556*) defined financial leverage as the ratio of total debt to total assets or total value of the firm. The use of the fixed charges sources of funds, such as debt and preference share capital along with the owner's equity in the capital structure, is described as financial leverage or 'trading on equity' ( *Pandey ; 1999:23*). Trading on equity is derived from the fact that it is the owner's equity that is used as a basis to raise debt, i.e. the equity that is traded upon. The supplier of debt has limited participation in the company's profit, therefore, debt holder will insist on protection in earnings and value represented by ownership capital.

## 2.2 Review of Legal Requirements

As per the new policy and procedural arrangements for establishment and operation of financial institutions, 2063 of NRB, the minimum paid up capital requirement for different classes of financial institutions has been revised as follows.

Class	National Level	Regional Level*	4-10 Districts*	1-3 Districts*
"A"	Rs. 2 Billion	-	-	-
"B"	Rs. 640 Million	-	Rs.300 Million a/ Rs.200 Million	Rs.300 Million a/ Rs.100 Million
"C"	Rs. 300 Million a/ Rs. 200 Million	-	-	Rs.300 Million a/ Rs.100 Million
"D"b/	Rs. 100 Million	Rs. 60 Million #	Rs.20 Million c/	Rs. 10 Million

\* Except Kathmandu Valley. The scope of such institutions to be confined to the stipulated districts.

a/ applicable only to financial institutions doing leasing business

b/ financial institutions doing micro credit business

c/ including additional 5 districts of mountain region

# operating within development region

Whilst, the above provisions are applicable to any new financial institution, the existing financial institutions are required to increase their paid up capital to the above mentioned level by the end of FY 2070/71.

The capital adequacy norm (popularly known as Capital Adequacy Ratio or "CAR") has been set different for commercial banks and for development banks and finance companies. CAR is the relationship between Shareholder's fund (Capital Fund) to total risk weighted assets of the bank. CAR is 10% of total capital fund with minimum of 6% of core capital for commercial banks (as per BASEL II requirement). The same is 11% of total capital fund with minimum of 5.5% of core capital for development banks and

finance companies. The provisions of BASEL II are not applicable to development banks and finance companies till date.

Total capital fund is the sum of core capital and supplementary capital. Where, core capital includes paid up capital, share premium, non-redeemable preference share, general reserve fund and accumulated loss/ profit, supplementary capital includes general loan provision (provided on good loans @ 1%), exchange equalization reserve, asset revaluation reserve, hybrid capital instrument, subordinated term debt and free reserve.

## **2.3 Review of Articles**

### **The Modigliani and Miller's First Study**

In their first study they used the previous works of "Allen And Smith" in support of their independence hypotheses in the first part of their work M-M tested their proposition I, the cost of capital is irrelevant to the firm's capital structure by correlation after tax cost of capital with leverage  $B/V$  they found that the correlation co-efficient are statically in significant and positive in sign. The regression line doesn't consist of curvilinear "U" Shaped cost of capital key of traditional view, when the data are shown in setter diagram. 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 equity ratio. The second part of their study is consistent with their views i.e. if the cost of borrowed funds increases, the cost of equity will decline to offset this increases Modigliani and Miller second study. M-M were conducting the second study in 1963 with correcting their original hypotheses for corporate income taxes and expected cost of capital to be affected by leverage for its tax

advantages, therefore they wanted to test whether leverage had tax advantages or not, for this they conducted the mathematical analysis regarding the effect of leverage and other variable on the cost of capital, they found that the leverage is significant only because of the tax advantage involved (*Modigliani & Miller; 1958:261*).

### **The Van Horn's Study**

James C. Vanhorn has also presented controversial decision about capital structure. According to him financial signaling occurs when capital structure change conveys information to security holders (*Van Horne; 1985:277*). It assuming as symbolic information between management and stock holders management behavior result in debt issue being regarded on good news by investors and stock issue as bad news empirical evidence seems to be consistent with the nations.

### **Weston's Study**

Weston J.F. (1963) in “*A Test of Cost of Capital Proposition*” made some important-improvement in the cost of capital modes. He included firm size and growth as additional explanatory in his model.

He found the regression co-efficient of leverage to be positive and significant, when he used M – M model. However when the multiple regression was shown he found that the correlation coefficient is significant and the regression co-efficient of leverage in negative and significant when the influence of growth is isolated leverage is found to be negative correlation with the cost of capital. He concluded that the apparent lack of influence of leverage on the overall cost of capital observed by M – M was due to the negative correlation of leverage with earning growth Weston also listed M – M proposition II.

### **Wiper's Study**

Wiper R (1960) in “*Financial Structure and Value of the Firm*” has made a test to empirical relationship between financial structure and value of the firm he tried to eliminate the principle problem of empirical study on the leverage and attempted to offer what were hoped to be more, alternative’s in determining the relationship between leverage and cost of capital. He found the share holder’s wealth can be enhanced by judicious by judicious use of debt financing.

### **Sharma and Rao’s Study**

Sharma and Rao (1969) in “*Leverage and the Value of the Firm*” concluded the list of M-M hypothesis on the influence of debt on the value of a firm to a non-regulated industry. They argued that estimate of cost of capital arrived at through the model will be accurate only when their hypothesis on debt and dividends are correct this is an essential condition for the employment of the model.

Calculation of variables was done in exactly the same ways done by M.M. with two exceptions. They experimented with total assets and sale for deflecting the variables and the result are meaningful when fixed of total assets of fixed assets was used as the growth variable the result were somewhat inconsistent with economic reasoning they therefore took the earning froth rate as the growth variable because this would and account growth of earning due both to the utilization of existing capacity and to the additional of new capacity they include that debt has no tax advantage also thus this paper-support-that the investors refer corporate to personal leverage and therefore the value of a firm sizes up to leverage rate considered prudent.

### **Rao and Litzaberge’s Study**

Rao and Litzaberge (1970) in “*Leverage and the Cost of Capital in Less Developed Capital Market Comment*” conduct the study of the effect of capital structure on the cost of capital in loss developed and less efficient capital market (India) and in highly developed and efficient capital market(US) They used 28 India utilize and 77 American

utilized. They conducted the study for five cross section years 1962-1966. They found that the result for the American utilities are constant to the M-M proposition except for the advantage of debt financing the cost of capital independent of capital structure and result also supported that the M-M hypothesis that investors are different for the firm's dividend policy in case of India utilities, the result are in consistent to the M-M approach and support the traditional belief the judicious use of financial leverage will lower the firms cost of capital and investors have a reference for current dividends. In conclusion, they contended that the M-M approach after allowing for the tax advantage of debt the firms cost of capital is independent of capital structure does not appear to be applicable in the case of a developing economy.

#### **Dr. Manohar Krishna Shrestha**

Dr. Shrestha (1985) conducted a thesis research on "*Analysis of Capital Structure in Selected Public Enterprises*". The study found that the public enterprises have a very confusing capital structure. In many instances adhocism became the basis of capital structure and in that also most of them want to eliminate debt if possible to relieve financial obligations. Further more, the determination of capital structure is greatly influenced by the inflow of International Donor Agency long term credit through the medium of His Majesty's Government of Nepal (HMG). In a way, neither the public enterprises nor HMG developed criteria in determine capital structure nor this is the reason as to why debt equity ratio became a ticklish problem. Also true that the calculation of equity capitalization rate and overall capitalization rate according to given data provide very fantastic results in many cases, although they carry valid and meaningful results in some instances. As such, the use of Net Operation Income Approach and Net Income Approach on the whole is more an academic exercise rather than proving much valid. While determined and there is growing tendency among most

of public enterprises to have least combination of debt with equity to escape financial obligations as far as possible. Again, it is an implied fact that the contribution of debt to procurement of assets shows significant deviations. The earning of the public enterprises in most cases does not prove satisfactory except in limited few. There are many unfavorable side effects such as growing accumulated losses climbing greater heights and little maintenance of tax provisions.

He suggested that debt equity ratio should neither be highly levered to create too much financial obligations that lie beyond capacity to meet nor should it be much low levered to infuse operational strategy to bypass responsibilities without performance. [The Nepalese Journal of Public Administration, March 1985]

## **2.4 Review of Previous Thesis**

Krishna Pathak (1995) conducted research on “*Study on Capital Structure Management of Gorakhkali Rubber Udyog Ltd*” The basic objective was to analyze the debt equity ratio, interest coverage ratio with some of the measures to improve the policy. He had analyzed all the variables in the form of ratio analysis.

- ) In his findings especially to the capital structure and profitability position, following issues has drawn.
- ) As compared to the shareholder’s equity and the trend of debt – equity the ratio was increasing every day.
- ) Company’s debt serving capacity was very poor due to the negative interest coverage ratio.
- ) The operational performance was not satisfactory due to negative earnings and low volume of sales revenue.



- ) The company was not able to utilize its capacity more than 50% which result the huge losses.
- ) At last, he suggested lowering down the amount of debt and obtaining additional funds through issue of equity share, improving its working capital and reducing over staff, making strategic plans and developing the motivations management.

**Mr. Kamal Bahadur Railawat** (1999) conducted a research on “*Capital Structure of Necon Air Limited*”. The main objective of the study is to analyze and examine the capital structure of Necon Air Limited, examine the financial position, highlight their growth and policies and review of various previous studies relating to the study.

The methodology used in the study includes financial tools such as ratio analysis and statistical tools – correlation coefficient and Probable error. The study used primary as well as secondary data for the analysis. The study has found that Necon Air Limited has debt equity ratio higher than required. This higher debt capital is a serious implication from the firm’s point of view. In this condition, the capital structure will lead to inflexibility in the operation of the firm as creditors would exercise pressure

and interferes with management. Necon Air has raised debt from different commercial banks and has to pay heavy portion of profit as interest. So, the payment of the interest will be hazardous when profit is declining. So, it is suggested that Necon Air Ltd should decrease its debt capital drastically as far as possible. It has added that the ratio of 2:1 is the best ratio for optimal capital structure i.e. why the company should reduce its heavy burden of interest payment.

Study done by **Udaya Lal Shrestha** (1999) on “*Comparative Evaluation of Capital Structure Between Selected Manufacturing and Trading Companies of Nepal*” has access on debt serving capacity of the companies and as well as return on equity, debt ratio, following the calculation earnings before interest and tax , earning per share.

He also observed that manufacturing companies had a higher risk with higher return on the interest and debt and low dividend. The study further indicated that the amount of profit earned could only meet the interest and because of that had to suffer losses.

It has concluded that there was not enough return to pay interest, debt and dividend for both types of companies although maintaining a high risk of debt.

And he finally recommended for a regular check up the level of debt, earnings before interest and tax (EBIT), earning before tax (EBT) and earnings per share (EPS) by monitoring authority, so that the companies would not fall into a weaker position.

**Ganesh Prasad Neupane** (2002) conducted research on “*A Study on Capital & Assets Structure of Nepal Bank Limited (NBL)*”. The basic objective of this study was to analysis interrelation between different ratio, analysis of component parts of capital structure; debt equity ratio, net worth, deposit/investment ratio etc. According to him the research analyzed the different financial aspects of NBL

He remarked that the total deposit and total investment were not significantly related. He concluded that the net worth was used in unproductive assets of the bank and further commented that the bank needs to have productive use of its net worth.

**Anjana Shah** (2004) made the study on “*A Study of the Capital Structure of Selected Manufacturing Companies*” with a purpose to access the debt serving capacity of the

mentioned manufacturing companies, examine the relation between return on equity and total debt, return on equity and debt ratio. Earnings after tax and total debt and interest and earnings before interest and tax.

The methodology used in the study included both financial as well as statistical tools. The financial tools used were ratio analysis and statistical tools used were correlation coefficient and regression analysis.

The study revealed that Nepal lever Ltd has not been using long term debt and it was fully equity based. The bottlers Nepal Ltd is free of long term debt because of improved cash flows and effective management. The Sriram spinning mills has 66.33% of assets financed with debt and hence there is less flexibility to the owners. The degree of financial leverage analysis of Jyoti spinning mills shows the failure of the company to gain expected profits. And the Arun Vanaspati Udhyog has a fluctuation Debt Equity ratio. Its long term debt is decreasing and only creditors make a small share of equity.

## 2.5 Research Gap

There are various studies accepted on capital structure management of various state owned banks and public limited companies of Nepal. Most of the study indicates that a sound principle of capital structure and its management haven't been followed by the enterprises in Nepal. The basic objective in all of the studies shows analysis of components parts of capital structure ratios, its interrelationship, debt serving capacity, relation between return on equity-debt, earning before tax and interest. However, their study reveals that they have not been using long term debt effectively. The net worth of the bank was used in unproductive assets, shows low debt equity ratio. Even then, different studies have been carried out regarding the subject matter of gap structure previously by different researchers. But, the research gap among the previous studies and this current study lies firstly in fiscal years under which the current study has undertaken. Secondly, the sample companies are new from the previous studies. Previously made studies included manufacturing companies, bank etc. The current study however is a comparative study of capital structure of three

commercial banks. The researcher may feel comfort if the gap created by the previous studies can be filled up. Besides the analysis of capital structure ratios this study has made an attempt to analyze the effect of capital structure on the value of the companies. Further, this study will help research student to carry further studies as well as, it will helpful to the interested groups in the selected companies to analyze their position at present and search for the prospective investors.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Thus “Research Methodology” is the way to solve systematically about the research problem. For this purpose the research is exploratory as well as analytical in order to accomplish the objective of this study. The research methodology has 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.

#### **3.2 Research Design**

To fulfill the objectives of the study certain research design is essential so the analysis of this study is based on the nature of data and tools for analysis. To fulfill the objectives of the study it emphasizes on analytical as well as descriptive research design.

#### **3.3 Sources and Nature of Data**

The study is based on historical or “Secondary Data”. This secondary data is extensively used in this. The primary data could not be collected due to lack of source, time & information constrains. The raw secondary data is not modified to some extent for the study purpose. Mostly data is collected from the “Balance Sheet”. Income statement and profit and loss account of commercial banks. Some other necessary data in this study have also been supplemented from Nepal Stock Exchange Ltd. and various related journal in management and other publication to some extent necessary primary data are also collected by interviewing related commercial Banks Manager and other Personal.

### **3.4 Population and Sample**

The term “Population” means all the members of research study in which the research is based. The population of the study comprises of all 26 commercial banks within the kingdom of Nepal. Here Nabil Bank Ltd, HBL and NIBL are selected as sample bank for the study of capital structure.

### **3.5 Data Analysis Tools**

Different tools have been selected according to the nature of data as well as subject matter. The major tools employed for the analysis of the data is the ratio analysis which established the quantities or numerical relationship between two variable of the financial statement. Besides there the statistical tools are also used.

#### **3.5.1 Financial Tools**

The Financial Tools are: ratio analysis, leverage analysis, EBIT-EPS analysis and others.

##### **3.5.1.1 Ratio Analysis**

Ratio Analysis is the powerful tool of financial analysis. Ratios can be used for performance evaluation. They are calculated from a firm’s financial statements. The purpose of financial analysis is to reveal financial strengths and weaknesses of the firm. Generally, the financial ratios are compared with the patterns of the industry. One should understand that financial ratios of small firms might be different from those of large firms. So, financial ratios should be compared with comparable firms.

The required financial tools for this study are as follows:

### **a. Debt Equity Ratio (Leverage Ratio)**

Leverage Ratio measures the contribution of financing by owners compared with financial provided by the outsiders. They also provide some measure of the debt financing by the calculation of the coverage of fixed charge. It can be calculated by the long-term debt divided by shareholders' equity. In the calculation, shareholders' equity preference share capital accumulated losses, discount on issue of share etc, so the shareholders' equity is defined as net worth and D/E ratio also called debt to net worth ratio related with the total debt. This debt equity measures the claim of the creditors an owner against the company's assets. In this study following leverage ratios have been calculated.

$$\text{Debt equity ratio} = \frac{\text{Long-term debt}}{\text{Shareholders' equity}}$$

A high Debt equity ratio indicates that the claim of creditors is greater than that of the owners and vice-versa.

### **b. Debt to Total Capital Ratio**

The relationship between creditor's funds and owner's capital can also express in term of debt to total capital ratio. This ratio highlights the need of long-term debt in the capital employed by the firm. Long-term debt includes the debt, which matures in more than one accounting period, whereas capital employed includes long-term debt and shareholder's equity of the firm. This ratio is called the long-term debt to capital debt ratio. Larger the ratio, larger the proportion of long term debt in the capital employed and vice versa. It is calculated by dividing long-term debt with capital employed by the firm. This ratio is also known as debt to permanent capital ratio whereas permanent capital means total assets minus current liabilities.

$$\text{Debt to total capital ratio} = \frac{\text{Long-term debt}}{\text{Permanent capital}}$$

Permanent Capital consists of shareholders equity as well as long-term debt.

### **c. Total Debt to Total Asset Ratio**

The total debt of the firm comprises long-term debt plus current liabilities while total assets consist of permanent capital plus current liabilities. Assets may be described as valuable resources owned by a business, which have been acquired at a measurable money cost. Assets as an economic resource satisfy three requirements. They are firstly, the resources must be valuable or it may provide future benefits to the operations of the firms; secondly, the resources must be owned, and thirdly the resources must be acquired at a measurable money cost. A comparison of debt ratio for a given company with those of similar firms gives us a general indication, of the credit worthiness and financial risk of the firm. The reason, that is a general indication, is that the assets and cash flows of the firm provide payment of debt.

This can be calculated as:

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

The ratio however gives some similar indication as debt equity ratio.

### **d. Long Term Debt to Total Debt Ratio (LTD / TD)**

The relationship between long term debt and total debt has a decisive impact on the financial structure of all four companies under study. Debt is considered as the total debt, which includes all secured and unsecured loan. Within these two types of loan

there comes long-term debt, short-term debt, debenture, overdraft etc. It is externally borrowed from financial institute. Debt capital is the capital to which a fixed rate of interest should be paid. Interest paid for debt is deductible expenses. It can save the tax. Debt capital is a cheap means of financing. But there is a risk in holding debt capital. Risk in the sense of timely payment of interest and the redeemable value at the end of maturity period. Debt capital should be limited up to a level, which the earning capacity of the firm can support. Otherwise, the company has to sell its assets and be forced to go into liquidation. The ratio of long-term debt to total debt indicates what percentage of company's total debts is included in the form of long term debt. It is calculated as:

$$\text{LTD / TD} = \frac{\text{Long-term debt}}{\text{Total debt}}$$

#### **e. The Degree of Financial Leverage (DFL)**

The degree of financial leverage at a particular EBIT level is measured by the percentage change in earning per share relative to the percentage change in EBIT. The company needs a lot of funds to operate activities these funds are collected from different sources having different rates. On the way to profitability, the company can use equity capital. In the process of profit planning, it tries to increase the amount of profit, but different kinds of leverage considered. DFL is one kind of leverage. DFL measures proportionate change in EPS as a result of given change in EBIT. The financial leverage measures the financial risk arises due to the interest. Higher the financial leverage higher the financial risk. The financial leverage exists when the company as debt capital in the composition of capital structure. The extra amount of investment by debt capital can be measured only with the help of financial leverage this may be calculated as:



$$\text{Degree of financial leverage} = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}}$$

$$\text{Degree of financial leverage} = \frac{\text{EBIT}}{\text{EBIT} - R}$$

$$= \frac{\text{EBIT}}{\text{EBT}}$$

Where, R represents fixed financial costs, which are interest and preference dividend.

#### **f. Interest Coverage Ratio**

It is also known as time interest earned ratio. This ratio measures the debt servicing capacity of a firm in so far as fixed interest on long-term loan is earned. It is determined by dividing the ratio of earnings before interest and taxes (EBIT) by the fixed interest charges on loans. The interest coverage ratio shows many firms the interest charges are covered by funds that are ordinarily available to pay the interest. This is calculated as,

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest}}$$

This ratio is very useful in determining whether a borrower is going to be able to service interest payments on a loan. In other words, the ratio is designed to relate the

financial charges of a firm to its ability to service them. This ratio also known to determine whether a firm has the ability to meet its long-term obligations A high interest coverage ratio indicates the company's strong debt servicing capacity.

### **3.5.1.2. Profitability Ratio**

Profitability Ratios are used as overall measures of the efficiency and effectiveness of the firm's management. In other words, it gives final answers about how effectively the firm is being managed. In the study following profitability ratio are as follows:

#### **a. Return on Total Assets (ROA)**

It is also known as Return to Investment or  $R_o$  1 before tax basis. Return on total assets ratio measures the profitability of the bank that explains how to earn satisfactory return on all financial resources invested in the bank assets. The ratio explains net income for each unit of assets. Higher ratio indicates efficiency in utilizing its overall resources and vice versa.

$$\text{Return on total assets} = \frac{\text{EBIT}}{\text{Total Assets}}$$

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

$$\text{Return on total asset} = \frac{\text{Net Profit after tax}}{\text{Total asset}}$$

### **b. Return on Net-Worth (Ordinary Shareholders Equity)**

The ratio of net profit taxes to net worth measure the state of return on the stock holder's investment is computed by dividing EAT with net worth. This ratio tells us the earning power on shareholders equity and is frequently used in comparing two or more firms in an industry. It also indicates that the funds supplied by owners. The higher ratio indicates that the funds using have effective in the company. It reflects the extent to which the objective of profit maximization has been achieved. Here net worth represents only equity capital.

$$\text{Return on Share Holder's Equity} = \frac{\text{Net Profit after Tax}}{\text{Share Holder's Equity}}$$

## **3.6 Statistical Tools**

The main important tool to achieve the objectives of this study is Statistical Tools. Mandy statistical tools are often employed in the analysis and interpretation of data as an aid to management and managerial decision. Following statistical tools are used more systematically in this chapter.

### **3.6.1 Correlation Coefficient (r)**

Correlation coefficient measures the relationship between two variables, when they are so related that the change in value of one variable is accompanied by the change in the value of the other. It contributes to the understanding of economic behavior, aids in locating the

critical important variables on which others depend, may reveal to the economist the connection by which disturbances spread stabilizing forces may become effective. Although there are three types of correlation i.e. simple, partial and

multiple but here the focus is on simple correlation based on “Pearson’s coefficient of correlation”.

The correlation co-efficient denoted by r and shows the direction of relationship between coefficients.

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

**Where,**

*r = Pearson's correlation coefficient*

*N = No. of Observation*

*X, Y = Variables.*

If one variable increases or decreases then r will fall between 0 and 1 i.e. the inverse relationship exists on the other side, if one variable increases the other also increases and the value of r will be ranged between 0 and 1 i.e. the relationship exists.

### Decision criteria

When the value of  $r = +1$ , the variables are perfectly correlated

When the value of  $r = -1$ , the variables have perfect negative correlation

When the value of  $r = 0$ , there is no correlation between the variables.

If  $-1 < r < 0$  then two variables either increase or decrease but it is the opposite direction.

### 3.6.2 Probable Error (P.E)

The probable error of the coefficient of correlation helps in interpreting its value with the help of probable error it is possible to determine the reliability of the value of the

coefficient is done for as it depends on the condition of random sampling. The P.E of the coefficient of correlation is obtained as follows:

$$P.E (r) = \frac{6 \times 0.6745 (1-r^2)}{N}$$

Where,

*r*=correlation coefficient

*N*=no. of parts of observation

**Note:**

- ) If the value of *r* is less than the P.E. there is no evidence of correlation i.e. the value of *r* is not significant.
- ) If the value of *r* is more than 6 times of P.E. the coefficient of correlation is practically certain i.e. the value of *r* is significant.

### 3.6.3 Simple Regression Analysis

It is a statistical tool, which helps to estimate or predict the one variable when the value of other variable is known. The unknown variable, which we have to predict, is called dependent variable and the variable whose value is known is called independent variable. The analysis used to describe the average relationship between two variables is known as simple linear regression analysis.

Regression equation of *y* on *x*:

$$y = a + bx$$

### **Regression Constant (a)**

Regression constant synonymous with the numerical constant determines the distance of the fitted line directly above or below the origin. The value of the constant, which is the intercept of the model, indicates the average level of dependent variable when independent variable (s) is zero. In other words, a constant indicates the mean or average effect on dependent variable if all variables omitted from the model.

### **Regression Coefficient (b)**

The regression coefficient of each dependent variable indicates the marginal relationship between that variable and value of dependent variable, holding constant the effect of all other independent variable in the regression model. In other words, the coefficient describes how much change in independent variables; affect the value of dependent variables estimate. It is also known that the numerical constant, which determines the changes in dependent variable per unit, changes in independent variables (i.e. slope of the line).

## **CHAPTER IV**

### **DATA PRESENTATION AND ANALYSIS**

This is the heart of research study. Without this part the study remains incomplete to achieve the objectives set in chapter one. To analyze the financial performance in respect to capital structure, various presentation and analysis have been presented in this chapter to make the study clear, effective, systematic, easily understandable and result oriented. This chapter helps to analyze the strength and weakness of the bank. Therefore, in this chapter the data collected will be analyzed and presented mathematically.

In this chapter, financial tools are used to know the capital structure of sample banks.

It is already stated that Capital structure refers to the combination of preference share, equity share capital including reserve and surplus as well as long-term debt. Optimal capital structure refers to that combination of funds, which maximizes the EPS, value of the firm and overall cost of capital. The analyses in this chapter are divided into following sections, which is directly and indirectly related to the capital structure.

#### **4.1 Capital Structure Analysis**

##### **4.1.1 Debt Equity Ratio**

Debt equity ratio is used to show the relationship between borrowed funds and owners' capital. It reflects the relative claims of creditors and shareholders against the assets of the firm. It is an important tool for the financial analysis to appraise the financial structure of a firm. The ratio reflects the relative contribution of owners and creditors capital of business in its financing. In other words, this ratio exhibits the relative proportions of capital contributed by owners and creditors. Debt equity ratio can be calculated in the basis of shareholders' equity and long-term debt. Shareholders' equity includes reserve and accumulated profit, preference share and

equity share capital. Where long-term debt includes total debt minus short-term debt or current liabilities, here debt equity ratio is also computed by simply dividing long-term debt of the firm by shareholders' equity. The high D/E ratio shows the large share of financing in the capital by the creditors then the owners or it's also reflects that the creditors claim is higher against the assets of firm and vice-versa. D/E ratios of concerned companies are shown in the following table that is referred from the appendix 1.

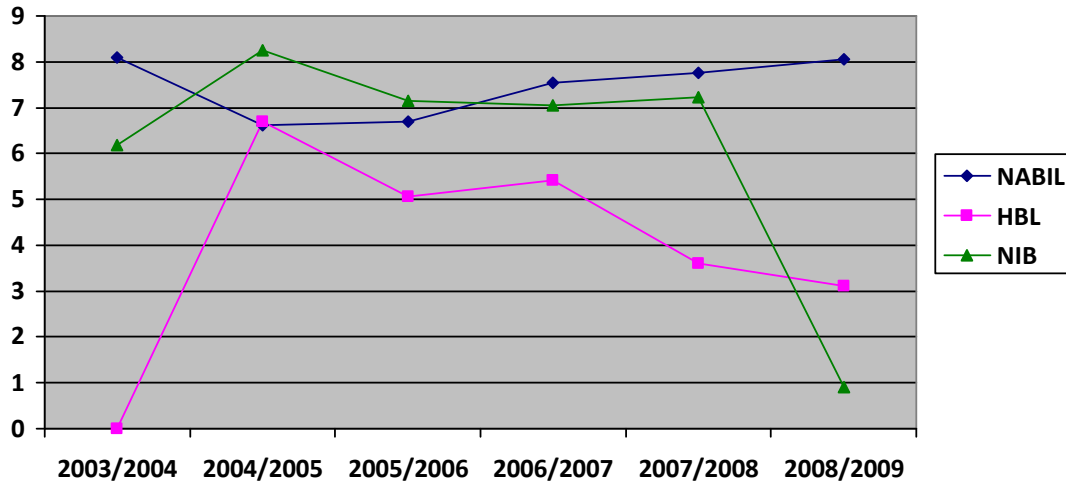
**Table 1**  
**Comparative Debt – Equity Ratio**

Fiscal Year	Debt Equity Ratio (times)		
	NABIL	HBL	NIBL
2003/2004	8.10	NA	6.18
2004/2005	6.62	6.70	8.25
2005/2006	6.69	5.06	7.15
2006/2007	7.54	5.41	7.05
2007/2008	7.75	3.60	7.23
2008/2009	8.05	3.12	0.90
Average	7.46	4.78	6.13

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*



**Fig: 8**  
**Comparative Debt – Equity Ratio**



The debt equity ratio and average ratio has been calculated in the above table where seven years data have been presented:

*The table shows that D/E ratio of NABIL is 8.10, 6.62, 6.69, 7.54, 7.75 and 8.05 in fiscal years 2002/2003 to 2007/2008 respectively. The average D/E ratio of NABIL is 7.46. It shows that creditors have 7.46 times claims on assets where the last two years ratio are lower than average ratio, it indicates that claim of owners is higher than the creditors. It also indicates that the company has lesser amount to be paid as interest on debt.*

*The value of HBL shows D/E ratio have decreasing trend except in year 2002/03. D/E ratio is NA in the year 2002/03. The ratio increases to 6.70 in the following year then again decreases to 5.06 in the year 2004/2005. The ratio then increases to 5.41 in the year 2005/2006. In the year 2006/2007 the ratio decreases to 3.60 again it decreases to 3.12 in the following year 2007/2008. The average D/E ratio is 4.78 times which implies that the claim of creditors is 4.78 times in compare to owner of the company.*

*In case of NIBL, above calculation shows that D/E ratio have fluctuating trend over the study period. The table shows that D/E ratio of NIBL is 6.18 in the year*

*2002/2003 and then it increases to 8.25 in the year 2003/2004. Then it decreases to 7.15 in the year 2004/2005. In the year 2005/2006 again it decreases to 7.05 after which its D/E ratio increases to 7.23 in the year 2006/2007. Again in the following year 2007/2008 the ratio decreases to 0.90. This shows that NIBL have very fluctuating trend of D/E ratio. The average D/E ratio is 6.13 times which implies that the claim of creditors is 6.13 times in compare to owner of the company.*

*Between NABIL, HBL and NIBL, HBL has lowest D/E ratio.*

#### **4.1.2 Long Term Debt to Capital Employed Ratio**

The optimal capital structure has important relationship with the long term debt to capital employed ratio. This relationship suggests the portion of long term debt and capital employed used in the capital structure of the firm. This ratio highlights the need of long term debt in the capital employed by the firm. Long term debt includes the debt, which matures in more than one accounting period whereas capital employed includes long term debt and share holders' equity of the firm. The relationship of the long term debt and capital employed can be analyzed by establishing the ratio between them. This ratio is called the long term debt to capital debt ratio. Larger the ratio, larger the proportion of long term debt in the capital employed and vice versa. This ratio can be calculated by dividing long term debt with capital employed by the firm. This ratio is also known as debt to permanent capital ratio whereas permanent capital means total assets minus current liabilities. Long term debt to permanent capital ratio is presented in the following table:

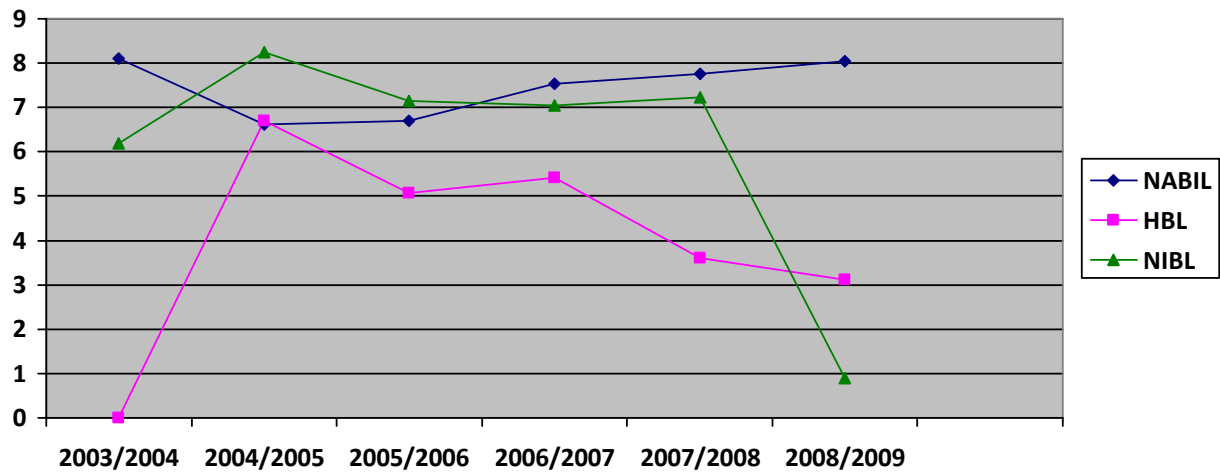
**Table 2**  
**Comparative Long Term Debt to Capital Employed Ratio**

Fiscal Year	Long Term Debt to Capital Employed Ratio (times)		
	NABIL	HBL	NIBL
2003/2004	8.10	-	6.18
2004/2005	7.91	6.85	8.66
2005/2006	8.03	5.20	7.40
2006/2007	7.54	6.39	7.44
2007/2008	8.93	5.19	7.65
2008/2009	9.29	4.84	1.29
Average	8.30	5.69	6.44

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

**Fig: 9**

**Comparative Long Term Debt to Capital Employed Ratio**



*NABIL has fluctuating trend of long term debt to capital employed ratio. In F/Y 2002/2003 the ratio is 8.10. Similarly, in the following years the ratio decreases to 7.91 in the year 2003/2004. Again the ratio increases to 8.03 in the year 2004/2005. Whereas, in the ratio decreases to 7.54 in the year 2005/2006 and then it increases to 8.93 and 9.29 in the following years 2006/2007 and 2007/2008 respectively. The average ratio shows a ratio of 8.3 times.*

*Similarly, HBL also have a fluctuating trend in term of LTD to capital employed ratio. In F/Y 2002/2003 the ratio is 0.61 that means 61% of capital is employed by long-term debt and remaining is contributed by shareholder's equity. The ratio increases to 6.85 in the year 2003/2004 and then decreases to 5.2 in the year 2004/2005. Again it increases to 6.39 in the year 2005/2006. After that in the fiscal year 2006/2007 and in 2007/2008 the ratio gradually decreases to 5.19 and 4.84 respectively. The average ratio is 5.69 times.*

*In case of NIBL also ratio of LTD to capital employed is in fluctuating trend as that of NBL. In F/Y 2002/2003 the ratio is 6.18. In the following year 2003/2004 the ratio*

*increases to 8.66 and in F/Y 2004/2005, 2005/2006, 2006/2007 and 2007/2008 the ratios are 7.40, 7.44, 7.65 and 1.29 respectively. The average ratio shows the ratio of 6.44 times.*

*Between NABIL, HBL and NIBL, NABIL shows highest ratio which means NABIL has higher amount of capital financed by long term debt.*

#### **4.1.3 Long Term Debt to Total Debt Ratio**

The relationship between long term debt and total debt has a decisive impact on the financial structure of the companies. This relationship indicates what percentage of total debt is covered by long-term debt of the firm. Normally firms use short term and long-term debt. Current liabilities and provisions are also needed during the operation of the firm. Simply dividing long-term debt by the total debt can derive the relationship the long term debt and total debt of the firm.

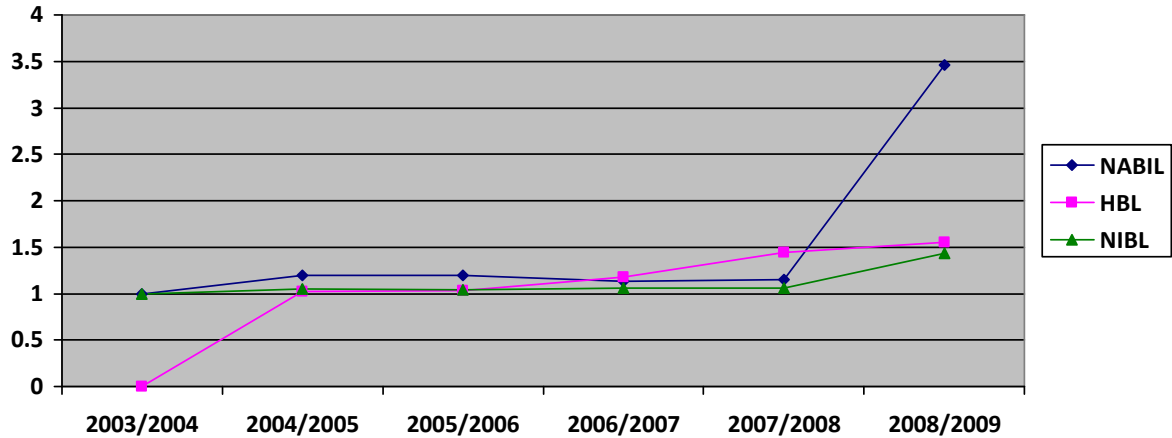
The total debt includes all types of borrowed firm, current liabilities and provisions. If the firm uses large amount of short term loans and current liabilities and provisions in the larger amount, the percentage of the long term debt on the total debt will be low and vice versa. The higher ratio of long term debt to total debt indicates the higher claim of long term debt holder upon the total debt and the lower ratio indicates the higher portion of short term loans and current liabilities in the total debt of the firm. The amount of short-term loans and current liabilities used depends upon the liquidity of that firm. The relationship of long term debt and total debt is presented in the following table with the percentage change in that ratio to show the movement of trend individually. In addition the average ratios are also calculated to compare with each other. The detailed calculation is show in the *appendix 4*.

**Table 3**  
**Comparative Long Term Debt to Total Debt**

Fiscal Year	Long Term Debt to Total Debt (percentage)		
	NABIL	HBL	NIBL
2003/2004	1.00	NA	1.00
2004/2005	1.20	1.02	1.05
2005/2006	1.20	1.03	1.04
2006/2007	1.13	1.18	1.06
2007/2008	1.15	1.44	1.06
2008/2009	3.46	1.55	1.43
Average	1.52	1.24	1.11

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

**Fig: 10**  
**Comparative Long Term Debt to Total Debt**



The trend analysis of the company reveals that NABIL has quite fluctuating trend of LTD/TD ratio. The above calculation shows that the ratio of LTD/TD of NABIL is 1 in F/Y 2002/2003. This means contribution of long term debt is 1. The ratio is 1.2 in the year 2003/2004 and also in the following year 2004/2005. After that the ratio decreases to 1.13 in the year 2005/2006 and 1.15 in the year 2006/2007. The ratio gradually increases to 3.46 in the year 2007/2008. The average ratio is 1.52.

Similarly, HBL has increasing trend of LTD/TD ratio .In the fiscal year 2003/2004 the ratio is 1.02 that indicated contribution of long term debt in total debt and remaining portion is contributed by current liabilities. It increases to 1.03, 1.18, 1.44 and 1.55 for the following years 2004/2005, 2005/2006, 2006/2007 and 2007/2008 respectively. The average ratio is 1.24.

Similarly, NIBL also have the fluctuating trend of LTD to TD ratio for the six sample years. It is 1 for the F/Y 2002/2003 which indicates contribution of long term debt in total debt is only 1 times and remaining part is current liabilities. The ratio then is 1.05, 1.04, 1.06, 1.06 and 1.43 for the F/Y 2003/2004, 2004/2005, 2005/2006, 2006/2007 and 2007/2008 respectively. The average ratio is 1.11.

*From the above calculation we can say that NIBL is low levered firm with comparison to rest two firms since it has used less long term debt than that of NBL and HBL.*

#### **4.1.4 Interest Coverage Ratio**

The interest coverage ratio is useful tool to measure long-term debt serving capacity of the firm. It is also called interest on ratio. Interest is fixed charges of the companies, which is charged in long term and short-term loans. Generally, interest coverage ratio measures the debt serving capacity of the firm and it is concerned with long-term loans. It shows how many times the interest charges are covered by EBIT out to which they will be paid. This ratio uses the concept of net profit before tax because interest is tax deductible or tax is calculated after paying interest on loan. This ratio examines the interest paying capacity of the firm by how many times the interest charges are covered by EBIT.

Interest coverage ratio is calculated, dividing EBIT by interest. So it is necessary to analyze EBIT and interest. This ratio is useful to measure long-term debt serving capacity of the firm. The high ratio shows that the firm may imply unused debt capacity and the firm has greater capacity to handle fixed liabilities of creditors whereas, low ratio is a signal that the firm is using excessive debt and does not have the ability to offer assured payment of interest to the creditor. The calculated interest coverage ratios are presented in the following table:

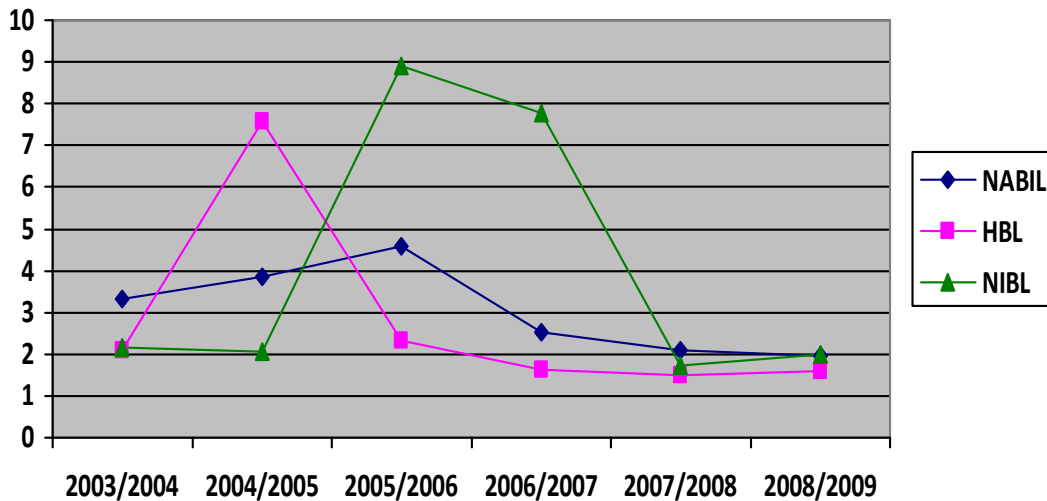


**Table 4**  
**Interest Coverage ratio**

Fiscal Year	Interest Coverage ratio (times)		
	NABIL	HBL	NIBL
2003/2004	3.31	2.09	2.16
2004/2005	3.87	7.58	2.07
2005/2006	4.60	2.32	8.92
2006/2007	2.54	1.64	7.76
2007/2008	2.09	1.51	1.74
2008/2009	1.97	1.61	1.99
Average	3.06	2.79	4.11

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

**Fig: 11**  
**Interest Coverage ratio**



*In table 5 the average ratio of NABIL is 2.90 which imply no. of times of interest covered by its EBIT. The interest coverage ratio of NABIL shows increasing trend beside last F/Y. The ICR of NABIL in year 2002/2003 is 3.31 times which increases to 3.87 times in F/Y 2003/2004 and 4.60 times in 2004/2005. Then it decreases gradually to 2.54 times in 2005/2006, 2.09 times in 2006/2007, 1.97 times in 2007/2008 and 1.90 times in the year 2008/2009 respectively. It shows that NBL is capable and it is good indication because higher ratio is preferable.*

*In case of HBL the ICR is 2.09, 7.58, 2.32, 1.64, 1.51, 1.61 and 5.98 times in the year 2002/2003, 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008 and 2008/2009 respectively. The average calculated ratio is 3.25 times. This implies company's available profit can meet the debt amount.*

*In case of NIBL the ICR is 2.16, 2.07, 8.92, 7.76, 1.74, 1.99 and 1.56 times in the year 2002/2003, 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008 and 2008/2009 respectively. Here the ratio shows slightly fluctuating trend. But it is in decreasing trend in last three F/Y of the sample period and also the available profit can meet the debt amount.*

*The ratio between three banks shows that there is enough profit to meet the claim of the creditors. Between three firms the ICR of NABIL is greater.*

#### **4.1.5 Return on Share Holders' Equity**

Shareholder's fund represents that part of long-term source of funds, which is calculated by issuing equity shares and preference share. Shareholders are actually the owners of the company. Shareholders have ultimate claim in the return of the company. To measure the return earned by the shareholders, return on shareholders' equity is used or this ratio is calculated to find out the profitability on the owners' capital or investment.

If the companies earning is good, shareholders' earning is greater than outside investors because they are ultimate holders and they are bearing high risk as well. But outside investors get return before the owner that is fixed. Shareholders get the return after paying the fixed interest charge to the creditors and tax to the government. Earnings after tax(EAT) is the profit of the shareholders. Therefore this ratio is calculated on the basis of EAT. In this study the sampled companies have not employed the preference share thus it includes only return on shareholders' equity.

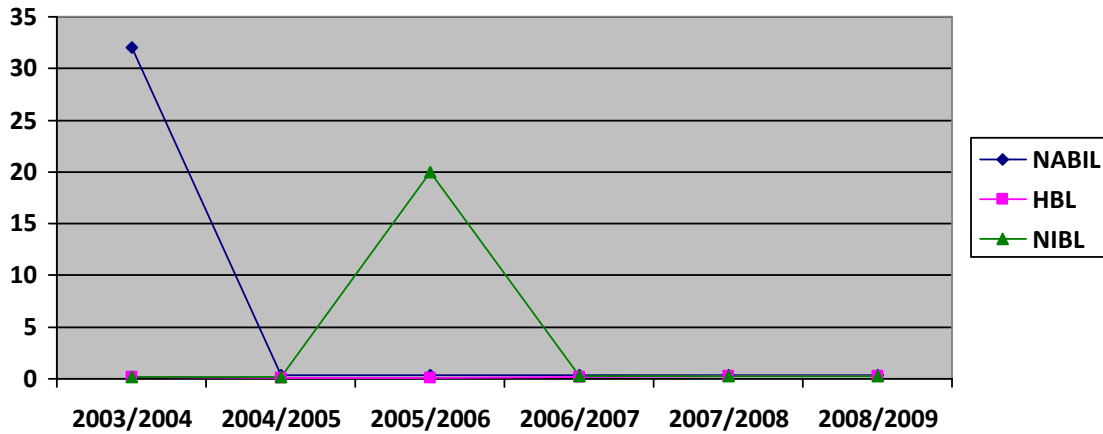
The high return on shareholders' equity (ROE) represents the high profitability of the firm and vice versa. So ROE is desirable from the point of view of the owner of the company. This ratio can be calculated simply dividing earning after tax by shareholders' equity, which is presented in the following table:

**Table 5**  
**Return on Shareholder's Equity**

Fiscal Year	Return on Shareholder's Equity (times)		
	NABIL	HBL	NIBL
2003/2004	0.32	0.20	0.18
2004/2005	0.31	0.11	0.21
2005/2006	0.31	0.12	0.20
2006/2007	0.34	0.16	0.25
2007/2008	0.33	0.23	0.27
2008/2009	0.31	0.25	0.26
Average	0.32	0.18	0.23

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

**Fig: 12**  
**Return on Shareholder's Equity**



The Table 5 exhibits return's on shareholder's equity of sample companies. In the context of NABIL, it has a fluctuating trend. In the fiscal year 2003/2004, the ratio is 32% that imply that one hundred investment by shareholder's equity earned 132. In F/Y 2004/2005 and 2005/2006 it decreased to 31%. Again it increased to 34% in F/Y 2006/2007 and further decreased to 33% and 31% in 2007/2008 and 2008/2009 respectively. The average ratio is 32%.

Similarly, HBL shows increasing trend. The ROE is 0.2, 0.11, 0.12, 0.16, 0.23 and 0.25 in F/Y 2003/2004, 2004/2005, 2005/2006, 2006/200, 2007/2008 and 2008/2009 respectively. Its average ratio is 18%.

In case of NIBL, ROE is in increasing trend for first two years and then it reaches to 0.21 in the F/Y 2004/2005. Then it decreases to 0.20 in the following year. ROE of NIBL then again increases to 0.25, 0.27 and 0.26 in the year 2006/2007 to 2008/2009 of sample period respectively. The average ROE is 23%. By analyzing the above calculation, it is found that the return earned by shareholders of HBL is highly greater.

#### 4.1.6 Earning Per Share (EPS) Analysis

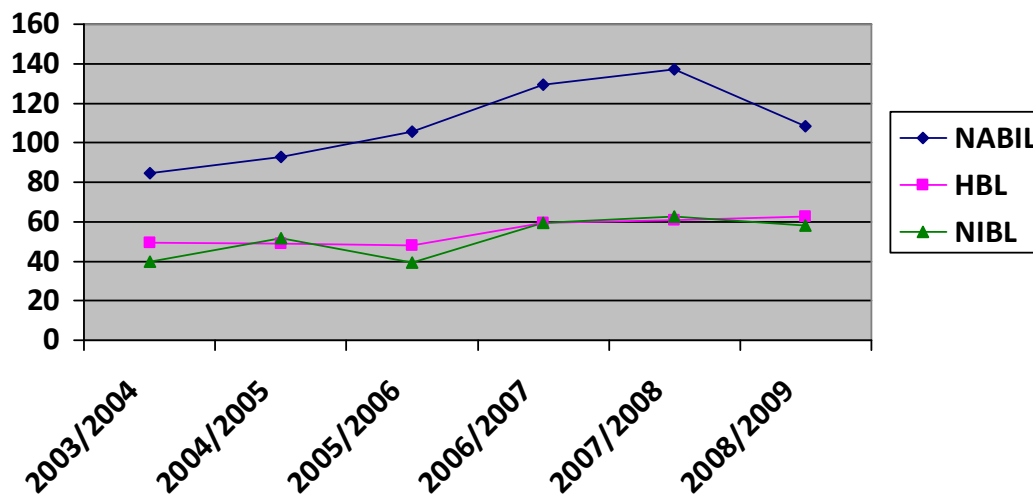
The profitability of bank from the point of view of the ordinary shareholders is earning per share. The ratio explains net income for each unit of share. Earnings per share of an organization gives the strength of the share in the market. It shows how much theoretically belongs to the ordinary shareholders.

**Table 6**  
**Comparative Earnings Per Share**

Fiscal Year	Earnings Per Share (In Rupees)		
	NABIL	HBL	NIBL
2003/2004	84.66	49.45	39.56
2004/2005	92.61	49.05	51.70
2005/2006	105.49	47.91	39.50
2006/2007	129.21	59.24	59.35
2007/2008	137.08	60.66	62.57
2008/2009	108.31	62.74	57.87
Average	109.56	54.84	51.76

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

**Fig: 13**  
**Comparative Earnings Per Share**



The Earning per share of NABIL are Rs 84.66, Rs 92.61, Rs 105.49, Rs 129.21, Rs 137.08 and Rs 108.31 in the F/Y 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008 and 2008/2009 respectively. The average EPS is Rs 109.56. The overall trend is increasing till 2007/2008 then the trend is decreasing. The highest EPS is Rs 137.08 in F/Y 2007/2008.

Similarly, the earning per share of HBL in the years 2003/2004, 2004/2005, 2005/2006, 2006/2007 and 2007/2008 are Rs 49.45, Rs 49.05, Rs 47.9, Rs 59.24, Rs 60.66 and Rs 62.74 Rs 61.04 respectively. The average EPS is Rs 54.84.

The Earning per share of NIBL are Rs 39.56, Rs 51.70, Rs 39.50, Rs 59.35, Rs 62.57 and Rs 57.87 in the F/Y 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008 and 2008/2009 respectively. The average EPS is Rs 51.76. Here the overall trend is fluctuating. EPS first increases and reaches to Rs 51.70 in 2004/05 and then it decrease to Rs 39.50 in the following year. Again it increases to Rs 59.35 and Rs 62.57 in the F/Y 2006/2007 and 2007/2008 respectively. The EPS again decreases to Rs 57.87 in the F/Y 2008/2009.

*Between all three banks EPS of NABIL has the highest Rs 109.56 average which shows NABIL is most profitable.*

#### **4.1.7 Dividend Per Share (DPS) Analysis**

Dividend per share is evaluated to know the share of dividend that the shareholders received in relation to the paid up value of the share. Dividend per share is the earning distributed to ordinary shareholders divided by the no. of ordinary shares outstanding.

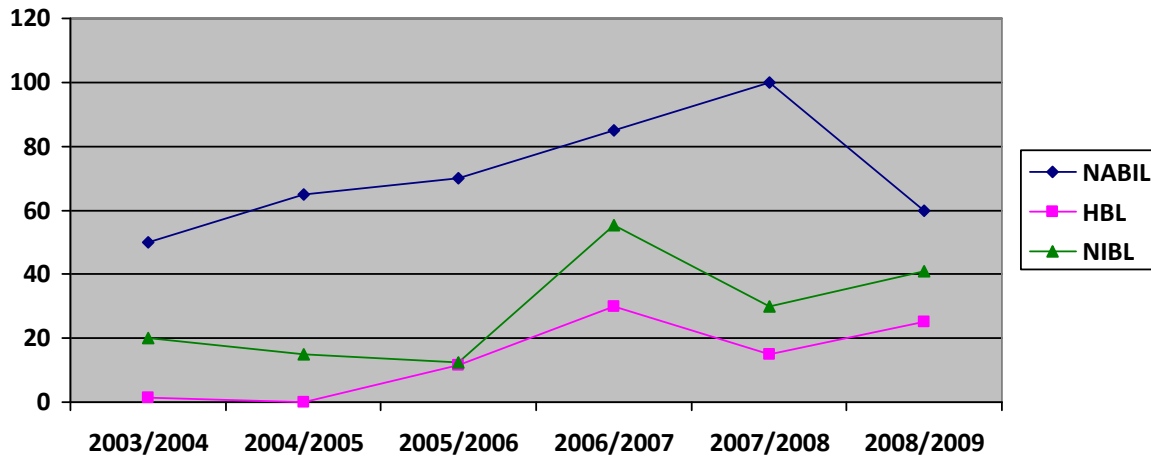
**Table 7**  
**Comparative Dividend per Share**

Fiscal Year	Dividend Per Share (In Rupees)		
	NABIL	HBL	NIBL
2003/2004	50	1.32	20
2004/2005	65	0	15
2005/2006	70	11.58	12.50
2006/2007	85	30	55.46
2007/2008	100	15	30
2008/2009	60	25	40.83
Average	71.67	13.81	28.97

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*



**Fig: 14**  
**Comparative Dividend per Share**



*The dividend per share of NABIL are Rs 50, RS 65, Rs 70, Rs 85, Rs 100 and Rs 60 in the years 2003/2004, 2004/2005, 2005/2006, 2006/200, 2007/2008 and 2008/2009 respectively. The average DPS is Rs 71.67. The highest DPS paid is in the financial year 2007/2008.*

*Similarly, HBL shows a DPS of Rs Rs 1.32, Rs 0.00, Rs 11.58, Rs 30, Rs 15, Rs 25 and Rs 30.91 in the F/Y 2003/2004, 2004/2005, 2005/2006, 2006/200, 2007/2008 and 2008/2009 respectively. The average DPS is Rs 13.82. HBL has paid a highest dividend of Rs 30 in the year 2006/2007 whereas it has paid no dividend at all in the year 2004/2005.*

*The dividends per share of NIBL are Rs 20, Rs 15, Rs 12.50, Rs 55.46, Rs 30 and Rs 40.83 in the F/Y 2003/2004, 2004/2005, 2005/2006, 2006/200, 2007/2008 and 2008/2009 respectively. The average DPS is Rs 28.97. The highest DPS paid is in the financial year 2006/2007.*

*The table shows that NABIL has paid the highest average dividend of Rs 71.67. It shows that the more investors are likely to be attracted in investing at NABIL.*

## 4.2 Analysis of Financial Leverage

When the company employs debt or other fund carrying fixed charges i.e. interest in the capital structure, financial leverage exists. If the financial charge is high the company can have advantage of tax shield but it will affect the owner's return i.e. net profit as well. Financial leverage explains the relationship between earnings before interest and taxes and net profit of the company.

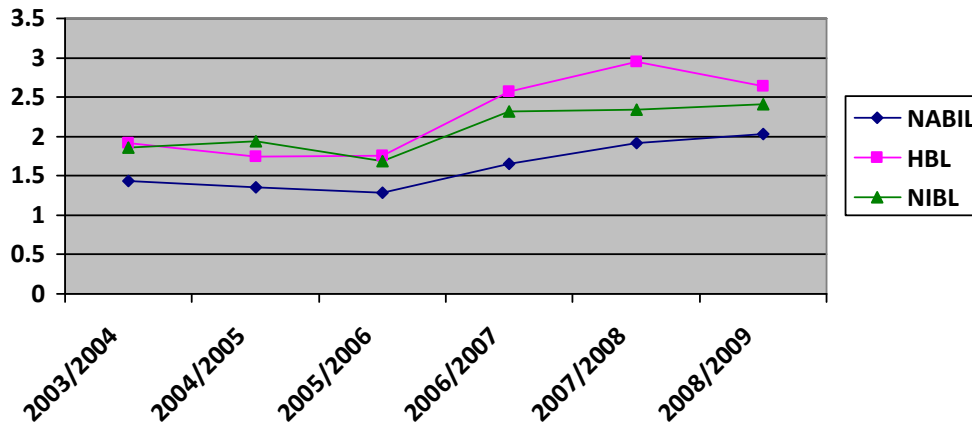
Either dividing percentage change in EPS by percentage change into EBIT or dividing percentage change into EBT by EBIT can calculate degree of financial leverage. In this analysis of financial leverage second method is chosen. High the financial leverage, high will be the financial risk and also high will be the shareholders' return. The degree of financial leverage of Sample Company is presented below:

**Table 8**  
**Degree of Financial Leverage**

Fiscal Year	Degree of Financial Leverage (times)		
	NABIL	HBL	NIBL
2003/2004	1.43	1.92	1.86
2004/2005	1.35	1.74	1.94
2005/2006	1.28	1.76	1.69
2006/2007	1.65	2.57	2.32
2007/2008	1.92	2.95	2.34
2008/2009	2.03	2.64	2.41
Average	1.61	2.26	2.09

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

**Fig: 15**  
**Degree of Financial Leverage**



Above calculated DFL of NABIL has decreasing trend in first four years of sample period and is increased in F/Y 2006/2007. In the fiscal year 2003/2004 the DFL is 1.43 times. In second year the DFL is 1.35 times in the fiscal year 2004/2005. In the F/Y 2005/2006, 2006/2007, 2007/2008 and 2008/2009 the DFL is 1.28, 1.65, 1.92 and 2.03 times respectively. The average DFL is 1.61 times.

The trend of HBL is quite fluctuating. The DFL of HBL in the fiscal year 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008 and 2008/2009 are 1.92, 1.74, 1.76, 2.57, 2.95 and 2.64 times respectively. The average DFL of HBL is 2.26 times.

The trend of NIBL is also fluctuating. In case of NIBL, DFL in the fiscal year 2003/2004, 2004/2005, 2005/2006, 2006/2007, 2007/2008 and 2008/2009 are 1.86, 1.94, 1.69, 2.32, 2.34 and 2.41 respectively. The average DFL of NIBL is 2.09 times.

Analyzing the above data, it is found that the DFL of HBL is greater than NABIL and NIBL. It shows that HBL has greater burden of financial charges.

### 4.3 Correlation Analysis

Correlation analysis enables us to have an idea about the degree and direction of the relationship between two or more variables. The correlation is a statistical tool which studies the relationship between two or more variables and correlation analysis involves various methods and techniques used for studying and measuring the extent of the relationship between two or more variables. It is denoted by 'r'. However it fails to reflect upon the cause and effect relationship between the variables. Although there are three types of correlation i.e. simple, partial and multiple but here the focus is on simple correlation based on 'Pearson's Coefficient of Correlation'. In the following section correlation between different variables are calculated and presented of the sample companies.

**Table 9**

<b>Bank</b>	<b>Correlation Coefficient</b>
NABIL	-0.36
HBL	-0.18
NIBL	0.90

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

Table 9 represents that Nabil bank and Himalayan bank are negatively correlated whereas, Nepal Investment bank are positively correlated with shareholder's equity to operating profit. NIBL is highly correlated in terms of shareholder's equity and operating profit. Whereas, Nabil bank and HBL is less correlated in terms of shareholder's equity and operating profit.

#### 4.4 Simple Regression Analysis

Regression analysis is a mathematical measure of the average relationship between two or more variables in terms of the original units of the data. The regression analysis confined to the study of only two variables at a time is termed as simple regression. In regression analysis there are two variables. The variable whose value is influenced is dependent variable and the variable which influences the values is independent variable. Table 10 gives the result of simple regression analysis, in which ROE is dependent variable for all the banks.

**Table 10**

Fiscal Year	Regression Analysis (times)		
	NABIL	HBL	NIBL
2003/2004	0.318	0.131	0.183
2004/2005	0.319	0.150	0.201
2005/2006	0.320	0.169	0.219
2006/2007	0.321	0.188	0.237
2007/2008	0.322	0.207	0.255
2008/2009	0.323	0.226	0.273
Average	0.321	0.179	0.228

*Source: Annual Reports of NABIL, HBL & NIBL from FY 2003/04 to 2008/09.*

Table 10 represents that Nabil bank's trend analysis is 0.318 in F/Y 2003/2004. The regression analysis is 0.319, 0.320, 0.321, 0.322 & 0.323 in the following years *2003/2004, 2004/2005, 2005/2006, 2006/200, 2007/2008 and 2008/2009* respectively.

In case of HBL, trend analysis is 0.131 in F/Y 2003/2004. Its regression analysis increases with the increasing trend. In 2004/2005 its trend analysis is 0.150 and 0.169 in F/Y 2005/2006. In the following year 2006/2007, 2007/2008 & 2008/2009 it is 0.188, 0.207 & 0.226 respectively.

Similarly, NIBL trend analysis is 0.183, 0.201, 0.219, 0.237, 0.255 & 0.273 in F/Y *2003/2004, 2004/2005, 2005/2006, 2006/200, 2007/2008 and 2008/2009* respectively. Nabil has high regression analysis than any other banks in terms of ROE. Nabil, HBL and NIBL all three banks follows increasing trend analysis.

#### **4.5 Major Findings**

- The average Debt equity ratio of NABIL is 7.57. It shows that the creditors of NBL have claims on the assets of NABIL, where the last three years ratio are lower than average ratio, it indicates that claim of owners is higher than the creditors. The average D/E ratio of HBL is 3.62, which implies that the claim of creditors is 362% in compare to owner of the company. The average D/E ratio of NIBL is 5.26, which implies that the claim of creditors is 526% in compare to owner of the company.
- Long term Debt to capital employed ratio highlights the portion of fund financed by long term Debt in the capital employed by the firm. The data shows NABIL has fluctuation trend. Its average ratio is 8.47. Similarly, trend of Long term Debt to capital employed ratio of HBL shows a decreasing trend. Its average ratio is 5.41 and in case of NIBL the ratio is in fluctuating trend. Its average ratio is 5.69, which implies portion of fund financed by long-term debt in the capital employed is average for the sample period.

- Long term Debt to Total Debt ratio indicates what percentage of Total Debt is covered by long-term debt of the firm. The trend analysis of NABIL shows fluctuating LTD/TD ratio. LTD/TD in 2003/2004 is 1 that means contribution of LTD is 1 and the remaining portion contributed by current liabilities. NABIL has 1.13 of average ratio. HBL shows constant ratio. Its average ratio is 1.05. NIBL also shows the fluctuating trend of LTD/TD ratio. Its average ratio is 1.13. In these cases the total debt is contributed by current liabilities to large extent.
- The average interest coverage ratio of NABIL is 2.90, which imply no. of times of interest covered by its EBIT. The interest coverage ratio of NBL shows an increasing trend besides last F/Y. It shows the capabilities of NABIL. In case of HBL, the average ratio is 3.25; this implies company's available profit can meet the debt amount. The interest coverage ratio of NIBL shows slightly fluctuating trend and its average ratio is 3.74. ICR of NIBL is found to be greater than HBL and NABIL.
- Return on shareholder's equity of NABIL has fluctuating trend. The average ratio is 32% that imply one hundred investments by shareholder's equity earned Rs 132. Similarly, HBL shows decreased ratio in first two years then it gradually increases to 2.28 till 2008/2009. Its average ratio is 48%. ROE of NIBL shows fluctuating trend. Its average ratio is 23%. Analyzing between three companies return earned by shareholders of HBL is highly greater.
- Earnings per share of an organization shows how much earning belongs to the ordinary shareholders. The average earning per share of NABIL is Rs 109.16. Similarly, the average earning per share of HBL is Rs 55.73 and that of NIBL is Rs 49.71. Between them NABIL has the higher EPS.

- The average dividend per share of NABIL is Rs 66.43. Similarly, HBL shows an average DPS is Rs 16.26 and that of NIBL is Rs 27.68. Between three of them, NABIL has paid higher dividend.
  
- When the company employs debt or other fund carrying fixed charges in the capital structure, financial leverage exists. From the degree of financial leverage, it can be concluded that HBL is bearing high financial risk because it has used more long term debt. NABIL and NIBL have employed lesser long term debt than that of HBL so they have lesser financial risk.
  
- The correlation between shareholder's equity and operating profit is positive for NABIL, HBL and NIBL.



## **CHAPTER V**

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

This is the last chapter which includes the briefing about the entire chapter ahead known as summary. To know the actual theme of the study, following four chapter viz: Introduction, Literature Review, Research Methodology and Analysis the study is summarized. Then conclusion is drawn from following analysis part and comparing the theoretical aspect and analysis.

#### **5.1 Summary**

The capital structure of a firm involves the choice of an appropriate mix of different sources of funds i.e. owner funds and outsider funds. The selection of the capital structure will obviously depends on the bearing that it has on the firm's objectives of maximizing of shareholder's wealth. A financial mix which leads to maximization of shareholders wealth as reflected in the market price of share is termed as an optimal capital structure. An ideal capital structure should be determination of proper balance between borrower's fund i.e. debt capital and owner's fund i.e. equity, which maximize the shareholders wealth and minimizes the composite cost of capital.

This study analyze about capital structure of three commercial banks; Nabil Bank Ltd, Nepal Investment Bank Ltd and Himalayan Bank Ltd. To make the study reliable the whole study has been divided into five chapters. This study endeavors to evaluate capital structure of commercial banks with reference to the sample companies. The main objectives of the study are to evaluate and analyze capital structure ratios of commercial banks. For the realistic study, review of various books, research studies and articles have been used. Various steps to adopt a systematic analysis have been explained in the third

chapter. Most of the data used in this study are secondary in nature. Seven years data are taken as sampled years, which are analyzed by using

financial and statistical tools such as Ratio analysis, Leverage analysis, Correlation analysis and Regression analysis etc. it employed simple regression model to evaluate

the relationship between debt equity ratio with return on equity which are presented in the appendix. Finally, summary, conclusion and recommendations of the study are presented separately to understand about the whole study.

## **5.2 Conclusions**

It's renowned fact, whether we like it or not, the globalization of JVBs/CB is a reality. The growth and increasing integration of the world's economy has been parallel by expansion of global banking activities. Nepal though a developing country couldn't deny the fact that JVBs/CB has running potentially, which is responded by extending loans and developing new, highly innovative financial techniques that laid the foundation for totally new approaches to the provision of banking services. On the basis of entire research study, some conclusion has been deducted.

This study is particularly deals with conclusion about "A Study of capital structure management of commercial banks." The Capital Structure decision is crucial because of the need to maximize returns to various organizational constituencies and also because of the impact such a decision has on an organization's ability to deal with its competitive environment. This present study evaluated the capital structure ratios and the relationship between capital structure and profitability of firms. The study reveals that the companies are financially leveraged with a large percentage of total debt being short term.

Commercial bank has been using debt. The higher D/E ratio constitutes that the outsider's claim in total assets of the banks in owner's claim.

On an average NABIL constitutes 7.57 times of D/E ratio compare to 3.62 times of D/E ratio of HBL and 5.26 times of D/E ratio of NIBL. The ICR shows that all the

three banks are able in paying interest but in comparison NIBL is operating efficiently. The average ROE of the Nabil, HBL and NIBL are 0.32, 0.48 and 0.23 times respectively. The shareholder's equity and operating profit are positively correlated with NABIL, HBL and NIBL.

### **5.3 Recommendations**

In this section of the study, it endeavors to recommend few points that can be helpful to stakeholders as well as to the company. These recommendations are based upon above calculations and drawn conclusions. These recommendations are guidelines which would be helpful in taking prompt and appropriate decision about capital structure.

**These recommendations are given below;**

**5.3.1** The Debt ratio of about 33% is considered appropriate (source; J. Fred Weston and T.E. Copeland "Managerial Finance" Second U.K. edition). So this 33% ratio can be assumed as standard ratio while analyzing. With comparison to above three of the firm have low ratio. This shows that the share of total assets financed by outsider's fund is very low.

**5.3.2** It indicates that the owner's claim on total assets of the company is higher than creditors claim. If the company is unsuccessful to yield a substantial percentage of return, the owners should bear heavy losses but the creditors

incur only the moderate loss. Therefore, it is recommended that all the three firms mainly Nabil bank should raise their debt ratio.

**5.3.3** Banks should be aware that the debt financing results in tax saving on interest charges that would help to maximize profit.

**5.3.4** The capital structure of the banks are found to be volatile over the study period so company should try to use stable capital structure as far as possible.

**5.3.5** It is recommended that capital structure decision of commercial banks should be based on different factors like the agency cost, cost of capital

and value of the firm. Optimal capital structure minimizes agency cost, cost of capital and maximizes value of the firm.

**5.3.6** The cost of capital should be considered while taking financing decision by the commercial banks.

**5.3.7** It will be better for all the three banks, to open branches in other cities and rural areas in order to find profitable opportunities.

**5.3.8** Government should formulate plans and policies and launch various programs for the growth of development banks focusing on private sector development banks.

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