

# CHAPTER - I

## INTRODUCTION

### 1.1 Background of the Study

Nepal like all underdeveloped countries has been facing problem of accelerating the economic development. Development of industrial sector, among other sectors, is equally essential for the rapid economic development of the country. But it is impossible with out the development of different sector like banks, Agriculture and Industry etc. of the economy. Nepal is a land locoed mountains countries and located between the gigantic counties India and china. It is a small country with an area covering 1,47,181 square kilometer and also ranked to last developing country with per capital income U.S. \$ 210. It is one of the richest counties for hydropower with potentiality of 83,000 megawatts but due to its developing nature is not being able to utilize its full capacity and has been using only about 0.6% of full capacity. Capital is one of the prime factors which is necessary for the development and Advancement of the country. Now our investment to solve this problem, in this context of capital formation, we must talk about banking industry. Industry is very crucial factor for economic progress and plays the role of the lubricant for economic prosperity of the country. The industrial development is not old as the process started with the establishments of Biratanagar jute mill and industrial council in 1936 A.D. There after industrial growth accelerated with establish if the Morang Cotton Mill in 1941, the Morang Sugar mill in 1946, the Ragupati Jute Mill 1946 etc. The industrial growth took high speed before the Second World War. The year 1956 is said to be "Golden year."

Various writers have defined the word "bank" is different ways. "A commercial bank is dealer in money and in substitutes for money, such as cheque or bill of exchange. He also provides a variety of financial service". Commercial bank as a financial institution transfers monetary sources from savers to users. Finance is needed to perform a firm's production marketing

and other function. Commercial banks are to lend money to merchant, house owners, Farmer's, industrialists and to hold government bonds. Commercial bank can mainly undertake measures such as organizational reforms of banks, maximum utilization of resources and increase in non-cash reserve transactions to reduce the spread between interest rate on deposit and credit. They deploy funds raised from different sources in to different assets with a primary objective of profit generation. They also play an important role for the economic development and poverty alleviation of the country through providing credit facilities, quality banking service to a people both business community as well as common man. Today there are altogether 25 banks operating in the country and most of them are joint venture banks.

"Capital structure is the composition of the debt and equity securities and is considered as financing decision undertaken by the financial manager. The financial manager must strive to obtain the best financing mix or optimum capital structure for his firm. The firm attains capital structure where the debt-equity proportion maximizes the market value of the shares. The uses of debt affect the return and risk of the equity shareholder; it increases the return on equity fund and at the same time it also increases risk. A proper balance must be strike between the risk and return in order to maximize the market value of shares". ( Pandey; 1995:54)

"Capital structure is very crucial part of financial management as the various composition of debt and equity capital may impact differently on risk and rate of return to equity shareholders. The funds required to business enterprises are raised either through the ownership securities (i.e. equity share and preference shares) and creditor ship securities (i.e. debenture and bond). A business enterprise has to maintain a proper mix of both the securities in a manner that the cost and risk perception to he shareholders are minimized. The mix of different securities is portrayed by the firm's capital structure". (Koirala; 1990:105)

Financial decision must be very sensitive in inappropriate composition of debt equity in capital structure may lead to bankruptcy of the firm. The

optimal capital structure is attained at the level where the risk perception of shareholder is minimized and returns are maximized. As the return to shareholder is maximized automatically the market value of the firm is maximized. The capital structure affects the cost of the firm. The financial manager must be sensible while selecting the optimal capital structure for the firm.

## **1.2 Commercial Banking Scenario in Nepal**

The history of financial and monetary development in Nepal is not very old. It has gone through different stages; during the Prime minister ship of Randip Singh around 1872 A.D. "Tajarath Adda" was introduced. Which brought reforms in economic and financial sector? The main purpose of "Tajarath Adda" was to provide credit facilities to the general public at a concessional rate. However the installment of "Kausi 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. After that the first commercial bank of Nepal, Nepal Bank Limited (NBL) was launched with the cooperation of imperial Bank of India in November 1937 holding 51% government equity. The second commercial bank Rastriya Banijya Bank (RBB), came into existence in 1966 A.D. With 100% government ownership.

In early 1980's to meet the need of health competition in the financial system. Nepal allowed the entry of foreign banks as joint ventures with up to maximum of 50% equity participation. The first bank to be set up under such arrangement of financial liberalization process of the government, the whole financial industry went through drastic change with credit institutions mushrooming in the country. It has brought crucial change and big milestones in its services during these short spans. Nepal Rastra Bank (NRB) came into existence since April 1956 A.D, under the NRB act 1955 A.D. as the central bank of the country for the dedication to the development of banking and to manage the circulation of national currency and also to maintain exchange rate stability.

In the liberal financial system, the role of central bank as guardian of financial system comes to be more significance it. The recent experience of south East Asian countries have shown that in the case of weak monitoring and supervision financial crisis is likely to occur immediately. Taking this fact into consideration, it is essential to make financial system health and strong while enhancing the monitoring and supervising capacity of the central bank in coming day.

His majesty's government of Nepal budget for the year (FY2005) provided the following justification for allowing the setting up of joint venture banks in the following words. "As present the financial institutions of the country have neither been effortful to mobilize resources. On the one hand, the major part of their commercial loan is concentrated among the few individuals where as the small trade entrepreneurs are facing difficulties to receive loan on the other. The only solution to this problem is to encourage competition in the banking sector. Therefore a policy of allowing new commercial banks under joint venture with foreign collaboration has been adopted. This will promote competition among banks where by the client will get improved facility. In addition, the share of there new banks will also be sold to the general public and in distributing the share. It will be ensured that the ownership is spread out to the maximum intent possible."(Ministry of Finance;2005:13)

Today there are altogether 25 commercial banks. That operating in Nepal financial market among which are government, private sector banks and joint venture banks with foreign banks.

Nepal Arab Bank limited is the first bank established in joint investment in Nepal. This bank was est. in 2041(1985) under the commercial bank act 2031 (1974) and company act 2021 (1964). There are Nepal and foreign investors in it. The second bank established in joint venture investment was the Nepal Endosuez Bank Ltd. It was established in 2042 (1985). At percent its name investment bank limited and there is no foreign investment. Stander chartered Bank is est. on joint investment. It was registered in 2043 (1986)

under the commercial Bank act and company act. In beginning its named was Grindlays banks limited. Nepal SBI bank Ltd. Also was formed in joint venture. It was established in 2050 (1993). This bank was established with the joint investment the state bank of India and Nepal. Himalayan Bank Limited was established in 2049 (1992). This bank was established in joint participation of the Habib Bank of Pakistan. Nepal Bangladesh bank limited was established in 2051 (1994). This bank was formed in joint venture of the international finance investment and commerce Bangladesh. Everest bank was established in 2051 (1994) under 5he commercial Bank out and company act 2021 (1965). It is joint venture of state bank of India and Nepal promoter. Bank of Kathmandu Ltd. was established in 2051 (1994) under joint investment of the Siam commercial Bank Thailand. Nepal credit and commerce bank of joint investment of Nepal investors and the Srilankan investors but Srilankan investors but Srilankan investors have sold their shaves to NB group of Nepal and it name has been change into Nepal credit and commerce bank limited. Under the commercial bank act and company act other banks was established such as Lumbini bank, NIC bank, Kumari Banks, Machhapuchre bank, Laxmi bank, and Sidhhartha bank ltd.

### **1.3 Profile of Concerned Banks**

#### **A. Nepal SBI bank limited**

Nepal SBI bank limited a joint venture of state bank of India and Nepali promoters. Nepal SBI bank ltd. was registered under the company act 1964 in 1994. The bank is managed by state bank of India under the joint venture and technical services agreement signed between it and Nepal promoters viz. Employees provident fund and agriculture development Bank Nepal. The state bank of India is holding 50% share of total investment. The man objective of the bank is carrying out modern banking business in the country under commercial bank act 1974. The bank provide loan to agriculture, commercial and industrial sectors. The bank started its banking operating on 1994.

Its share subscription is given as:

State Bank of India, India	50%
Employee Provided Fund	15%
Agriculture Development Bank	05%
Nepalese Public	30%

The following facilities have been providing by the bank are:

- ) International trade and banking guarantee
- ) Any branch banking
- ) Conventional banking facilities
- ) Remittance, etc.

#### **B. Everest Bank Limited (EBL)**

Everest Bank Limited (A joint venture with Punjab National Bank India) has been established with the objective of expending professionals banking services to various sections of society in the kingdom of Nepal and there by contributes in the economic development of the country. The bank has come into formal operations from 18<sup>th</sup> October 1994 (Kartik 2051B.S). EBL is a joint venture with Panjab National Bank" (PNB) one of the largest commercial bank in India having over 3700 branches and more than 300 foreign correspondents around the globe. PNB has a century old tradition of successful banking and is know for its financial strength and will laid down modern banking system and procedures. PNB is providing the top management service to EBL under a technical services agreement signed between the two institutions. EBL has advantage of the banking expertise and financial strength of its partner currently with 10 branches in various parts of the kingdom of Nepal. EBL operated with the objectives of providing the full range of quality banking service to both the business community and the common man.

Present capital structure of Everest Bank.

Share capital and Reserves	NPRS in Million
Authorized capital	240
Issued and paid up capital	120
Statutory and other reserves	23.15
Retained earring	2.76

Shareholding Pattern:

	Percent	Amount
Nepalese promoters	50%	60
Punjab National Bank (Joint neuter partners )	20%	24
General pubic	30%	36

The following activities and service are provides by EBL including normal functions.

- ) SWIFT transfer
- ) T.T transfer
- ) L.C facilities
- ) Deposit locker
- ) Drawing arrangement
- ) International trade and bond guarantee.

### **C. Nepal investment Bank Ltd. (NIBL)**

NIBL previously Nepal Indosuez Bank Ltd. Was established in 2042 B.S. under company act 2021 as second joint venture Bank . The bank had joint venture between Nepalese and French partner. The French partner (holding 50% of the capital in NIBL) was credit Agricole Indosuez, a subsidiary of one the largest banking group in the world .With decision of credit Agricole Indosuez to divest a group of companies comprising of banker, professionals, industrialists and businessman has acquired on Baishak 2059

B.S. the 50% shareholding of credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has changed to Nepal Investment Bank Ltd. (NIBL) upon approval of bank's annual general meeting. NRB and company registrar's office with the following shareholding structure. A group of companies holding 50% of the capital.

- ) Rastriya Banijya Bank (RBB) holding 15% of the capital.
- ) Rastriya Beema Sasthan (RBB) holding 15% of the capital
- ) The remaining 20% being held by the general public (this means that NIBL is company listed on the Nepal stock exchange (NEPSE)).

The main objective of the bank is to provide loans and advance to agriculture, industries and commerce to provide modern banking and financial statistics (2003).

#### **D. Himalayan Bank Limited (HBL):**

HBL was established in 1992AD .it is established to maintain the economic welfare of the general people to facilitate loan for agriculture, industry and commerce to provide the banking service to the country and the people. The founder stockholder own 51% share, Habib Bank of Pakistan 20%, Karmachari Sanchaya Kosh 14% and general public15% of the total capital structure, the bank has Rs. 120 million authorized and Rs. 60million issued capital . It is the first joint venture bank having domestic ownership more than 50%. According to annual report 2002/03, there are total 385 staff employed with 12 branch office.

### **1.4 Statement of the Problems**

Capital structure concept is not taken seriously by the Nepalese companies. Therefore optimal capital structure does not exist at all. Among the listed commercial bank in the stock exchange very few are using the debt capital and country to this come 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 capital and some business use both debt and equity capital. Therefore determination of capital structure largely depends upon the company policy and cost of capital. Most of the banks make low cost of capital structure. Unfortunately there is no model for determining capital structure in the Nepalese business organization. In the initial period of any company they want to use only equity capital and do not want to include debt in their capital due to high interest. The main key factors risk and return can be used of decision. Following are the major problems that have been identified for the purpose of this study.

- ) What does factor affected capital structure?
- ) What is the financial position of these banks?
- ) How far commercial banks have been able to use their resource?
- ) How efficiently these banks are managing their capital structure.
- ) How much the profitability?
- ) What is the relation of capital structure and other variables?

## **1.5 Objectives of the Study**

The main objective of this study is to the financial position and the values of firm with capital structure. The optimal capital structure differs in individual firms, banks and industries. These studies also find out the use of debt and equity, Capital structure effect the various factors etc.

The specific objectives of the study are as follows.

- (i) To examine the current capital structure of sample commercial banks .
- (ii) To analyze the capital of selected banks of mix of debt and equity.
- (iii) To analyze relationship between capital structure cost of capital and profitability.

## **1.6 Signification of the Study**

The study has multidimensional significance which can be divided into four broader heading.

### **A. Its importance to the shareholders:**

The study will helpful to aware the shareholders regarding the financial performance of their banks. The comparison will help them to identity the productivity of their funds in each of these banks.

### **B. Its importance to the management:**

The study will helpful to go deep into the matters as to why the performance of their banks is better than their competitor.

### **C. Its importance to the policy makers:**

Policy makers have referred to the government and Nepal Rastra Bank and management. The study will helpful to them while formulating the policy regarding commercial banks.

### **D. Its importance to outsiders:**

Among outsiders, mainly the customers, financing agencies, stock exchange and stock traders are interested in the performance of banks and the customers both can identity to which bank they could go. The financial agencies can understand where the funds are more secured and stock exchanges, stock broker can find the relative worth of stock of each bank.

## **1.7 Limitation of the Study**

Every study has its limitations the present study is also not an exception. The following are the limitation of this study.

1. This study done mostly the basis of the published financial documents likes: Balance sheet, profit and loss account, other related journals and books etc.

2. This whole study is based on data of five year (2001/02-2005/06) period.
3. This study is based on secondary data collected from bank.
4. This study is limited to related variables affecting capital structure of the selected banks.
5. The lack of sufficient resources and time is the limitation of the study. The study is to fulfill the business studies (MBS) programmed and has to conducted and submitted with in the prescribed time.

## **1.8 Organization of the Study**

This research study has been divided into five chapters. They are as follows:

### **Chapter – I**

In the first chapter, introduction part of the study. It has introduction of commercial bank as well as the introduction of selected banks (Nepal SBI Bank Ltd. and Everest Bank Ltd. General background of the study commercial banking scenario in Nepal, statement of the problem objective of the study, significance of the study, limitation of the study, organization of the study are arranged.

### **Chapter – II**

The second chapter deals with review of literature. It includes a discussion on the conceptual framework of the capital structure. It also reviews the major relevant studies with fund mobilization of a commercial joint venture bank.

### **Chapter – III**

The third chapter explains the research methodology use to evaluate capital structure practices of joint venture bank in Nepal. It consists of research design, sources of data, population and sample, tools and method of analysis.

## **Chapter – IV**

The fourth chapter deals with presentation and analysis of data through a definite course of research methodology. This chapter is to analysis different financial ratios and statistical analysis related to capital structure and fund structure of this sample bank.

## **Chapter – V**

The fifth chapter discusses summary of the study and suggestion as well as recommendations. Besides this bibliography on appendices are also included.

# **CHAPTER II**

## **REVIEW OF LITERATURE**

The purpose of reviewing the literature is to develop some expertise in one's area, to see what contributions can be made, and to receive some ideas for developing a research design. Every study is very much based on past study. Thus the past studies can not be ignored. This chapter helps to take adequate feed back to broaden the information based an inputs to my study. This chapter is divided into different parts, which arrange in to the following order.

- 2.1 Conceptual Review
- 2.2 Review of Journals and Articles
- 2.3 Review of Thesis

### **2.1 Conceptual Review**

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

#### **2.1.1. Concept of the Capital Structure**

Capital structure of a company consists of debts and equity securities which provide funds for a firm. A simple capital structure consists of equity share and preference share. But a complex capital structure consists of multi securities as equity share, Preference shares, debentures, bond etc.

"Financial structure referees to the way the firm's assets are financed; it is the entire right hand side of the balance sheet. Capital structure is the permanent financing of the firm, represented primarily by long term debt, preference stock and common stock but excluding all short term credit. Thus a firm's capital structure is only a part of its financial structure". (Weston and Braigham; 1979:663)

"Capital structure is made up of debt and equity securities which comprise a firm's finance of its assets. It is the permanent financing of a firm represented by long term debt plus preferred stock plus net worth". (Kulkarni; 1983:363)

"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". (Schall and Haley; 1983: 339).

"Capital structure policy involves a choice between risk and expected return". (Brigha; 1982:452)

"Within this framework of equating the rate of return and the cost of capital, capital structure is sought by using a proportion of debt such that the correct degree of trading on equity leading to financial leverage will cause the highest market value of the ordinary share." (Kuchal; 1977:388)

"A part from short term finance from creditors and banks, companies are usually financed either by long term loans (debentures) carrying a fixed rate of interest on capital or by ordinary shares carrying membership of the company and dividends at rates which depend upon profits." (Francis; 1980: 192)

"Capital structure refers to the mix of long-term sources of fund, such as debenture, long term debt, preference share capital and equity share capital including reserves and surpluses i.e. retained earnings."(Pandey; 1999: 718)

"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 earnings per share can be increased using higher leverage. But leverage also increases the financial risk of the share holder." (Gautam and Thapa; 2060: 223)

"Capital structure is concerned with the analyzing the capital composition of the company." (Weston and Brigham; 1982: 555)

"The optimum capital structure may be defined as that capital structure or combination of debt and equity that leads to the maximum value of the firm."  
(Khan and Jain; 1997:213)

"The capital structure is the combination of the long-term sources of funding i.e. debt, preferred stock and common stock that are used to finance the firm." (Botten and John; 1981: 348)

A sound or appropriate capital structure should have the following features.  
(Pandey; 1999: 719)

**A. Return:**

The capital structure of the company should be most advantageous. Subject to other consideration, it should generate maximum return to the shareholders without adding additional cost to them.

**B. Risk:**

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

**C. Flexibility:**

The capital structure should be flexible. Flexibility as company can raise helps to grab market opportunity as company can raise required funds wherever it is needed for profitable investment opportunities. It also when funds from debt and preferred stock are no more required in the business.

**D. Capacity:**

The capital structure should be determined within the debt capacity of the company, and this capacity should not be exceeded. The debt capacity of a company depends on its ability to generate future cash flows.

## **E. 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 involved minimum risk of loss control of the company. Issue of excess equity shares to new investors may bring threats to the control by existing manager.

The term capital denotes the long-term fund of the firm. All of the items on the liabilities side of firm's balance sheet, excluding current liabilities are sources of capital. The total capital can be divided into two components: debt and equity capital.

### **(i) Debt Capital:**

It includes all long term borrowing incurred by the firm. Debenture, bonds, long term loan etc. are major sources of debt or borrowed capital. A firm employs subtotal amount of debt capital of tax deductibility of interest payment, flexibility, and lower effective cost. However excess amount of debt exposes high risk.

### **(ii) Equity Capital:**

It consists of the long term fund provided by the firm's owners, the stockholders. In other words, equity capital includes common stock, paid in capital or share premium, reserve and surplus and retained earnings. Joint Stock Company can not be established with no equity financing. Preferred stock is neither purely a debt nor equity.

## **2.1.2 Assumption of Capital Structure**

To explain different theories, following assumptions are:

- The ratio of debt to equity for a firm is change by issuing debt to repurchase stock or issuing stock to pay off debt. In other words a change in capital structure is effected immediately. In this regard, we assume no transaction cost.



- The firm has a policy of paying 100% of its earnings in dividends. Thus, we abstract from the dividend decision.
- The expected value of the subjective probability distribution of expected future operating earnings for each company are the same for all investors in the market.
- The operating earnings of the firm are not expected to grow. The expected value of the probability distributions of expected operating earnings for all future periods are the same as present operating earning (Van Horn; 2002: 253-254).
- There are only two sources of funds under by a firm: perpetual risk less debt and ordinary shares.
- The dividend pay out ratio is 100. That is the total earning or paid out as dividend to the shareholders and there are no retained earnings.
- The total assets are given and not change. The investment decisions are in other words to be constant.
- The total financing remains constants. The firm can change its degree of leverage (Capital structure) either by selling shares and use the proceeds to retire debenture or by raising more debt and reduce the equity capital.
- The operating profit (EBIT) is not expected to grow.
- Perpetual life of the firm. (Khan and Jain; 1999: 11.1-11.2)

### **2.1.3 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 know as capital structure. Under normal economic condition, the earnings per share can be increased using higher leverage. But leverage also increases the financial risk of the shareholders. As a result, it can not 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 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 maximized by adopting optimal capital structure. Modigliani and miller, on

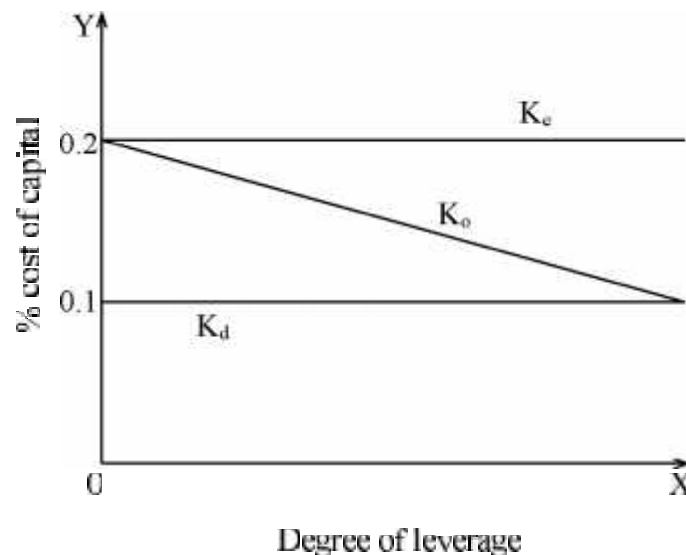
the other hand argue that in perfect capital market, it does not affect value of the firm. The major theories of capital structure are as follow:" (Pandey; 1999: 675)

### 2.1.3.1 Net Income Approach

Net income approach suggests that the existing optimal capital structure. It is that the firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in the capital structure. The crucial assumptions of this approach are:

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

**Figure 2.1**



In figure 2.1 the degree of financial leverage is plotted along the horizontal axis and the cost of capital figures on the vertical axis. Under NI approach,  $k_e$  and  $K_d$  are assumed not to change with leverage. As the proportion of debt

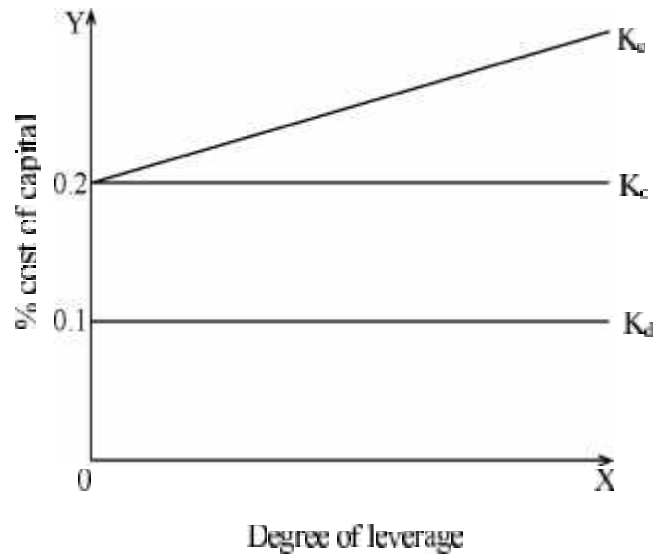
is increase in the capital structure, beings less costly, it causes weighted average cost of capital to decrease and approach the cost of debt. The capital structure would occur at the point where the value of the firm is maximum and overall cost of capital is minimum. Under the NI approach, the firm will have the maximum value and the lowest cost of capital when it is almost debt financed. (Pandey; 1999: 678- 680)

### **2.1.3.2 Net Operating Income Approach**

One approach to the valuation of the earning of a company is known as the net operating income approach. According to this approach, the market value of the firm is not affected by the capital structure changes. The cost of equity is assumed to increase linearly with leverage. As a result, the weighted average cost of capital remains constant and the total value of the firm also remains constant as leverage is change. The critical assumptions of the NOI approach are:

- ) The market capitalizes the values of the firm as a whole. Thus the split between debt and equity is not important.
- ) The market uses an overall capitalization rate,  $K_o$  to capitalize the net operating income.  $K_o$  depends on the business risk. If the business risk is assumed to remain unchanged.  $K_o$  is a constant.
- ) The use of less costly debt funds increases the risk of share holders. This causes the equity capitalization rate to increase.
- ) The debt capitalization rate ( $K_d$ ) is a constant and the corporate income taxes do not exist.

**Figure 2.2**



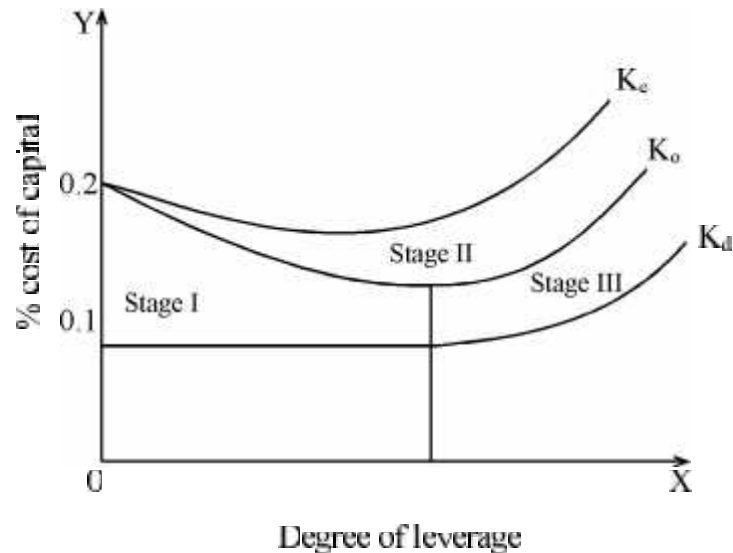
In above figure 2.2 "Degree of leverage is plotted along the horizontal axis and the cost of capital figures on the vertical axis. It shows that  $K_o$  and  $K_d$  are constant and  $K_e$  increase with leverage continuously. As the average cost of capital is constant, this approach implies that there is not any unique optimal capital structure." (Pandey; 1999: 678)

### **2.1.3.3 Traditional Approach**

"The traditional capital structure theories, which is taken as middle ground position is known as intermediate approach. It is a compromise between the net income approach and the net operating approach. According to this view, the value of the firm can be increased or the cost of capital can be reduced by a judicious mix of debt and equity capital. This approach very clearly implies that the cost of capital decreases within the reasonable limit of debt and then increases with leverage. Thus, an optimal capital structure exists, and it occurs when the cost of capital is minimum of the value of the firm is maximum. The cost of capital declines with leverage because debt capital is cheaper than equity capital within reasonable, or acceptable, limited of debt. According to the traditional approach, the manner in which the overall cost

of capital reacts to change in capital structure can be divided in to three stages." (Salomon; 1963: 92-94)

**Figure 2.3**



**Stage -I (Increasing Value)**

"In the 1st stage, the rate at which the shareholders capitalize their net income i.e. the cost of equity ( $K_e$ ) remains constant or rises slightly with debt. But when it increases, it does not increase quickly to offset the advantage of low cost debt. During this stage, the cost of debt remains constant or rises negligibly since the market views as the reasonable policy. As a result the value of the firm increase or the overall cost of capital  $K_o = \frac{\bar{X}}{\bar{V}} = K_e (S/V) + K_d (B/V)$ , Falls with increasing leverage.  $K_e$  and  $K_d$  are constant, the value of the firm increase at a constant rate, the amount of debt increase. Therefore  $K_e > K_d$ , the average cost of capital will decline with leverage."(Panday; 1999: 683-684)

**Stage: II (Optimal Value)**

"Once the firm has reached a certain degree of leverages in have a negligible effect on the value, or the cost of capital of the firm. This is so because the increase in the cost of equity due to the addled financial risk offsets the advantage of low cost debt. With in that range or at the specific point, the

value of the firm will be maximum or the cost of capital will be minimum."(Panday; 1999: 684)

### **Stage: III (Declining Value)**

"After a critical turning point, any further close of debt to capitalization will prove fatal. The cost of debt and equity will tend to raise a result of the increasing risk of each causing on increasing in the overall cost of capital which will be faster than raise in earnings from the introduction of additional debt. Consequently upon this market value of the firm will show depressing tendency." (Srivastav; 1984: 878-879)

#### **2.1.3.4 Modigliani and Miller Approach's (M-M Approach)**

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

##### **(i) M-M without Taxes**

"M-M have restated and amplified the NOI approach. MM agree that, in the absence of tax, a firm's market value and the cost of capital remain invariant to the capital structure change. In their 1958 article, they provide analytically sound and logically consistent behavior justification in favor of their hypothesis and reject any other capital structure as incorrect."(Modigliani and Miller; 1969: 261)

There are some assumptions as follows:

#### **1. Perfect capital market**

- ) Investors are free to buy or sell securities
- ) They can borrow without restriction at the same terms as the firm do and
- ) They have rationally

## 2. Homogeneous risk classes

Firm can be grouped homogeneous risk classes. Firm would be considered to belong to a homogeneous risk classes if their expected earnings have identical risk characteristics.

## 3. Risk

The risk of investors is defined in terms of the variability of the net operating income. The risk of investors depends on both the random fluctuations of the expected NOI and the possibility that the actual value of the variable may turn out to be different than their best estimate.

## 4. No taxes

In the original formulation of their hypothesis, M-M assume that no corporate income taxes exist.

## 5. Full payout

"Firms distribute all net earnings to the shareholder". (Pandey; 1999: 686-687)

The M-M- hypothesis can be best explained in terms of their propositions I and II.

### Proposition – I

The value of the firm is independent of debt equity mix and established by capitalizing its expected NOI or (EBIT) and a constant overall rate (i.e. cost of capital) which is based on the firm's risk class. Its can be express and follows:

$$\begin{aligned} \text{Value of the firm} &= \text{market value of (equity + debt)} \\ &= \frac{\text{Expected net operation income}}{\text{Expected overall cpaitalization rate}} \end{aligned}$$

$$V = (S + B) = \frac{\bar{X}}{K_0} = \frac{NOI}{K_0}$$

Value of levered firm, ( $V_L$ )= value of unleveled firm ( $V_U$ )

Where,  $V$  = total market value of the firm

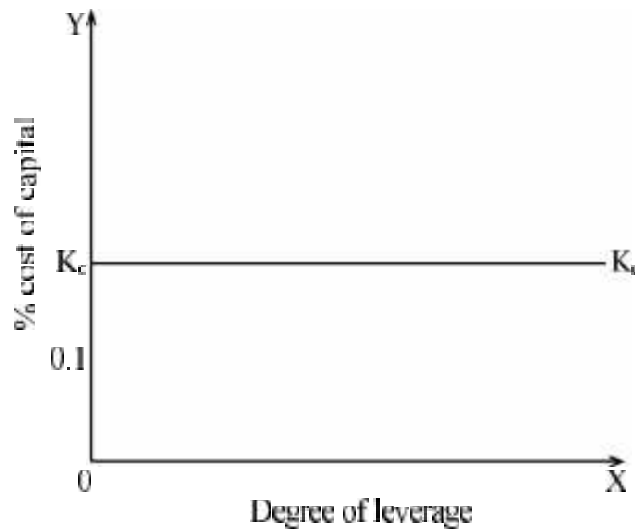
$S$  = total market value of the equity

$B$  = total market value of the debt

$NOI = \bar{X}$  = the expected net operating income on the assets of the firm

$K_0$  = the capitalization rate appropriate to the risk class of the firm.  
(Modigliani and Miller; 1958: 266)

**Figure : 2.4**



The cost of capital on proposition I is shown in the figure which clearly shows that the cost of capital is constant and is not affected by leverage.

**Proposition – II**

M-M's proposition II, which defines the cost of equity. "The cost of equity to a levered firm is equal to: the cost of equity to an unleveled firm in the same risk class plus risk premium whose both size depend with both differential

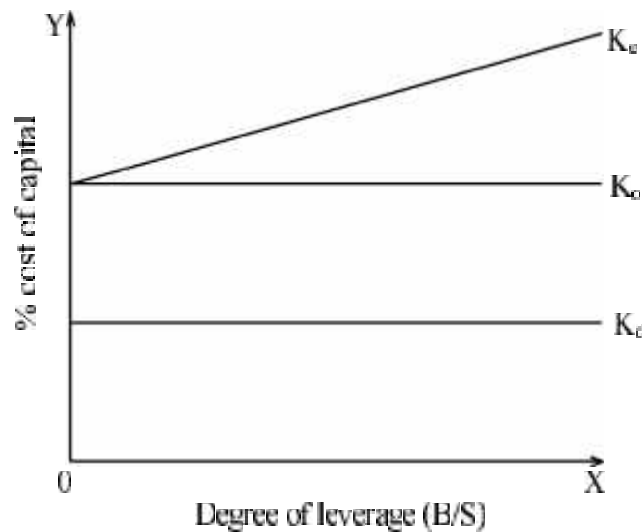


between an unleveled firm's cost of debt and equity and the amount of debt leverage used." (Panday; 1999:692)

$$K_e(L) = K_e(U) + \text{Risk Premium}$$

$$K_e(L) = K_e(U) + (K_e(U) - K_d) B/S$$

**Figure 2.5**



"The above figure indicate that higher the leverage ratio higher the cost of equity ratio. It means the cost of equity ( $K_e$ ) is linear function of leverage, measured by the market value of debt to equity. Thus leverage will result not only in more earnings per share to shareholders but also increase cost of equity. The benefit of leverage is exactly taken of by the increased cost of equity and consequently, the firm's market value will remain unaffected." (Modigliani and Miller; 1954: 59)

#### **2.1.4 Factors Affecting Capital Structure**

Capital structure of different types of firms varies widely. There are no hard and fast rules about what percentage of capitalization should be represented by bonds and debentures and what should be of equity shares and preference share factors affecting capital structure revolve principally around the adequacy and stability of earnings. Following are factors which affect the capital structure.

1. **Cost of capital:** "The impact of financing decisions on the overall cost of capital should be evaluated and the criteria should be to minimize the overall cost of capital or to maximize the value of the firm". (Pandey; 1988: 264)
2. **Assets structure:** firms whose assets are suitable as securities for loans tend to use debt heavily. "Borrowed capital should not exceed a reasonable percentage of fixed assets". (Batty; 1963: 159)
3. **Flexibility:** "The Company's desire for flexibility in future financing decision also affects the capital structure of the company. Therefore the company should compare the benefits and cost of attending the desired degree of flexibility and balance then properly."(Schwartzman and Ball; 1977: 65)
4. **Control:** If management has voting control over the company and is not in a position to buy any more stock, debt, may be a choice for new financing. On the other hand, management group that is not concerned about voting control may decide to use equity rather than debt.
5. **Profitability:** The firms with very high rate of return on investment use relatively little debt. Their rate of return enables them to do most of their financing with retained earnings.
6. **Taxes:** Interest is deductible expenses while dividend are not deductible. Hence the higher a firm's tax rate, the greater is the advantage is using debt.
7. **Interest rate:** This affects the choice of securities to be offered to investors. High interest rate makes financing costly. When funds are obtained easily and cheaply, there is greater attitude for choice of types of security to be used.
8. **Operating leverage:** The Company with a high level of earnings before interest and taxes can make a profitable use the high degree of leverage to increase return on the shareholder's equity.

9. **Floation costs:** Floation cost is incurred only when the funds are raised. The cost of floating a debt is less than cost of floating and equity issue. This may encourage a company to use debt than issue equity shares.
10. **Market condition:** conditions in the stock and bonds market undergo both long and short term changes which can have an important bearing on a firm's optimum capital structure.
11. **Growth rate:** Faster growing firm's must rely more heavily on external capital. Other factors are stability of sales, cash flow ability of a company, nature of industry and capital requirements etc.

### 2.1.5 Optimum Capital Structure

The overall cost of capital is minimized; theoretically at least. When the firm reaches its optimum capital structure. The optimum capital structure strikes a balance between the risk and returns and thus maximizes the price of the price of the stock.

) "There is no such thing as the model capital structure for all business undertakings. One way of planning the capital structure is to make it fit into a model compiled from a number of different experiences that may have been drawn from the historical ratio of the firm." (Kuchal; 1977: 390)

) "Optimum capital structure can be properly defined as that combination of debt and equity that attains the stated managerial goals maximization of the firm's market value, and which minimizes the firm's cost of capital. As the existence of an optimum capital structure implies the simultaneous optimization of both the cost of capital and the firm's market value, occupies a central position in the theory of financial management." (Phillipatos; 1974: 237)

) "An optimum capital structure would be obtained at the combination of debt and equity that maximizes the total value of the firm (value of

shares plus value of debt) or minimizes the weighted average cost of capital." (Panday; 1999: 277)

) "firm has certain structure of assets, which offers net operating earnings of a given size and quality and gives a certain structure of rates in the capital market, there is some specific degree of financial leverage at which the market value of the firm's securities will be higher (or the cost of capital will be lower) than at any other degree of leverage." (Soloman; 1963:92)

Some of important objectives of the optimal structure are as follows:

- ) To maximize return on equity capital
- ) To minimize cost of capital
- ) To minimize risk
- ) To increase flexibility
- ) To maintain control power
- ) To employ high grade security

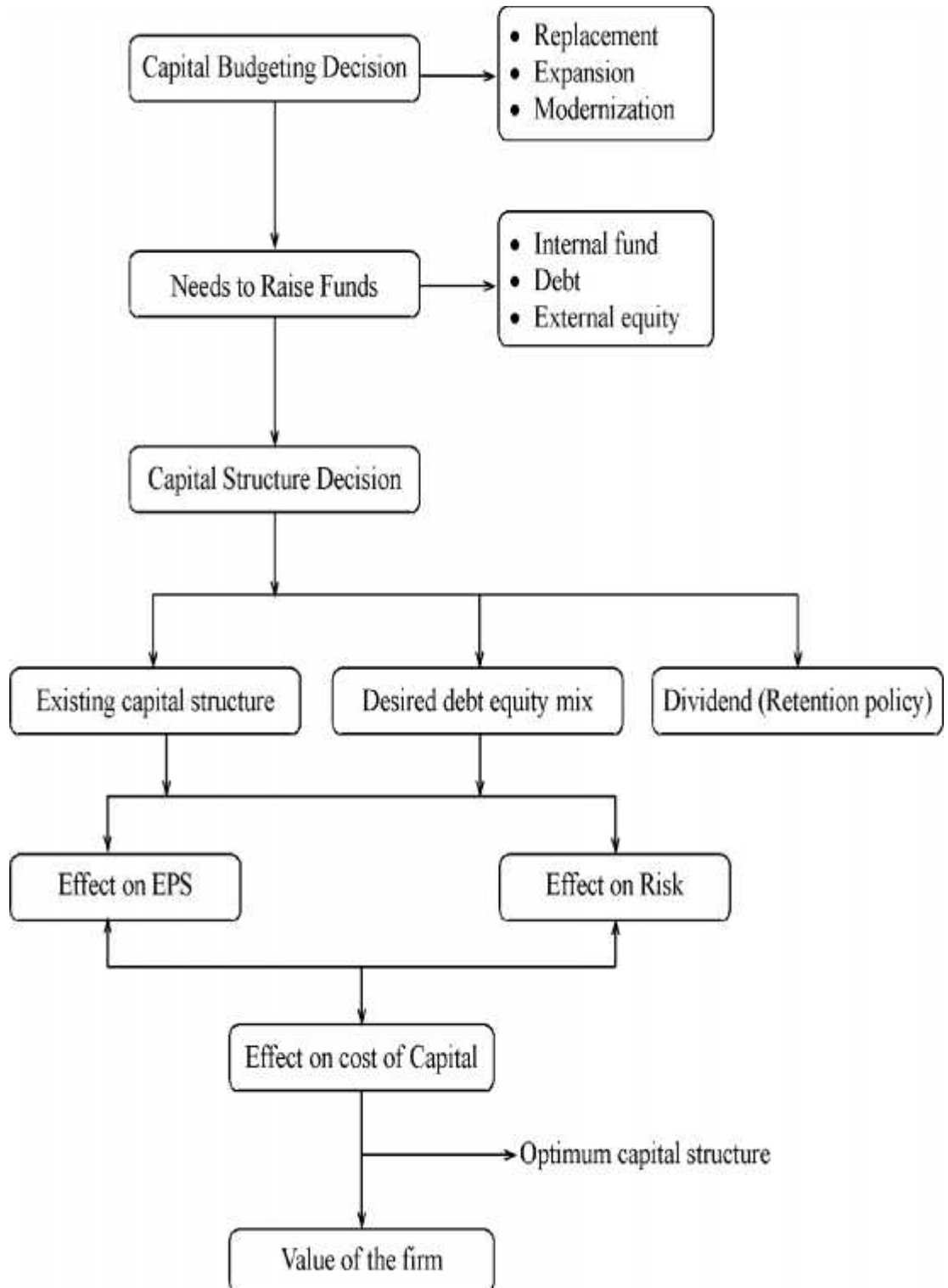
### **2.1.6 Capital Structure Decision**

"Capital structure with a reasonable proportion of debt and equity is called the optimal capital financing mix of optimal capital structure. Since, a proper balance between risk and return to stockholder is necessary, the financing of capital structure decision is a significant managerial decision as it influences the shareholders' return and risk. When ever funds have to capital structure initially at the time, of its promotion and subsequently. Funds have to be raised to finance investment a capital structure decision is involved." (Van Horne; 1997: 10).

A process of capital structure decision is shown in figure below.

**Figure 2.6**

**Capital Structure Decision**



(Source: Panday; 1988: 204).

According to the above capital structure decision chart, demand for funds generates a new capital structure. Since a decision has to be made as to the equality and forms of financing, the decision will involve an analysis of the exiting capital structure and the factor which will govern the decision at the present. The dividend decision bearing on the capital structure may effect its debt equity mix. The debt equity mix has implication for the shareholder's earning and risk which in turn will affect the cost of capital and the market value of the firm.

## **2.2 Review of Journals and Articles**

This section is devoted to review of important empirical works, concerning capital structure and cost of capital since 1958 till 2005. 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, some important studies and their findings are presented. In this section, review will be made on the foreign studies including Indian studies. The review is undertaken in four subsections. Section I focuses on the review of empirical works carried up to 1960s with their major findings. The second section deals with the review of studies during 1970s. Third section is devoted to review of studies during 1980s and finally fourth section deals with studies during 1990s respectively.

### **(i) Review of Empirical Works (up to 1970s)**

**Modigliani and Miller (1958)** in their **first study**, they used the previous work of 'Allen and Smith' in support of their independence hypothesis. In the first part of their work, MM tested their proposition I the cost of capital is irrelevant to the firm's capital structure, by correlating after tax cost of capital, with leverage,  $B/V$ . They found that the correlation coefficient is statically in significant and position in sign. The regression line does not sauciest a curvilinear, 'u' shaped cost of capital key of traditional view, and then the data are shown in scatter diagram.

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

**Modigliani and Miller (1963)** were conducted the **second study** in 1963 with correcting their original hypothesis for corporate taxes and expected cost of capital to be affected by leverage for its tax advantages. They therefore wanted to test whether leverage had tax advantages or not. For this, they conducted the mathematical analysis regarding the effect of leverage and other variables only because of the tax advantage involved.

**Barge (1963)** tested the same hypothesis. For the study purpose, he utilized cross section data from three different industries-61 rail road industries, 63 departmental store companies and 34 cement industries.

For the railroad industries, he performed both yield as well as the average cost of capital test. The average cost of capital was computed by dividing the three year average income by the average total market value. He uses the ratio of long term debt to permanent capital, at book value as the measure of financial structure. The result obtained from the study suggested that the average cost of capital first tends to decline and then tends to rise as the debt capital increase in the capital structure.

In the department store study, he computed the leverage in the same manner as the rail road study. Result obtained from the support to the traditional view. Barges final test was on cement industry. In this study variables were estimated in the same manner as in the case of departmental store are results obtained from this study again concluded that the traditional view has supported.

**Weston (1963)** the research work done by Weston is 'A Test of Cost of Capital Proposition'. He made some important improvement in the cost

of capital model. He included firm size and growth as additional explanatory variables in his model.

He found the regression co-efficient of leverage to be positive and significant, when he used MM model. However, when the multiple regressions were run, he found that the correlation coefficient is significant and the regression coefficient is negative and significant. When the influence of growth is isolated, leverage is found to be negatively correlated with the cost of capital. He concluded that the apparent lack of influence of leverage on the over all cost of capital observed by MM was due to the negative correlation of leverage with earning growth.

Weston also tested MM proposition II. When he used the MM model, his results were found to be consistent with their results i.e. cost of equity is the linear function of debt equity ratio.

**Wipper (1966)** Wiper study is related to test the empirical relationship between ‘financial structure and value of the firm’. He tried to eliminate the principle problem of empirical study on the leverage and attempted to offer what were hoped to be more fruitful alternatives in determining the relationship between leverage and cost of capital. He found that shareholder’s wealth can be enhanced by judicious use of debt financing.

**Sharma and Rao(1967)** tested the MM hypothesis that after allowing for the tax advantage from the interest paid on debt the value of a firm is independent its capital structure on the data of 30 engineering companies from Indian engineering industry. In this cross- sectional study for the year 1963, 1964 and 1865 they concluded that debt has non tax advantages and investors prefer corporate to personal leverage. So, it can be concluded that value of a firm rises up to leverage rate considered prudent.

They found the co-efficient of debt variables to be more than’t’ the corporate income tax. They introduced debt as a separate independent



variable. They used two stages least square as a method of arriving at the true expected future earnings.

**Peterson (1969)**, in his study of manufacture firms showed the evidences contrary to the traditional view, on the relation between risk measured by the coefficient of variation of rate of return of total capital over the period of 1947-56 and leverage measured by the ratio of senior to junior capital at book value, then the ratio of senior to junior capital at market value and finally by the ratio of fixed charges to earning power.

**(ii) Review of Empirical Works (1970-1980s)**

**Rao and Lintznberges(1970)** were conducted the study of the effect of capital structure on the cost of capital in a less developed and less efficient capital market (India) and in a highly developed and efficient capital market (United States).

They found that the results for the American utilities are consistent to the MM proposition that except for the advantages of debt financing, the cost of capital is independent of capital structure, and the results also supported that the MM hypothesis that investors are indifferent for the firm's dividend policy.

In case of Indian utilities, the results are inconsistent to the MM approach and the traditional belief, the judicious use of financial leverage will lower the firm's cost of capital and investors have a preference for current dividends.

In conclusion, they contended that the MM approach after allowing for the tax advantage of debt, the firm's cost of capital is independent of capital structure does not appear to be application in the case of developing economy.

**Davenport (1971)** in his study used the British data of three unrelated industries chemical, food and metal manufacturing industries.

They had concluded that the results of his study did not support the MM contention, that the overall cost of capital is independent of the

proportion of debt and preference share in the capital structure of the firm. They supported the traditional view of cost of capital and leverage because his result shows the u-shaped cost of capital schedule with respect to leverage.

**Hamada (1972)** provided the evidences that support of the MM hypothesis. Lev and Pekelman (1975) tested the validity of multi period adjusted model and concluded that the equity and debt effect on the current period of financial policy of the firms. Similarly, Kim et. al. (1979) suggested that weak evidence supports to the Clientele hypothesis of miller. Schwartz and Aronson (1966), Remmers et.al. (1974) showed that industrial influence is not a significant determinant of financial structure in the USA, Norway and Netherlands. Scott (1972) conversely provided the evidence in the support of significant industrial influence on capital structure and suggested that firm in different industries have different financial structure. Scott and Martin (1975) also came to the same type of conclusions. Remembers et. al. (1979) also bolstered evidence for the significant industrial influence on financial structure in the Japanese and French cases.

**Rao and Rao (1975)** found the negligible positive impact of corporate income tax on corporate debt policy of manufacturing sector in India. Mishra(1978) showed that the evidence in favor of the tax avoidance hypothesis for sugar, Tobacco, trading Industries and Aggregate Corporate Sector of India. Chakarborty (1975) examined the effect of firm's characteristics on capital structure and found that negative association of debt and equity ratio of leverage, retained earnings, profitability scaled by capital employed and corporate tax and positive association with size, profitability scaled by sales and capital intensiveness measured by gross fixed assets to sales. Rao (1979) found the adverse effect of profitability on debt equity ratio. Pandey (1979) observed the adverse relationship between capital structure and cost of equity.

**Pandey (1978)** has tried to test the MM approach in the developing economy with taking the sample from four different utilities cotton, chemicals, engineering and electricity from Indian market. He made some improvement in the model derived by MM and used multiple regression equation for the year 1968, 1969 and 1970 for the pooled data of the three cross-section years. The improvement was made on the measurement of leverage and added earning variability and liquidity as risk measure variable in the regression equation. He used two types of leverage, the debt to total capital ratio, and the debt to equity ratio the two ratios were measured with or without preference share capital in the debt portion. Both leverage were done on book value and included short-term loan as part of leverage.

### **(iii) Review of Empirical Works (1980- 1990s)**

**Barnea, Haugen and Sanbet (1981)** identified three problems that occur because of debt financing. First is the stockholders incentive to accept sub-optimal and high-risk projects, which transfer wealth from bond holders. Second, the presence of debt in capital structure causes the firm to forgo any investment with positive net market value being lower than the debt value. The third is the bankruptcy costs where bankruptcy probability increases with company might not be able to generate profits to pay back the interest and the loans.

**Pandey's (1981)** study is concerned with the test of relationship between the cost of capital and leverage, effect of leverage, Cost equity and, effect of tax deductibility on cost of capital in Indian context. In the cross-sectional analysis of 131 observations drawn from Cotton, Chemical, Engineering and Electricity industries for the years 1986, 1969 and 1970, he found that the conclusion of MM independent hypothesis does not hold reliable conclusion specially in the context of India. **Matta (1984)** found the negative relationship between debt, equity ratio and growth rate. **Garg (1988)** suggested that there existed the relationship between

business risk and debt equity ratio. Pandey (1904) did the attitude survey of the practicing managers of 30 Indian companies and drew the conclusion that Indian practicing manager have the concept of optimal capital structure and it should be maintained by every company.

**Bawen et. al. (1982)**, Kester (1986) and Bradley et.al.(1989) studied in industrial influences on capital structure and found that the statistically significant industrial influences on financial structure. They have documented the leverage ratio of specific industries. Their results are on broad agreement and showed that drugs instruments, electronics and food industries have consistently low leverage paper, textile mill products, still, airlines and cement industries have consistently high leverage. Further, Bradley et. al. (1984) concluded that regulated industries are most highly levered firms.

Several studies under the framework of agency cost and asymmetric information modes are carried out on the specific characteristics of industries and firms that determine the leverage ratio and provide the guidelines in formulation of there financing policy. The result showed that the study of 1980s do not agree each other in respect to their findings except in the use of the relationship established between the fixed assets and leverage. Bradely et. al (1984) Kester(1986), Titman and Wessels(1988), Wedig (1988) Friend and Lang (1988) and friend and Hasbruck(1988) concluded that the increase impact of the volatility of earnings on leverage. Auebach (1985) and Kim Sorensen (1986) found that the positive relationship between the volatility and leverage ratio. In general, the results of the studies in regard to the relationship between the volatility and leverage are inconsistent with the agency cost theory. This theory contented that high variance firm has lower agency cost of debt and hence higher financial leverage.

**Mayer (1984)** pointed out that financial economists have not hesitated to give advice on capital structure, even though how firm actually chase their capital structure remains a puzzle as the theories developed did not

seem to explain fully actual financing behavior. Mayer states that internal financing is preferred more than external financing. This is due to the transaction (flotation) costs and the resulting agency costs of issuing new securities. When retained earnings are not sufficient, debt financing is the next choice before considering offering new stocks. The reason is that the flotation costs of debt issuing are lower than those of equity issuing.

**Auerbach (1985)** argues that leverage is inversely related to the growth rate because the tax deductibility of interest payments is less valuable to fast growing firms since they usually have more non-debt tax shields.

**Monohar Krishna Shrestha (1985)** His study on "analysis of capital structure in selected public enterprises" argue that most of public enterprises have confusing capital structure since the corporation are not guided by any objectives based financial plan and policies. The corporations are using least combination of debt with equity to avoid financial burden as far as possible. According to Mr. Shrestha, the debt-equity ratio should neither be highly levered to create too much financial obligations that lie beyond capacity to meet not should be much lower low levered to infuse operational strategy to bypass responsibilities with out performance. He used ratio analysis as the tool of analysis and found the selected public enterprises. He further added that in many instances adhocism become the basis of capital structure and most of them want to eliminate debt if possible to relieve financial obligations.

#### **(iv) Review of Empirical Works (1990 to Early 2000s)**

**Mackin-Mason (1990)** studied the tax effect on corporate financing decisions. The study provided evidence of substantial tax effect on the choice between debt & equity. He concluded that changes in the marginal tax rate for any firm should affect financing decisions. when already exhausted ( with loss carry for wards) or with a high probability of facing a zero tax rate ,a firm with high tax shield is less likely to finance with

debt .the reason is that tax shields lower the effective marginal tax rate on interest deduction.

**Harris and Ravi (1991)** pointed that numbers attempts to explain capital structure have proved to be inconclusive. The capital structure decision is ever more complicated when it is examined in an international context; particularly in developing countries where markets are characterized by controls and institutional constraints.

**Thies and Klock (1992)** found results that pertain to long term debt and common equity. The findings also refute claims that there is no cross sectional relationship between variability and capital structure and suggests that there are differences in the utilization of leverage across time and firms.

**Radhe S. Pradhan, (1994)** on his research financial management and practices in Nepal in 1992. The survey mainly dealt with financial function, sources and types of financing, financing decisions involving debt effect of change in taxes on capital structure, financial distress dealing with banks and dividend policy. The major findings of study connected with financial management are given as:

1. Banks and retained earnings are the two most widely used financing sources.
2. Generally, there is no definite time to borrow the issues stocks. That is majorities of respondents are unable to predict when interest rate will low or go up are unable to predict when the stock will go down or up.
3. The enterprises have a definite performance for bank loans at a lower level of debts.
4. Most enterprises do not borrow from one bank only and they do switch between banks which ever offer best interest rates.
5. Most enterprises find that banks are flexible in interest rate and convenience.

To sum up it can be said that out of numerous studies on the capital market of Nepal. This study is established itself as a milestone and an outstanding one.

### **2.3 Review of Thesis**

Under this section various thesis related to this study have been reviewed. There are as follows:

**Shanti Rai Parsai (1999):** In his MBA thesis "*A Study on Capital Structure of Nepal Bank limited*". in this research has some issues, to accept deposits with or without interest under saving and fixed other, deposits schemes, To provide loans taking the securities such as government securities, movable property, company shares or debenture, bill of exchange and promissory notes. This study's of specific objective are to analysis of debt and equity, trend of total assets and total liabilities, relationship between deposit and investment. To analysis the return in ratio to capital employed, relationship between deposit and net profit. Describe the structure and trend of income and expenditure. He has use of various financial and statistical tools such as ratio analysis, percentage, index, trend analysis and coefficient of correlation.

This study found that the major contribution to the total liabilities is deposit, followed by net worth and borrowing from other banks. The major proportion of the total assets are: bills loans and advances followed by investment in share and debenture, cash and other bank balance and others assets. During this study total assets and liabilities is in increasing trend. It also increasing trend of total deposit and investment. Total deposit and total assets, net profit of other bank is highly fluctuating. Its EPS is increasing tend. There is significant relationship them total assets and net profit, total investment, total deposit and total investment but there is not significant relationship between net worth and net profit. Total income and total expenses are not under control of the bank.. The increasing rate of total income and total expenditure are highly fluctuating. He has suggested total income and total expenditure, total deposit and total investment must be

control by the bank. The bank needs to improve market price of the share reduce its expenses and control fluctuation in the earning per share.

**Kamal Bahadur Rajlawat (1999):** In his MBA thesis paper that, "*A Study on Capital Structure of Necon Air Ltd.*" This specific objective are; growth and polices of NAL, to examine the financial position, review of various study relating topic and analysis of capital structure of the company. He has used some of financial and statistical tools such as: ratio analysis, correlation co-efficient. Time series, percentage, graph etc. From this study focus on debt and equity of the company and its result of debt and equity ratio is higher than needed. It means higher the debt cerates higher the risk. Which is dangerous the creditor point of view. On other hand higher debt capital is serious implication form the firm's point of view. In this condition the capital structure would lead to inflexibility in the operation of the firms as creditor would exercise pressure and interfere in management. Mrs Rajlawat suggest that Necon air Ltd. should decrease its debt capital drastically as possible as it can on the ratio of to 2:1 is the best ratio fro optimal capital structure. That is why the company should reduce it's heavy burden of interest payment.

**Shambhu Prasad Prajuli (2001):** In his master level thesis "*Capital Ownership Structure and it's Impact on Profitability of Nepal Lever Ltd.*" The main objective of this study is to evaluate the capital structure and specific objective are: to study the relationship of debt and equity shareholder, EBIT and interest payment. To analyze the return on capital in relation to capital employed. He has used some of the statistical and financial tools such as: ratio analysis, percentage, correlation coefficient, index etc. He found that its long term debt seems very high at the time of establishment. The debt equity ratio in term of long term debt and shareholder equity has been decreasing trend. His shows low degree of positive relationship between total debt and shareholder equity. There is not significant between debt and equity. The capital structure is not optimum. In order to optimum



capital structure there must be significant relationship between debt and equity. The debt to total capital ratio computed in term of shareholder equity to total assets shows the increasing trend which means the company has been increasing equity fund in raising the assets. The relationship between interest payment and EBIT is not significant. He suggest from the Du point analysis, it is seen that the assets use efficiency but profit margin and equity multiplies is in decreasing tend. Which caused continuous decrease in ROE? Now it appears that ROE could be levered up by increasing amount of debt in the firm. In this study shows that some of fiscal year, there is no long term debt. He recommended the maintainers of a proper capital structure by including long term debt.

**Nibedan Baidy (2004):** His MBA research on title of "*Capital Structure Management of Manufacturing Companies Listed in NEPSE*". Under this study, the main objective is to analyze, evaluate and interpret their capital structure employed by the selected organization but specific objective are: to examine the capital structure. To analyze cost of capital and return on capital in relation to the employed, debt servicing capacity of these company. He can be used financial and statistical tools are ratio and percentage. He found the average Dol is negative and positive. Negative shows the inefficient earning capacity of the firm which try to increase sales volume. The average ratio between shareholder equity and total assets for Arun vanaspati udhoyog and Jyoti spinning mills is negative. It's shows the negative value of shareholder equity. This indicates that all the assets have been produced out of debt capital, which is not good for any manufacturing company. In this study shows EPS, P/E ratio and Book value per share of Nepal lever limited is higher then other company. The higher price ratio indicates the greater confidence of investors with its future. Book value per share is negative as companies have negative net worth in an average. Cost of equity is also higher of Nepal level Ltd. in these selected companies. The use of less costly debt fund increased the risk to the shareholders. This causes the equity capitalization rate to increase. At last he suggests increase the equity proportion financing its assets to be a safe mode against liquidation. The

debt amount is very huge and that is a need to reduce the debt capital. All the companies should try to streamline their sales. To earn high amount of profit from the sales revenue by increasing operating efficiency. Most of Nepalese manufacturing company are losses. This reason is high operating cost of production, unskill manpower, over staffing, misuses of facilities etc. This causes should be indicate by the management.

**Susil Dev Subedi (2005):** In his MBA thesis "*A Study on Capital Structure of Nabil Bank Ltd.*" In this studies specific objective were analyze the capital of Nabil Bank Ltd. 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. 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 determent factor to capital structure. Debt and equity are properly mixed good capital structure is formed. Price earning 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.

**Niraj Mishra (2005):** In his analytical study "*A Study of Capital Structure Management of Selected Manufacturing Companies*". This study has specific objective are analyze cost of capital and return on capital in relation of the employed. To examine the capital structure and debt servicing capacity of the company. He used analytical tools ratio analysis, mean, standard deviation, coefficient of variance, correlation coefficient. This study find average DOL is negative which shows the inefficient earning capacity of the firm. The average DFL is less then one. There is no any consistency in the DOL and DFL for the same types of manufacturing companies. Debt equity

and interest coverage ratio for Jyoti spinning mills Ltd. is negative as the company has negative equity. Interest coverage ratio is negative, it shows that the company's earnings are not sufficient even to repay their interest. Due to the use of lower amount of debt. The profit margin for the Jyoti spinning shows negative, which indicates that the company is suffering loss during almost all the study period. ROA for Jyoti spinning is negative which indicates that the assets of the company are not generating profit. The higher P/E ratio indicates greater confidence of investor with its future. Average overall cost of capital and cost of equity of Jyoti spinning is negative and other Nepal lever Ltd. and Bottlers Nepal are positive. Correlation coefficient of debt and shareholder's equity for Jyoti spinning negative correlation but Nepal lever and Bottlers Nepal are positive correlation. Correlation coefficient between EBIT and net profit for Jyoti spinning mills and Nepal lever Ltd. are negative correlation but Bottlers Nepal Ltd. is positive correlation. Correlation between EBT and net profit for Jyoti spinning mills and Nepal lever Ltd is positive correlation and Bottlers Nepal Ltd shows negative correlation. He concluded that the company's policy to increase current liabilities by replacing long term loan is not according to the principle of capital structure management. The use of debt would save the tax if the would be earning but in reality of Jyoti spinning mills. There is no earning so there is not saving. His recommendation was increase in current liabilities would effect the liquidity aspect of the company. Short term borrowing is more risky because short term interest rates are more little than longer rates. Therefore there is maintaining proper capital structure by including long term debt.

## **2.4 Research Gap**

This study is different in the sense that the selected companies are totally different from the above previous studies. The study totally revolves around the banking and the named of selected commercial banks. This study done considering the data of five year (2001/02-2005/06) all the selected

banks. This study tried to analyze and evaluate the relationship of capital structure with various variables on like, leverage ratio, cost of capital, cost of equality and so on. Most of the researcher did not use **SPSS** programme so I used that programme and calculate the statistical tools which is used in multiple regression.

# CHAPTER-III

## RESEARCH METHODOLOGY

### 3.1 Introduction

Research refers to systematic and objective attempt. Which is used to study a problem for the purpose of deriving general principles. The investigation has been guided by previously collected information and aims to add to the body of knowledge on the subject "Research methodology is the way to solve systematically about the research problem." (Kothari 1990; 39) "The research for gaining the knowledge about method of goal methodology." (Joshi 2001; 12.13) This chapter includes research design. Nature and source of data. Population and sample Data Collection and procedure and method of analyses. To accomplish the goal, this study follows the research methodology described in this chapter.

### 3.2 Research Design

Research design is the plan structure and strategy of investigations conceived so as to obtain answer to research questions and to control variance. "A research design is purely and simply the Framework or plan for a study that guides the collection and analysis of the data." (Goes; 1989:51) The main objective of this study is to analyze and evaluate the capital study of selected commercial Bank. This study follows the analytical and descriptive research design. To complete this study following design and format has been used. First of all information and data are collected. The important information and data are selected. Then data is arranged by using manner. After that data are analyzed by using approach financial and statistical tools. In analysis part interpretation and comments are also made where ever necessary. Result and conclusion are given after analyses of data recommendation and suggestion is also given. The design has been adopted from previous research works.

### **3.3 Nature and source of Data**

This study conducted on the basis of the secondary data for the characteristic study annual report of the selected banks Supporting data and information are obtained from the office of selected banks. Booklets, Documents other published and unpublished materials, thesis newspaper are the important source of data. The secondary data have been collected from financial statement. Annuals reports and from Nepal stock. Com of the office website of Nepal stock exchanged Ltd security exchange Board and the related office.

### **3.4 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 and loss A/C stock exchange security board and Nepal Rastra bank and informal enquiries form the banks personal.

### **3.5 Population and sample**

The time limited and unavailability of the relevant data had forced met to make research on the few commercial banks functioning allover the kingdom and most of their stocks are trade activity in the stock market out of them commercial Bank have been chosen this study on the sample commercial bands selected are as follows.

1. Nepal SBI Bank Ltd.
2. Everest Bank Ltd.
3. Nepal Investment Bank Ltd.
4. Himalayan Bank ltd.

### **3.6 Method of Data Analysis**

As mentioned earlier this study is confined to analysis of capital structure of the few selected commercial Band in Nepal. To research the objective the

collected data are computed and analyzed using financial and statistical tools. The various tools applied in this study, has been briefly presented below.

### **3.6.1 Financial Analysis**

Financial tools are used to examine the financial performance i.e. strength and weakness of band. In this study financial tools like ratio analysis and financial statement analysis have been used.

The analysis of financial mix is performed by using ratio analysis. It's a powerful tool of financial analysis. A ratio analysis is defined as. "The indicated quotient of two mathematical expressions and as the relationship between two or more thing."(Webster's new colloquia Dictionary; 1975:958). It is used to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial condition can be determined. Capital structure ratio.

The ratio indicates the proportion of debt and equity in financing the firm's assets. It is concerned with the long term solvency of a firm. Concerned with the long-term solvency of a firm. Capital structure rations are calculated to measure the financial risk and firm's ability of using the debt for the benefit of the shareholders. "The choice between debt and equity depends on ht cost risk and control. The cost of capital is the minimum rate of return a project must generate to be acceptable to the shareholders. Charges in the debt equity mix after the risk ness of the firm's earnings and with that the cost of the two sources of financial capital are affected. Cost or risk consideration would favors equity however maintaining control can be pivotal when ever capital structure decisions are being made and the choice between debt and equity can at times tilt in favour of debt." (Glen and pinto; 1995:41)

#### **(i) Debt to Equity ratio**

This ratio is a measure of the relative amount provided by lenders and owners. It is also known as "External internal Equity Ratio." It is calculated according to the following.

Formula,

$$\text{Debt Equity Ratio} = \frac{\text{Amount of Debt}}{\text{Amount of Equity}}$$

This ratio indicates the cushion of ownership funds available to debt holder. It gives an idea of the amount of capital supplied to a firm by internal funds or owners an average debt to equity ratio of 1:1 is acceptable.

**(ii) Debt ratio**

The debt ratio is defined as total debt divided by total assets. It indicates the percentage of assets that are financed through debt. It is calculated as under

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

This ratio should be 1:2 or 0.5:1. A ratio above 1:2 or 0.5:1 implies that lenders and creditors were providing more finance than ordinary shareholders and that too without expectation of a share in any surplus as compensation to creditors in extending credit. A very low ratio can cause worry to shareholders as it means the company is not using debt to best advantage.

**(iii) Interest coverage ratio:**

It is also known as times interest earned ratio. "This ratio measures the debt servicing capacity of a firm as far as fixed interest on long term loan is concerned. The interest coverage ratio is the sum of net profit interest and taxes divided by interest charges.

$$\text{Interest coverage ratio} = \frac{\text{Net profit before interest and tax}}{\text{Interest charge}}$$

This ratio shows how many times the interest charges are covered by funds that are ordinarily available to pay the interest charges. A high ratio is desirable but a too high ratio indicates that the firm is very conservative in



using debt. A lower ratio indicates excessive use of debt or inefficient operations.

**(iv) Earning per share (EPS)**

A part from return the profitability of a firm from the point of view of the ordinary shareholders is earning per share. It measures the profit available to equity shareholder per share.

$$\text{EPS} = \frac{\text{Net profit after tax} - \text{Pref. Divident}}{\text{No. of equity share}}$$

**(v) Price Earning ratio (P/E Ratio)**

Price-Earning ratio indicates investor's expectation about the growth of the firm's earnings.

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

**(vi) Return on Total Assets (ROA)**

This ratio measures the productivity of the assets. Higher ratio shows the higher return on the assets used in the business there by indicating effective use of the resources available and vice versa. The formula for computation of this ratio is as follows:

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

**(vii) Return on Share holder's fund or Equity (ROSE)**

This ratio is ascertained for measuring the efficiency of the investment made by the shareholders in the business on the basis of the relationship between shareholder's fund and net profit;

$$\text{ROSE} = \frac{\text{Net profit after tax}}{\text{Share holder fund}}$$

**(viii) Net income Approach (overall capitalization Rate)**

The overall cost of capital is measured by dividing net operating income by the value of firm is the book value debt and market value of equity overall cost of capital ( $K_o$ ).

$$K_o = \frac{\text{Earning Before Interest and tax (EBIT)}}{\text{Total value of firm (V}_o)}$$

**(ix) Net operating income Approach (Equity Capitalization Rate)**

This approach argues that the value of the firm remains constant to the degree of leverage and equity capitalization rate tends to increase with the degree of leverage Equity capitalization Rate ( $K_e$ ).

$$K_e = \frac{\text{EBIT} - I}{S} \text{ or } \frac{\text{EPS}}{\text{MVPS}}$$

**3.6.2 Statistical Analysis**

Statistical and Research can not be separated whenever research work is carried on statistics is most to have output of the research .To achieve the objective of the study, some important statistical tools such as mean, standard deviation, coefficient of variance, of correlation, regression analysis of important variables has been used which are as follows:

**a. Arithmetic mean ( $\bar{X}$ )**

The most popular and widely used measure for representing the entire data by on value is called the mean. The value is obtained by adding together all the items and diving this total by the no of items.

$$\bar{X} = \frac{X_1 + X_2 + \dots + X_n}{n} \text{ or } \frac{\phi X}{n}$$

Where  $\phi X$  = Sum of all values of the variables

n = No. of observation years

### **b. Standard Deviation (S.D.)**

The standard deviation measures the absolute dispersion or variability of a distribution the greater the amount of dispersion or variability the greater the standard deviation the greater will be magnitude of the deviations of the values from their mean and vice versa.

$$S.D. X \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

### **c. Correlation Coefficient (r)**

Correlation coefficient is calculated of relationship between the deferent variables. When change in the value of one variable is accompanied by the change in value of the other two variables are said to have correlation. The study used karl person's correlation coefficient. The correlation coefficient between two variables x and y usually denoted by  $r^{xy}$  is a numerical measure of linear relationship between them.

$$r X r_{xy} X \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}}$$

Where,  $x = x - \bar{x}$ ,  $x = \frac{\sum x}{n}$

$$Y = y - \bar{y}, y = \frac{\sum y}{n}$$

### **d. Probable Error (P.E.)**

The Probable error of the coefficient of correlation helps in interpreting its value. The probable error helps to determine reliability of computed correlation coefficient so far as it depends on the condition of random sampling. The probable error is defined by

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

It can be interpreted to know whether it calculated value of is significant or not in the following way.

- ) If  $r < PE$  There is no evidence of correlation i.e. r is not at all significant.

- ) If  $r > 6$  P.E. The existence of correlation is practically certain i.e.  $r$  is significant.
- ) The P.E. of correlation may be used to determine the limits with in which the population correlation coefficient lies. The limit of the population correlation is  $r \pm$  P. E.

### e. Regression Analysis

Regression is the measure of the average relationship between two or more variables in term of the original units of the data. In other word Regression analysis is a statistical device which is widely used in almost all research work in order to estimate the unknown values of one variable from known value of other variables. In this study includes simple and multiple regression models to examine the empirical relationship between the variable.

#### (i) Simple Regression Analysis

Simple regression if the estimation of unknown value or prediction of one variable from known value of the other variables.

$$Y = a + bx$$

Where,  $a$  = Intercept or Regression constant

$b$  = slope of regression line or Regression coefficient.

#### (ii) Multiple Regression

Generally the form of multiple regression equation with two or more independent variables say,  $X_1, X_2, \dots, X_n$  is as follows.

$$X_0 = a + b_1 X_1 + b_2 X_2 + \dots + b_n X_n$$

Coefficient  $b_1, b_2, \dots, b_n$  associated with  $X_1, X_2, \dots, X_n$  in the above equation are commonly described as regression coefficient and value 'a' represents regression constant. The above multiple regression equation depends upon the number of independent variable i.e.  $X_1, \dots, X_n$ .

#### Regression constant (a)

The value of 'a' in regression model indicates the average level of dependent variable when independent variable is zero. In another word, regression constant 'a' represents the mean or average effect on dependent variables if other variable remain constant. It is also called intercept value.

**Regression constant (b)**

The regression coefficient of each independent variable indicates the marginal relationships between dependent variable and independent variable. Alternatively, the coefficient describes how the changes of independent variables affect on the value of dependent variable.

## **CHAPTER -IV**

### **DATA PRESENTATION AND ANALYSIS**

This chapter constitutes the most crucial part of the study. It provides mechanism for meeting the basic objectives stated earlier in the first chapter of this research. The research has followed the, methodology described in this third chapter in order to attain the objectives. Thus, application of the major variables taken into account for the purpose study are total Debt and Total Assets, EBIT and EBT, Net Profit after tax and Shareholder's Equity, EBIT and Interests, Net Income and Net Operating Income approach, Co-efficient of Correlation analysis of different variables of selected banks.

The firm should maintain a sound capital structure to run its business operation in this competitive world. Both excessive as well as inadequate capital positions are dangerous from the firm's point of view. So, an enlightened management should, therefore, maintain right capital structure to meet its objectives.

#### **4.1 Financial Analysis**

The ratios of a firm by themselves do not reveal anything. For meaningful interpretation, the ratios of a firm should be compared with the ratios of similar firms and the international and national standard and industry norms. Such comparisons will reveal whether the firm is significantly out of line with its competitors. If it significantly out of line, the firm should undertake a detailed analysis to spot out the troubled areas. The study is conducted using each of the bank's financial statement for the last six fiscal years. Hence various as well as statistical tools to analyze the compatibility of the banks.

### 4.1.1 Calculation of Debt Ratio

Debt ratio shows what portion of the capital assets is financed by outside funds. When successfully employed, this ratio benefits the shareholders by raising their expected return-earnings per share. High ratio shows bank's success in exploiting debt to be more profitable as well as it also indicates its riskier capital structure and vice versa.

**Table 4.1**



**Debt Ratio of Selected Banks**

Year Bank	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D	CV(%)
EBL	0.6224	0.8934	0.6908	1.0923	0.9690	0.8536	0.1948	22.82
HBL	0.5389	0.5490	0.7309	0.7660	0.7733	0.6716	0.1177	17.52
SBIL	0.9821	0.6904	0.6531	0.7268	0.7783	0.7661	0.1293	16.87
NIBL	0.6786	0.7459	0.7619	0.7826	0.8201	0.7578	0.0523	6.90

*Source: Annual reports and website of concerned banks.*

**Figure 4.1**

**Debt Ratio of selected Banks**

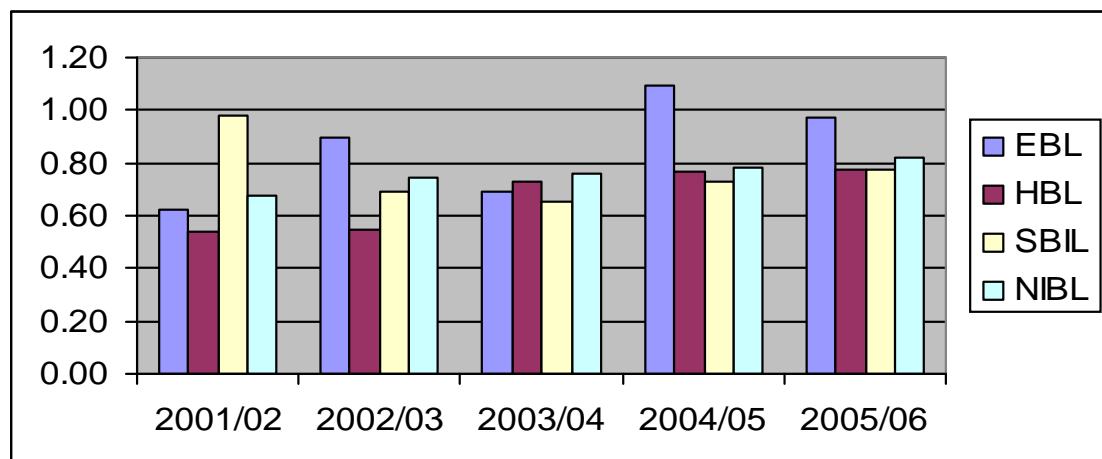


Table & Figure 4.1 of debt ratio of the selected banks over the study periods. In terms of total debt to total assets reveals that the selected banks are highly leveraged (i.e. more than 60 percent in average) on five years time horizon. It means the assets of selected banks have been financed more funds collected from creditors.

Everest Bank has the highest average ratios of 85.36 percent in comparison to the lowest of 67.16 percent of HBL. In other words, creditor's finance is 85.36 percent of total bank's fund and remaining 14.54 percent is shareholder's claim. The ratio of EBL has fluctuating trend over the study period. SBI has average ratios of 76.61 and NIBL less than that of SBI.

The ratio of banks is slightly fluctuating trend, the creditor's margin of safety is very low, which means they have high risk. The banks are found using higher debt capital to finance their assets.

The standard deviation are 0.1948, 0.1177, 0.1293, 0.0523 and CV are 22.82, 17.52, 16.87, 6.90 percent respectively EBL, HBL, SIBL, and NIBL. The CV of NIBL is smallest among selected banks that mean the ratio of NIBL is more consistency than other.

In terms of total debt to total assets reveals that the selected banks are highly leveraged (i.e. more than 60 percent in average) on five year time horizon. It means the assets of selected banks have been financed more funds collected from creditors. Everest bank has the highest average ratio of 85.36% in comparison to the lowest of 67.16 % of HBL. SBI has average ratios of 76.61% and NIBL is less than that of SIBL.

#### **4.1.2 Calculation of Debt- Equity Ratio**

The debt-equity ratio is the relationship between borrowed funds and owner's capital. It is determined to measure the firm's obligation to creditors in relation to the funds invested by owners. A high debt-equity ratio implies that a proportion of long-term financing is from debt sources that are the firm is using a great deal of financial leverage. Long-term creditors generally



prefer to see a modest debt-equity ratio since it means great protection and a greater stake in the company's future for equity holders. The total debt includes current accounts, saving accounts, calls and short deposits, overdraft fixed deposit, loan and advances and borrowing from other banks. Shareholder's equity or net worth includes paid-up capital, reserve and surplus.

**Table 4.2**  
**Debt to Equity Ratio of Selected Banks**

Year \ Bank	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D	CV(%)
EBL	14.36	13.31	12.94	16.87	22.33	15.96	3.88	24.28
HBL	12.98	16.71	13.67	13.62	12.90	13.98	1.57	11.22
SBIL	8.91	9.17	8.80	10.51	10.33	9.54	0.81	8.53
NIBL	4.78	10.53	13.85	10.88	12.36	10.48	3.45	32.88

*Source: Annual reports and website of concerned banks.*

**Figure 4.2**  
**Debt to Equity Ratio of Selected Banks**

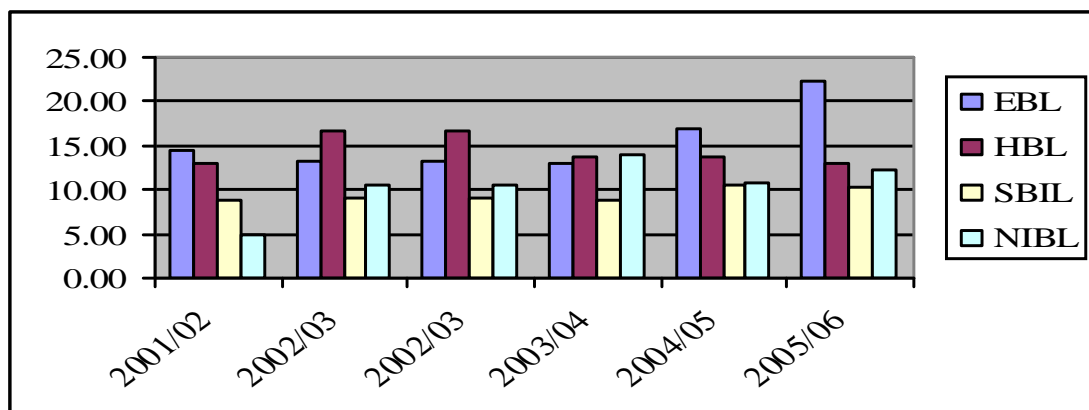


Table 4.2 and Figure 4.2 show the debt to equity ratio of selected banks over the study period. EBL has D/E ratio of 15.86 times on an average. It means debt capital financing is more than 15.86 times higher than shareholder's

equity. Highest D/E ratio is in the fiscal year 2005/06 and lowest in the fiscal year 2003/04 with 12.94 times.

HBL has an average of 13.96 times D/E ratio. It means debt capital financing is more than 13.96 times higher than shareholder's equity. SBI has average 9.54 times D/E ratio which is lowest among the selected banks. It means SBI debt capital financing is 9.54 times higher than equity financing.

NIBL has an average 10.48 times of D/E ratio. It means debt capital financing is more than 10.48 times of equity. SBI is able to maintain its D/E consistent than the other banks.

The standard deviation is 3.88, 1.57, 0.81, 3.45 and CV is 24.28, 11.22, 8.53 and 32.88 percent respectively EBL, HBL, SIBL, and NIBL.

EBL has D/E ratio of 15.86 times on an average. It means debt capital financing is more than 15.86 times higher than shareholder's equity. HBL has an average of 13.96 times D/E ratio. It means debt capital financing is more than 13.96 times higher than shareholder's equity. SBIL has average 9.54 times D/E ratio which is lowest among the selected banks. It means SBIL debt capital financing is 9.54 times higher than equity financing. NIBL has an average 10.48 times of D/E ratio. SBIL is able to maintain its D/E consistent than the other banks.

#### **4.1.3 Calculation of Interest Coverage Ratio**

The interest coverage ratio also named as the times-interest earned ratio is used to test the firm's debt servicing capacity. Interest coverage ratio reflects the firm's ability to pay interest out of earnings. This ratio shows the number of times the interest charges are covered by funds that are ordinarily available for their payment. Too high or too low ratio is unfavorable to the banks. Too high ratio implies unused debt capacity or a firm's conservativeness in using debt to its best advantage. Whereas, low ratio

imply a danger signal that the firm is using excessive debt and does not have the ability to offer assured payment of interest to the creditors.

**Table 4.3**  
**Interest Coverage Ratio**

Bank \ Year	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D	CV(%)
EBL	1.55	1.66	2.18	1.87	1.66	1.782	0.2523	14.2
HBL	2.21	2.42	2.77	3.00	3.31	2.741	0.4409	16.1
SBIL	1.43	1.61	2.31	2.02	1.69	1.813	0.3513	19.4
NIBL	1.59	1.90	1.71	2.61	2.01	1.963	0.3938	20.1

*Source: Annual reports and website of concerned banks*

**Figure 4.3**

**Interest Coverage Ratio**

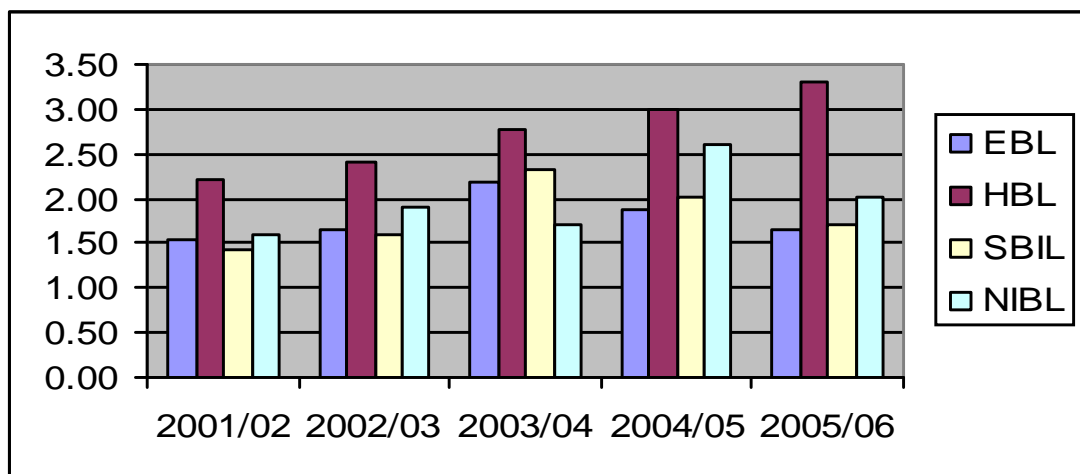


Table 4.3 and Figure 4.3 shows the effects of interest coverage ratio of selected banks over five years study period. HBL able to maintain highest interest coverage ratio than other banks. It's average interest coverage ratio during five year's period is 2.741 times.

EBL has average interest coverage of 1.783 times, which is lowest among the selected banks. The highest ratio of the yr 2005/06 is 3.31 and lowest ratio is 2.21 in the yr of 2001/02. But this ratio shows consistent trend.

SIBL has highest average ratio is 1.963. interest coverage ratio of SIBL shows the fluctuating of the study period. The highest ratio of the yr 2004/05 is 2.61 and lowest ratio is 1.59 in the yr of 2001/02.

NIBL has highest average ratio is 1.813. Interest coverage ratio of SIBL shows the fluctuating of the study period. The highest ratio of the yr 2003/04 is 2.31 and lowest ratio is 1.43 in the yr of 2001/02. The standard deviation of are 0.2523, 0.4409, 0.3513, 0.3938 and CV are 14.2, 16.1, 19.4, 20.1 percent respectively EBL, HBL, SIBL and NIBL.

The computed interest coverage ratio of both banks in above table shows how many times the interest charges are covered by funds that the ordinary available to pay interest charges.

HBL able to maintain highest interest coverage ratio than other banks. It's average interest coverage ratio during five years period is 2.741 times. EBL has average interest coverage of 1.783 times, which is lowest among the selected banks. But this ratio shows consistent trend. Ratio the computed interest coverage ratio of both banks in above table shows how many times the interest charges are covered by funds that the ordinary available to pay interest charges

#### **4.1.4 Calculation of Degree of Financial Leverage**

It is already stated that financial leverage refers to the use of interest bearing debt and preferred stock along with debt capital. The degree of financial leverage indicates the degree of financial risk, i.e., higher the value of degree of financial leverage, higher the degree of financial risk and vice-versa. The degree of financial leverage can be calculated as:

$$\text{DFL} = \text{Percentage Change in EBT} / \text{Percentage Change in EBIT}$$

Or,

$$DFL = EBIT/EBT$$

Here,  $EBIT - I = EBT$

**Table 4.4**  
**Degree of Financial Leverage**

Bank \ Year	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D.	CV (%)
<b>EBL</b>	3.02	3.26	2.50	2.19	2.16	2.63	0.50	19.90
<b>HBL</b>	7.73	4.86	4.70	4.81	5.38	5.49	1.28	23.22
<b>SIBL</b>	6.08	5.23	3.34	3.06	2.68	4.08	1.49	36.51
<b>NIBL</b>	2.67	2.11	2.41	2.06	1.97	2.25	0.29	12.84

*Source: Annual reports and website of concerned banks*

Average degree of financial leverage of EBL is 2.63. In this study period shows the decreasing trend. The lower ratio of the EBL is 2.16 in the yr of 2005/06. The standard deviation and CV is .050 and 19.90 % respectively.

Himalayan Bank Limited constitutes higher degree of financial leverage, which represents higher financial risk for the bank. Its average DFL is 5.49 times. The degree of financial leverage in 2001/02 is 7.37 which represents highest figure of degree of financial leverage over the study period. In the year 2001/02 to 2005/06 the ratios are 4.86, 4.70, 4.81 and 5.38 respectively. The standard deviation and CV are 1.28 and 23.22 % respectively.

Average degree of financial leverage of SIBL is 2.68. In this study period shows the decreasing trend. The lower ratio of the SIBL is 2.68 in the yr of 2005/06. The standard deviation and CV is .149 and 36.51 percent respectively.

The degree of financial leverage of NIBL has the lowest ratio of 2.25 times on an average, which reflects the bank has lower degree of financial risk. The DFL ratio is decreasing trend over the study period, i.e. 2.67, 2.11, 2.41, 2.06 and 1.97 percent in the fiscal year 2001/02 to 2005/06 respectively. The standard deviation and CV is .0.29 and 12.84 percent respectively. The CV of NIBL is lower than other. That means the ratio of NIBL is high consistency and SIBL is less consistency than others.

The degree of financial leverage of NIBL has the lowest ratio of 2.25 times on an average, which reflects the bank has lower degree of financial risk. HBL constitutes higher degree of financial leverage, which represents higher financial risks for the bank. Average DFL is HBL and SBI are 5.49, 2.63 and 4.08 times respectively.

#### 4.1.5 Calculation Return on Total Assets

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 banks assets; otherwise its survivable is threatened. The ratio explains net income for each unit of assets. Higher ratio indicates efficiency in utilizing its overall resources and vice-versa. Rate return on total assets is major tool to judge the operational efficiency of a bank. The return on total assets of selected banks is as follows:

**Table 4.5**  
**Return on Assets**

Bank \ Year	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D	CV(%)
<b>EBL</b>	1.30	1.20	1.50	1.40	1.50	1.38	0.13	9.45
<b>HBL</b>	1.14	0.91	1.06	1.11	1.55	1.15	0.24	20.66
<b>SBIL</b>	0.80	0.64	0.72	0.58	0.89	0.73	0.13	17.22
<b>NIBL</b>	1.13	1.3	1.15	1.44	1.64	1.33	0.21	15.99

*Source: Annual reports and website of concerned banks*

**Figure 4.4**

**Return on Assets of selected Banks**

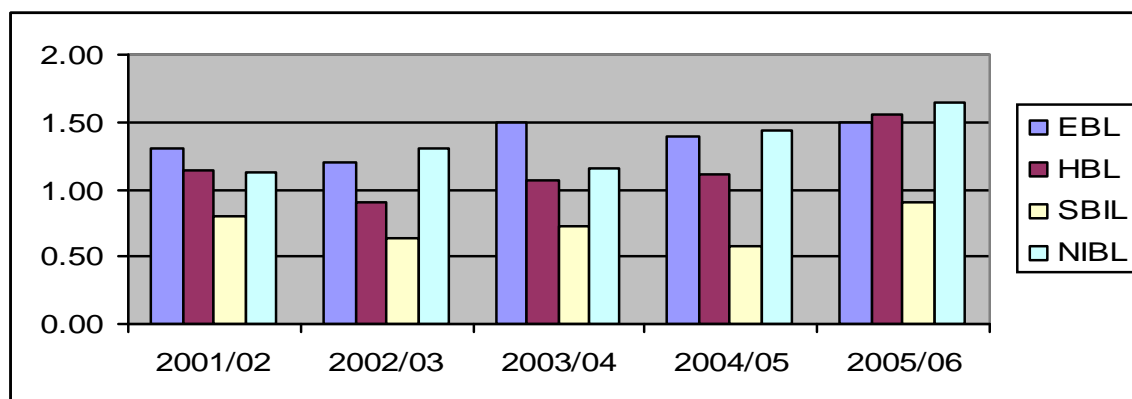


Table 4.5 and figure 4.4 shows the return on assets of selected banks over the study period.

EBL has highest average ROA among the selected bank i.e 1.38 percent. ROA of EBL shows the increasing trend, ratio of beginning two years are below the average and above the average in the rest of the year. Standard deviation and Coefficient of variations shows the consistently increasing trend. EBL has better utilizes its assets to generate profit than other companies.

Average ROA of HBL is 1.15 percent. In the fiscal year 2001/02, 2002/03, 2003/04 and 2004/05 ROA is below the average and in the fiscal year 2005/06 is above the average. ROA is in increasing trend except the fiscal year 2001/02. Which shows the performance of these banks is satisfactory. ROA of HBL is not consistent over the study period, since the Standard deviation is highest among the selected banks, i. e. 0.2384 and CV is 20.65%.

SBIL has lowest average ROA among the selected banks i.e 0.73 percent. In the fiscal year 2001/02, 2002/03, 2003/04, 2004/05, 2005/06 is 1.14, .091, 1.06, 1.11 and 1.55 respectively. Which means SBIL is able to earn 0.73 percent of its total assets. Return on total assets of SBI is fluctuating over the study period. The S.D. and are 0.1256 and 17.22 % respectively.

ROA of NIBL is in increasing trend over the study period. Average ROA of NIBL is 1.33 percent. In the fiscal year 2001/02, 2002/03, 2003/04, 2004/05, 2005/06 is 1.15, 1.3, 1.15, 1.44 and 1.64 percent. The ratio of first three year is below the average and above the average in the rest of the year. The Standard Deviation and CV are 0.213 and 15.99% respectively, which measure the consistency of ratio.

EBL has highest average ROA among the selected bank i.e.1.38 percent EBL has better utilizes it's assets to generate profit than other companies. SBI has lowest average ROA among the selected banks i.e. 0.73 percent. Average ROA of HBL and NIBL are 1.15 percent. 0.2348 percent, ROA of NIBL is in increasing trend over the study period.

#### **4.1.6 Calculation of Return on Shareholder's Equity**

A return on shareholder's equity is the measure of productivity of shareholder's funds. It carries the relationship of return on shareholder's equity. The shareholder's equity includes common share capital, preference share capital and reserve and surplus. Management's objective is to generate the maximum return on shareholder's investment in the firm. ROE is therefore the best single measure of the company's success in fulfilling its goal. Thus, this ratio is of great interest and value to the present as well as the perspective shareholders and also of great concern to management, which has the responsibility of maximizing the owner's welfare. The ratio equals the net profit after taxes divided by the common stockholder's equity.

Return on shareholder's equity SBIL found to be paying dividend in average Rs.22.41.Its gave Rs 30 in 2001/02 and decrease the DPS in 2002/03 to 2004/05. The year of 2005/06 SIBL gave high DPS is Rs. 34.56 in this study period. The standard deviation and CV is 6.54 and 42.57% respectively Net Profit after tax/Shareholder's Equity



**Table 4.6**  
**Return on Shareholder's Equity**

<b>Bank \ Year</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>Mean</b>	<b>S.D.</b>	<b>CV(%)</b>
<b>EBL</b>	20.508	18.174	22.792	22.486	34.247	23.641	6.210	26.266
<b>HBL</b>	27.388	19.971	19.865	19.996	25.901	22.624	3.708	16.389
<b>SBIL</b>	8.126	8.656	9.711	8.399	11.910	9.360	1.547	16.523
<b>NIBL</b>	10.888	18.323	20.986	19.183	24.763	18.829	5.082	26.990

*Source: Annual reports and website of concerned banks*

**Figure 4.5**

**Return on Shareholders Equity**

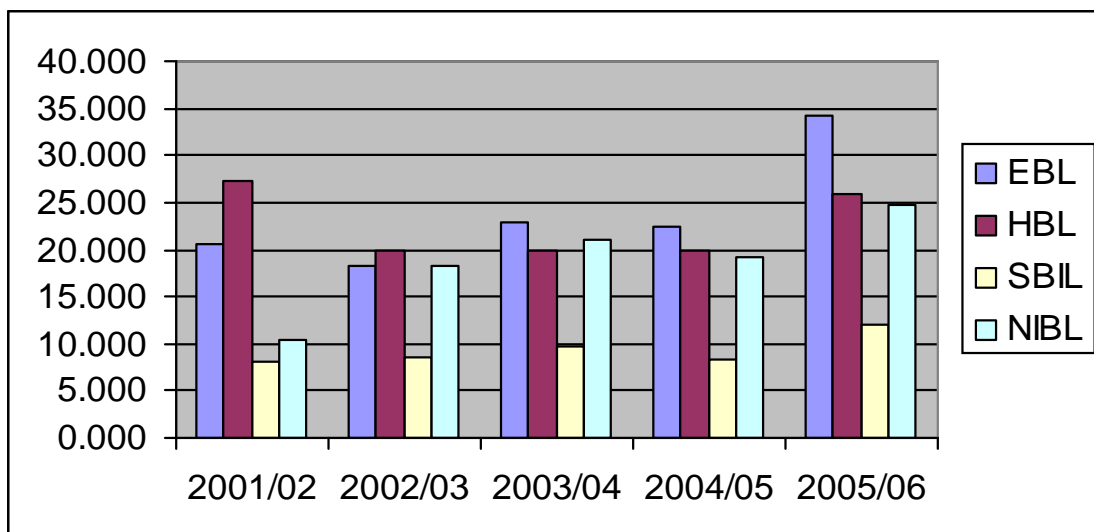


Table 4.5 and Figure 4.5 show the return on total shareholders equity over the study period. Among the selected banks EBL has highest average ROE i.e 23.641. ROE of EBL is in increasing trend. Ratio ranges highest of 34.247 in the fiscal year 2005/06 and lowest of 18.174 in the fiscal year 2002/03.

Return on shareholders equity of HBL ranges highest of 27.338 in the fiscal year 2001/02 to lowest in the fiscal year 2003/04 with 19.87 percent. Average ROE of HBL is 22.624 which mean HBL is able to generate 22.624 percent net profit on its shareholders equity.

Return on shareholders equity of SBI ranges highest of 11.910 in the fiscal year 2005/06 to lowest of 8.126 in the fiscal year 2001/02. Average ROE of SBI is 9.360 which is least among the selected banks. Which shows the weak performance of banks, in the maximizing the shareholders equity.

ROE of NIBL ranges highest of 20.986 percent in the fiscal year 2003/04 and lowest in the fiscal year 2001/02. Average ROE of NIBL is 18.829 over the five years period. Here NIBL is able to attain 18.829 percent on the shareholders equity fund.

The standard deviation is 6.21, 3.708, 1.547, 1.547, 5.082 and CV is 26.266,16.389, 16.523, 26.990 respectively EBL, HBL, SIBL and NIBL.

Among the selected banks EBL has highest average ROE i.e. 23.641. Average ROE of HBL, SBI and NIBL are 2.624, 9.360 and 18.829 percent on the shareholders equality fund respectively. ROE of HBL is least among the selected banks. Which shows the weak performance of banks, in the maximizing the shareholders equality.

## **4.2. Market Related Ratios**

### **4.2.1. Earning per Share**

.Earning per share shows the profitability of the firm on a per share basis; it does not reflect how much is paid as dividend and how much is retained in the business. EPS is one of the most widely used measures of the bank's performance. It is an important index of the bank's performance and the investors rely heavily on it for their investment decisions. In order to see the

strength of the share in the share in the market, EPS of selected banks are calculated as below:

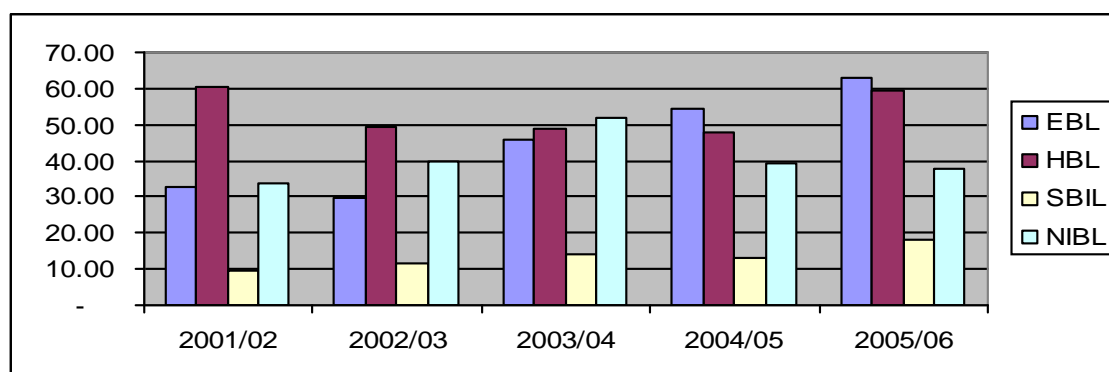
**Table 4.7**  
**Earning per share**

<b>Year</b> <b>Bank</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>Mean</b>	<b>S.D</b>	<b>CV(%)</b>
EBL	32.91	29.90	45.58	54.22	62.78	45.08	13.925	30.89
HBL	60.26	49.45	49.05	47.91	59.24	53.18	6.0331	11.34
SBIL	9.61	11.47	14.26	13.26	18.27	13.37	3.262	24.39
NIBL	33.59	39.56	51.70	39.31	37.81	40.39	6.7577	16.73

*Source: Annual reports*

**Figure 4.6**

**Earning per share**



The Table and Figure shows the Earning per share of selected companies over the study period. Earning per share of EBL ranges highest of Rs. 62.78 in the fiscal year 2005/06 and lowest in the fiscal year 2002/03 with Rs.29.90. Average earning per share of EBL is 45.08. Standard deviation and CV shows the moderate level of consistency in the ratio over the study period.

Earning per share of HBL ranges highest of Rs. 60.26 in the fiscal year 2001/02 and lowest in the fiscal 2004/05 with Rs. 47.91. Average earning per share of HBL is Rs. 53.18 over the study period, which is highest among

the selected banks. Here HBL possess strength on earning per share, which help to maximize the shareholders' wealth.

Average Earning per share of SBIL is lowest among the selected banks over the study period. Earning per share of SBI ranges highest of Rs. 18.57 in the fiscal year 2005/06 and lowest in the fiscal year with Rs.9.61. Earning per share of SBIL is increasing trend over the study period.

Earning per share of NIBL ranges highest of Rs. 51.70 in the fiscal year 2003/04 and lowest of Rs. 33.59 in the fiscal year 2001/02. Average EPS of NIBL is Rs. 40.39 over the study period. Earning per share of SBIL is in increasing trend. Average earning per share is Rs.13.37. The lowest EPS is Rs. 9.61 in the fiscal year of 2001/02 which is less than average EPS. EPS of SBIL is consistent.

Average earning per share of EBL, HBL are RS. 45.08 And RS. 53.18. Earning per share of HBL is highest among the selected banks. Here HBL process strength on earning per share, which help to maximize the shareholders wealth. Average earning per share of SBI is lowest among the selected banks over the study period. Average EPS of NIBL is Rs. 40.39 over the study period. Earning per share of SBI is in increasing trend

#### **4.2.2 Dividend per Share**

Companies generally prefer to pay cash dividends. They finance their expansion and growth by issuing new shares or borrowings. Companies like to follow a stable dividend policy since investigators generally prefer such policy for certainly reason. A stable dividend policy does not constitute constant DPS, but a reasonably predicible dividend policy.

**Table 4.8**  
**Dividend per share**

<b>Year</b> <b>Bank</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>Mean</b>	<b>S.D</b>	<b>CV(%)</b>
EBL	35	25	20	31.58	35	29.32	6.62	22.57
HBL	20	20	20	20	25	21	2.24	10.65
SBIL	30	20	15	12.5	34.56	22.41	9.54	42.57
NIBL	0	8	0	0	5	2.60	3.71	142.88

*Source: Annual reports*

This Table shows the dividend per share of selected banks over the study period. Here HBL found to be paying relatively more dividend in average Rs. 29.32. two years dividend per share Rs.35 in 2001/02 and 2005/06. In 2003/04 dividend per share Rs. 20 which is minimum dividend per share of the study period in this bank. The S.D. and CV is 6.62 and 22.57% respectively.

HBL has given the Rs.20 in 2001/02 to 2004/05 and increase the DPS in 2005/06 Rs.25. the average DPS is Rs.21. The standard deviation and CV is 2.24 and 10.65 percent respectively. It's distributed bonus share.

NIBL found to be paying dividend in average Rs.22.41. Its gave Rs 30 in 2001/02 and decrease the DPS in 2002/03 to 2004/05. The year of 2005/06 NIBL gave high DPS is Rs. 34.56 in this study period. The standard deviation and CV is 6.54 and 42.57% respectively.

SBIL found to be paying dividend in average Rs.2.6. Its gave DPS Rs.8 in 2002/03. In the year of 2001/02, 2003/04 and 2004/05 did not gave DPS which is Rs.0, last of study period DPS is Rs.5. The standard deviation and CV is 3.71 and 42.88% respectively. The issue of bonus share is advantageous in some cases. Sometimes issuing bonus share reduces the market price of share and makes it more attractive to investors.

HBL found to be paying relatively more dividend in an over age Rs.29.32, followed by NIB, EBL, SBI is the lowest dividend previous period. HBL distribute bonus share. The issue of bonus share is advantageous in some cases. Sometimes using bonus share reduces the market price per share now makes it more attractive to investor.

### 4.2.3 Price Earning Ratio

Price earning ratio reflects the price currently being paid by the market for the each rupees of currently reported EPS. In other words, it measures investor 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 earning 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:

$$P/E \text{ ratio} = \text{Market Price of a Share} / \text{Earning per Share}$$

**Table 4.9**  
**Price Earning Ratio**

<b>Year</b> <b>Bank</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>Mean</b>	<b>S.D</b>	<b>CV(%)</b>
EBL	12.31	14.88	14.93	16.04	21.97	16.03	3.59	22.42
HBL	16.59	16.91	17.12	19.20	18.57	17.68	1.14	6.45
SBIL	41.72	22.24	21.54	25.21	33.49	28.84	8.62	29.91
NIBL	22.62	21.01	18.18	20.25	21.23	20.66	1.63	7.88

*Source: Annual reports.*

Price earning ratio of EBL is lowest among the selected banks i.e.16.03. P/E ratio of EBL is increasing over the study period. At the beginning of the study period 2001/02 ratio is 12.31, while in the end of the study period it reaches to 21.97. The standard deviation and CV is 3.59 and 22.42 percent respectively.

Price earning ratio of HBL is shows 17.68 in average. Some of the year increase trend and last of 2005/06 fiscal year was decrease i.e 18.57 .In 2001/02,2002/03, 2003/04 and 2004/05 fiscal year was 16.59,16.91, 17.12 and 19.20 respectively. Average P/E ratio is 17.68 which is higher than EBL and lower than NIBL. The standard deviation and CV is 1.14 and 6.45 % respectively. P/E ratio of HBL is consistent in comparison to other banks.

The price earning ratio of selected banks over the study periods. Average price earning ratio of SBIL is Rs.28.84 times are highest among the selected banks. Price earning ratio of SBIL ranges highest of 41.72 in the fiscal year 2001/02 and lowest in the fiscal year 2003/04 with 21.54 times. On an average, the investors were interested to pay 28.84 times higher than per rupees of reported earning in the market. The S.D and CV is 8.62 and 29.91 % respectively.

Average price earning ratio of NBIL is Rs.20.66. which was second highest among the selected banks. Over all trend of price earning ratio shows the fluctuating trend. It ranges highest of 22.62 in the fiscal year 2001/02 and lowest in the fiscal year 2003/04 is 18.18. The standard deviation and CV is 1.63 and 7.88 %respectively.

Average price earning ratio of SBIL i.e. 28.84 times is highest among the selected banks. On an average, the investors were interested to pay 28.84 times higher than per rupee of reported earning in the market. Price earning of HBL is consistent in comparison to other banks with an average price earning ratio of HBL is 17.68. Price earning ratio EBL is lowest among the selected bank i.e. 16.03 P/E ratio of NIBL is 20.66 which is second highest among the selected banks. Over all trend of price earning ratio shows the fluctuating trend.

### 4.3 Analysis of Capital Structure

The analysis of capital structure is a concept of vital importance for this study. Here, both NI and NOI approach are considered to analyze the capital structure of the overall capitalization.

#### 4.3.1 Net Income Approach (overall Capitalization Rate- $K_o$ )

The total market value of firm is simply obtained by adding the market value of debt to the market value of equity.

$$K_o = EBIT/V$$

**Table 4.10**  
**Overall Capitalization Rate (NI Approach)**

<b>Year</b> <b>Bank</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>Mean</b>	<b>S.D</b>	<b>CV(%)</b>
EBL	6.14	5.59	6.07	4.10	4.59	5.34	0.93	17.47
HBL	7.73	4.86	4.70	4.81	5.38	5.49	1.28	23.22
SBIL	6.92	6.91	6.63	5.30	5.27	6.20	0.85	13.68
NIBL	5.35	4.88	5.15	4.95	5.27	5.12	0.20	3.92

*Source: Annual reports and website of concerned banks.*

Average overall capitalization rate of EBL is 5.34. In the study period highest is 6.14 in 2001/02 fiscal year and lowest is 4.59 in 2005/06 fiscal year. The standard deviation is 0.93 and coefficient of variation is 17.47 percent.

Average overall capitalization rate of HBL is 5.49. In the study period highest is 7.73 in 2001/02 fiscal year and lowest is 4.70 in 2003/04 fiscal year. Fiscal year 2002/03, 2004/05 and 2005/06 are 4.86, 4.81 and 5.38 overall capitalization rate respectively. The standard deviation is 1.28 and coefficient of variation is 23.22 percent.



Table shows the overall capitalization rate of selected banks over the study period. Over viewing the above calculated overall capitalization rate of SIBL is highest among the selected banks. Highest  $K_e$  is in fiscal year 2005/06. Some of year increase and decrease in overall capitalization .Average overall capitalization rate is 5.12 which is minimum of selected bank of study period. The standard deviation and CV is 0.93 and 17.47 % respectively.

Average overall capitalization rate of NIBL is 5.12 which is the least among the selected banks. Ratio of NIBL ranges highest is 5.35 in the fiscal year 2001/02 and lowest capitalization rate is 4.88 in the fiscal year 2002/03. The standard deviation and CV is 0.20 and 3.92 respectively.

Overall trend doesn't show any clear direction. Over viewing the above calculated over all capitalization rate of SBIL is highest among the selected companies. HBL is 5.49 which is lowest then SBIL. Average over all capitalization ratio of EBL is 5.34. Average overall capitalization rate of NIBL is 5.12 which the least among the selected companies.

#### **4.3.2 Net Operating Income (NOI) Approach (Equity Capitalization Rate – $K_e$ )**

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. According to this approach, overall capitalization rate,  $K_o$  as well as the debt capitalization rate,  $K_i$ , is independent of degree of leverage. However, the equity capitalization rate,  $K_e$ , increase linearly with financial leverage. Equity capitalization rate is obtained simply dividing the earning before tax by market value of the equity. Thus, under net operating income approach, the equity capitalization is computed as follows:

**Table 4.11**  
**Equity Capitalization Rate (NOI Approach)**

Bank \ Year	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D	CV(%)
EBL	12.11	9.69	9.85	9.20	6.63	9.49	1.95	20.59
HBL	8.95	10.04	9.34	8.83	7.92	9.01	0.77	8.59
SBIL	3.26	6.37	6.99	8.65	5.10	6.08	2.03	33.37
NIBL	6.05	7.25	8.34	7.14	6.79	7.10	0.83	11.70

*Source: Annual reports and website of concerned banks.*

The equity capitalization rate of EBL has decreasing trend of equity capitalization rate over the study period, having average rate of 9.49 where HBL, SIBL and NIBL has quite fluctuating trend over the years. In the fiscal year 2001/02 to 2005/06, the rate of EBL is in downward trend, i.e.9.69% in fiscal year 2002/03 and it again increased to 9.85%. Average rate is 9.49 which is greater than 9.20 in 2004/05 fiscal year. The standard deviation and CV is 1.95 and 20.59 respectively.

Average equity capitalization rate of HBL is 9.01. Over the study period ratio highest of 10.04in the fiscal year 2002/03 and lowest in the fiscal year 2005/06 is 7.92. Equity capital of HBL does not show any clear direction. The S.D. and CV is 0.77 and 8.59% respectively. Bank has a decreasing trend of equity capitalization rates are decreasing and the market is above the par value of the banks. The par value of selected banks has Rs. 100 per share.

Average equity capitalization rate of SBIL is 6.08. This is the lowest among the selected banks. Over the study period ratio highest of 8.65in the fiscal year 2004/05 and lowest in the fiscal year 2001/02 is 3.26. Beginning of the 4 year increasing trend but 2005/06 fiscal year was decrease of rate The S.D. and CV is 2.03 and 33.37% respectively.

Nepal Investment Bank Ltd. has average equity capitalization rate is 7.10%. This bank has a decreasing and increasing trend of equity capitalization rates. It's ranges highest equity capitalization rate is 8.34 in 2003/04 fiscal year and lowest is 6.05 in 2001/02 fiscal year. The S.D. and CV is 0.83 and 11.70 percent respectively.

Equality capitalization rate equality cost of banks was fluctuating in active. Average equality capitalization of EBL is 9.49. Overall trend shows the decreasing trend over the study period. Average equality HBL is 9.01 over the study period. Average equality of SBIL is 6.80. This is the lowest among the selected companies. Average equal to NIBL is 7.10 equality capitalization rates are decreasing and the market values above the par value in all bonus shares.

#### **4.4 Statistical Analysis**

##### **4.4.1 Coefficient of Correlation between EBIT and Interest Payment**

The relation between EBIT and interest payment is evaluated in order to measure debt-servicing capacity of the banks. It is assumed that there is significant relationship between EBIT and interest payment. Here interest payment (x) is dependent variable and EBIT (Y) is independent variable. Positive values show the positive relation and negative values shows the negative relation. The following result is obtained for selected banks.

**Table 4.12**  
**Relationship between EBIT and Interest Payment**

Banks	r	R <sup>2</sup>	PE	6 X PE	Level of significant
EBL	0.944	0.892	0.033	0.196	significant
HBL	0.821	0.674	0.098	0.590	significant
SIBL	0.775	0.601	0.120	0.722	significant
NIBL	0.992	0.985	0.005	0.027	significant

From the Table analysis; it's clear that the correlation between EBIT and interest payment in case of EBL, HBL, SIBL and NIBL is 0.944, 0.821, 0.775 and 0.992 which showed positive relationship. It shows that increase in EBIT, increase interest payment. On the other hand, the correlation between EBIT and interest payment of bank which shows higher positive. Considering the probable error (P.E.), the value of 'r' is greater than six times of the probable error. Therefore, it is depicted that the value of 'r' in banks is significant, i.e. there is significant relationship between EBIT and interest payment. It shows that the selected banks are significantly able to service their debt.

Correlation coefficient between EBIT and interest payment of EBIL, HBL, SBIL and NIBL is 0.944, 0.821, 0.775 and 0.992 which showed positive relationship. It shows that increase in EBIT, increase interest payment. On the other hand, the correlation between EBIT and interest payment of banks which shows higher positive relationship. Therefore, it is depicted that value of 'r' in banks is significant, i.e. there is significant relationship between EBIT and interest payment. It shows that the both banks are significantly able to service their debt.

#### **4.4.2 Coefficient of Correlation between Overall Capitalization Rate (X) and Debt-Equity Ratio (Y)**

Correlation of coefficient between overall capitalization rate (X) and debt-equity ratio (Y) in terms of total debt to net worth is calculated in order to measure whether increase in the debt-equity ratio decreases overall capitalization rate of the banks. Applying Karl Pearson's correlation coefficient, following result is obtained.

**Table 4.13**  
**Relationship between Overall Capitalization Rate and Debt Equity ratio**

Banks	r	R <sup>2</sup>	PE	6 X PE	Level of significant
EBL	-0.859	0.739	0.079	0.473	Insignificant
HBL	-0.419	0.176	0.249	1.492	Insignificant
SIBL	-0.957	0.916	0.025	0.153	Insignificant
NIBL	-0.363	0.132	0.262	1.571	Insignificant

Table shows the correlation coefficient between overall capitalization rate and debt equity selected banks over the period. Here correlation coefficient of EBL, HBL, SIBL, and NIBL are -0.859, -0.419, -0.957 and -0.363 respectively. Correlation coefficient of EBL, HBL, SIBL and NIBL shows the highly negative, low negative, highly negative and low negative respectively. Above result, correlation between overall capitalization rate and debt equity ratio of selected banks obtained poor negative relationship i.e., increase in debt capital portion in capital structure poorly decrease overall capitalization rate. Correlation coefficient of selected banks i.e. 'r' is less than six times P.E. of all banks so that the relationship of  $k_0$  and D/E ratio is insignificant.

Therefore, from above correlation coefficient, it cannot be ascertained to establish the relationship that the capital structure decision strongly affects the profitability. Hence, it can be concluded that the value of 'r' is insignificant and there is no proper relationship between overall capitalization rate and debt-equity ratio of selected banks. Correlation coefficient between overall capitalization rate and debt equality selected banks over correlation coefficient of EBL, HBL, SBIL and NIBL are -0.859, -0.419, -0.957, and -0.363 respectively. Correlation of EBL, SBIL and NIBL shows the highly negative, low negative, highly negative and low negative respectively. Correlation coefficient of selected banks i.e. 'r' is less than P.E. of all banks, show relationship is insignificant. Hence, it can be concluded that value of 'r' is insignificant and there is no proper relationship between overall capitalization rate and debt-equality ratio of selected bank.

#### 4.4.3 Coefficient of Correlation between Return on Equity and Debt-Equity Ratio.

The correlation between ROE (Y) and DER(X). These banks are analyzed in order to know whether increase in debt capital portion in the capital structure increase return on equity. Positive values show the positive relation and negative values shows the negative relation. The following result is obtained for EBL, HBL, SIBL and NIBL:

**Table 4.14**  
**Relationship between Return on Equity Rate and Debt Equity Ratio**

Banks	r	R <sup>2</sup>	PE	6 X PE	Level of significant
EBL	0.790	0.624	0.114	0.681	significant
HBL	-0.591	0.349	0.196	1.179	Insignificant
SIBL	0.425	0.181	0.247	1.483	Insignificant
NIBL	0.911	0.829	0.052	0.310	significant

This Table shows the relationship between the return on equity and equity ratio of selected banks over the study period .coefficient of correlation of coefficient of EBL, HBL, SIBL and NIBL are 0.790,-0.591, 0.425 and 0.911 respectively. Here relation of EBL, NIBL is highly positively and SIBL is low degree of positive whereas HBL has moderately negative relationship. Considering the probable error (P.E.), the value of r is greater than six times of the probable error of two banks EBL and NIBL and less than six times of the probable error of HBL and SIBL. Therefore, it is depicted that the value of r in EBL and NIBL is significant .whereas insignificant in the rest of the two banks HBL and SIBL i.e. there significant relationship between on equity and debt to equity ratio of EBL and NIBL. Where as insignificant relationship between return on equity and debt of HBL and SIBL.

Relationship between the return on equality and debt to equality ratio of selected banks over the study period. Coefficient of Correlation of EBL, HBL, SBIL and NIBL are 0.790,-0.591, 0.425 and 0.911 respectively. Here

relationship of EBL, NIBL is highly positive and SBIL is low degree of positive where as HBL has moderately negative relationship. Considering the probable error (P.E.), the value of r is greater than six times of the probable error of two banks EBL and NIBL and less six times of the probable error of HBL and SBIL. Therefore, it is depicted that the value of r in EBL and NIBL is Significant whereas insignificant in the rest of the two banks HBL and SBIL i.e. there is significant relationship between return on equality and debt to equality ratio EBL and NIBL where as insignificant relationship between return on equality and debt of HBL and SBIL.

#### **4.4.4 Coefficient of Correlation between Debt-Equity Ratio and return on Assets.**

The correlation between debt equity ratio and return on assets of selected banks are analyzed in order to examine which debt capital is significant in generating more return. It is assumed that there is significant relationship between return and debt capital. Positive values show the positive relation and negative values shows the negative relation. The following result is obtained for EBL, HBL, SIBL and NIBL:

**Table 4.15**  
**Relationship between Debt-Equity Ratio and Return on Assets**

Banks	r	R <sup>2</sup>	PE	6 X PE	Level of significant
EBL	0.676	0.457	0.164	0.982	Insignificant
HBL	-0.869	0.755	0.074	0.443	Insignificant
SIBL	-0.049	0.002	0.301	1.806	Insignificant
NIBL	0.377	0.142	0.259	1.553	Insignificant

From the Table analysis, it's clear that the correlation between debt equality ratio and return on assets. Correlation coefficient of between debts to equality of EBL is 0.676; here the relation is moderate positive. Correlation coefficient of HBL, SBL and NIBL is -0.869,-0.049 and 0.377 respectively. Here correlation coefficient of HBL shows the highly negative relationship, SBIL shows the low negative relation and NIBL shows the low positive relationship. Value of 'r' is less than 6 times probable error of selected banks.

Which shows the value of r is insignificant, i.e. there is not significant relationship between debt to equity and return on assets. It shows that the selected banks are insignificant in terms of debt to equity to return on assets. It is clear shows that the debt to equity ratio increase return on assets will also increase and vice-versa.

Correlation between debt to equity ratio and return on assets. Correlation coefficient of between debts to equity of EBL is 0.676 here the relation is moderate positive. Correlation coefficient of HBL, SBL, and SIBL is -0.869, -0.049, and 0.377 respectively. Here correlation coefficient of HBL shows the highly negative relationship, SBIL shows the low negative relation and NIBL shows the low positive relationship. Value of 'r' is less than six times probable error of selected banks. Which shows the value of r is insignificant, i.e. there is not significant relationship between debt to equality and return on assets. It shows that the selected banks are insignificant in terms of debt to equality to return on assets.

## **4.5 Multiple Regression Analysis**

### **4.5.1 Net Profit Function**

The multiple regression analysis is used to predict the value of depended variable i.e. Net Profit ( $X_0$ ) from the independent variables i.e. Interest on income ( $X_1$ ) Exchange Income ( $X_2$ ), other income ( $X_3$ ) for the selected banks. We have multiple regression equation for selected banks using SPSS program in computer, following result was obtain:

$$X_0 = a + b_1X_1 + b_2X_2 + b_3X_3$$

#### **Regression Equation of EBL.**

$$X_0 = -722.70 + 6.89 X_1 + 11.79X_2 + 3.31X_3$$

From the above equation, if exchange income( $X_2$ ) and other income( $X_3$ ) were held constant but increased by rupee one in interest income( $X_1$ ), net profit of EBL would increased by Rs.6.89. similarly, if exchange income( $X_2$ ) and interest income( $X_1$ ), were held constant but increased by rupee one in



other income ( $X_3$ ), net profit of EBL would increase by Rs.3.31. Finally if ( $X_1$ ) and ( $X_3$ ), were held constant, but increased by rupee one in exchange income, net profit would increase by Rs.11.79. This implies that the bank would earn from exchange income more than the other independent variables i.e. ( $X_1$ ) and ( $X_3$ ). The constant coefficient of -722.70 obtained. This depicts that net profit of the bank would decrease by -722.70 million if these three independent variables were zero.

### **Regression equation of HBL**

$$X_0 = -99.97 + 0.62X_1 + 0.85X_2 + 5.39X_3$$

From the above equation, if exchange income ( $X_2$ ) and other income ( $X_3$ ) were held constant but increased by rupee one in interest income ( $X_1$ ), net profit of HBL would increase by Rs. 0.62. Similarly, if exchange income ( $X_2$ ) and interest income ( $X_1$ ), were held constant but increased by rupee one in other income ( $X_3$ ), Net profit of HBL would increase by Rs. 5.39. Finally if ( $X_1$ ) and ( $X_3$ ), were held constant, but increased by rupee one in exchange income, net profit would increase by Rs. 0.85. This implies that the bank would earn from other income more than the other independent variables i.e. ( $X_1$ ) and ( $X_2$ ). The constant coefficient of -99.97 obtained. This depicts that net profit of the bank would decrease by 99.97 million if these three independent variables were zero.

### **Regression equation of SIBL**

$$X_0 = -13.79 - 1.96X_1 + 1.81X_2 + 1.62X_3$$

From the above equation, if income ( $X_2$ ) and other income ( $X_3$ ) were held constant but increased by rupee one in interest income ( $X_1$ ), net profit of SIBL would decrease by Rs.-1.96. Similarly, if exchange income ( $X_2$ ) and interest income ( $X_1$ ), were held constant but increased by rupee one in other income ( $X_3$ ), net profit of SBIL would increase by Rs.1.62. Finally if ( $X_1$ ) and ( $X_3$ ), were held constant, but increased by rupee one in exchange income, net profit would increase by Rs.1.81. This implies that bank would earn from exchange income more than the other independent variables i.e.

( $X_1$ ) and ( $X_3$ ). The constant coefficient of -13.79 obtained. This infers that net profit of the bank would decreased by 13.79 million if these three independent variable were zero.

### **Regression equation of NIBL**

$$X_0 = 15.87 + 1.90X_1 - 1.03X_2 + 1.81X_3$$

From the above equation, if exchange income ( $X_2$ ) and other income ( $X_3$ ) were held constant but increased by rupee one in interest income ( $X_1$ ), net profit of NIBL would increased by Rs.1.90. Similarly, if exchange income ( $X_2$ ) and interest income ( $X_1$ ), were held constant but increased by rupee one in other income ( $X_3$ ), Net profit of NIBL would increased by Rs.1.81. Finally if ( $X_1$ ) and ( $X_3$ ), were held constant, but increased by rupee one in exchange income, net profit would decreased by Rs.1.03. This implies that the bank would earn from interest income more than the other independent variables i.e. ( $X_1$ ) and ( $X_3$ ). The constant coefficient of 15.87 obtained. This depicts that net profit of the bank would remain at 15.87 million if these three independents variable were zero.

Regression analysis based on the net profit function i.e. Net profit is the function of interest income, Exchange income and other income. Net profit of EBL depend more on exchange than other two in depended variables. HBL net profit depends more on other than other two in depended variables. Net profit of SBIL depend more on exchange income than interest income and other income. NBIL earn from interest income than from the exchange and other income.

### **4.5.2 Return on Equity Function**

Return on equity (ROE) is the function of debt equity ratio (DER) in term of debt to equity ratio, dividend payout ratio (DPR) and interest margin (IM). The multiple regression analysis is used to predict the value of dependent

variable i.e. ROE ( $X_0$ ) from the independent variables i.e. DER ( $X_1$ ), DPR ( $X_2$ ) and IM ( $X_3$ ).

### **Regression equation of EBL**

$$X_0 = 6.03 + 1.76X_1 - 5.29X_2 + 0.83X_3$$

From this equation, if DER( $X_1$ ) were held constant but increased by one percent IM ( $X_3$ ), ROE of EBL would increase by 0.83%. Similarly, if DPR( $X_2$ ) and IM ( $X_3$ ), were held constant but increased by 1% in DER, ROE of EBL would increase by 1.76 percent. Finally if DER and IM were held constant but increased 1% in DPR, ROE of the bank would decrease by 5.29% which was more pronounced than the other two variables i.e.  $X_1$  (DPR) and  $X_2$  (IM) to increase ROE of the bank.

### **Regression equation of HBL**

$$X_0 = -12.08 + 9.89X_1 + 4.81X_2 - 0.42X_3$$

From this equation, if DER( $X_1$ ) and DPR( $X_2$ ) were held constant but increased by 1% IM ( $X_3$ ), ROE of HBL would decrease by 0.42%. Similarly, if DPR( $X_2$ ) and IM ( $X_3$ ), were held constant but increased by 1 percent in DER, ROE of HBL would increase by 9.89 percent. Finally if DER and IM were held constant but increased 1% in DPR, ROE of the bank would increase by 4.81 percent. Here DER is pronounced than other two variables i.e. DPR and IM to increase ROE of the bank.

### **Regression equation of NIBL**

$$X_0 = 42.3 - 9.59X_1 - 6.12X_2 + 0.18X_3$$

From this equation, if DER( $X_1$ ) and DPR( $X_2$ ) were held constant but increased by one percent IM ( $X_3$ ), ROE of NIBL would decrease by 0.18%. Similarly, if DPR( $X_2$ ) and IM ( $X_3$ ), were held constant but increased by 1 percent in DER, ROE of NIBL would increase by 9.59 percent. Finally if DER and IM were held constant but increased 1% in DPR, ROE of the bank would increase by 6.12 percent. Here IM is pronounced than other two variables i.e. DPR and IM to increase ROE of the bank.

### **Regression equation of SIBL**

$$X_0 = 7.37 - 1.93X_1 + 3.81X_2 + 1.73X_3$$

From above result, if DER( $X_1$ ) and DPR( $X_2$ ) were held constant but increased by one percent IM ( $X_3$ ), ROE of SIBL would decreased by 1.73%. Similarly, if DPR( $X_2$ ) and IM ( $X_3$ ), were held constant but increased by 1 percent in DER, ROE of SIBL would increased by 1.93 percent. Finally if DER and IM were held constant but increased 1% in DPR, ROE of the bank would increase by 3.81 percent. Here IM is pronounced than other two variables i.e. DPR and IM to increased ROE of the bank.

Regression analysis based on Equality function i.e. return on equality is the function of dividend payout ratio, interest margin and debt to equality ratio shows that ROE of EBL depends on the debt to equality ratio than the other two variables, same as EBL in case of HBL. Interest margin of NIBL have major effect to increase return on equality than other two variables. Dividend payout ratio of SBIL is major variable among the independent variable to increase the return on equality of the bank.

### **4.6 Major Finding of the Study**

- ❖ In terms of total debt to total assets reveals that the selected banks are highly leveraged (i.e. more than 60 percent in average) on five year time horizon. It means the assets of selected banks have been financed more funds collected from creditors. Everest bank has the highest average ratio of 85.36% in comparison to the lowest of 67.16 % of HBL. SBI has average ratios of 76.61% and NIBL is less than that of SIBL.
- ❖ EBL has D/E ratio of 15.86 times on an average. It means debt capital financing is more than 15.86 times higher than shareholder's equity. HBL has an average of 13.96 times D/E ratio. It means debt capital financing is more than 13.96 times higher than shareholder's equity.

SBIL has average 9.54 times D/E ratio which is lowest among the selected banks. It means SBIL debt capital financing is 9.54 times higher than equity financing. NIBL has an average 10.48 times of D/E ratio. SBIL is able to maintain its D/E consistent than the other banks.

- ❖ HBL able to maintain highest interest coverage ratio than other banks. Its average interest coverage ratio during five years period is 2.741 times. EBL has average interest coverage of 1.783 times, which is lowest among the selected banks. But this ratio shows consistent trend. Ratio the computed interest coverage ratio of both banks in above table shows how many times the interest charges are covered by funds that the ordinary available to pay interest charges.
- ❖ The degree of financial leverage of NIBL has the lowest ratio of 2.25 times on an average, which reflects the bank has lower degree of financial risk. HBL constitutes higher degree of financial leverage, which represents higher financial risks for the bank. Average DFL is HBL and SBI are 5.49, 2.63 and 4.08 times respectively.
- ❖ EBL has highest average ROA among the selected bank i.e. 1.38 percent EBL has better utilizes its assets to generate profit than other companies. SBI has lowest average ROA among the selected banks i.e. 0.73 percent. Average ROA of HBL and NIBL are 1.15 percent. 0.2348 percent, ROA of NIBL is in increasing trend over the study period.
- ❖ Among the selected banks EBL has highest average ROE i.e. 23.641. Average ROE of HBL, SBI and NIBL are 2.624, 9.360 and 18.829 percent on the shareholders equality fund respectively. ROE of HBL is least among the selected banks. Which shows the weak performance of banks, in the maximizing the shareholders equality.
- ❖ Average earning per share of EBL, HBL are RS. 45.08 and RS. 53.18. Earning per share of HBL is highest among the selected banks. Here HBL process strength on earning per share, which help to maximize

the shareholders wealth. Average earning per share of SBI is lowest among the selected banks over the study period. Average EPS of NIBL is Rs. 40.39 over the study period. Earning per share of SBI is in increasing trend.

- ❖ HBL found to be paying relatively more dividend in an over age Rs.29.32, followed by NIB, EBL, SBI is the lowest dividend previous period. HBL distribute bonus share. The issue of bonus share is advantageous in some cases. Sometimes using bonus share reduces the market price per share now makes it more attractive to investor.
- ❖ Average price earning ratio of SBIL i.e. 28.84 times is highest among the selected banks. On an average, the investors were interested to pay 28.84 times higher than per rupee of reported earning in the market. Price earning of HBL is consistent in comparison to other banks with an average price earning ratio of HBL is 17.68. Price earning ratio EBL is lowest among the selected bank i.e. 16.03 P/E ratio of NIBL is 20.66 which is second highest among the selected banks. Over all trend of price earning ratio shows the fluctuating trend.
- ❖ Over viewing the above calculated over all capitalization rate of SBIL is highest among the selected companies. HBL IS 5.49 which is lowest then SBIL. Average over all capitalization ratio of EBL is 5.34. Average overall capitalization rate of NIBL is 5.12 which the least among the selected companies.
- ❖ Equality capitalization rate equality cost of banks was fluctuating in active. Average equality capitalization of EBL is 9.49. Overall trend shows the decreasing trend over the study period. Average equality HBL is 9.01 over the study period. Average equality of SBIL is 6.80. This is the lowest among the selected companies. Average equal to NIBL is 7.10 equality capitalization rates are decreasing and the market values above the par value in all bonus.

- ❖ Correlation coefficient between EBIT and interest payment of EBL, HBL, SBIL and NIBL is 0.944, 0.821, 0.775 and 0.992 which showed positive relationship. It shows that increase in EBIT, increase interest payment. On the other hand, the correlation between EBIT and interest payment of banks which shows higher positive relationship. Therefore, it is depicted that value of 'r' in banks is significant, i.e. there is significant relationship between EBIT and interest payment. It shows that the both banks are significantly able to service their debt.
- ❖ Correlation coefficient between overall capitalization rate and debt equality selected banks over correlation coefficient of EBL, HBL, SBIL and NIBL are -0.859, -0.419, -0.957, and -0.363 respectively. Correlation of EBL, SBIL and NIBL shows the highly negative, low negative, highly negative and low negative respectively. Correlation coefficient of selected banks i.e. 'r' is less than P.E. of all banks, show relationship is insignificant. Hence, it can be concluded that value of 'r' is insignificant and there is no proper relationship between overall capitalization rate and debt-equality ratio of selected bank.
- ❖ Relationship between the return on equality and debt to equality ratio of selected banks over the study period. Coefficient of Correlation of EBL, HBL, SBIL and NIBL are 0.790, -0.591, 0.425 and 0.911 respectively. Here relationship of EBL, NIBL is highly positive and SBIL is low degree of positive where as HBL has moderately negative relationship. Considering the probable error (P.E.), the value of r is greater than six times of the probable error of two banks EBL and NIBL and less six times of the probable error of HBL and SBIL. Therefore, it is depicted that the value of r in EBL and NIBL is Significant whereas insignificant in the rest of the two banks HBL and SBIL i.e. there is significant relationship between return on equality and debt to equality ratio EBL and NIBL where as insignificant relationship between return on equality and debt of HBL and SBIL.

- ❖ Correlation between debt to equality ratio return on assets. Correlation coefficient of between debts to equality of EBL is 0.676 here the relation is moderate positive. Correlation coefficient of HBL, SBIL, and SIBL is -0.869, -0.049, and 0.377 respectively. Here correlation coefficient of HBL shows the highly negative relationship, SBIL shows the low negative relation and NIBL shows the low positive relationship. Value of 'r' is less than six times probable error of selected banks. Which shows the value of r is insignificant, i.e. there is not significant relationship between debt to equality and return on assets. It shows that the selected banks are insignificant in terms of debt to equality to return on assets.
- ❖ Regression analysis based on the net profit function i.e. Net profit is the function of interest income, Exchange income and other income. Net profit of EBL depend more on exchange than other two in depended variables. HBL net profit depends more on other than other two in depended variables. Net profit of SBIL depend more on exchange income than interest income and other income. NBIL earn from interest income than from the exchange and other income.
- ❖ Regression analysis based on Equality function i.e. return on equality is the function of dividend payout ratio, interest margin and debt to equality ratio shows that ROE of EBL depends on the debt to equality ratio than the other two variables. Same as EBL in case of HBL. Interest margin of NIBL have major effect to increase return on equality than other two variables. Dividend payout ratio of SBIL is major variable among the independent variable to increase the return on equality of the bank.



# **CHAPTER V**

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

Every business need capital to operate smoothly and capital is said to be the blood of the business. So, sound capital structure is very crucial for smooth operation of business. As in order firm, capital structure is crucial part for banking industry to the study had been carried based on four commercial bank i.e. HBL, EBL, NIBL and SBIL for study of capital structure. Financial sector is a part of the industry and is regarded as the backbone or engine of the growth of the economy whether it is developed or developing or in transition of emerging. It plays a very crucial role in the development of all sectors of the economy and actually works as a lubricator by the financial resources. Banking industry is a part of financial sector and it has great contribution in economic development of the country. By the various functions it increases employment opportunity, industrial activities, trade business etc. NBL is the first bank established in the year 1937 A.D. and dominated the whole financial sector in the country for almost three decades.

After liberalization policy has been initiated in mid 1980s, it created the path to the foreign investors. In 1984 A.D., the Nepal Arab Bank Limited was established as the first joint venture commercial bank of the country. Today there are altogether 25 commercial banks operating in the country and most of them are joint venture banks. The banks are having competition and most of them were successful in providing customer satisfaction through various service.

Capital is a most blood of any business or organization. It is a planning and decision making for which manager to involve in business. It is not only

challenging job for organization but also challenging study for a researcher. A brief introduction of the study and overall introduction of the companies they have undertaken for study purpose have presented in first chapter. Second chapter is good review of the issues related with abstracts of capital structure. The possible valid used of ratios and mechanics; financial and statistical tools and techniques are briefly reviewed in chapter three research methodology. Lastly, fourth chapter consists of analytical framework of data and findings that is considered as the important part revealing the performance of selected banks. This is the final chapter includes dealing with summary, conclusion and recommendation arrive from the entire study.

## **5.1 Summary**

Basically, concerned on the various aspect of the study on capital structure of selected commercial banks in Nepal. It covers five Fiscal years starting from 2001/02 to 2005/06. It includes the data of four commercial banks.

To accomplish the setting objectives in first chapter, the necessary data and others various information or collected from the financial statements of each individual bank. Similarly, the requirement of data is mostly fulfilled from "the annual report of selected banks." In some year, some of the required figures or data re available from inquiry with relevant staff of concern Bank.

The capital structure position has been analyzed by calculating various ratio. The ratio of debt ratio is slightly fluctuating trend, the creditor's margin of safety is very low, which shows high risk. EBL has held high protection of average debt ratio with 85.36%. EBL has debt to equity financing higher than other selected bank i.e. 15.86 is average ratio. But SBLL is able to maintain it debt to equity consistent than the other banks. Interest coverage ratio shows consistent trend. HBL is able to maintain highest interest coverage ratio than other bank. It is average ratio during the five year's period is 2.741 times but IBL has lower average interest coverage ratio among the selected banks. Degree of financial coverage of NIBL has low

ratio which shows low risk and HBL has highest degree of financial coverage which shows high financial risk to the creditor. Leverage ratio measure the long term solvency of firm. ROA ratio of selected bank have mixed trend. EBL has better utilizes its assets to generate profit than other banks. ROA of SBIL is fluctuating over the study period but ROA of NIBL is increasing trend over the study period. ROE of HBL is least among the selected banks. Which is shows the week performance of banks.

Earning per share of HBL is higher among the selected bank. Here HBL progress strength on earning per share, which help to maximize the share holder's wealth, average EPS of SBI is lowest among the study period but EPS of allover the bank have an fluctuating trend. Dividend per share of NIBL, EBL and SBI is the lowest dividend previous study period. HBL distribute bonus share for the issue of bonus share is advantageous is same case. It reduces the market price per share and its more attractive to investor. Price earning ratio of SBIL is 28.84 times is highest among the selected banks on an average; the investors were interested to pay 28.84 times higher than per rupee of reported earning in the market. Over all trend of price earning ratio shows the fluctuating trend.

The NI approach implies that proportion of high leverage consequently increases the value of the firm. The approach is well acquainted with this study as the value of the banks has increased in accordance to the increasing portion of leverage. The  $K_0$  of selected bank are positive. NIBL is the least among overall capitalization of the selected banks and EBL is the highest overall capitalization rate in the study period.

The correlation coefficient between EBL and interest payment of selected banks are positive relationship. And significant relationship all over the selected banks. The relationship between overall capitalization rate and EBL equity ratio are negative value or 'r' shows relationship is insignificant. the relationship ROE and debt to equity ratio of HBL is negative value of 'r' that is negative relationship but remaining banks are positive relationship

because all value of 'r' is positive. Expect EBL and NIBL have insignificant relationship between ROE and debt to equity ratio. Debt equity and ROA of HBL and SBIL are negative relationship, remaining EBL & NIBL are positive relationship. But all the selected bank have insignificant relationship. Thus it is not sure that if debt to equity increases. The ROA will increase by the regression analysis net profit function i.e. Net profit is the function of interest, exchange and other income.

## **5.2 Conclusion**

From the study bank are found to be highly levered. The companies financial mix accounts a higher proportion of debt and it is increasing every year. The growth and increasing integration of the world's economy has been parallel by expansion of global banking activities. Nepal though a developing country, couldn't identify the fact that commercial banking which is responded by extending loan and developing new highly innovative financial techniques that laid the foundation for totally new approaches to the provision of banking services on the basis of entire research study, the analysis of capital structure is very significant in project appraisal of shift competition. Most of the banks cannot manage the current assets. Because of the inefficient current management company cannot fulfill the organizational objective, i.e. to earn maximum profit and maximizing the share holder equity.

The debt-shareholder's fund ratio calculated is relation to the proportion of funded debt to shareholder fund which shows % of funded debt is many times greater than shareholder's fund in the bank. The interest coverage ratio during the study period was positive for all selected bank. In case of ROA and ROE, EBL has higher ratio than any other banks. Which indicated the EBL best bank among the selected banks. The average EPS of EBL and HBL higher than other selected banks and EPS of EBL is found to be in increasing trend and EPS of other banks are fluctuating during the study period. In Nepalese banking trend of profit is not increasing, profit level is less than the standard level of return on investment. Cost of existing condition, bank may not be run in long term. The main cause of cost increase

may unskilled manpower, overstaffing, unsystematic arranged of material, level of unnecessary and expenses is high and misuse of the facilities and resources. The correlation coefficient of the variable of selected bank for the statistical analysis is found positive to each other. The coefficients are all statistically significant in more than average banks. A positive correlation means both of the variables are moving toward the same direction.

Finally, it can be said that the study of a capital structure cannot be neglected by selected commercial banks. Otherwise it can seriously ride their financial viability. Thus, managers should understand the factors determining capital structure. Some of the Nepalese joint venture banks are suffering from the huge losses due to their administrative negligence in day to day operation and lack of specific Analysis of capital structure policy.

### **5.3 Recommendations**

The sound capital structure enhances the profitability and growth of any company and it also indicates sound financial position of the company. The capital structure decision in term of banking is very much different from other industry. Bank enjoyed by using outsider's fund by various measures in variety of assets in order to provide good return to their shareholders. As the outsider's fund is very higher than owner's fund financial manager must be very much sensible in each step of investing and lending the funds in various assets. If bank fail to make handsome return, it may bring worse period for the bank. Based on finding following recommendation are provide financial position of HBL, NIBL, SIBL and EBL.

) The capital structure of selected banks is highly leveraged. Still EBL, HBL and SBIL has higher leverage ratio in compared to NIBL. It is good making handsome return by employing outsider's fund but at same time it also brings risk to the bank. The proportion of debt and equity capital should be decided keeping in mind the efforts of tax advantage and financial distress. The banks, when in difficulty to pay interest and principal, ultimately lead to liquidation or bankruptcy. For such the bank should reduce the high use of debt capital.

- ) The ROS, ROA and EPS of HBL, SIBL, and NIBL are very low in compare to EBL. So they needed to seek more profitable are in order to increase profit of the bank. And they also need to maintain optimal capital structure considering cost of capital so that it helps to enhance the ROS and profitability of the banks.
- ) Dividend payout ratio should be determined considering the shareholder's expectation and the growth requirements of the banks. A higher payment attracts both the existing and potential investors leading to increaser in market price of the share, which consequently leads to the strength of financial capacity. Hence HBL, EBL, SIBL and NIBL banks are recommended to maintain consistent dividend payout ratio.
- ) The earnings of all the selected banks are decreasing. Yearly this may be due to the providing economic, political condition of the country. But the banks need to enhance their profitability by increasing efficiency in their productivity and decreasing the cost.
- ) The central bank as a regulating supervising and directing bank mandates all the commercial banks to increase their capital fund to Rs. 1 (One) billion and also needed to maintain sufficient capital adequacy radio as per NRB directives. So all selected banks need to adopt the guidance of the central bank to maintain appropriate capital structure so safe guard the depositor's money.
- ) All the selected banks need to review and monitor leverage ratio regularly so that risk to the bank may not increase which may effect in efficient operation of the banks and it is basically not concerned to mobility their deposit fund to productive areas. So they are proposed to come forward to match government obligation by financing the priority sector development program.
- ) High risk to make high profit. Thus the management should not consider it as danger. It is the ability to manage the current assets properly and efficiently for the efficient utilization of current assets.

The management should identify its strengths and weak points. To develop the managerial ability there should be training, participating in management, conferences, foreign, enterprise tour and need of the changing time and situation for the managerial level employees.

) All the companies should be given continuity in providing both conceptual and practical training to the staff to enhance their knowledge. Skills and competency level. They should remain consistently vigilant in enhancing their morale and motivation.