

# **CAPITAL STRUCTURE MANAGEMENT IN NEPAL**

(A CASE STUDY ON NABIL, NIBL, NEA, NTC & HGICL)

Submitted By

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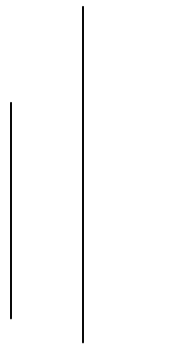
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## **VIVA-VOCE SHEET**

We have conducted the viva-voce examination of the thesis

presented by

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entitled

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**(A case study on NABIL, NIBL, NEA, NTC & HGICL)**

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

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## **RECOMMENDATION**

This is to certify that the thesis  
submitted by  
**Ms. Aisha Malik**  
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### **CAPITAL STRUCTURE MANAGEMENT IN NEPAL**

**(A case study on NABIL, NIBL, NEA, NTC & HGICL)**

has been prepared as approved by this campus in the prescribed format of the Faculty of Management, Tribhuvan University. I recommend this thesis for acceptance and forwarded for examination.

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## **DECLARATION**

I hereby declare the work reported in this thesis entitled "**CAPITAL STRUCTURE MANAGEMENT IN NEPAL (A case study on NABIL, NIBL, NEA, NTC & HGICL)**" submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Degree of Masters in Business Studies (M.B.S.) under the supervision of Dr. Kamal Das Manandhar and Mr. Dhruva Subedi of Shanker Dev Campus.

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## ABBREVIATIONS

Co.	:Company
F/Y	:Fiscal Year
Fig.	:Figure
HGICL	:Himalayan General Insurance Company Limited
i.e.	:That is
Ltd.	:Limited
Mio.	:Million
NABIL	:Nabil Bank Limited
NEA	:Nepal Electricity Authority
NIBL	:Nepal Investment Bank Limited.
NTC	:Nepal Tele Communication
No.	:Number
NPR	:Nepalese Rupees
Rs.	:Rupees
S.N.	:Serial Number
Vol.	:Volume
Yr.	:Year

## **CHAPTER –ONE**

### **1. INTRODUCTION**

#### **1.1 Background of the study:-**

Economic development is the backbone of the development of a nation. The economic development of Nepal is backward in comparison to other developed and developing countries. For the purpose of development of the country many business houses and companies are being established rapidly under different acts. Economic development is a challenging task in Nepal not just due to lack of resources but it is due to lack of proper utilization of the available resources in efficient manner. This problem needs to be researched and requires proper planning and strategy development. Every development program needs capital however capital could not be collected easily. Due to the scarcity of capital it becomes necessary to collect the fund scattered among different individuals and groups. Capital collection and its mobilization is essential condition for the uplifting of the nation.

The collected capital may be big or small in amount which builds up the financial power. It would be worthy and productive if such amount is collected from various people and utilized in proper way.

Banks are essential financial institutions. They are the principal source of credit that provide short term working capital finance. They contribute to the economy in different manner. They collect money from savers and invest in lucrative sectors. They make profit by paying less for savings than what they charge to the borrowers. Therefore, banks could play a key role in reducing poverty through income distribution and by producing income opportunities.

Commercial banks are Business Corporations regulated and controlled by the central bank. They need to be studied constantly in comparison to other firms as they hold more importance than others. They hold saving of the regulators and the common people which determine the health of the economy, maximizing the value of shareholder's wealth at an accepted level of risk.

The Nepalese economy is contributed in great number by the industrial and public sector. Nepal is in developing stage of industrialization featured by the lack of adequate human, physical and financial resource and even due to its geographical structure. Environment encouraging the industrial growth is missing in the picture.

The manufacturing sector in Nepal is small contributing 8% of its share to the total G.D.P. It consists mainly of small industries. Capital goods industries are few in number. Most of the sectors manufacture food even though the structure is changing. This sector consists of five sub-sectors namely

- a. Food, Beverage and Tobacco
- b. Textile and garment
- c. Chemical
- d. Mechanical Engineering
- e. Electrical and Electronics

The production growth has been significant in paper, food, footwear, iron and steel, beverage and chemical industries.

Fund is the most important criteria to operate any kind of business or organization. It can be raised by two sources i.e. Equity Capital and Debt Capital. These two sources of capital comprise the total capital structure. Capital Structure refers to the composition of all source and amount of funds collected to use or invest in business. In other words Capital structure refers to the capital and long-term liabilities of balance sheet. Therefore, it includes shareholder's fund and long term loans.

It is different from financial structure as financial structure includes both long term and short term source of financing while capital structure includes only long term source of financing. Thus, a firm's capital structure is only a part of its financial structure. Thus, the financial structure shows the true picture of organization. It reflects out the short-term obligation and long term sources of fund of the company. Different factor such as sale stability, assets structure, operating leverage, growth rate, profitability, taxes, management attitude, lender attitude, market condition, legal requirement etc should be taken into consideration while designing the capital structure.

Mainly, the capital structure is the mixture of long term debt and equity capital. The debt finance is borrowed capital. For the employment of such capital in the

company, we have to pay the fix charge periodically and with principal at the maturity date. Equity capital provides the ownership to the shareholders. The cost of such fund to the company is cost of the capital. The decision making, access of choosing funds with the best capital mix among various alternatives plays an important role in the capital investment decision of the company. That is the optimum capital structure when the shareholder's return is maximizes and risk is minimized and the shareholder's wealth is maximized. Capital structure is the mixture of the external and internal finance.

The term capital structure is also known as capital plan or leverage. The financing decision of a firm is one of the firm's objectives of shareholder's wealth maximization. The capital decision of the firm relates to choice of proportion of debt and equity to finance the investment requirement. A proper balance between debt and equity is necessary to ensure a trade off between risk and return to the shareholders.

"Capital Structure decisions are intertwined with other corporate decisions". (Graham & Harvey, 2001: 187). "The financing decision of a firm involves the choice of an appropriate mix of different sources of financing namely, ownership funds and outsider funds. Capital structure decision of an enterprise affects the cost of capital through the risk complexion and ultimately the value of the enterprise. So, finance manager should try to minimize the overall cost of capital and maximize value of a firm by optimizing the capital structure. The highly levered firms are more likely to keep away from profitable investment opportunities". (Myer, 1977: 147-175). The selection of capital structure will obviously depend on the bearing that it has on the firm's objective of maximization of shareholder's wealth.

The Nepalese economy is quite dynamic with favorable economic indicators viz, stable prices, strong balance of payments position and average annual economic growth of more than 4 percent during the decade of the 1990's. These descriptions however hide the fact that Nepal is a least developed country with widespread poverty and a gross national per capita income of USD 240 in fiscal year 2004/05, with the country ranking 136 out of 177 countries in the United Nation Development program's human development index.

Nepal had a late start in development. Its pace of industrialization has been slow. The history of industrial growth in Nepal can be divided in three distinct eras, eras of

crafts and cottage industry, era of haphazard industrial growth and era of planned industrial growth. However, growth of industries in Nepal has been a slow process. Various censuses of manufacturing establishment indicate that the number of manufacturing establishments has been declining in recent years. The mortal rate has been high for both manufacturing and service providing industries. The targets and programs set by various development plans for industrial development were ambitious. The achievements have been poor. Industrial infrastructure is in developing stage in Nepal. The enabling environment for industrial growth is missing. So in recent years, it is felt that the competitive environment is necessary for growth and survival of industries.

In order to create an environment necessary to enable the private sector to play a principle role in the industrialization endeavor of the country, the public sector industries will mostly be privatized and no private sector industries will be nationalized. At the same time the government will make no interference in fixing the price of industrial product other than creating open and competitive atmosphere. If necessary, during the initial period of industrialization, government may establish in the form of joint venture either with the national or foreign private sector and such industries will also be gradually transferred to private sector. As we know that for the industrialization, the banking sector play a vital role so the government should inspire the banks to make investment in productive sector rather than in non-productive sector which is the major problem for the development and survival of industry in current situation.

Within a period of two and half decades, the Nepalese financial system has grown significantly both in terms of business volume and the size of assets and market. The period saw a number financial institutions coming into existence with varied nature of operations and offering a wide range of financial service. Since the second half of the 1980, significant achievement have been made in Nepalese financial system in Mid-July 2007, the Nepalese financial sector comprised of commercial banks, development banks, finance companies, co-operatives and non- government organization and some other non-banking financial institutions. The other non-deposit taking financial institutions include 18 insurance companies, one Employee Provident Fund, one Citizen Investment Trust, one Deposit Insurance and Credit Guarantee Corporation, one Nepal

Stock Exchange Limited, one Credit Information Bureau, 116 postal saving offices and one Rural Self Finance Fund. Commercial banks, development banks, finance companies, co-operatives and non government organizations licensed to carry out limited banking business come under the regulatory and supervisory jurisdiction of NRB.

## **1.2 History of Bank**

Banking has a long history. The origin of bank is not a new phenomenon. There was a crude form of banking even in ancient VEDIC era. The terms in banking such as pledges, deposits, rate of interest, loans etc can be found in the ancient Hindu Epic **ManuSmriti**. Even in 300 B.C. it was in existence in India, China, Arabia, Greece, Persia and Egypt even though the procedures of banking were not organized. On the span of time, it has been expanding. In accordance with the practical testable origin and development banking institution of the world, “The Bank of Venice of Italy” was established in 1157 A.D. as the first banking institution. The second banking institution namely “The Bank of Barcelona of Spain” was established in 1411 A.D. whereas The Bank of England of United Kingdom was established in 1694 A.D. as a joint stock bank and later on in 1844 A.D. The Bank Of England became the first central bank in the world.

Nepal Bank Limited was the first and the only bank to be established in Nepal in 1944 B.S. After that Nepal Rastra Bank was established in 2013 as the central bank of Nepal. Rastriya Banijya Bank was established in 2022 B.S. under full government ownership. In 2031 B.S. government issued a commercial bank act 2031. After the eighties decade, the government of Nepal adopted liberal economic policy under which it initiated foreigners to make investment in Nepal.

## **1.3 Growth Of Industries in Nepal**

The industrial development of Nepal is not old as the history begins with the establishment of the Biratnagar Jute Mill and Industrial Council in 1936 A.D. Till 1935 crafts and cottage industries were established. The purpose was mainly consumption. After the Act passed in 1936 “Gharelu Ilam Prachhar Adda” was established in 1940



and then Morang Cotton Mill, Morang Sugar Mill, Juddha Match Factory and many other industries were established .Thereafter the industrial growth accelerated.

Pace of the industrial development accelerated in Nepal with the launching of first year plan (2013-2018) .The plan aimed to promote technical training and equipment but didn't prove to have achieved much.

During second 3 year plan (2019-2022 B.S.) sugar, metal, handicrafts, hotels, matches, textiles biscuits and confectionery industries were established. It emphasized on the improvement in the industrial practices and settlement of the import and export industries (2022-2027).

The third 5 year plan emphasized on establishment of new industries in public sectors such as agricultural tools, bricks, leather and shoe factory. In private sectors, the growth in the textile and steel industries was remarkable.

The fourth 5 year plan (2027-2032) was launched in 1970. It could not contribute much in the private sectors. The industries established in this phase were beer factory, rice mills, flour mill etc. New industrial policy was announced in 1974 and replaced the Industrial Enterprises Act in 1973.

During the fifth 5 year plan (2032-2037) the growth of 6.7% was seen in the production in the private sectors .Although the development in private sector was poor, very few small scale industries were established during this period.

The sixth 5 year plan (2037-2042) aimed to promote export industries. Lumbini Sugar Factory, Bhrikuti Paper Industry, Nepal Paper Industry, Herbs Production and Processing Company Limited were established in public sector whereas the goods established in private sector were biscuits, sweet, shoes etc.

The seventh 5 year plan (2042-2047) emphasized on the contribution to G.D.P. Woolen carpet, ready made garment, distillery, cement etc were established in private sector. Udaypur Cement Factory, Industrial District Management Limited and Economic Services Center were also established.

The objectives of the eighth 5 year plan (2049-2054) were to generate extra income through developing the industrial sector, improve the availability of resources for cottage industries and to promote the large scaled industries. During this phase, 16 big

industries such as Bansbari Leather & Shoe Factory, Harisiddhi Brick Factory, Seti Cigarette Factory etc were privatized.

The Ninth plan (2054-2059) is the recently completed plan. This plan is seen quite successful to achieve its target as the key policies were privatization of public enterprises. 16 enterprises out of 30 targeted public enterprises have been privatized. The industrial production contributed 9.7% increase to G.D.P.

The Tenth plan started with the objective to increase the production in private sectors targeting to develop cottage and small scale industries through generating employment opportunities in industrial sector as well. The Tenth five year plan is has been completed eventhough there are a number of problems in overall development of industrialization. The pace of growth is very slow as compared to other developed countries. However the target set by various development plans are ambitious. The infrastructure is in infant stage which is a matter of great concern.

#### **1.4 Statement of Problems:**

The capital and assets structure of any organization can be effective if evaluated on the basis of Balance Sheet, Profit and Loss Account, size and type of the organization. Every organization can benefit if optimal capital mix is maintained. Very few organization use only debt capital, some use only debt capital and some use both debt and equity capital. Generally higher the debt more is the risk to the company even though high debt has its own advantage on the other hand. Balance capital is one of the important factors for the success of a firm. Hence the study will be focused on the following problems related to the subject matter:

- a. How is capital structure managed in Nabil Bank Ltd., Nepal Investment Bank Ltd., Nepal Electricity Authority, Nepal Telecom and Himalayan General Insurance Company Limited?
- b. What is the debt servicing capacity of the selected organizations?
- c. What is the trend of composition of assets and capital structure?

- d. What future suggestions and recommendations can be made on the selected organizations?

This study will try to search the solution of the above questions. In addition to this, it will try to search how far the commercial banks, public companies and insurance companies are aware of the importance of the capital structure management and will try to state the earning capacity of the mentioned organizations.

### **1.5 Objectives of the study**

The specific objective of this study is to evaluate the capital structure of Nabil Bank Ltd., Nepal Investment Bank Ltd., Nepal Electricity Authority, Nepal Telecom and Himalayan General Insurance Company Limited. The study helps to improve and maintain or create the perfect situations. Following are the subsidiary objectives to assist the main objectives.

1. To show the trend of composition of assets and capital structure.
2. To analyze the return on equity and assets.
3. To analyze the value of the firm.
4. To analyze the aggregate liability bearing capacity of the selected organizations.
5. To analyze the relationship between liability and assets of the selected organizations.
6. To analyze the profitability of the selected organizations.

### **1.6 Significance of the study:**

The organizations selected for the study hold a strong position in contributing to the uplifting of the economy. Therefore, their financial position is the matter of concern. This study will be beneficial to overview their capital structure management and to formulate future strategies to do much better in their horizon. Not only can the sampled organizations benefit from the study but also the other firms and the new researchers for the review of literature in the near future. Hence, I have chosen the study of capital

structure management as the subject matter and also in the present context it seems relevant.

### **1.7 Limitation of the study:**

The study is made for the partial requirement of Masters of degree in Business Studies (M.B.S.). This research is mainly concerned with the capital structure of the selected organizations. However, some commonly attributed limitations are as follows:

- a. This study covers only a period of 5 years (i.e. FY 2059/60 - FY 2063/64)
- b. The whole study is confined to only two commercial banks, NEA, NTC and one insurance company.
- c. The time frame is limited therefore the study can not cover all the requirement of the subject matter.
- d. For quantitative analysis, SPSS software is used. Hence the limitations of this program are inherent.
- e. The study will be particularly based on secondary data. Therefore the accuracy of the calculation is fully depended on the accuracy of data provided by the concerned organizations.

### **1.8 Organization of the study:**

The study is accomplished according to approved general format of thesis of Tribhuvan University. Formalities and style are those adopted in the study is not new but followed the senior which makes the study possible come in this form and format. This study includes five chapters i.e. introduction, review of literature, research methodology, data presentation and analysis and summary conclusion and recommendation.

Introduction, the first chapter includes background of the study, history of bank, overall industrial growth in Nepal, statement of problems, objective of the study, significance of the study, limitation of the study and organization of the study.

Review of literature, the second chapter deals with the conceptual framework and review of relevant research studies. It includes meaning of capital structure, theory of capital structure, determinants of capital structure, capital structure decision and review of related studies.

Research Methodology, the third chapter deals with interpretation and analysis of major findings. Its main scheme is to describe about the methods and procedures of the study.

Data Presentation and Analysis, the fourth chapter is the heart of the study in which all the relevant collected data are analyzed and interpreted. Mainly different financial and statistical tools are used for the analysis purpose.

Summary, Conclusion and Recommendation, the fifth chapter contains summary and conclusion in accordance of analysis and interpretation of data. After that all necessary recommendations for the concerned authorities and institutions is made.

## **CHAPTER-TWO**

### **2. REVIEW OF LITERATURE**

This chapter is focused on brief discussion about the abstract regarding the theories of capital structure management. Literature review is basically a 'stock taking' work of available literature. To make the research more realistic, review of literature is required. It provides significant knowledge in the field of research. Thus, the review of books, research studies and articles has been used to make clear about the concept of capital structure management.

The purpose of literature review is to find what research studies have been conducted in one's area of study and what remains to be done. It provides foundation to the study. This chapter deals in two sections:

- Conceptual Framework
- Review of related studies

#### **2.1 Conceptual Framework**

In this section, concept, definitions, composition and assumptions of capital structure, theories and approaches of capital structure and checklist for factors affecting capital structure are reviewed.

As the study focuses on capital structure management, here it is most important to open up with the conceptual thought behind it. Capital is a scarce sources and much more essential to maintain smooth operation of any firm. The available capital and financial sources should be utilized so efficiently that could generate maximum return. Capital structure is considered as the mix of debt and equity and to operate in long run prospect, a firm must concentrate in its proportion.

**Van Horne (1999)** has also presented controversial decision about capital structure. According to this decision, financial signaling occurs when capital structure changes. It conveys information to security holders. It assumes symmetric information between management and stock holders. Management behavior results in debt issue are regarded as good news by investors and stock issues as a bad news.

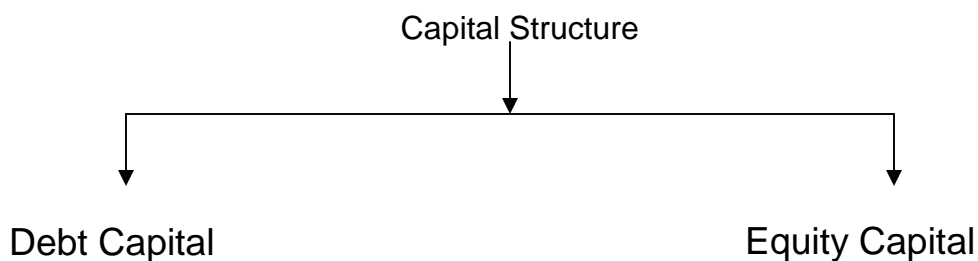
## Concept of Capital Structure

A firm can raise its required funds by the issue of various types of financial instruments. Investors hold different claims on the firm's assets and cash flows thus they are exposed to different degree of risk. Creditors and debt holders have priority claim over the firm's assets and cash flows. The firm is under a legal obligation to pay interest and principle. Debt holders are however exposed to the risk of default. Since, the firm's cash flow is uncertain, there is possibility that it may default in its obligation to pay interest and principle.

"Capital Structure is the combination of long term debt and equity. It is a part of financial structure i.e. comprised to; the total combination of preferred stock, common stock, long term debt and current liabilities. If current liabilities are removed from it we get capital structure." (Mathur, 1979: 693)

A distinction is usually made between financial structure and capital structure. Financial structure refers to all source (both short term and long term) that are used to finance the entire assets of a firm whereas capital structure is taken as the capitalization part of firms total financing which includes only the long term source such as long term debt and equity. Thus, the capital structure can be determined by considering relevant factors and is a part of financial structure.

The composition of capital structure can be presented as shown below



**Fig No. 2.1: Composition of Capital Structure**

The nature of capital structure could differ from one company to the other, which is directly guided, regulated and controlled by the management of the company.

However a reasonable satisfactory capital structure can be determined by considering relevant factors and analyzing the impact of alternative financing proposals on the earning per share.

One of the financial managers principal goals is to maximize the value of the firm's securities. For that purpose, the firm should select a financial mix, financial leverage which will help in achieving the objective of financial management with a view to maximize the value of the share. In order to attain the business goal, the firm should select an appropriate capital structure.

"Given the objective of the firm to maximize the value of the equity share, the firm should select a financial mix capital structure which will help in achieving the objective of financial management." (Chandra, 1985: 176)

"If the capital structure decision affects the total value of the firm, it should select such a financial mix as well as maximize the shareholders wealth. Such a capital structure refers to optimal capital structure." (Khan and Jain, 1995: 473)

"The optimal capital structure has been defined as that mix of debt and equity which will maximize the market value of the company .If such an optimum exists in two fold. It maximizes the value of the company and wealth of the owners; it minimizes the company's cost of capital which in turn increases the ability to find new wealth creating investment opportunities". (Soloman, 1969: 676)

"An optimum capital structure would be obtained at the combination of debt and equity that maximizes the total value of the firm or minimize the weighted average cost of capital." (Pandey, 1995: 11)

"The capital structure is the composition of debt and securities that make up the firm's financing of its assets. Both debt and equity securities are used in most large corporations. The choice of the amount of the debt and equity is made after a comparison on certain characteristics of each kind of security of internal factors related to the firm's operations on of external factors that can affect the firm." (Hampton, 1989: 33)

Thus, the capital structure involves long term financing decision or choice between debt or equity capital. Selection of appropriate mix of debt and equity capital minimizes cost of capital and maximizes value of the firm or shareholder's wealth. The



cost of capital and the value of the firm vary with the changes in capital structure. The cost of capital and capital structure are interrelated and has a joint impact upon the value of a firm. Moreover, capital structure affects financial risks of the firm. Using more debt in capital structure leads to increase the financial risk of the firm. It is a significant financial decision, since it affects the financial risks and return and consequently market value per share.

According to Brigham (1980) to maximize the price of stock a firm must also minimize the cost of producing in any level of output and therefore the management should try to obtain its required capital at lowest possible cost which amounts to minimize its weighted average cost of capital.

Therefore, a firm should determine appropriate capital structure, which minimize the overall cost of capital and minimize the value of the firm. On the other hand, appropriate capital structure (optimal capital structure) maximizes its share value in a reasonable level of risk.

Thus capital structure is a rational judicious mix of debt, preferred stock and common stock. By the capital structure concept, already given, it remarks that a sound capital structure depends upon the efficiency in the management of the rational estimation of capital mix. The financial manager should adhere in proper mixing of debt and equity that can maximize the value and minimize the overall cost of capital of the firm.

Brigham (1994) stated capital structured which had following conclusions: 1) There does not exist an optimal capital structure or at least an optimal range of structure for every firm. 2) However, financing theory is not powerful enough to locate a firm's optimum capital structure with precision. 3) The capital structure is not set in isolation rather it depends on a set of factors which include the firm's dividend policy, capital investment opportunities and investor's preference for different types of securities at the point of time.

There are four dimensional lists when thinking about capital structure decision:-

1. Taxes: - If the company is the tax paying proportion and increase in leverage reduces the income tax paid by the company and increases tax paid by the investor. If the company has a large accumulated loss, an increase in leverage can not reduce corporate tax, but does increase personal taxes.
2. With or without bankruptcy: - Financial distress is costly. Other things equal, distress is more likely for the firm with high business risk. That's why such firms generally issue less debt.
4. Asset type: - The cost of distress is likely to be greater for firms whose value depends on growth opportunity or intangible assets. These firms are more likely to go for profitable opportunities and if default occurs, their assets may be eroding rapidly. Hence, firms whose assets are weighted toward intangible assets should borrow significantly less on average than firms holding assets you can kick.
5. Financial slack: - In the long run, a company's value rests more on its capital investment on operating decisions than on financing. Therefore you want to make sure your firm has sufficient financial slacks, so that financing is quickly accessible when good investment opportunity arises. Financial slack is the most valuable to firms that have ample positive NPV growth opportunity. That is another reason why growth companies usually aspire to conservative capital structure.

### **2.1.1 Theories Of Capital Structure**

The theory of capital structure is closely related to the firm's cost of capital. About optimal capital structure, many debates are found in financial literature. Argument between those who believe there is an optimal 'capital structure' for each firm and those who believe no such optimal 'capital structure' began late 1950's and there is yet no resolution of the conflict. Modigliani and Miller logically asserts that the value of firm or cost of capital is independent of capital structure decision of the firm. On the other hand,

traditionalists view the value of the firm or the cost of capital is affected by capital structure change. In order to understand how firm should adhere the optimal capital structure decision, it is important to know some views about Capital Structure Theories. In this regard some basic assumptions are necessary to know that are following.

### **Assumptions**

- i. There are no corporate or personal income taxes and no bankruptcy cost.
- ii. The ratio of debt to equity for a firm is changed by issuing debt to repurchase stock or issuing stock to pay off debt. In other words a change in capital structure is effected immediately. In this regard, we assume no transaction cost.
- iii. The firm has a policy of paying 100% of its earnings in dividend. Thus, we abstract from the dividend decision.
- iv. The expected value of the subject probability distribution of expected future operating earning for each company are the same for all investor in the market.
- v. Expected values of the probability distributions of expected operating earnings for all future periods are the same as present operating earnings.

Besides the above assumptions, the following symbols related to capital structure theories are used.

B	=	Total market value of debt
S	=	Total market value of stock
V	=	Total market value of Firm (B + S)
Ke	=	Equity capitalization rate
Kd	=	Cost of debt / Yield on debt
Ko	=	Overall capitalization rate
I	=	Total amount of interest
EBIT	=	Earning Before Interest and Taxes or Net Operating Earning.

In respect of capital structure decision, different views have been expressed by financial wizards. These views can be categorized into four important theories, Viz, Net Income Approach, Net Operating Income Approach, Traditional Approach and Modigliani-Miller Approach.

### **A. Net Income Theory ( NI)**

This theory was propounded by David Durand. "The essence of the net income theory is that the firm can increase its value or lower the overall cost of capital by increasing the position of debt in the capital structure." (Brealy and Steward, 2002: 614)

"The emphasis on EBIT is to measure how the degree of leverage brings change in the valuation of a firm. Assuming a constant equity capitalization rate, the increase in cheaper debt funds lower the weighted average cost of capital and there by raising the value of the firm and the increase in debt may not be increasing risky." (Shrestha, 1981: 28)

**The crucial assumption of this approach is:** (Brealy and Steward, 2002: 615)

1. The use of debt does not change the risk perception of investors, as a result, the equity-capitalization rate i.e.  $K_e$  and the debt-capitalization rate i.e.  $K_d$  remains constant with change in leverage.
2. The debt capitalization rate is less than the equity capitalization rate(i.e.  $K_d < K_e$ )
3. The corporate income tax does not exist.

"As the portion of cheaper debt funds in the capital structure increases the weighted average cost of capital decreases and approaches the cost of debt ( $K_d$ )." Van Horne, (2000: 251)

"Therefore the overall cost of capital declines as the firm increases its level of debt relative to equity. The importance of this levered overall cost of capital is that it increases the value of firm." (Shrestha, 1981: 29)

Overall cost of capital can be expressed by following formula.

$$\text{Overall cost of capital (K}_o\text{)} = \frac{\text{Net Operating Income}}{\text{Total value of the firm}} = \frac{\text{EBIT}}{V}$$

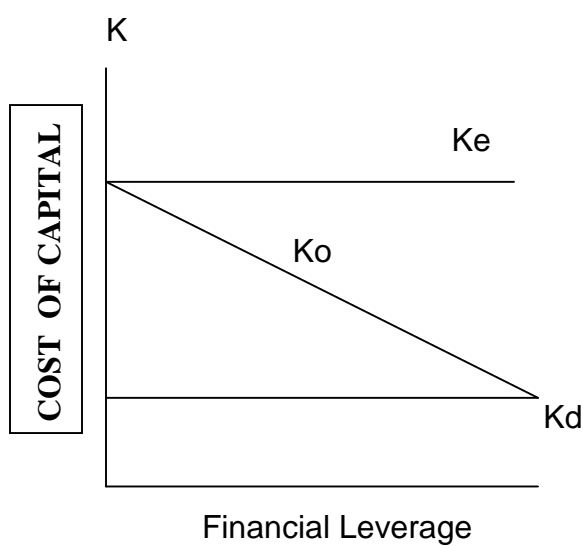
OR

Another formula for  $(K_o)$  is  $K_o = (K_e - K_d) B/V$

As per assumption of NI approach,  $K_e$  and  $K_d$  are constant and  $K_d$  is less than  $K_e$ . Therefore,  $K_o$  will decrease as  $B/V$  increases.

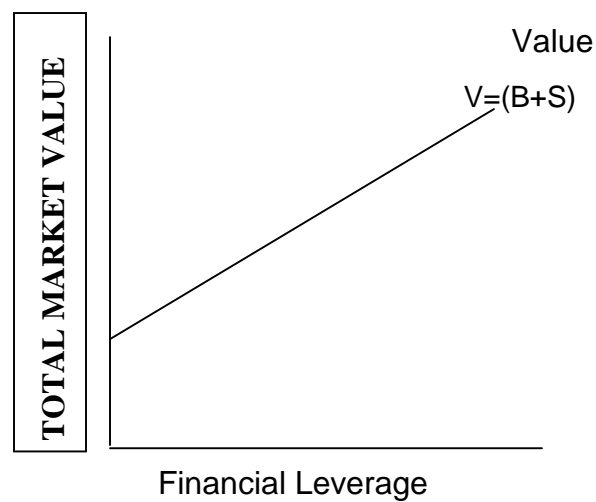
Also,  $K_e = K_o$  when  $B/V=0$

This approach is graphically shown in the following figure:



(100EquityD/E Ratio 100% Debt)

**Fig No. 2.2: Net Income Approach(Cost)**



(100EquityD/ERatio 100% Debt)

**Fig No.2.3: Net Income Approach(Value)**

From the above figure ' $K_d$ ' is constant but ' $K_o$ ' is declining. So, under the NI approach the cost of capital will decline and value of the firm will increase the leverage. The optimum capital structure would occur at the point where the value of the firm is maximum and overall cost of capital is minimum. That will have the maximum value of the lowest cost of capital as all debt financed or has as much as debt possible. If the

firm is unlevered the overall cost of capital will be just equal to the equity capitalization rate. (i.e.  $K_o = k_e$ )

Upadhyaya (1985) mentions that it is unrealistic that an increase in the proportion of debt in the total capitalization results in higher risk. NI approach does not recognize that an increase in the proportion of debt in the total capitalization results in higher risk. If loans are excessive, the equity shareholders would perceive increase in risk and would sell their equity shares. As a result, the market price of equity shares will go down. Thus, the very objective of optimizing the value of the firm will be defeated on this reasoning thus the NI theory is considered inadequate for capital structure management.

## **B. Net Operating Income Theory (NOI)**

This theory was propounded by Durand. The NOI approach does not agree with NI approach. It is also known as modern theory or an independent hypothesis of capital structure. This theory assumes that the cost of debt and overall cost of capital remains constant with the firm's financial leverage. However, as the firm increases its relative debt level, the cost of equity capital increases.

"The total value of the firm remains unaffected by its capital structure. There is no optimum capital structure and investors are indifferent to change in capital structure as whatever results from debt financing, will offset by the rise in cost of equity capital with result that overall cost of capital remains unaffected for all the degrees of financial leverage." (Shrivastav, 1984: 811)

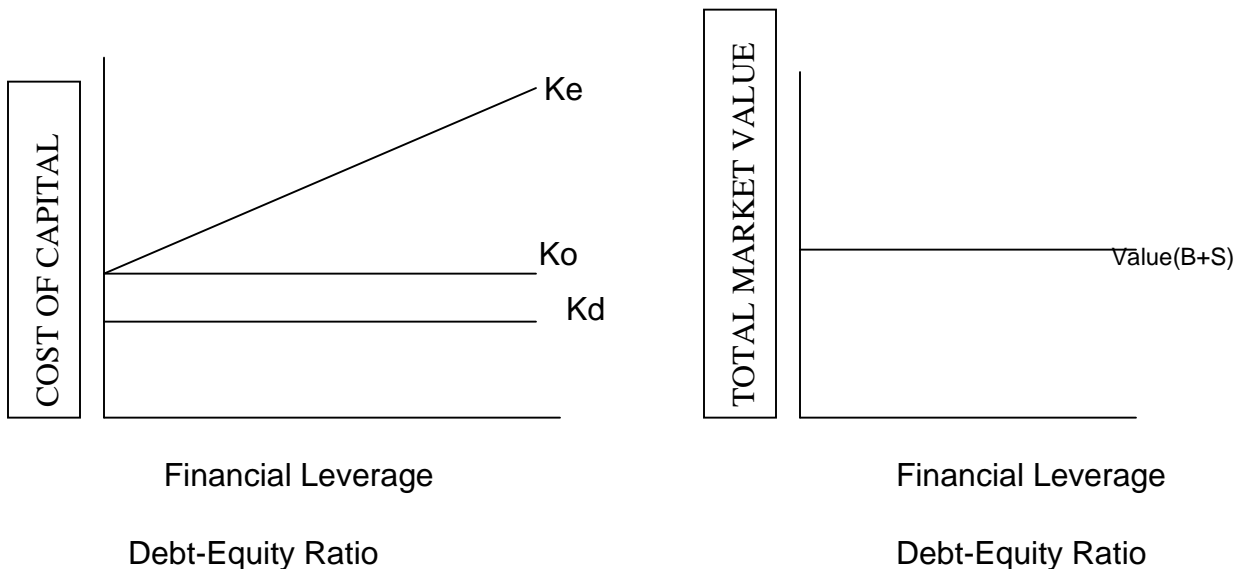
### **Assumption of NOI Approach**

1. The market capitalizes the value of the firm as whole. Thus, the split between debt and equity is not important.
2. The market uses an overall capitalization rate  $K_o$ , to capitalize the net operating income.  $K_o$  depends on the business risk. If the business risk is assumed to remain unchanged,  $K_e$  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 advantage of debt is affected exactly by the increase in the equity capitalization rate,  $K_e$ .
4. The debt capitalization rate,  $K_d$  is constant.
5. The corporate income taxes do not exist.

"Under NOI approach the capital structure selected is more detailed since the value of the firm is independent of the firm's capital structure. If the firms increase its use of financial leverage by employing more debt this is directly affected by an increase in the cost of capital." (Brealy and Steward, 2002: 617)

The degree of leverage, cost of capital and value of firm are shown as follows



(100 Equity D/E Ratio 100%Debt)

(100 Equity D/E Ratio 100%Debt)

**Fig No. 2.4: Net Operating Income Approach (Cost)**

**FigNo2.5: Net Operating Income Approach (Value)**

The above figures show that " $K_o$ " and " $K_d$ " are constant and " $K_e$ " increase with leverage. As  $K_o$  is constant every leverage is optimal. "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.

It can be expressed as:

$$K_e = K_o + (K - K_d)$$

B/S

OR

$$K_e = K_d + \frac{(K_o - K_d)}{S/V}$$

S/V

"Like NI approach, the NOI also assumes a constant rate of  $K_d$  which means that the debt holders do not demand higher rate of interest for higher level of leverage risk. But, equity holders do react to higher leverage risk and demand higher rate of return for higher debt equity ratio." (Pradhan, 1996: 359)

Thus, this approach suggested that there is not any optimum capital structure, as the overall cost of capital is the same at all capital structure, every capital structure is optimal.

### **C. Traditional Theory**

The traditional theory is also known as an intermediate approach compromise between the NI approach and NOI approach. This approach says that the value of a firm can be increased or the cost of capital can be reduced by the judicious mix of debt and equity capital. In addition the cost of capital decreases within the reasonable time limit of debt and then increases with the leverage. Thus an optimal capital structure exists when the cost of capital is minimum or the value of the firm is maximum.

"The more sophisticated version of the net income approach is contained in the traditional view. According to this approach, the value of the firm can be increased or the cost of capital can be decreased by the judicious mix of debt and equity capital." (Pandey, 1981:30)

"In this approach the cost of capital decreases within the reasonable time limit of debt and then increases with the leverage." (Chandra, 1992:61)

The crucial assumptions of the traditional approach are:

- a. The cost of debt ( $K_d$ ) remains more or less constant up to a certain degree of leverage but rises thereafter at an increasing rate.



- b. The cost of equity (Ke) remains more or less constant or rises only gradually up to a certain degree of leverage and rises sharply thereafter.
- c. The average cost of capital (Ko) as a consequence of above behavior or 'Ke' and 'Kd' (i) decreases up to a certain point (ii) remains more or less unchanged for moderate increases in leverage thereafter and rise beyond a certain point.

"According to the traditional approach, the manner in which the overall cost of capital reacts to change in capital structure can be divided into three stages:" (Soloman, 1963: 94)

**First stage:**

The first stage of traditional approach begins with the total capital. In this stage cost of equity 'Ke' remains constant or rise slightly with the use of debt fund. But it does not increase fast enough off set the advantage of low cost of debt. In this stage the cost of debt 'Kd' remain constant or uses negligibly since the market views the use of debt as a reasonable policy.

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

$$\begin{aligned}
 V = S+B &= \frac{X - K_d B}{K_e} + \frac{K_d B}{K_d} \\
 &= \frac{X - K_d B}{K_e} + B \\
 &= \frac{X}{K_e} + \frac{(K_e - K_d) B}{K_e}
 \end{aligned}$$

Thus, so long as 'Ke' and 'Kd' are constant the value of the firm 'V' increases at a constant rate.

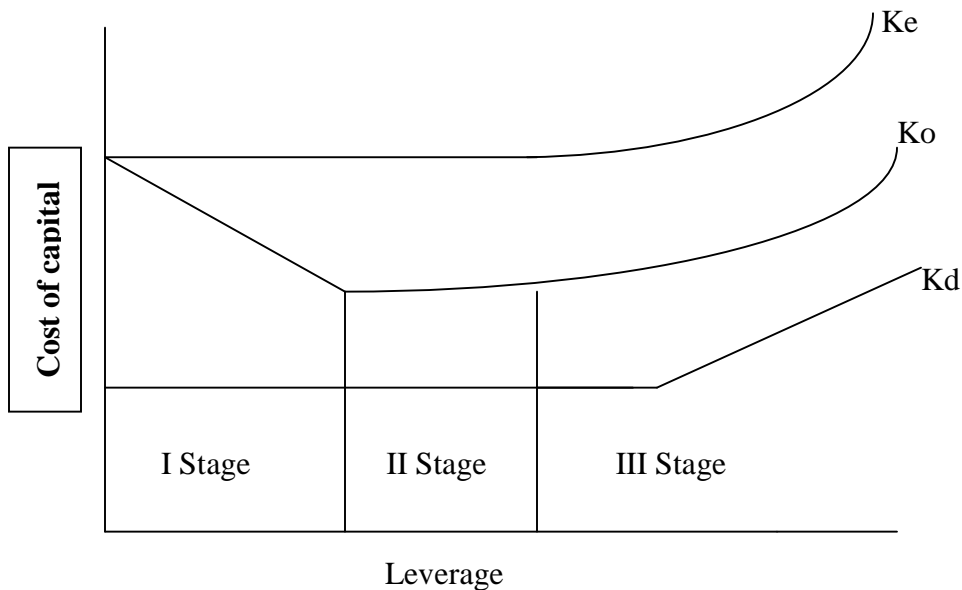
**Second Stage:**

In the second stage, once the firm has reached to a certain degree of leverage, further application of debt will increase the cost of equity due to the added financial risk that offsets the advantages of low cost debt. So the total market value of the firm remains unchanged. 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:**

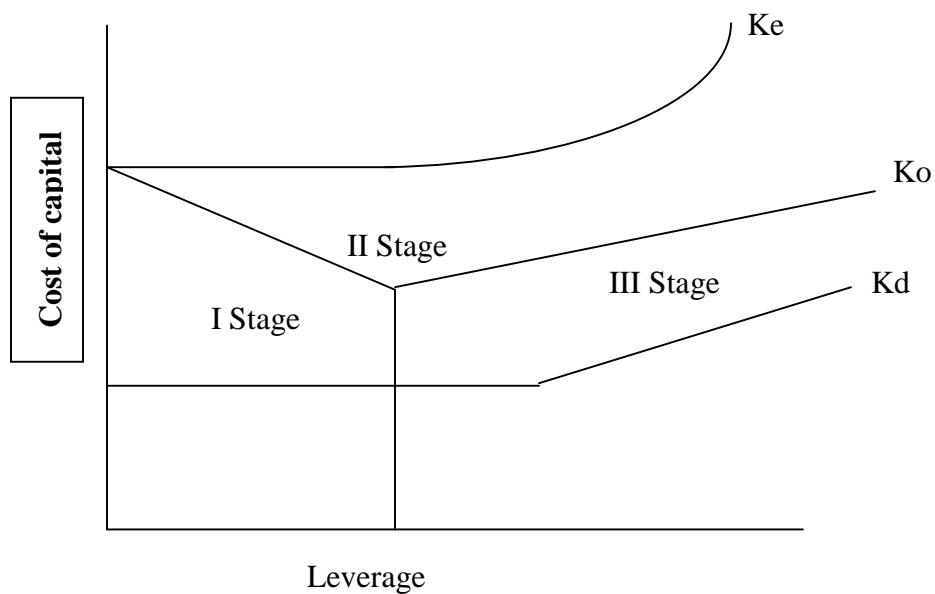
In this stage, after the acceptable degree of leverage, the market value of the firm decreases with leverage or the overall cost of capital increases with leverage. This happens because the cost of debt and equity will tend to rise as a result of increasing the degree of financial risk that will make in the increase in the overall cost of capital by more than to offset the advantage of low cost debt. Thus, in the third stage, market value of the firm will show depressing tendency.

The overall effect of these three stages is to suggest that the cost of capital is a function of leverage. First it declines with leverage and after reaching a minimum point or range it starts rising. This minimum point defined the optimal capital structure. This fact is graphically shown in figures:



**FigNo.2.6: The cost of Capital Behaviour (Traditional View)**

The figure shows that the overall cost of capital curve 'Ko' is saucer shape with a horizontal range. This implies that there is a range of capital structure in which the cost of capital is minimized. The 'Ke' is assumed to increase slightly in the beginning and then at a faster rate.



*Fig No. 2.7: The cost of Capital Behaviour (Traditional View-a-variation)*

Under such a situation, there is a precise point at which the cost of capital would be minimum. This precise point would occur at that optimum degree of leverage, at which marginal cost of debt is equal to the average cost of capital.

#### **D. Modigliani-Miller Theory (M –M Theory):**

Modigliani and Miller (MM) in their original position advocate that the relationship between leverage and the cost of capital is explained by net operating income approach. They make a formidable attack on the traditional position by offering behavioral justification for having the cost of capital,  $K_o$  remains constant throughout all degree of leverage. (Van Horne. 2000: 255)

The crucial assumptions of M-M proposition as propounded are :(Pandey, 1985:687)

- i. Capital markets are perfect. Information is costless and readily available to all investors. There are no transaction costs, and all securities are infinitely divisible. Investors are assumed to be rational and to behave accordingly.
- ii. The average expected future operating income of a firm are represented by subjective random variables. It is assumed that the expected values of the probability distribution of all investors are the same. The M-M illustration implies that the expected values of the probability distributions of expected operating earnings for all future periods are the same as present operating earnings.
- iii. Firms can be categorized into “equivalent return” classes. All firms within a class have the same degree of business risk. As we shall see later this assumption is not essential for the proof.
- iv. The absence of corporate income taxes is assumed. M-M removes this assumption later.
- v. Firms distribute all net earnings to the shareholders i.e. 100 % pay out . MM in 1958, proposed the theory without taxes and later, they relaxed the theory with tax considerations. So,
  - 4.1. M-M Theory (without taxes)
  - 4.2. M-M Theory (with taxes)

The definition of some technologies/notions, used in M-M theory is given below:

Terminology:

- ) Levered firm: A firm that uses some percentage of debt in its capital structure is called levered firm.
- ) Unlevered firm: All equity financed firms are known as unlevered firm.
- ) Risk premium: Risk premium is that expected additional return by the equity holders for making a risky investment. In other words, it is the additional return demanded by the equity holders due to inclusion of debt capital in firm’s capital structure.

### **Notation**

- i.  $K_eU$  = The equity capitalization rate of an unlevered firm.
- ii.  $K_eL$  = The equity capitalization rate of a levered firm.
- iii.  $K_d$  = The debt capitalization rate.
- iv.  $K_oU$  = The overall capitalization rate of an unlevered firm.
- v.  $K_oL$  = The overall capitalization rate of a levered firm.
- vi.  $V_u$  = Value of an unlevered firm.
- vii.  $V_l$  = Value of a levered firm.
- viii.  $T$  = The corporate tax-rate.
- ix.  $B_t$  = Present value of tax shield benefits of debt/present value of interest tax shield.

### **M-M Theory (without taxes)**

This theory can be expressed in terms of the propositions 1 and 2.

#### **PROPOSITION 1**

This proposition states that the market value of a firm is independent of its capital structure. M-M argue that for firms in the same risk class, the total market value is independent of debt-equity mix and is given by capitalizing the net operating income (NOI or EBIT) by the rate appropriate to the risk class. This is their proposition 1 and can be expressed as follows:

$$V = \text{NOI}/K_o \quad \text{OR} \quad \text{NOI}/K_o$$

For an unlevered firm,

$$V_u = \text{NOI}/K_oU = \text{NOI}/K_eU$$

For a levered firm,

$$V_l = \text{NOI}/K_oL$$

According to the propositions, there is no relationship between the value of a firm and the way its capital structure is made up of or nor there is any relationship between the overall cost of capital and the capital structure.

If there are rational investors, this proposition is correct because investors are willing to substitute personal or homemade leverage for corporate leverage i.e. arbitrage will take place to restore equilibrium in the market place.

## **PROPOSITION 2**

This theory states that the cost of equity rises proportionately with the increase in the leverage in order to compensate in the form of premium for bearing additional risk arising from the increase in leverage. It assumes that only the equity holders adjust the capitalization rate for the degree of financial leverage risk. It means that the  $K_e$  increases as debt equity ratio increases. The  $K_d$  doesn't respond to changes in debt-equity ratio and it remains constant.

The cost of equity capital for a levered firm ( $K_{eL}$ ) is equal to the cost of equity of an unlevered firm ( $K_{eU}$ ) plus a risk premium equal to the difference between  $K_{eU}$  and  $K_d$  multiplied by the debt-equity ratio.

$$K_{eL} = K_{eU} + (K_{eU} - K_d) B/S$$

Since,  $K_{eU} = K_{oU}$  So,

$$K_{eL} = K_{oU} + (K_{oU} - K_d) B/S$$

This proposition shows the impact of financial leverage on the cost of equity. Due to the increase in leverage, the firm gets the benefit of cheaper debt, but the benefit is exactly offset by an increase in the cost of equity in the form of risk premium expected by the shareholders.

## **M-M Theory (With Taxes) :**

Under MM theory, the value of the firm is independent of its debt policy based on the critical assumption that the corporate income taxes do not exist. But in

reality, corporate income taxes exist, and interest paid to debt holders is treated as a deductible expense. This makes debt financing advantageous. "In their 1963 article, MM shows that the value of the firm will increase with debt due to deductibility of interest charges for tax composition and the value of the levered firm will be higher than that of the unlevered firm." (Pandey, 1985: 687).

Thus, the value of the levered firm is equal to the value of the unlevered firm plus the present value of interest tax-shields as shown below:-

Value of a levered firm = value of an unlevered firm + present value of interest tax-shield.

*Symbolically,*

$$V_l = V_u + B_t$$

The value of unlevered firm when corporate taxes exist is

$$V_u = \frac{\text{NOI} (1-T)}{K_oU} = \frac{\text{NI}}{K_eU}$$

When,

NI = Net Income after tax.

Also, when a firm is unlevered,

$K_oU = K_e V$ . Thus

$V_l = \text{NI} / K_e V \pm B_t$ .

The above equation implies that, when corporate tax exists, the value of the levered firm will increase continuously with debt. Thus, theoretically the value of the firm will be maximum when it employs 100 % Debt.

### **2.1.2 Checklist For A Target Capital Structure:**

All the theories and analysis showed the effect of financial leverage in stock price, earning per share and the cost of capital. The Analysis suggests that some optimal capital structure exists which simultaneously maximizes the firm's stock price and minimizes its average cost of capital. Although, it was theoretically possible to determine with precision. Accordingly, financial executives generally treat the optimum capital structure as a range for example, 40 to 50 percent debt rather than as a precise point such as 45 percent. Also they analyze the effects of different capital structures on expected earning per share and interest coverage ratios rather than concentrating exclusively on imprecisely estimated stock prices. Firms also tend to analyze such factors as sales stability, asset structure, effect on control, so on, and the final target capital is more judgmentally than quantitatively determined. The firm must also consider the following factors, which have an important, though hard to measure, bearing on the choice of target capital structure.

### **1. SALES STABILITY**

A firm whose sales are relatively stable, a firm can safely take on more debt and incur higher fixed charges than can a company with unstable sales utility companies, because of their stable demand, have historically been able to use more financial leverage than the industrial firms.

### **2. ASSET STRUCTURE**

Firms whose assets are suitable as security for loans tend to use debt rather heavily. Thus, real state companies are tend to be highly leveraged, while manufacturers with heavy investment in specialized machinery and work-in-progress inventories employ less debt.

### **3. OPERATING LEVERAGE**

Other things the same, a firm with less operating leverage is better able to employ financial leverage because the interaction of operating and financial leverage



determines the overall impact of a decline in sales on operating income and net cash flows.

#### **4. GROWTH RATE**

Other things remaining same, faster growing firms must rely more heavily on external capital. Further, the floatation cost involved in selling common stock exceeds these incurred when selling debt. Thus, to maximize financing cost, rapidly growing firm tends to use somewhat more debt than do slower-growth-companies.

#### **5. PROFITABILITY**

One of ten observes that a firm with very high rate of return on investment uses relatively little debt. Although there is no theoretical justification for this fact, the practical reason seems to be that very profitable. Firms like IBM and KODAK simply do not need to do much debt financing their high rates of return enable them to do most of their financing with retained earnings.

#### **6. TAXES**

Interest is a deductible expense, while dividends are not. Hence, higher a firm's corporate tax rate, greater the advantage of using debt.

#### **7. CONTROLS**

A management concerned about control may prefer to insure debt rather than (voting) common stock to raise funds. Of course, if market conditions are favorable, a firm wanting to sell equity could issue non-voting share or make a pre-emptive offering, allowing each shareholder to maintain proportionate ownership. Generally, only in closely held firm's threatened by take-over does control become a major concern in the capital structure decision process.

#### **8. MANAGEMENT ATTITUDES**

In the absence of proof that one capital structure will lead to higher stock prices than another, management can exercise it's own judgment about a proper

choice. Some management tends to be more conservative than others and thus uses debt than the average firm in their industry, while for other management the reverse is true.

## **9. LENDERS AND RATING AGENCY ATTITUDE**

Regardless of manager's own analysis of the proper leverage factors for their firm, there is no question but the lenders and rating agencies attitudes are frequently important determinants of financial structure. In the majority of cases, the corporations discuss its financial structure with lenders and rating agencies and give much weight of their advice. But the management is so confident of their future that it seeks to use leverage beyond the norms for its industry, lenders may be unwilling to accept such debt increases or may do so only at a high price.

## **10. MARKET CONDITIONS**

Conditions in the stock and bond markets undergo both long and short-run changes, which can have an important bearing on a firm's optimum capital structure. For example, during the credit crunch in the winter of 1982, there was simply no market at any reasonable interest rate for new long-term bonds rated. Low rated companies that needed capital were forced to go to the stock market of the short term debt market. Action such as this could represent permanent changes in target capital structure of temporary departures from stable targets, the important point, however, the stock and bond market condition do affect the type of securities used for a given financing.

## **11. THE FIRM'S INTERNAL CONDITION**

A firm's own internal condition can also have a bearing on its target capital structure. For example, suppose a firm has just successfully completed R&D program and it projects higher earnings in the immediate future. However the new earnings are not yet anticipated by investors and hence are not reflected in the price of the stock. This company would not want to issue stock, it would prefer to finance with debt until the higher earnings materialize and are reflects in the stock price, at which time it wants to sell an issue of common stock, retire the debt and return to its target capital structure.

## **12. FINANCIAL STABILITY**

It has been noted that firms can earn a lot more money from good capital budgeting and operating decisions than they can from good financing decisions indeed. The researchers really are not sure how financing decisions affect stock prices, but they do know that having to turn down a large order because funds are not available for buying the raw materials or the equipment needed to fill it will lower profits. For this reason, many treasurers have as their primary goal to always be in a position to raise the capital needed to support operations. We also know that when times are good, firms can raise capital with either stock or bonds, but when times are bad, suppliers of capital are much more willing to make funds available if they are given a secured position and this means bonds.

## **13. CASH FLOW**

The key concern of the firm when considering a new capital structure must center on its ability to generate the necessary cash flows to meet obligations. Cash flow forecasts reflecting ability to service debt and preferred stock must support any capital structure shift.

## **14. CONTRACTUAL OBLIGATIONS**

A firm may be contractually constrained with respect to the type or form of funds it subsequently raises. For example, a contract describing conditions of an earlier bond issue might prohibit the firm from selling additional debt except where the claims of holders of such debt are made sub-ordinate to the existing debt. Contractual constraints on the sale of additional stock as well as the ability to distribute dividends on stock might also exist.

## **15. MANAGEMENT PREFERENCES**

Occasionally, a firm will impose internal constraints on the use of debt to limit the firm's risk exposure to a level deemed acceptable to its management. In other

words, due to risk aversion, the firm's management constraints the firm's capital structure at a certain level, which may or may not be the true optimal.

## **16. EXTERNAL RISK ASSESSMENTS**

The firm's ability to revise funds quickly and at favorable rate will clearly depend on the external risk assessments of lenders and bond raters. The financial manager must therefore assess the potential impact of capital structure decision not only on share value but also on published financial statement from which lenders and raters tend to assess the firm's risk.

## **17. TIMING**

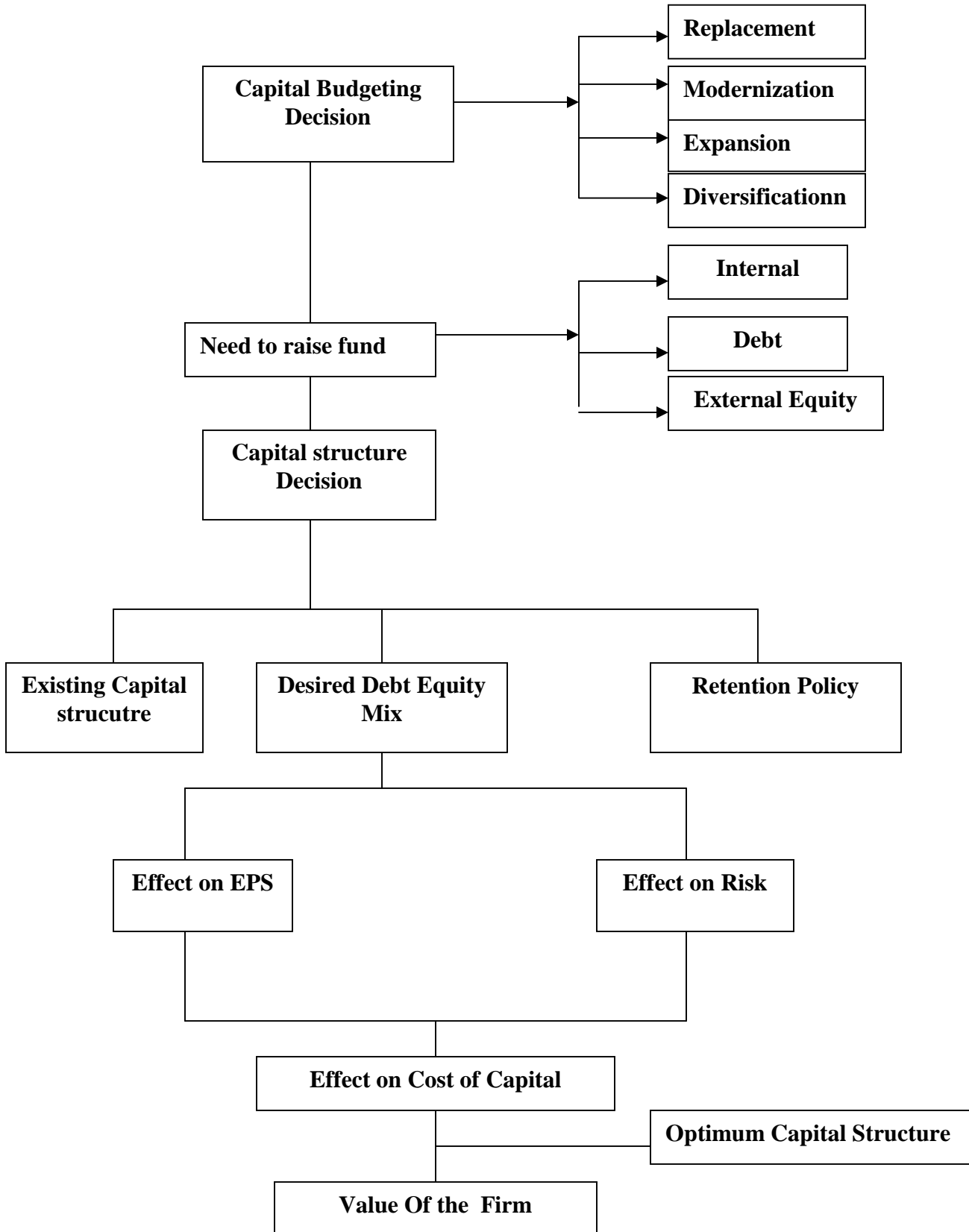
At a certain point in time, when the general level of interest rate is low, the use of debt financing might be more attractive, when interest rates are high, the sale of stock may become more appealing. Sometimes the sources of both debt and equity capital dry up and become unavailable under what would be viewed as reasonable terms. General economic conditions especially those of the capital market can thus significantly affect the capital structure decision.

## **18. SOLVENCY**

The use of excessive debt threatens the solvency of the company. To the point debt does not add significant risk should be used, otherwise its use should be avoided.

The above mentioned are the general features of a target capital structure. The particular characteristics of a company may reflect some additional specific features.

### 2.1.3 THE CAPITAL STRUCTURE DECISIONS



## ***Fig. No. 2.8: The Capital Structure Decisions***

### **2.2 Review Of Related Studies:**

In this section, literature related to the capital structure management is reviewed. The framework of the theory structure includes of previous writings, research and studies related to capital structure problems.

The quotes and the findings are based on the primary source of data i.e. original research report or writing. This topic includes the review of related books, journals, articles, theses and research gap.

#### **2.2.1 Review Of Articles:**

Under this section various articles related to capital structure management have been reviewed. These are as follows:

**Shrestha, (1985)** under “Analysis of Capital Structure of selected public enterprises”, had concluded that the enterprise has a chaotic capital structure since the corporations are not guided on the basis of financial plans and policies. In many instances most of them wanted to eliminate debt if possible to relieve financial obligations. He further pointed out that the calculation of equity capitalization rate has been giving many fantastic results in many cases. The use of NI and NOI approach on the whole was more an academic exercise rather than providing much valid. The debt equity ratio was improperly determined and the contribution of debt, procurement of assets was insignificant. He suggested that the ratio should neither be highly levered to create financial obligation beyond the capacity nor too low to infuse operational lethargy to pass responsibilities without performance. The aid donor strategies should be taken into consideration as the inflow of foreign government and international financial institution credit has dominant influence in the capital structure.

**Marsh, (1982)** in his article "The choice between equity and debt" had expressed an issue that whether companies have target debt ratio or not. They should have similar targets for the composition of debt. Another issue is whether other factors influence their debt ratios or the choice of financial instrument. He has questioned how

accurate the prediction of the company is issuing debt or equity can be made. His suggestion to the study was that when planning their issues, companies should consider further as well as current debt ratio. If companies are looking at book value debt ratios, there will be change during the inter issue period because of retentions and bank loans. Any overall change in tax levels could cause issuing companies to shift their performance towards either debt or equity. Small companies rely on bank loans rather than long term debt because of location cost and problems of access to capital market. Equity issues seem to be favored after it provides strong share price and overall market performance.

**Modigliani and Miller, (1958)** wrote an article on debt –equity composition “The cost of capital corporation finance and theory of investment”. They argued that “The impact of additional debt in a tax and economically perfect world, the total market value of a company’s debt plus equity should not change as debt is substitution for equity. Although expected earnings per share will increase as debt is substituted for equity (or additional financing is done with debt rather than equity), this effect is exactly offset by markdown in the company’s price/earning ratio. The markdown occurs because the additional debt exposes the common stockholders to an extra financial risk.

### **2.2.2 Review Of Thesis:**

Under this section, various master level dissertation related to this study, which has been done by M.B.A. students have been reviewed. These are as follows:

**Shrestha, (2004)** has conducted a thesis on the topic of “Capital Adequacy of banks in Nepalese context”. His main objective is to study the capital adequacy of the banks. He has suggested that bank should deal in highly risky transaction to maintain strong capital base. However, the capital base should neither be too much leading to inefficient allocation of scarce resources nor too weak as to expose to extreme risk. The study accepts that the operations of bank and the degree of risk associated with are subject to change country wise, bank wise, and period wise. Henceforth, the study suggests preparing standard capital adequacy ratio for each individual bank keeping in mind the various relevant factors.

However the study covered only banking sector as a whole. The statistical tools were limited upto ratio analysis.

**Sharma, (2005)** has conducted a study on “Capital Structure Management of manufacturing companies.” The selected companies are Jyoti Spinning Mill, Nepal Lube Oil and Nepal Lever Ltd. The basic objective was to analyze return on equity and assets. It was found in the study that JSML had a huge amount of debt and there is a need to reduce the debt capital and NLL has no long term debt so they should reduce tax by taking long term debt. It is suggested that JSML and NLOL should increase the equity portion for financing its assets to be in safe mode against liquidation. The study observed that among same type of manufacturing companies, there is a vast difference in the degree of operating leverage (DOL) and capital structure. Therefore, the companies should concentrate on restructuring their capital. They should try to increase their sales volume to reduce their operating cost. The assets, equity and debts condition is very poor in JSML. NLL is highly dependent on short term debt, it should try to adopt long term source of debt.

The sample size of the study is small and limited to manufacturing sector. Furthermore, the study did not cover the issue of determinants of capital structure and the tools used for analysis is limited to ratio analysis and degree of operating leverage (DOL).

**Giri, (2006)** conducted a study on “Capital Structure Management of listed joint venture commercial banks in which he has analyzed the capital structure of Standard Chartered Bank and Nepal Bangladesh Bank. The study shows that the private sector banks have been successful in increasing their deposit and credit portfolio remarkably over the past few years and have been cautious about loans and advances. The operating profit of all private sector commercial banks have gone up so has the provision for loss. However he suggested joint venture banks to open their doors to small depositors and entrepreneurs .They have lack of theoretical and practical knowledge with regard to capital structure. JVB are suggested to play merchant banking role like underwriting



securities, brokers, development of capital market and supportive role to the security exchange center to uplift the nation.

However the sample size of the study was quite small. The researcher could have made more effective had number of sampled company been more.

**Sapkota, (2006)** conducted a study on “Capital Structure management of Nabil Bank”. The capital and liabilities analysis says that the overall condition and position of Nabil Bank is better until 2057/58, all they declined continuously and the profit is very low in comparison to the deposit. Therefore the bank is suggested to adopt the corrective measure to strengthen its position. It should operate different programs to attract people to save money to collect more deposit which can be invested in favorable projects. It is recommended that the bank should increase its profit two times than in present. The study demands better investment of fixed deposit as it is not mobilized in proper manner.

The study focused on only one bank so the conclusion drawn from the study is not relevant for other commercial banks and could not be able to analyze other sectors of capital structures. The study excludes the factors influencing capital structure decision. The sources of input in the study are from limited area and the statistical tools used are limited to ratio analysis.

**Pradhan, (2007)** conducted a study on Capital Structure management of manufacturing companies and hotels”, it is found that the composition of capital structure of the concerned companies have no uniformities. The capital structure decision is not found to be considered properly by the companies. Investment and financing decision should be taken keeping the capital structure in mind. The study recommended the unlevered firms i.e. Bottlers Nepal and Unilever Nepal to use cheaper debt which may increase the value of the firm. The levered firms Hotel Shehanshah and Hotel Yak & Yeti are suggested to increase debt servicing capacity to take the benefit of leverage. To earn high level of profit all the companies should maintain optimum level of interest rate in business. More independent variable should be adopted to capture the industry nature

of Nepalese firm to better explain the variability in the profitability. Cost and benefit should be analyzed before raising fund from different source of capital.

The study focused on the ratios of the selected organizations. The overall value of the firm of the firms can be analyzed through the size of balance sheet. The excluded such assumptions.

### **2.3 Research Gap**

As the above research works are concerned with capital structure. They are mostly done by taking single firm or 2-3 firms as a sample. In most of the studies, the samples are taken from same sector which may not represent different sectors. The studies also observed some defects in capital structure. The tools used for analysis have been limited to ratio analysis. So this study tries to explore the determinants of capital structure and capital structure pattern in three different sectors of Nepalese organization with current year's data. Furthermore this study will be helpful to the interested groups. At last this study will be different from the above in terms of sample companies, data presentation as well as statistical tools used for interpretation and analysis of data.

## **CHAPTER – THREE**

### **3. RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter deals about research methodology which is used for research purpose. Research is a system enquiry for seeking facts and methodology is the method of doing research in well manner. So, research methodology means the analysis of specific topic by using proper method.

“The term research methodology refers to the various segmental steps to be adopted by a researcher in studying a problem with certain objectives in a view. It describes the methods and process applied in the entire aspect of study” (Kothari, 1994: 19).

"This process of investigation involves a series of well thought out activities of gathering, recording, analyzing and interpreting the data with the purpose of finding answers to the problem. Thus the entire process by which we attempt to solve problems is called research." Wolff and Pant (2000:203)

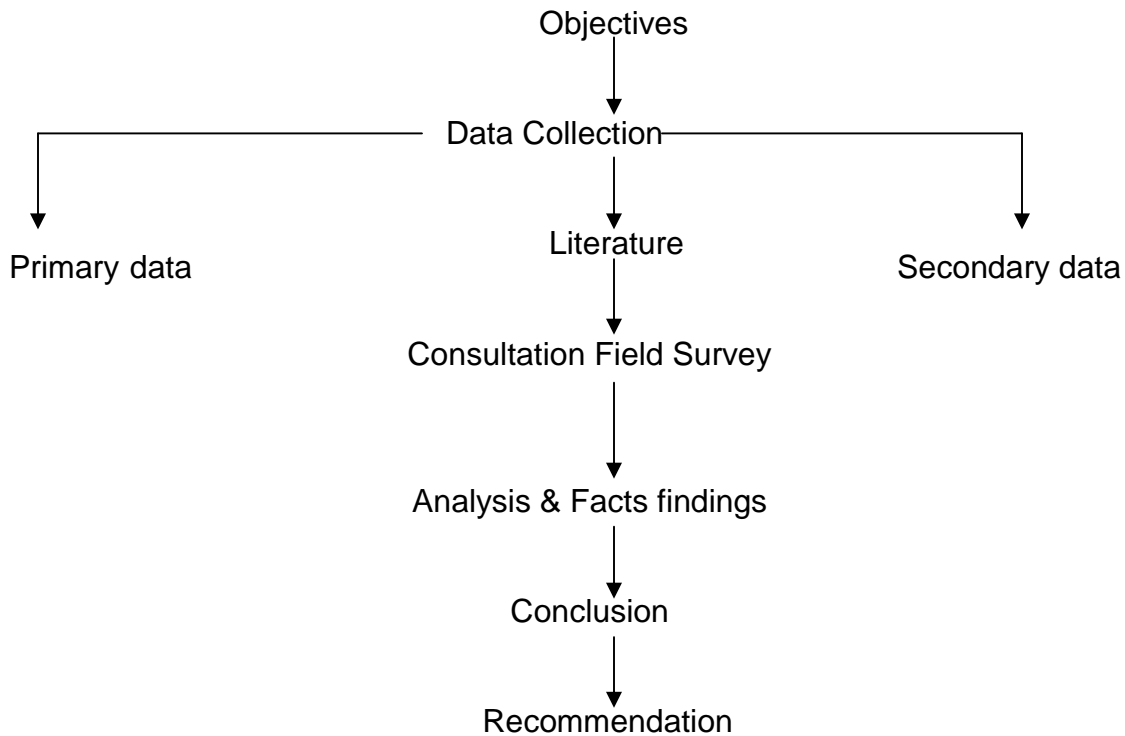
It is significant to have appropriate choice of research methodology that helps to make this research study meaningful and more scientific. Therefore, appropriate methodology has been followed to meet the purpose objectives of the study. So, the methodologies of this research include the research design, research question, period covered, selection of enterprises, types and sources of data, data processing procedures, presentation of data and method of analysis.

#### **Research Questions:**

- Is there a sound capital structure for the good performance?
- Is there appropriate linkage between debt and equity in relation with profitability?
- How efficiently capital is used in different sectors of Nepal?

- Is the earning adequate?
- What is the debt servicing capacity of the selected organisations?

Flow chart given below shows the entire methodology of this study.



***Fig No. 3.1: Flowchart of entire methodology***

### **3.2 Research design:**

The term “research” refers to the systematic and organized effort to investigate a specific problem that needs a solution. “Design” means planning to carry out investigation conceived to obtain an answer to reason question. Thus research design is a plan, structure and strategy of investigation conceived to obtain possible solution to the research problem in one’s area of study.

The study is based on historical data, which covers a period of five years from F.Y. 2002/2003 to 2006/2007. The analysis of the study is based on certain research design. Selection of appropriate research design is necessary to meet the study objectives. The main objective of the study is to analyze capital structure of the selected organizations

in Nepal. It emphasizes on descriptive and analytical study of collected data of Profit and Loss Account and Balance Sheet over the period of time, and it gives suggestion of the capital structure.

Comparatively this study has been designed as a descriptive cum analytical design. This study is concluded with the measurable suggestion to strengthen or improve the capital structure management in the position of the selected firms.

This chapter is composed of six sections:

- Period Covered
- Selection of Enterprises
- Types and sources of data
- Data Processing Procedures
- Presentation of data and Method of analysis

### **3.3 Period covered:**

For the study, financial data from Fiscal Year 2002/2003 to 2006/2007 of Nabil Bank Ltd, Nepal Investment Bank Ltd., Nepal Electricity Authority, Nepal Telecom and Himalayan General Insurance Company Limited have been collected. The study of five years data of selected commercial banks and companies show the development trend of Nepal in their respective sector.

### **3.4 Selection of Enterprises:**

Various studies have been made by Master Degree researchers and other scholars on this topic. But only some study are considered on capital structure decision of organizations from various sectors in the same study. The main drawback of private companies is that they do not want to show off their debt capital in composition of capital structure. In other words, most of the companies and enterprises are unlevered or use of debt capital is negligible in amount. By reviewing these difficulties, the researcher focused on Nepal Investment Bank Ltd. and Nabil Bank Ltd, one of the leading commercial banks whereas Nepal Electricity Authority and Nepal Telecom in

their respective fields and Himalayan General Insurance Company Limited among insurance companies.

### **3.5 Types and Sources of data:**

The authenticity of a research depends upon the data it collects. Data collected for any kind of research study can be either primary or secondary or both. This study is related to the capital structure management; therefore the sources of data used in this study are basically of secondary nature. All the study analysis and evaluation have been based on the available annual report (P/L A/C and B/S) and progress reports of the concerned companies. The other sources were Unpublished Thesis, Research Study, Several Books, Journals, Magazines and Newspapers in different libraries. Internet was also an important source. The use of primary source was negligible.

### **3.6 Data Processing Procedure:**

The study is basically based on the secondary data. The data are collected in crude form in the initial stage and then properly synthesized, arranged, tabulated and calculated to serve the objective of the study.

### **3.7 Data Presentation and Method of analysis:**

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

The analysis of data requires a number of closely related operations such as establishment of categories, the application of these categories to raw data through collecting, tabulation and then drawing statistical interlays. On the basis of research problem and objectives of the study data and information needed is identified and collected. The collected data are properly processed and arranged in the form of the

table for simplicity. Financial and statistical tools have been used for analysis and interpretation of arranged data. For this purpose, statistical tools such as Karl Pearson's coefficient of correlation and regression analysis have been calculated to see the relationship between various variables. Likewise, some financial tools such as ratio analysis and trend analysis have been used.

For quantitative analysis and calculation of correlation and regression SPSS software is used.

### **3.7.1 Financial Analysis Tools:**

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

#### **Ratio Analysis:**

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

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

- i. Liquidity ratios
  - ii. Leverage or Capital Structure ratio
  - iii. Activity ratios
  - iv. Profitability ratio
- ❖ Liquidity ratios measure the firm's ability to meet current obligations.
  - ❖ Leverage ratios show the proportions of debt and equity in financing the firm's assets. This ratio is also known as debt management ratio.

- ❖ Activity ratios also known as assets management ratios measures how effectively the firm is managing its assets.
- ❖ Profitability ratios measure the overall performance and effectiveness of the firm. It is the net result of a large number of policies and decisions. These ratios show the combined effects of liquidity, asset management (activity ratio), and leverage ratios on operating results.

### **Standards of Comparison:**

The ratio of a firm should be compared with some standard. The standard should be ratio of similar firms. The analysis as reveals the firm's financial condition, it will force them to be more competitive and take corrective action wherever necessary. As the trend analysis shows the ratio of several years, it adds considerable significance to the financial analysis.

The major indicator used in this study is the ratio analysis concerned to capital structure management (leverage ratio). The various leverage ratios are analyzed and interpreted in this present report. In general, there should be appropriate mix of debt financing and equity financing the firm's assets. Likewise the EBIT-EPS models do have been tested to find out the effect on alternative financing decisions. Brief analysis of those indicators is as follows:

### **Capital Structure or Leverage Ratio:**

Leverage ratio measure the contribution of financing by owners compared with financing provided by the outsiders. They also provide some measure of the risk of debt financing by the calculation of the coverage of fixed charges. In this study, following leverage ratios have been calculated.

#### **a. Debt to Equity Ratio:**



The relationship between borrowed fund and owner's capital is a popular measure of long term solvency of a firm. This ratio is intended to address the firm's ability to meet its obligation. The following structures of ratios are presented under this ratio:

### ***a.1 Long term debt to shareholders fund ratio***

Long-term debt to equity ratio reflects the relative claims of creditors and shareholders against the assets of the firm. In other words, this ratio indicates the relative proportion of debt and equity in financing the assets of the firm. This ratio is also known as external internal equity ratio and is calculated as follow:

$$\text{D/E ratio} = \frac{\text{Long term debt}}{\text{Shareholder's equity}}$$

Where, long term debt includes debentures and loan not maturing with one year. Shareholder's equity or net worth includes Equity share, preference share, reserve and surplus, P/L A/C, retained earnings. Past accumulated loss and deferred expenditures are deducted from shareholder's equity to determine the denominator i.e. net worth.

### ***a.2 Total debt to shareholders fund ratio***

$$\text{D/E ratio} = \frac{\text{Total debt}}{\text{Shareholder's equity}}$$

Where,

Total debt = Long term debt + Current Liabilities

Shareholder's equity = Common stock + Preference capital + Retained Earning

### **b. Total debt to total assets ratio**

This ratio is also known as debt ratio. It measures the percentage of total funds provided by creditors. Debt includes current liabilities and all bonds. Creditors prefer moderate debt ratios. Since, lower the ratio, greater the cushion against creditor's

losses in the event of liquidation. In contracts to the creditor's preference to a low debt ratio, the owners may seek high leverage to magnify earnings or because raising new equity means giving up some degree of control. If the debt ratio is too high, there is a danger of encouraging responsibility on part of the owners. The owner's stake can become so small that speculative activity, if it is successful, however, they will incur only a moderate loss because their investment is small.

$$\text{Debt ratio} = \frac{\text{Total debt}}{\text{Total Assets}} \times 100$$

### **c. Interest coverage ratio (Debt capacity ratio)**

This ratio is called "Time Interest Earned Ratio." This ratio measures the debt servicing capacity of a firm in so far as the fixed interest on the total loan is concerned. It is determined by dividing the operating profit or Earning before Interest and Taxes (EBIT) by the fixed interest (I) charge on loan. Thus, in the calculation of Interest Coverage Ratio, IC-Ratio in times is expressed as.

$$\text{IC Ratio (in Times)} = \frac{\text{EBIT}}{\text{Interest Charge (I)}}$$

This ratio is very useful in determining whether a borrower is going to be able to service interest payment 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 is also known to determine whether a firm has the ability to meet its long-term obligations. From the creditors point of view the larger the coverage the greater the ability the firm to handle charges.

### **Financial Leverage:**

Financial leverage refers to the use of fixed income securities - debt and preferred stock- and financial risk is the additional risk placed on the common stockholders as a result of using financial leverage. Conceptually, the firm has a certain amount of risk inherent in its operation; this is business risk, which is defined as an uncertainty inherent

in projection of future ROE. By using debt and preferred stock (financial leverage) the firm concentrates its business risk on common stockholders. Therefore financial risk can be defined as the portion of stockholder's risk over and above the basic business risk, resulting from the use of financial leverage.

Financial risk depends upon the financial leverage of the firm. If the financial leverage exists financial risk will occur. Operating leverage affects the business risk whereas financial leverage affects the financial risk. The use of fixed charges sources of funds, such as debt and preference capital along with the owner's equity in the Capital Structure as prescribed as financial leverage. Financial leverage can be defined as the extent to which fixed income securities (debt and preferred stock) are used in the firm's Capital Structure.

Financial leverage affects the earning per share. When the economic conditions are good and firm's EBIT is increasing, its EPS increase faster with more debt in the financial structure. The degree of financial leverage is defined as the percentage change in earning per share that is associated with given percentage change in earning before interest and taxes (EBIT). DFL may be calculated by using any one of the following formulas:

$$\text{DFL} = \frac{\text{Percentage change in EPS}}{\text{Percentage change in EBIT}}$$

**Or**

$$\text{DFL} = \frac{\text{Percentage change in EBT}}{\text{Percentage change in EBIT}}$$

DFL shows that to what extent the firm is able to bear its fixed charges. DFL of unlevered firm will be 1 and it will be greater than 1 in case of levered firm.

### **Capital Adequacy Ratio:**

Capital adequacy is evaluated by compliance with the requirement stipulated by NRB. The capital adequacy ratio of banks is regularly monitored through their returns to submit to NRB. Before the ratio is breached the bank will be directed to direct fresh

capital within a certain period and will be recommended to submit plans for capital increase. Appropriate capital adequacy ratio has always been a controversial issue, however extremely higher or lower capital adequacy ratio is considered to be unfavorable in terms of lowered return or lowered solvency respectively. Some of the ratios taken for analysis are:

- ❖ Capital fund to total deposit ratio
- ❖ Core capital to risk asset ratio

## **OTHER INDICATORS**

### **a. *Return on Capital Employed (ROCE)***

Return on Capital Employed is similar to return on assets except in one respect. Here the profits are related to total capital employed. The capital employed basis provides a test of profitability related to the source of long term funds. A comparison of this ratio with similar firms, with the companies' average and over time and would provide sufficient insight into how efficiently the long term funds of owners and creditors are being used. In the calculation of return on capital employed, ROCE in percentage is expressed as

$$\text{ROCE (\%)} = \frac{\text{EAT} + \text{Interest}}{\text{Capital Employed}} \times 100\%$$

The higher ratio indicates more efficiency of firm in capital utilization.

### **b. *Return on shareholders equity (ROSE)***

The ratio reveals how profitability the owner comparison of the ratio with that of similar firms, as also with the industry average, will through light on the relative performance and strength of the firm. Without external financing, the source of divided growth is the retention of earnings and the return on this retention, namely the Return on Shareholder's Equity (ROSE). The ratio tells us the earning power on shareholder s

book investment and is frequently used in comparing two or more firms in a company. In the calculation of Return on Shareholder's Equity, ROSE in percentage is expressed as:

$$\text{ROSE (\%)} = \frac{\text{EAT} + \text{Interest}}{\text{Shareholder's equity}} \times 100\%$$

The higher ratio indicates more efficiency of firm.

### ***c. Return on Risky assets***

This ratio measures the profitability of a bank, which shows the percentage of net profit against risky assets (i.e. loan and advances plus bills purchased and discounted). It can be computed by dividing net profit by risky assets.

$$\text{Return on Risky Assets} = \frac{\text{Net Profit}}{\text{Risky Assets}}$$

### ***d. Credit deposit ratio (C/D ratio)***

Credit deposit ratio is supposedly used to measure the relation of total loan and advance to total deposit. Thus:

$$\text{Credit deposit ratio (\%)} = \frac{\text{Total loan and advance}}{\text{Total deposit}}$$

## **3.7.2 Statistical Analysis Tools:**

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

- Coefficient of correlation

- Regression Analysis
- Trend analysis

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

### **Coefficient of correlation**

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

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

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

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

X = Sum of the observations in series X

Y = Sum of the observations in series Y

X<sup>2</sup> = Square of the sum of the observations in series X

Y<sup>2</sup> = Square of the sum of the observations in series Y

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

### **Regression Analysis:**

Regression analysis is used to develop an estimating equation that is mathematical formula that relates the known variable to the unknown variable. It is a statistical tool used to determine the statistical relationship between two or more variables and to make estimation of one variable on the basis of other variable. It is to understand here that 'a' constant indicates the mean or average effect on dependent variable of all the variables omitted from the model. Averages are the measures, which

condense a huge unwieldy data into single value which represents the entire data. It's value lies between two extreme observations, i.e. the largest and the smallest items. Similarly, the regression coefficient 'b' of each independent variable indicates the marginal relationship between variables and value of dependent variable, holding constant the effect of all other independent variables in the regression model. In other words, the coefficient describes how changes in independent variable affect the values of dependent variable estimate. In this study, regression coefficient is calculated for selected dependent and independent variable specified in the model. The formula for regression coefficient can be calculated as follows:

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

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

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

Where,

Y	=	Dependent variable
X	=	Independent variable
b	=	Slope of regression or Regression co-efficient
a	=	Regression constant

### **Trend Analysis:**

Ratio analysis is not able to show the fluctuation of the financial position of the companies with time. The financial position is improving or deteriorating over the years show by the use of trend analysis. The significance of a trend analysis or ratios lies in the fact that the analysis can know the direction of movement, i.e. whether the movement is favorable or unfavorable. For example, the ratio may be low as compared to the norms and standard but the trend may be upward. On the other hand, though the present level may be satisfactory, the trend may be a declining one. Thus, trend analysis is of great significance to the study.

## ***CHAPTER – FOUR***

### **4. DATA PRESENTATION AND ANALYSIS**

#### **4.1 Introduction**

This chapter deals with the presentation, analysis and interpretation of relevant data of Nepal Telecom, Nabil Bank, Nepal Electricity Authority, Himalayan General Insurance



Company Limited and Nepal Investment Bank Ltd. in order to fulfill the objectives of this study. To obtain best result, the data have been analyzed according to the research methodology as mentioned in third chapter. The purpose of this chapter is to introduce the mechanics of data analysis and interpretation. With the help of this analysis, efforts have been made to highlight the comparative financial strength of selected organizations. For analysis, different types of analytical methods and tools such as financial ratio analysis as well as statistical analysis are used.

## **4.2 Financial Analysis Tools**

Financial statements of respective organization are analyzed by using various financial ratio analyzing tools to draw the meaningful conclusion and to meet the objective of the study. In the direction of financial statement analysis, research has incorporated all respective information from published material from the respective organization. Mainly annual report is used to get the information.

### **4.2.1 Capital Structure or Leverage Ratio:**

Simply capital structure is a combination or portfolio of resources on the total capital of the organization. In other capital structure refers to the mix of long term sources of funds, such as debentures, long term debt, preference share capital and equity share capital including reserves and surpluses. Theoretically, a financial manager should plan an optimum capital structure for his / her company the optimum capital structure is obtained when the market value per share is the maximum.

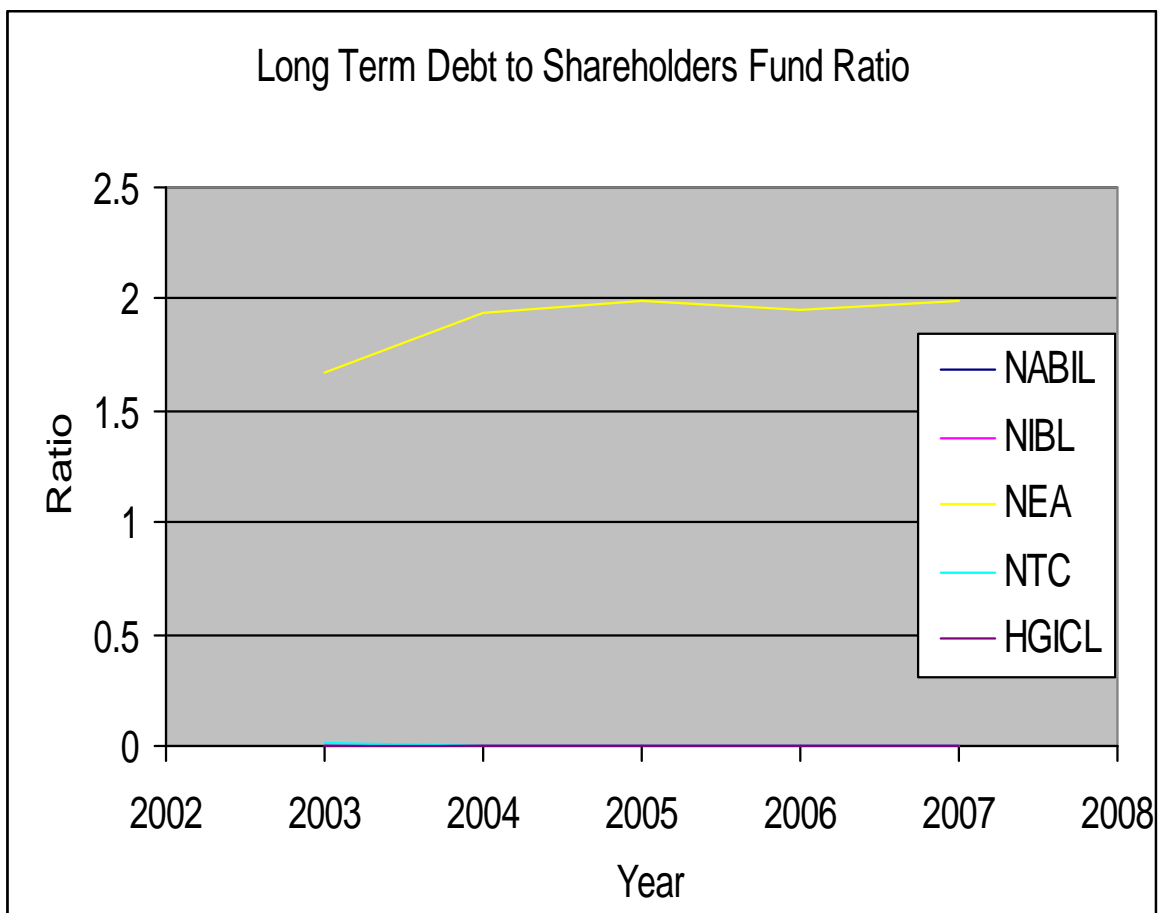
#### **) Long term debt to shareholders fund ratio**

Long-term debt to equity ratio reflects the relative claims of creditors and shareholders against the assets of the firm. In other words, this ratio indicates the relative proportion of debt and equity in financing the assets of the firm. In other word long term debt is a source of long term financing having fixed obligation to made regular payment to the respective holder and shareholder's fund is a heading of source having no obligation to make regular payment. So, this ratio measures the relationship between the long term debt and shareholder's fund. If high volume of debt is used in capital structure, it would

cause to lower the tax liability and higher earning per share but also cause to make the organization failure. Similarly higher equity volume cause to make higher tax liability, lower the earning per share but doesn't consider regular fixed payment so don't directly cause to liquidate the organization.

**Figure No. 4.1**

**Presentation of Long term debt to total shareholders fund ratio**



Annex-1

Since the practices of various debts related securities are limited to very few organizations. So the trend to collect the fund from the debt security is nominal in banking sector and other sector, however the trend seems some better than the past. Looking at the above figure, debt ratio of NEA is around twice it means NEA is collecting the fund from the debt twice than the equity of the organization which is very aggressive combination and may not show the financial soundness. Being the pioneer

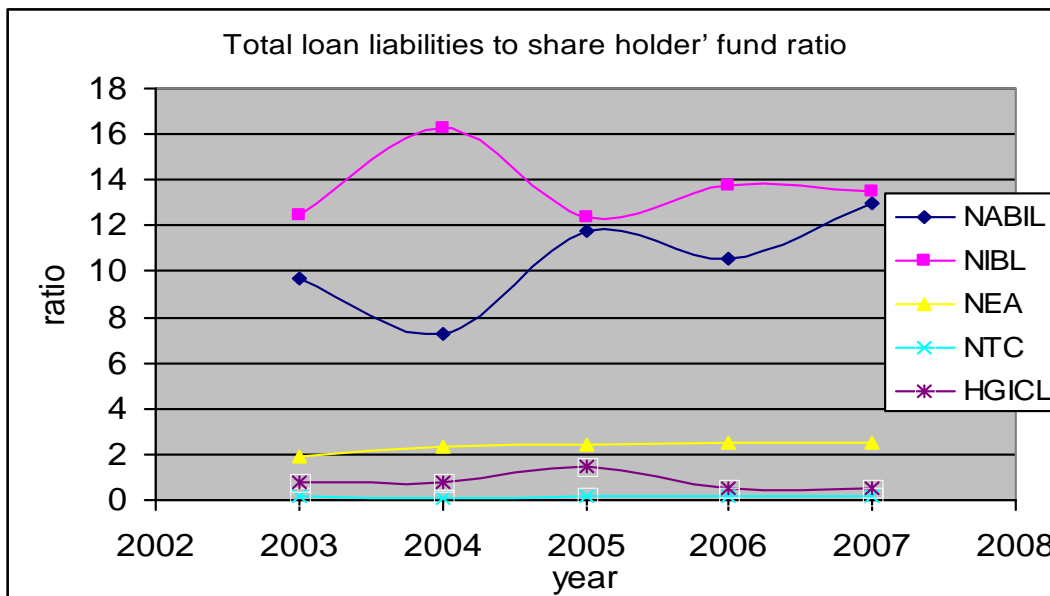
of power sector NEA is reaping the benefit of trust of lender; if lender found other better opportunities than NEA definitely they stop to lend the resource the fund to NEA. Similarly very few volume of debt is used in the capital structure of NTC during the period of 2003 but than after there is no notable debt gearing on capital structure of NTC. Being big financial houses NTC and NEA dominates other in volume related issue so; the gearing of other organization is not seen in the figure. Other than these houses don't have debt transaction during the sampled period too.

) **Total debt to shareholders fund ratio**

Total debt is the summation of long term debt liabilities (bond, debenture) and current liabilities (all such heading of liabilities which are matured with in the period of one year i.e. bills payable; tax payable, outstanding salaries and wages etc.). Similarly shareholder' fund consists the paid up capital, reserves and surplus, retained earning/profit etc. Higher the ratio causes to higher the earning per share and vice-versa.

**Figure No. 4.2**

**Presentation of total loan liabilities to total shareholders fund ratio**



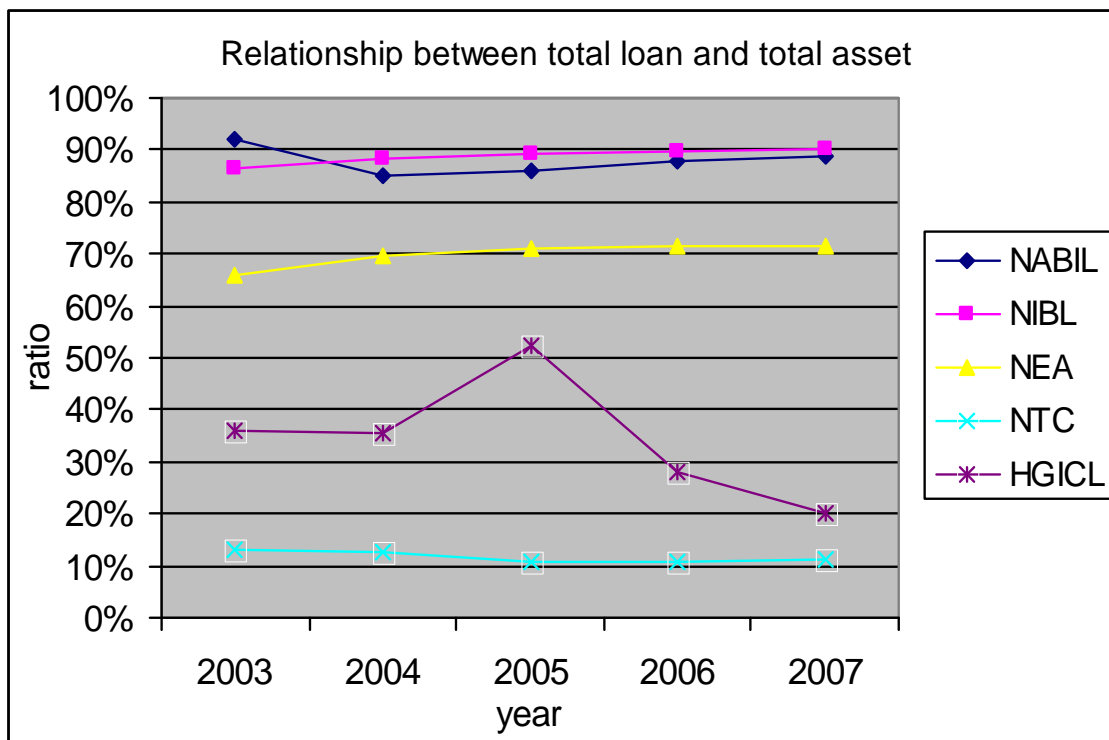
Movement of NABIL and NIBL seems in inverse trend. During the period of 2003 gap between the NABIL and NIBL seems lower as the time passes to 2004, gap seems maximum but then for the period of 2005 both have more or less same ratio. After the period of 2005 movement again seems in inverse trend and again they are met in 2007. Movements lead to the conclusion that, NABIL and NIBL have just inverse strategy in the concern of total loan liability deployment. At present NABIL has slightly lower ratio but NIBL is in increasing trend. Ratio of total liability of NEA seems more or less same during 2003 to 2007. Similarly, NTC is in almost unvarying trend. So, NEA and NTC have practiced same strategy in the concern of total loan liabilities. However ratio of NTC is lower than NEA. Ratio of HGICL seems in fluctuating trend which is almost fluctuating between the ratio of NEA and NTC. Comparatively, total loan liabilities to shareholders fund ratio of NIBL is highest, ratio of NABIL is higher, NEA is in third position, HGICL is in fourth position and NTC is in fifth position.

#### ) **Total debt to total assets ratio**

This ratio is also known as debt ratio. It measures the percentage of total funds provided by creditors. Debt includes current liabilities and all types of long term debt. Creditors prefer moderate debt ratios. Since, lower the ratio, greater the cushion against creditor's losses in the event of liquidation. In contracts to the creditor's preference to a low debt ratio, the owners may seek high leverage to magnify earnings or because raising new equity means giving up some degree of control. If the debt ratio is too high, there is a danger of encouraging responsibility on part of the owners.

**Figure No. 4.3**

**Presentation relationship between total debt and total asset**



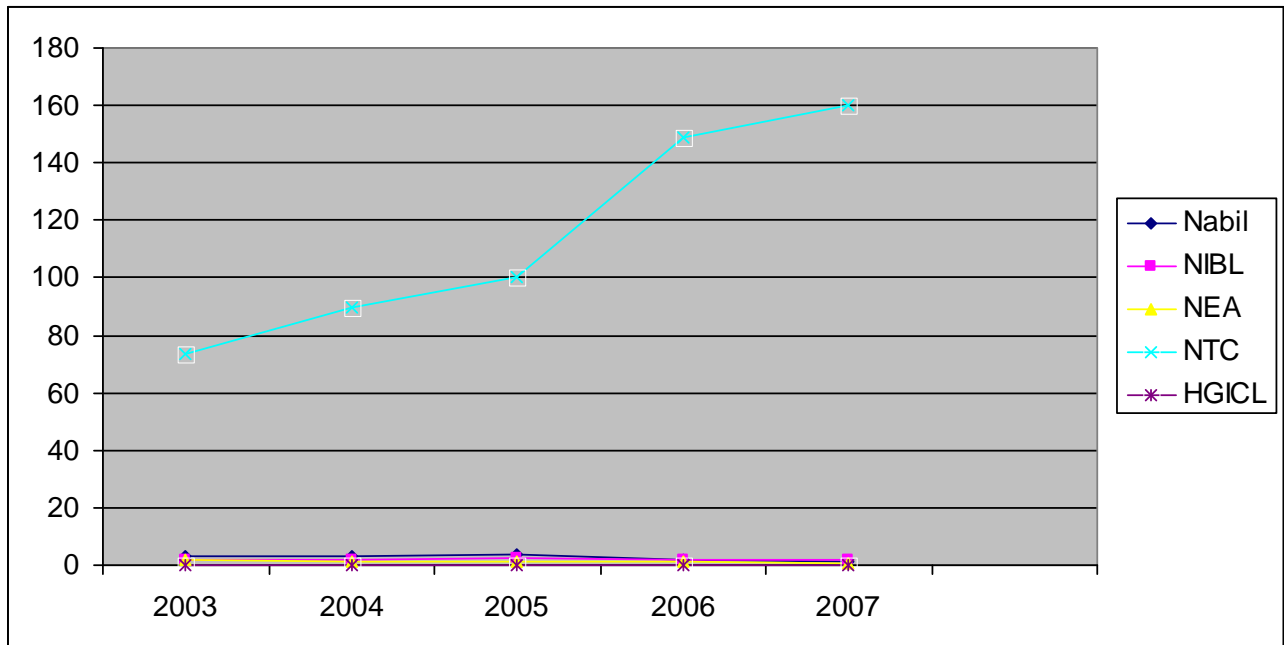
Annex-3

Looking at the above figure, ratio of NABIL is in peak during the period of 2003 but than after it is in declining trend however after the period of 2004 ratio seems more or less same for NIBL. Similarly NIBL is in almost unvarying trend or NIBL is using stability in total loan and total ratio. In the case of NEA, ratio seems in the trend of up warding slowly. Fluctuation of HGICL is astonishing because the movement of respective line in graph. HGICL is declining the ratio than the past. Similarly NTC is in declining its ratio slowly than past. Comparatively, total debt to total ratio of NIBL is highest, ratio of NABIL is higher, NEA is in third position, HGICL is in fourth position and NTC is in fifth position.

) **Interest coverage ratio (Debt capacity ratio)**

This ratio is also known as time interest earned (TIE) ratio which measures the debt servicing capacity of a firm in so far as the fixed interest on the total loan is concerned. Higher the ratio indicates higher capacity to bear the high volume of interest charge and vice versa.

**Figure No. 4.4**  
**Presentation interest coverage ratio**



Annex-4

Looking at the above figure, TIE of NEA is in massively up warding trend. TIE of NEA is increasing significantly during the period of 2003 to 2007. TIE of HGICL is fluctuating below 20 and seems more or less same during the period of 2003 to 2007. Similarly NIBL, NABIL and NEA has more or less same ratio during the period of 2003 to 2007. Comparatively, TIE of NTC is highest, ratio of HGICL is higher, and NABIL, NEA and NIBL are in almost same position. So, interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and other organization are seems very weak in the concern of interest expenses bearing.

) **Analysis of Earning Per Share (EPS) and Financial Leverage (FL)**

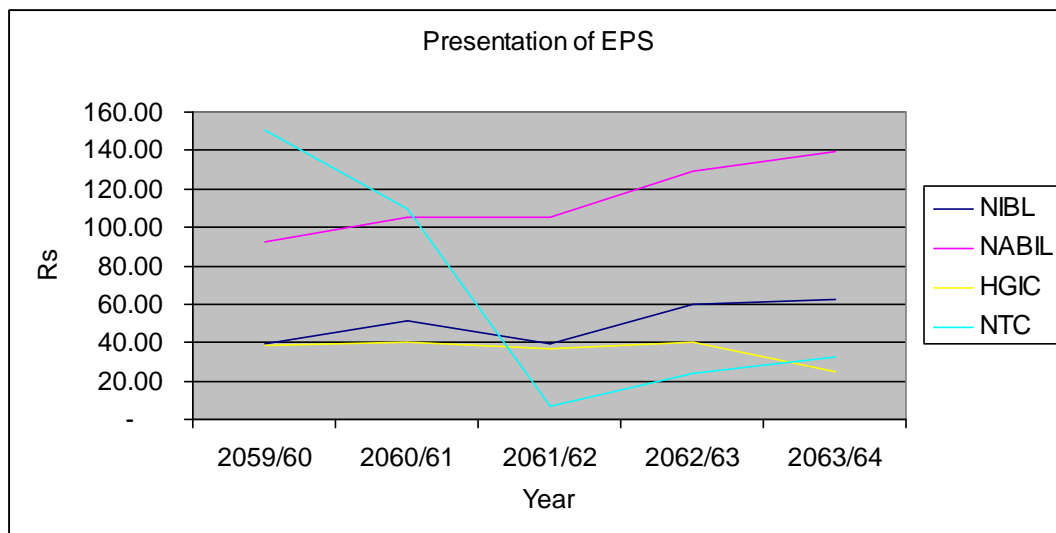
Analysis of EPS shows the relationship between total no. of outstanding shares and earning of respective year. Higher ratio is the symbol of organizational soundness and prosperity. For the exploration of organization soundness study has tried to show the comparative EPS analysis of selected organization. Study has not incorporated the respective analysis of NEA because of regular losses.

**Table No: 4.1**  
**EPS of Selected Organizations**

Year	EPS			
	NIBL	NABIL	HGIC	NTC
2059/60	39.56	92.54	38.41	150.34
2060/61	51.70	105.16	39.86	109.42
2061/62	39.5	105.49	36.7	6.95
2062/63	59.5	129.21	39.9	23.62
2063/64	62.57	139.45	25.1	32.91

Annex-5 & 6

**Figure No: 4.5**  
**Presentation of EPS**



#### Annex- 6

Looking at the graphs, NABIL is regularly improving its earning capacity during the study period. So NABIL is in good condition. Similarly EPS of NTC is in highest form during the starting period of sampled data but then after it is in sharply declining form after crossing the period of 2061/62 is again in steady growing trend. So it seems good trend for NTC. HGIC and NIBL has more or less same pattern during the period of first four years but the trend of NIBL is growing significantly after 2061/62.

Financial Leverage is the relationship between operating profit and net profit after tax. Generally FL helps to explain the factors associating between net profits and operating profit. In the same direction study has presented the relationship of said variables within the sampled organizations i.e NIBL, NABIL, HGICL and NTC.

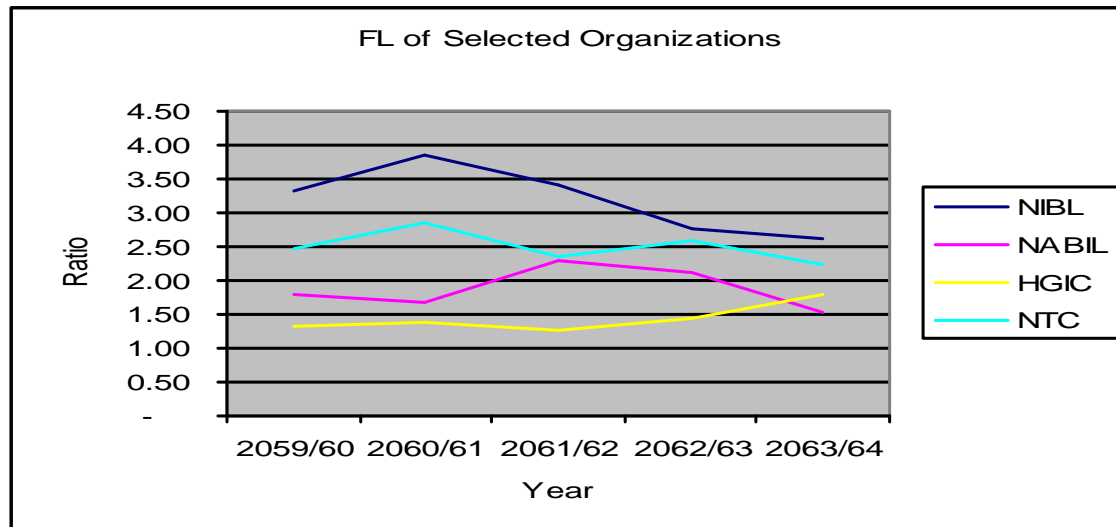
**Table No: 4.2**

#### **Financial Leverage of Selected Organizations**

Year	Financial Leverage			
	NIBL	NABIL	HGICL	NTC
<b>2059/60</b>	3.33	1.78	1.32	2.48
<b>2060/61</b>	3.85	1.69	1.38	2.85
<b>2061/62</b>	3.41	2.3	1.26	2.35
<b>2062/63</b>	2.77	2.12	<b>1.43</b>	<b>2.6</b>
<b>2063/64</b>	2.62	1.54	1.78	2.24



**Figure No: 4.6**  
**Presentation of FL**



Annex-6 &amp; 7

Looking at the figure, FL ratio of NIBL seems higher than all other sampled organizations. This informs that NIBL is investing more fund on administration issues or other headings which are not directly connected with operation (like as fund mobilization and collection), but scenario is in improving trend because of down ward sloping curve. NTC has more or less same level of FL during the whole study period. NABIL is also maintaining same level of FL however it was increased during the period of 2061/62. Being the small organization between the total selected organizations, curve relating with HGICL is in small form but it seems moving up ward in recent time.

#### 4.2.2 Capital Adequacy Ratio:

Capital adequacy is evaluated by compliance with the requirement stipulated by NRB. The capital adequacy ratio of banks is regularly monitored through their returns to submit to NRB. Before the ratio is breached the bank will be directed to direct fresh capital within a certain period and will be recommended to submit plans for capital increase. Appropriate capital adequacy ratio has always been a controversial issue, however extremely higher or lower capital adequacy ratio is considered to be

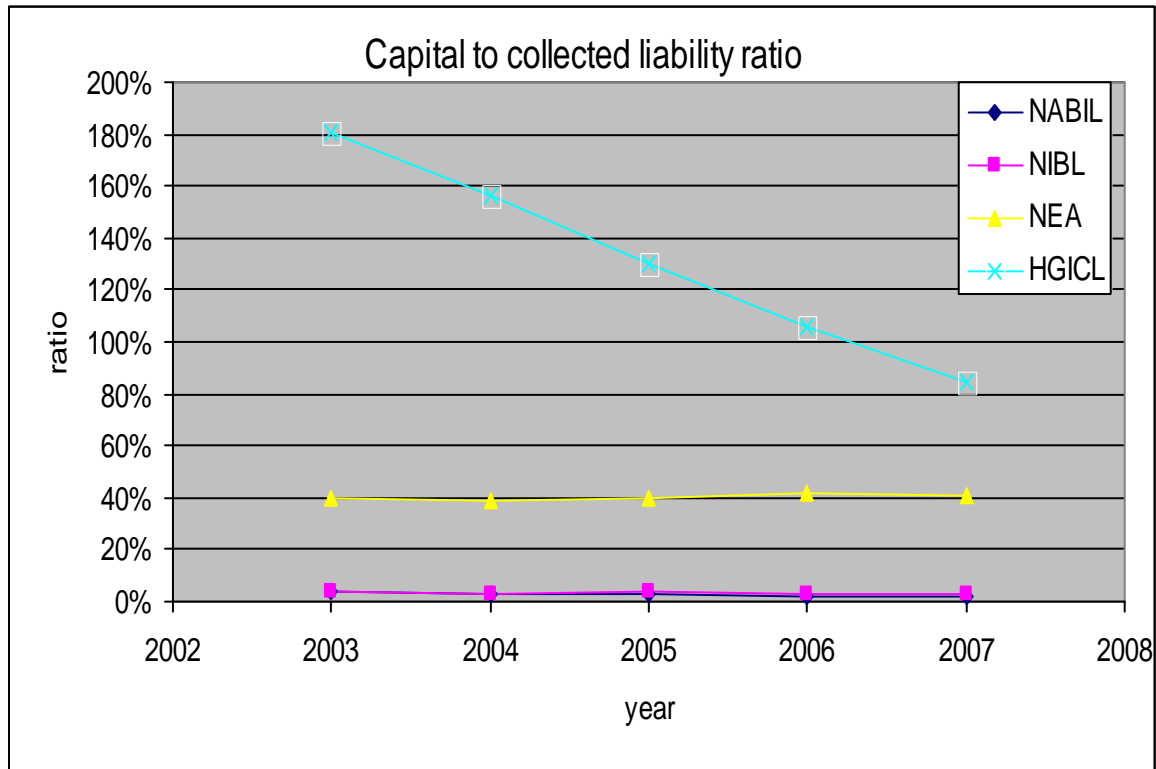
unfavorable in terms of lowered return or lowered solvency respectively. Some of the ratios taken for analysis are:

) **Capital fund to total other collected liability (as deposit, loan etc) ratio.**

Capital (paid up capital) is the fund invested by the owner' and other collected liabilities are subjected to the fund which are collected form the other sources like as deposit, premiums, loans etc. So this ratio is useful to know about to know the fund management capacity of selected organization or use of owner money and lenders money of selected organizations are measured by this ratio. Gearing of such resource depends up the attitude of the organization toward the risk. If ratio is 1, organization is using owner' and other liability equally, if ratio is more than 1 capital is more than other liabilities and if ratio is lower than 1 organization are using more other liabilities. As the development and expansion of the business owner' capital become deficit than organization starts to depend on other capital too. Excessive usages of other resources may lead to the organization toward the financial crisis and vice versa.

**Figure No. 4.7**

**Presentation of Capital to Other Collected Liability ratio**



Annex-8

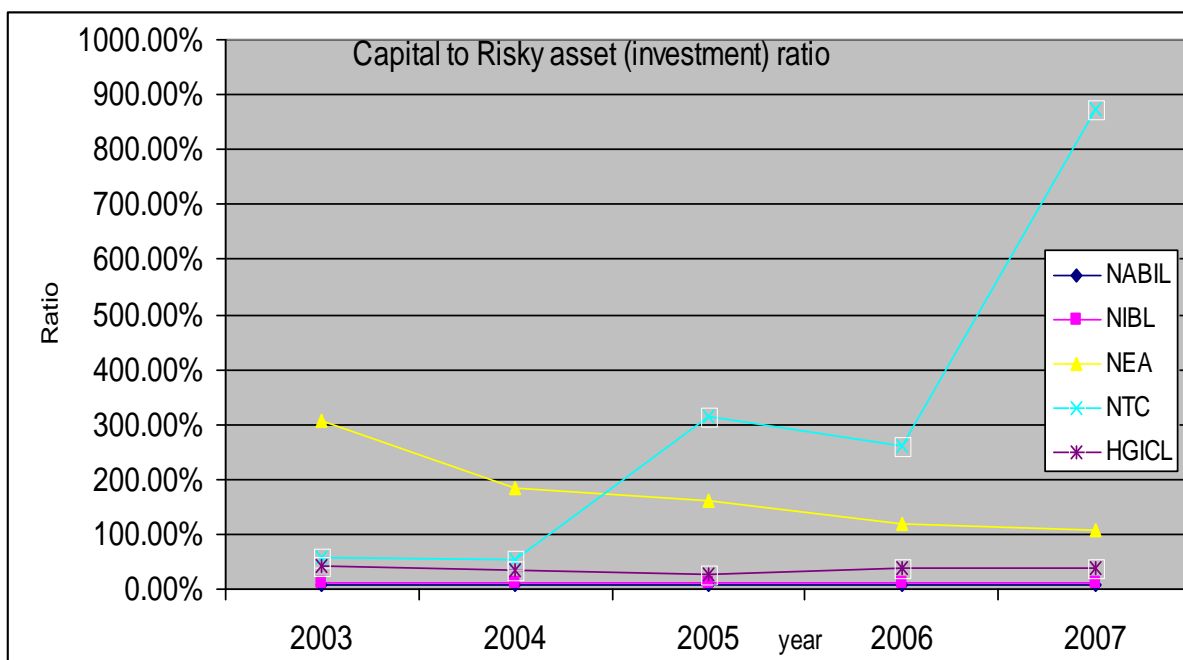
NIBL has lower capital to other liability ratio which indicated NIBL is mobilizing excessive deposit than its capital or deposit is in significantly higher side. Similarly NEA is using more or less unvarying gearing or NEA is also depending other collected liabilities than owner' capital. Trend of HGICL is seems more fluctuating because it has shown down trend. In the past HGICL is mobilizing owner's capital only but after the period of 2006 HCICL is mobilizing other capital significantly. Similarly Ratio of NTC is mobilizing owner's capital significantly or NTC has it' own un-mobilized capital so NTC is not depended on other liabilities. Comparatively, capital to other liability ratio of NIBL and NABIL is lowest, ratio of NEA is lower, HGICL has higher ratio and ratio of NTC is in highest position. So NTC is the organization having own sufficient fund, HGICL has moderate level of own fund, NEA has poor in the concern of self fund and NIBL and NABIL are poorest in the concern.

)] **Core capital to risky assets ratio.**

Core capital incorporates the heading of share capital fund and risk asset are the subject to the investment which are invested on the various headings like as manufacturing some thing, credit relating the various heading, work in progress, investment it self etc. credit is the source of the fund and asset is utilization of fund so proper mechanism should be develop to get better result from the process.

**Figure No: 4.8**

**Presentation of Relationship between risky assets to capital ratio**



Annex-9

Looking at the graph, ratio of NEA is in declining during the period of 2003 to 2007 which is the symbol of higher investment on work in progress and other investment. Similarly ratio of NEA is in increasing significantly in step jump manner which is the indication of lower investment on work in progress and other investments. Similarly HGICL is investing also investing capital to risky asset because line is shifted below the slab of 100%. Similarly NABIL and NIBL has invested massively on risky asset because the line is shifted almost on zero level which is the indication of 0% weight of capital asset on total risky asset of respective organization. Comparatively, NIBL and NABIL

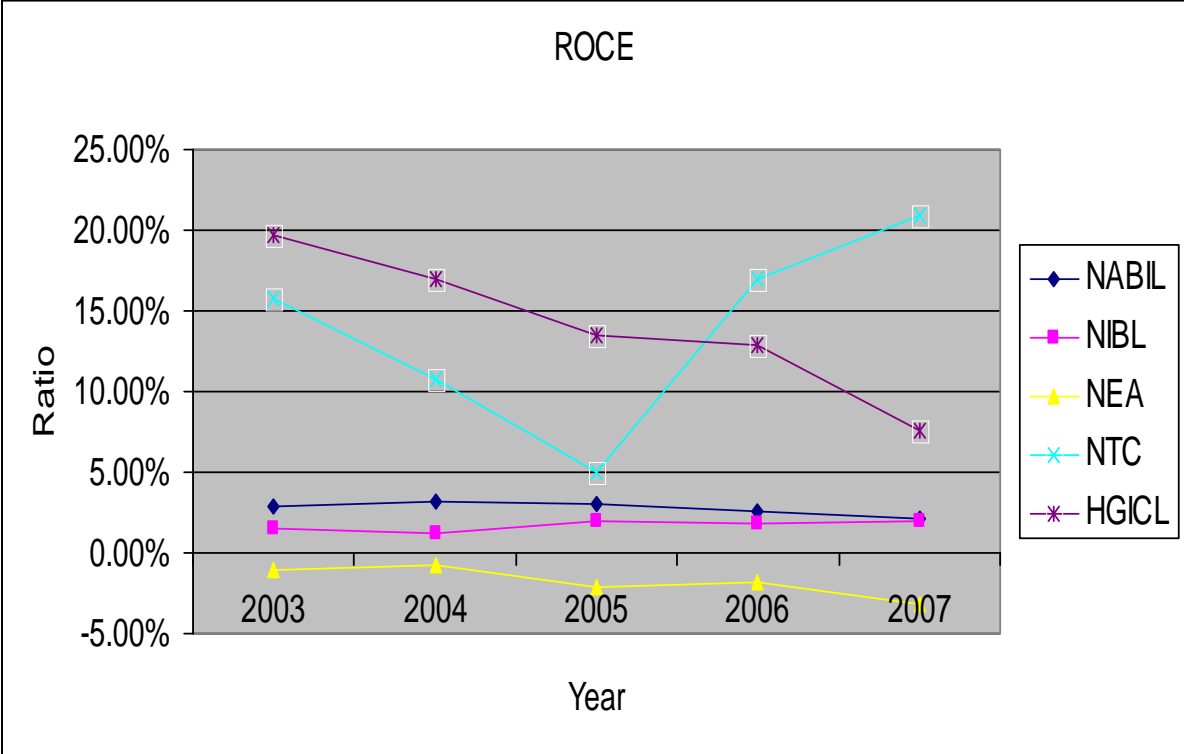
are massively investing in risky asset than other organization; HGICL is also deploying the capital on risky asset which is also aggressive investment. Similarly NEA is trying to invest on risky asset as the capital of the organization. NTC is either increasing the capital or reducing the volume of investment on risky asset so the ratio is very high than 100%

### 4.2.3 OTHER INDICATORS

- o **Return on capital employed (ROCE)**

ROCE is an indicator which helps to describe the relation between seeded money (invested money) and the return form the investment. As we know every feasible projects requires amount to be invested for the shake of expected return of project. in the decision making process higher ROCE is highly acceptable and vice versa.

**Figure No: 4.9**  
**Presentation of ROCE**

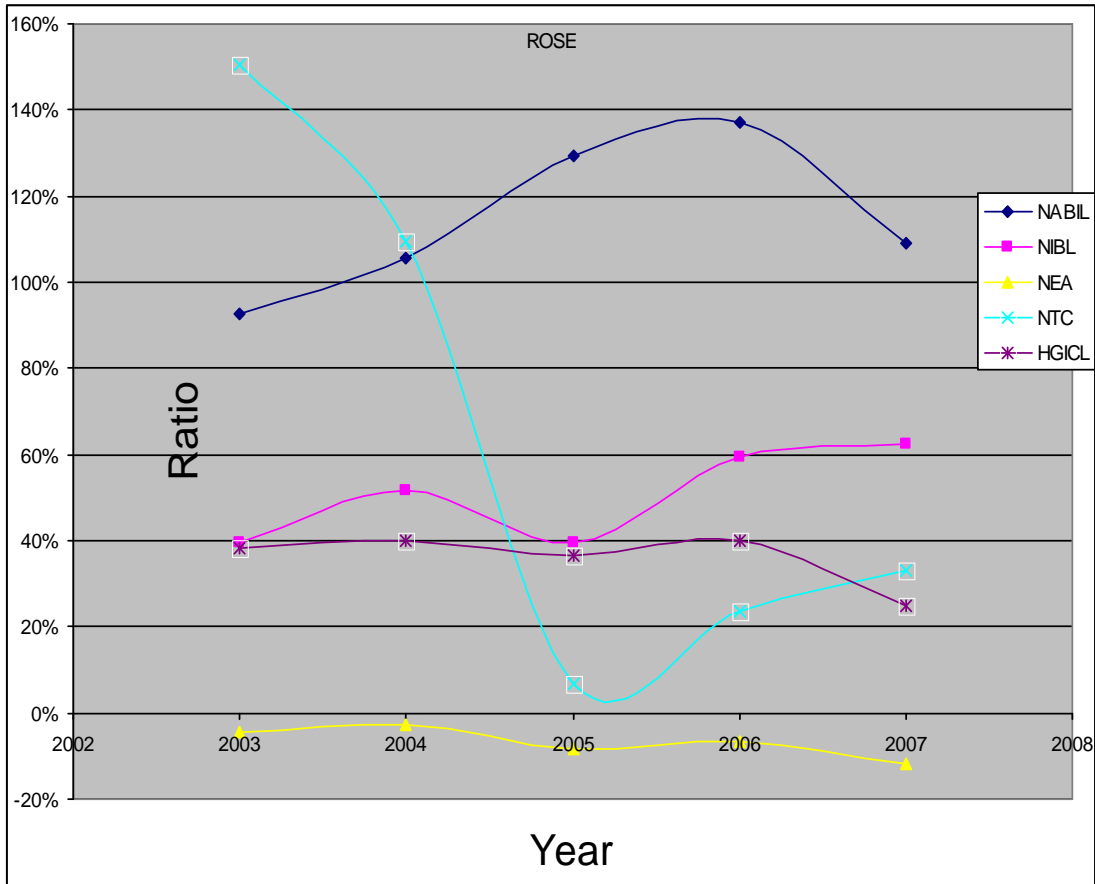


Looking at the graph, ROCE of HGICL is higher till the year 2005 than after it is in declining trend but which is still higher than NIBL, NABIL and NEA. However ROCE of HGICL is declined significantly during the period of 2003 to 2007. Similarly ROCE of NTC is in declining trend till the period of 2005 than after it is in increasing trend. In the case of NABIL ROCE seems more or less same during the period however some down pattern has appeared after the period of 2005. ROCE of NIBL is also seems more or less same but some up ward movement have seen after 2004. ROCE of NEA is seems stable during the period of 2003-2004 but than after it is in more worse trend or declining trend. So, ROCE of NTC is highest, HGICL is in second position, NABIL is in third position, NIBL is in fourth position and NEA is in last position in the concern of ROCE.

- **Return on shareholders equity (ROSE)**

Shareholders equity consist share capital, general reserves, profit/retained earnings etc. ROSE evaluated the relationship between shareholders' equity and profit that is garnered through the business operation. Higher ROSE is the symbol of good business and vice versa.

**Figure No: 4.10**  
**Presentation of ROSE**



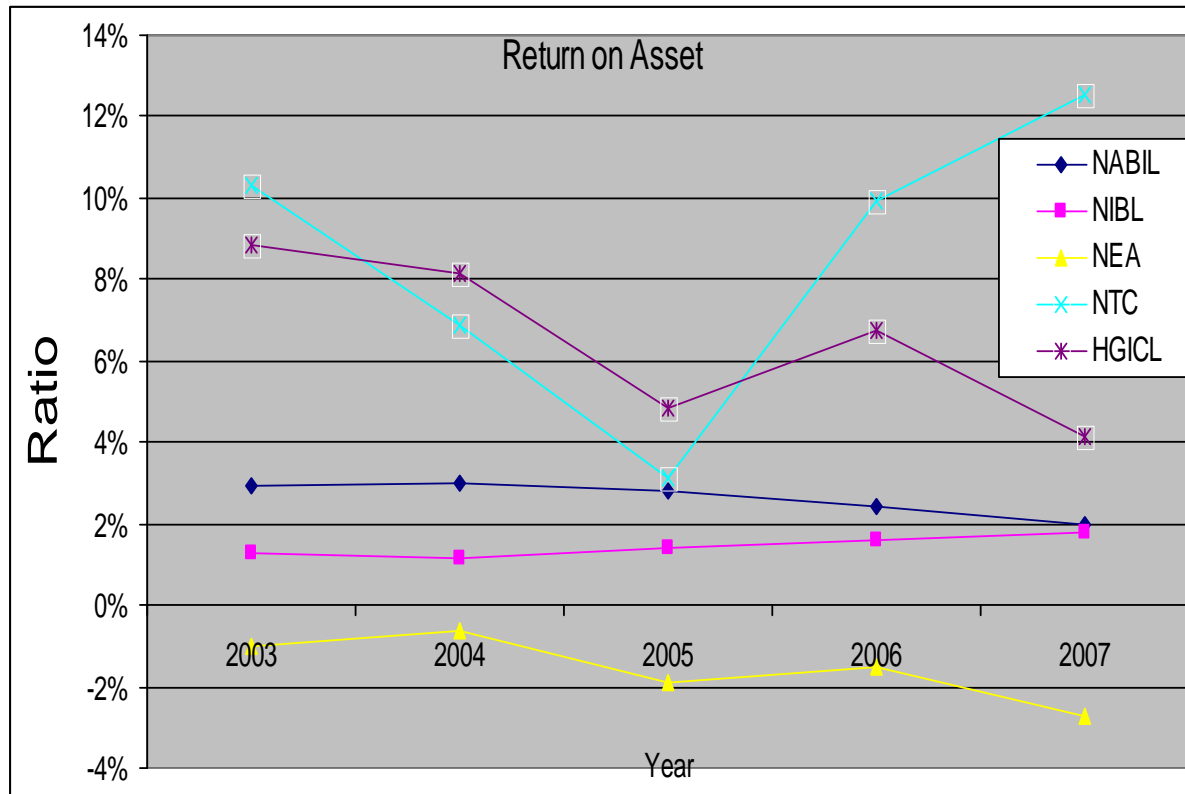
Annex-11

Looking at the graph ROA of NTC is declined significantly which seems at peak during the period of 2003 but after the period of 2005 it is increasing slowly. Similarly ROA of NABIL is in increasing trend however it shows some downward pattern after the year 2006. NIBL seems less fluctuating because its curve have very few up and down movement however ROA of NIBL is also increasing significantly. In the concern of HGICL, ROA seems more or less same till the period of 2006 but than after it is in down trend. NEA has negative profit so its ROA is in negative form, respective curve of NEA show slow down trend which is the meaning of the more negative return. So, ROA of NABIL is highest, NIBL is in second position, NTC is in third position, HGICL is in fourth position and NEA is in last position in above concern.

- **Return on assets (ROA)**

This ratio measures the profitability of a bank, which shows the percentage of net profit against risky assets (i.e. loan and advances plus bills purchased and discounted). Higher ROA is the indication of better utilization of asset and vice versa.

**Figure No: 4.11**  
**Presentation of Return on Asset**



Annex-12

Looking at the above graph, ROA of NTC seems more fluctuating because of more ups and down movement of curve. ROA of NTC seems in declining form till the period of 2005 than after it is in increasing trend. Similarly ROA of HGICL seems down trend with low fluctuating patterns. ROA of NABIL is seems more or less same patterns however ROA of NABIL is in declining form in slow motion. Patterns of NIBL show slow upward movement. Similarly ROA of NEA is declining regularly. So, ROA of NTC is highest, HGICL is in second position, NABIL is in third position, NABIL is in fourth position and NEA is in last position in above concern.



- **Credit to Deposit ratio (C/D ratio)**

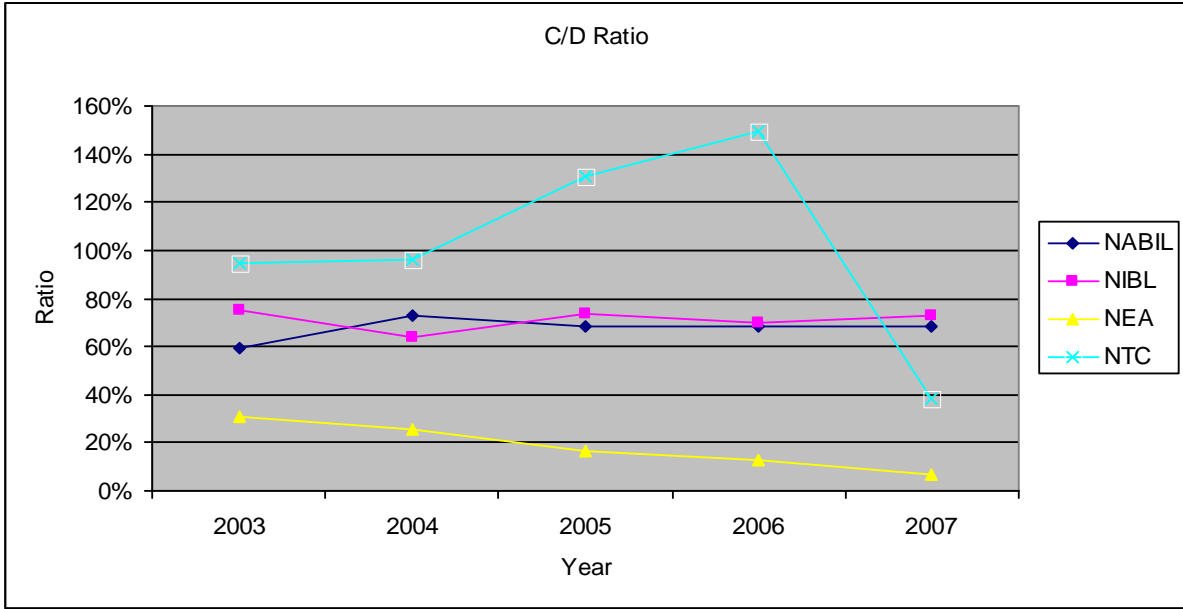
Credit and deposit are two opposite transactions of accounting under the banking service. Credit stands on the assets side as the use of resources and deposit stands on the liabilities side as the source of resources. So, proper management of such resources mobilization and deployment plays significant role in and institution.

Since the all sample organizations are not financial institution so, the terms deposit and credit are not found in the transaction of other organization. To make the work simple and understandable the term deposit is assumed as the summation long term liabilities and current liabilities and credit is assumed as the summation of investment and work in progress (assets) for the organization other than bank.

Higher the C/D ratio cause to raise the profit for the organization and cause to lower the liquidity for the bank. Similarly higher the fund investment on work in progress would cause to garner the extra profit for the organization but would cause to additional risk to the organization on failure of investment.

**Figure No: 4.12**

**Presentation of Credit (investment & Work in Progress) to Deposit (Liability) Ratio**



Annex-13

Looking at the above graph, C/D ratio of NTC seems up ward sloping till the period of 2006 but after this point C/D ratio of NTC has declined significantly. C/D ratio of NIBL and NABIL seems more or less same during the period of 2003 to 2007. C/D ratio of both banks is scattered between 60 percent and 80 percent which is assumed as good liquidity management. C/D ratio of NEA seems very low it means NEA has extra fund on hand which is waiting to be invested. Study has not included the ratio of HGICL because of no meaning full matter for C/D ratio. So, C/D ratio of NIBL is highest, NABIL is in second position, NTC is in third position, NEA is in fourth position.

**4.3 Statistical Analysis Tools:**

**Correlation Analysis**

Correlation is a tool to measure the co-movement's relationships of two headings of statistics. In other word how movement of one variable affects the movement of other variable can be measured the correlation analysis. Universally, such relation can be fund with in the limitation of – 1 to +1. in the intension to find out the relation of debt and equity study have focused the correlation.

**Table No. 4.3**  
**Correlation (COR) between Equity and Debt**

	NABIL		NIBL		NEA		NTC	
	Equity	Total Debt	Equity	Total Debt	Equity	Total Debt	Equity	Total Debt
2003	491,654.00	14,349.00	295,293.00	7,929.60	16601300	47,422.60	2,053,864.00	3909.192
2004	491,654.00	14,603.67	295,293.00	11,886.18	16976900	51,984.10	2,053,864.00	4090.353
2005	491,654.00	19,520.60	587,739.00	14,604.57	18215900	55,641.20	15,000,000.00	3642.112
2006	491,654.00	24,224.85	590,586.00	19,477.31	20161800	62,003.90	15,000,000.00	3882.723
2007	689,216.00	33,275.05	801,353.00	25288.856	21273100	65,621.30	15,000,000.00	4475.753
<b>COR</b>	<b>0.857263884</b>		<b>0.935364637</b>		<b>0.986642213</b>		<b>0.000748076</b>	

Annex-14

Index of COR for NABIL shows the relationship of 0.8573, which gives the meaning that if some up and down trend occurred in equity than only 0.8573 percent changes would be reflected by debt and vice versa. Other remaining effect would be caused by other variables. So, movements of equities are directly related with the movement of debts in positive manner. So, if equity of NABIL is increased than it would definitely cause to increase in debt also. Similarly looking at the index of NIBL more or less same effect as NABIL can be found because movement of equity and debts are correlated 0.935 which is approximately 1. So, movements of equity are fully reflected by the movement of debt in positive manner for NIBL too. Relationship between fund collection and use of fund is positive for NEA by 0.9867 which means uses and collection approximately same. Case of NTC is different then other because only partial effect is found in between the relationship of equity and debt.

### Trend Analysis:

Trend is the continuity of past on present and future, which helps to formulate the strategies, plans and policies. This study has tried to find out the expected movement of selected organization during upcoming 5 year by using the trend analysis. To make the analysis accurate and dependable calculations are done by using sophisticated calculation software named SPSS.

**Table No. 4.4 (Figure in thousand)**  
**Existing profit trend of selected organizations**

Year	NABIL Profit	NIBL Profit	NEA Profit	NTC Profit	HGICL Profit
2003	455,000.00	116,817.00	(717,400.00)	3,087,782.00	11,523.00
2004	518,636.00	152,671.00	(455,900.00)	2,247,301.00	11,958.00
2005	635,262.00	232,147.00	(1,486,100.00)	1,042,816.00	11,011.00
2006	673,960.00	350,536.00	(1,312,800.00)	3,542,461.00	11,970.00
2007	750,354.00	501,399.00	(2,472,600.00)	4,936,647.00	7,530.00

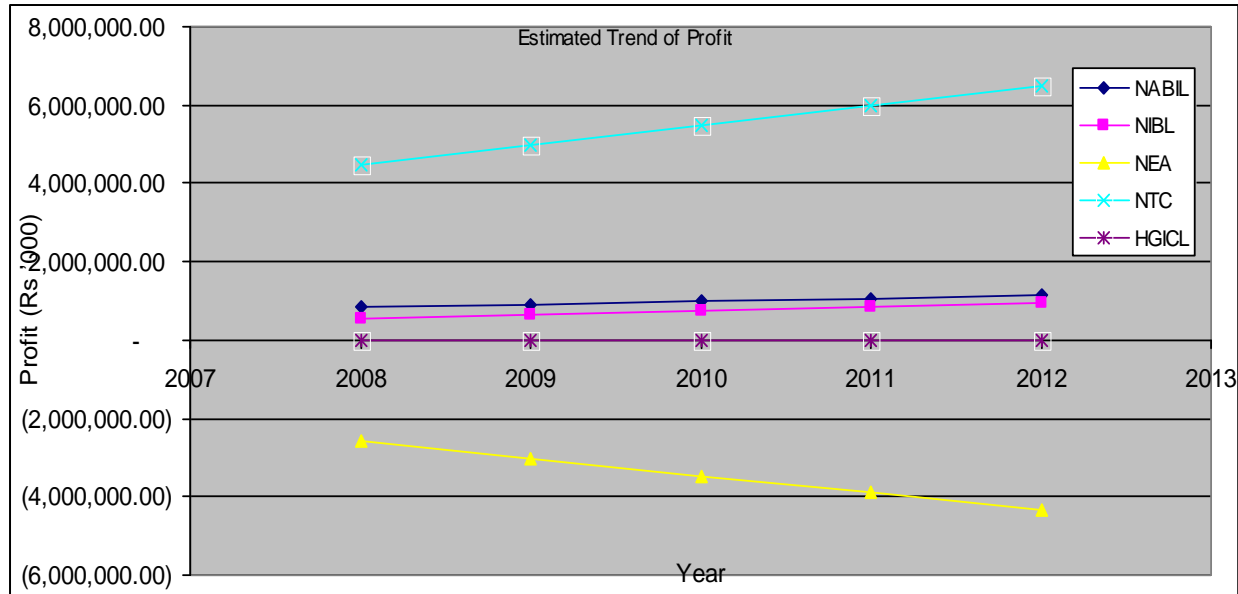
Looking at the table, NABIL, NIBL NTC and HGICL are garnering profit during the period of 2003 to 2007 but NEA is in loss. Hereunder the study tries to find out the expected movement of profit of selected organizations.

**Table No: 4.5 (Fig in thousand)**  
**Projection of profit**

Year	Profit (NABIL)	Profit (NIBL)	Profit (NEA)	Profit (NTC)	Profit (HGICL)
2008	830,452.00	560,822.70	(2,599,150.00)	4,469,268.40	8,406.20
2009	905,055.20	657,525.60	(3,035,880.00)	4,968,557.40	7,608.80
2010	979,658.40	754,228.50	(3,472,610.00)	5,467,846.40	6,811.40
2011	1,054,261.60	850,931.40	(3,909,340.00)	5,967,135.40	6,014.00
2012	1,128,864.80	947,634.30	(4,346,070.00)	6,466,424.40	5,216.60

Profit of NABIL seems in progressive way, NIBL is also in same way NEA seems in massive loss way similarly profit of NTC is increasing slowly and profit of HGICL seems in decline trend.

**Figure No: 4.13**  
**Presentation of Trend of Profit**



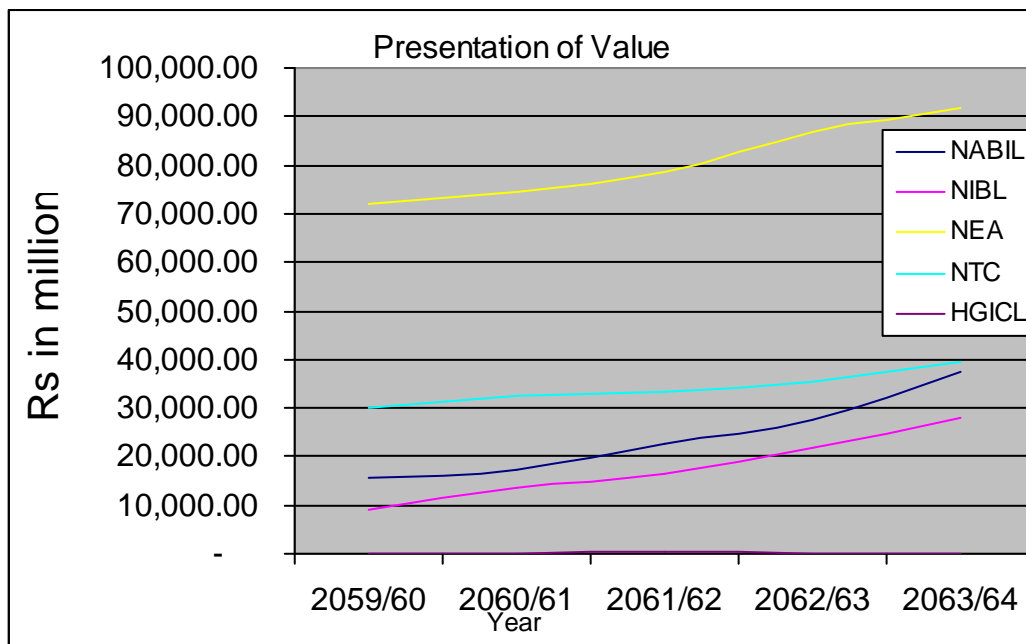
Annex-15

Looking at the graph above, profit of NTC seems in steady growth. So if present condition remain same it would be beneficial for NTC. Similarly profit of NABIL seems more or less same so, present condition should be improved to reap extra benefit from the operation. Similarly NIBL has also more or loss same level of profit. NIBL should improve the condition but the condition of HGICL is exactly same in figure so massive improvement should be done by HGICL. NEA is sinking in loss year by year. So NEA should make new mechanism to improve the financial condition.

#### 4.4 Analysis of overall value of organization

Under this heading, study has tried to compare the over all size of balance-sheet during the study period. Value indicates the numerical summarization of overall activities which can be represented in monetary terms. In the same sprit total asset or total liabilities relating with respective organizations during the study period are undertaken.

**Figure No: 4.14**  
**Presentation of Values**



Annex-16

Looking at the graph NEA has the overall highest position in the volume of balance sheet, so activities and coverage of NEA are higher than others. Similarly, position of NTC is shifted on second place so overall activities that can be converted on monetary terms are lower than NEA and higher than other selected organizations. Positions of NIBL and NABIL is lower than these two organization and over all position of HGICL is slightly lower than other that's why it is not present on the slab of presentation. In

aggregate NEA has the higher value of firm than after NTC is counted, similarly NABIL has higher position than NIBL but lower than NTC and NEA.

#### **4.5 Major Findings**

- Being big financial houses NTC and NEA dominates other organizations in volume related issue so; the gearing of other organization is not seen in the figure. Other than these houses don't have debt transaction during the sampled period too.
- Comparatively, total loan liabilities to shareholders fund ratio of NIBL is highest, ratio of NABIL is in second position, NEA is in third position, HGICL is in fourth position and NTC is in fifth position.
- Comparatively, total debt to total assets ratio of NIBL is highest, ratio of NABIL is higher, NEA is in third position, HGICL is in fourth position and NTC is in fifth position.
- Interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and other organization are seems very weak in the concern of interest expenses bearing
- In case of EPS, NABIL is in good condition as it regularly improving its earning capacity during the study period. EPS of NTC is in highest form during the starting period of sampled data but than after it is in sharply declining form after crossing the period of 2061/62 is again in steady growing trend. So, it seems good trend for NTC. HGICL and NIBL has more or less same pattern during the period of first four years but the trend of NIBL is growing significantly after 2061/62. NEA is not taken into account because of its regular losses.
- FL of NIBL seems higher than all other sampled organizations. This informs that NIBL is investing more fund on administration issues or other headings which are not directly connected with operation (like as fund mobilization and collection),

but scenario is in improving trend because of down ward sloping curve. NTC has more or less same level of FL during the whole study period. NABIL has been maintaining same level of FL however it was increased during the period of 2061/62. HGICL, being a small organization among the total selected organizations, the curve is in small form but it seems moving up ward in recent time.

- NTC is the organization having own sufficient fund, HGICL has moderate level of own fund, NEA has poor in the concern of self fund and NIBL and NABIL are poorest in the concern.
- Comparatively, NIBL and NABIL are massively investing in risky assets than other organization; HGICL is also deploying the capital on risky asset which is also aggressive investment. Similarly NEA is trying to invest on risky asset as the capital of the organization. NTC is either increasing the capital or reducing the volume of investment on risky asset so the ratio is very high than 100%.
- ROCE of NTC is highest, HGICL is in second position, NABIL is in third position, NIBL is in fourth position and NEA is in last position in the concern of ROCE.
- ROSE of NABIL is highest, NIBL is in second position, NTC is in third position, HGICL is in fourth position and NEA is in last position in above concern.
- ROA of NTC is highest, HGICL is in second position, NABIL is in third position, NABIL is in fourth position and NEA is in last position in above concern.
- C/D Ratio of NIBL is highest, NABIL is in second position, NTC is in third position and NEA is in fourth position.
- Correlation between sources and uses of fund (correlation between credit and deposit) for banks is approximately +1 and for NEA and NTC is approximately -1.
- Trend of the profit for upcoming 5 year is massively positive for NTC. Similarly profit of HGICL seems in declining trend and NEA seems in massive loss trend. Similarly profit trend of NIBL and NABIL is more or less same.



- NEA has the higher value of firm than after NTC is counted, similarly NABIL has higher position than NIBL but lower than NTC and NEA. Overall position of HGICL is slightly lower than others.

## ***CHAPTER – FIVE***

### **5. SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary and Conclusion**

This chapter includes the aggregate summary of the previous chapter and recommends for the betterment to the respective organization. For simplicity this section has divided in to two subheadings named summary and conclusion & recommendation section.

Being chapter of introduction, chapter I deals with the overall introduction of the study which have included general background of the research topic, objectives, limitation, statements of problems etc. The first chapter is also known as the main guide line for the entire study.

Existing studies which are conducted by other authors are reviewed in second chapter to get the in depth information and leakages of existing studies.

Similarly the third chapter consists the briefing and mechanism of analytical tools and methodologies which are used to draw meaningful conclusion from the scattered and random data.

Being the main chapter of the study, chapter four consists of various analysis and data presentation procedures, which is directly related with the achievements of objectives of the study. General summary of chapter four is as follows:

Being big financial houses NTC and NEA dominates other organizations in volume related issue so; the gearing of other organization is not seen in the figure. Other than these houses don't have debt transaction during the sampled period too.

Comparatively, total loan liabilities to shareholders fund ratio of NIBL is highest, ratio of NABIL is in second position, NEA is in third position, HGICL is in fourth position and NTC is in fourth position. Comparatively, total debt to total ratio of NIBL is highest,

ratio of NABIL is higher, NEA is in third position, HGICL is in fourth position and NTC is in fifth position. Interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and other organization seem to be very weak in the concern of interest expenses bearing. In case of EPS, NABIL is in good condition as it regularly improving its earning capacity during the study period. EPS of NTC is in highest form during the starting period of sampled data but than after it is in sharply declining form after crossing the period of 2061/62 is again in steady growing trend. So, it seems good trend for NTC. HGICL and NIBL has more or less same pattern during the period of first four years but the trend of NIBL is growing significantly after 2061/62. NEA is not taken into account because of its regular losses. FL of NIBL seems higher than all other sampled organizations. This informs that NIBL is investing more fund on administration issues or other headings which are not directly connected with operation (like as fund mobilization and collection), but scenario is in improving trend because of down ward sloping curve. NTC has more or less same level of FL during the whole study period. NABIL has been maintaining same level of FL however it was increased during the period of 2061/62. HGICL, being a small organization among the total selected organizations, the curve is in small form but it seems moving up ward in recent time.

NTC is the organization having own sufficient fund, HGICL has moderate level of own fund, NEA has poor in the concern of self fund and NIBL and NABIL are poorest in the concern. Comparatively, NBIL and NABIL are massively investing in risky asset than other organization; HGICL is also deploying the capital on risky asset which is also aggressive investment. Similarly NEA is trying to invest on risky asset as the capital of the organization. NTC is either increasing the capital or reducing the volume of investment on risky asset so the ratio is higher than 100%. ROCE of NTC is highest, HGICL is in second position, NABIL is in third position, NIBL is in fourth position and NEA is in last position in the concern of ROCE. ROSE of NABIL is highest, NIBL is in second position, NTC is in third position, HGICL is in fourth position and NEA is in last position in above concern. ROA of NTC is highest, HGICL is in second position, NABIL is in third position, NABIL is in fourth position and NEA is in last position in above concern. C/D Ratio of NIBL is highest, NABIL is in second position, NTC is in third

position and NEA is in fourth position. The study has not included the ratio of HGICL because of no meaningful matter for C/D ratio Correlation between sources and uses of fund (correlation between debt and equity) for banks is approximately +1 and for NEA and NTC is approximately -1. Trend of the profit for upcoming 5 year is massively positive for NTC. Similarly profit of HGICL seems in declining trend and NEA seems in massive loss trend. Similarly profit trend of NIBL and NABIL is more or less same. The value of NEA is highest followed by NTC; similarly NABIL has higher position than NIBL but lower than NTC and NEA. Overall position of HGICL is slightly lower than others.

## **Recommendations**

Based on the research work, the following recommendations are made on the above findings and conclusion. Certain recommendations can be made here so that the concerned authorities can benefit from them.

- The value of the firm can be maximized either by minimizing the overall cost of capital. The organizations should focus more on optimal capital structure rather than increasing debt portion or equity.
- It is found that DFL of NIBL & NTC is high, NABIL is constant with it and HGICL seems to have been doing fairly well as it is small compared to others. NEA has negative DFL as it has been running in loss. It is the fixed cost, which ultimately affects the profit; all the companies should maintain optimal level of interest cost in business. NEA which is suffering from losses is suggested to decrease its interest cost.
- NTC should focus to the unutilized capital to generate extra income.
- NEA should focus on profit for sustainability and effectiveness. So, NEA is recommended to review the statistics and should prepare the sound financial plan.

- NABIL and NIBL are seems in satisfactory trend so, they should try to maintain at least same pattern to stabilize the condition.
- HGICL is seems in down trend pattern in the concern of profit so, it should think about the innovating gearing and operation for betterment.
- It is recommended that cost and benefit should be analyzed before raising fund from different source of capital. Although debt creates tax benefit and increase ROE.
- The capital structure decisions are not found to be considered properly by the companies. It affects the value of the firm and overall cost of capital so every investment and financing decision of the company should be taken by considering the capital structure of firm.
- The concerned authorities should give continuity in providing both conceptual and practical training to the staff to enhance their knowledge, skill and competency.

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## Annex-1

### Long Term Debt to shareholders fund ratio

Fig. in NPR mio.

Year	NABIL		
	Long term Debt	Shareholders Fund	Ratio
2002/03	0	1,482.00	0
2003/04	0	1,999.00	0
2004/05	0	1,657.00	0
2005/06	0	2,287.00	0
2006/07	0	2,560.00	0
Year	NIBL		
	Long Term Debt	Shareholders Fund	Ratio
2002/03	0	638.54	0
2003/04	0	729.05	0
2004/05	0	1,180.17	0
2005/06	0	1,415.44	0
2006/07	0	1,878.12	0

Year	NEA		
	Long Term Debt	Shareholders Fund	Ratio
2002/03	41,474.50	24,755.10	1.68
2003/04	43,786.00	22,560.40	1.94
2004/05	45,252.00	22,766.50	1.99
2005/06	48,686.40	24,987.90	1.95
2006/07	51,955.50	26,003.90	2.00

Year	NTC		
	Long Term Debt	Shareholders Fund	Ratio
2002/03	233.78	19,521.87	0.01
2003/04	0	33,703.24	-
2004/05	11.249	20,580.39	0.00
2005/06	24.239	20,825.86	0.00
2006/07	0	23,686.03	-

Year	HGICL		
	Long Term Debt	Shareholders Fund	Ratio
2002/03	0	58.51	-
2003/04	0	70.47	-
2004/05	0	81.48	-
2005/06	0	93.33	-
2006/07	0	65.56	-



**Annex-2**

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**Total debt to shareholders fund ratio**

Fig. in NPR mio.

Year	NABIL		
	Total Debt	Shareholder's Fund	Ratio
2002/03	14,349.00	1,482.00	10
2003/04	14,603.67	1,999.00	7
2004/05	19,520.60	1,657.00	12
2005/06	24,224.85	2,287.00	11
2006/07	33,275.05	2,560.00	13

Year	NIBL		
	Total Debt	Shareholder's Fund	Ratio
2002/03	7929.595	638.542	12
2003/04	11886.18	729.05	16
2004/05	14604.574	1,180.17	12
2005/06	19477.306	1,415.44	14
2006/07	25288.856	1,878.12	13

Year	NEA		
	Total Debt	Shareholder's Fund	Ratio
2002/03	47422.6	24,755.10	2
2003/04	51984.1	22,560.40	2
2004/05	55641.2	22,766.50	2
2005/06	62003.9	24,987.90	2
2006/07	65621.3	26,003.90	3

Year	NTC		
	Total Debt	Shareholder's Fund	Ratio
2002/03	3909.192	19,521.87	0.20
2003/04	4090.353	33,703.24	0.12
2004/05	3642.112	20,580.39	0.18
2005/06	3882.723	20,825.86	0.19
2006/07	4475.753	23,686.03	0.19

Year	HGICL		
	Total Debt	Shareholder's Fund	Ratio
2002/03	46.933	58.51	0.80
2003/04	52.256	70.47	0.74
2004/05	119.38	81.48	1.47
2005/06	49.897	93.33	0.53
2006/07	36.113	65.56	0.55

## Annex-3

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**Total debt to total assets ratio**  
**Fig. in NPR mio.**

Year	NABIL		
	Total Debt	Total asset	Ratio
2002/03	14,349.00	15,626.00	92%
2003/04	14,603.67	17,186.33	85%
2004/05	19,520.60	22,686.21	86%
2005/06	24,224.85	27,610.64	88%
2006/07	33,275.05	37,487.67	89%

Year	NIBL		
	Total Debt	Total asset	Ratio
2002/03	7929.595	9163.895	87%
2003/04	11886.18	13463.937	88%
2004/05	14604.574	16390.652	89%
2005/06	19477.306	21732.081	90%
2006/07	25288.856	28073.517	90%

Year	NEA		
	Total Debt	Total asset	Ratio
2002/03	47422.6	72177.7	66%
2003/04	51984.1	74545.3	70%
2004/05	55641.2	78407.7	71%
2005/06	62003.9	86991.8	71%
2006/07	65621.3	91625.2	72%

Year	NTC		
	Total Debt	Shareholder's Fund	Ratio
2002/03	3909.192	29892.993	13%
2003/04	4090.353	32652.787	13%
2004/05	3642.112	33221.352	11%
2005/06	3882.723	35572.772	11%
2006/07	4475.753	39351.406	11%

Year	HGICL		
	Total Debt	Shareholder's Fund	Ratio
2002/03	46.933	130.065	36%
2003/04	52.256	146.512	36%
2004/05	119.38	227.705	52%
2005/06	49.897	176.788	28%
2006/07	36.113	180.763	20%

## Annex-4

### Interest Coverage Ratio Fig. in NPR mio.

Year	NABIL		
	Interest cost	Operating Profit	Ratio
2002/03	205.50	695.62	3.4
2003/04	243.55	769.74	3.2
2004/05	357.16	1,359.51	3.8
2005/06	555.71	1,037.61	1.9
2006/07	758.43	1,128.42	1.5

Year	NIBL		
	Interest cost	Operating Profit	Ratio
2002/03	189.214	388.72	2.1
2003/04	326.202	587.51	1.8
2004/05	354.549	791.08	2.2
2005/06	490.947	970.48	2.0
2006/07	685.53	1,314.23	1.9

Year	NEA		
	Interest cost	Operating Profit	Ratio
2002/03	1,395.50	2,427.30	1.7
2003/04	2,973.40	4,332.40	1.5
2004/05	2,991.50	3,915.50	1.3
2005/06	3,079.80	3,653.70	1.2
2006/07	3,281.50	3,098.70	0.9

Year	NTC		
	Interest cost	Operating Profit	Ratio
2002/03	98.204	7208.087	73.4
2003/04	67.619	6070.423	89.8
2004/05	22.323	2241.821	100.4
2005/06	57.732	8584.144	148.7
2006/07	65.046	10413.655	160.1

Year	HGICL		
	Interest cost	Operating Profit	Ratio
2002/03	0	15.2	0
2003/04	0	16.53	0
2004/05	0	13.972	0
2005/06	0	17.065	0
2006/07	0	13.38	0

## Annex 5

### Calculation of EPS

#### NABIL

Year	No. of Share	Net Profit	EPS
2002/03	4,916,540.00	455,000,000.00	92.54
2003/04	4,916,540.00	517,000,000.00	105.16
2004/05	4,916,540.00	518,636,000.00	105.49
2005/06	4,916,540.00	635,262,000.00	129.21
2006/07	4,916,540.00	685,626,000.00	139.45

#### NIBL

Year	No. of Shares	Net Profit	EPS
2002/03	2,952,930.00	116,817,000.00	39.56
2003/04	2,952,930.00	152,671,000.00	51.70
2004/05	5,877,390.00	232,147,000.00	39.50
2005/06	5,905,860.00	350,536,000.00	59.35
2006/07	8,013,530.00	501,399,000.00	62.57

#### NEA

Year	Equity	Net Profit	Ratio
2002/03	166,013.00	(717,400,000.00)	(4,321.35)
2003/04	169,769.00	(455,900,000.00)	(2,685.41)
2004/05	182,159.00	(1,486,100,000.00)	(8,158.26)
2005/06	201,618.00	(1,312,800,000.00)	(6,511.32)
2006/07	212,731.00	(2,472,600,000.00)	(11,623.13)

#### NTC

Year	Equity	Net Profit	Ratio
2002/03	20,538,640.00	3,087,782,000.00	150.34
2003/04	20,538,640.00	2,247,301,000.00	109.42
2004/05	150,000,000.00	1,042,816,000.00	6.95
2005/06	150,000,000.00	3,542,461,000.00	23.62
2006/07	150,000,000.00	4,936,647,000.00	32.91

#### HGICL

Year	Equity	Net Profit	Ratio
2002/03	300,000.00	11,523,000.00	38.41
2003/04	300,000.00	11,958,000.00	39.86
2004/05	300,000.00	11,011,000.00	36.70
2005/06	300,000.00	11,970,000.00	39.90
2006/07	300,000.00	7,530,000.00	25.10

## Annex-6

### Earning Per Share (EPS) & Financial Leverage (FL)

#### NIBL

Year	2002/03	2003/04	2004/05	2005/06	2006/07
No. of Share	2,952,930.00	2,952,930.00	5,877,390.00	5,905,860.00	8,013,530.00
Net Profit	116,817,000.00	152,671,000.00	232,147,000.00	350,536,000.00	501,399,000.00
Operating Profit	388,715,000.00	587,512,000.00	791,079,000.00	970,482,000.00	1,314,233,000.00
<b>EPS</b>	<b>39.56</b>	<b>51.70</b>	<b>39.50</b>	<b>59.35</b>	<b>62.57</b>
<b>Financial Leverage</b>	<b>3.33</b>	<b>3.85</b>	<b>3.41</b>	<b>2.77</b>	<b>2.62</b>

#### NABIL

Year	2002/03	2003/04	2004/05	2005/06	2006/07
No. of Share	4,916,540.00	4,916,540.00	4,916,540.00	4,916,540.00	4,916,540.00
Net Profit	455,000,000.00	517,000,000.00	518,636,000.00	635,262,000.00	685,626,000.00
Operating Profit	812,000,000.00	873,000,000.00	1,194,898,000.00	1,346,130,000.00	1,053,807,000.00
<b>EPS</b>	<b>92.54</b>	<b>105.16</b>	<b>105.49</b>	<b>129.21</b>	<b>139.45</b>
<b>Financial Leverage</b>	<b>1.78</b>	<b>1.69</b>	<b>2.30</b>	<b>2.12</b>	<b>1.54</b>

#### HGICL

Year	2002/03	2003/04	2004/05	2005/06	2006/07
No. of Share	300,000.00	300,000.00	300,000.00	300,000.00	300,000.00
Net Profit	11,523,000.00	11,958,000.00	11,011,000.00	11,970,000.00	7,530,000.00
Operating Profit	15,200,000.00	16,530,000.00	13,927,000.00	17,065,000.00	13,380,000.00
<b>EPS</b>	<b>38.41</b>	<b>39.86</b>	<b>36.70</b>	<b>39.90</b>	<b>25.10</b>
<b>Financial Leverage</b>	<b>1.32</b>	<b>1.38</b>	<b>1.26</b>	<b>1.43</b>	<b>1.78</b>

#### NEA

Year	2002/03	2003/04	2004/05	2005/06	2006/07
No. of Share	166,013,000.00	169,769,000.00	182,159,000.00	201,618,000.00	212,731,000.00
Net Profit and Loss	(860,700,000.00)	(1,953,700,000.00)	(1,760,300,000.00)	(1,312,800,000.00)	#####
Operating Profit	3,098,700,000.00	3,653,700,000.00	3,915,500,000.00	4,332,400,000.00	2,427,300,000.00
<b>EPS</b>	<b>(5.18)</b>	<b>(11.51)</b>	<b>(9.66)</b>	<b>(6.51)</b>	<b>(11.62)</b>
<b>Financial Leverage</b>	<b>(3.60)</b>	<b>(1.87)</b>	<b>(2.22)</b>	<b>(3.30)</b>	<b>(0.98)</b>

#### NTC

Year	2002/03	2003/04	2004/05	2005/06	2006/07
No. of Share	20,538,640.00	20,538,640.00	150,000,000.00	150,000,000.00	150,000,000.00
Net Profit and Loss	3,087,782,000.00	2,247,301,000.00	1,042,816,000.00	3,542,461,000.00	4,936,647,000.00
Operating Profit	7,669,284,000.00	6,404,615,000.00	2,450,419,000.00	9,194,297,000.00	#####
<b>EPS</b>	<b>150.34</b>	<b>109.42</b>	<b>6.95</b>	<b>23.62</b>	<b>32.91</b>
<b>Financial Leverage</b>	<b>2.48</b>	<b>2.85</b>	<b>2.35</b>	<b>2.60</b>	<b>2.24</b>

## Annex-7

### Graphical Presentation

Year	Financial Leverage			
	NIBL	NABIL	HGIC	NTC
2002/03	3.33	1.78	1.32	2.48
2003/04	3.85	1.69	1.38	2.85
2004/05	3.41	2.3	1.26	2.35
2005/06	2.77	2.12	<b>1.43</b>	<b>2.6</b>
2006/07	2.62	1.54	1.78	2.24

Year	EPS			
	NIBL	NABIL	HGIC	NTC
2002/03	39.56	92.54	38.41	150.34
2003/04	51.70	105.16	39.86	109.42
2004/05	39.5	105.49	36.7	6.95
2005/06	59.5	129.21	<b>39.9</b>	23.62
2006/07	62.57	139.45	25.1	32.91

## **Annex-8**

### **Capital Fund to Deposit Fig. in NPR Thousand**

Year	NABIL		
	Capital Fund	Deposit	Ratio
2002/03	491,654.00	14,349,000.00	3%
2003/04	491,654.00	14,586,609.00	3%
2004/05	491,654.00	19,347,396.00	3%
2005/06	491,654.00	23,342,275.00	2%
2006/07	689,216.00	31,915,047.00	2%

Year	NIBL		
	Capital Fund	Deposit	Ratio
2002/03	295,293.00	7,922,766.00	4%
2003/04	295,293.00	11,524,680.00	3%
2004/05	587,739.00	14,254,574.00	4%
2005/06	590,586.00	18,927,306.00	3%
2006/07	801,353.00	24,488,856.00	3%

Year	NEA		
	Capital Fund	Loan	Ratio
2002/03	16,601,300.00	41,474,500.00	40%
2003/04	16,976,900.00	43,786,000.00	39%
2004/05	18,215,900.00	45,252,000.00	40%
2005/06	20,161,800.00	48,686,400.00	41%
2006/07	21,273,100.00	51,955,500.00	41%

Year	NTC		
	Capital Fund	total loans	Ratio
2002/03	2,053,864.00	3,909.19	52539%
2003/04	2,053,864.00	4,090.35	50212%
2004/05	15,000,000.00	3,642.11	411849%
2005/06	15,000,000.00	3,882.72	386327%
2006/07	15,000,000.00	4,475.75	335139%

Year	HGICL		
	Capital Fund	Reserve-Statutory	Ratio
2002/03	30,000.00	16,645.00	180%
2003/04	30,000.00	19,220.00	156%
2004/05	30,000.00	23,035.00	130%
2005/06	30,000.00	28,439.00	105%
2006/07	30,000.00	35,560.00	84%

## **Annex-9**

### **Core Capital to Risky Assets Ratio**

**Fig. in NPR thousand**

<b>Year</b>	<b>NABIL</b>		
	<b>Core Capital</b>	<b>Risky Assets</b>	<b>Ratio</b>
2002/03	491,654.00	5,894,931.46	8.34%
2003/04	491,654.00	6,116,175.76	8.04%
2004/05	491,654.00	6,047,344.20	8.13%
2005/06	491,654.00	5,919,514.16	8.31%
2006/07	689,216.00	8,360,190.08	8.24%

<b>Year</b>	<b>NIBL</b>		
	<b>Core Capital</b>	<b>Risky Assets</b>	<b>Ratio</b>
2002/03	295,293.00	2,362,344.00	13%
2003/04	295,293.00	2,527,708.08	12%
2004/05	587,739.00	5,436,585.75	11%
2005/06	590,586.00	5,380,238.46	11%
2006/07	801,353.00	8,021,543.53	10%

<b>Year</b>	<b>NEA</b>		
	<b>Core Capital</b>	<b>*Risky Assets</b>	<b>Ratio</b>
2002/03	16,601,300.00	5,390,800.00	308%
2003/04	16,976,900.00	9,268,500.00	183%
2004/05	18,215,900.00	11,396,600.00	160%
2005/06	20,161,800.00	16,773,400.00	120%
2006/07	21,273,100.00	20,155,600.00	106%

<b>Year</b>	<b>NTC</b>		
	<b>Core Capital</b>	<b>*Risky Assets</b>	<b>Ratio</b>
2002/03	2,053,864.00	3,692,871.00	56%
2003/04	2,053,864.00	3,918,134.00	52%
2004/05	15,000,000.00	4,771,796.00	314%
2005/06	15,000,000.00	5,791,312.00	259%
2006/07	15,000,000.00	1,713,887.00	875%

<b>Year</b>	<b>HGICL</b>		
	<b>Core Capital</b>	<b>*Risky Assets</b>	<b>Ratio</b>
2002/03	30,000.00	72,690.00	41%
2003/04	30,000.00	91,930.00	33%
2004/05	30,000.00	110,790.00	27%
2005/06	30,000.00	78,942.00	38%
2006/07	30,000.00	81,000.00	37%



## **Annex-10**

### **ROCE ANALYSIS** **Fig. in NPR thousand**

Year	NABIL		
	*Capital Employed	Net profit	Ratio
2002/03	15,653,150.00	455,000.00	2.91%
2003/04	16,261,310.00	518,636.00	3.19%
2004/05	21,395,596.00	635,262.00	2.97%
2005/06	26,281,907.00	673,960.00	2.56%
2006/07	36,322,398.00	750,354.00	2.07%

Year	NIBL		
	*Capital Employed	Net profit	Ratio
2002/03	7,929,601.00	116,817.00	1%
2003/04	11,886,179.00	152,671.00	1%
2004/05	11,604,575.00	232,147.00	2%
2005/06	19,477,306.00	350,536.00	2%
2006/07	25,288,855.00	501,399.00	2%

Year	NEA		
	*Capital Employed	Net profit/Loss	Ratio
2002/03	66,229,600.00	(717,400.00)	-1%
2003/04	66,347,200.00	(455,900.00)	-1%
2004/05	68,018,500.00	(1,486,100.00)	-2%
2005/06	73,674,300.00	(1,312,800.00)	-2%
2006/07	77,959,400.00	(2,472,600.00)	-3%

Year	NTC		
	*Capital Employed	Net profit/Loss	Ratio
2002/03	19,521,866.00	3,087,782.00	16%
2003/04	20,757,100.00	2,247,301.00	11%
2004/05	20,580,387.00	1,042,816.00	5%
2005/06	20,825,855.00	3,542,461.00	17%
2006/07	23,686,027.00	4,936,647.00	21%

Year	HGICL		
	*Capital Employed	Net profit/Loss	Ratio
2002/03	58,514.00	11,523.00	20%
2003/04	70,472.00	11,958.00	17%
2004/05	81,484.00	11,011.00	14%
2005/06	93,326.00	11,970.00	13%
2006/07	98,558.00	7,530.00	8%

\* Capital Employed= sum of Long Term of Financing

## Annex-11

### ROSE ANALYSIS Fig. in NPR thousand

Year	NABIL		
	Equity	Net Profit	Ratio
2002/03	491,654.00	455,000.00	93%
2003/04	491,654.00	518,636.00	105%
2004/05	491,654.00	635,262.00	129%
2005/06	491,654.00	673,960.00	137%
2006/07	689,216.00	750,354.00	109%

Year	NIBL		
	Equity	Net Profit	Ratio
2002/03	295,293.00	116,817.00	40%
2003/04	295,293.00	152,671.00	52%
2004/05	587,739.00	232,147.00	39%
2005/06	590,586.00	350,536.00	59%
2006/07	801,353.00	501,399.00	63%

Year	NEA		
	Equity	Net Profit	Ratio
2002/03	16,601,300.00	(717,400.00)	-4%
2003/04	16,976,900.00	(455,900.00)	-3%
2004/05	18,215,900.00	(1,486,100.00)	-8%
2005/06	20,161,800.00	(1,312,800.00)	-7%
2006/07	21,273,100.00	(2,472,600.00)	-12%

Year	NTC		
	Equity	Net Profit	Ratio
2002/03	2,053,864.00	3,087,782.00	150%
2003/04	2,053,864.00	2,247,301.00	109%
2004/05	15,000,000.00	1,042,816.00	7%
2005/06	15,000,000.00	3,542,461.00	24%
2006/07	15,000,000.00	4,936,647.00	33%

Year	HGICL		
	Equity	Net Profit	Ratio
2002/03	30,000.00	11,523.00	38%
2003/04	30,000.00	11,958.00	40%
2004/05	30,000.00	11,011.00	37%
2005/06	30,000.00	11,970.00	40%
2006/07	30,000.00	7,530.00	25%

## Annex-12

### Return On Assets Fig. in NPR thousand

Year	NABIL		
	Assets	Net profit	Ratio
2002/03	15,626,000.00	455,000.00	3%
2003/04	17,186,331.00	518,636.00	3%
2004/05	22,686,210.00	635,262.00	3%
2005/06	27,610,638.00	673,960.00	2%
2006/07	37,487,666.00	750,354.00	2%

Year	NIBL		
	Assets	Net profit	Ratio
2002/03	9,163,895.00	116,817.00	1%
2003/04	13,463,937.00	152,671.00	1%
2004/05	16,390,652.00	232,147.00	1%
2005/06	21,732,081.00	350,536.00	2%
2006/07	28,073,517.00	501,399.00	2%

Year	NEA		
	Assets	Net profit	Ratio
2002/03	72,177,700.00	(717,400.00)	-1%
2003/04	74,545,300.00	(455,900.00)	-1%
2004/05	78,407,700.00	(1,486,100.00)	-2%
2005/06	86,991,800.00	(1,312,800.00)	-2%
2006/07	91,625,200.00	(2,472,600.00)	-3%

Year	NTC		
	Assets	Net profit	Ratio
2002/03	29,892,993.00	3,087,782.00	10%
2003/04	32,652,787.00	2,247,301.00	7%
2004/05	33,221,352.00	1,042,816.00	3%
2005/06	35,572,772.00	3,542,461.00	10%
2006/07	39,351,406.00	4,936,647.00	13%

Year	HGICL		
	Assets	Net profit	Ratio
2002/03	130,065.00	11,523.00	9%
2003/04	146,512.00	11,958.00	8%
2004/05	227,705.00	11,011.00	5%
2005/06	176,788.00	11,970.00	7%
2006/07	180,763.00	7,530.00	4%

## **Annex-13**

**C/D Ratio**  
**Fig. in NPR thousand**

<b>Year</b>	<b>NABIL</b>		
	<b>Credit</b>	<b>Deposit</b>	<b>Ratio</b>
2002/03	8,549,000.00	14,349,000.00	60%
2003/04	10,586,170.00	14,586,609.00	73%
2004/05	13,278,782.00	19,347,396.00	69%
2005/06	15,903,024.00	23,342,275.00	68%
2006/07	21,769,771.00	31,915,047.00	68%

<b>Year</b>	<b>NIBL</b>		
	<b>Credit</b>	<b>Deposit</b>	<b>Ratio</b>
2002/03	5,921,788.00	7,922,766.00	75%
2003/04	7,338,566.00	11,524,680.00	64%
2004/05	10,453,164.00	14,254,574.00	73%
2005/06	13,178,152.00	18,927,306.00	70%
2006/07	17,769,100.00	24,488,856.00	73%

<b>Year</b>	<b>NEA</b>		
	<b>Credit</b>	<b>Deposit</b>	<b>Ratio</b>
2002/03	20,155,600.00	66,229,600.00	30%
2003/04	16,837,400.00	66,347,200.00	25%
2004/05	11,332,600.00	68,018,500.00	17%
2005/06	9,268,500.00	73,674,300.00	13%
2006/07	5,420,800.00	77,959,400.00	7%

<b>Year</b>	<b>NTC</b>		
	<b>Credit</b>	<b>Deposit</b>	<b>Ratio</b>
2002/03	3,692,871.00	3,909,192.00	94%
2003/04	3,918,134.00	4,090,353.00	96%
2004/05	4,771,796.00	3,642,112.00	131%
2005/06	5,791,312.00	3,882,723.00	149%
2006/07	1,713,887.00	4,475,753.00	38%

## Annex-14

Following outputs are derived by using SPSS software.

### 1. Nabil

#### Correlations

		Debt	Equity
Debt	Pearson Correlation	1	0.857 (**)
	Sig. (2-tailed)	.	.001
	N	5	5
Equity	Pearson Correlation	0.857(**)	1
	Sig. (2-tailed)	.001	.
	N	5	5

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

### 2. NIBL

#### Correlations

		Debt	Equity
Debt	Pearson Correlation	1	0.935(**)
	Sig. (2-tailed)	.	.001
	N	5	5
Equity	Pearson Correlation	0.935(**)	1
	Sig. (2-tailed)	.001	.
	N	5	5

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

### 3. NEA

#### Correlations

		Debt	Equity
Debt	Pearson Correlation	1	0.986(*)
	Sig. (2-tailed)	.	.034
	N	5	5
Equity	Pearson Correlation	0.986(*)	1
	Sig. (2-tailed)	.034	.
	N	5	5

\* Correlation is significant at the 0.34 level (2-tailed).

#### 4. NTC

#### Correlations

		Debt	Equity
Debt	Pearson Correlation	1	0.0007
	Sig. (2-tailed)	.	.083
	N	5	5
Equity	Pearson Correlation	0.0007	1
	Sig. (2-tailed)	.083	.
	N	5	5

\* Correlation is significant at the 0.83 level (2-tailed).

## Annex-15

### 1. Nabil

#### Regression

##### Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Year(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

##### Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	382832.800	19972.711		19.168	.000
	Year	74603.200	6021.999	.990	12.388	.001

a. Dependent Variable: Profit

Profit (Y) = 382832.800+74603.200 x Year

### 2. NIBL

##### Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	Year(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

### Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-19394.700	43574.872		-.445	.686
	Year	96702.900	13138.318	.973	7.360	.005

a. Dependent Variable: Profit  
 Profit (Y) = -19394.700+96702.900 x Year

### 3. NEA

#### Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Year(a)	.	Enter

a. All requested variables entered.  
 b. Dependent Variable: Profit

### Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	21230.000	450611.639		.047	.965
	Year	-436730.000	135864.521	-.880	-3.214	.049

a. Dependent Variable: Profit  
 Profit (Y) = 21230.000+ (-436730) x Year



#### 4. NTC

##### Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Year(a)	.	Enter

- a. All requested variables entered.  
b. Dependent Variable: Profit

##### Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1473534.400	1477383.152		.997	.392
	Year	499289.000	445447.781	.543	1.121	.344

- a. Dependent Variable: Profit

$$\text{Profit (Y)} = 1473534.400 + 499289.000x \text{ Year}$$

#### 5. HGICL

##### Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Year(a)	.	Enter

- a. All requested variables entered.  
b. Dependent Variable: Profit

##### Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13190.600	1670.597		7.896	.004
	Year	-797.400	503.704	-.675	-1.583	.212

- a. Dependent Variable: Profit

$$\text{Profit (Y)} = 13190.600 + -797.4 x \text{ Year}$$

**Annex-16**

**Presentation of value of firm**

**Total Assets (Fig. in Million)**

<b>Year</b>	<b>NABIL</b>	<b>NIBL</b>	<b>NEA</b>	<b>NTC</b>	<b>HGICL</b>
	<b>Total asset</b>	<b>Total asset</b>	<b>Total asset</b>	<b>Total asset</b>	<b>Total asset</b>
2002/03	15,626.00	9,163.90	72,177.70	29,892.99	130.07
2003/04	17,186.33	13,463.94	74,545.30	32,652.79	146.51
2004/05	22,686.21	16,390.65	78,407.70	33,221.35	227.71
2005/06	27,610.64	21,732.08	86,991.80	35,572.77	176.79
2006/07	37,487.67	28,073.52	91,625.20	39,351.41	180.76

## **Annex 17**

### **Introduction of Sampled Commercial Banks:**

#### **Nabil Bank**

Nabil Bank is rated as a successful commercial bank. It was established in 2041 B.S. as Nepal Arab Bank Limited with foreign investment. It was the first bank of Nepal to operate with the foreign investors. It was established in joint investment with Dubai Bank Limited, UAE. Nepali partners in investment were NIDC, Rastriya Beema Sansthan and Security Exchange Limited. Its 3% shares are issued to general public. It has been helping business communities and the government in different ways since the time of its establishment. It holds not only the capital but also millions of deposits and acts as a conducts its operations as a responsible body. Now it is not just a joint venture business as Dubai Bank Limited has withdrawn its investment from this bank.

It has an authorized capital of Rs. 500 million, issued capital of Rs.491.654 and paid up capital of Rs. 491.654 million, Par value: Rs 100; Listing Date: B.S. 08/09/2042 (1986 A.D.).

#### **Nepal Investment Bank Limited (Indosuez Bank Ltd.)**

Nepal Investment Bank Limited was established on January 21, 1986 as a third joint venture bank under the Company Act 1964. It is situated at Darbar Marg, Kathmandu. The bank is managed signed between it and Nepali Promoters. The main objective of the bank is to provide loans and advances to the agriculture, industries, commerce and deprived sectors as well and to provide modern banking services to the general people.

The proposal dated 25<sup>th</sup> April, 2002 to change the name of Indosuez Bank Ltd. to Nepal Investment Bank Ltd. has been approved by 15<sup>th</sup> Annual General Meeting held on May 2002. Nepal Rastra Bank approved on 12<sup>th</sup> June 2002. It has an authorized capital of Rs. 1,000 million, Issued capital: Rs. 801.352 million; Paid up capital: Rs. 801.352 million; Par value: Rs 100.00; Listing Date: B.S. 05/08/2044 (1987 A.D.).

## **A brief overview over sampled service companies and insurance company:**

### **Nepal Telecom (Nepal Doorsanchar Company Limited):**

Telecommunication service in Nepal dates back to 94 years in B.S. 1970. But formally telecom service was provided mainly after the establishment of MOHAN AKASHWANI in B.S. 2005. Later as per the plan formulated in First National Five year plan (2012-2017); Telecommunication Department was established in B.S.2016. To modernize the telecommunications services and to expand the services, during third five-year plan (2023-2028), Telecommunication Department was converted into Telecommunications Development Board in B.S.2026. After the enactment of Communications Corporation Act 2028, it was formally established as fully owned Government Corporation called Nepal Telecommunications Corporation in B.S. 2032 for the purpose of providing telecommunications services to Nepalese People. After 29 years of its service, Nepal Telecommunication Corporation was transformed into Nepal Doorsanchar Company Limited from Baisakh 1, 2061 under the companies Act 2053. However the company is known to the general public by the brand name Nepal Telecom as registered trademark. Nepal Telecom has always put its endeavors in providing its valued customers a quality service since its inception. To achieve this goal, technologies best meeting the interest of its customers has always been selected. The nationwide reach of the organization, from urban areas to the economically non-viable most remote locations, is the result of all these efforts that makes this organization different from others. Nepal Telecom objects to assist in the socio-economic development of the urban as well as rural areas, as telecommunications is one of the most important infrastructures required for development. Accordingly in the era of globalization, it is felt that milestones and achievements of the past are not adequate enough to catch up with the global trend in the development of telecommunication sector and the growth of telecommunication services in the country will be guided by Technology, declining equipment prices, market growth due to increase in standard of life and finally by healthy competition.

It has an authorized capital of Rs.25 arab, Issued capital: Rs. 15 arab; Paid up capital: Rs. 15 arab; Par value: Rs 100.00; Listing Date: Shrawan 30, 2062.

**Nepal Electricity Authority:**

Nepal Electricity Authority was established in August 16, 1985 (Bhadra 1, 2042) under the Nepal Electricity Authority Act. 1984, through the merger of the Department of Electricity of Ministry of Water Resources, Nepal Electricity Corporation and related Development Boards. The reason behind the merger of these individual organizations was to remedy the inherent weakness associated with these fragmented electricity organizations with overlapping and duplication of works and to achieve efficiency and reliable service. The primary objective of NEA is to generate, transmit and distribute adequate, reliable and affordable power by planning, constructing, operating and maintaining all generation, transmission and distribution facilities in Nepal's power system both interconnected and isolated.

**Himalayan General Insurance Company Limited:**

Himalayan General Insurance Co. Ltd. commenced operations in December 1993 to write Insurance Policies after obtaining license from the Insurance Board of Nepal to underwrite General Insurance (Non-life). It worked with Swire Blanch Asia Ltd., Singapore, through a technical service agreement for the initial five years in order to arrange reinsurance with the world's best reinsurers.

It has been providing its service since last 15 years through the customer-driven service packages, personalized service delivery, and technology-focused operations, their clients enjoy value and benefits that are unparalleled in the industry. While HGI is widely acknowledged for its market leadership in claims services, it services a large and diverse product range and client base. Their clients span all levels of society – business corporations, development organizations and individual customers. Their primary objective is to deliver progressive and superior customer value, uphold the interests of our human assets, provide sustained stakeholder returns, stay abreast of social responsibility initiatives, to deliver expert and innovative solutions in risk evaluation and risk mitigation alternatives.

It has share capital of Rs. 63 million as on 2007/08; Par value: Rs 100.00; Listing Date: 26/01/1994 .