# CHAPTER - I

# INTRODUCTION

## 1.1 General Background of the Study

Every Business firm or bank requires the initial funds for its sound operation. Capital is the blood of the business. A business firm or Enterprises cannot run their business without capital. Enterprises whether they are Government owned or privately owned have to make pertinent capital structure decision in identifying exactly how much capital is needed to run their operation smoothly.

Basically, the term “Capital structure” is used in finance, and its refers to the aspect of corporation finance which assets through the combination of equity, Hybrid securities or debt. Capital structure then the comparison of structure of the liabilities.

The bank will generate the income in different ways. They collect money from savers and lend it to borrowers by charging more to lending and by giving less to savings. Bank also generates income by providing other services for which they charge fees and commissions. The success of any organization in other words say “profit” depends largely on its capital structure.

The fund required are generated usually by two means: equity and debt, equity provides the ownership of the firm to the shareholders. On the other hand, debt is a fund borrowed with fixed charges to be paid periodically to the debtor, the term capital structure refers to the proportion of debt and equity capital or the composition of long term sources of finance, such as preference capital debentures, long term debt

and equity capital including services and surpluses (i.e. retained earnings and excluding short term debts).

The capital structure decision affects the total value of the firm. The proper balance between debt and equity is necessary to ensure a tradeoff between risk and return to the shareholders. The capital structure of the bank should be such that leads to the value maximization. The optimal capital structure, i.e. the capital structure with reasonable proportion of debt and equity minimizes the opportunity cost of capital and maximizes the shareholder's wealth.

The term capital structure refers to, the relationship between the various long terms forms of financing such as debentures, preference shares, Capital and equity share capital. Financing the firm assect is a very crucial problem in every business and as a rule there should be a proper mix of a debt and equity capital financing the firm's assects. Though the capital structure cannot affect the total earnings of available equity holders. Managing the capital structure of a firm is an important aspect of corporate financing. The main issue with respect to source of financing is concerned with the nature of relationship between the debt equity ratio and the market value of the firm.

Capital structure is concerned with qualitative aspects. To meet their requirements, company generally issue three types of securities, such as, debentures, equity shares, and preference shares. A decision about the proportion among these three types of securities refers to the capital structure of an enterprise. Broadly, defined Capital and assect structure management includes all policies and approaches designed to obtain funds from deposit and investments. In order to run and manage a

company, funds are needed; if funds are inadequate and are not managed properly the entire organization will suffer badly.

The capital structure consists of two words i.e. capital and structure. It means the capital is the fund raised from different sectors to finance different assects, short term or long term. While the term, structure is the management of capital as well as other components.Thus,capital structure is the mix of long term sources of funds, such as debentures, long term debt, preference share capital and equity share capital including reserves and surplus. A mix of company long term debt, specific short term debt, common equity and preference equity is capital structure. The capital structure is how a firm finances its overall operations and growth by using different sources of funds.

Debt comes in the form of bond or issues or long term notes payable, while equity is classified as common stock preferred stock or retained earnings. A company's proportion of short and long term debt is considered when analyzing capital structure. When people refer to capital structure they are most likely referring to a firm's debt to equity ratio, which provides insight in to how risky a company is. Usually a company more heavily financed by debt. Greater risk, as their firm is relatively highly levered.

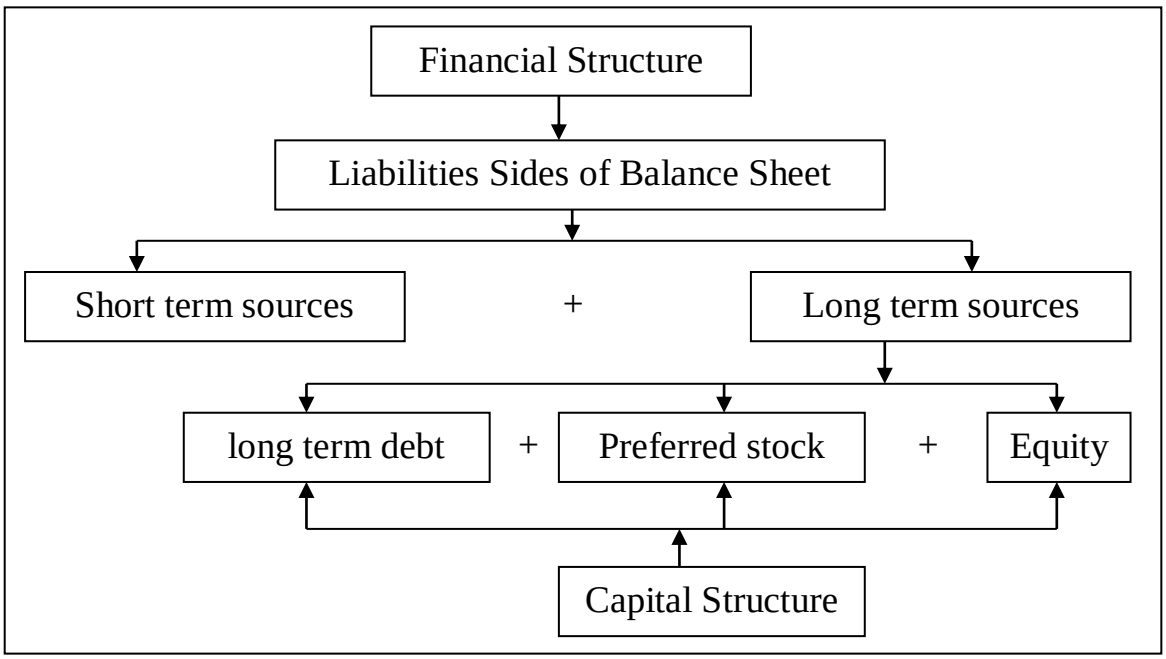
Capital structure is the mixture of sources of funds a firm uses (debt, preferred stock, common stock). The amount of a debt that a firm uses to finance its assects is called leverage. A firm with a lot of debt in its capital structure is said to be highly levered. A firm with no debt is said to be unlevered. Capital structure can be viewed as the permanent financing the firm represented primarily by long term debt, preferred stock and common equity but excluding all short term credit.

Additionally, capital structure affects leverage, which in turn, affects the expected return and risk facing owners and creditors of the firm. A firm's capital structure is determined by the proportion of debt and equity capital used in financing the firm's aspects. A capital structure with a reasonable proportion of debt and equity capital is called optimal capital structure. Financial manager should try to construct optimal capital, which minimizes cost of capital through risk reduction and ultimately increase the value of firm. Optimal capital structure is achieved by balancing financing so as to achieve lowest average cost of long term financing.

Capital structure is financial parlance means the way in which a company designs its assets. It can be bases on equity or based on debt. Mostly companies go in for a mix of both equity and debt to offset the risk involved.

**Figure No.1.1**

**Financial Structure & Capital Structure**




*(Source: Rabindra Bhattarai: Book Capital Structure Management Theory and Practice.)*

## 1.2 Evolution of Banking Industry

### 1.2.1 In Worldwide Context

The origin of a bank is not a new phenomenon. Banking has a long history. When, where and how the modern banking actually came in existence cannot be pointed out. But the different historical facts it reveals that some banking activities have been carried out since the time immemorial. At that time merchants, money lenders, gold smiths, etc performed the banking transactions. Letter the transactions started increasing and they became the activities of money exchange securing the valuable goods, deposit money, lending money and so on. There was a crude form of banking event in ancient VEDIC era. The term in banking such as pledges, deposits, rate of interests, loan etc can be found in the ancient Hindu Epic Manusonriti. 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. For all these types of activities written receipts began to be used and the modern banking started.

In the historic age sources say that gold smiths any money lenders contributed to large extent in the growth of banking system. They used to store peoples gold charging nominal charges, issued receipts to the depositors, which was good for payments. Latter, they started advancing money charging interest on it. So the gold smith and money lenders started performing the functions of modern banking. i.e. accepting deposits and advancing loans. However, the modern banking originated in Italy.

The word ‘Bank’ was derived from the Italian word ‘Banco’. This means accumulation of money or stock. Bank as an formal institution was

originated from Italy. The bank of Venice which was established in 1157 A.D. was the first bank in the history of banking and it was established to finance the Monarch in the wars. The bank of Barcelona, Spain which was established in 1404 A.D. was the second bank in the world and then the bank of Genoa was set up in 1407 A.D.

The first central bank through was the bank of England which was established in 1844 A.D. Banking has come through the present advanced form through various stages. Some sorts of banking activities have been carried out since the time immemorial. Traditional forms of banking were traced during the civilization of Greek, Rome and Mesopotania. With large banking firms established in Florence, Rome, Venice and other Italian cities the banking activities spread throughout the Europe and it slowly spread throughout the world.

### 1.2.2 In Nepali Context

The growth of banking in Nepal is not so old. In the 14$^{th}$ century, Jayasthiti Malla - A king of Kantipur classified people in 64 groups according to their occupations, "Tanka Dhari" was one among them who used to lend money at a fixed rate of interest.

The specific date of beginning of money and banking transactions in Nepal is unknown. The banking functions were carried out in unorganized sectors. It is found that minted coins, copper coins, silver coins and gold coins were introduced by different kings. It has gone through different stages.

The history of banking in Nepal may be described from the age of barter system but the financial system is still in evolutionary stage in our country. Goldsmiths, merchants and money lenders were the early bankers in Nepal. “Tejarath Adda” was the first institutional development

of banking which was established during the period of Rana prime minister “Ranodeep Singh” in 1993 B.S. “Tejarath Adda” was introduced which brought reforms in economic and financial sectors. The main purpose of ‘Tejarath Adda’ was to provide credit facilities to the general public at a confessional rate. However, the installment of ‘Kaushi Toshakhana’ as a banking agency during the regime of king Prithvi Narayan Shah could also be regarded as the first step towards banking in Nepal.

Another strong step of banking was the emergence of Nepal Bank Limited. Nepal bank limited came in to existence as a public sector commercial bank with 49% ownership of public and 5% ownership of Nepal Government in 1994 B.S. At that time, Nepalese economy was characterized by the prevalence of dual currency system. There were great fluctuations in the open market rate of exchange of the Nepalese rupees face to face the Indian currency which provided great hindrance to the economic stability as well as development of the country. Thus, there was an immediate need of central bank. As a result, Nepal Rastra Bank was established as a central bank of the country in 2013 B.S. then, in 2016 B.S. the government established Nepal Industrial Development Corporation (NIDC).It worked as an industrial development bank with the package of both type of services such as financial and technical assistance to establish modern industries in private sector.

Similarly, Rastriya Banijaya Bank (RBB) was set up in 2022 B.S. with a view of providing financial assistance for Agriculture, Agriculture development bank of Nepal (ADB) was established in the government sector in 2024 B.S. The security exchange centre (SEC) was set up in 2032 B.S. in order to provide the liquidity to government securities. At the same time, Employee’s provident fund cooperation, Nepal Insurance

Corporation and other institutions were established. These institutions contributed positively to the generation of outputs, employment, revenue and infrastructure in Nepal. These also helped to enhance the private sector but the growth rate of public sector was far faster than that of private sector.

In 1980 A.D. government introduced "Financial sectors reforms" which facilitated the establishment of different private sector financial institutions in Nepal. As a result, different commercial banks, insurance companies, finance companies, development banks, co-operative societies and other financial institutions came in to the scene of Nepalese economy. At present 32 commercial banks, 79 financial companies, 87 development banks and 5 rural development banks are working under the banking and financial institution ordinance 2067-2068 reforms was introduced with the changes in commercial bank act 2031 B.S. and its amendment in 2041 B.S.

Nepal Arab bank limited is the first private commercial bank in Nepal, which introduced computerized banking system and other modern technologies in this field. Nepal Arab bank limited was set up in 2041 B.S. as a joint venture with Dubai Bank limited with the emergence of Nepal Arab bank limited. The door was opened for private sector commercial banks. Then whole lot of commercial banks was opened in Nepal. Currently thirty two commercial banks operating in Nepali financial market, out of these six banks are joint venture commercial banks. List of licensed commercial banks are presented below;

**Table No 1.1**

**List of Licensed commercial Banks of Nepal**

| S.N. | Names | Operation date (A.D) | Head office | Paid up Capital Rs. '0000' |
|---|---|---|---|---|
| 1. | Nepal Bank Limited | 1937.11.15 | Kathmandu | 3804 |
| 2. | Rastriya Banijya Bank | 1988.0123 | Kathmandu | 3853 |
| 3. | Agriculture Development Bank Ltd | 1988.01.18 | Kathmandu | 94375 |
| 4. | Nabil Bank Limited | 1984.07.18 | Kathmandu | 20298 |
| 5. | Nepal Investment Bank Ltd | 1986.02.27 | Kathmandu | 24091 |
| 6. | Standard Chartered Bank Nepal Limited | 1987.01.30 | Kathmandu | 16102 |
| 7. | Himalayan Bank LImited | 1993.01.18 | Kathmandu | 20000 |
| 8. | Nepal SBI Bank Limited | 1993.07.07 | Kathmandu | 18693 |
| 9. | Nepal Bangaladesh Bank Ltd. | 1994.06.05 | Kathmandu | 20103 |
| 10. | Everest Bank Limited | 1994.10.18 | Kathmandu | 11198 |
| 11. | Bank of Kathmandu Ltd | 1995.03.12 | Kathmandu | 13595 |
| 12. | Nepal Credit and Commerce Bank Limited | 1996.10.14 | SiddharthNagar | 13997 |
| 13. | Lumbini Bank LImited | 1998.07.17 | Narayanghat | 13000 |
| 14. | Nepal industrial and Commercial Bank Limited | 1998.07.21 | Biratnagar | 13116 |
| 15 | Machhapuchhre Bank Limited | 2000.10.03 | Pokhara | 16272 |
| 16 | Kumari Bank Limited | 2001.04.03 | Kathmandu | 14850 |

| | | | | |
|---|---|---|---|---|
| 17. | Laxmi Bank Limited | 2002.04.0. | Birgunj | 16140 |
| 18. | Siddhartha Bank Limited | 2002.12.24 | Kathmandu | 15610 |
| 19. | Global Bank Limited | 2007.01.02 | Birgunj | 15000 |
| 20. | Citizens Bank International Limited | 2007.06.21 | Kathmandu | 19223 |
| 21. | Prime Commercial Bank Limited | 2007.09.24 | Kathmandu | 22457 |
| 22. | Sunrise Bank Limited. | 2007.10.12 | Kathmandu | 18554 |
| 23. | Bank of Asia Nepal Ltd | 2007.10.12 | Kathmandu | 15175 |
| 24. | DCBL Bank Limited | 2008.05.25 | Kathmandu | 19209 |
| 25. | NMB Bank Limited | 2008.06.25 | Kathmandu | 16517 |
| 26. | Kist Bank Limited | 2009.05.07 | Kathmandu | 20000 |
| 27. | Janata Bank Nepal Ltd | 2010.04.05 | Kathmandu | 14000 |
| 28. | Mega Bank Nepal Ltd | 2010.07.23 | Kathmandu | 16310 |
| 29. | Commerce and Trust Bank Nepal limited | 2010.09.20 | Kathmandu | 14000 |
| 30. | Civil Bank Limited | 2010.11.26 | Kathmandu | 12000 |
| 31. | Century Commercial Bank Limited | 2011.03.10 | Kathmandu | 10800 |
| 32. | Sanima Bank Limited | 2012.02. | Kathmandu | 21000 |

Source: Nepal Rastra Bank.

**Table No 1.2**

**List of Licensed Joint Venture Commercial Banks in Nepal**

| S.N. | Names | Operation date (A.D.) | Head Office | Paid up capital in '0000 |
|---|---|---|---|---|
| 1. | Nabil Bank Limited. | 1984.07.18 | Kathmandu | 20298 |
| 2. | Himalayan Bank Limited. | 1993.01.18 | Kathmandu | 20000 |
| 3. | Standard Chartered Bank Nepal Limited. | 1987.01.30 | Kathmandu | 16102 |
| 4. | Everest Bank Limited. | 1994.10.18 | Kathmandu | 11198 |
| 5. | Nepal Investment Bank Limited. | 1986.02.27 | Kathmandu | 24091 |
| 6. | Nepal SBI Bank Limited. | 1993.07.07 | Kathmandu | 18693 |

Source: Nepal Rastra Bank.

### 1.2.3 Functions of Commercial Banks

The main functions of commercial Banks include:

- Accepting deposits in the forms of current,
- Saving and fixed deposits, providing short, medium and long term loans.
- Acting in agency in transfer of money, make payment on commission basis for the cheque, draft, bill of exchange etc. by the customer,
- Buying & selling shares and debentures of any company and government bonds.
- Collecting interest on debentures and government bonds, dividends on shares and funds from other banks for its customers,

- Making payments on insurance premium, rent, income tax, school fees, and telephone bills to the concerned offices on behalf of customers.
- Carrying out the foreign currency exchange and helping in foreign trade,
- To protect the precious jewelleries, to provide travelers cheque, to underwrite the debentures, to issue credit card, master card, visa card etc.
- To create credit on the specific basis and expand credit and so on.

## 1.3 Profile of Selected Joint Ventures Bank

A joint venture is the joining of forces between two or more enterprise for the purpose of carrying out specific operations (industrial of commercial investment, production or trade). So the major objective is to join economic forces in order to achieve some result which each of the partner could not achieve separately. For joint venture there should be at least two partners. A prerequisite for the Joint venture is that it should establish a favorable investment climate. In Nepal three of the dramatic reforms were carried out in 1980's. The measures were allowing the foreign banks to operate as a joint venture, lifting of central on interest rate and introduction of the actor of governments' securities.

Commercial bank in Nepal commenced in a formal manner in 1973 with the establishment of Nepal Bank limited from that date forward, banking in Nepal has taken many strides forward, with a myriad of banks and numbers of financial products entering the market. The entry of Joint venture banks in the kingdom opened the doors to international standard banking services and with it heightened customer expectation. To meet

these whilst some chose to complete on price, others chose to complete on the service delivery and customer satisfaction.

### 1.3.1 Standard Chartered Bank Nepal Limited (SCBNL)

Standard chartered bank Nepal Limited formally known as Nepal Grindllays Bank Limited. Standard chartered bank limited, has been in Nepal since 1987 when it was initiate registered as a joint venture operation. The bank has opening its branch more than 150 countries all over the world. Today the bank is an integral part of standard chartered group who has 75% owner ship in the company with 25% shares owned by the Nepalese public. The bank enjoys the status the largest international bank currently operating in Nepal with its slogan, "High performance banking ," (www.standardchartered.com/np).

On 31st July 2000, Nepal Grindllays Bank limited concluded the acquisition with ANZ Grindllays bank Limited from the Australia and Newzealand banking group limited with this acquisition, 50 percent share of Nepal Grindllays Bank Limited (NGBL) Previously owned byANZ Grindllays Bank limited leading to the name change of the Bank to standard chartered Bank Nepal limited with effect from 16 July 2001.

Standard chartered group employees 30,000 people in over 500 locations in more than 50 countries in Asia pacific region, South Asia, the Middle East, Africa, the United Kingdom, and the Americas. It is one of the most world's most international banks, with a management team comprising 79 nationalities. The bank trusted across its network for its standard of governance and its commitment to making a difference in the communities in which it operates.

An integral part of the only international banking group currently operating in Nepal, the bank enjoys an impeccable reputation of a leading

financial institution in the country with 11 point of representation (7 Branches) and 9 ATM across the kingdom and with over 300 local staffs, standard chartered bank Nepal limited is in a position to serve its customers through a large domestic network. In addition to which the global network of standard chartered group gives the bank the unique opportunity to provide truly international banking in Nepal.

Standard Chartered Bank Nepal limited, offers a full range of banking products and services in wholesale and consumer banking, catering to a wide range of customer from individuals, to mid-market local corporate to multinationals and large public sector companies, as well as embassies, aid agencies airlines and government corporations.

The Bank has been the pioneer in introducing "customer forward" products and services in the country and aspires to continue to be a leader in introducing new products and highest level of service delivery. It is a first bank in Nepal that has implemented the Anti-money laundering policy and applied the 'know your customer' procedure on all the customer on all the customer accounts.

**Table No 1.3**
**Capital Structure of standard Chartered Bank Nepal Limited**

| Capital as at 2010/11 | Amount in Rs. '000' |
|---|---|
| Authorized Capital<br>20,000,000 Numbers ordinary shares × Rs.100 each. | 2,000,000,000 |
| Issued Capital<br>16,101,680 Numbers of ordinary shares × Rs.100 each | 1,610,168,000 |
| Paid up Capital<br>16,101,680 Numbers of ordinary shares × Rs.100 each | 1,610,168,000 |

Source: Annual Report and website of concerned bank

### 1.3.2 Nepal Investment Bank Limited

Nepal Investment Bank Limited (NIBL), Previously Nepal Indosuez Bank Limited, was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was credit Agriculture Indosuez, a subsidiary of one of the largest banking group in the world.

With the decision of credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessman has acquired on April 2002 the 50% share holding of credit Agricole Indosuez in Nepal Indosuez Bank Limited.

The name of the bank has been changed to Nepal Investment Bank limited up on approval of Bank's annual general meeting, Nepal Rastra Bank and Company registers office with the following shareholding structure.

- A group of companies holding 50% of the capital
- Rastriya Banijya Bank holding 15% of the capital
- Rastriya Beema Sansthan holding the 15% of the capital
- The remaining 20% being held by the general public (which means that NIBL is a company listed on the Nepal stock exchange NEPSE).

Recently, the bank has celebrated its silver jubilee anniversary i.e. 25$^{th}$ Annual day. The Bank NIBL has one city office and 41 branch office, and 67 ATM all over the country to serving its customer. The bank has awarded by the, 'Bank of the year 2010', 'Bank of the year 2008,' 'Bank of the year 2005,' and 'Bank of the year 2003' respectively.

**Table No 1.4**

**Capital Structure of Nepal Investment Bank Limited**

| Capital as at 2010/2011 | Amount in ' Rs.' |
|---|---|
| Authorized Capital<br>4,00,00,000 Numbers ordinary shares ×Rs 100 of each | 4,00,000,00,00 |
| Issued Capital<br>2,40,90,977 Numbers ordinary shares × Rs 100 of each | 2,40,90,97,700 |
| Paid up capital<br>2,40,90,977 numbers ordinary shares × Rs. 100 of each | 2,40,90,97,700 |

Source: Annual report & website of concerned bank.

## 1.4 Objectives of the Study

It is already mentioned that the commercial bank play vital role to improve the economic development of the country. For that it must has strong financial position that is capital structure and the way it is financed. The size and type of the capital and assets depends up on the size and nature of the organization.

The main objectives of the study is to highlight, analyze, examine, interpret and to know the financial position and value of the firm with capital structure management and other different variables of joint ventures banks, i.e. standard chartered bank Nepal limited and Nepal Investment bank limited. To achieve the main objective, following objectives have been set out for the study:

- To examine the current capital structure of selected joint venture commercial banks.
- To evaluate the role of capital structure on the growth of selected joint venture commercial bank in Nepal.

- To examine the relationship of the capital structure and cost of capital of selected joint venture commercial bank.
- To analyze the relationship of capital structure with variables like earning per share, dividend per share, total debt to total assets, debt to equity ratio, interest coverage ratio, return on shareholders' equity of the selected joint venture commercial banks.
- To provide suggestion and recommendation on the basis of the major findings of the study.

## 1.5 Statement of the Problem

This study tries to analyze and examine practice of capital management in the joint venture bank of Nepal. This study specially deals with the problem such as how the capital management affect at the growth of the bank, to what extent such policy is followed by joint venture bank and the problem faced by banking in developing and implementing the capital structure policy. Moreover what to difficulties, obstacles, and problem faced in the process of maintaining financial structure will also be discussed.

Capital Structure concept is not taken seriously by the Nepalese companies. Therefore optimal capital structure does not exist all. Among the listed commercial banks in the stock exchange very few are using the debt capital and contrary to this some of the companies are ruined by the excess burden of the cost of debt capital. Generally every company has its own policy in determining capital structure for operating business activities. Some of the business use only equity capital some use only debt and some business use both debt and equity capital. Therefore determination of capital structure largely depends up on the company's policy and cost of capital.

Although, banking industry in Nepal is making remarkable progress and growth it's not without problems. At the present context the main problems faced by the business sector as well as banking sector is the unstable political situation and poor economic of the country.

But besides these common problems another problem faced by the banking industry is the lack of optimal capital structure in the commercial banks. The success and prosperity of a bank relies heavily on maximization of the wealth of the shareholders or return on equity. Nepalese banks do not take the capital structure concept seriously. The combination of debt and equity used in the capital structure is not proportionate which in turns affect the value maximization of the bank. Most of the banks make low cost of capital structure. In the initial period of any company, they want to use equity capital and do not want to include debt in their capital due to high interest. The key factors; risk and return can be used for decision. The present study will try to analyze and examine the practice of capital structure in the commercial banks in Nepal. This study specially deals with the following problems.

- What is the financial problem position of the selected joint venture banks?
- How far commercial banks have been able to use their resources?
- How efficiently these banks are managing their capital structure?
- What factors affected capital structure?
- What is the relation between capital structure and other variables?
- How much is the profitability?

## 1.6 Framework of the Study

Null Hypothesis (Ho): There is no significant difference between average debt and equity, total debt total assets ratio, EBT to EBIT ratios,

interest coverage ratio, EAT/ITA ratio, return on capital employed ratio, return on shareholders' equity ratio of selected joint venture commercial banks.

Alternative Hypothesis (H1): there is significant difference between average debt and equity, total debt to total assects ratio, EBT to EBIT ratios, interest coverage ratio, EAT/ITA ratio, return on capital employed ratio, return on shareholders' equity ratio of selected joint venture commercial bank limited.

## 1.7 Significance of the Study

As it is well known fact that, the commercial bank affects the economic condition of the whole country. We could not imagine a bank without capital or the proper mixture of the debt and equity. The study is mainly based on the evaluation of the capital structure of the joint venture bank expecting that the study can balance the proportion of equity capital and debt capital. Most of the banking transactions are done through private and public sectors' banks. Every business concerns objective will to be maximize its value. The value is represented by capital structure. The study will support the different areas like student's interests, shareholder's, financial manager's policy makers, customer and financing agencies etc by providing valuable information about the subject matter of the study.

## 1.8 Limitations of the Study

The study has been concluded to the practical fulfillment of MBS degree and time, money and experience which may affect the study. This research work has some permanent boundary. Beside this, boundry is not diversified these are called limitation of the study. This study is limited within the following factors:

- Through there has been in operation six joint venture commercial banks in Nepal, only two joint venture i.e. standard chartered bank Nepal limited, and Nepal Investment bank limited are taken as sample for the proposed study.
- Although, the selected joint venture banks has published their annual and financial report from the very beginning to their establishment period, the study will consider the period of only five years for the analysis of data. So, it has time constraint.(i.e. from fiscal year 2006/7 to 2010/2011)
- Due to lack and difficulties of primary data, the study is mainly based on secondary data. So ,the reliability of this study depends up on the accuracy of published data by concerned banks,
- Out of numerous affecting factors only the factors related with capital structure are considered.
- In this study, only selected financial and statistical tools and techniques are used.

## 1.9 Organization of the Study

The study has been organized in to five chapters each developed to some aspect of the study of capital structure management of selected joint venture commercial bank in Nepal.

**Chapter I Introduction**

Chapter I contains the introduction part of the study which includes general background of the study, introduction of selected joint ventures banks, statement of the study, objectives of the study, significance of the study, framework of the study, limitations and organization of the study.

**Chapter II Review of Literature**

The second chapter of the study is related to review of related studies. This chapter includes conceptual review, review of related study, different thesis, and review of journals, Articles and research studies published by various authors in the related topic.

**Chapter III Research Methodology**

This chapter related to research methodology. Research methodology studying a problem with certain objectives in view. It describes various sources of data related with the study and various tools techniques such as statistical and financial employed for presenting the data. This chapter includes research design, source of data, population and sample size, data collection methods and analysis, interpretation of data, tabulation, nature and resource of data, and data collection procedure.

**Chapter IV Presentation and Analysis of Data**

This chapter is the main part of the research. This chapter analyses the data related with study and present the finding of the study. This chapter contains presentation and analysis of data which includes presentation of table and figure of financial and statistical analysis and major finding according to presentation of table and figure, data processing, data analysis and interpretations are given in this chapter.

**Chapter V Summary, Conclusion and Recommendation**

The last chapter contains the summary, conclusion and recommendations of the study. It also gives important suggestion to the concerned organization for the better improvement. Bibliography and Appendix are also included at the end of the chapter.

# CHAPTER - II

# REVIEW OF LITERATURE

## 2.1 Introduction

This chapter is about the review of literature. The purpose of reviewing the literature is to develop some expertise in one's area, to see what contribution can be made, and to receive some ideas for developing a research design. Literature review is basically a 'stock taking' works of available literature. To make the research more realistic review of literature is required. It provides significant knowledge in the field of research. Every study is very much based on past study. Thus the past study cannot be ignored. This chapter helps to make adequate feedback on broaden the informational based inputs to my study.

The purpose of review of literature is thus find out what research studies have been conducted in ones field of study, and what remains to be done. Review of literature provides foundation to the study. The literature survey also minimizes the risk of pursuing the dead end in research. To make meaningful research study conceptual review has been done through the study of various books, journals and articles and researches conducted by the previous researcher in the field of capital structure i.e. research work, thesis and dissertation. So, this chapter "review of literature" has been divided in to the following sections.

- Conceptual review or framework
- Review of journals
- Review of Articles
- Review of Thesis

## 2.2 Conceptual Framework

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 term prospect, a firm must concentrate in its proportion.

Capital structure refers to the combination of long term sources of fund, such as debentures, long term debt, and preference share capital and equity share capital including reserve and surplus. Capital structure represents the relationship among different kinds of long term sources of capital and their amount. Normally, a firm raises long term capital through the issue of common shares, sometimes accompanied by preference shares. The share capital is often supplemented by debt securities and other long term borrowed capital.

In some cases the firm accepts deposits except for the common shares, different kinds of external financing, i.e. preference share as well as the borrowed capital carry fixed return to the investors. Financial structure refers to the capital and liabilities side of Balance sheet. Therefore, it includes shareholder's fund, long term loans as well as short term loans. It is sources of financing while financial structure includes both long term and short term sources of financing. Thus, a firm's capital structure is only a part of its financial structure.

Capital structure is one of the most complex areas of financial decision making due to its interrelation with other financial decision

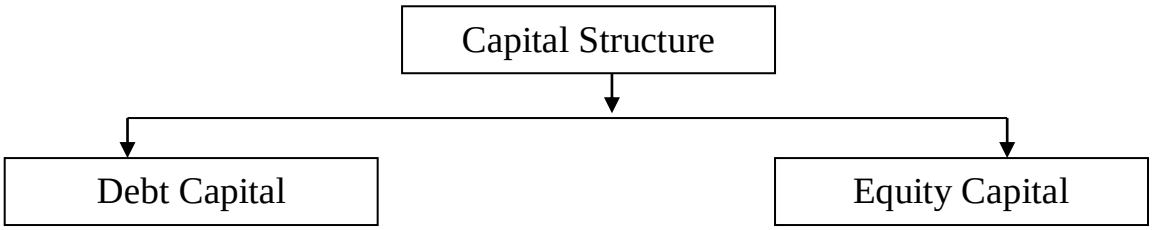
variables. The success and failure of the enterprises depends up on the ability of top management to make appropriate capital structure decision.

The term 'capital structure' means the proportion of different types of securities issued by a firm. The optimal capital structure is the set of proportion that maximizes the total value of the firm"(Schalll and Halew :1983:339)

Capital structures refers to the combination of debt and equity capital, which a firm uses to finance its long term operations. Capital in this context refers to the parment or long term financing arrangement of the firm. Debt capital therefore is the firm's long term borrowings and equity capital is the long term funds provided by the shareholders, the firm's owners. Capital structure is illustrated in following figure.

**Figure No 2.1**

**Combination of Capital Structure**




Therefore, capital structure can be defined as the combination of long term sources of funds. i.e. preference share capital, equity share capital and long term debt capital. The capital structure mix affects the total value of the firm its earnings per share and overall or weighted average cost of capital. It should aim to maximize the value of the firm, Earning per share by minimizing the overall cost of capital without affecting the operation earnings of the firm. So, firm's always trend to maintain the appropriate capital structure, which is advantageous for the

firm. A sound or appropriate capital structure should have the following features:

- **Risk:** The use of excessive debt threatens the solvency of the company. To the point debt does not add significance risk it should be used, otherwise its use should be avoided.
- **Return:** The capital structure of the company should be most advantageous. Subject to other considerations, it should generate maximum returns to the shareholders without adding additional cost to them.
- **Flexibility:** The capital structure should be flexible. Flexibility as company can raise helps to grab market opportunity as company can raise required funds whether it is needed for profitable investment opportunities. It also when funds from debt and preferred stock are no more required in the business.
- **Capacity:** The capital structure should be determined within the debt capacity of the company, and this capacity should not be exceeded. The debt capacity of a company depends on its ability to graduates future cash flows.
- **Control:** Control power is the one of the most concerned part for the management. Management always wants to maintain control over the firm. The capital structure should involve minimum risk of loss control of the company. Issue of excess equity share to new investors may bring threats to the control by existing manager.

## 2.3 Theories of Capital Structure

The two principal sources of long term financing are equity and debt capital. The composition of these two long term financing is known as capital structure. Under normal economic condition, the earning per

share can be increased using higher leverage. But leverage also increases the financial risk of the shareholders. As a result, it cannot be said whether or not the value of the firm will increase with leverage. In other words, a great deal of controversy has been developed on whether the capital structure affects the value of the firm or not. Traditionalists agree that capital structure is relevant factor for valuation of the firm further they say value of the firm can be minimized by adopting optimal capital structure. Modigliani and Miller, on the other hand argue that in perfect capital market, it does not affect value of firm.

Capital structure is an important subject, especially for firms. A bad capital structure is more expensive than a good capital structure. Firms raise investment funds in a number of different ways. A firm's mix of these different sources of capital is referred to as its capital structure. Basically, the theories of capital structure are distinguished in to six different groups, which are as follows.

- Traditional Theory
- Modigliani-Miller Theory
- Trade off Theory
- Free Cash Flow Theory
- Pecking order Theory
- Stake holder Theory

### 2.3.1 Traditional Theory

The first theory is called the "traditional Theory". Supporters of this theory believe that the lowest weighted average cost of capital (WACC) will maximize the firm's market value. This means the existence of an optimum relation between debts and equity but it is very difficult to reach that point.

Although, it is cheaper to finance with debt, this theory certainly rejects to finance all with debt because after a certain level of debt the risk of non-payment increases. In this case shareholders and debt financiers demand a higher compensation.

### 2.3.2 Modigliani-Miller Theory

The next theory is the most important theory, although it is not a realistic theory. In 1958, two prominent financial researchers, Franco Modigliani and Melton Miller (MM), showed that under certain assumptions, a firm's overall cost of capital, and therefore, its value is independent of the capital structure.

The Modigliani-Miller theory states that if the capital structure decision has no effect on the cash flows generated by a firm, the decision also will have no effect in absence of transaction costs on the total value of the firm's debt & equity. This means that there is no relationship between a firm's market value and the capital structure. Profitability of a firm's activities is the only factor that determines the market value and the capital structure.

This theory is based on a perfect capital market. The only market imperfections they admit are corporate taxes. In short, the assumptions of the Modigliani-Miller theorem are as follows (JC Van Horne, 1995)

- Capital markets are perfect.
- Information is free of costs and widely available.
- There are no transactions cost of buying and selling securities.
- All investors behave rationally and have homogeneous expectations of a firms earning.
- Every firm has perpetual flows of money with equal time values.

- All investors can borrow or lead at the same rate.
- There are no personal or corporate taxes.

### 2.3.3 Trade Off Theory

The third theory is called the static trade off theory. The tradeoff between the cost and returns of debt financing determines the optimum debt ratio. Firms consider this ratio as a target debt ratio, because this ratio will minimize the market value of a corporation. Myers assumes that firms need to adapt this capital structure to reach that ratio. But an adaption of the capital structure needs time and costs money. Therefore, it is possible that present temporary debt ratios differ from the target ratios

Or as Myers formulated it, "A static trade off framework in which the firm is viewed as setting debt to value ratio and moving gradually towards it in much the same way that a firm adjusts dividend to move towards a target payout ratio." (Myers 1984:576)

### 2.3.4 Free Cash Flow Theory

In the contrary of the trade off theory, in which a firm strives after a maximization of the market value, the free cash flow theory preassumes that there are enormous conflicts of interest between shareholders and stakeholders. This implies that manager's decisions don't always maximize the market value of the firm. (Jenson, 1986:324)

A free cash flow is the balance of money, when all projects (with positive net present values) is financed. Debt reduces the agency costs of free cash flow by reducing the cash flow available for spending at the discretion of managers.

Debt also reduces the freedom of decisions, because a firm is forced to pay at certain times interest and payoffs. There will always be

risk that a firm won't be able to pay interest and payoffs in future times. This risk causes managers to lead and organize a firm more efficient.

### 2.3.5 Pecking Order Theory

Myers also shows another view of capital structure not a static trade off theory, but also the pecking order theory. This fifth theory assumes that firms have perforations by choosing a way to finance their projects. The sequence of investment resources is restricted by problems caused by asymmetrical information between managers and potential investors. The following assumption is made this theory. (Myers, 1984)

- Firms prefer internal way to finance projects.
- Firms adapt their target dividend payment ratios to available investment resources.
- Internal resources of a firm are fluctuating because of unpredictable fluctuations of profitability.
- When firms need extra resources, they prefer the safest way of getting funds, this means that firms prefer debt to convertible stocks and common stocks.

The results of this pecking order theory is that a firm does not have a certain target debt ratio. The target ratio is dependent on the way a firm financed its projects in the past. This theory also pays attention to costs of asymmetrical information and costs of bankruptcy. When these costs exist, a firm does not always choose to finance projects with a positive net present value. Not a positive net present value determines whether a firm finances a projects or not, but the way in which a firm is able to finance their projects. Baskin reached the validity of this theory in 1989. He made the following conclusion.

The accumulated evidence in favour of the pecking order hypothesis is now substantial. Now it is possible to provide pecking order behavior with a rational theoretical basis, and these seems no longer any reason to ignore the manifest empirical evidence.

### 2.3.6 Stake Holder's Theory

Carnell and Shapiro (19870) assume that not only investors have an interest in a firm. There are different group of non-investor, stakeholders, and some of them have a lot of influence in the financial policy of a firm. According to Cornell and Shapiro: financial structure may also depend on a firm's net organizational capital and on the nature of its stakeholders. Example of no-investor stakeholders are customers, employees and suppliers.

Non investor stakeholders that implicit claims. Implicit claims are non written promises and rights, such as the right to provide service to customers or Job security for employees.

## 2.4 Approaches to Capital Structure

There are basically four approaches of calculating capital structure. They are:

- Traditional approach
- Net Income(NI) approach
- Net operating income(NOI) approach
- Modigliani-Miller approach

All the above approaches are based on some common assumptions which are as follows. Basic assumptions and definitions: (Weston and Brigham, 1992; 741)

- Only two types of capital structures are employed long term debt and common stock.
- There is no tax corporate income.
- The firms total assets are fixed, by its capital structure can be changed immediately by selling debt repurchases common stock to retire debt.
- All earnings are paid out as dividends.
- All investors have the same subjective probability distribution of expected future operating earnings (EBIT) for a given firm that is investors have homogeneous expectations.
- The operating earnings of the firm are not expected to grow that is the firms expected EBIT is same in all future periods.
- The firm's business risk is constant over time and it is independent of its capital structure and financial risk.
- The firm of is expected to continue indefinitely.

In additions to these assumptions, it uses the following basic definition and symbols:

S = Total market value of the stock (equity)

B = Total market value of the Bonds (Debt)

V = total market value of the firm= S+B

EBIT = Earnings before interest and taxes = Net operating income = Interest payments.

$$\text{Cost of debt (Kd)} = \frac{\text{Interest}}{\text{Debt}} = \frac{I}{B}$$

$$\text{Value of debt (B)} = \frac{\text{Interest}}{\text{Kd}}$$

Cost of equity capital (Ks) = cost of equity capital

$$(K) = \frac{di + g}{P_0}$$

Where,

di = Next dividend

$P_o$ = Current price per share

g = expected growth rate.

Overall or weighted average cost of capital

K = Kd (B/S) + Ks (S/V)

$$= \frac{\boldsymbol{Kd-(B)+Ks\ (S)}}{\boldsymbol{(B+S)(B+S)}}$$

The total value of firm is thus defined as, the sum of the value of the firm's debt and firm's equality

V = B+S

Or, $V = \frac{NOI}{K_0}$

### 2.4.1 Traditional Approach

The traditional approach of capital structure theory has been popularized by Ezra Soloman, which is also known as intermediate approach is compromise between Net Income approach and Net operating Income approach. This approach says that the value of the firm can be increased or the Judicious mix of debt and equity capital can reduce the cost of capital. In addition, the cost of capital decreases with the reasonable limit of debt and then increases with leverage. Thus, an

optimal capital structure exists when the cost of overall capitalization rate is minimum or the value of the firm is maximum.

Under this approach, the line of equity capitalization rate is higher than debt capitalization rate. It means the debt funds are cheaper than equity funds.

The crucial assumptions of the traditional approaches are:

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

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.

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

First stage: Increasing Value.

Second stage: Optimum Value.

Third stages: Declining Value.

**1. First Stage: Increasing Value**

The first stage starts with the introduction of debt in the firm's capital structure. In this stage, the cost of equity (Ke) either remains constant or rises slightly with debt because of the added financial risk.

But it does not increase fast enough to offset the advantage of low cost debt. In other words, the advantage arising out of the use of debt is so large that, even after allowing for higher cost of equity, the benefit of the use of the cheaper sources of funds are still available. As a result the value of the firm (V) increases as the overall cost of capital falls with increasing leverage.

During the stage cost of debt (Kd) remains constant or rises only modestly. The combined affect of all these will be reflected in increase in market value of the firm and decline in overall cost of capital (Ko).

**2. Second Stage: Optimum Value**

In the second stage, further application of debt will raise cost of debt and equity capital so sharply as to offset the gains in net income. Hence, the total market value of the firm would remain unchanged. While the firm has reached a certain degree of leverage, increase in it has a negligible effect on the value of the firm or overall cost of capital of the firm. The increase in the degree of leverage increases the cost of equity due to the added financial risk that offsets the advantage of low cost debt within the large 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.

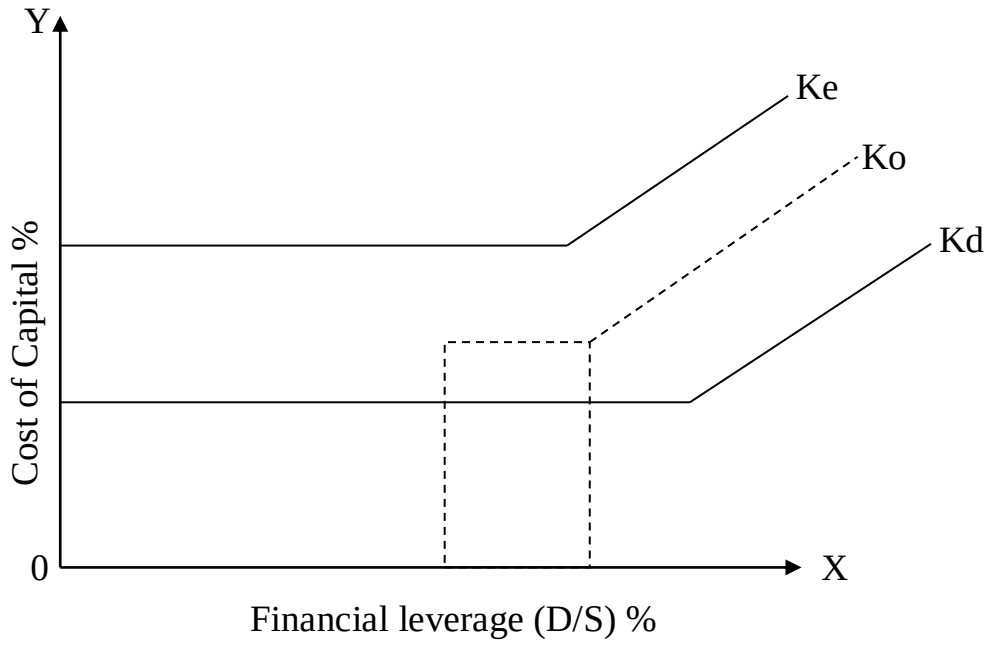
**3. Third Stage: Declining Value**

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

The overall effect of these three stages is to suggest that the cost of capital is a function of leverages, i.e. first falling and after reaching minimum point or range it would start rising. The relation between cost of capital and leverage is graphically shown in figure below;

**Figure no 2.2**

**The relationship between cost of capital and financial leverage**




In the above figure, it is assumed that 'Ke' rises at an increasing rate with leverage, where as 'Kd' assumed to rise only after significant leverage has occurred. At first, the weighted cost of capital, 'Ko,' declines with leverage because the rise in 'Ke' does not entirely offset the use of cheaper debt funds. As a result, 'Ko' declines with moderate use of leverage, after a point, however the increases in 'Ke'more than offset the use of cheaper debt funds in the capital structure and 'Ko'being to rise. The rise in 'Ko' is supported further once 'Kd' begins to rise the optimal capital structure in point X thus the 'e' traditional position implies that

the cost of capital is not independent of capital structure of the firm and that there is an optimal capital structure.

### 2.4.2 Net Income Approach (NI)

David Durand proposed the Net Income approach. This approach stated that firm can increase its value or lower the cost of capital by using the debt capital. According to NI approach, there exists positive relationship between capital structure and valuation of firm and change in the pattern of capitalization bring about corresponding change in the overall cost of capital and total value of firm. Thus, with an increase in the ratio of debt to equity, overall cost of capital will decline and market price of equity stock as well as value of firm will rise. (David Durland, 1959:91-116).

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

It means that a firm attends an optimal capital structure when it used 100% debt financing. Running a business with 100% debt financing, however, is quite uncommon in the real world. The firm can achieve

optimal capital structure by making judicious use of debt and equity and attempt to maximize the market price of its stock.

In sum, as per NI approach, increase in ratio of debt to total capitalization brings about corresponding increase in total value of firm and decline in cost of capital. On the contrary, decrease in ratio of debt to total capitalization causes decline in total values of firm and increase cost of capital. Thus, this approach is appeared as relevancy theory. This approach is based on the following assumptions:

- The cost of equity and debt remain constant to the acceptable range of leverages.
- The corporate income taxes do not exist.
- The cost of debt rate is less than the cost of equity.
- The increasing leverage brings about no deterioration in the equity of net earnings so long as borrowing is consigned to the amount below the acceptable limits.

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

**Figure no 2.3**

**The effect of leverage on the cost of capital**

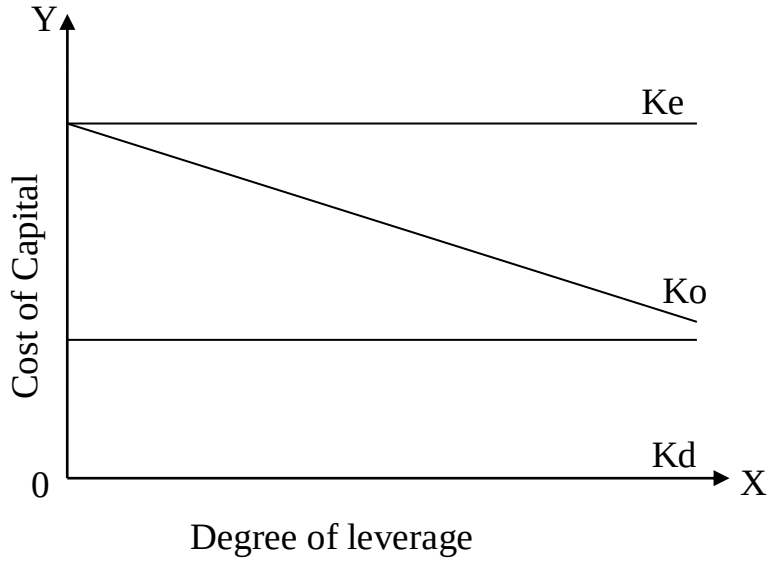
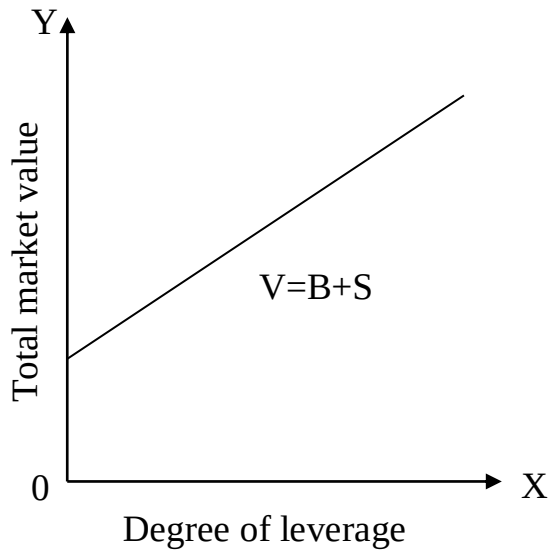


**Figure no 2.4**

**The effect of leverage on the total market value of the firm**




In the above figures shows a continuous decreases in 'Ko' with the increase in debt equity ratio, since any decrease in 'Ko' directly contributes to the value of the firm it increases with the increases in the debt equity ratio (Fig. 2). Thus, the financial leverage, according to the NI approach is an important variance in the capital structure decision of a firm. Under the NI approach, a firm can determine an optimal capital structure. If the firm unlevered the overall cost of capital will be just equal capitalization rate.

In brief the essence of the net income approach is that the firm can lower its cost of capital by using debt does not change the risk perception of the investor consequently, the interest rate of debt (Ke) remain constant to debt. Therefore, the increased use of debt results in higher market value shares and as a result, lower overall cost of capital (Ko).

### 2.4.3 Net Operating Income (NOI) Approach:

Net operating income (NOI) approach is another behaviorual approach suggested by Durand David. This approach is diametrically opposite from the NI approach with respect to the assumption of the behavioural of equity holders and debt holders. The essence of this approach is that the leverage/capital structure decision of the firm is irrelevant. The overall cost of capital is independent of the degree of leverage; any change in leverage will lead to change in the value of the firm and the market price of the shares. Net operating income approach is slightly different from NI approach. In NOI approach, the overall cost of capital and value of firm are independent of capital structure decision and change in degree of financing. Leverage does not bring about any change in the value of firm and cost of capital.

The main difference between NI and NOI approach is the base that investors use to value the firm under NOI approach, the net operating income, i.e. the earnings before interest and tax (EBIT) instead of Net Income is taken as the base like the NI approach, the NOI approach also assumes a constant rate of 'Kd', which means that the debt holders not demand higher rate of interest for higher level of leverage risk. However, unlike the assumption of NI approach, NOI approach assumes that the equity holders do reach to higher leverage risk and demand higher rate of return for higher debt equity ratio. This approach says that the cost of equity increases with the debt level and the higher cost of equity offset the benefit of chapter debt financing, resulting no effect at all on overall cost of capital (Ko). The NOI approach is based on following assumptions;

- The market capitalizes the value of the firm as a whole. Thus the split between debt and equity is not important.
- The market uses an overall capitalization rate, 'Ko' to capitalize the net operating income. 'Ko' depends on the business risk is assumed to remain unchanged, 'Ko' is constant.
- The use of less costly debt funds increases the risk of shareholders. This because the equity capitalization rate to increase. Thus, the advantages of debt are offset exactly by the increases in the equity capitalization rate, 'Ke'.
- The debt capitalization rate, kd is constant.
- The corporate income taxes do not exist.

The function of 'Ks' under NOI approach can be expressed in equation as follows;

$$Ke = Ko + (Ko - Kd)\ B/S$$

The relation between financial leverage and K, Ks and Kd has been graphically depicted in following figure:

**Figure 2.5**

**The effect of leverage on the cost of capital of the firm**

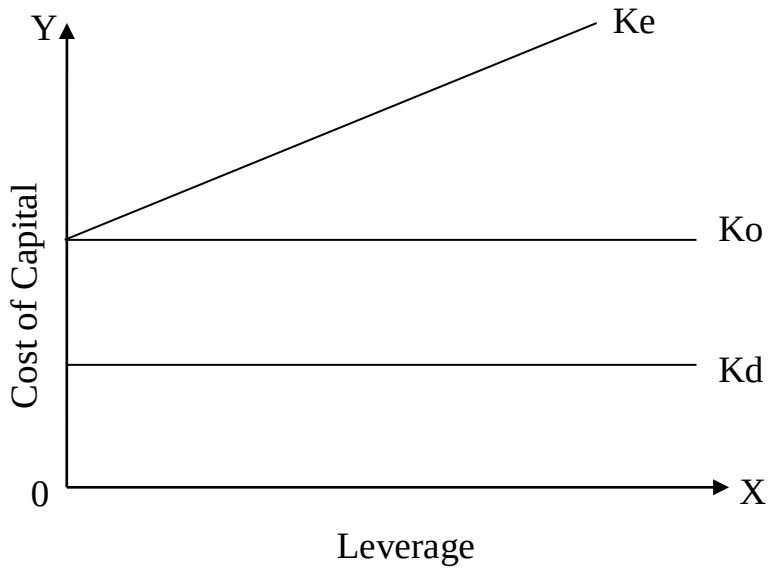
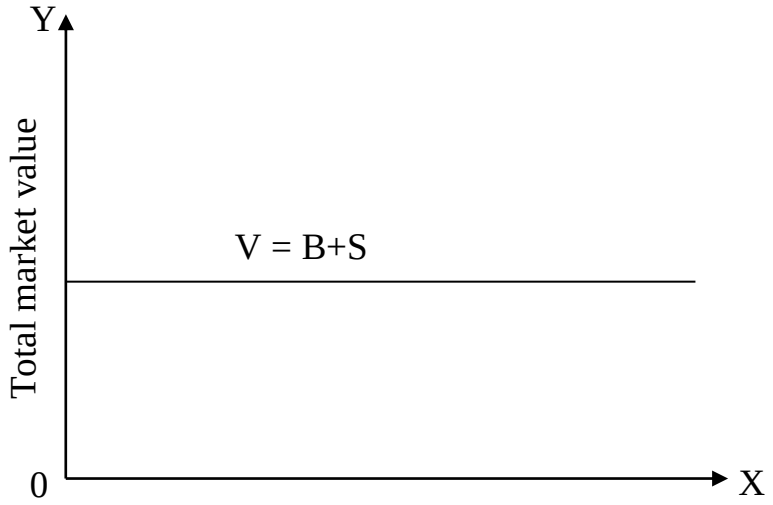


**Figure no 2.6**

**The effect of leverage on total market value of the firm**




In the above figure no 2.5, it is shown that the curve Ko and Kd are parallel to the horizontal X-axis and Ke is increasing continuously. This is because Ko and Kd remain constant under all the circumstances but the Ke increases with the degree of increase in the leverage. Thus, there is no single point or range where the capital structure is optimal. We know obviously from the figure 2.5 that under the NOI approach, as low cost of debt is used, its advantage is exactly offset by increase in cost of equity in such a way that the cost of capital remains constant. By this, value of the firm also remains constant. At the extreme degree of financial leverage, hidden cost becomes very high hence the firm's cost of capital and its market value are not influenced by the use of additional cheap debt fund (Gitman Lawrence, 1998: 791).

### 2.4.4 Modigliani and Miller approach's (M-M Approach)

Modigliani and Miller (MM) is 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 by having the cost of capital, Ko remains constant throughout all degree of leverages. (Van Horne, 2000:255)

The approach concludes that then total market value of a firm and the cost of capital are independent (exclusive of tax considerations) of the capital structure. This model is identical with the net operating income approach." (Jain; 1997:53)

Assumptions of MM Hypothesis (I.M.Pandey, 1985:687)

- 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.
- 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 as present operating earnings.
- Firms can be categorized in to "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.
- The absence of corporate income taxes i.e. assumed. M-M removes this assumption later.
- Firms distribute all net earnings to the shareholders i.e.100% payout. MM in 1958, proposed the theory without taxes and layer, they relaxed the theory with tax consideration. So, assumption of MM hypothesis can be classified in to two ways:
    i. M-M Hypothesis ( with no taxes)
    ii. M-M Hypothesis (with taxes)

M-M Hypothesis with no taxes is identical to net operating income approach, which has already explained.

According to Modigliani and Miller hypothesis with taxes, the value of levered firm must be great than the value of unlevered firm by the amount of debt tax shield. (Miller and Modigliani, 1966, 128)

I. Debt tax shield when corporate tax is given;

Present value of debt tax shield = B × T

Where,

B = value of debt

T = corporate tax

II. Debt tax shield when corporate and personal taxes are given:

Present Value of debt tax shield = $\boldsymbol{V_u + B\left[1 - \left\{\frac{(1-Tc)(1-Tps)}{1-Tpd}\right\}\right]}$

Where,

Tc =corporate tax

Tps =personnel tax on common stock

Tpd =marginal personal tax on debt

B = amount of debt

Proposition I

According to assumption of M-M hypothesis that for firm in same class business risk, the value of the firm is independent of its capital structure. i.e. Financial leverages. This is their proposition it can be expressed as follows. (Pandey, 1995;135)

Proposition I can be stated in an equivalent way interims of the firms overall cost of capital (Ko), which is the ratio of rhe market value of all its securities.

That is:

X-x Ko

(S+B) –V

If defining as ‘Kd’ expected return on the firm’s debt and as Ke’ expected return on the firm’s equity then expected net operation income is given as;

X =Kov +KdB

As given in equation by definitions,

Ko = X/V

Ko = KeB +KdB

S+B =S+B

It can be expressed as follows too:

VL + Vu =X/Kou

Where,

Kou = cost of overall capital of unlevered firm

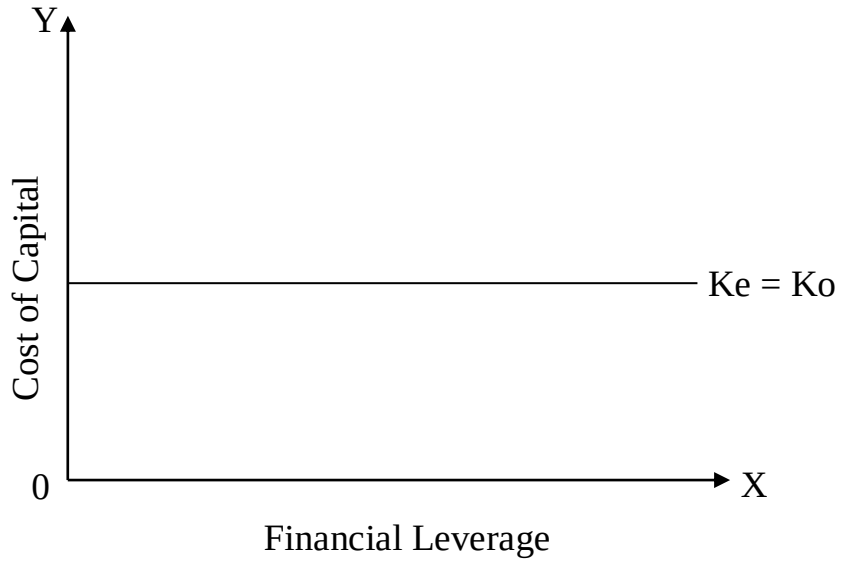
VL = Value of levered firm.

Vu = value of unlevered firm.

M-M concludes that the total market value of the firm is unaffected financing mix, it follows that the cost capital is independent of the capital structure and is equal to the capitalization rate of pure equity stream of its class (pandey, 1996). Graphically, it can be shown as follows;

**Figure no 2.7**

**Behavioural of Ko, Kd and Ke under M-M hypothesis.**




Proposition II

Based on proposition I, M-M formulated proposition II which defines the cost of equity is the linear functions of the leverage. The equation form of this proposition can be expressed as follows;

Ke = Ko + ( Ko + Ke ) B/S

Validity of the M-M proposition II depends up on the assumption of 'Ke' constant for any degree of leverage. But in real business work 'ke' increases with leverage beyond certain acceptable level of leverage.

According to this equation

Kol = Kou

Where,

Kol = cost of overall capital of levered firm.

Kou = cost of overall capital of unlevered firm.

The relation between cost of capital and value of firm is shown graphically in above fig no 2.7.

## 2.5 Types of Leverage

The term leverage may be defined as the use of that source of funds in the business for which the firm has to pay fixed charged, irrespective to the earnings of firm. There are three types of leverage, which are identified with the marginal analyses approaches to profit planning. All types of leverage are related to the measurement of profit in order to operate the financial activities.

### 2.5.1 Operating Leverage

The measurement of the relationship between percentage in earnings before interest and taxes (EBIT) and the percentage in sales is known as operating leverage. In other words, the analysis of change in EBIT due to a change in output quality is described as an operating leverage. A change in fixed operating cost affects the operating leverage significantly. When a firm is highly levered, operating profit will increase at a faster rate for a few increases in sales. But the operating profit of a highly levered firm would suffer more loss than the firm with nil or low operating profit when sales volume falls. So the operating leverage is double edges word.

It is already clear that the degree of operating leverage is related to the fixed costs of the firm. If the company has large fixed cost more than it's marginal contribution, it should try to cover all fixed costs by following some corrective action. When the company reaches its breakeven point, a small change in sales causes the large percentage change in EBIT. Once the company reached in breakeven point the fixed cost will be equal to the contribution margin. In this situation, when the company has a high degree of operating leverage, a small change in sales brings comparatively a high changes in EBIT. So the analyses of

operating leverage tells the financial manager about the impact of change in sales, EBIT must be in negative position and the company may suffer great loss. As a very risky fact, a fluctuated operating leverage may damage the good reputation of the company. So, it should try to operate the business activities efficiently above the breakeven point in order to avoid the dangerous condition that may damage the effects of achieving the profitability of the firm. All these information and suggestions can be gained only after the study of operating leverage.

#### 2.5.1.1 Degree of Operating Leverage

The degree of operating leverage at any single sales volume can be calculated from a ratio of marginal contribution to EBIT. The degree of operating leverage at any single sales, volume can be calculated from a ratio of operating leverage (DOL) which may be defined as the percentage change in operating profit resulting from a percentage change in sales.

$$\text{DOL} = \frac{\textbf{\% change in operating profit}}{\textbf{\% change in sales}}$$

$$\text{DOL} = \frac{\Delta \boldsymbol{EBIT}/\boldsymbol{EBT}}{\Delta \boldsymbol{sales}/\boldsymbol{sales}}$$

### 2.5.2 Financial Leverage

Financial leverage measures the responsiveness of EPS to change in EBT. The use of fixed charge source capital along with the owner is equity in the capital structure is described as a financial leverage.

Financial leverage is the potential use of fixed financial cost to magnify the changes in earnings before interest and taxes (EBIT) on earning per share (EPS). As we know that financial leverage exists when

a company uses a debt capital in its capital structure and it results from the presence of fixed financial costs in the firm's income stream.

Financial leverage shows up as interest expenses causing additional variability in net income ones and above the variability in net income that reflects financial risk. When the company wants to expand its capacity, it needs more money to invest in fixed capital. The need of large investment can be fulfilled by equity and debt. When the cost of debt is less that company may be profitable with debt capital investment. In this way, the profitability of company, by using debt capital can be measured only with the help of the financial leverage.

### 2.5.2.1 Degree of Financial leverage (DFL)

The degree of financial leverage (DFL) is the numerical measure of the firm's leverage. When the economic condition is good and the firm's EBIT is increase its EPS increases faster with more debt in the capital structure. The degree of financial leverage is defined as the percentage change in EPS due to a given percentage change in EBIT.

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

$$\text{DOL} = \frac{\Delta \boldsymbol{EPS}/\boldsymbol{EPS}}{\Delta \boldsymbol{EBIT}/\boldsymbol{EBIT}}$$

### 2.5.3 Combined Leverage

The combined leverage is the potential use of fixed costs both operating and financial to magnify the effect of change in sales on the firms earning per share (EPS). The effect on earnings per share due to total cost used by firm is described a combined leverage. The combined leverage also called total leverage, representing the combination of

operating and financial leverages, measures the relationship between Q and EPS. Through the study of the combined leverage, we can analyze the effect of operating and financial leverage on the firm's risk by using framework to develop individual concept of leverage. Due to the inclusion of all types of fixed costs, this leverage can be viewed as the total impact of the fixed costs in the firm's operating and financial structure. Combined leverage is used to compare charges in revenue with charges in EBT and also change in net income.

### 2.5.3.1 Degree Combined Leverage

The combined leverages measures the relationship between Percentage change in EPS and percentage change in sales. Calculating the effect of total leverage in EPS associated with a given change in sales is described as a combined leverage. The degree of combined leverage is defined as percentage change in EPS due to given Percentage changes in sales.

$$\text{DCL} = \frac{\%\ \textbf{change in EBIT}}{\%\ \textbf{change in sales}} \times \frac{\%\ \boldsymbol{change\ in\ EPS}}{\%\ \boldsymbol{change\ in\ EBIT}} = \frac{\%\ \boldsymbol{change\ in\ EPS}}{\%\ \boldsymbol{change\ in\ sales}}$$

## 2.6 Review of Previous Study

This section is devoted to review of important empirical works, concerning capital structure and cost of capital since 1958 till 2010. There are numerous studies in capital structure. So, it is out of the scope of this study to survey and review all the empirical work extensively and give here in detail. Therefore only some important studies and their findings are presented. In this section, review will be made on the foreign studies too.

### 2.6.1 Review of Journals

**Modigliani –Miller study (1958)**

In their first study, M-M used the previous works of Allen and Smith in support of their independence hypothesis. Allen's study consists an analysis of the relation between security yield and financial structure for large electric utilities, which is based on average figure for the years 1947 and 1948, which smith designed his study of 42 electric utilities.

In the first part of their work M-M tested their proposition I, the cost of capital is irrelevant to the firm's capital structure by correlation to the firm's capital structure by correlation after tax cost of capital with leverage B/V. they found that the correlation coefficient is statistically insignificant and positive in sign.

In the second part of their study, they tested their proposition II the expected yield on common share is linear function of debt to equity ratio. The second part of their study is consistent with their views i.e. if the cost of borrowed funds increases the cost of equity will decline to offset this increase.

M-M conducted the second study inn 1963 their original hypothesis for corporate income taxes and expected cost of capital to be affected by leverage for its advantage or not.

For this they conducted the mathematical analysis regarding the effect of leverage and other variable on the cost of capital, they found that the leverage factors are significant only because of the tax advantage involved. (Modigliani, F and Miller, M.H. (1966:333-391)

**Joshua Arbor (2005)**

Joshua Arbor in his study, "The effect on capital structure on profitability" mentioned that the relationship between capital structure and firm has been the subject of considerable debate. Throughout the literature debate has centered on whether there is an optimal capital structure for an individual firm or whether the proposition of debt usage is irrelevant to the individual firm's value the capital structure of firm concerns the mix of debt and equity the firm's uses in its operation Berkley and Myers contend that the choice of capital structure is fundamentally a marketing problem.

According to Weston and Brigham, the optimal capital structure is the one that maximizes the market value of the firm's outstanding shares.

Other theories that have been advanced to explain the capital structure of firms include Bankruptcy cost, agency cost and pecking order theory. These theories are discussed below.

Bankruptcy costs are the cost directly incurred when the perceived profitability increases with debt level since it increases the fear that the interest and the company might not be able to generate profits to pay back the interest and the loans. The potential costs of the bankruptcy may be both direct and indirect. Examples of indirect bankruptcy costs are the loss in profits incurred by the firm as a result of the unwillingness of shareholders to do business with them.

The use of debt in capital structure of the firm also leads to agency costs. Agency costs arise as a result of the relationship between shareholders and managers and those between debt holders and shareholders.

The need balance gains and costs of debt financing emerged as a theory known as the static trade off theory by Myers. It values the company as the value of the firm if unlevered plus the present value of the tax shield minus the present value of bankruptcy and agency costs.

**Reema Devi Shrestha (1993)**

Reema Devi Shrestha conducted a study on the topic "Focus on capital structure of selected and listed public companies." This study used data from 19 companies, which covered different sectors such as manufacturing, finance, utility service and other allied areas. It was found that most of these companies have debt capital relatively very high than equity capital. Consequently, most of them are operating at the extent that payement of interest on loan which has been a serious issue. Most of these losses are after charging interest on loan. It has suggested that the government has to consider the public enterprise in evaluation the relationship between use of debt and its impact on overall earnings of public enterprise. So government should be sure in knowing how to use debt capital which will maximize return, it should develop a suitable capital structure guideline to make public enterprises aware of its responsibility and to repay the debt schedules. Government has to analyze cost and risk return trade off. Thus, capital structure needs to be made more determine by realistic analysis of cost. Lastly, she concluded that policy makers have to be careful in developing the suitable capital structure guidelines in making public enterprises as well as listed companies to be aware of financial accountability.

Fakher Buferna, Kenbata Bangassa and Lynn Holdkinson, 2005, University of Liverpool London:

This study made by Fakher Buferna, Kenbata Bangassa, and Lynn Holdkinson, on the topic "Determinants of capital structure," contributes towards a better understanding of financing behavior in Libyan companies. Hypothesis, base on comparing the relationship between long term debt and short term debt and four explanatory variables that represents profitability, growth, tangibility and size were developed to test which capital structure theories best explained Libyan companies 'Capital Structure'. The result suggests that both the static trade off theory and the agency cost theory are pertinent theories whereas there was little evidence to support the information asymmetry. The lack of secondary market may have an impact on agency costs as shareholders, who are unable to off load their shares, might expert pressure on management to act in their best interests. It is likely that equity agency costs, arising due to conflict between debt holders and shareholders, will be mix of a for private companies and indeed the relationships supporting the agency cost theory were stronger for private companies.

**Keshar Jung Badal (1996)**

Keshar Jung badal (1996) had submitted a thesis on the topic of " capital Structure and cost of capital in public sector enterprises of Nepal." The main objective of that study is to analyze the capital structure and cost of capital in public sector enterprises of Nepal. That study reached to the conclusion that performance of public enterprises are very poor and they are not adding the wealth of the society but diluting it, and hindering the development of the country. Further, the huge amounts of adjusted losses of manufacturing and trading enterprises is quite below its costs of capital and overall cost of capital in almost fiscal years of the study period. Thus, it can be concluded that capital structure of Enterprises in public sector in Nepal more or less in the outcome of the deliberate

decision of HMGN but not a product of market and public Enterprises structures.

**Ganesh Prasad Neupane (1997)**

Ganesh Prasad Neupane (1997) had conducted a thesis on ‘ A study on the Assects and capital structure of Nepal Bank Limited.’ The study was made with the objective of to analyze the assects and capital structure of Nepal bank limited finds that the amount of other assects is more than 3.5 times than the amount of net worth. It indicates that not only all the amount of net worth is used in unproductive assects but also other liabilities are used in fixed assects as land, building, and furniture, stationary at hand. So, the total income of the bank could not increase along with the increasing rate of total liabilities.

### 2.6.2 Review of Articles

**Manohar Krishna Shrestha**

Manohar Krishna Shrestha carried out Articles in 1985 B.S. “ Analysis of capital structure in selected public Enterprises.” He has found that the selected public enterprises under study have a very confusing capital structure, since the cooperation’s are not guides by objectives based financial plans and policies in many instances in idolism become the basis of capital structure and most of them want to eliminate debt if possible to relieve financial obligation. He has further pointed out that there were neither, to the public enterprises nor private enterprises developed criteria is detaining capital structure and this is the reason as to why debt equity ratio cause a ticklish problem. He has also suggested that the debt equity rate should neither highly levered to create too much financial obligations that the beyond capacity to meet nor should it be

much low lever infuse operational strategy to bypass responsibility without performance.

**Sudhir Poudyal**

"A study on capital structure; its impact on value of a firm," an article by Sudhir Poudyal concentrated to examine the interrelationship between the objective of achieving an optimal capital structure and to provide conceptual framework for the determination of the optimal capital structure.

For this, a hypothetical firm is constructed and different assumptions are laid down to analyze the effect of capital structure. Various statistical and financial tools like ratio analysis are used to extract reasonable figure for the hypothetical firm. It is observed that the minimum weighted average cost of capital, maximum value of the firm and price per share are attended at debt ratio of 30%.

Furthermore, if there is flexibility to select capital structure in any proportion, optimal capital structure ranges 30% to 40%. An optimal capital structure would fulfill the interest of equity shareholders and financing requirement of a company as well as other concerned groups.

**Paul Marsh**

Paul Marsh in his Article, "The Choice between Equity and Debt," expressed following issues:

- Whether companies are having the targeted debt ratio.
- Whether they have similar targets from the composition of their debt;
- Whether debt ratio or the choice of the finance instrument are influenced by other factors.

- How accurately can we predict whether the company will issue equity or debt?

Then he suggested that;

- While planning their issues, company should consider future as well as current debt ratio.
- If the companies are looking at book value debt ratio, there will change during the interest issuing period of retentions and bank loans.
- Any overall change in tax level could cause issuing companies to shift their performance toward either debt or equity.
- Small companies rely on bank loan rather long term debt because of location, cost and problems of access to capital market.
- Equity issues seem to be favorable as it provides strong share price and overall market performance.

### 2.6.3 Review of Dissertation (Thesis)

**MS. Anjana Shah (2004)**

Ms Anjana Shah (2004) in her study "A study on capital structure of selected manufacturing companies," made the study with a purpose to access the debt servicing capacity of the mentioned manufacturing companies, examining the relation between return on equity and total debt, return on equity and debt ratio, earning after tax and total debt and interest and earnings before interest and tax.

Both financial tools such as ratio analysis as well as statistical tools such as correlation coefficient and regression analysis have been used as the methodology.

The study revealed that Nepal lever Ltd. Is fully equity based and has not been using long term debt. The Bottlers Nepal Ltd. Is free of long term debt because of improved cash flows and effective management. The Sri Ram spinning Mills has 66.33% of assets financed with debt and hence there is less flexibility to the owners. The degree of financial leverage analysis of Jyoti spinning Mills shows the failure of the company to gain expected profits. And the Arun vanaspati Udyog has a fluctuating debt equity ratio. Its long term debt is decreasing and only creditors make a small share of finance.

**MS.Manju Kumari Pandey**

Ms . Manju Kumari Pandey conducted a thesis entitled, " The study on capital structure management of Standard Chartered Bank Nepal Limited and Nepal Bangladesh Bank Limited." The main objectives of the study are; to analyze the interrelationship of capital structure with various important variable such as earning per share, dividend per share and the net worth of the Joint venture banks and to provide suggestions to overcome various issues and gaps.

The study has used financial tools such as Ratio analysis, EBIT-EPS analysis, overall capitalization rate, equity capitalization rate, total value calculation etc and statistical tools such as Karl Pearson's correlation and probable errors.

The study calculated that all the Joint venture banks are using high percentage of total debt in raising the assects and all the banks are able to pay the interest. The study suggested that the bank must control total deposit and the bank must also control investment. The bank needs to reduce its expenses and control fluctuations in the earnings per share to improve its market price per share.

**Mr.Shanti Raj Prasai (1999)**

Mr. Shanti Raj Prasai (1999) has done a study on "Capital Structure of Nepal Bank Limited," the basic objective of the study is to analyze the interrelationship and trends amount some of the components of loan and advance are the major portion. During the study total components are different. So, the interrelationship of the components is fluctuating. The average growth rate of net profit and total expenses are not under control of the bank. And the net profit is only 40.64% of the total income.

He has conducted that the bank showed total income as well as expenditure and suggested that the total deposit and investment must also be controlled by the bank. The bank needs to reduce 4328 expensive and control fluctuation in the earning per share to improve the market price per share.

**Gopal Prasad Regmi (1998)**

Gopal Prasad Regmi has conducted thesis in 1998 entitled, "Capital Structure Management of Necon Air Limited." The study showed that the company as operating with debt capital relative higher than equity capital. So, he concluded that the company should make a drastic reduction in total debt capital. And if it's not possible, they need to issue more equity shares. He further added that the company should minimize its operational cost and applies technological base management to strength the company's competitive capability. Apart these strategies, he suggested that the management should adopt competitive strategy policy to balance with its different investors, as well as, identify and select the best alternative financing from available fund.

**Mr .Umesh Kumar Koirala(2003)**

Mr. Umesh Kumar Koirala (2003) has studied, "A Comparative Evaluation of Capital Structure between Dabur Nepal Pvt.Ltd.and Nepal Lever limited. According to his study the Dabur Nepal pvt.Ltd.is highly levered form and Nepal lever Ltd.is unlevered since for 4 years. The debt equity ratio in terms of long term debt and shareholders equity, of Dabur Nepal is higher than Nepal lever limited.

The capital structure of Dabur Nepal limited is debt based where as Nepal lever Limited cut off long term debt financing. So, he has suggested that both the companies to change their debt by changing long term debt to share capital and in the case of Nepal Lever Limited, to consider long term debt while financing. So, both the companies are suggested to maintain appropriate debt ratio, which minimizes the cost and maximizes the return of the firm. He further finds that the Dabur Nepal limited is bearing high amount of interest expenses due to higher debt equity ratio and other operating expenses. Similarly, Nepal Lever Limited is also bearing high interest expenses even it does not use long term debt in its capital structure. As a result, the return of the firm is not satisfactory. So, has recommended both the companies to minimize interest expenses by using cheaper debt as well as other operating expenses to the return of the firm.

**Sushil Dev Subedi (2005)**

" A study on capital structure of Nabil Bank Limited," in this study specific objectives were analyze the capital of Nabil Bank Limited to show financial position, examine the different profitability ratio and show overall trend analysis. Under this study used various tools such as graph, percentage diagram, mean, standard deviation and co-variance are used to

analyse the study. He found and concluded that total liabilities and capital item, show the overall situation of bank in falling down. Deposit is the biggest amount in the balance sheet. Fixed deposit is taken as long term debt in the banking business. It is key derment factor to capital structure. Debt and equity are properly mixed good capital structure is formed. Price earnings ratio reflects the price currently reported EPS. It measures investor's expectations and the market appraised of the performance of a firm.

This study suggests, deposit is the major concern to the capital structure. It effects on investment policy. The more the fixed deposit increase the more the long term investment becomes possible. Bank becomes more successful and competent as per its capacity to collect the fixed deposit. So, fixed deposit should be collected more as can as possible.

The review of above journals and thesis has undoubtedly helped me to strength analytical ability to pursue my thesis in the right way and direction. There are variable inputs which I could go as to look problems more critically having done the literature review, now I proceed to research methodology which is necessary for my analysis in the following chapter.

# CHAPTER - III

# RESEARCH DESIGN

## 3.1 Introduction

Research Methodology is a way to systematically solve the research problem (Kothari, 1990: 10). It may be understood as a science of studying how research is done scientifically. The research methodology considers the logic behind the method used in research and explains why particular method or technique is applied.

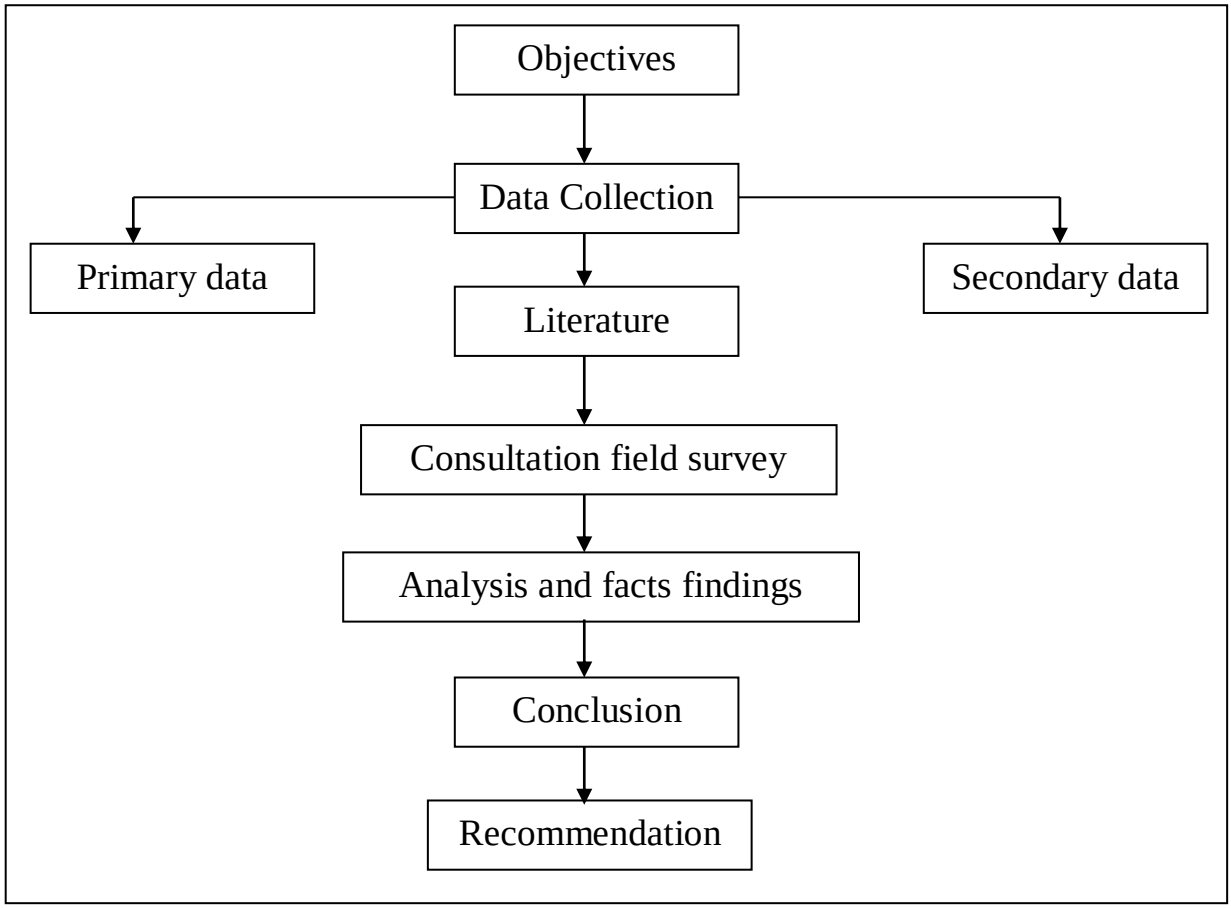
Research is the process of a systematic and in depth study or search of any particular topic, subject or area of investigation in different ways for relevant data. So, research methodology means the analysis of specific topic by using proper method. In other words, research methodology is the way to solve systematically the research problem. Research methodology helps us to find out accuracy, validity and suitability of research. Research methodology describes the methods processes applied in the entire aspect of the study.

This chapter includes research design, nature and sources of data, collection and procedure of data, population and sample of data and short outline of the methods applied in the process of analyzing the capital structure of the selected joint venture commercial bank. To accomplish the goal, study is follows the research methodology described in this chapter.

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

**Figure no 3.1**

**Flow chart of entire methodology**




## 3.2 Research Design

Research design is the plan, structure and strategy of investigations conceived so as to obtain answers to research equations and to control variance. It provides only guidelines for the researcher to enable him / her to keep track of his/her action and to how he/she is moving in the right direction in order to achieve his/her goal. The design may be a specific presentation of the various steps such as selection of research problem, the formulation of the hypothesis, conceptual clarity and methodology,

survey of literature, bibliography, data collection, and interpretation presentation and report writing in the process of research.

"A research design is purely and simply the framework or plan for a study that guides the collection analysis of the data." (Goes; 1989:51)

"A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the search purpose with economy in procedure."

For the analysis of the capital structure of selected Joint venture commercial banks, analytical as well as descriptive designs are applied to achieve the objective of the research.

## 2.3 Nature and Sources of Data

Mainly the study is conducted on the basis of secondary data with neglible primary data collected. The data related to the trend analysis of Nepal Investment Bank Limited, and Standard Chartered Bank Nepal Limited are obtained with the help of both bank's balance sheets from 2006/07 to 2010/11. The supplement data and information have been acquire from Annual reports published from concerned banks, Journals published from various institutions like NRB, Nepal Chamber of Commerce etc. the source of data are elaborated as below.

- **Primary Data collection**

The data which are originally collected by an investigator or an agent for the first time for the purpose of statistically enquiry are known as primary data collected personally through questionnaire, observation and interviewing method. These data highlight the real fact information of both of the concerned bank. In this thesis, structure review and unstructured observation method was used.

- **Secondary Data Collection**

The data which are originally collected but obtained from some published or unpublished sources are secondary data. The secondary data are collected from secondary sources. These secondary sources consist of two sources:

**Internal Sources**

- Annual general meeting of Nepal Investment bank Limited and Standard Chartered Bank Nepal Limited of year 2006/07 to 2010/11.
- Interest Chart rate of both of selected banks i.e.(NIBL and SCBNL)
- Brochures of both of selected banks i.e.(NIBL and SCBNL)
- Booklets of both of banks etc.

**External Sources**

- Books and publications.
- Journal article, articles from News paper.
- Local News paper.
- Previous fieldwork reports.
- Internet and E-mails.
- Nepal Rastra Bank Directives.
- Dissertation of Central library of T.U.,Library of Shankar Dev Campus, Library of Nepal Commerce Campus, and Library of Public Youth campus.

## 3.4 Population and Sample

The objective of the research is to study and describe the capital structure of selected of joint venture commercial banks in Nepal from the

various aspects. All together there are 32 commercial banks operating their business. Out of them only six banks are establishment as a joint venture commercial banks in Nepal. All these six joint venture banks are not possible to take because of time limited and unavailability of the relevant data therefore only two joint venture commercial banks .i.e. SCBNL and NIBL, have been chosen for this study.

## 3.5 Coverage of the Study

The applicability and acceptability of the result of the study also depend up on the sample size and coverage of the study. Given the difficult inherent in the procuring necessary statistically data and other information of all joint venture bank only. A reasonable number of samples of two joint ventures banks out of six joint venture banks will be selected for the purpose of the study. To keep the study within manageable limits regarding the temporal coverage. This study coverage the period of five years only.

## 3.6 Data Collection Procedure

The data used in this study is primary and secondary nature. The study is based on secondary data provided by bank and other relevant sources. The data are collected from the Balance sheet, profit & loss account, Stock exchange security board, and Nepal Raster bank and informal enquires from the banks personal.

## 3.7 Data Presentation and Analysis

For the sake of effectiveness, data collected from various source will be presented in the form of table, chart, bar diagram as per needed of the study. The result obtain from the analysis will be clearly interpreted so as to depict the exact finding of the study. Details of the individual's

Joint Venture bank's data and other useful information will be presented in the appendixes of the end of the study.

## 3.8 Methods of Data Analysis

Mainly financial methods are applied for the purpose of this study and appropriate statistical tools are also used. Financial tools to calculation the relationship between two financial variables on ratio and percentage basis. Financial tool includes ratio analysis and leverage analysis. Likewise, statistical tools include correlation Analysis and other financial and statistical tools may be used as per the requirement. The various tools applied in this study, has been briefly presented below.

### 3.8.1 Financial Analysis

A widely used tool for the financial analysis is ratio analysis. It is defined as the systematic use of ratio to interpret the financial statement so that the strength and weakness of a firm as well as its historical performance and current financial condition can be determined. Management should be able to analyze the financial strength so as to find out the weakness of the company and erase them out by making rational decision.

In other words, management may have different types of weakness, which may be the causes of unsuccessful organization. So, the company should use on analytical tool to know about its own situation and take a suitable and corrective action to relieve from a risen problems, the most useful tool of financial analysis is ratio analysis.

Various ratios can be computed but ratios which are directly related with the study of the leverage and profitability are computed and analyzed in this study.

**i) Long Term Debt to Total Debt Ratio:**

It specifies the contribution of long term debt holders to the total debt of the company. It is calculated by long term debt divided by the total debt.

$$\text{Long term debt to total debt} = \frac{\%\ \text{Long term debt}}{\text{Total debt}}$$

Higher ratio indicates the higher contribution of long term debt to the total debt i.e. higher leverage risk and vice versa.

**ii) Long Term Debt to Share Holders Equity Ratio:**

This ratio also measures the leverage risk of the company. It specifies the contribution of owner to total capital. It can be calculated by the long term debt divided by shareholder's equity.

$$\text{Long term debt to Share holder's equity} = \frac{\text{Long term debt}}{\text{Shareholder's equity}}$$

Higher ratio indicates the higher contribution of owner then creditors. It also indicates the lower leverage risk and vice versa.

**iii) Total Debt to Shareholder's Equity Ratio:**

The total debt to shareholder's equity ratio is vital tool used to analyze the long term solvency of firm this ratio equals firm's debt divided by its equity. When debt can be defined as total debt or as long term debt. There, it is computed as.

$$\text{Total debt to shareholders equity} = \frac{\text{Total debt}}{\text{Shareholder's equity}}$$

Higher ratio indicates the comparatively higher contribution of debt holders than share holders. It also indicates that at the time of

liquidation higher portion of total assets will be claimed by the debt holders.

**iv) Total Debt to Total Asset Ratio:**

It is commonly known as debt ratio. It specifies the contribution of debt holders to the total assets of the firm. It is measured by using following formula.

$$\text{Total debt to total assets} = \frac{\text{Total debt}}{\text{Total assets}}$$

Higher ratio specifies the higher leverage risk or higher contribution of debt holders to the total assets. Too high ratio leads the carelessness of shareholders to the business activities.

**v) Shareholder's Equity to Total Assets Ratio:**

This ratio also indirectly measures the leverage risk of the company. It can be computed either subtracting debt ratio from 1 or using following formula.

$$\text{Shareholder's equity to total assets} = \frac{\text{Shareholder's equity}}{\text{Total assets}}$$

Shareholder's equity to total assets = 1- debt ratio

Higher ratio indicates the lower leverage risk and vice versa.

**vi) Interest Coverage Ratio:**

The interest coverage ratio also known as the time interest earned ratio. It is one of the most conventional coverage ratio used to test the firm's debt servicing capacity. This ratio show the number of times the

interest charges are covered by funds that are ordinarily available for their payment. The interest coverage ratio is thus computed as:

$$\text{Interest coverage ratio} = \frac{\text{Earning Before Income and Tax}}{\text{Interest}}$$

$$\text{Interest coverage ratio} = \frac{\text{Net Profit Before Income and Tax}}{\text{Interest}}$$

Higher ratio indicates the strong debt service capacity of the company and vice versa. Too high ratio refers the unused debt capacity of the company.

**vii) Long Term Debt to Capital Employed Ratio:**

The ratio is used to express the relationship between long term debt and capital employed by the firm. It shows the proportion of long term debt and shareholder's fund in the capital structure. This ratio is calculated as;

$$\text{The long term debt to capital employed ratio} = \frac{\text{Long term debt}}{\text{Capital employed}}$$

The higher ratio of long term debt to capital employed ratio shows the higher contribution of long term debt to the capital structure and vice versa.

**viii) Return on Shareholder's Fund or Equity (ROSE):**

A return on shareholder's equity is calculated to see the profitability of owner's investment. This ratio is ascertained for measuring the efficiency of the investment by made by the shareholders in the business on the basis of the relationship between shareholder's fund and net profit.

The shareholder's equity includes paid up share capital, share premium and reserves and surplus less accumulated losses. The return on shareholder's equity is net profit after taxes divided by shareholder's equity.

$$\text{ROSE} = \frac{\text{Net Profit After Tax}}{\text{Shareholder's equity}}$$

Higher ratio is more efficient of management and utilization of shareholder's fund and vice versa.

**ix) Return on Assets (ROA):**

This ratio measures the productivity of the assets. A ratio between net profit to assets is known as return on assets. But generally, return on assets can express the relationship between net profit after taxes and total assets.

$$\text{ROA} = \frac{\text{Net Profit After Tax}}{\text{Total assets}}$$

Higher ratio implies that the available source and tools are employed efficiently.

**x) Earning Per Share (EPS):**

The income per share of common stock is known as earning per share. This ratio is mostly used in capital structure to know the availability of return for shareholders. The earning per share is calculated by dividing the profit after taxes by the total number of common share outstanding.

$$\text{EPS} = \frac{\textbf{Net profit available to common shareholders}}{\textbf{Number of shares outstanding}}$$

The increasing EPS means the increasing return for shareholders.

**xi) Dividend Per Share (DPS):**

Dividend per share is the earnings distributed to ordinary shareholders divided by the number of ordinary shares outstanding.

$$\text{DPS} = \frac{\textbf{Dividend}}{\textbf{Number of shares outstanding}}$$

**xii) Price Earning Ratio(P/E Ratio):**

Price earning ratio indicates investor's expectation about the growth of the firm's earning.

$$\text{P/E ratio} = \frac{\textbf{Market price per share}}{\textbf{Earning per share}}$$

**xiii) Dividend Payout Ratio:**

The ratio represents the percentage of the profit distributed as dividend and the percentage retained as revenue and surplus for growth of the bank.

$$\text{Dividend payout ratio} = \frac{\textbf{DPS}}{\textbf{EPS}}$$

**xiv) Overall Capitalization Rate under NI Approach:**

The net Income approach known as relevant theory of capital structure is already discussed in former chapter. Hence, the formulas used in to compute the value of the firm and overall capitalization rate under NI approach is given.

Market value of the firm = Market value of debt + Market value of stock

$$\text{Or, } V = B+S$$

$$\text{And, Overall Capitalization rate} = \frac{\textbf{EBIT}}{\textbf{Value of the firm}}$$

$$\text{Or, Ko} = \frac{\mathbf{EBIT}}{\mathbf{V}}$$

**xv) Equity Capitalization Rate under NOI Approach:**

The equity is one of the sources of Capital, which has its own cost and it is known as cost of equity. A large amount of equity means the higher amount of cost of equity. The equity capitalization rate under NOI approach can be calculated as;

$$\text{Equity Capitalization rate} = \frac{\mathbf{EBT}}{\mathbf{Market\ value\ of\ common\ shares}}$$

$$\text{Or,} \quad \text{Ke} = \frac{\mathbf{EBT}}{\mathbf{S}}$$

### 3.8.2 Statistical Analysis

Statistically tools are equally important to meet the objectives of this study. This will helps us to analyze the relationship between two or more variables. For this research following statistical tools are used. They are;

- Arithmetic mean (A.M).
- Standard Deviation (S.D).
- Karl Pearson's Coefficient of Coefficient.
- Probable error (P.E).

- **Arithmetic Mean:**

Arithmetic mean also called the mean or average arithmetic mean is the most popular and widely used method of central tendency. It is the

ratio of sum of all observations divided by no. of sample. It is calculated from ungrouped data and frequency.

$$\bar{X} = \frac{\sum X}{N}$$

Where,

$\bar{X}$ = mean Average

Σ = Summation

N = No of years

- **Standard Deviation:**

Standard deviation is the most popular and most useful measure of dispersion and gives uniform, correct and stable results. The main characteristics of standard deviation are that, it based on mean. Furthermore, a standard deviation is always a positive number and it is superior to the mean deviation. A standard deviation is the positive square root of average sum of square of deviations of observations from the arithmetic mean of the distribution.

Standard deviation S.D. = $\sqrt{\frac{\sum(X-\bar{X})^2}{N}}$

Where,

S.D. = standard deviation

Σ = Summation

X = sample data

$\bar{X}$ = Average mean

N = no of years

- **Correlation Coefficient (r):**

For the purpose of comparison and further analysis it is necessary to get a numerical measure for the correlation between two variables. A relative measure of this type is developed by Karl Pearson called Pearson's coefficient of correlation or product movement coefficient. It measures the relationship between two or more than two variables and they are so related that the change in the value of one variable is accompanied by change in the value of the other or it indicates the direction of relationship among others. It is denoted by 'r'. the correlation coefficient can be calculated as:

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

Where,

N = No of observations.

X and Y are variables.

The decision criteria,

When,

r = 0, there is no relationship between variables.

r = 1, the variables are perfectly positive correlation.

r = -1, the variables are perfectly negative correlation.

- **Probable Error (P.E ):**

The probable error is the measure of ascertaining the reliability of the value of Pearson coefficient of correlation, P.E. is worked out as under for Karl Pearson's coefficient of correlation.

Probable Error (P.E.) = $0.6745 \times \frac{\mathbf{1-r^2}}{\sqrt{n}}$

Where,

r = correlation coefficient'

N = No. of pairs of observation.

The probable is used to test whether the calculated value of sample correlation coefficient is significant or not. A few rules for the interpretation of the significance of correlation coefficient are as follows:

- If the value of ' r' is less than the probable error there is no evidence of correlation i.e. the value of 'r' is not significant.
- If the value of 'r' is more than 6 times of probable error the coefficient of correlation is practically certain, i.e. the value of 'r' is significant.
- The P.E. of correlation may be used to determine the limits within which the population correlation coefficient lies. The limit of the population correlation is r + P.E.

# CHAPTER - IV

# DATA PRESENTATION AND ANALYSIS

## 4.1 Introduction

This chapter named presentation and analysis of data constitute the most important and crucial part of the study. In this chapter, collected data will be analyzed and presented mathematically. It provides mechanism for meeting the basis objectives stated earlier in the first chapter of this research. The research has followed the methodology described in third chapter in order to attain the objectives. Thus, application of the major variables taken in to account for the purpose study are total debt and total assets, EBIT and EBT, total debt and net worth, Net worth, net profit after tax (NPAT) and shareholder's equity, EBIT and interest, net Income and net operating income approach, co-efficient of correlation analysis of different variables of selected banks.

It is already stated that capital structure refers to the combination of preference share, equity share capital including reserve and surplus as well as long term debt. Optimal capital structure refers to that combination of funds, which minimizes the EPS, value of the firm and overall cost of capital. Thus, this chapter emphasizes the position of capital structure of selected joint venture banks. The analyses in this chapter are divided into following section which is directly and indirectly related to the capital structure.

- Ratio Analysis.
- Analysis of capital structure.
- Leverage Analysis.
- Correlation Analysis

## 4.2 Ratio Analysis

### 4.2.1 Long Term Debt to Total Debt Ratio:

The relationship between long term debts to total debt has a decisive impact on the financial structure of the companies. This relationship indicates what percentage of total debt is covered by long term debt of the firm. Normally firms used short term debt and long term debt. Current liabilities and provisions are also needed during the operation of the firm. Simply dividing long term debt by the total debt on derived the relationship between the long term debts included all types of borrowed fund, current liabilities and provision. If the firm used large amount of short term loans and other current liabilities and provision in the large amount, the percentage of long term debt will be low and vice versa.

The higher ratio long term debt holders up on the total debt and the lower ratio indicates the higher portion of short term loans and current liabilities in the total debt of the firm. The amount of liabilities used depended up on the liquidity of that firm. This relationship of long term debt and total debt is presented in the following table along with percentage change in that ratio to show the movement of trend individually. In addition the average (standard) ratio is also calculated to compare with each other.

$$\text{Long term debt to total debt ratio} = \frac{\text{Long term debt}}{\text{Total debt}} \times 100$$

**Table No. 4.1**

**Long Term Debt to Total Debt of SCBNL**

(In Millions)

| Fiscal Year | Ratio (%) | LTD | Total debt | Change (%) |
|---|---|---|---|---|
| 2006/07 | - | - | 26480.33 | - |
| 2007/08 | - | - | 30843.24 | - |
| 2008/09 | - | - | 37014.10 | - |
| 2009/10 | - | - | 36843.61 | - |
| 2010/11 | - | - | 40132.74 | - |
| Mean | - | | | |
| S.D. | - | | | |
| C.V. | - | | | |

Source: Annual report & website of concerned bank**.**

**Table No. 4.2**

**Long Term Debt to Total Debt of NIBL**

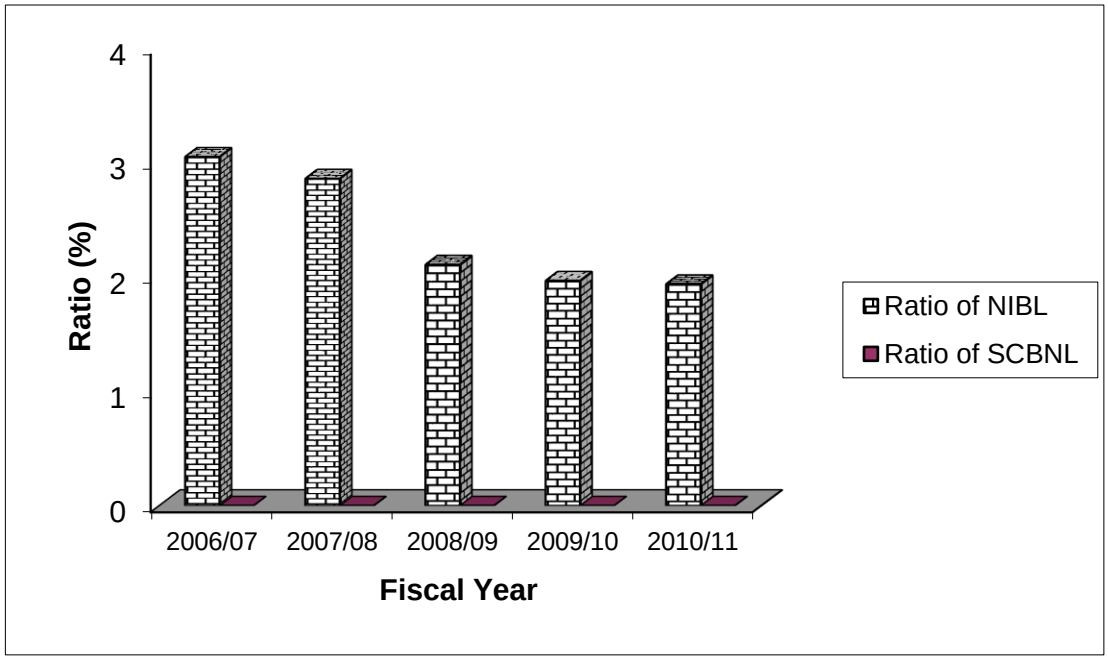
(In Millions)

| Fiscal Year | Ratio (%) | LTD | Total Debt | Change % |
|---|---|---|---|---|
| 2006/07 | 3.05 | 800.00 | 26195.39 | - |
| 2007/08 | 2.86 | 1050.00 | 36719.17 | 0.19 |
| 2008/09 | 2.11 | 1050.00 | 49688.91 | 0.75 |
| 2009/10 | 1.97 | 1050.00 | 53350.15 | 0.14 |
| 2010/11 | 1.94 | 1050.00 | 53989.24 | 0.03 |
| Mean | 2.38 | | | |
| S.D. | 0.47 | | | |
| C.V. | 19.75 | | | |

Source: Annual report and website of concerned bank.

**Figure No. 4.1**

**Long Term Debt to Total Debt Ratio of SCBNL & NIBL**




The above calculation show that the ratio of long term debt to total debt of SCBNL and NIBL respectively. Long term debt to total debt ratio of SCBNL constituted nil in whole five years study period i.e. fiscal year 2006/07 to 2010/11. This means that SCBNL has does not use long term debt in these fiscal years whole portion of debt is contributed by the current liabilities. The SCBNL has does not use long term debt so average mean, S.D, and C.V. of bank is nil. This means that the bank has no risk on the basis of S.D. and C.V.

In case of NIBL, in fiscal year 2006/07 the long term debt to total debt ratio is 3.05%. This means contribution of long term debt to total debt is 3.05% by the current liabilities. This ratio of NIBL is in decreasing order. This ratio of NIBL in Fiscal year 2007/08 is 2.86% which is decreased than previous year and then decreased to 2.11% in Fiscal year 2008/09. In fiscal year 2009/10 the long term debt to total debt ratio is 1.97% which is decreasing than previous year and in fiscal

year 2010/11 this ratio is also decreased in 1.94%. The NIBL has 2.38% of average long term debt to total debt ratio. The NIBL has S.D, and C.V. are 0.47 and 19.75 respectively. The NIBL has highest S.D. and C.V. than SCBNL.

### 4.2.2 Long Term Debt to Capital Employed Ratio:

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

$$\text{Long term debt to capital employed ratio} = \frac{\text{Long term debt}}{\text{Capital employed}}$$

**Table No. 4.3**

**Long Term Debt to Capital Employed Ratio of SCBNL**

( in Millions)

| Fiscal Year | Ratio % | LTD | Capital Employed | % Change |
|---|---|---|---|---|
| 2006/07 | - | - | 2116.35 | - |
| 2007/08 | - | - | 2492.55 | - |
| 2008/09 | - | - | 3052.47 | - |
| 2009/10 | - | - | 3369.71 | - |
| 2010/11 | - | - | 3677.78 | - |
| Mean | - | | | |
| S.D. | - | | | |
| C.V. | - | | | |

Source: Annual report & website of concerned bank.

**Table No.4.4**

**Long Term Debt to Capital Employed Ratio of NIBL**

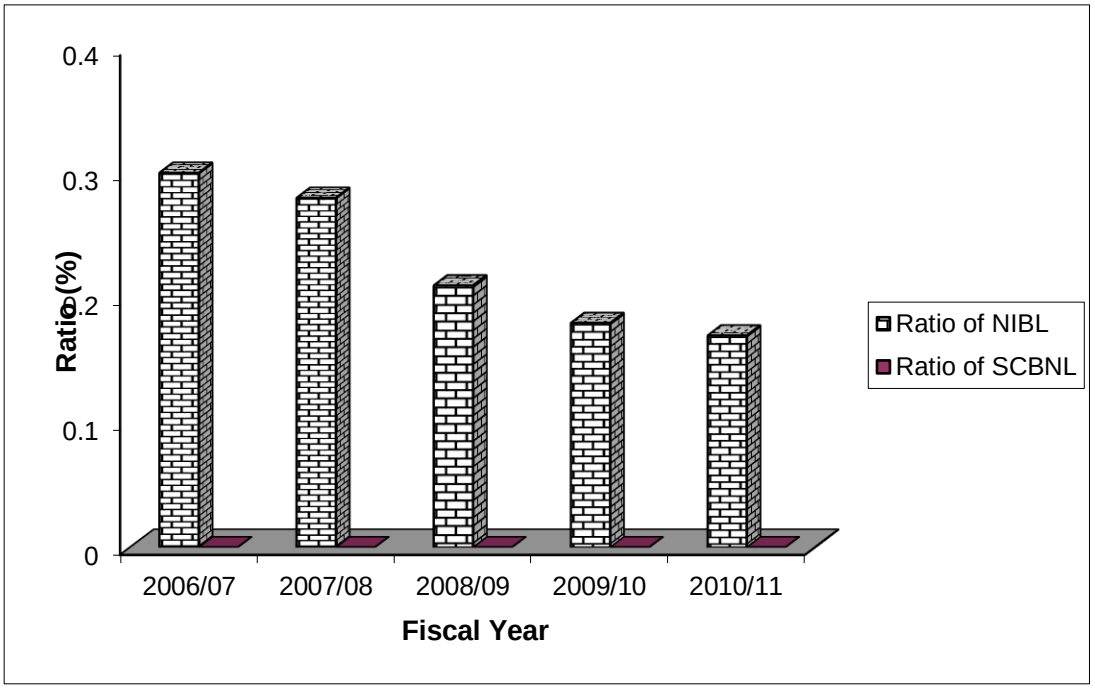
(In Millions)

| Fiscal year | Ratio % | LTD | Capital Employed | Change % |
|---|---|---|---|---|
| 2006/07 | 0.30 | 800.00 | 2678.12 | - |
| 2007/08 | 0.28 | 1050.00 | 3736.78 | 0.02 |
| 2008/09 | 0.21 | 1050.00 | 4957.84 | 0.07 |
| 2009/10 | 0.18 | 1050.00 | 5635.39 | 0.03 |
| 2010/11 | 0.17 | 1050.00 | 6209.76 | 0.01 |
| Mean | 0.23 | | | |
| S.D. | 5.91 | | | |
| C.V. | 25.7 | | | |

Source: annual report & website of concerned bank.

**Figure No 4.2**

**Long Term Debt to Capital Employed Ratio of SCBNL and NIBL**




The above table shows that the long term debt to Capital Employed ratio of two Joint venture banks. The long term debt to capital employed ratio of SCBNL is nil during the whole five years study period because of not using of long term debt. Average mean, S.D. and C.V. of SCBNL is also nil because of not using Long term debt.

Similarly, the long term debt to capital employed ratio of NIBL is in decreasing trend. In fiscal year 2006/07 the long term debt to capital employed ratio of NIBL is 0.30%. In fiscal year 2007/08, 2008/09, 2009/10 and 2010/11is 0.28, 0.21, 0.18, and 0.17 percent respectively. The average ratio is 0.23. The NIBL has S.D. and C.V.is 5.91 and 25.7 respectively.

### 4.2.3 Debt to Total Asset Ratio:

Total debt to total assets ratio express the relationship between creditors fund and total assets. It is also the leverage ratio. Which is generally called the debt ratio. This type of capital structure ratio is variant of debt equity ratio. Calculating debt to total assets is one calculation approach of the debt to capital ratio. The total debt includes long term debt and current liabilities. The total assets consist of permanent assets and other assets. It measures the percentage of total funds provided by creditors.

This ratio can be calculated by simple dividing total debt by the total assets of the firm.

$$\text{Debt to total assets ratio} = \frac{\text{Total debt}}{\text{Total assets}} \times 100$$

The lower total debt to total assets ratio indicates that the creditors claim in the total assets of the company is lower than the owner's claim and vice versa.

**Table No 4.5**
**Total Debt to Total Assets Ratio of SCBNL**

(In Millions)

| Fiscal Year | Ratio % | Total Debt | Total Assets | Change % |
|---|---|---|---|---|
| 2006/07 | 92.60 | 26480.33 | 28596.69 | - |
| 2007/08 | 92.52 | 30843.24 | 33335.79 | 0.08 |
| 2008/09 | 92.38 | 37014.10 | 40066.57 | 0.14 |
| 2009/10 | 91.62 | 36843.61 | 40213.32 | 0.76 |
| 2010/11 | 91.60 | 40132.74 | 43810.52 | 0.02 |
| Mean | 92.14 | | | |
| S.D. | 61.31 | | | |
| C.V. | 66.55 | | | |

Source: Annual report & website of concerned banks.

**Table No 4.6**

**Total Debt to Total Assets Ratio of NIBL**

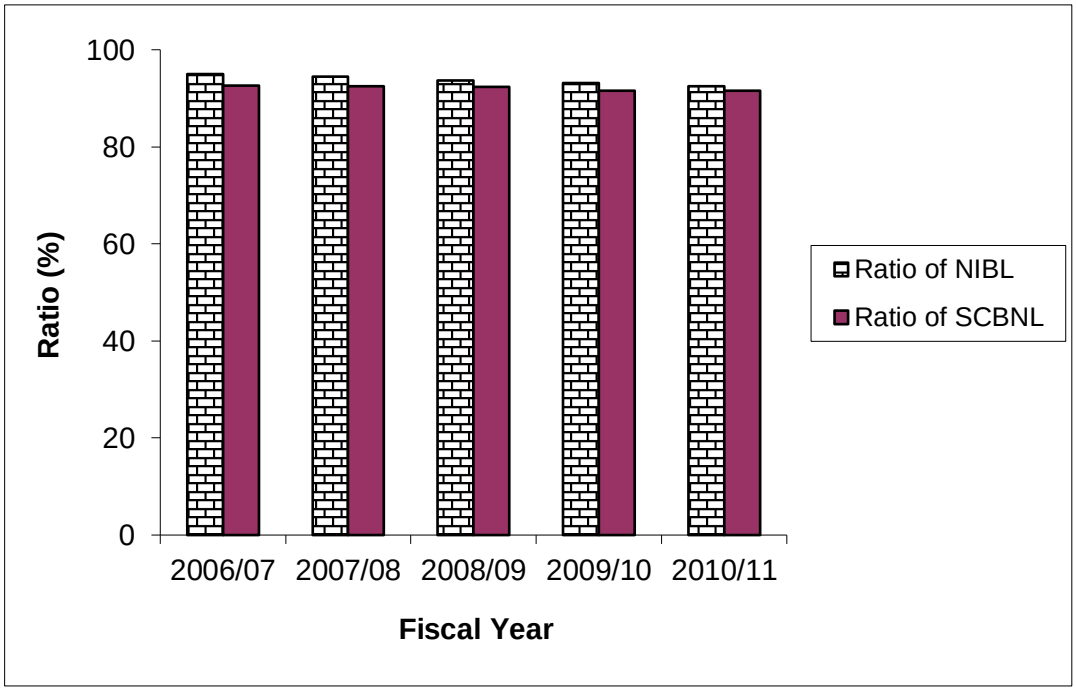
(In Millions)

| Fiscal Year | Ratio % | Total debt | Total Asset | Change % |
|---|---|---|---|---|
| 2006/07 | 94.94 | 16195.39 | 27590.84 | - |
| 2007/08 | 94.46 | 36719.17 | 38873.30 | 0.48 |
| 2008/09 | 93.73 | 49688.91 | 53010.80 | 0.73 |
| 2009/10 | 93.10 | 53350.15 | 57305.41 | 0.63 |
| 2010/11 | 92.51 | 53989.24 | 58356.82 | 0.59 |
| Mean | 93.75 | | | |
| S.D. | 88.10 | | | |
| C.V. | 93.97 | | | |

Source: Annual reports and website of concerned bank.

**Figure No 4.3**

**Total Debt to Total Asset Ratio of SCBNL and NIBL**



The computation from table no 4.5 and 4.6 of debt ratio in terms of total debt to total asset reveals that the joint venture banks are highly leveraged on five years' time horizon. It means the assets of selected bank have been financed more funds collected from creditors.

SCBNL has the lower average ratio of 92.14 percentages in comparison to NIBL. In other words, creditor's finance is 92.14 percent of total bank's fund and remaining 7.86 percent is shareholder's claim. The ratio of SCBNL has slowly in decreasing trend over the study period. It has 92.60 percent in 2006/07, which decreased in 2007/08 to 92.52 percent. Similarly, it decreased to 92.38 percent in 2008/09. Again it decreased 91.62 in 2009/10, and 91.60 percent in 2010/11.

NIBL has the average ratio of 93.75 percent. NIBL's total debt to total assets ratio has decreasing trend over the study period. It has 94.94 percent in 2006/07, which decreased in 94.46 percent, 93.73 percent, 93.10 percent, and 92.51 percent in fiscal year 2007/08, 2008/09, 2009/10 and 2010/11 respectively.

NIBL has the highest standard deviation i.e. 0.88 and SCBNL has the lowest standard deviation 0.61.These two banks found using higher debt capital to finance their assets. The highest C.V. is 0.93 for NIBL and the lowest c.v.is 0.66 for SCBNL.

### 4.2.4 Debt to Equity Ratio:

The debt equity ratio measures the long term components of capital structure. Long term debt and shareholder's equity are used in financing assets of the companies. So, it reflects the relative claims of creditors and shareholders against the assets of the firm. Debt to equity ratio indicates the relative proportions of debt and equity. The relationship between

outsiders claim and owner's capital can be shown by debt equity ratio. It is calculated as:

$$\text{Debt to equity ratio} = \frac{\text{Total debt}}{\text{Shareholder's equity}} \times 100$$

This ratio is also known as debt to Net worth ratio. A high debt equity ratio indicates that the claims of the creditors are greater than that of the shareholders or owners of the company. Debt equity ratios of concerned are shown in the following table.

**Table No: 4.7**

**Debt to Equity Ratio of SCBNL**

(In Millions)

| Fiscal year | Ratio % | Total Debt | SHE | Change % |
|---|---|---|---|---|
| 2006/07 | 12.51 | 26480.33 | 2116.35 | - |
| 2007/08 | 12.37 | 30843.24 | 2492.55 | 0.14 |
| 2008/09 | 12.12 | 37014.10 | 3052.47 | 0.25 |
| 2009/10 | 10.93 | 36843.61 | 3369.71 | 1.19 |
| 2010/11 | 10.91 | 40132.74 | 3677.78 | 0.02 |
| Mean | 11.77 | | | |
| S.D. | 0.70 | | | |
| C.V. | 0.06 | | | |

Source: Annual report & website of Concerned bank.

**Table No: 4.8**
**Debt to Equity Ratio of NIBL**

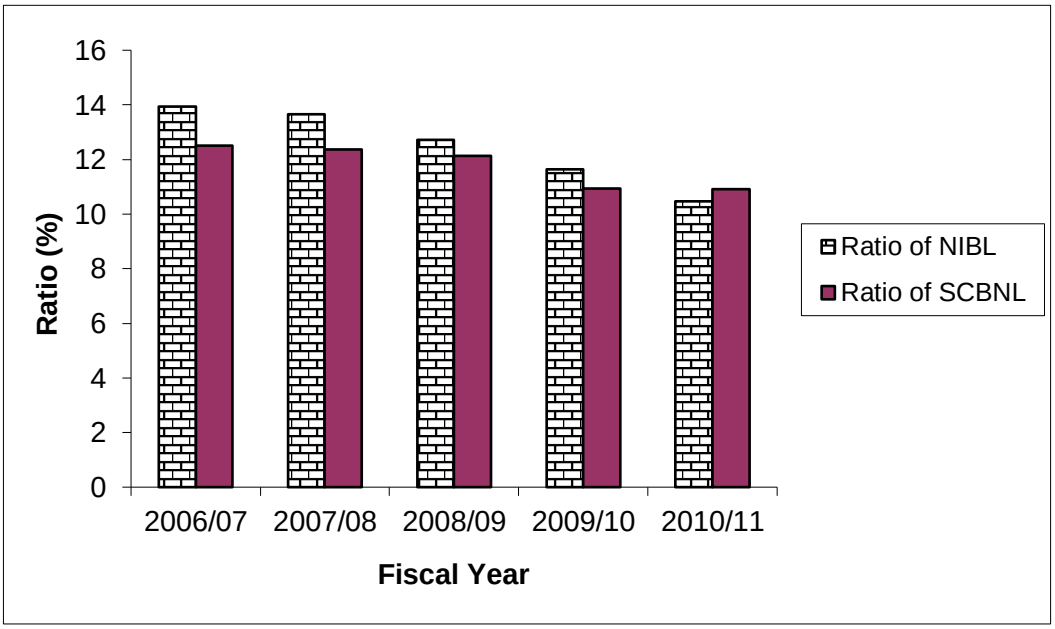
(In Millions)

| Fiscal year | Ratio % | Total debt | SHE | Change % |
|---|---|---|---|---|
| 2006/07 | 13.94 | 26495.39 | 1878.12 | - |
| 2007/08 | 13.66 | 36719.17 | 2686.78 | 0.28 |
| 2008/09 | 12.71 | 49688.91 | 3907.84 | 0.95 |
| 2009/10 | 11.63 | 53350.15 | 4585.39 | 1.08 |
| 2010/11 | 10.46 | 53989.24 | 5159.76 | 1.17 |
| Mean | 12.48 | | | |
| S.D. | 1.29 | | | |
| C.V. | 0.10 | | | |

Source: Annual reports and website of concerned bank.

**Figure No: 4.4**

**Debt to Equity Ratio of SCBNL and NIBL**




SCBNL has D/E ratio of 11.77 times on an average. It means debt capital financing is more than almost 12 times higher than shareholder's equity with the bank. The bank has 12.51 times D/E ratio in 2006/07,

which is decreasing to 12.37 times, 12.12 times, 10.93 times, and 10.91 times in fiscal year 2007/08, 2008/09, 2009/10, and 2010/11 respectively.

NIBL has D/E ratio of 12.48 times on an average. The bank's D/E ratio has in decreasing trend. The bank has 13.94 times D/E ratio in the fiscal year 2006/07, which decreased down to 13.66 times in 2007/08. The ratio lowered down to 12.71 times in the fiscal year 2008/09, 11.63 times in the fiscal year 2009/10,and 10.46 times in the fiscal year 2010/11.

It means both joint venture banks SCBNL and NIBL has decreasing trend of D/E ratio. The S.D. of SCBNL has 0.70 and NIBL has 1.29. the C.V. concerned with long term loan. Interest is fixed charges of the companies of SCBNL is 0.06 and C.V. of NIBL is 0.10.

### 4.2.5 Interest Coverage Ratio:

It is also known interest earn ratio. The interest coverage ratio is useful tools to measures long term debt serving capacity of the firm and it is concern with long term loan. Interest is fixed charges of the companies, which is charge in long term and short term loan. It shows how many times the interest charges are covered by EBIT out of which they will be paid. This ratio examines the interest paying capacity of the firm by how many times the interest charge is covered by EBIT. It is determined by using following formula:

$$\text{Interest Coverage ratio} = \frac{\text{Earning Before Interest and Tax}}{\text{Interest}}$$

Hence, higher interest coverage ratio indicates the company's strong capacity to meet interest obligations. A firm always prefers interest coverage ratio because low interest coverage ratio is a danger signal.

Lower interest coverage ratio means the firm is using excessive debt and does not have an ability to offer assured payment of interest to the creditors.

**Table No 4.9**
**Interest Coverage Ratio of SCBNL**

(In Millions)

| Fiscal Year | Ratio(Times) | EBIT | Interest | Change % |
|---|---|---|---|---|
| 2006/07 | 2.6 | 1092.97 | 413.05 | - |
| 2007/08 | 2.6 | 1248.43 | 471.73 | 0 |
| 2008/09 | 2.7 | 1506.11 | 543.78 | -0.1 |
| 2009/10 | 2.8 | 1612.46 | 575.74 | -0.1 |
| 2010/11 | 1.7 | 1707.31 | 1003.1 | 1.1 |
| Mean | 2.48 | | | |
| S.D. | 0.39 | | | |
| C.V. | 15.72 | | | |

Source: Annual report & website of concerned bank.

**Table No 4.10**
**Interest Coverage Ratio of NIBL**

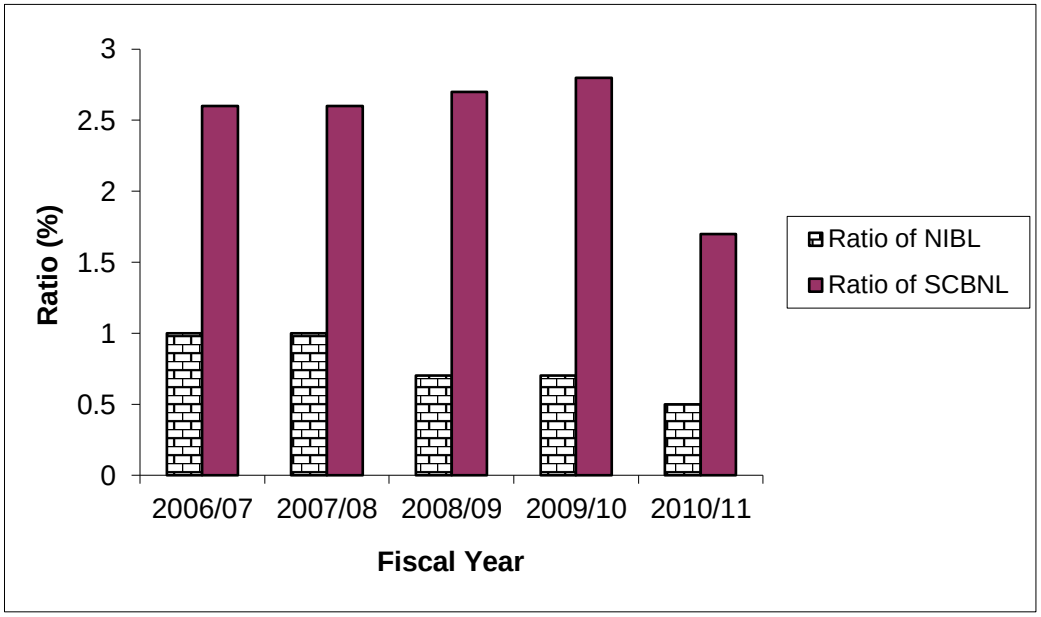
(In Millions)

| Fiscal Year | Ratio (Times) | EBIT | Interest | Change % |
|---|---|---|---|---|
| 2006/07 | 1.0 | 727.51 | 685.53 | - |
| 2007/08 | 1.0 | 1013.33 | 992.15 | 0 |
| 2008/09 | 0.7 | 1310.85 | 1686.97 | 0.3 |
| 2009/10 | 0.7 | 1928.42 | 2553.84 | 0 |
| 2010/11 | 0.5 | 1783.66 | 3620.33 | 0.2 |
| Mean | 0.78 | | | |
| S.D. | 0.03 | | | |
| C.V. | 4.82 | | | |

Source: Annual report and website of concerned bank.

**Figure No: 4.5**

**Interest Coverage Ratio of SCBNL and NIBL**




The above table 4.9 and 4.10 has been constructed to show the effect of interest coverage ratio of two banks over five year's study period. SCBNL has higher average ICR and NIBL has lower ICR. The average ratio of SCBNL is 2.48, which implies the number of times the interest covered by its EBIT. The interest coverage ratio of SCBNL shows in fluctuating trend. Similarly, in the case of NIBL, the average ratio is 0.78 times in the fiscal year 2006/07, the interest coverage ratio is 1.00 times which is same in fiscal year 2007/08 also. The interest coverage ratio of NIBL is 0.7, 0.7, and 0.5 times in the fiscal year 2008/09, 2009/10, and 2010/11 respectively. The computed interest coverage ratio of both banks in above table shows how many times the interest coverage are covered by funds that the ordinarily available to pay interest charges. Though the coverage ratio of banks is positive, NIBL should make effort to improve the prevailing situation by improving its operating efficiently and to reduce amount of debt capital through refunding debt simultaneously.

### 4.2.6 Return on Total Assets Ratio:

Return on total assets ratio measures the profitability of bank that explains a firm to earn satisfactory return on all financial resources invested in the bank's assets. The ratio explains net income for each unit of assets.

Higher ratio indicates efficiency in utilizing its overall resources and vice versa. From the point of view of judging operational efficiency, rate of return on total assets is more useful measure.

The return on total assets ratio is calculating using the following formula below:

$$\text{Return on total assets} = \frac{\text{Net Profit after Tax}}{\text{Total assets}}$$

**Table No: 4.11**

**Return on Total Assets Ratio of SCBNL**

( In Millions)

| Fiscal Year | Ratio % | Net profit | Total Assets | Change % |
|---|---|---|---|---|
| 2006/07 | 2.42 | 691.67 | 28596.69 | - |
| 2007/08 | 2.45 | 818.92 | 33335.79 | -0.03 |
| 2008/09 | 2.55 | 1025.11 | 40066.57 | -0.1 |
| 2009/10 | 2.70 | 1085.87 | 40213.32 | -0.15 |
| 2010/11 | 2.55 | 1119.17 | 43810.52 | 0.15 |
| Mean | 2.53 | | | |
| S.D. | 0.098 | | | |
| C.V. | 0.038 | | | |

Source: Annual report and website of concerned bank.

**Table No: 4.12**

**Return on Total Assets Ratio of NIBL**

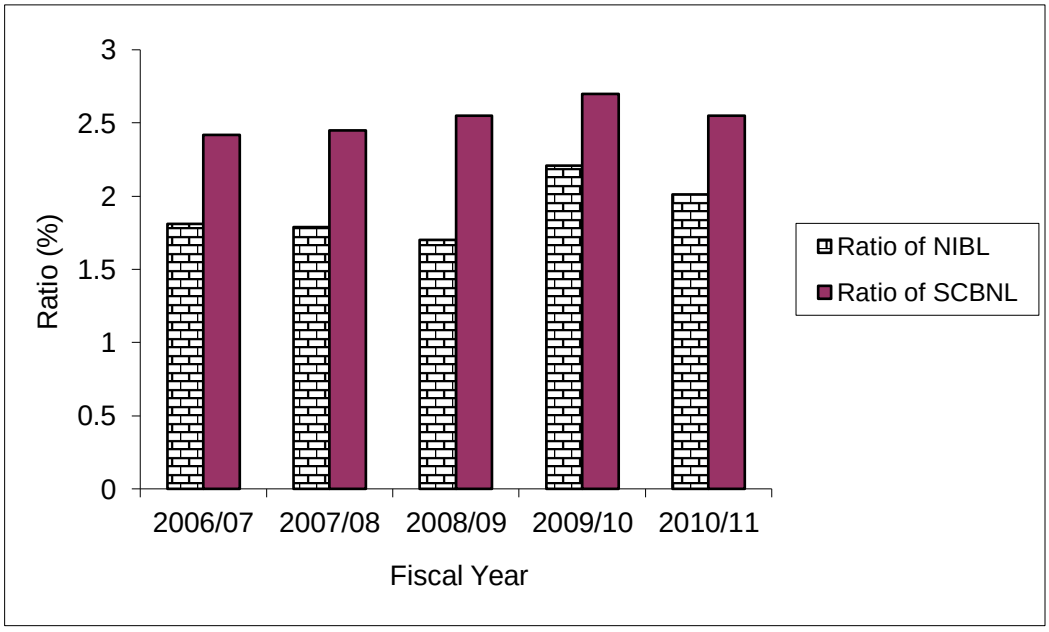
(In Millions)

| Fiscal Year | Ratio % | Net Profit | Total assets | Change % |
|---|---|---|---|---|
| 2006/07 | 1.81 | 501.39 | 27590.84 | - |
| 2007/08 | 1.79 | 696.73 | 38873.30 | 0.02 |
| 2008/09 | 1.70 | 900.62 | 53010.80 | 0.09 |
| 2009/10 | 2.21 | 1265.95 | 57305.41 | -0.51 |
| 2010/11 | 2.01 | 1176.64 | 58356.82 | 0.2 |
| Mean | 1.90 | | | |
| S.D. | 0.18 | | | |
| C.V. | 0.09 | | | |

Source: Annual report & website of concerned bank.

**Figure No: 4.6**

**Return on Total Assets Ratio of SCBNL and NIBL**




The above table No 4.11 and 4.12 shows the comparative position of return on total assets of the two joint venture commercial bank. From

the table No 4.11, the return on total assets of SCBNL in Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11 are 2.42, 2.45, 2.55, 2.70, and 2.55 respectively. The average ratio of SCBNL is 2.53.

Similarly, from the table No 4.12 the return on total assets of NIBL in fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11 are 1.81, 1.79, 1.70, 2.21, and 2.01 respectively. The average return on total assets of NIBL is 1.90 the S.D. of SCBNL is 0.098 and NIBL is 0.18.The highest C.V. is 0.09 for NIBL and lowest S.D.is 0.038 for SCBNL.

### 4.2.7 Return on Shareholder's Equity Ratio:

Shareholders are the owners of the company. To measure the return of shareholders, we use return on shareholder's equity. This ratio analyzes whether the company has been able to provide higher return on investment to the owners or not.

If the company's earning is good, shareholders earning is greater than outside investors because they are ultimate owners and they are bearing high risk as well. But outside investor get return before the owner that is fixed. Shareholder gets the return after paying the fixed interest charge to the creditors and tax to the government. Earnings after tax (EAT) are the profit of the shareholders. Therefore, this ratio is calculated on the basis of equity. This ratio is calculated as:

$$\text{Return's on shareholders equity} = \frac{\textbf{Net profit after Tax}}{\textbf{shareholder's equity}}$$

Higher the ratio represents the higher profitability of the firm and vice versa. So obviously a company's owners prefer higher return on shareholder's equity.

**Table No: 4.13**

**Return on Shareholder's Equity Ratio of SCBNL**

(In Millions)

| Fiscal Year | Ratio % | Net profit | SHE | Change % |
|---|---|---|---|---|
| 2006/07 | 32.68 | 691.67 | 2116.35 | - |
| 2007/08 | 32.85 | 818.92 | 2492.55 | -0.17 |
| 2008/09 | 33.58 | 1025.11 | 3052.47 | -0.73 |
| 2009/10 | 32.22 | 1085.87 | 3369.71 | 1.36 |
| 2010/11 | 30.43 | 1119.17 | 3677.78 | 1.79 |
| Mean | 32.32 | | | |
| S.D. | 0.90 | | | |
| C.V. | 0.02 | | | |

Sources: Annual report & website of concerned bank.

**Table No: 4.14**

**Return on Shareholder's Equity Ratio of NIBL**

(In Millions)

| Fiscal Year | Ratio % | Net Profit | SHE | Change % |
|---|---|---|---|---|
| 2006/07 | 26.69 | 501.39 | 1878.12 | - |
| 2007/08 | 25.93 | 696.73 | 2686.78 | 0.76 |
| 2008/09 | 23.04 | 900.62 | 3907.84 | 2.89 |
| 2009/10 | 27.60 | 1265.95 | 4585.39 | -4.56 |
| 2010/11 | 22.80 | 1176.64 | 5159.76 | 4.8 |
| Mean | 25.21 | | | |
| S.D. | 1.94 | | | |
| C.V. | 0.07 | | | |

Source: Annual report & website of concerned bank.

**Figure No: 4.7**

**Return on Shareholder's Equity Ratio of SCBNL & NIBL**

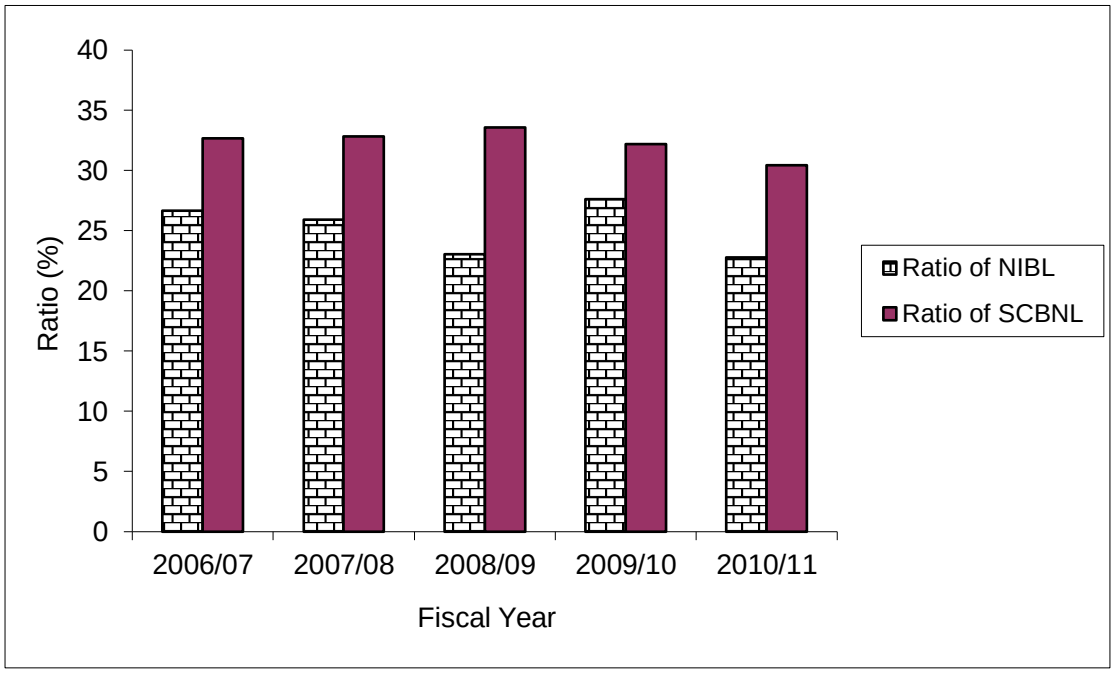



Table 4.13 and 4.14 shows the analysis of return on shareholder's equity of two joint venture commercial banks over five year's time horizon. SCBNL has the highest ratio of return on shareholder's equity. On an average, it has 32.35 percent, which is the higher ratio of ROE in comparison with NIBL. The ratio continuously increased in first three years i.e., 32.68%, 32.85%, and 33.58% in the fiscal year 2006/07, 2007/08, and 2008/09 respectively. But in the last two fiscal years, i.e. 2009/10, and 2010/11, the ratio is in downward trend, i.e. 32.22% and 30.43% respectively.

The ratio of NIBL has fluctuating nature. On an average, the ratio of return on equity was 25.21%. The return in shareholder's equity on fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, are 26.69, 25.93, 23.04, 27.60, and 22.80 percent respectively.

The S.D. of SCBNL and NIBL is 0.90, and 1.94 respectively. The SCBNL has lowest C.V.0.02 and NIBL has highest C.V.0.07.

SCBNL has the higher percentage of return than NIBL from the analysis; SCBNL has satisfactory ROE during the study period in comparison to NIBL bank.

### 4.2.8 Earning Per Share:

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

$$\text{Earning per share} = \frac{\textbf{Net Income}}{\textbf{No.of shares outstanding}}$$

**Table No: 4.15**

**Earning Per Share of SCBNL**

(In Millions)

| Fiscal Year | EPS | Net Income | No. of shares outstanding | Change % |
|---|---|---|---|---|
| 2006/07 | 167.37 | 691.67 | 4132548 | - |
| 2007/08 | 131.91 | 818.92 | 6207840 | 35.46 |
| 2008/09 | 109.10 | 1025.11 | 9319664 | 22.81 |
| 2009/10 | 77.64 | 1085.87 | 13984836 | 31.46 |
| 2010/11 | 69.50 | 1119.17 | 16101680 | 8.14 |
| Mean | 111.10 | | | |
| S.D. | 35.92 | | | |
| C.V. | 0.32 | | | |

Source: Annual report and website of concerned bank.

**Table No: 4.16**

**Earning Per Share of NIBL**

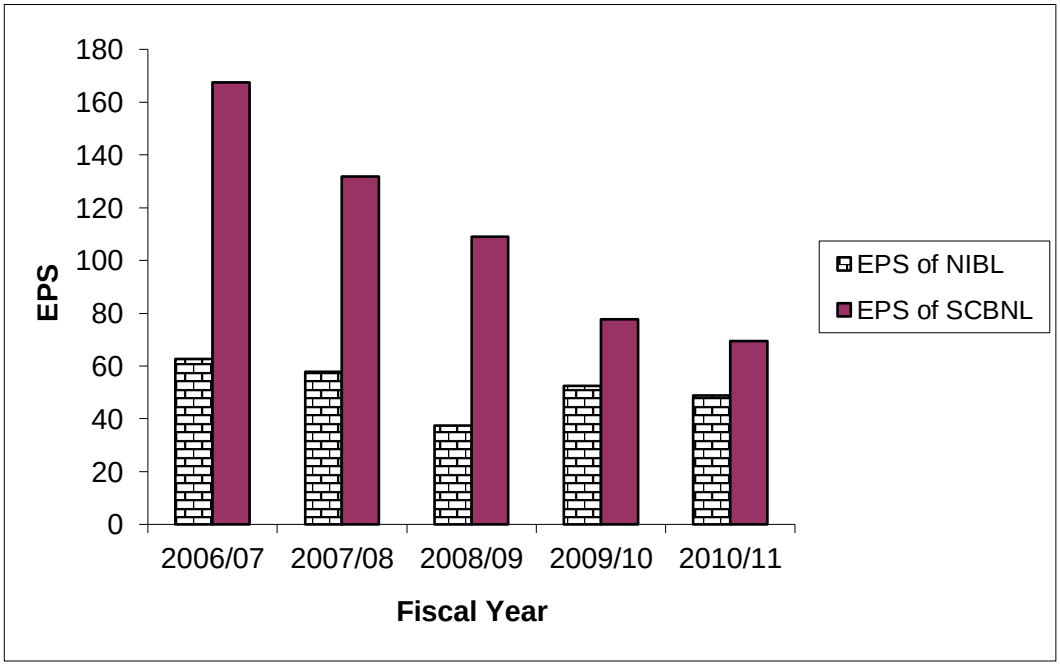
(In Millions)

| Fiscal year | EPS | Net Income | No. of shares outstanding | Change % |
|---|---|---|---|---|
| 2006/07 | 62.56 | 501.39 | 8013526 | - |
| 2007/08 | 57.87 | 696.73 | 12039154 | 4.69 |
| 2008/09 | 37.41 | 900.62 | 24070689 | 20.46 |
| 2009/10 | 52.54 | 1265.95 | 24090977 | -15.13 |
| 2010/11 | 48.84 | 1176.64 | 24090977 | 3.7 |
| Mean | 51.84 | | | |
| S.D. | 8.59 | | | |
| C.V. | 0.16 | | | |

Source: Annual report and website of concerned bank.

**Figure No: 4.8**

**Earnings Per Share of SCBNL and NIBL**



In the above Table No. 4.15 and 4.16 shows that the comparative position of EPS of different two joint venture banks.

The EPS for SCBNL is in decreasing trend over the five years study period. The highest EPS of SCBNL is RS. 167.37 In Fiscal year 2006/07. The value of EPS of SCBNL is lowered down to Rs. 131.91, Rs.109.10, Rs.77.64 and Rs.69.50 in the Fiscal year 2007/08, 2008/09, 2009/10, and 2010/11, respectively. Its average EPS is Rs 111.10.

NIBL has fluctuating EPS over its five years study period. Its EPS is Rs. 62.56 in the Fiscal year 2006/07 and Rs 57.87 is in the Fiscal year 2007/08. The EPS of NIBL is Rs.37.41, Rs.52.54, and Rs 48.84, is in the Fiscal year 2008/09, 2009/10, and 2010/11 respectively. It average EPS is Rs. 51.84.

The S.D. of SCBNL has 35.92, and NIBL has 8.59. Similarly, the C.V. of SCBNL is 0.32 and NIBL has 0.16.

### 4.2.9 Dividend Per Share:

Dividend per share is calculated to know the share of dividend that the shareholders receive in relation to the paid up value of the share. Dividend per share is the earning distributed to ordinary shareholders divided by the number of ordinary shares outstanding, i.e.

$$\text{Dividend per share} = \frac{\textbf{Total Dividend}}{\textbf{No.of ordinary shares}}$$

**Table No: 4.17**

**Dividend Per Share of SCBNL**

(In Millions)

| Fiscal year | DPS | Total Dividend | No. of shares outstanding | Change % |
|---|---|---|---|---|
| 2006/07 | 80.00 | 330.60 | 4132548 | - |
| 2007/08 | 80.00 | 496.62 | 6207840 | 0 |
| 2008/09 | 50.00 | 465.983 | 9319664 | 30 |
| 2009/10 | 55.00 | 769.166 | 13984836 | -5 |
| 2010/11 | 50.00 | 805.084 | 16101680 | 5 |
| Mean | 63 | | | |
| S.D. | 14 | | | |
| C.V. | 0.222 | | | |

Source: Annual report and website of concerned bank.

**Table No: 4.18**

**Dividend Per Share of NIBL**

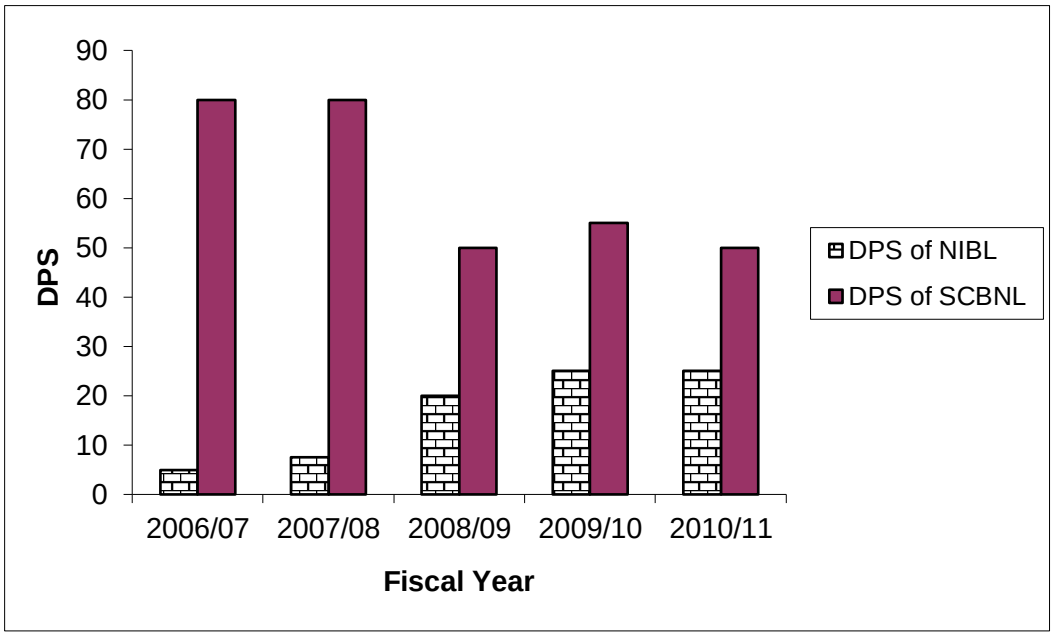
(In Millions)

| Fiscal year | DPS | Total dividend | No.of shares outstanding | Change % |
|---|---|---|---|---|
| 2006/07 | 5.00 | 40.06 | 8013526 | - |
| 2007/08 | 7.50 | 90.29 | 12039154 | -2.50 |
| 2008/09 | 20.00 | 481.41 | 24070689 | -12.50 |
| 2009/10 | 25.00 | 602.27 | 24090977 | -5 |
| 2010/11 | 25.00 | 602.27 | 24090977 | 0 |
| Mean | 16.5 | | | |
| S.D. | 8.60 | | | |
| C.V. | 0.52 | | | |

Source: Annual report and website of concerned bank.

**Figure No: 4.9**

**Dividend Per Share of SCBNL & NIBL**




The above Table No 4.17 and 4.18 shows that the comparative position of DPS of sample bank i.e. SCBNL and NIBL. In case of SCBNL, the EPS is in the fluctuating trend over the five years of study period. The average DPS of SCBNL is Rs. 63. SCBNL has distributed Rs. 80, Rs. 80, Rs. 50, Rs.55, and Rs.50, dividend per share in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, respectively. SCBNL found to be paying dividend of Rs.50, as an average.

The DPS for NIBL is in increasing trend. NIBL has distributed Rs. 5, Rs, 7.5, Rs. 2o, Rs. 25, and Rs 25, dividend per share in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, respectively. The average DPS of NIBL is Rs.16.5.

The highest S.D. is 14 for SCBNL, and 8.60 for NIBL. The highest C.V. is 0.52 for NIBL and 0.22 for SCBNL.

### 4.2.10 Price Earning Ratio:

Price earnings ratio reflects the price currently being paid by the market for for the each rupees of currently reported EPS. In other word, it measures investors expectations and the market appraisal of the performance of a firm. It is an indication of the way investors think that the banks would perform better in the future. Higher market price suggest that investor expect earnings to grow and this gives a high P/E implies that investor feel that earning are not likely to rise. Price earning ratio is calculated as below;

$$\text{P/E ratio} = \frac{\textbf{Market price of share}}{\textbf{Earning per share}}$$

**Table No: 4.19**

**Price Earning Ratio of SCBNL**

(In Millions)

| Fiscal Year | P/E Ratio | MPS (Rs) | EPS | Change % |
|---|---|---|---|---|
| 2006/07 | 35.25 | 5900 | 167.37 | - |
| 2007/08 | 51.77 | 6830 | 131.91 | -16.52 |
| 2008/09 | 55.08 | 6010 | 109.10 | -3.31 |
| 2009/10 | 42.23 | 3279 | 77.64 | 12.85 |
| 2010/11 | 25.90 | 1800 | 69.50 | 16.33 |
| Mean | 42.04 | | | |
| S.D. | 10.69 | | | |
| C.V. | 0.25 | | | |

Source: Annual report & website of concerned bank.

**Table No: 4.20**

**Price Earning Ratio of NIBL**

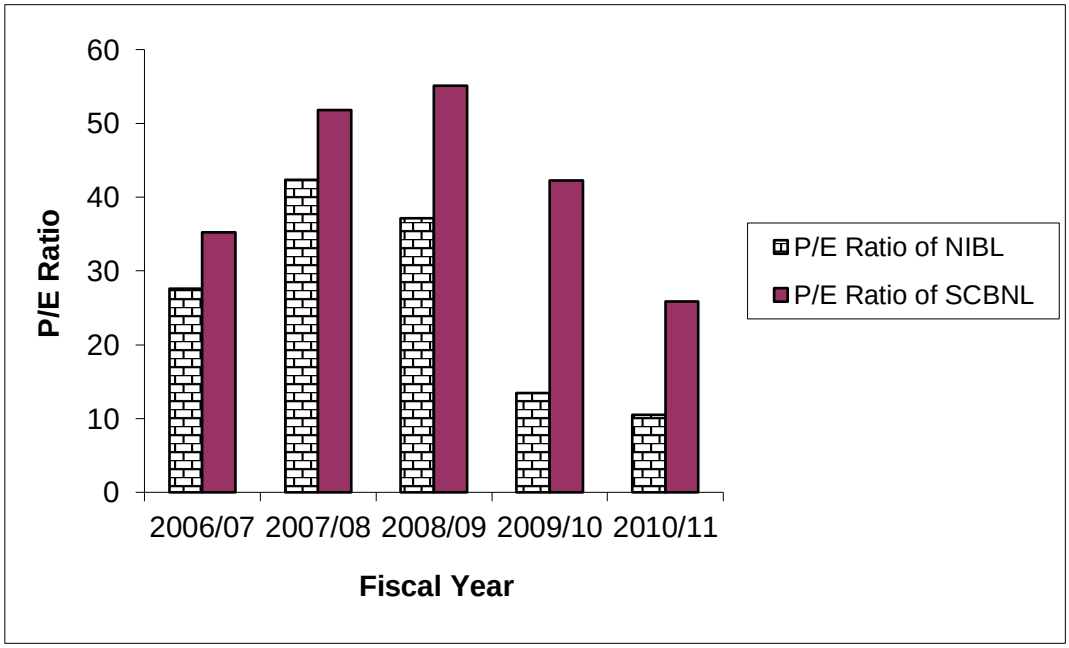
(In Millions)

| Fiscal Year | P/E Ratio | MPS (Rs.) | EPS | Change % |
|---|---|---|---|---|
| 2006/07 | 27.63 | 1729 | 62.56 | - |
| 2007/08 | 42.33 | 2450 | 57.87 | -1.47 |
| 2008/09 | 37.10 | 1388 | 37.41 | 5.23 |
| 2009/10 | 13.42 | 705 | 52.54 | 23.68 |
| 2010/11 | 10.54 | 515 | 48.84 | 2.88 |
| Mean | 26.20 | | | |
| S.D. | 12.56 | | | |
| C.V. | 0.48 | | | |

Source: Annual report and website of concerned bank.

**Figure No: 4.10**

**Price Earning Ratio of SCBNL and NIBL**



The above table No. 4.19 and 4.20 shows that the comparative position of P/E ratio of SCBNL and NIBL. In case of SCBNL, the P/E ratio is in the fluctuating trend over the five years study period. The average P/E ratio of SCBNL is 42.04 percent which is greater than NIBL. The price earnings ratio of SCBNL is 35025, 51.77, 55.08, 42.23 and 25.90 in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, respectively.

Similarly, NIBL has also fluctuating price earning ratio over the five year study period. The average price earning ratio of NIBL is 26.20 which is less than SCBNL. The P/E ratio of NIBL is 27.63, 42.33, 37.10, 13.42, and 10.54 in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, respectively.

The S.D. of SCBNL is 10.69, which is less than that of NIBL and the C.V. of SCBNL is 0.25 which is also less than that of NIBL.

The S.D. of NIBL is 12.56, which is greater than SCBNL, and the C.V. of NIBL is 0.48, which is also greater than that of SCBNL.

### 4.2.11 Dividend Payout Ratio:

The ratio represents the percentage of the profit distributed as dividend and the percentage retained as revenue and surplus for the growth of the bank. The shareholders prefer usually higher ratio whereas a very high ratio may also slow down the growth rate of the firm. It helps to segregate the proportion of dividend and retained earnings. Importance of DPS lays in its ability to state the dividend policy of the concerned banks more obviously, which influences the market value of the share.

$$\text{Dividend payout ratio} = \frac{\text{DPS}}{\text{EPS}}$$

**Table No: 4.21**

**Dividend Payout Ratio of SCBNL**

(In Millions)

| Fiscal Year | Dividend payout ratio | DPS | EPS | Change % |
|---|---|---|---|---|
| 2006/07 | 47.79 | 80.00 | 167.37 | - |
| 2007/08 | 60.64 | 80.00 | 131.91 | -12.85 |
| 2008/09 | 45.83 | 50.00 | 109.10 | 14.81 |
| 2009/10 | 70.84 | 55.00 | 77.64 | -25.01 |
| 2010/11 | 71.94 | 50.00 | 69.50 | -1.1 |
| Mean | 59.41 | | | |
| S.D. | 10.81 | | | |
| C.V. | 18.19 | | | |

Source: Annual report and website of concerned bank.

**Table No: 4.22**

**Dividend Payout Ratio of NIBL**

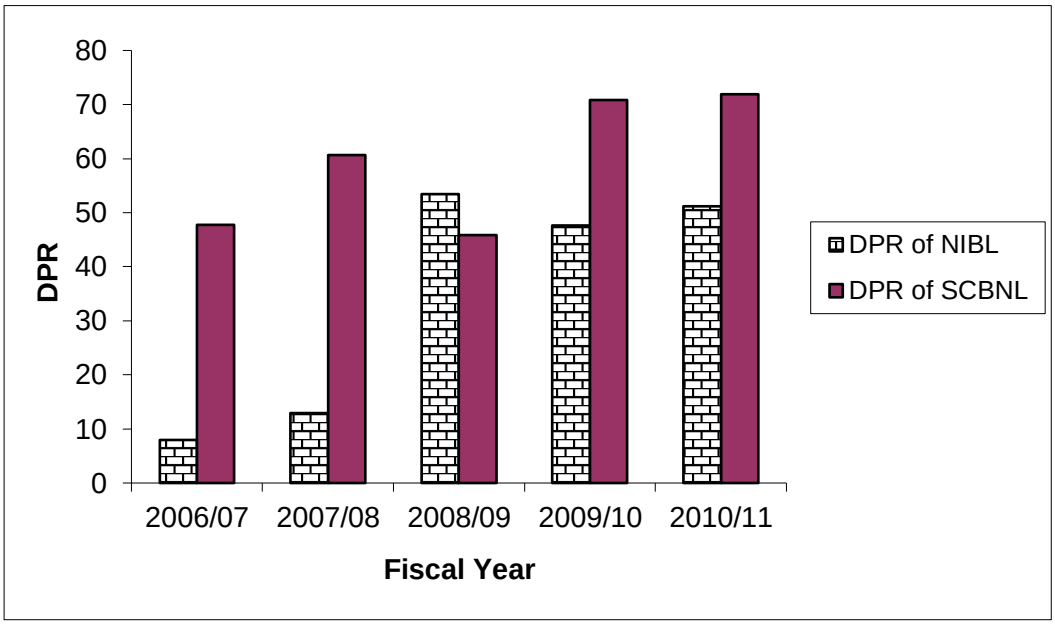
(In Millions)

| Fiscal Year | Dividend Payout Ratio | DPS | EPS | Change % |
|---|---|---|---|---|
| 2006/07 | 8.00 | 5.00 | 62.56 | - |
| 2007/08 | 12.96 | 7.50 | 57.87 | -4.96 |
| 2008/09 | 53.46 | 20.00 | 37.41 | -40.5 |
| 2009/10 | 47.58 | 25.00 | 52.54 | 5.88 |
| 2010/11 | 51.18 | 25.00 | 48.84 | -3.6 |
| Mean | 34.63 | | | |
| S.D. | 19.87 | | | |
| C.V. | 57.37 | | | |

Source: Annual report and website of concerned bank.

**Figure No: 4.11**

**Dividend Payout Ratio of SCBNL and NIBL**




SCBNL has higher dividend payout ratio in comparison to NIBL. On average, SCBNL is found paying 59.41 percent which is relatively more than NIBL, i.e. 34.63 percent. The S.D. of SCBNL is 10.81, which is less than that of NIBL, i.e. 19.87. The C.V. of SCBNL is 18.19, which is very low in the comparison of NIBL i.e. 57.37.

## 4.3 Analysis of Capital Structure:

Various approaches have been developed under the relevance of the capital structure, which helps to evaluate value of firm, such as Net Income approach (NI), Net operating income approach (NOI). Here, both NI and NOI approach are considered to analysis the capital structure of the overall capitalization.

### 4.3.1 Net Income (NI) Approach:

Net Income approach is also known as dependent hypothesis of capital structure. The essence of this approach is that the firm can reduce

its cost of capital by using debt and total valuation of the firm through the reduction in the cost of capital leading to increasing in the degree of leverage. This theory assumes that the cost of debt and cost of equity remains constant as change in the firm's capital structure. In other words the firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in the capital structure.

Overall capitalization means the cost of overall capital collected by the company from different sources. In this study, Ko is calculated as per the NI approach, which means Ko is calculating EBIT dividing by value of the firm. Such formula for calculating Ko is as follows:

$$\text{Cost of overall capitalization rate (ko)} = \frac{\text{EBIT}}{\text{Value of firm (V)}}$$

The overall capitalization rate of selected joint venture banks under NI approach is shown below:

**Table No: 4.23**

**Value of Firm of SCBNL**

(In Millions)

| Fiscal Year | No. of shares | Closing market price | Market value of equity(S) | Value of debt (B) | Value of firm (V) |
|---|---|---|---|---|---|
| 2006/07 | 4132548 | 5900 | 24382033200 | - | 24382033200 |
| 2007/08 | 6207840 | 6830 | 42399547200 | - | 42399547200 |
| 2008/09 | 9319664 | 6010 | 560111806400 | - | 560111806400 |
| 2009/10 | 13984836 | 3279 | 458562772400 | - | 458562772400 |
| 2010/11 | 16101680 | 1800 | 2898302400 | - | 2898302400 |

**Table No: 4.24**

**Value of Firm of NIBL**

(In Millions)

| Fiscal Year | No of shares | Closing market price | Market value of equity (S) | Value of debt (B) | Value of Firm (V) |
|---|---|---|---|---|---|
| 2006/07 | 8013526 | 1729 | 138553864500 | 800000000 | 1393538645000 |
| 2007/08 | 12039154 | 2450 | 29495927300 | 1050000000 | 30545927300 |
| 2008/09 | 24070689 | 1388 | 334101163300 | 1050000000 | 3351511633000 |
| 2009/10 | 24090977 | 705 | 169841387900 | 1050000000 | 1708913879000 |
| 2010/11 | 24090977 | 515 | 124068531600 | 1050000000 | 1251185316000 |

**Table No: 4.25**

**Cost of Overall Capitalization of SCBNL**

(In Millions)

| Fiscal Year | Ko | EBIT | Value of Firm (V) | Change % |
|---|---|---|---|---|
| 2006/07 | 0.04 | 1092.97 | 24382.03 | - |
| 2007/08 | 0.03 | 1248.43 | 42399.54 | 1.54 |
| 2008/09 | 0.02 | 1506.11 | 560111.80 | 0.25 |
| 2009/10 | 0.03 | 1612.46 | 458562.77 | -0.82 |
| 2010/11 | 0.59 | 1707.31 | 2898.30 | -2.38 |
| Mean | 0.71 | | | |
| S.D. | 0.61 | | | |
| C.V. | 0.86 | | | |

Source: Annual report and website of concerned bank.

**Table No: 4.26**

**Cost of Overall Capitalization Rate of NIBL**

(In Millions)

| Fiscal Year | Ko | EBIT | Value of Firm (V) | Change % |
|---|---|---|---|---|
| 2006/07 | 0.05 | 727.51 | 1393538.64 | - |
| 2007/08 | 0.03 | 1013.33 | 30545.92 | 0.02 |
| 2008/09 | 0.03 | 1310.85 | 3351511.63 | 0 |
| 2009/10 | 0.11 | 1928.42 | 170891.38 | -0.08 |
| 2010/11 | 0.14 | 1783.66 | 1251185.31 | -0.03 |
| Mean | 0.36 | | | |
| S.D. | 0.29 | | | |
| C.V. | 0.80 | | | |

Source: Annual report and website of concerned bank.

Above table computed overall capitalization rate of SCBNL shows that the costs are 0.04, 0.03, 0.02, 0.03, and 0.59, in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, respectively. SCBNL has 0.71 on an average of overall capitalization rate. The overall capitalization rates trend was fluctuating trend over the five year period.

In the case of NIBL, the costs are 0.05, 0.03, 0.03, 0.11, and 0.14 in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11 respectively. NIBL gas 0.36 on an average of overall capitalization rate. The overall capitalization rates trend was fluctuating trend over the five years study period.

The S.D. of two banks is 0.61 and 0.29 respectively. The highest C.V. 0.86 for SCBNL and the lowest C.V. is 0.80 for NIBL.

### 4.3.2 Net Operating Income (NOI) Approach:

The Net operating Income approach focus on the equity capitalization rate and appears as irrelevancy theory of capital structure, as already explained in detail in chapter II, implies that the market value of the firm is not affected by the capital structure changes. According to this approach, overall capitalization rate, Ko as well as the debt capitalization rate, Ke are independent of degree of leverage. However, the equity capitalization rate, Ke, increase linearly with financial leverage. The formula for calculating Ke is as follows:

Cost of equity (Ke) =

$$\frac{\textbf{Earning available to common stock holders (NI)}}{\textbf{Market Value of stock(S)}}$$

**Table No: 4.27**

**Cost of Equity of SCBNL**

(In Millions)

| Fiscal Year | Ke | Net Income | Market value of equity | Change % |
|---|---|---|---|---|
| 2006/07 | 2.83 | 691.67 | 24382.03 | - |
| 2007/08 | 1.93 | 818.92 | 42399.54 | 0.9 |
| 2008/09 | 1.83 | 1025.11 | 560111.80 | 0.10 |
| 2009/10 | 2.36 | 1085.87 | 458562.77 | -0.53 |
| 2010/11 | 3.86 | 1119.17 | 2898.30 | -1.5 |
| Mean | 2.56 | | | |
| S.D. | 73.93 | | | |
| C.V. | 28.86 | | | |

Source: Annual report & website of concerned bank.

**Table No: 4.28**
**Cost of Equity of NIBL**

(In Millions)

| Fiscal Year | Ke | Net Income | Market Value of Equity(S) | Change % |
|---|---|---|---|---|
| 2006/07 | 3.61 | 501.39 | 138553.86 | - |
| 2007/08 | 2.36 | 696.73 | 29495.92 | 1.25 |
| 2008/09 | 2.69 | 900.62 | 334101.16 | -0.33 |
| 2009/10 | 7.45 | 1265.95 | 169841.38 | -4.76 |
| 2010/11 | 9.48 | 1176.64 | 124068.53 | -2.03 |
| Mean | 5.12 | | | |
| S.D. | 2.83 | | | |
| C.V. | 55.27 | | | |

Source: Annual report and website of concerned bank.

SCBNL has Fluctuating trend of equity capitalization rate over the five years study period, having average rate of 2.56%. The equity capitalization rate SCBNL is 2.83%, 1.93%, 1.83%, 2.36%, and 3.86%, in the Fiscal year 2006/07, 2007/08, 2008/09, 2009/10, and 2010/11, respectively.

Similarly, NIBL has also Fluctuating trend of equity capitalization rate over the five years study period, having average rate of 5.12%. The equity capitalization rate of NIBL is 3.61%, 2.36%, 2.69%, 7.45%, and 9.48%, respectively in the Fiscal year 2006/07, 2007/08' 2008/09, 2009/10, and 2010/11 respectively.

## 4.4 Leverage Analysis

Leverage and capital structure are closely related concepts linked to cost of capital and capital structure budgeting decision. Leverage results from the use of fixed cost or trends to magnify return to the firm's owners changes in leverage results changes in level of return and

associated risk. Generally, increase in leverage result in increase in return and risk where as decrease in leverage result in decrease return and risk. The amount of leverage in the firm's capital structure or the mix of long term debt and equity maintained by the firm can significantly affects its value by affecting return and risk. Because of its value the financial manager must understand how to measure and evaluate leverage when attempting to create the best capital structure.

Generally, leverage refers to the use of special force of power to have more than normal results from a particular action. Similarly, in financial term it is used to describe about utilization of funds for which the firm has to pay fixed cost and to have more return than normal having more risk as well. Leverage may be used to owner's returns but it is used at the risk of increasing losses if the firm's economic fortune declines. Thus gain and losses are magnified by leverage and the higher the leverage employed by the firm, the greater will be the volatility of its return. There are three types of leverage – Operating leverage, financial leverage and combined leverage. Operating leverage is the function of fixed cost, contribution margin and sales volume.

Financial leverage is the relation between EBIT and EBT and combined leverage is the combine of operating and financial leverage.

Financial leverage is related to the capital structure of the firm, so financial leverage is relevant issue of this study, which is explained in this section.

### 4.4.1 Analysis of Financial Leverage:

When the company employs debt or other fund carrying fixed charges i.e., interest in the capital structure, financial leverage exists. If the financial leverage is high the company can have advantage of tax

shield but it will affect to owners return i.e., net profit as well. Financial leverage explains the relationship between earnings before interest and taxes and net profit of the company.

The degree of financial leverage as part of leverage analysis also reflects the leverage of the firm as similar as above ratios. The degree of financial leverage analyzes the burden of interest expenses and financial risk of the company. The degree of financial leverage is defined as the percentage change EPS due to a given percentage change in EBIT or this is a relationship between EBIT and EBT. In this study the following relationship will be used. It is expressed as:

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

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

The higher ratio of DFL indicates the higher financial risk as well as higher fixed charges of the company and vice versa.

**Table No: 4.29**
**Degree of Financial Leverage of SCBNL**

(In Millions)

| Fiscal Year | DFL | EBIT | EBT | Change % |
|---|---|---|---|---|
| 2006/07 | 1.07 | 1092.97 | 1016.09 | - |
| 2007/08 | 1.04 | 1248.43 | 1193.37 | 0.03 |
| 2008/09 | 1.02 | 1506.11 | 1467.20 | 0.02 |
| 2009/10 | 1.05 | 1612.46 | 1536.36 | -0.03 |
| 2010/11 | 1.07 | 1707.31 | 1598.32 | -0.02 |
| Mean | 1.05 | | | |
| S.D. | 0.02 | | | |
| C.V. | 0.02 | | | |

Source: Annual report and website of concerned bank.

**Table No: 4.30**

**Degree of Financial Leverage of NIBL**

(In Millions)

| Fiscal Year | DFL | EBIT | EBT | Change % |
|---|---|---|---|---|
| 2006/07 | 0.85 | 727.51 | 853.09 | - |
| 2007/08 | 0.87 | 1013.33 | 1155.95 | -0.02 |
| 2008/09 | 0.89 | 1310.85 | 1464.80 | -0.02 |
| 2009/10 | 1.01 | 1928.42 | 1901.26 | -0.12 |
| 2010/11 | 0.91 | 1783.66 | 1945.36 | 0.1 |
| Mean | 0.90 | | | |
| S.D. | 0.05 | | | |
| C.V. | 0.05 | | | |

Source: Annual report and website of concerned bank.

In the above table, it shows the comparative degree of financial leverage of two sample banks i.e. SCBNL and NIBL. The trend of SCBNL is in Fluctuating trend. The DFL of SCBNL is 1.07 times in the Fiscal year 2006/07. The DFL of SCBNL is 1.04, and 1.02, in the Fiscal year 2007/08, and 2008/09, respectively which is in decreasing trend. In the fiscal year 2009/10, and 2010/11, the DFL of SCBNL is 1.05, and 1.07 times respectively, which is in increasing trend. The average DFL of SCBNL is 1.05 times.

Similarly, the DFL of NIBL is 0.85 times, 0.87 times, 0.89 times, 1.01 times, and 0.91 times in the fiscal year 2006/07, 2007/08, 2008/09, and 2009/10, respectively which is in decreasing trend. In the fiscal year 2010/11, the DFL is 0.91 times, which is in decreasing trend. The average DFL of NIBL is 0.90 times.

### 4.4.2 Coefficient of Correlation Analysis:

Correlation analysis enables us to have an idea about the degree and direction of the relationship between the two or more variables. The correlation is a statistical tool which studies the relationship between two or more variables and correlation analysis involves various methods and techniques used for studying and measuring the extent if the relationship between the two or more variables. It is denoted by 'r'. However, it fails to reflect up on the cause and effect relationship between the variables.

Although there are three types of correlation i.e. simple, partial and multiple correlation but here we focus on simple correlation based on 'Pearson's coefficient of correlation. In the following section correlation between different variables are calculated and presented of the sample banks which are being studied under this research.

- Total debt and shareholder's equity
- Long term debt and earning per share
- EBIT and interest
- EBIT and DPS

#### 4.4.2.1 Coefficient of Correlation between Total Debt and Shareholder's Equity:

The relationship between total debt and shareholder's equity has been shown in the following table below. The total debt includes all types of long term borrowed funds, current liabilities and provisions. Whereas share holders equity includes share capital reserves and surplus. This correlation indicates whether there is positive or negative correlation between total debt and shareholder's equity and their respective probable error (P.E) is also presented. Probable error interprets the value of

correlation co-efficient. It helps to determine applicability for the measurement of reliability of the computed value of the correlation coefficient 'r'. Detail calculation is presented in the Appendix- 1 and 2.

**Table No: 4.31**

**Coefficient of Correlation between Total Debt and Shareholders Equity with P.E.**

| Bank | r | $r^2$ | P.E. | 6 (P.E) | Relationship | Remarks |
|---|---|---|---|---|---|---|
| SCBNL | 0.97 | 0.94 | 0.01 | 0.06 | Positive | Significant |
| NIBL | 0.98 | 0.96 | 0.01 | 0.06 | Positive | Significant |

Source: Appendix-1 and 2.

In the above table 4.30, Karl Pearson's correlation coefficient between total debt and shareholder's equity of SCBNL is found to be 0.97 i.e. there is positive correlation between total debt and shareholder's equity and closer to 1. The probable error 6(P.E) of SCBNL is 0.06, which is less than correlation coefficient hence there is significant relationship between total debt and shareholder's equity.

Similarly, in case of NIBL, the correlation coefficient between total debt and shareholder's equity is 0.98. It is positive and closer to 1. The probable error of 6 (P.E.) of NIBL is 0.06, which is less than correlation coefficient hence there is significant relationship between total debt and shareholders' equity.

### 4.4.2.2 Coefficient of Correlation between Long Term Debt and Earning Per Share:

Long term debt is the source of long term financing or long term funds. Company should pay interest for this debt capital. Whereas earning per share (EPS) is earning of a share of a firm from one year business. EPS has positive relationship with company's earning. In this section the

relationship between these two variables has been shown using Karl Pearson's correlation coefficient method. It tries to analyze that the increment in long term debt leads to increment in the EPS or not. The calculated correlation coefficient and their respective probable error have been shown in the following table referred from Appendix-3 and 4.

**Table No: 4.32**

**Coefficient of Correlation between Long Term Debt and EPS with Probable Error (P.E).**

| Banks | r | $r^2$ | P.E. | 6 ( P.E ) | Relationship | Remarks |
|---|---|---|---|---|---|---|
| SCBNL | 0 | 0 | 0.30 | 1.81 | No | Insignificant |
| NIBL | 0.13 | 0.0169 | 0.29 | 1.74 | No | Insignificant |

Source: Appendix-3 and 4.

In the above table No.4.31, correlation coefficient of SCBNL is found to be zero, i.e. there is no relationship between long term debt and EPS. 6 (P.E) of respected correlation is 1.81, which is more than correlation coefficient hence there is insignificant relationship between long term debt and EPS.

Similarly, in case of NIBL, the correlation coefficient between Long term debt and EPS is 0.13, it is positive. The 6(P.E) of respected correlation is 1.74, which is more than correlation coefficient hence there is insignificant relationship between long term debt and EPS.

### 4.4.2.3 Coefficient of Correlation between EBIT and Interest:

Long term debt holders get the interest as return and EBIT is operating profit of the company. Here correlation coefficient of interest and EBIT has presented of concerned companies to analyze whether there is positive or negative correlation between interests and operating profit,

those are calculated on the basis of Karl Pearson's correlation coefficient. Following table shows the relationship between these variables of sampled banks. And to check the significance of these calculated correlations, P.E. is also presented, which is referred from Appendix 5 and 6.

**Table No: 4.33**

**Coefficient of Correlation between EBIT and Interest**

| Banks | r | $r^2$ | P.E | 6(P.E) | Relationship | Remarks |
|---|---|---|---|---|---|---|
| SCBNL | 0.79 | 0.62 | 0.08 | 0.48 | Positive | Significance |
| NIBL | 0.90 | 0.81 | 0.05 | 0.30 | Positive | Significance |

Source: Appendix-5 and 6.

In the above table No: 4.32, correlation coefficient of SCBNL is found to be 0.79, i.e. there is positive correlation between Interest and EBIT. 6(P.E) of respected correlation is 0.48, which is less than correlation coefficient hence there is significant relationship between EBIT and Interest.

Similarly, in case of NIBL, the correlation coefficient between EBIT and Interest is found to be 0.90. It is positive. The 6(P.E) of respected correlation is 0.30, which is less than correlation coefficient hence there is significant relationship between EBIT and Interest.

### 4.4.2.4 Coefficient of Correlation between EBIT and DPS:

Shareholders get the dividend as return and EBIT is operating profit of the company. Here, correlation coefficient of EBIT and DPS has been presented of concerned banks to analyze whether there is positive or negative correlation between dividends and operating profits. Following table shows the relationship between these variables of sample banks.

And to check the significance of these calculated correlations, PE is also presented, which is referred from Appendix 7 and 8.

**Table No: 4.34**

**Coefficient of Correlation between EBIT and DPS**

| Banks | r | $r^2$ | P.E. | 6 (P.E) | Relationship | Remarks |
|---|---|---|---|---|---|---|
| SCBNL | -0.93 | 0.84 | -0.04 | 0.24 | Negative | Insignificant |
| NIBL | 0.95 | 0.90 | 0.03 | 0.18 | Positive | Significant |

Source: Appendix 7 and 8.

In the above table, correlation coefficient of SCBNL is found to be -0.93, i.e. there is negative correlation between EBIT and DPS. The 6(P.E) of respected correlation is 0.24, which is greater than correlation coefficient hence there is insignificant relationship between EBIT and DPS.

Similarly, in case of NIBL, the correlation coefficient between EBIT and DPS is 0.95. It is positive and closer to 1. The 6(P.E) of respected correlation is 0.18, which is less than correlation coefficient hence there is significant relationship between EBIT and DPS.

## 4.5 Major Findings of the Study:

From presentation and analysis of data, the following major findings are drawn-out:

### 4.5.1 Ratio Analysis:

- Long term debt to total debt ratio indicates that what percentage of total debt is covered by long term debt of the firm. Long term debt to total debt ratio shows that SCBNL has does not use long term debt over five years study period so, long term debt to total debt

ratio of SCBNL is nil. In case of NIBL, NIBL has decreasing trend of long term debt to total debt ratio. In average NIBL has 2.38% of average long term debt to total debt ratio, which means that about 97.62% of the total debt is contributed by current liabilities.

- Long term debt to Capital employed ratio highlights the portion of fund financed by long term debt in the capital employed by the firm. The above calculation shows SCBNL has does not use the long term debt over its five years study period, so, long term debt to capital employed ratio of SCBNL is Nil, whole study period. In the case of NIBL, the average long term debt to capital employed ratio is 0.23%. NIBL has decreasing trend of long term debt to capital employed ratio.
- Debt to total assets ratio express the relationship between creditors fund and total assets. Both selected banks have high debt to total assets ratio. Average ratio of SCBNL is 92.14%, NIBL has 93.75%, which is the highest debt to total assets ratio than SCBNL. The highest ratio 93.75% of NIBL indicates 93.75 percent assets are purchased by creditor's fund shareholders has only 6.57 percent contributions in the assets of the company.
- The debt to equity ratio shows the claim of creditors on the total assets of the company. Debt to equity ratio is used to show the relationship between funds and owner's capital. The trend analysis shows decreasing trend in both sampled banks used for this study. The average debt to equity ratio of SCBNL shows that the creditors have 11.77% claims on the assets of SCBNL, which is lowest than NIBL. It also indicates that the company has lesser amount to be paid as interest on debt. In case of NIBL, the claim of creditors is 12.48%, which is higher than SCBNL.

- Interest coverage ratio shows how many times the interest charges are covered by EBIT out of which they will pay.
- In regards of the comparative position of return on total assets the two commercial joint venture banks SCBNL seems to have the highest return of 2.53%, while NIBL, has the Fluctuating trend with on average of 1.90%.
- Return on shareholders' equity is used to measure the return earned by shareholders. The study shows the decreasing trend of return on shareholders' equity of two commercial sampled banks. The average ratio of SCBNL is 32.35%, which indicates that the shareholders earn 32.35 paisa investing one rupee. Similarly, the average ratio of NIBL is 25.21% the return of SCBNL is highest and NIBL has the lowest return on shareholder's equity ratio.
- The Earning per share explains net income for each unit share. It shows the market position of the firm. EPS of an organization shows the strength of the share in the market. The trend of selected banks is in increasing trend. The average EPS of SCBNL is Rs. 111.10, which is greater than NIBL. Similarly, the average EPS of NIBL is Rs. 51.84.
- Dividend per share is the earning distributed to ordinary shareholders. The analysis shows that SCBNL paid the highest DPS on average with Rs. 63 and NIBL with lowest of Rs. 16.5 on average.
- Price earnings ratio measures investor's expectations and the market appraisal of the performance of a firm. The analysis shows that SCBNL has the highest price earnings ratio on average with 42.04% and NIBL with lowest of 26.20% on average.

- The dividend payout ratio represents the percentage of the profit distributed as dividend and the percentage retained as revenue and surplus for the growth of the bank. The trend of selected banks is in fluctuating trend. The dividend payout ratio of SCBNL is 59.41% on average. Similarly, the average dividend payout ratio of NIBL is 34.63%, which is lesser than that of SCBNL.

### 4.5.2 Capital Structure Analysis:

- Under the NI approach the interest rate and the cost of equity are dependent of the capital structure with the increased use of leverage overall cost of capital declines and the total value of firm raise. From the calculation, the cost of overall capital for SCBNL has 0.71% on an average of overall capitalization rate. Over capitalization rate of NIBL is 0.36% on an average rate.
- Net operating income approach is an independent hypothesis of capital structure. Any change in leverage will not lead to any changes in the total value of the firm and market price of the share. The equity capitalization rate of SCBNL on an average rate is 2.56%. On an average NIBL has 5.12%.

### 4.5.3 Leverage Analysis:

- When the company employs debt or other fund carrying fixed charges in the capital structure financial leverage exists. The financial leverage analysis helps to evaluate the financial risk of the firm. The average financial degree of SCBNL and NIBL are 1.05, and 0.90, respectively. We can say that SCBNL is bearing the highest DFL than NIBL.

### 4.5.4 Coefficient of Correlation Analysis:

- The calculated correlation coefficient between total debt and shareholder's equity shows relationship between total debt and shareholder's equity. SCBNL has positive correlation between total debt and shareholder's equity of 0.97 and its respective P.E.is 0.06 which is less than correlation coefficient i.e. relationship between total debt and shareholder's equity is significant. In case of NIBL the correlation coefficient is 0.98 and its respective P.E.is 0.06 which is also less than correlation which shows the value of 'r' is positive and significant.
- Correlation coefficient and P.E. ratio shows of LTD and EPS explain about the relationship between LTD and earnings per share. In case of SCBNL correlation coefficient between LTD and EPS is 0, which is positive relationship. Its respective P.E. is 1.81, which is greater than that of calculated value 'r' .so, it is insignificant. Similarly, NIBL has 0.13 correlation coefficient between LTD and EPS and its respective P.E. is 1.74, which is greater than that of calculated value of 'r'. So, it is insignificant.
- The correlation coefficient between EBIT and Interest of both sampled bank under the study are positive. The both sampled banks have significant value since is greater than P.E. In the case of both sampled banks the correlation between EBIT and Interest are positive and significant relationship.
- The correlation coefficient between EBIT and DPS of SCBNL is -0.93 and its respective P.E. is 0.24, which is greater than that of calculated value of 'r'. so, it is insignificant. In case of NIBL, the correlation of it is 0.95 and its respective P.E. is 0.18 which is less than that of its calculated 'r', so it has significant relationship between EBIT and DPS.

# CHAPTER – V

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

This is the concluding chapter of this study. This chapter is divided in to three sections: summary, conclusion, and recommendations. In this chapter, we summarize the study in brief. In the last section of this chapter some recommendations have given, which are useful to stakeholders and to concerned banks as well. They can use these recommendations to take some corrective action to draw decisions.

## 5.1 Summary:

In this section of study, we are about to analyze capital structure of the two joint venture bank that have been chosen for this study. These banks are standard chartered bank Nepal limited and Nepal investment bank limited. Both banks are listed in NEPSE. To make the study more reliable, the whole study has been divided in to five chapters. The summaries of each chapter are presented below:

### First Chapter:

First chapter starts with historical background of the study. On this chapter an introduction of the banking industries in Nepal, in worldwide context, introduction of the bank selected for the study, description of the capital structure is presented briefly. This study endeavors to evaluate capital structure of joint venture banks with special reference to SCBNL and NIBL. The main questions presented as the statement of the study, are what is the condition of capital structure of the commercial banks of Nepal? Whether or not they are using an appropriate financial mix? If not, what may be the suggested to improve or to maximize the value of the firm in the context of Nepalese banks?

The statement of the problems deals with the effect of the capital structure policy which is followed by the joint venture bank in Nepal and the main problems faced by the joint venture banks in developing and implementing the capital structure.

The main objective of the study presented is to evaluate the role of capital structure on the growth of the commercial banks in Nepal. To analyze the effectiveness and efficiency of capital structure of the commercial banks of Nepal and to analyze the relationship of capital structure with other variables. Such as earning per share, dividend per share, and net worth.

Finally, framework of the study, significance of the study, limitations of the study, and organization of the study are also presented on first chapter.

**Second Chapter:**

In this chapter, various books, research studies and articles concerned with the capital structure have been reviewed and presented as the reviews of literature to make the concept of capital structure more clear. Capital structure theories such as NI approach, NOI approach, M-M model and other theoretical approaches to establish appropriate capital structure are described in this chapter. Review of different management Journals, Articles as well as related Nepalese studies have been presented as well.

**Third Chapter:**

In this chapter the steps to adopt realistic study needed for the researchers have been presented. The methodology, researcher can use to get appropriate guidelines and knowledge about the various sequential

steps to adopt a systematic analysis has been explained in this chapter. Most of data used in this study are secondary in nature that is annual reports provided by concerned banks. Five years data are taken as sampled years and are analyzes by using financial and statistical tools such as ratio analysis, capital structure, leverage analysis, correlation analysis, probable error etc. methods, which the study is going to use is exhibited in this chapter.

**Fourth Chapter:**

The data mentioned in the third chapter are presented and analyzed in this chapter using methods mentioned in the chapter third above such as ratio analysis, leverage analysis, correlation, and probable error and capital structure analysis. Details calculations presented in this chapter are shown as Appendix which is presented after fifth chapter.

**Fifth Chapter:**

In this chapter summary of the study are presented in brief to understand the whole study instantly after which conclusion of study with recommendation are presented.

## 5.2 Conclusion:

- Long term debt to total debt ratio indicates that what percentage of total debt is covered by long term debt of the firm. Long term debt to total debt ratio shows that SCBNL has does not use long term debt over five years study period so, long term debt to total debt ratio of SCBNL is nil. In case of NIBL, NIBL has decreasing trend of long term debt to total debt ratio. In average NIBL has 2.38% of average long term debt to total debt ratio, which means that about 97.62% of the total debt is contributed by current liabilities.

- Long term debt to Capital employed ratio highlights the portion of fund financed by long term debt in the capital employed by the firm. The above calculation shows SCBNL has does not use the long term debt over its five years study period, so, long term debt to capital employed ratio of SCBNL is Nil, whole study period. In the case of NIBL, the average long term debt to capital employed ratio is 0.23%. NIBL has decreasing trend of long term debt to capital employed ratio.
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- The debt to equity ratio shows the claim of creditors on the total assets of the company. Debt to equity ratio is used to show the relationship between funds and owner's capital. The trend analysis shows decreasing trend in both sampled banks used for this study. The average debt to equity ratio of SCBNL shows that the creditors have 11.77% claims on the assets of SCBNL, which is lowest than NIBL. It also indicates that the company has lesser amount to be paid as interest on debt. In case of NIBL, the claim of creditors is 12.48%, which is higher than SCBNL.
- Interest coverage ratio shows how many times the interest charges are covered by EBIT out of which they will pay.
- In regards of the comparative position of return on total assets the two commercial joint venture banks SCBNL seems to have the

highest return of 2.53%, while NIBL, has the Fluctuating trend with on average of 1.90%.

- Return on shareholders' equity is used to measure the return earned by shareholders. The study shows the decreasing trend of return on shareholders' equity of two commercial sampled banks. The average ratio of SCBNL is 32.35%, which indicates that the shareholders earn 32.35 paisa investing one rupee. Similarly, the average ratio of NIBL is 25.21% the return of SCBNL is highest and NIBL has the lowest return on shareholder's equity ratio.
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is positive relationship. Its respective P.E. is 1.81, which is greater than that of calculated value 'r' .so, it is insignificant. Similarly, NIBL has 0.13 correlation coefficient between LTD and EPS and its respective P.E. is 1.74, which is greater than that of calculated value of 'r'. So, it is insignificant.

- The correlation coefficient between EBIT and Interest of both sampled bank under the study are positive. The both sampled banks have significant value since is greater than P.E. In the case of both sampled banks the correlation between EBIT and Interest are positive and significant relationship.
- The correlation coefficient between EBIT and DPS of SCBNL is -0.93 and its respective P.E. is 0.24, which is greater than that of calculated value of 'r'. So, it is insignificant. In case of NIBL, the correlation of it is 0.95 and its respective P.E. is 0.18 which is less than that of its calculated 'r', so it has significant relationship between EBIT and DPS.

## 5.3 Recommendations:

A clear financial picture can be viewed from all above presentation. In this section of the study, few points that can be helpful to stakeholders as well as to the concerned bank are recommended based up on above calculations and drawn conclusions. These recommendations are guidelines, which would be helpful in taking prompt and appropriate decision about capital structure. Now, some valuable and timely, suggestions and recommendations are put forward on the basis of findings and conclusions or literally their financial pictures in order to revitalize and improve the financial position of SCBNL and NIBL. These recommendations are given below:

- In conclusion derived from findings of the study, Joint venture banks have lack of theoretical and practical knowledge with regard to capital structure theories. They have not given significant attention to the capital structure matter. Nepalese investors are not attracted by the theories. Capital structure is a serious matter. It affects EPS, value of firm, cost of capital etc. so it is recommended that the selected banks should follow the theoretical as well as practical aspects of the capital structure management or give it more attention in this matter and try to manage their activities accordingly.
- Joint venture banks in Nepal have concentrated their business with big businessmen and industrialists. Their clients are mostly big manufacturer, carpet and garment exporters, multinational companies, large scale of industries; NGOS as well as INGOS, travel agencies, cargo agencies, housing companies etc. therefore, the joint venture banks are suggested to open their doors to the small depositors and entrepreneurs also.
- The capital structure of selected banks in highly leveraged. The proportion of debt and equity capital should be decided keeping in mind the efforts of tax advantages and financial distress. The banks, when it is difficult to pay interest and principal, ultimately lead to liquidation or bankruptcy. For such, the bank should reduce the high use of debt capital.
- Return ratios like; return on total assets and return on shareholder's equity are not satisfactory in NIBL. SCBNL seems very good performing than NIBL in the case of ROE. Having geared up capital structure position and insufficient return indicates the resources in to most profitable sector and be more concerned to get

better return and be careful about their financial condition so that their returns would not be depressed any more.

- It is visible that all banks are granting significant role in the modern banking system to uplift the economical development of the nation but they are not playing merchant banking role. Hence, selected banks are suggested to play the role of financial intermediary and merchant banking like underwriting of securities, broker's development of capital market and supportive role to the security exchange centre which will consequently be helpful for the upliftment of nation.
- Additionally banks are required and recommended to expand assets and branches, which ultimately affect the bank's capital structure and expected to increase the profitability more than present. All the banks vary in case of total assets, number of bank branches and their volume of transactions.
- Nepalese shareholders are very much concerned about the payment of cash dividend banks rather than their financial statement. As such, banks are suggested to pay cash dividend consistently. NIBL needs to pay attention on paying dividends.
- The bank should give continuity in providing both conceptual and practical training to the staff to enhance their knowledge, skill and competency level. They should remain consistently vigilant in enhancing their moral and motivation.
- The bank has to enhance effectiveness, efficiency and proper coordination of its departmental tasks by continuously reviewing its structural design in accordance with the need of the changing time and situation.

- The savings from rural communities are neglected by JVBS, without which they cannot contribute much to the economic development of the country. So JVBs recommended being cooperative and should expand branches by covering all the five development regions of the country including rural areas to achieve geographically balanced approach. The study recommended that the savings that are out of the bank's domain especially in the rural areas could be captured by reaching them through expansion of branches and by providing innovative and improved quality of services. The competition from the informal sectors and other financial institutions can then be handled. This will ultimately benefit the country as well as the bank themselves.
- Dividend payout ratio should be determined considering the shareholder's expectation and the growth requirements of the banks. A higher payout attracts both the existing and potential investors leading to increase in market price of the share, which consequently leads to the strengthened financing capability. Henceforth, the banks are recommended to maintain consistent dividend payout ratio.

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**APPENDIX-1**

# COEFFICIENT OF CORRELATION ANALYSIS

## Coefficient of Correlation Analysis between Total Debt and Shareholder's equity

### STANDARD CHARTERED BANK NEPAL LIMITED

| Fiscal Year | Total Debt (X) | SHE (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 26 | 21 | 546 | 676 | 441 |
| 2007/08 | 30 | 24 | 720 | 900 | 576 |
| 2008/09 | 37 | 30 | 1110 | 1369 | 900 |
| 2009/10 | 36 | 33 | 1188 | 1296 | 1089 |
| 2010/11 | 40 | 36 | 1440 | 1600 | 1296 |
| N =5 | ∑X=169 | ∑Y=144 | ∑XY = 5004 | $\sum X^2$ = 5841 | $\sum Y^2$ =4302 |

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

$$= \frac{5\times5004 - 169\times144}{\sqrt{5\times584 - (169)^2}\sqrt{5\times4302 - (144)^2}}$$

r = 0.97

$r^2$ = 0.94

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

$$= \frac{0.6745\times(1-0.97^2)}{\sqrt{5}}$$

= 0.01

6(P.E.) = 0.06

**APPENDIX-2**

## Coefficient of Correlation between Total Debt and Shareholder's Equity

**NEPAL INVESTMENT BANK LIMITED**

| Fiscal Year | Total Debt (X) | SHE (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 27 | 18 | 486 | 729 | 324 |
| 2007/08 | 38 | 26 | 988 | 1444 | 676 |
| 2008/09 | 53 | 39 | 2067 | 2809 | 1521 |
| 2009/10 | 57 | 45 | 2565 | 3249 | 2025 |
| 2010/11 | 58 | 51 | 2958 | 3364 | 2601 |
| N =5 | ∑X=233 | ∑Y=129 | ∑XY = 9064 | $\sum X^2$ = 11595 | $\sum Y^2$ = 7147 |

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

$$= \frac{5\times 9064 - 233\times 129}{\sqrt{5\times 11595 - (233)^2}\sqrt{5\times 7147 - (129)^2}}$$

r = 0.98

$r^2$ = 0.96

$$\text{P.E.} = \frac{0.6745\times(1-r^2)}{\sqrt{n}}$$

$$= \frac{0.6745\times(1-0.98^2)}{\sqrt{5}}$$

= 0.01

6(P.E.) = 0.06

**APPENDIX-3**

## Coefficient of Correlation between Long Term Debt and EPS

**STANDARD CHARTERED BANK NEPAL LIMITED**

| Fiscal Year | LTD (X) | EPS (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 0 | 167.37 | 0 | 0 | 28012.7169 |
| 2007/08 | 0 | 131.92 | 0 | 0 | 17402.8864 |
| 2008/09 | 0 | 109.99 | 0 | 0 | 12097.8001 |
| 2009/10 | 0 | 77.65 | 0 | 0 | 6029.5225 |
| 2010/11 | 0 | 69.51 | 0 | 0 | 4831.6401 |
| N =5 | $\sum X=0$ | $\sum Y=556.44$ | $\sum XY = 0$ | $\sum X^2 = 0$ | $\sum Y^2 = 60374.566$ |

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

$$= \frac{5\times 0 - 0\times 556.44}{\sqrt{5\times 0 - (0)^2}\sqrt{5\times 60374.566 - (0)^2}}$$

$r = 0$

$r^2 = 0$

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

$$= \frac{0.6745\times(1-0)}{\sqrt{5}}$$

$= 0.30$

$6(P.E.) = 1.8$

**APPENDIX - 4**

## Coefficient of Correlation between Long Term Debt and EPS

**NEPAL INVESTMENT BANK LIMITED**

| Fiscal Year | LTD (X) | EPS (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 80 | 62 | 4960 | 6400 | 3844 |
| 2007/08 | 105 | 57 | 5985 | 11025 | 3249 |
| 2008/09 | 105 | 37 | 3885 | 11025 | 1369 |
| 2009/10 | 105 | 52 | 5460 | 11025 | 2704 |
| 2010/11 | 105 | 48 | 5040 | 11025 | 2304 |
| N =5 | ∑X=500 | ∑Y=256 | ∑XY = 25330 | $\sum X^2$ = 61525 | $\sum Y^2$ = 13470 |

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

$$= \frac{5\times 25330 - 500\times 256}{\sqrt{5\times 61525 - (500)^2}\sqrt{5\times 13470 - (256)^2}}$$

r = 0.13

$r^2$ = 0.0169

$$\text{P.E.} = \frac{0.6745\times(1-r^2)}{\sqrt{n}}$$

$$= \frac{0.6745\times(1-0.13^2)}{\sqrt{5}}$$

= 0.29

6(P.E.) = 1.74

**APPENDIX-5**

## Coefficient of Correlation between EBIT and Interest

**STANDARD CHARTERED BANK NEPAL LIMITED**

| Fiscal Year | EBIT (X) | Interest (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 1092 | 413 | 450996 | 1192464 | 170569 |
| 2007/08 | 1248 | 471 | 587808 | 1557504 | 221841 |
| 2008/09 | 1506 | 543 | 817758 | 2268036 | 294849 |
| 2009/10 | 1612 | 575 | 926900 | 2598544 | 330625 |
| 2010/11 | 1707 | 1003 | 1712121 | 2913849 | 1006009 |
| N =5 | ∑X=7165 | ∑Y=3005 | ∑XY = 4495583 | $\sum X^2$ = 10530397 | $\sum Y^2$ = 2023893 |

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

$$= \frac{5\times 4495583 - 7165\times 3005}{\sqrt{5\times 10530397 - (7165)^2}\sqrt{5\times 2023893 - (3005)^2}}$$

r = 0.79

$r^2$ = 0.62

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

$$= \frac{0.6745\times(1-0.79^2)}{\sqrt{5}}$$

= 0.08

6(P.E.) = 0.48

**APPENDIX-6**

## Coefficient of Correlation between EBIT and Interest

**NEPAL INVESTMENT BANK LIMITED**

| Fiscal Year | EBIT (X) | Interest (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 727 | 685 | 497995 | 528529 | 469225 |
| 2007/08 | 1013 | 992 | 1004896 | 1026169 | 984064 |
| 2008/09 | 1310 | 1686 | 2208660 | 1716100 | 2842596 |
| 2009/10 | 1928 | 2553 | 4922184 | 3717184 | 6517809 |
| 2010/11 | 1783 | 3620 | 6454460 | 3179089 | 13104400 |
| N =5 | ∑X=6761 | ∑Y=9536 | ∑XY = 15088195 | $\sum X^2$ = 10167071 | $\sum Y^2$ = 23918094 |

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

$$= \frac{5\times 15088195 - 6761\times 9536}{\sqrt{5\times 10167071 - (6761)^2}\sqrt{5\times 23918094 - (9536)^2}}$$

$r = 0.90$

$r^2 = 0.81$

$$\text{P.E.} = \frac{0.6745\times(1-r^2)}{\sqrt{n}}$$

$$= \frac{0.6745\times(1-0.90^2)}{\sqrt{5}}$$

$= 0.05$

$6(\text{P.E.}) = 0.30$

**APPENDIX-7**

## Coefficient of Correlation between EBIT and DPS

**STANDARD CHARTERED BANK NEPAL LIMITED**

| Fiscal Year | EBIT (X) | DPS (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 1092 | 80 | 87360 | 1192464 | 6400 |
| 2007/08 | 1248 | 80 | 99840 | 1557504 | 6400 |
| 2008/09 | 1506 | 50 | 75300 | 2268036 | 2500 |
| 2009/10 | 1612 | 55 | 88660 | 2598544 | 3025 |
| 2010/11 | 1707 | 50 | 85350 | 2913849 | 2500 |
| N =5 | ∑X=7165 | ∑Y=315 | ∑XY = 436510 | $\sum X^2$ = 10530397 | $\sum Y^2$ = 20825 |

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

$$= \frac{5\times 436510 - 7165\times 315}{\sqrt{5\times 10530397 - (7165)^2}\sqrt{5\times 20825 - (31512)^2}}$$

r = - 0.93

$r^2$ = 0.8649

$$\text{P.E.} = \frac{0.6745\times(1-r^2)}{\sqrt{n}}$$

$$= \frac{0.6745\times(1-0.93^2)}{\sqrt{5}}$$

= - 0.04

6(P.E.) = 0.24

**APPENDIX-8**

## Coefficient of Correlation between EBIT and DPS

**NEPAL INVESTMENT BANK LIMITED**

| Fiscal Year | EBIT (X) | DPS (Y) | XY | $X^2$ | $Y^2$ |
|---|---|---|---|---|---|
| 2006/07 | 727 | 5 | 3635 | 528529 | 25 |
| 2007/08 | 1013 | 7.50 | 7597.50 | 1026169 | 56.25 |
| 2008/09 | 1310 | 20 | 26200 | 1716100 | 400 |
| 2009/10 | 1928 | 25 | 48200 | 3717184 | 625 |
| 2010/11 | 1783 | 25 | 44575 | 3179089 | 625 |
| N =5 | $\sum X$=6761 | $\sum Y$=82.5 | $\sum XY$ = 130207.5 | $\sum X^2$ = 101670771 | $\sum Y^2$ = 1731.25 |

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

$$= \frac{5\times 130207.5 - 6761\times 82.5}{\sqrt{5\times 10167071 - (6761)^2}\sqrt{5\times 1731.25 - (82.5)^2}}$$

r = 0.95

$r^2$ = 0.90

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

$$= \frac{0.6745\times(1-0.95^2)}{\sqrt{5}}$$

= 0.03

6(P.E.) = 0.18