

CHAPTER - I

INTRODUCTION

1.1 Background Information

Nepal is a democratic, independent, small, and landlocked country situated in the southern slopes of Himalayas. Nepal is surrounded by China in north and India by other side. The total area of Nepal is 147,181 sq. kilometers, situated between 26°22' north 30°27' north latitudes and 80°4' east 88°12' east longitudes resembling with roughly rectangular. Of the total area, about 83% is high hills, snow capped mountain, and 17% is the total land of Tarai in the South. The northern belt has high Himalayas (15% of total land) with snow all the year around (Economic survey, 2006: 156).

Nepal is one of the developing countries in the world characterized by high population growth. unit price (2.2%), low Per capita income (\$385), and low unit price of capital formation. Gross domestic saving is 11 Percent of the GDP, and almost half of the population (above 50 Percent population) lives below the poverty line. Landlocked, unfavorable topography, absence of economic infrastructure, political instability in the past and lack of political commitment are some of the reasons behind the backward economic condition (Economic Survey, 2007:233).

Nepalese economy is dominant by agriculture that accounts for 41 Percent of national gross domestic product (GDP), which provides employment to 81.2 Percentage of the economically active population of the country in 1999. Hence, "Nepal has remained as one of the poorest country in the world with around 385 US dollars per capita income."

This

Can be attributable to inefficient use of the resources in both the sectors i.e. agriculture and industry. However, in recent years, the non-agricultural sector is contributing more shares in GDP in comparison with the agricultural sector. The

area of information and communication retains the important as an inevitable infrastructure for the development of the country.

In this era of globalization, the economic activities are soaring up in the international market. Nepal doesn't have its own long history of the economic activities. About two century ago the barter system was prevailing every where in the country, even now in the remote areas the system is still in practice. Until the period of reunification of modern Nepal by Prithvi Naryan Shah there were only two prevailing which was some how controlled by the Rnanas, their regime begun in 1903 B.S. During the beginning period of their regime, office like Tejarath Adda and Mulukhi Khana were established in order to attract deposits and grand loans. But it was not sufficient for the economic development due to lacking of experienced manpower and new technology. As the time passed by there some increasing economic activities was seemed in the country which led to the establishment of first commercial bank of Nepal viz. Nepal Bank Limited.

Thus, the history of the development of financial institutions in Nepal is not very long. Nepal bank Ltd. is the first commercial bank of Nepal, which was established in 1994 B.S. in non-government sector. The second commercial bank is Rastrya Bank Ltd., which was established in 2022B.S.in 100% government ownership. But after studying to the origin of modern banking, we come to know that "Bank DERIALO" which was established in 1587 A.D. is the first bank of the world in Venice, Italy.

Financial institutions include banks, finance companies, co-operative organizations and insurance companies. All of them do contribute something to the economy of the country. Financial institutions play a vital role in the proper functioning of an economy. These institutions act as intermediary between the individuals who lend and who borrow. These institutions accept deposits and in return lend it to people who are in need of financial resources. These institutions make the flow of investment easier. So we cannot deny the

role of a bank for the development of the country. It pulls the funds scattered in the economy and mobilizes them to the productive sector. But these institutions inherent a large amount of risk, which cannot be denied. If a bank behaves irresponsibly, the costs borne by the economy are enormous.

Bank is an institution that deals in money and its substitute and also provides other financial services. Bank accepts and makes loan as well as derives a profit from differences in interest rates paid and charges respectively.

The term “Bank” is originated from the Latin word “Bancus” which refers to the bench on which the banker would keep its money and his/her records. Some persons trace its origin to the French word “Banque” and the Italian word “Banca” which means a bench for keeping, lending and exchanging of money or coins in the market place by moneylenders and moneychangers.

The first bank called the “Bank of Venice” was established in Venice a city and sea-port in north-east Italy, in 1157 to finance the monarch in his wars. But actually, it was not a bank in broad sense but simply an office for the transfer of the public debt. Many of the early banks dealt primarily in coin and bullion, much of their business being money changing and the supplying of foreign and domestic coin of the correct weight and fineness. As a first central bank, “The Bank of England” was incorporated on July 27, 1694, as a private joint-stock association, with a capital of £1.2 million. In return for the loan of its entire capital to the government it received the right to issue notes and a monopoly on corporate banking in England.

According to Chamber’s Twentieth Century Dictionary – “Bank is an institution for keeping, lending and exchanging etc. of money”.

According to the Shorter Oxford Dictionary – “Bank is established for the custody of money received from on behalf of its customer its essential duty is to pay their draft in it, its profit arise from its use of the money left unemployed by them”.

Indian Banking Regulation 1949 Sec 5(b) defines bank as “Accepting for the purpose of lending or investment of deposit from the public, repayable on demand or otherwise, and withdrawal by cheque, draft, order or otherwise”.

According to above definition, the bank accepts deposit with a view of lending or investing and insisting that money deposits are withdrawn by cheque, draft and order or otherwise. Although the above act defines the banking in broad sense, at present time banking is such a vague term. It does a lot more than deposits and credit, remitting of money, letter of credit (L.C.), guarantee, issue of money, controlling monetary activities of country etc.

The kingdom of Nepal lies along the southern slopes of Himalayas, though the modern banking institution has a very recent origin in Nepal. Therefore the term bank is new thing for Nepalese economy. Modern banking system makes the economy always alive and smart to run and maintain day-to-day commercial, economic and banking transaction. In short, banking transaction helps a country to develop its economy swiftly.

Banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector, which deals in the process of channel zing the available resources in the needed sectors. It is the intermediary between the deficit and surpluses of financial resources. Financial system contains two components viz. depository financial institution and non-depository financial institution. Commercial banks and finance companies (in Nepalese context) are the example of depository financial institutions whereas employee provident fund, development banks, insurance companies etc. are the examples of non-depository financial institutions. All the economic activities are directly or indirectly channeled through these banks. People

keep their surplus money as deposits in the banks and hence banks can provide such funds to finance the industrial activities the form of loans and advances.

The present structure of financial institutions is based on the foundation laid by commercial banks. The commercial banks command the highest share of national resources, which must be utilized for the rapid economic development of the country. Realizing the importance of commercial bank, Dr. Pant has remarked, “Indeed no institution has greater or closer interest in well established, expanding and successful industry and agriculture than a commercial bank” (Pant, 1971:125).

Commercial banks are stated as a key component of the financial institution. They can play vital role in accelerating the pace of economic development of the country through the mobilization of the scattered savings and channeling it in the real sector of the economy. Besides that, commercial banks grant business loan on the basis of proposal and also grant traditional loan with the guarantee of valuables i.e. gold and silvers.

In order to fulfill the demand and need of modern banking transactions and to remove all the inconveniences, in past time Nepal Bank Limited was established on 30th Kartik 1994 B.S. as the first commercial bank in the country. Before the establishment of NBL, there was hardly any source other than the organized money market to meet the financial needs of people. As there was political change in 2007 B.S., solid and important events took place in 2012 B.S. because of establishment of Nepal Rastra Bank as a control bank. The Rastriya Banijya Bank (RBB) which is fully state-owned came into existence on 22nd Magh 2022 B.S. under RBB Act 2021 with the explicit objectives banking facilities to areas or regions of the country not covered by Nepal Bank Ltd. and making RBB's activities more development oriented rather than profit oriented. Various branches in various times were opened by these two banks. And after two decades of establishment of RBB, Joint venture bank Nabil bank was established in 2040 B.S. Then after commercial banks were established with joint stock and increasing tremendously. However, we can

say that the development of commercial banks in 6 decades history is very much satisfactory.

Witnessing a significant development in the capital market, His Majesty's Government initiated to reform capital markets by converting Securities Exchange Center into Nepal Stock Exchange (NEPSE) in 1993 (2049 BS). NEPSE is a not-profit organization operated under Securities Exchange Act, 1983 with the basic objective of imparting free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member market intermediaries such as brokers, market makers etc. NEPSE opened its trading floor on 13th January 1994. Then after it started its organized open-outcry system in its floor. However, HMG amended Security Exchange Act, 1983 for the second time on Jan 30, 1997 and established the Securities Board of Nepal (SEBON) as an apex regulatory body as it widened the horizon of SEBON by bringing market intermediaries directly under its jurisdiction and also made it mandatory for the corporate bodies to report to SEBON annually as well as semi-annually regarding their performance. Since its establishment, SEBON has been concentrating its efforts to improve the legal and statutory frameworks which are the basis for the healthy development of the capital market. As per the security ordinance of 2005, the major objectives of SEBON are to regulate issue and trading of securities and market intermediaries, promote market development and protect investors' right. Among the many functions of SEBON, one of the most important functions is to comment on the prospects of issuing companies. As per the provision of Security Exchange Act, 1983 and Company Act, 1997, companies issuing their securities to the public should first get their prospectus approved from Company Registrar's Office (CRO) and then apply to SEBON along with the approved prospectus to get issue approval. In this context CRO and SEBON were cooperating with each other in order to make the prospectus more informative and reliable.

The prospectus include the short description about the introduction of the company, objectives of the company, existing shareholders with the number of share they possess,

name of the board of directors. It also includes last three years' income statement, net worth and other important financial statement and also projected financial statement of coming three years'. On the basis of all these financial statement SEBON analyses the past performance of the company. It also tests the reality of the projected financial performance of the company. After making all these analysis, SEBON either gives approval for the issuance of the share to public or not.

There are 27 commercial banks in the country licensed by NRB as of mid July 2007. At the time of expanding the branches of commercial banks, emphasis was given to the deposit mobilization and credit disbursement. However, the importance of the quality-credit could not be recognized and the banking sector failed to witness the expected developments. Subsequently, the banking sector faced the problem of bad debts, overdue loans, accrued interest, accumulation of non-banking assets and excess liquidity in the banking system. In addition to these expected happenings, new challenges were added to the Nepalese banking sector due to the adverse developments in the domestic economy resulting from the deteriorating peace and security situation and continuous persistence of natural calamities inside the country on one hand and global recession primarily caused by international terrorism on the other. Viewing the need of structural is reform amidst these adverse implications. NRB recently issued directives to run commercial banks in a healthy competitive manner to ensure the sustainable development of the overall banking system.

The term capital denotes the long-term funds of the firm. The long-term funds o the firms are financed by two major components, i.e., debt capital and equity capital. Debt capital includes long-term borrowings incurred by the firm. Equity capital consists long-term funds provided by the firm's owners. *The mix of long-term debt and equity maintained by the firm is called capital structure.* Capital structure shows, what percentage of the firm's capital is in equity and what percentage of firm's capital is in debt.

Capital structure is one of the most complex areas of financial decision making due to its inter-relationship with other financial decision variables. A financial manager must

understand the firm's capital structure and its relationship to risk, return and value for attainment of its primary objective of wealth maximization.

Capital structure is very crucial part of the 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 shares and preference shares) and creditor shares (i.e. debentures or bonds). A business enterprise has to maintain proper mix of both the securities in a manner that the cost and the risk perception to the shareholders are minimized. The mix of different securities is portrayed by the firm's capital structure (Kamal Koirala, 1990:105).

Capital is a scarce sources and much more essential to maintain smooth operation of any firm. The available capital and financial sources should be utilized so efficiently that could generate maximum return.

Capital structure is considered as the mix of debt and equity and to operate in long run prospect. A firm must concentrate in its proportion. A firm can raise required fund by issuing various types of financial instruments. Investors and creditors being the key supply of capital, they hold greater degree of risk and hence have claims over firm's assets and cash flow. Similarly debt holders are also a source of financing fund and they have risk considering firm's cash flow in uncertain and there is probability that it may default in its obligations to pay off its interest and principle. In the other hand, if a firm issues preference share, those shareholders have the priority in payment of dividend is fixed as the percentage of interest to debt, it is preferably paid off only after interest payment. Common shareholders are as the owner of the firm; they are paid from cash remaining after all payment is being made. Since the common share i.e. equity fluctuate in the market more than the preference share and debt, there is more risk.

The above statement states in brief that either fund is raised by debt or equity financing, risk is associated in proportion of its uncertainty is being paid off. The required rate of return expected by investors according to their risks is cost of capital. Therefore a firm should try to obtain necessary fund at lowest cost. This cost of capital is fully dependent upon the proportion of debt and equity i.e. financial leverage, which is actually the capital structure used by the firm.

Capital structure concepts has important place in financial management theory. It is basically decision is concerned with shareholders wealth maximization. As capital refers to the proportion of debt and equity, a choice in proportion is actually financial decision in case to fulfill investment requirement. Therefore, it is a wise decision to select a financing mix, which maximizes shareholders wealth.

1.1.1 Profile of the Banks under Study

Everest Bank Ltd. (EBL)

Everest Bank Ltd. was registered under the company act 1964 in 19th November 1993 and started commenced banking transaction in 16th October 1994, the promoter of the bank decided to join hands with an Indian bank and entered into joint venture agreement in January 1997 AD with Punjab National Bank (PNB), which is one of the leading commercial bank of India, having over 100 years of successful banking experience and known for its strong system and procedure. A team of professionals are deputed by PNB under this arrangement. Now the bank has 38 branches including main branch in Nepal. Nepalese promoter holds 50% and rest 30% held by General public.

The main purpose of EBL is to extend professional banking services to various sectors of the society in the Kingdom of Nepal and thereby contributing in the economic development of the country. It provides following facilities and services to their customers;

- Cumulative Deposit Scheme

- Unfix Fixed Deposit
- Required Deposit Plan
- Telegraph Transfer (T.T)
- Letter of Credit
- Drawing Arrangement
- SWIFT Transfer
- International Trade and Bank Guarantees
- Remittance
- Foreign Currency Deposits/ Lending
- Foreign Exchange
- Trade Finance
- 365 Days Banking
- Debit Card
- Merchant Banking
- ATM (Automated Teller Machine) etc

Everest Bank Ltd. is moving towards to the consumer finance and providing different types of loans like; Home Loan, Home Equity Loan, Education Loan, Professional Loan, and Vehicle Loan etc.

Nepal SBI Bank Limited

Nepal SBI Bank Ltd. commenced its operation since 1994 as a Joint Venture between the employees' provident fund and the State Bank of India, where the Indian bank holds 50% of the equity. The initial paid up capital in 1994 was 119.95 million. The bank at present is fully aware of present scenario of banking sector, and is implementing required business plans and strategies to face the challenges and to enhance its profit to a reasonable level by the yearend. SBI bank has the following future plans:

-) Technology up –graduation and automation
-) International banking relationships
-) Branch expansion
-) New services and areas of investment

Kumari Bank Ltd. (KBL)

Kumari Bank Ltd. was established in April 03 2001 as part of the policy of Nepal Rastra Bank's liberalization of the Nepalese Banking Industry. It has been established with an objective of providing a complete banking solution to customers backed by its state-of-the-art infrastructure. Apart from its regular business loans, KBL is gearing itself up to offer a wide range of consumer banking product and services like; vehicle loan, education loan and home loans etc. At present it has 28 branches including main branch (head office) in Nepal. It was established fully investment made by Nepalese investors and its 100% equity is held by the Nepali promoters and public.

KBL is providing following facilities and services to their customers;

- Internet Banking
- Electronic Bill Payment System
- Mobile Banking
- Debit Card, Credit Card

1.2 Focus of the study

Capital is the most important factor from beginning of the business organization. Due to lack of the capital, the business organization cannot operate regularly their daily activities. The success of business organization depends upon proper composition of debt equity in the capital structure. The proper composition of debt and equity help to generate high return to the business organization and help in long-term solvency.

Investors invest their funds in ownership securities or debt securities of the organization with the expectation of getting favourable return in the future. In absence of proper utilization of the capital it fails to meet their expectation and damages the creditworthiness of the organization and leads to fall the market value of the organization.

The banks are such business organization which deals with others money and the capital structure incase of the bank are very crucial. This study mainly focuses on the capital structure management of EBL, KBL and SBI.

1.3 Statement of the problem

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

Efficient capital structure is the major tool to measures the strength and weakness of the bank. Strong joint venture banks contribute to national economy and also attract further foreign investment in this sector. It may be an example to a new comer joint venture bank. Therefore the present studies seek to explore the answer the following questions.

1. How far the joint venture bank been able to mobilize their resources? Does the proportion of debt and equity capital structure effect the capital management of joint venture bank or not?
2. How efficiently these banks are managing their capitals structure? Does the assets structure helps to improve the capital structure of the joint venture bank or not?
3. To what extend these banks have been able to raise their profitability?

1.4 Objective of the study

The major objectives of the study are to evaluate the capital structure of Everest Bank Ltd., Kumari Bank Ltd. and Nepal SBI Bank. It is the study about the capital structure & profitability of EBL, KBL and SBI by taking the financial data. It tries to analyze the overall capital structure & profitability. The specific objectives are as follows:

1. To examine the relationship of the capital structure and cost of capital of Everest Bank Ltd., Kumari Bank Ltd. and Nepal SBI Bank.
2. To evaluate the role of capital structure on the growth of Everest Bank Ltd., Kumari Bank Ltd. and Nepal SBI Bank.

3. To analyze the relationship of capital structure with variables like earning per share, dividend per share total debt to total assets, debt to equity ratio, interest coverage ratio, return on shareholders equity of Everest Bank Ltd., Kumari Bank Ltd. and Nepal SBI Bank.
4. To suggest and recommend on the basis of major findings of the study.

1.5 Significance of the study

As it is well known fact that, the commercial bank affects the economic conditions of the whole country. We could not imagine a bank with out capital or the proper mixture of the debt and equate .The study is mainly based on the evaluation of the capital structure of the joint venture bank expecting that the study can balance the proportion of equity capital and debt capital. Most of the banking transactions are done through private and public sector's banks. Every business concerns objective will be to maximize its value. The value is represented by capital structure. The study will support the different areas like student's , investor's, shareholder's , financial manager's policy maker's, customer and financing agencies etc by providing valuable information about the subject matter of the study.

1.6 Limitation of the study

This study has been made for the partial fulfillment of the requirement for the Master's Degree in Business Studies (M.B.S.) but not a comprehensive study. The study has been conducted with certain limitations. The time is the one factor of limitations. Besides it, the scope of the study is limited within the bank. Some more limitations are follows:

- i) The study analyzes capital structure and profitability of a particular bank.
- ii) The whole study is based on secondary data.
- iii) Difficult to collect all required data, due to business secrecy.
- iv) The study is fully based on the student's limited financial resources within a limited period.

- v) Variation of data in itself is also found when comparing with different sources.
- vi) The study is not a final study of the subject.

1.7 Organization of the study

The study has been organized into five chapters. The title of each of these chapters is as follows:

Introduction chapter comprises background of the study, focus of the study, statement of problem, objectives of the study, significance of the study and limitation of the study.

Review of literature chapter comprises conceptual review of the capital structure and review of the past thesis.

Research methodology deals with the method of investigation and includes research design, nature of the data, data collection procedure and tools used.

Data presentation and analysis of data deal with different statistical and the financial tools that used in the analysis of the data.

Last chapter includes the *summary, conclusion* of the study and *recommendation*.

CHAPTER - II

REVIEW OF LITERATURE

This chapter is concerned with the review of relevant literatures available in the books, journals, articles, research reports, newspapers, magazines, policy documents which are published or unpublished. Every study is very much based on past knowledge, study and experiences. The past knowledge or the previous studies should not be ignored as it provides foundation to the present study. Various thesis works have done in different aspects of non performing assets of different organization are also reviewed for the purpose of justifying the study. This chapter consists of two parts-theoretical Framework and Review of Related Studies. In theoretical framework, review of what has been written in academic books is carried out while review of related studies is further divided into review of journals and review of master degree thesis.

Conceptual Review of the Study

2.1 General concept of Capital Structure

Capital, collective term for a body of goods and monies from which future income can be derived. Generally, consumer goods and monies spent for present needs and personal enjoyment are not included in the definition or economic theory of capital. Thus, a business regards its land, buildings, equipment, inventory, and raw materials, as well as stocks, bonds, and bank balances available, as capital. Homes, furnishings, cars, and other goods that are consumed for personal enjoyment (or the money set aside for purchasing such goods) are not considered capital in the traditional sense.

In the more precise usage of accounting, capital is defined as the stock of property owned by an individual or corporation at a given time, as distinguished from the income derived from that property during a given period. A business firm accordingly has a capital account (frequently called a balance sheet), which reports the assets of the firm at a

specified time, and an income account, which reckons the flow of goods and of claims against goods during a specified period.

Capital is a scarce source and much essential to maintain smooth operation of any firm. The available capital and financial sources should be efficiently that could generate maximum return.

Capital Structure is considered as the mix of debt and equity and to operate in long run prospect. A firm must concentrate in its proportion. A firm can raise required fund by issuing various types of financial instruments. Investors and creditors being the key supply of capital, they hold greater degree of risk and hence have claims over firm's assets and cash flow is uncertain and there is probability that it may default in its obligations to pay off its interest and principal. In the other hand, if the firm issues preference share, those shareholders have the priority in payment of dividend before common shareholders but after debt holders. Since the percentage of preference dividend is fixed as the percentage of interest to debt, it is preferably paid off only after interest payment. Common shareholders as are the owner of the firm; they are paid from cash remaining after all payment is being made. Since the common share i.e. equity fluctuate in the market more than the preference share and debt, there is more risk.

The above statement states in brief that either fund is raised by debt or equity financing, risk is associated in proportion of its uncertainty is being paid off. The required rate return of expected by investors according to their risk is cost of capital. Therefore a firm should try to obtain necessary fund at lowest cost. The cost of capital is fully dependent upon the proportion of debt and equity i.e. financial leverage, which is actually the capital structure used by the firm.

2.2 Conceptual basis of Capital Structure

Capital Structure concept has important place in financial management theory. It is basically known as financial structure, financial plan or leverage. Financing decision of a firm, as the other financial decision is concerned with shareholders wealth maximization.

As capital structure refers to the proportion of debt and equity, a choice in proportion is actually financial decision in case to fulfill investment requirement. Therefore, it is a wise decision to select a financing mix, which maximizes shareholders wealth.

The term capital denotes the long-term funds of the firm. The long-term funds of the firms are financed by two major components, i.e., debt capital and equity capital. Debt capital includes long-term borrowings incurred by the firm. Equity capital consists long-term funds provided by the firm's owners. *The mix of long-term debt and equity maintained by the firm is called capital structure.* Capital structure shows, what percentage of the firm's capital is in equity and what percentage of firm's capital is in debt. Capital structure is one of the most complex areas of financial decision making due to its inter-relationship with other financial decision variables. A financial manager must understand the firm's capital structure and its relationship to risk, return and value for attainment of its primary objective of wealth maximization. (V.K. Saxena & C.D. Vashist, 2002: B.5.1)

A financial manager must strive to obtain the best financing mix or optimum capital structure for his/her firm. The firm's capital structure is optimum when the market value of share is maximized. The use of debt affects the return and risks of shareholders; this will increase the return on equity but also risk at the same time. When the shareholders' return is maximized with the minimum risk, the market value per share will be maximized and firm's capital structure would be optimum (Van Horne, 1983: 10).

Capital structure is permanent financing of the firm represented primarily by long-term debt, preferred stock and common stock, but excluding all short term credit (Weston & Brigham, 1982: 555).

Both debt and equity are used in most large corporation. The choice of the amount of debt and equity is made after a comparison of certain characteristics of each kind of securities, of interest factor related to the firm's and of external factors can affect the firm (Hampton, 1986: 42).

The term of capital structure is used to represent the proportionate relationship between debt and equity. The debt and equity mix of a firm is called capital structure. The capital structure decision is a significant financial decision since it affects the shareholders' return, risk and market value of shares (Pandey, 1992:663).

The importance of an appropriate capital structure is the obvious. There is a viewpoint that strongly supports the close relationship between leverage and value of firm. There is an equally strong body of opinion, which believes that financing mix or the combination of debt and equity has no impact on the shareholders' wealth and the decision on financial structure is irrelevant. In other words, there is nothing such as optimum capital structure (Khan & Jain, 1999: 11.1).

Under the assumption that a firm will attempt to maximize the run market value of ownership shares; there exists an optimum capital structure for each individual firm. It varies in different industries because the typical assets structure and stability of earning, which determine inherent risks vary for different type of production (Kulkarni, 1983: 368).

The concern of the financial decision is with the financing mix or capital or leverage. The financing decision of a firm relates to the choice of the portion of these sources to finance the investment requirement. There are two aspects of the financing decisions. First, the theory of capital structure which shows the theoretical relationship between the employment of debt and the return to the shareholders. The use of debt implies a higher return to the shareholders and also the financial risk. A proper balance between debt and equity to ensure a trade off between risk and return to the shareholders are necessary. A capital structure with reasonable proportion of debt and equity capital is called optimum capital structure (Khan & Jain, 1984: 10).

Capital structure of a company refers to the composition or make-up of its capitalization and it includes all long-term capital resources, viz. loans, reserves, shares and bonds (Charles, 1960: 72).

2.3 Assumptions of Capital Structure (Khan & Jain, 1999: 11.1-11.2)

Capital structure theory has some assumptions which are as follows:

- a) There are only two sources of funds used by a firm: Debt and Ordinary Shares.
- b) There are no corporate taxes (this assumption is removed later)
- c) The dividend payout ratio is 100% i.e. the total earnings are paid out as cash dividend to the shareholders and there is no retained.
- d) The firm's total assets are given and do not change. The investment decisions are in other words, assumed constant.
- e) The firm's total financing remains constant. The firm can change its degree of leverage either by selling shares and use the proceeds to retire debentures or by raising more debt and reduce the equity capital.
- f) The operating profits (EBIT) are not effect to grow.
- g) All investors are assumed to have the same subjective probability of the future expected EBIT for a given firm.
- h) The firm's business risk is constant over the time and it assumed to the independent of its capital structure and financial risk.
- i) Perpetual life of the firm.

2.4 Classification of Capital Structure (Saxena & Vashist, 2002: B.5.1-5.2)

There are different classifications of capital structure. These are mentioned below:

1. Simple Capital Structure

(i)

Balance Sheet as at.....

Equity Share Capital	Rs.2,00,000	Fixed Assets	Rs.1,20,000
		Current Assets	80,000
	<u>2,00,000</u>		<u>2,00,000</u>

(ii)

Balance Sheet as at.....

Equity Share Capital	Rs.1,60,000	Fixed Assets	Rs.1,20,000
Retained Earnings	40,000	Current Assets	80,000
	<u>2,00,000</u>		<u>2,00,000</u>

2. Complex Capital Structure

(i)

Balance Sheet as at.....

Equity Share Capital	Rs.1,80,000	Fixed Assets	Rs.1,20,000
Current Liabilities	20,000	Current Assets	80,000
	<u>2,00,000</u>		<u>2,00,000</u>

(ii)

Balance Sheet as at.....

Equity Share Capital	Rs.1,40,000	Fixed Assets	Rs.1,20,000
Preference Share Capital	40,000	Current Assets	80,000
Retained Earnings	20,000		
	<u>2,00,000</u>		<u>2,00,000</u>

(iii)

Balance Sheet as at.....

Equity Share Capital	Rs.80,000	Fixed Assets	Rs.1,20,000
Preference Share Capital	40,000	Current Assets	80,000
Retained Earnings	20,000		
Debentures and long term loan	60,000		
	<u>2,00,000</u>		<u>2,00,000</u>

(iv) Mostly short-term liabilities are omitted in considering capital structure, but some authors (for example, J.R. Lindsay and A.W. Samtez) have held the view that considering the importance of bank credit, etc. it is better to include all liabilities (long-term and short-term) in consideration of capital structure. The view is not common view. If this view is also considered, the capital structure will be shown as follows:

Balance Sheet as at.....

Equity Share Capital	Rs.80,000	Fixed Assets	Rs.1,20,000
Preference Share Capital	40,000	Current Assets	80,000
Retained Earnings	20,000		
Debentures and long term loan	40,000		
Current Liabilities	20,000		
	<u>2,00,000</u>		<u>2,00,000</u>

Normally, current liabilities are considered only in working capital analysis and not in the analysis of sources of long-term funds.

3. Classification based on sources

Under this category long-term funds can be financed from (i) Internal capital, and (ii) External capital. Internal capital includes bonus issue, capital reserve and reserves and surplus. External capital refers to share capital, share premium, forfeited share, debentures and long-term liabilities.

4. Classification based on ownership

(i) *Ownership capital* comprises of equity share capital and retained earnings.

(i) *Debt capital* includes debentures and long-term loans.

Preference share capital is treated both as part of ownership capital or as part of debt capital. It should be grouped based on the view taken by the management.

5. Classification based on cost behaviour

Classification is also attempted based on cost behaviour of various sources of capital, i.e., fixed cost capital and variable cost capital.

Fixed cost capital includes preference share capital, debentures, long-term debt.

Variable cost capital includes equity share capital.

2.5 Theories of Capital Structure

2.5.1 Net Income (NI) Approach

Two capital structure theories, i.e., the net income approach and the net operating income approach, were propounded by David Durand. According to NI approach, the firm can increase its total valuation (V), and lower its cost of capital (K_o) when it increases the degree of leverage (D/V). The optimum capital structure can be attained when the cost of capital of a firm is the lowest and value of the firm is the greatest. The main feature of the NI approach is that a firm can lower its cost of capital continuously by use of debt capital and thus increase its total valuation. Reduction in the cost of capital (i.e., more and more use of debt and increase in the value of the firm) is possible when:

- i) Cost of debt (K_d) is less than cost of equity (K_e) and it remains constant;
- ii) The firm does not become more risky in the minds of investors and creditors consequent upon increase in the degree of leverage (Saxena & Vashist, 2002: B.5.3).

The financial leverage according to the NI approach is an important variable in the capital structure decision of the firm. With the judicious mixture of debt and equity, a firm can evolve an optimum capital structure which will be the one, at which value of the firm is the highest and overall cost of capital the lowest. At that structure the market price per share would be maximum. If the firm uses no debt be equal to the equity-capitalization rate. The weighted average cost of capital will decline and will approach the cost of debt as the degree of leverage reaches on (Pandey, 1984: 412).

According to this approach, there is optimal capital structure where the market price per share of stock is maximum. The significances of this approach are that a firm can lower its cost of capital continually and increase its total valuation by the use of debt funds. This will increase use of leverage overall cost of capital declines and total value of the firm rises (Khan & Jain, 1984: 411).

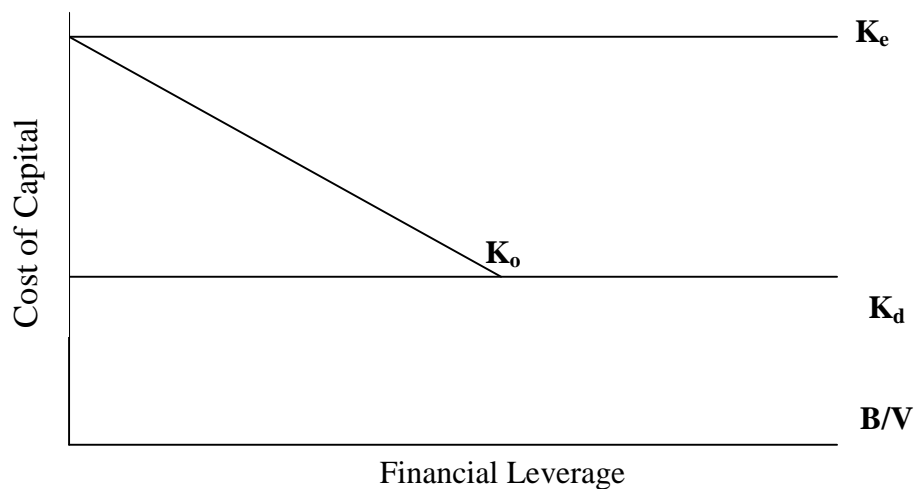


Fig. No. 1

Graphically, the effect on the firm's cost of capital and its total market value is shown in Figure No. 1. If cost of debt and cost of equity are constant as is assumed in the NI approach, then the proportion of cheaper debt funds in capital structure increases, the cost of capital decreases. Thus, under the NI approach the firm can lower its cost of capital and raises its total market value through the addition of debt capital (Gitman and Pinches: 710).

Assumption of Net Income (NI) Approach

NI approach is based on the following three assumptions:

- a) The cost of debt is less the cost of equity.
- b) The debt content does not change the risk perception of the investors, as a result the equity capitalization rate K_e and the debt capitalization rate K_d remain constant with change in leverage.
- c) There are no corporate taxes. Therefore as firm increases its leverage by increasing its level of debt relatives to equity, the overall cost of capital declines (Saxena & Vashist, 2002: B.5.3).

As per NI approach, the value of the firm can be determined as under:

$$V = S + D$$

where V = Value of the firm;

S = Market value of equity;

D = Market value of debt.

Market value of debt can be determined as follows:

$$S = E/K_e$$

where S = Market value of equity;

E = Earnings available for equity shareholders;

K_e = Equity capitalization rate or cost of equity (Saxena & Vashist, 2002: B.5.3).

2.5.2 Net Operating Income (NOI) Approach

NOI approach was also advocated by David Durand. This approach is diametrically opposite to the net income approach. The essence of this approach is that the capital structure decision to the firm is irrelevant. Any change in leverage will not lead any change in the total value of the firm and the market price of shares, as the overall cost of capital is independent of the degree of leverage (Saxena & Vashist, 2002: B.5.5).

Assumption of Net Operating Approach (NOI) Approach

NOI approach is based on following assumptions:

- a) Overall cost of capital (K_o) does not vary with leverage, i.e., it remains constant for all degree of leverage.
- b) Both Earning Before Interest and Taxes (EBIT) and overall cost of capital (K_o) are constant and independent of leverage. Value (V) of the firm does not change as leverage is changed. The market capitalizes the value of the firm as a whole. The split between debt and equity is not important. The value of the firm is found out by capitalizing the net operating income (EBIT) at overall cost of capital (K_o).

Thus:

$$V = \frac{EBIT}{K_o}$$

- c) The value of equity (S) is a residual value, which is arrived at by subtracting the value of debt (D) from the constant of the firm (V), i.e.,

$$S = V - D$$

- d) The cost of debt, i.e., K_d is a constant.

The cost of equity (K_e) is arrived at as follows:

$$K_e = \frac{EBIT - I^*}{S}$$

Where, I^* = Interest

The use of cheaper debt capital increases the risk to shareholders. This raises the cost of equity or capitalization rate.

The main point of NOI approach is that cost of equity (K_e) increases with increase in leverage, but the cost of debt (K_d), the weighted average cost of capital, K_e and total value of the firm V remain constant (Saxena & Vashist, 2002: B.5.5).

Features of Net Operating Approach (NOI) Approach

Total market value of the firm (V) is obtained by capitalizing net operating income (EBIT) at the overall cost of capital (K_c), which is constant.

Total value of the stock (S) is found by subtracting the value of debt from total market value of the firm.

The cost of equity $(EBIT - I)/S$ tends to rise in correspondence in the degree of leverage.

The overall cost of capital is an average of the cost of debt and equity.

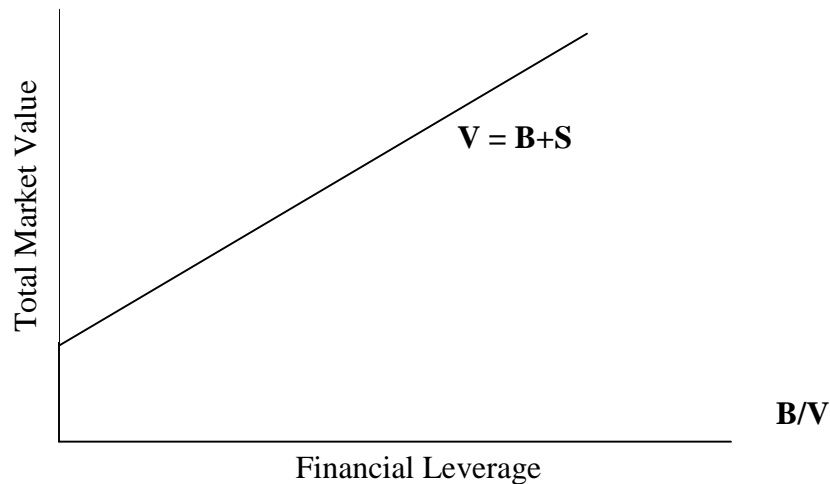


Fig. No. 2

Under the NOI approach, the capital structure selected is a “more detail” since the value of the firm is independent of the firm’s capital structure. If the firm increases its uses of financial leverage more debt directly offset by an increase in the cost of equity capital. This relationship as presented in Figure No. 2 indicates that as more debt is added to the firm’s capital structure, the cost of equity capital rapidly rises. According to NOI approach, the cost of debt has two parts. The explicit cost which is represented by the interest rate, and an implicit or hidden cost, which result from the increased cost of equity attribute to increase in the degree of financial leverage. At extreme degree of financial leverage, this hidden cost becomes very high. Hence, the firm’s cost of capital and its

total market value is not influenced by the use of additional “cheap” debt funds (Gitman & Pinches: 792).

2.5.3 Modigliani – Miller’s (M-M) Hypothesis

Franco Modigliani and Meron H. Miller (M-M) developed a hypothesis, which fundamentally affects the understanding of effects of gearing. They argue that in the absence of corporate tax, cost of capital and the market value of the firm remain invariant to the changes in capital structure or degree of leverage (Saxena & Vashist, 2002: B.5.7).

Assumptions of Modigliani – Miller’s (M-M) Hypothesis

The M-M Hypothesis is based on following assumptions relating to the capital market, behaviour of investors, actions of the firm and tax environment.

- a) The securities are traded in perfect market. This means that investors are free to buy and sell securities. The investors can borrow from the market at the rate of interest at which firms can borrow.
- b) The investors have homogeneous expectations.
- c) It is possible to classify the firms into homogeneous risk classes. The firms in a given risk class are equally risky and their expected future earnings are capitalized at the same rate, i.e., in a given class, the firms have same expected and required rate of returns.
- d) The dividend payout ratio is 100%, i.e., firms distribute all net earnings to shareholders.
- e) There is no corporate tax. This assumption was later on removed (Saxena & Vashist, 2002: B.5.7).

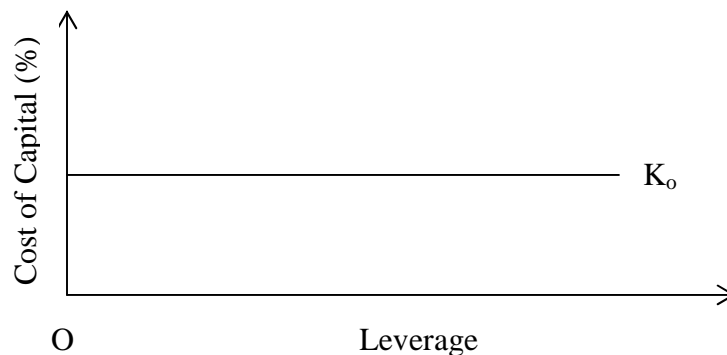
Based on the above assumptions, the M-M Hypothesis gave two propositions- Proposition I and Proposition II. These propositions are discussed below:

Proposition I: - This proposition is identical to the NOI hypothesis. The M-M hypothesis argues that the market value of the firm (V), and its overall cost of capital (K_o) are independent of its capital structure. For a firm's risk class, the market value of the firm is established by capitalizing net operating income (NOI = EBIT) at an appropriate rate as follows:

$$V = \frac{EBIT}{K_o} \quad \text{or} \quad K_o = \frac{EBIT}{V}$$

- Or
- K_o = K_d (D/V) + K_e (S/V)
 - V = The market value of the firm.
 - S = The market value of equity share.
 - D = The market value of debt.
 - X = Net operating income or earning before interest.
 - K_o = The capitalization rate appropriate to risk class of the firm.

In the above formula, EBIT is calculated before interest and for this reason it is independent of capital structure or leverage. Cost of capital K_o is equal to the capitalization rate appropriate to the risk class of the firm, and therefore, it is independent of capital structure, market structure, market value (V) must also be independent of capital structure or leverage. This is explained in the diagram given below:



Effect of leverage on cost of capital (M-M Hypothesis- Proposition I)

Fig. No. 3

The cost of capital function as hypothesis by M-M through Proposition I is shown above in Figure No. 3. It is evident from this that average cost of capital is a constant and is not affected by leverage (Saxena & Vashist, 2002: B.5.7-5.8).

Arbitrage Process: - M-M hypothesis does not accept the NOI approach as valid. It is held in this hypothesis that two identical in all respects except for their capital structure cannot command different values or have different cost of capital. M-M argue that if two firms differ only (a) in the way they are financed, i.e., capital structure are different; and (b) in their total market values, investors will sell the share of over-valued firm and buy the shares of under-valued firm. This process will continue till the two firms have the same market value. This is called arbitrage or switching process. When the equilibrium is reached, the NOI condition will be fulfilled and the value of the firm and their average cost of capital will be the same. Thus, it is held that V and K_o are independent of capital structure (Saxena & Vashist, 2002: B.5.8).

Proposition II: - The M-M Hypothesis argues that cost of capital K_e is equal to constant average cost of capital K_o plus a premium for the financial risk. This can be written as follows:

$$K_e = K_o + \text{Risk premium}$$

The premium for financial risk equals to the difference between equity capitalization rate K_e and cost of debt multiplied by the ratio of D/S, that is:

$$K_e = K_o + (K_o - K_e) \times D/S$$

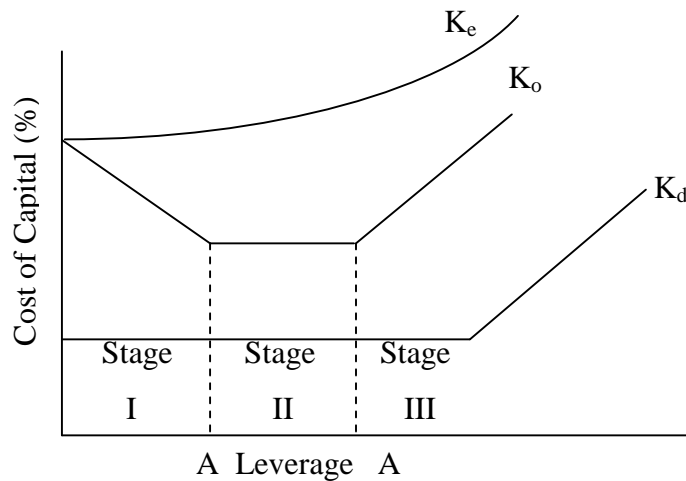
In brief, the Proposition II implies that firm's cost of equity increases to offset the use by cheaper debt capital. Alternatively, the firm's use of debt increases its cost of equity as well. Proposition II of M-M Hypothesis presumes a linear relationship between K_e and debt equity ratio (D/S) (Saxena & Vashist, 2002: B.5.9).

2.5.4 Traditional Approach

The traditional view, which is also known as an intermediate approach, is a compromise between NI approach and NOI approach. The crux of the traditional view relating to leverage and valuation and valuation is that through judicious use of debt-equity proposition, a firm can increase its total value and thereby reduce its overall cost of capital (Barges, 1963: 11).

The approach justifies the view that debt capital is relatively cheaper than ordinary shares. So changing leverage i.e., using debt instead of equity capital obviously causes a decline in the overall cost of capital is minimum or raised further the firm would become financially more risky to the investors who whole penalize the firm by demanding a higher equity capitalization rate (Khan & Jain, 1992: 495).

Traditional approach is a compromise between two extremes, i.e., net income approach and net operating income approach. The advocates of this approach hold the view that the value of the firm, i.e., V , can be increased or the cost of capital can be reduced up to a certain point by a judicious mix of debt and equity capital. Beyond that, the increase of equity more than offsets the use of cheaper debt capital in the capital structure and average cost of capital begins to rise. The average cost of capital structure further rises, when cost of debt also begins to rise. The optimum capital structure is the point at which overall cost of capital is the minimum or value of the firm is maximum. The essence of the traditional approach is that a firm may, through judicious mix of debt and equity, reduce the cost of capital and increase its total value. Graphically, traditional approach can be depicted as follows: (Saxena & Vashist, 2002: B.5.10)



The Cost of Capital Behaviour (Traditional Approach)

Fig. No. 4

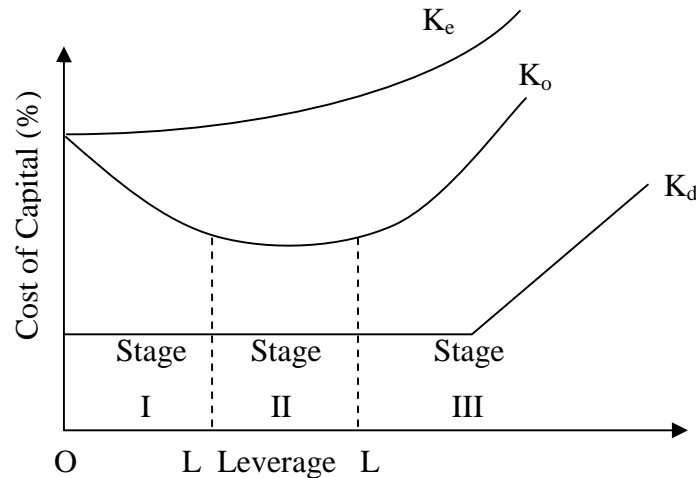
The traditional theory implies that the cost of capital is not independent of the capital structure of the firm. The traditional theory holds that this is an optimum level of capital structure. For degree of leverage before this point marginal cost of debt is less than the marginal cost of equity. Beyond this point, the marginal cost of debt exceeds that of equity (Saxena & Vashist, 2002: B.5.10).

Solomon holds the view that the reaction of the overall cost of capital to changes in capital structure can be divided into following three stages:

First stage (Increasing value):- in the joint stage cost of equity K_e remains constant or rises slightly with debt, but it does not rise fast enough to offset the advantage of low cost of debt. Thus during this stage the market value of the firm increases and the average cost or overall cost of capital. i.e., K_o decreases as leverage increases.

Second Stage (Optimum value):- once the firm has reached certain degree of leverage, increase in leverage (i.e., additions of debt capital) will have insignificant or negligible effect on the value of the firm and the cost of capital. During this stage, there is a range in which value of the firm V will be maximum and the average cost of capital K_o will be minimum.

Third Stage (Declining value):- Beyond the acceptable limits of leverage, the value of the firm V will decrease and overall cost of capital K_o will increase with in lend of leverages. This happens because both cost of debt K_o and cost of equity K_e will rise abnormally as the investors perceive high degree of financial risk. The three stages have been expressed graphically as below: (Saxena & Vashist, 2002: B.5.10 - 5.11)



Effect of leverage on Cost of Capital (Traditional Approach – A variation)

Fig. No. 5

2.6 Other related concept of Capital Structure

Common Stock

Common stock is a security representing the residual ownership of a corporation. It guarantees only the right to participate in sharing the earning of the firm if the firm is profitable. Common shareholders usually have the additional right to vote at stockholders meeting on issues affecting fundamental policies of the corporation. Also, the shareholders have the right to select the members of their board of directors, the right to inspect the firm's books (only for the legitimate purpose of evaluating the performance of management), and the right to obtain a list of the names and address of other shareholders (Hampton, 1986: 38).

Common equity in a corporation or partnership or proprietorship interests in an unincorporated firm constitute the first source of funds to a new business and the base of

support for borrowing by existing firms. The nature of equity ownership depends on the form of the business or organization. The central problems of such ownership revolve around an apportionment of certain rights and responsibilities among those who have provided the funds necessary for the operation of the business. The rights and responsibilities attached to equity consist of positive considerations (income potential and control of the firm) and negative considerations (loss potential, legal responsibility, and personal liability) (Weston & Copeland: 931).

When the investors buy common stock, they receive certificates of ownership as proof of their part as owner of the firm. The certificate states the number of shares and their par value (Bhalla, 1983: 154).

Preferred Stock

Shares whose holders are the first to receive dividends from available profit are preference shares. Preference shares are redeemed before ordinary shares when a company is liquidated (Microsoft Encarta 2006).

Preference stock is a source of capital that is part of shareholders equity. It has lower claim priority than the firm's debt but a higher priority than its common stock (Steven E. Bolten, Robert L. Conn, 1981: 612).

Accountants classify preferred stock as equity and generally list it in the equity portion of the balance sheet under the title "preferred stock" or "preferred equity". However in financial analysis preferred is sometimes treated as debt and sometimes as equity, depending on the type of analysis being made. If the analysis is being made by a common stockholder's then the key consideration is the fact that the preferred dividend is a fixed charge, which must be paid ahead of common stock dividends, so the common stock holder will view preferred stock as being similar to debt. Suppose, however that the analysis is being made by a bondholder studying the firm's vulnerability to failure due to a decline in sales and income. If the firm's income declines the debt holders have a prior

claim ahead of preferred stockholder's to the available income and if the firm fails, debt holders have prior claims to assets when the firm is liquidated. Thus to the bondholder preferred stock is similar to common equity. From management's perspective preferred lies between debt and common equity. Since the dividends on preferred stock are not a fixed charge in the sense that failure to pay them represents a default on an obligation, preferred stock is safer to use than debt. On the other hand, if the firm is highly successful, then the common stockholders will not have to share that success with the preferred stockholders, because preferred dividends are fixed. We see then, that preferred has some characteristics of debt and some the characteristic of common stock and it is entirely appropriate (Brigham, pg no. 510).

Long-term debt

If an existing obligation is not to be paid within one year or current operating cycle (whichever is longer) or replaced by another current liability, it is properly classified as long-term liability. The most frequently encountered long-term liabilities are holds payable; long-term notes payable, lease obligations, pension obligations, deferred taxes, other long-term deferrals and occasionally contingent liabilities.

The use of borrowed funds is known as the trading on equity. The customary reason for using borrowed fund is the expectation of investing them in a capital project that will provide a return in excess of the cost of the acquired funds.

When additional funds are needed to expand the business or for current operations, a corporation has the choice of issuing debt or equity securities. There are four basic reasons why a company may wish to issue debt rather than equity securities.

- Bonds may be the only available source of funds.

- Debt financing has a lower cost.

- Debt financing offers a tax advantage.

- The voting privilege is not shared.

Debenture

The word “debenture” has derived from the Latin word ‘debere’ meaning merely a debt and it has nothing to do with the security or lack of it.

A corporate debenture is a security representing a long-term promise to pay a certain sum of money at a certain time or over the course of the loan, with a fixed rate of interest payable to the holder of the debenture. Debenture have significant place in corporate finance. It enables to have funds without sharing control with the holders of the security. It may be unsecured or secured, convertible or non-convertible.

Retained earning

Retained earning is also called reinvested earnings. It is increased in stockholders equity due to profitable operation. It may be capital reserve, revenue reserve etc.

Dividend

Dividend, in corporation finance, a fund appropriated out of the profits of a corporation and distributed among its stockholders; also the share of the fund received by a stockholder. Dividends are usually declared periodically (quarterly, semi-annually, or annually) by the directors of a corporation. The action of a board of directors with respect to the declaration or non-declaration of dividends is usually final and conclusive upon the stockholders and is subject to review by the courts only in the event that the action is arbitrary or capricious.

Dividends are distributed on a proportional basis; the fractional share of the total dividend received by stockholders is equal to the proportional share of the stocks owned by them. Holders of the preferred stock of a company generally have a prior right to the payment of dividends over holders of common stock, and if their stock so provides, are paid at a fixed periodic rate. Preferred dividends may be cumulative or non-cumulative. Cumulative dividends are those that, if not paid for one or more periods, constitute charges on the profits of succeeding periods and must be paid at a future date before

dividends may be distributed on common stock. Non-cumulative dividends, if omitted, do not constitute charges on future profits. Dividends may take the form of additional shares of stock or of the right to purchase stock for a fixed sum per share; such dividends are called stock dividends and rights.

The term *dividend* is applied also to the assets of a bankrupt or insolvent business that are distributed among its creditors during the course of its liquidation. The term is used in insurance to signify the sum appropriated out of profits for distribution among policyholders whose policies so provide; such dividends may be used to reduce the next premium (Microsoft Encarta 2006).

Dividend, in the normal use of the word, refers to that portion of retained earnings that is paid to stockholders. Dividend policy refers to the policy or guidelines that management uses in establishing the portion of retained earnings that is to be paid in dividend (Bhalla, 1983: 167).

2.7 Determination of Capital Structure

There is some element of capital structure for decision. Without study of these element, the company cannot make appropriate capital structure and analysis of leverage may be incomplete. So we have to make a study of determinants of capital structure in the following ways.

EBIT / EPS Analysis

In the study of leverage the EBIT-EPS analysis is must because it is a method of financing under various assumptions of EBIT that should raise its capital position in different situation. In that situation, they have to choose better capital source as per the profitability of the company in the near future. To make balanced and appropriate capital structure for better future, the company needs to select different alternatives from different source in different proportion. The EBIT-EPS analysis is one of the best ways by which, we can understand the exclusive use of equity capital, debt capital, preference capital, a combination of different proportion and so on. These are analytical instrument,

which will be useful in planning the capital structure and increasing earning before interest and taxes with greater value of EPS.

The main objective of any company is to maximize the market value of the firm as well as shareholder's wealth position. Keeping this in view, the EBIT-EPS analysis should be considered logically at the first stage of designing capital structure. The EBIT-EPS analyses show the impact of various financial alternatives on EPS at various levels of EBIT. This method involves the comparison of alternative method of financing under various assumptions as to EBIT. With these methods, the financial manager can make an appropriate financial decision.

Cost of Capital

Cost of capital is generally used in the sense of overall cost of capital. This overall cost of capital is comprised of the costs of various components of financing, i.e., the sources from which the capital has been raised. Each source has got own cost. All these costs are combined to compute overall cost of capital of a firm.

Cost of capital is a very widely used term in the literature of finance. It is defined as the minimum rate of return (or required rate of return), that a firm must earn on its assets in order to maintain its market value and attract needed funds. It is the rate of return at which the market value of a firm remains unchanged. In capital investment proposals, cost of capital is used as discounting rate or hurdle rate, or cut-off rate that is applied to projects' cash flow stream to determine whether the project is worthwhile or not. One of the financial objectives of a firm is to earn more than cost of capital. It is the rate of return required by those who invest in the firm (Saxena & Vashist, 2002: B.5.16).

Flexibility

Flexibility means the firm's ability to adopt its capital structure to the needs of changing condition. The firm should keep flexible financial plan in order to economize use of funds by substituting one from financing other.

The restrictive covenants are commonly included in long-term loan agreement and debenture. The covenants in loan agreement may include restriction to distribute cash dividend, to purchase assets or to raise additional external financial. The firm also is required to maintain a certain ratio, as debt equity ratio or current ratio at certain ratio.

The firm having the discretion of refunding its debt and preference shares capital can enjoy considerable degree of flexible. The financial plan of the firm should be flexible enough to change the composition of the capital structure as warranted by the firm's operating strategy and needs.

2.8 General concept of Profitability

Profit, in business, the monetary difference between the cost of production and marketing of goods or services and the prices subsequently received for those goods or services. Profit is an essential competitive feature of buying and selling in the economic system. The opposite of profit is loss, whereby the cost of producing certain goods or services is higher than the price a buyer is willing to pay for them. In free market economy, the will to make and function by profits is termed the *profit motive*. Though normally taken as the basic motive for business, its universality has been challenged by the theory of the firm. Japanese firms, especially, are renowned for preferring market share over at least short-term profits.

The term 'Profit' is being used in several senses. According to Prof. Knight, "Perhaps no term or concept in economic discussion is used with a more bewildering variety of well-established meaning that profit". Some writers have defined it as the percentage returns on investment of capital while others have called it the reward of ownership. Some have referred to it as reward for risk-taking, while others have called it as a reward for entrepreneurship. There are still others who have defined profit as the residual income which results after all the three factors of production have been paid off. To get an accurate meaning of profit, it appears necessary to distinguish gross profit from net profit (Seth M.L., 1998: 438).

The profit and simply the money gained from a sale, which is more than the money spent. According to the dictionary of commerce, profit is termed as to describe the surplus resulting after a defined trading period but must be regarded as the first essential charge upon business, being a reward for engaging resources in conditions of speculative risk for the satisfaction of consumer resources of speculative risk for the satisfaction of consumer demand. It furnishes resources to invest in future operations and consequently its absence must result in a decline in effective capital resources and ultimately competitive extinction of the business.

The term 'profit' can be used in two senses. As a owner oriented concept it refer to amount and share of national income which is paid to the owners of business, that is those who supply equity capital as variant is described as profitability. In other word, profitability refers to situation where output exceeds input that is the value created by the use of resources is more than the total of input resource.

Profitability is a deviation of the term profit which explains ability to make a profit is a primarily a measuring rod of success of business enterprise. It is the basic test performance of any business simply stating. Profit is money excess of sale over money spent but the term "Profit" is very controversial and there are several different interpretations about it.

An economist will say that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced and that it provides a base for negotiating a wage increase. And investor will view it is a gauge of the return on his/her money. An internal revenue agent might regard it as a base for determining income taxes. The accountant will define it simply as the excess of firm's revenue over expenditure of producing revenue in given fiscal period (Lynch & Williamson, 1989: 99).

In this regard, American Institute of Banking says, "Under the free enterprise system like USA, the interest of the nation as well as those of the individual stockholders is supposed

to be best served by vigorously seeking profit. But the profit cannot be a sole objective of an enterprise and an enterprise should not be evaluated just on the ground of the profit it earned. Neither bank nor the community will be the best served if the banker unreasonably sacrifices safety funds of the liquidity of bank in an effort to increase income” (American Institute of Banking, 1972).

Every business firm has different types of goal. Profit maximization is the goal of business. Profit is very important for business firm. It is equally important as for is water. To cover cost of staying in business such as replacement of machines, furniture, obsolescence of machines, market or technical risks etc. Profit is essential in the sense to the self-financing principal. It provides structure and helps to minimize cost of capital. Profit of business is attraction for investors. So investors would invest their money where there is adequate profit. Hence profit is required to ensure and satisfy the entire expectation of management, shareholders, investors, employees and nation as whole.

2.8.1 Traditional Approach towards Profit

Profit maximization is the traditional approach of business environment and economic theory on the ground of profit for firm. In the economic theory, one of the assumptions is profit maximization. It always assumes that a firm sets a target to maximize the profit and is discretionary behaviour of the firm, so in the managerial economics, to maximize profit is the central belief.

“Profit is the measurement of the business firm’s overall performance. A business firm can claim it to be successful if it can maintain maximum profit to justify the worth of return on investment. This helps business firm to save from shortage of funds and provides best opportunities to under take the expansion of assets to enlarge business” (Shrestha, 1980: 23-24).

The promise of profit provides a strong incentive to owners and manager to act efficiently. Therefore it is common in economic theory to hypothesis that the criteria for

evaluating the action of the firm are profit maximization. The basic incentives for business are to produce goods and services. The profit in this sense is revenue that remains after deducting both explicit and implicit costs, including nominal profit considered of the entrepreneur's services. "Profit is essential for every enterprise to survive in the long run as well as to maintain capital adequacy through retained earnings. It is also necessary to accept market for both and equity to provide funds for increased assistance to the productive sector" (Robinson, 1951: 21-22).

2.8.2 Modern Approach towards Profit

Business environment is totally different from past to today. In past time one of main objectives of firm was profit maximization. But today sales maximization is the main objective of the firm. So that firm's objective may be to maximize its growth rate or satisfaction shareholders' wealth maximization.

Today every business firms finance by equity owners, creditors. Professional management is related to customer, employee, government and society concerned with firm. Besides other objectives of business firm, wealth maximization of shareholders' is normal objective of firm or otherwise a firm should set a standard for reasonable profit.

There are threats given to profit maximization and the economists to the profitability concept of firm give so many alternatives. Though there are denials towards profitability maximization model of a firm. Economists still do not have unified views to cover the alternative model when markets are perfect competitive, monopolistic or oligopolistic form. Therefore, the profitability model is still in the existence. A business firm still prefers to maximize profit as far as possible. "Business has multiple goals and the needs of survival, goodwill, security and both commonly call for some sacrifice of short term profits. Most business does, however, rate profitability consistently high among their term objectives and it could be argued short term goal such as security and growth rate, subordinate to long term profitability."

2.9 Review from past thesis

Tamang (2001) had done the comparative study about two Hotels, Yak & Yeti and Soaltee, which is entitled “An Impact of Capital Structure on Profitability”. He has found that to provide maximum returns to the shareholders and to increase the value of the firm, the firm has to focus on profit which is one of the measurements of successful firm in planning its most optimal capital structure. By analyzing the debt to equity ratio in terms of long-term debt and shareholders equity, both Hotels’ D/E ratios are not higher according to the standard ratio, which constitute 1:1. Hotel Yak & Yeti is trying to be levered company, which has practice of increasing the D/E ratio, since 2055/056 by approximately 27% every year. While calculating the correlation coefficient, he found that Hotel Soaltee has negative correlation and there is safety to lenders last year, which is indicated by the decreasing D/E ratio. Hotel Soaltee does not have financial leverage that is why changes in EBIT are not able to bring multiplier and increase the use of assets efficiently. In other words to get higher ROE, both Hotels have once higher profit margin but it is impossible to get high profit margin every time. So they should try to increase assets turnover and redeem the amount of total debt, otherwise such debt would be a burden in terms of paying fixed interest while Hotels are not getting high profit. He has also recommended that they should give equal importance to other factor like operating efficiency and assets efficiency, etc. and the government also should make effective tourism policy.

Giri (2006) had conducted a thesis on “Capital Structure Management of Listed Joint Venture Commercial Banks”. He studied on two joint venture commercial banks; they are Standard Chartered Bank Nepal Limited (SCBNL) and Nepal Bangladesh Bank Limited (NBBL). He found that JVBs have lack of theoretical and practical knowledge with regard to capital structure theories. Nepalese investors are not attracted by the theories. JVBs in Nepal have concentrated their business with big businessmen and industrialists. Their clients are mostly big manufacturer; carpet and garment exporters, multinational companies, large scale of industries, NGOs as well as INGOs, travel agencies, cargo agencies, housing companies etc. Therefore, the JVBs are suggested to

open their doors to the small depositors and entrepreneurs also. The capital structure of selected banks is highly levered. The proportion of debt and equity capital should be decided keeping in mind the efforts of tax advantage and financial distress. The banks, when they are in difficult to pay interest and principal, ultimately lead to liquidation or bankruptcy. For such, the banks should reduce the high use of debt capital. Return ratios like; return on total assets and return on shareholder's equity are not satisfactory in NBBL. SCBNL seems very good performing than NBBL in case of ROE. The savings from rural communities are neglected by JVBs, without which they can't contribute much to the economic development of the country. So, JVBs recommended being cooperative and should expand the branches by covering all the five development regions of the country including rural areas to achieve geographically balanced approach. JVBs are basically not concentrated to mobilize their deposit funds in productive areas. Nepalese shareholders are very much concerned about the payment of cash dividend by the joint venture banks rather than their financial statement. He has suggested paying cash dividend consistently. He also has suggested expanding branches and assets, which ultimately affect the banks capital structure and expected to increase the profitability more than the present. Last but not the least; the banks have to enhance effectiveness, efficiency and proper coordination of its departmental tasks by continuously reviewing its structural design in accordance with the need of the changing time and situation.

Shrestha (2007) had conducted a study on the topic of "Focus on Capital Structure of selected and listed public companies". Her objective of the study was to analyze the capital structure of selected and listed companies. She used data from 19 companies and study had covered different sectors manufacturing finance, utility service and other allied area. She had found that most of these companies have debt capital relatively very higher than equity capital. Consequently, most of them are operating at losses to the extent that payment of interest on loan has been serious issues. Most of the losses are after charging interest on loan. She has suggested that the government has to consider in public enterprises is that of evaluating the relationship between use of debt and its impact on overall earning of public enterprises. So, the government should be sure in knowing how

using debt capital will minimize return. Government of Nepal invested large amount of money in public enterprises. It should need to develop a suitable capital structure guideline to make public enterprise aware of the responsibility to repay the debt schedules. The other thing, which needs to be made publicity transparent that government money is not a lost less, found. Government has to analyze cost and risk return trade off. Thus, capital structure needs to be made more determinate by realistic analysis of cost.

Dhakal (2008) had submitted a thesis study on “An evaluation of Capital Structure of Bottlers Nepal Limited”. He has found that the long-term debt on BNL is increasing year by year because the company has borrowed more long-term debt. Different ratio analyses show the inefficient capital structure management of the company. He had made his analyses only five years periods and he suggested that the company has to follow good policy to set capital structure. The calculation of leverage position indicates the bad performance of the company because it is in increasing trend. After doing all calculations like ratio, leverage, capital structure position, correlation and P/E ratio etc, it was found that the company is facing bad situation due to inefficient capital structure. So the company has to lower down the amount of debt and to obtain additional fund through the issue of equity share by using cheaper source of collecting funds. In order to build up public image, share must be issued to the general public. Moreover the company should think about other new product for winter season to increase good image of the company. The company has regarded as highly geared up capital structured company. Thus, to design suitable pattern of capital structure for the company, the management must bring about a satisfactory compromise among these conflicting factors of cost, risk, control and timing. He recommended that the company to shift debt capital to equity capital when the company has high earning per share.

Thapa (2009) has conducted research on "A Study on Capital Structure of Industrial Public Enterprises". In this study, effect of leverage was tested and measured the relationship between capital investment and earnings generations and also measured the relationship of capital structure with profit.

Under this study, it was concluded that the overall result was unsatisfactory and suggested improving their self efficiency in the financial performance. Furthermore, it was advised that the subsidy and donation should be reduced where has been the main cause of inefficiency of the management.

Karki (2010) has conducted research on "An Evaluation of Capital Structure of Bottlers Nepal's Limited" suggested that the management must bring a satisfactory compromise among the confusion of cost, risk control and timing. It was found that the company did not have a proper balance of debt and equity. The debt capital was comparatively higher than equity, so the company is regarded as highly levered company. It was suggested that, in order to bring down the amount of debt capital, company should retire debt capital by issuing additional equity shares and further suggested that the company should maintain the general norms of capital structure optimal.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a systematic way to solve the research problem. In other words, research methodology describes the methods and process applied in the entire aspect of the study. Research methodology refers to the various sequential steps (along with a rationale of each step) to be adopted by a researcher in studying a problem with certain objectives in view (Kothari, 1994:9). Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing techniques and tools.

3.2 Research Design

The overall plan of the proposed study is made to specify the appropriate research methods and procedures for obtaining specific findings as objectively, accurately and economically as possible. The planning of subject matters studied are balance-sheet, profit and loss account, loan classifications and their provisioning, of sample selected banks and the directives issued by NRB regarding the loan classifications and their provisioning matters.

The populations of the study are taken the whole banks in the banking operations while samples are taken Everest Bank Limited, Kumari Bank Limited and Nepal Bangladesh Bank. As per the nature and requirement of the study, descriptive research design is adopted with analytical approach.

3.3 Sources of Data

The major portion of the data collected is from the secondary sources. The sources include the published annual reports of concerned banks, the different periodical publication of Research Department and Bank and Financial Institutions Regulation

Department of NRB as well. The different websites related to the required data are also visited during the data collection.

3.4 Population and Sample:

The large group about which the generalization is made is called population under study, or the universe and small portion on which the study is made is called the sample of the study.

Nowadays a number of commercial banks have been emerging rapidly. Some have already been established and others are in the process of establishment. Currently, there are 30 commercial banks in Nepal. In this study, all the commercial banks are population of the study. Among them Everest Bank, Kumari Bank and Nepal SBI Bank has been selected as samples for the present study on the basis of well financial performance.

5.5 Data Collecting Procedure

The study is based on the secondary data. So they are collected directly visiting the head office of the concerned banks. For this purpose the annual published report of the concerned banks are utilized and gathered the necessary data. Similarly quarterly Economic Bulletin, the publication of the Research department and the Banking and Financial Statistics the publication of Bank and financial Institutions department of NRB also are used during the data collection. The websites of the concerned banks also were visited in the course of data collection.

3.6 Data Processing Procedures

At first the raw data are collected from the various sources, which include the annual financial report of concerned banks, the various publications of NRB and the relevant websites of concerned banks. They are classified as per the nature of the study and in accordance of the data. The tabulation is specially made on the basis of their consequent three fiscal year's data available and need base headings; such as performing loan, total

NPA, substandard loan, doubtful loan and bad loan. The tabulation mainly contains the calculation of the percentage of required variables, as it is needed. The tabulation also comprises the total assets, total deposits, total lending, calculation of the return on total assets and the return on shareholder's equity. Simple percentage tool is used as arithmetic tool and Karl Pearson's coefficient of correlation as a statistical tool.

3.7 Tools and Techniques Employed

As mentioned earlier, this study is confined to the single analysis of capital structure and profitability of the private commercial bank. To reach the objectives, the collected data are computed and analyzed using statistical and financial tools.

3.7.1 Financial Analysis

A widely used tool for the financial analysis is ratio analyses. It is defined as the systematic use of ratio to interpret the financial statement so that the strength and weaknesses of a firm as well as its historical performance and current financial condition can be determined. Management should be able to analyze the financial strength so as to find out the weakness of the company and erase them out by making rational decision. In other words, management may have different types of weaknesses, which may be the causes of unsuccessful organization. So the company should use an analytical tool to know about its own situation and take a suitable and corrective action to relieve from arisen problems. The most useful tool of financial analyses is ratio analysis.

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

1. Long term Debt to total Debt Ratio

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

$$\text{Long term debt to Total debt} = \frac{\% \text{ Long term debt (LTD)}}{\text{Total debt}}$$

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

2. Long term Debt to Shareholder's Equity Ratio

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

$$\text{Long-term debt to shareholders' equity} = \frac{\text{Long term debt (LTD)}}{\text{Shareholder's equity}}$$

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

3. Total Debt to Shareholder's Equity Ratio

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

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

Higher ratio indicates the comparatively higher contribution of debt holders than shareholders. It also indicates that at the time of liquidation higher portion of total assets will be claimed by the debt holders.

4. Total Debt to Total Assets Ratio

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

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

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

5. Shareholder's Equity to Total assets

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

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

Higher ratio indicates the lower leverage risk and vice versa.

6. Interest Coverage ratio

The interest coverage ratio also known as the time interest-earned ratio is one of the most conventional coverage ratio used to test the firm's debt servicing capacity. This ratio show the number of times the interest charges are covered by funds that are ordinarily available for their payment. The interest coverage ratio is thus computed as;

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

Higher ratio indicates the strong debt service capacity of the company and vice versa.

Too high ratio refers the unused debt capacity of the company.

6. Long Term Debt to Capital Employed

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

$$\text{The Long term Debt to Capital Employed} = \frac{\text{Long Term Debt}}{\text{Capital Employed}}$$

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

7. Return on Shareholder's Equity (ROE)

A return on shareholder's equity is calculated to see the profitability of owner's investment. The shareholder's equity includes paid-up share capital share, premium and reserves and surplus less accumulated losses. The return on shareholder's equity is net profit after taxes divided by shareholder's equity.

$$\text{Return on shareholder's equity} = \frac{\text{Net Profit after tax}}{\text{Shareholder's equity}}$$

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

8. Return on Assets (ROA)

A ratio between net profits to assets is known as return on asset. But generally return on asset can express the relationship between net profit after taxes and total assets.

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

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

9. Earning per share (EPS)

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

$$\text{EPS} = \frac{\text{Net profit available to common shareholders}}{\text{Number of share out standing}}$$

The increasing EPS means the increasing return for shareholders.

10. Divided per Share (DPS)

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

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

11. Overall Capitalization rate Under NI approach

The NI approach Known as relevant theory of capital structure is already discussed in former chapter. Hence, the formulas used to compute the value of the firm and overall capitalization rate under NI approach is given. Market value of the firm = market value of debt + Market value of stock.

Or, $V=B+S$

And,

$$\text{Overall capitalization rate} = \frac{\text{EBIT}}{\text{Value of the Firm}}$$

Or,

$$K_o = \frac{\text{EBIT}}{V}$$

12. Equity capitalization Rate under NIO approach

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

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

$$\text{Or, } K_e = \frac{\text{EBT}}{S}$$

3.6.2 Statistical Analysis

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

-) Arithmetic Mean
-) Standard deviation
-) Karl Pearson's coefficient of correlation
-) Probable error

) **Arithmetic mean**

Arithmetic mean also called the mean' or average arithmetic mean is the most popular and widely used method of central tendency. It is the ratio of sum of all observations. It is calculated from ungrouped data and frequency.

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

Where,

\bar{X} = Mean Average

= Summation

N = No of Years

) **Standard Deviation**

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

$$SD = \frac{\sqrt{\sum (X - \bar{X})^2}}{N}$$

Where,

SD = Standard deviation

= Summation

X = Sample Date

\bar{X} = Average mean

N = No. of Years

) **Correlation Coefficient (r)**

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

s

$$\text{Correlation coefficient (r)} = \frac{\sum \phi_{xy} - \frac{\sum \phi_x \cdot \sum \phi_y}{N}}{\sqrt{\sum \phi_x^2 - \frac{(\sum \phi_x)^2}{N}} \sqrt{\sum \phi_y^2 - \frac{(\sum \phi_y)^2}{N}}}$$

Where,

N = number of observations.

X and Y are variables.

The decision criteria:

When,

r = 0, there is no relationship between the variables.

r = 1, the variables are perfectly positive correlated.

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

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

The Degree of reliability of computed correlation can be judged with the help of its probable error (P.E) It can be calculated as:

$$\text{P.E} = \frac{6 | 0.6745 | (1 Z r^2)}{\sqrt{N}}$$

Where,

r = correlation co-efficient.

N = number of pairs of observation

If the value of 'r' is less than the probable error there is no evidence of correlation i.e., the value of r is not significant.

If the value of r is more than 6 times of probable error the coefficient of correlation is practically certain, i.e. the value of r is significant.

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction:

Data presentation is the interpretation of the study. Data analysis summarizes the collected data and its interpretation presents the major findings of the study. Analysis is not complete without interpretation and interpretation cannot proceed without analysis. In this course of analysis, data gathered from. The data have been analyzed by using financial and statistical tools. The results of the computation have also been summarized in appropriated tables. The samples of computation of each model have been included in annexes. This chapter includes presentation of data and analysis of that data to reach at a conclusion

4.2. Analysis of Capital Structure:

4.2.1. Net Income (NI) Approach:

Net income (NI) approach is also known as dependent hypothesis of capital structure. The essence of this approach is that the firm can reduce its cost of capital by using debt and total valuation of the firm through the reduction in the cost of capital leading to increase in the cost of capital thus leading to increase in the degree of leverage. This theory assumes that the cost of debt and cost equity remain constant as change in the firm's capital structure. In other words the firm can increase its value or lower the overall cost of capital by increasing the proportion of debt in the capital structure. It gives attention on the overall capitalization rate. According to this theory optimum capital structure is that where the total value of the company is the highest and the overall capitalization is lowest. The overall capitalization rate can be calculated simply by dividing EBIT by the value of the firm. Net operating income

$$(NOI) = K_o . V$$

Where,

Ko = Cost of overall capitalization rate.

V = Total market value of the firm.

Comparative positions of overall capitalization rate.

Table No: 4.1

F/Y	EBL		KBL		SBI	
	Cost of capital(ko)	Value of firm(v)	Cost of capital(ko)	Value of firm(v)	Cost of capital(ko)	Value of firm(v)
2005/06	23.4%	2249.10	18.5%	4911.48	7.8%	4662.77
2006/07	19.2%	2877.52	16.8%	6455.03	6.9%	5533.13
2007/08	13.6%	5473.25	14.2%	9261.56	5.2%	10234.41
2008/09	10.1%	9552.81	12.8%	11584.62	5.6%	13335.57
2009/10	8.1%	15874.37	6.8%	25815.98	3.4%	23029.51
Average	14.9%	7205.41	13.8%	11605.73	5.8%	11359.07

Source: Appendix 10&11

Above computed overall capitalization rate of EBL shows that the costs are 23.4%, 19.2%, 13.6%, 10.1% and 8.1% for the fiscal year 2005/06 to 2009/010 respectively. When the value of the firms were 2249.10, 2877.52, 5473.25, 9552.81 and 15874.34 million respectively. The average cost is 14.9% at an average of Rs.7205.41 million.

In the case of KBL the cost are 18.5% , 16.8%, 14.2%, 12.85% and 6.8% from the F/Y 2005/06 to 2009/010 respectively when the value of the firm were Rs.4911.48, 6455.03, 9261.56, 11584.62 and 25815.98 respectively .The average cost is 13.8% at an average of Rs.11605.73 million.

Similarly, In the case of SBI the cost are 7.8%, 6.9%, 5.2%, 5.6% and 3.4% from the fiscal year 2005/06 to 2009/010 respectively. When the value of the firm were Rs 4662.77, 5533.13, 10234.41, 13335.57 and 23029.51 respectively . The average cost is 5.8% at an average of Rs.11359.07 million.

On the basic of NI approach, we can see on the above table that on the decrease in the cost of capital the value of the firm has increased, which Matches to the theory of NI

approach. It says if we increase the ratio of debt in the capital structure the cost of capital will decline and the value of firm will increase.

4.2.2 Net Operating Income (NOI) Approach:

It is an dependent hypothesis of capital structure decision of the firm and which is irrelevant to the value of firm and overall cost of capital. Change in leverage will not lead to any change in the total value of the firm and market price of the share as the overall cost of the capital is independent of the degree of leverage .Increase in leverage leads to increase in financial risk of the ordinary shareholders. To minimize the financial risk, the shareholders want a higher return on their investment .Increase in cost of equity (Ke) are exactly offset by using cheaper debt fund keeping ko constant .So, equity capitalization rate Ke is calculated here by simply dividing EBT by the market value of common equity which is presented in the following table.

Comparative position on effect of Debt on Equity:

Table No: 4.2

F\Y	EBL		KBL		SBI	
	Cost of equity(Ke)	LTD	Cost of equity(Ke)	LTD	Cost of equity(Ke)	LTD
2005/06	6.70%	–	5.8%	–	4.64%	–
2006/07	6.23%	300	5.2%	360	3.97%	–
2007/08	4.55%	300	5.3%	360	2.99%	200
2008/09	3.23%	300	4.6%	360	3.35%	200
2009/10	2.93%	300	2.5%	360	1.53%	200
Average	4.73%	240	4.68%	288	3.30%	120

Source: Appendix 12

The equity capitalization rate of EBL in the fiscal 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 are 6.70%, 6.23%, 4.55%, 3.23% and 2.93% respectively .And their respective long term debt are Rs.0.00, Rs.300, Rs.300, Rs.300 and Rs.300 million respectively . The average long term debt is Rs.240 million.

The equity capitalization rates of KBL in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 are 5.8%, 5.2%, 5.3%, 4.6% and 2.5% respectively and their respective long term debt are Rs.0.00, 360, 360, 360 and 360 million respectively . The average cost is 4.68% at an average long term debt of Rs.288 million.

Similarly, the equity capitalization rate of SBI in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 are 4.64%, 3.97%, 2.99%, 3.35% and 1.53% respectively. And their respective long term debts are Rs.0.00, 0.00, 200, 200 and 200 million respectively. The average cost is 3.30% at an average long term debt of Rs.120 million.

4.3. Ratio Analysis:

4.3.1. Long term debt to total debt ratio:

The relationship between long term debts to total debt has a decisive impact on the financial structure of the companies. This relationship indicates what percentage of total debt is covered by long term debt of the firm. Normally firms used short term and long term debt. Current liabilities and provisions are also needed during the operation of the firm. Simply dividing long term debt by the total debt can derived the relationship between the long term debt included all types of borrowed fund, current liabilities and provision. If the firm used large amount of short term loans and over current liabilities and provision in the larger amount, the percentage of long term debt will be low and vice versa. The higher ratio of long term debt holders upon the total debt and the lower ratio indicate the higher portion of short term loans and current liabilities in the total debt of the firm. The amount of liabilities used depended upon the liquidity of that firm. This relationship of long term debt and total debt is presented in the following table along with percentage change in that ratio to show the movement of trend individually. In addition the average (standard) ratio is also calculated to compare with each other. But the details calculation is shown in the appendix 1.

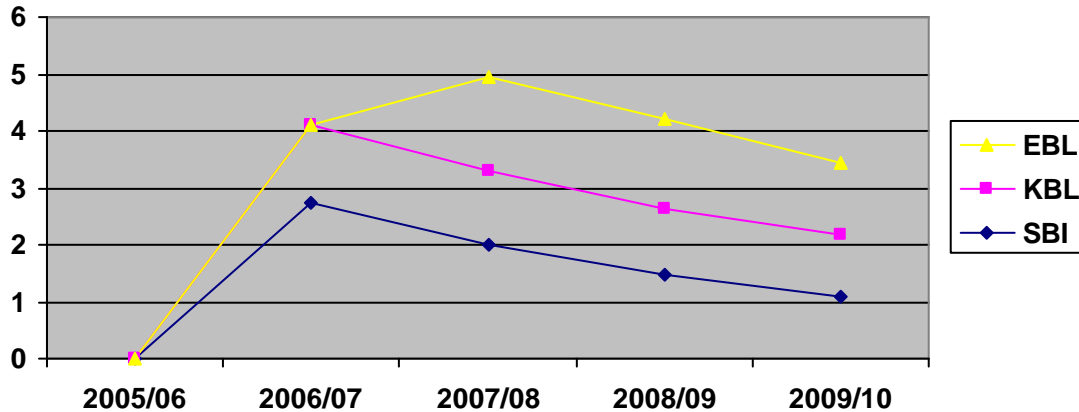
$$\text{Long term debt ratio} = \frac{\text{Long term debt} \mid 100}{\text{Total debt}}$$

Table No. 4.3
Long Term Debt and Total Debt position.

Fly	Long term debt to Total debt (%)		
	EBL	KBL	SBI
2005/06	-	-	-
2006/07	2.75	1.36	-
2007/08	2.00	1.30	1.65
2008/09	1.48	1.15	1.57
2009/10	1.10	1.06	1.26
Average	1.47	0.97	0.89

Source: Appendix 1.

Figure No. 4.1
Long Term Debt and Total Debt position



The table and figure shows that the ratio of long term debt to total debt of EBL constituted nil in fiscal year 2005/06. This means that EBL does not use long term debt in this fiscal year; the whole portion of debt is contributed by the current liabilities. In the fiscal year 2006/07, the long term debt to total debt of EBL is constituted 2.75%. This means that the portion of long term debt in total debt is 2.75% and the remaining portion is contributed by the current liabilities. This ratio of EBL in F/Y 2007/08 is 2%, which is decreased then previous year and then decreased to 1.48% in F/Y 2008/09. In f\y 2009/10

this ratio is also decreased to 1.10%. The company has 1.47 of average long term debt to total debt ratio.

In case of KBL it shows in the fiscal year 2005/06, the ratio is nil. This means that KBL has no long term debt in this year whole portion of debt is contributed by the current liabilities. In fiscal year 2006/07 the long term debt to total debt ratio of KBL is 1.36%. This means contribution of long term debt to total debt is to 1.36% by the current liabilities. This ratio of KBL in fiscal year 2007/08 is 1.30% which is decreased then previous year and then decreased to 1.15% in fiscal year 2008/09. In fiscal year 2009/10 this ratio is also decreased to 1.06%. The company has 0.97% of average long term debt to total debt ratio.

Similarly, in case of SBI, the long term debt to total debt ratio on fiscal year 2005/06 and 2006/07 is nil. That means that the SBI has does not use long term debt in this two year. In fiscal year 2007/08 long term debt to total debt ratio is 1.65, this means the contributed by current liabilities. In the year 2008/09 the ratio is 1.57 which is decreased to 1.26% in fiscal year 2009/10. The average ratio is 0.89%.

Finally, the banks S.D are 0.72, 0.27 and 0.55 and C.V of 48.98, 28.87 and 61.80 of EBL, KBL and SBI respectively. On the C.V part the highest C.V is 61.80 which is of SBI and the lowest C.V is 28.87 of KBL. It ranges from 48.98, 28.87 and 61.80 respectively.

4.3.2. Long Term Debt to capital Employed ratio:

The optimal capital structure has important relationship with the long term debt to capital employed ratio. This relationship suggests the portion of long term debt and capital of the firm. This ratio highlights the need of long term debt in the capital employed of the firm. Long term debt includes the debt, which matures in more than one accounting period whereas capital employed includes long term debt and shareholders equity of the firm. The relationship of long term debt and capital employed can be analyzed by establishing the ratio between them. This ratio is called the long term debt to capital debt ratio, larger

the proportion of the long term debt in the capital employed and vice versa. This ratio can be calculated by dividing the long term debt with capital employed by the firm. This ratio is also known as debt to permanent capital ratio, where as permanent capital means total assets minus current liabilities. The long term debt to permanent capital ratio is presented in following table:

Table: No. 4.4

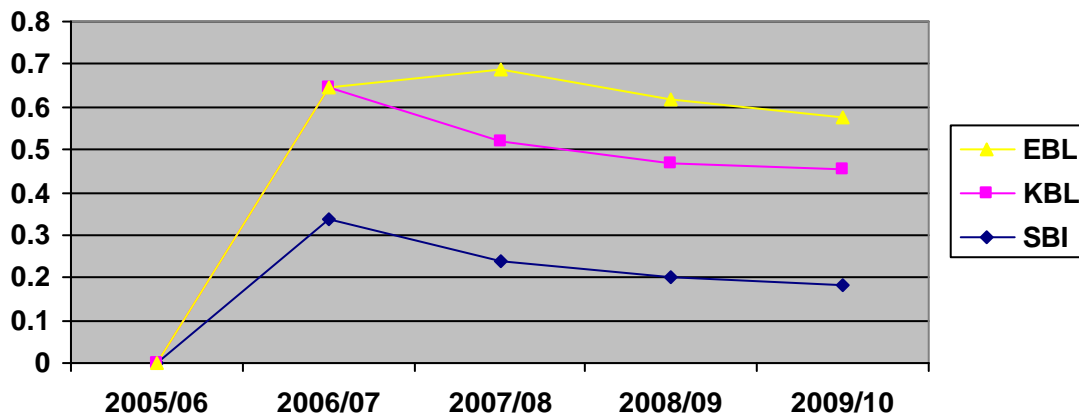
Comparative position of Long Term Debt to Capital Employed Ratio:

F\Y	Long term debt to Capital Employed (Times).		
	EBL	KBL	SBI
2005/06	-	-	-
2006/07	0.3376	0.31	-
2007/08	0.2375	0.28	0.17
2008/09	0.1997	0.27	0.15
2009/10	0.1835	0.27	0.12
Average	0.1917	0.22	0.09

Source: Appendix 2

Figure: No. 4.2

Comparative position of Long Term Debt to Capital Employed Ratio:



The above table and figure show that the long term debt to capital employed ratio of different joint venture bank. The long term debt to capital employed ratio of EBL in fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 is 0.338, 0.238, 0.199 and 0.183 respectively. The average ratio is 0.191.

Similarly, the long term debt to capital employed ratio of KBL is in fiscal year 2005/06 is Nil. Because the KBL has does not use long term debt. In fiscal year 2006/07, 2007/08, 2008/09, 2009/10 is 0.31, 0.28, 0.27, 0.27 respectively. The average ratio is 0.22.

Likewise, the long term debt to capital employed ratio of SBI in fiscal year 2005/06 and 2006/07 is nil because in this two year the bank has does not use long term debt. Similarly in fiscal year 2007/08, 2008/09 and 2009/10 this ratio is 0.17, 0.15 and 0.12 respectively which is in decreasing trend. The average ratio is 0.09.

Here, the S.D of EBL, KBL and SBI bank is 0.12, 0.13 and 0.08 respectively. KBL has highest S.D and SBI has lowest S.D

The highest C.V is 88.89 for SBI and lowest C.V is 59.09 for KBL. The C.V is ranging between 59.09 to 88.89. And the C.V is 62.60, 59.09 and 88.89 for EBL, KBL and SBI respectively.

4.3.3 Debt to Total Assets Ratio:

Total debt to total assets ratio express the relationship between creditors fund and total assets. It is also the leverage ratio, which is generally called the debt ratio. This type of capital structure ratio is variant of debt equity ratio. Calculating debt to total assets is one calculation approach of the debt to capital ratio. Debt includes all loans and total assets of the firm. It Measures the percentage of total funds provided by creditors.

This ratio can be calculated by simply dividing long term debt by the total assets of the firm.

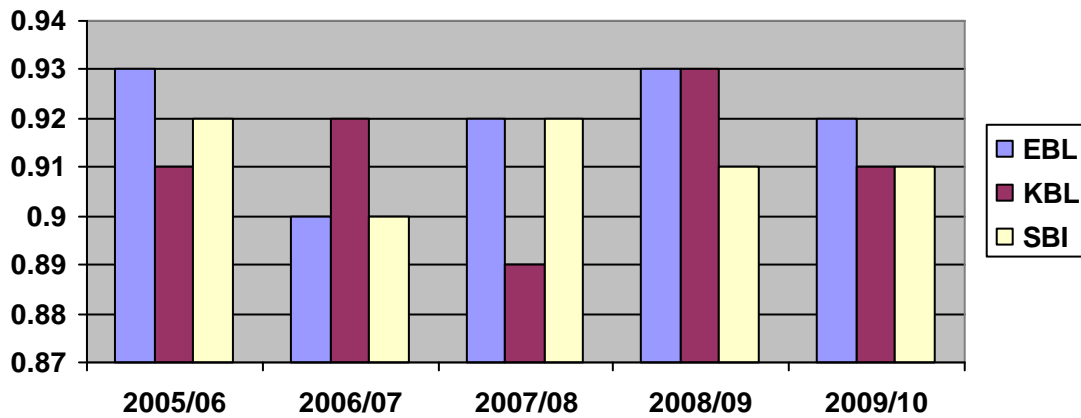
$$\text{Total to total assets ratio} = \frac{\text{Total debt} \times 100}{\text{Total assets}}$$

Table No: 4.5
Comparative position of Debt to Total Asset Ratios.

F\Y	Total debt to total assets (%)		
	EBL	KBL	SBI
2005/06	0.93	0.91	0.92
2006/07	0.90	0.92	0.90
2007/08	0.92	0.89	0.92
2008/09	0.93	0.93	0.91
2009/10	0.92	0.91	0.91
Average	0.92	0.91	0.91

Source: Appendix 3

Figure No: 4.3
Comparative position of Debt to Total Asset Ratios.



All the simple banks have negligible long term debt in comparison to total assets. Hence, the debt ratio or debt to total assets ratio of EBL, KBL and SBI is negligible. Therefore the debt ratio or debt to total assets ratio of EBL, KBL and SBI is negligible. Therefore the debt ratio is insignificant.

The S.D of EBL, KBL and SBI is 0.014, 0.015 and 0.014 respectively.

Here, the C.V of KBL is highest which 1.65 is and the lowest is 0.66 of SBI.

4.3.4 Debt to Equity Ratio:

Debt to equity ratio is used to show the relationship between borrowed funds and owners capital. It reflects the relative claims of creditors and shareholders against the assets of the firm. It is an important tool for the financial analysis to appraise the financial structure of a firm. The ratio reflects the relative contribution of owners and creditor's capital of business in it's financing. In other word, this ratio exhibits the relative proportions of capital contributed by ownership and creditors. Debt to equity ratio can be calculated in the basis of shareholders equity includes reserve and accumulated profit, preference share and equity share capital. Where long term debt includes total debt minus short term debt or current liabilities, here debt equity ratio is also computed by simply dividing long term debt of the firm by shareholder equity. The higher debt to equity ratio shows the large. Share of financing in the capital by the creditors then the owners or it's also reflects that the creditors claim in higher against the assets of firm and vice versa. D/E ratios of concerned companies are shown in the following table that is referred from the appendix 4

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

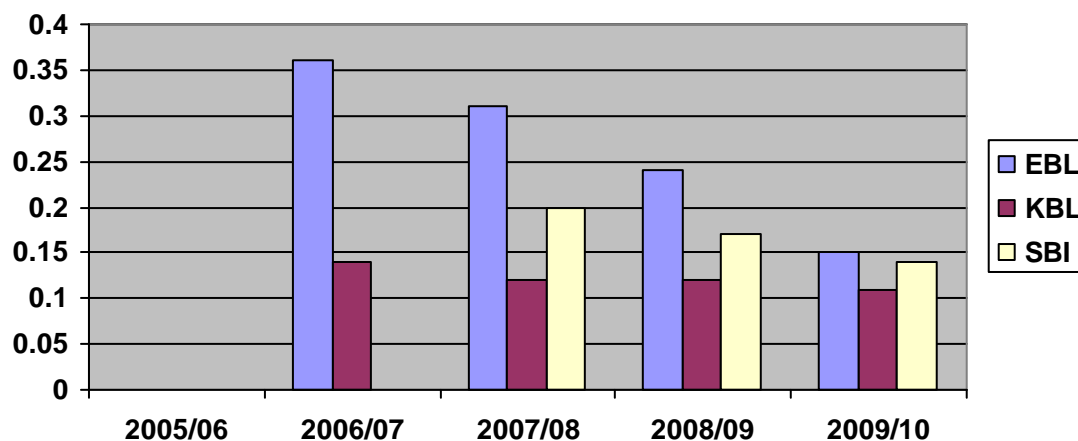
Table No. 4.6

Comparative position of Debt to Equity Ratio:

F\y	Debt to equity (%)		
	EBL	KBL	SBI
2005/06	-	-	-
2006/07	0.36	0.14	-
2007/08	0.31	0.12	0.20
2008/09	0.24	0.12	0.17
2009/10	0.15	0.11	0.14
Average	0.18	0.098	0.10

Appendix:4

Figure No. 4.4
Comparative position of Debt to Equity Ratio:



The debt to equity ratio and average ratio has been calculated in the above table five years data has been presented here.

The table shows that D/E ratios of EBL, KBL and SBI. The D/E ratio of EBL is nil in fiscal year 2005/06. In fiscal year 2006/07, 2007/08, 2008/09 and 2009/10. B.S D\E ratio is 0.36, 0.31, 0.24 and 0.015 respectively. The average ratio is 0.18.

Similarly, the debt to equity ratio of KBL in fiscal year 2005/06 is nil. Because the bank has not used long term debt in this fiscal year. In fiscal year 2006/07, 2007/08, 2008/09 and 2009/10 the debt to equity ratio is 0.14, 0.12, 0.12 and 0.11 respectively. The average debt to equity ratio is 0.098.

Likewise, the debt to equity ratio of SBI in fiscal year 2005/06 and 2006/07 is nil. Because SBI bank has not used long term debt in this two year. Similarly the debt to equity ratio of SBI in fiscal year 2007/08, 2008/09 and 2009/10 is 0.20, 0.17 and 0.14 respectively which is in decreasing trend. The average debt to equity ratio is 0.10.

The S.D of EBL, KBL and SBI is 0.15,0.06 and 0.095 respectively. On the C.V part, the highest C.V is 95.39 which is of SBI and the lowest is 61.21 of HB. It ranges from 71.43, 61.21 and 95.39 respectively.

4.3.5 Interest Coverage Ratio:

The interest coverage ratio is useful tools to measures long term debt serving capacity of the firm. It is also known interest earn ratio. Interest is fixed charges of the companies, which is charge in long term and short term loan. Generally interest coverage ratio measured the debt serving capacity of a firm and it is concerned with long term loan. It show how many times the interest charges are covered by EBIT out of which they will be paid. This ratio is used the concept of net profit tax is calculated after paying interest on loan. This ratio examines the interest paying capacity of the firm by how many times the interest the interest charge are covered by EBIT.

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

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

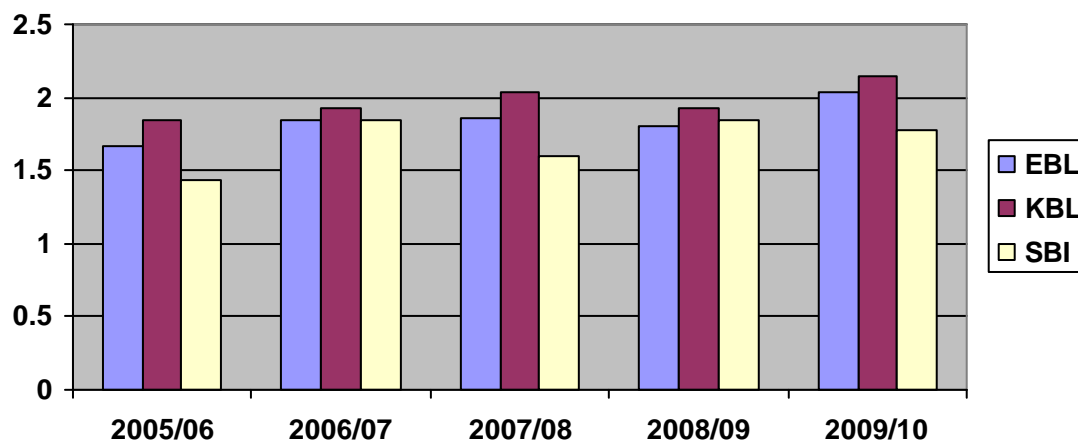
Table No: 4.7

Comparative position of Interest Coverage Ratio:

F\Y	Interest Coverage Ratio (time)		
	EBL	KBL	SBI
2005/06	1.67	1.85	1.43
2006/07	1.84	1.92	1.48
2007/08	1.86	2.03	1.60
2008/09	1.80	1.93	1.84
2009/10	2.04	2.15	1.78
Average	1.84	1.98	1.63

Source; Appendix 5

Figure No: 4.5
Comparative position of Interest Coverage Ratio:



In the above table and figure it is shows that the interest coverage ratio of EBL, KBL and SBI. The interest coverage ratio of EBL is 1.67, 1.84, 1.86, 1.80 and 2.04 in fiscal 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 respectively. The average ratio of KBL is 1.98.

Similarly the interest coverage ratio of KBL in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 is 1.85, 1.92, 2.03, 1.93 and 2.15 respectively. The average interest coverage ratio of KBL is 1.98.

Likewise, the interest coverage ratio of SBI in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 1.43, 1.48, 1.60, 1.84 and 1.78 respectively. The average interest coverage ratio of SBI is 1.63.

The S.D of EBL, KBL and SBI is 0.13, 0.12 and 0.19 respectively. Highest S.D is 0.19 of SBI and lowest S.D is 0.12 of KBL

Here, the C.V of SBI highest 11.66 and KBL has lowest 6.06

4.3.6 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. The ratio explains net income for each unit of assets.

Higher ratio indicates efficiently in utilizing it's overall resources and vice-versa. From the point of view of judging operational efficiency, rate of return on total assets is more useful measures.

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

$$\text{Return on Total Assets} = \frac{\text{Net profit after tax}}{\text{Total assets}}$$

Table No:4.8

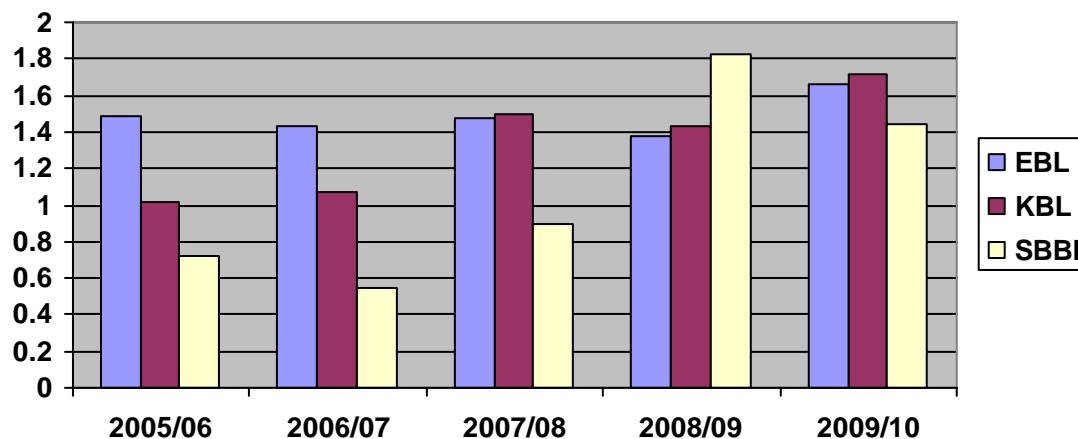
Position of comparative Return on Total Assets:

F\Y	Interest Coverage Ratio (time)		
	EBL	KBL	SBI
2005/06	1.49	1.02	0.72
2006/07	1.43	1.07	0.55
2007/08	1.48	1.50	0.90
2008/09	1.38	1.43	1.83
2009/10	1.66	1.72	1.44
Average	1.49	1.34	1.08

Source: Appendix 6

Figure No:4.6

Position of comparative Return on Total Assets:



The above table and figure shows the comparative position of return of total assets of the three joint venture bank. From the table, the return on total assets of EBL in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 1.49, 1.43, 1.48, 1.38 and 1.66 respectively. The average ratio is 1.49.

The return on total assets of KBL is fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 1.02, 1.07, 1.50, 1.43 and 1.72 respectively. The average return of this bank is 1.34.

Similarly, the return on total assets of SBI in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 0.72, 0.55, 0.90, 1.83 and 1.44 respectively. The average return on total assets of SBI is 1.08.

On the basis of S.D, EBL has 0.11, KBL has 0.30 and SBI has 0.53 . The SBI has highest S.D of 0.53 and EBL has lowest of 0.11.

Likewise , the C.V of SBI is 49.07 which is higher than other sample banks and the EBL has lowest C.V than other sample bank which is 7.38.

4.3.7 Return on shareholder's equity (ROE):

Shareholders fund represents that part of long term source of funds which is collected by using equity share and preference shares. To measure the return earn by shareholder's, return on shareholders equity is used or this ratio is calculated to find out the profitability on the owners capital or investment.

Since shareholders are the owners of the company they want to have good return on their investment. So, for this, we use this return on shareholders equity ratio to measure the return of shareholders. This ratio helps to analyze whether the company has been able to providing higher return on investment to its owners or not.

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

$$\text{Return on shareholders equity} = \frac{\text{Net profit after tax}}{\text{Shareholders equity}}$$

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

Position of comparative ROSHE:

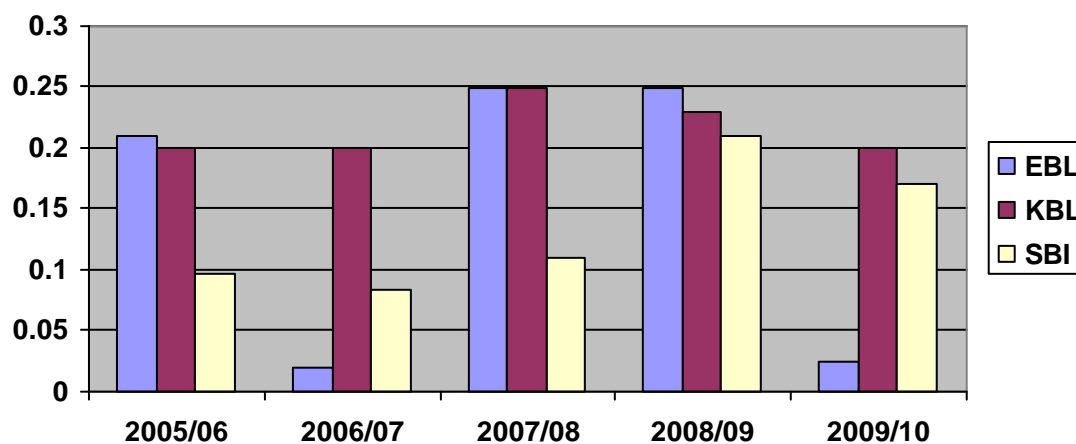
Table No: 4.9

F\Y	Return on shareholder's equity (in %)		
	EBL	KBL	SBI
2005/06	0.21	0.20	0.097
2006/07	0.02	0.20	0.083
2007/08	0.25	0.25	0.11
2008/09	0.25	0.23	0.21
2009/10	0.025	0.20	0.17
Average	0.15	0.22	0.13

Source; Appendix 7

Position of comparative ROSHE:

Figure No: 4.7



Above table exhibits, return on shareholders equity of sampled bank's of our study. In case of EBL in the fiscal year 2005/06, the ratio is 0.21% that implies that one rupee investment by shareholders equity earned 20 paise in one year. In the fiscal year 2006/07 it decrease to 25% and it remain constant in fiscal year 2008/09 it also decrease to 2.5% in fiscal year 2009/10. The average ROSE is 15%.

Similarly in case of KBL, the return in shareholders equity on fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 20%, 20%, 25%, 23% and 20% respectively. The average ratio is 13%.

Likewise, the return on shareholders equity of SBI in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 9.7%, 8.3%, 11%, 21% and 17% respectively. The average ROSE is 13%.

The S.D of EBL, KBL and SBI bank is 1.63, 3.56 and 5.17 respectively. The SBI bank has highest S.D and EBL has lowest S.D.

Here, C.V of SBI has highest of 41.19 and EBL has lowest of 7.04.

4.3.8 Earning Per Share:

The profitability of bank from the view point of ordinary shareholders is earning per share or EPS. This ratio explains net income for each unit of share. It also shows how much of the total earning belongs to the ordinary shareholders. EPS is calculated as:

$$\text{EPS} = \frac{\text{Net income}}{\text{No. of share outstanding}}$$

EPS of an organization gives the strength to the company's share in the market.

Position of comparative EPS:

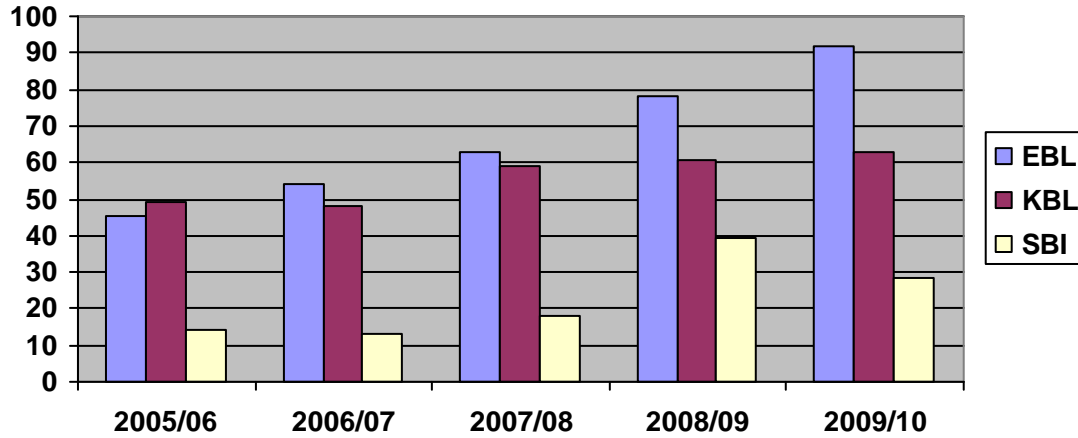
Table No: 4.10

F\Y	Earning per share (in Rs.)		
	EBL	KBL	SBI
2005/06	45.58	49.05	14.25
2006/07	54.22	47.91	13.28
2007/08	62.78	59.24	18.27
2008/09	78.30	60.66	39.35
2009/10	91.82	62.74	28.33
Average	66.54	55.92	22.70

Source: Appendix 8

Position of comparative EPS:

Figure No: 4.8



In the above table, it is shows that the comparative position of EPS of different bank. In case of EBL the earning per share in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 45.58, 54.22, 62.78, 78.30 and 91.82 receptivity. The average EPS ratio is 66.54.

Similarly the EPS of KBL in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 are 49.05, 47.91, 59.24, 60.66, and 62.74 respectively. The average EPS is 55.92.

Likewise, the EPS of SBI in the fiscal year 2005/06, 2006/07, 2007/08, 2008/09, 2009/10 are 14.25, 13.28, 18.27, 39.35 and 28.33 respectively. The average EPS is 22.70.

The S.D of EBL has 18.59, KBL has 6.92 and SBI has 11.05 here the EBL has highest S.D and KBL has lowest S.D

Similarly, the C.V of EBL, KBL and SBI is 27.94, 12.37and 46.68 respectively.

4.3.9 Dividend per Share (DPS):

Dividend per share is calculated to know the share of dividend that the shareholder received in relation to paid up value of the share. An institution offering a high dividend per share is regarded as efficient in fulfilling shareholder's expectation which will also increase the value of an institution. It is calculated by using following equation.

$$\text{DPS} = \frac{\text{Total dividend}}{\text{No. of ordinary shares}}$$

Dividend per share is the earning distributed to ordinary shareholders dividend by the number of ordinary share outstanding.

Position of comparative DPS:

Table No: 4.11

F\Y	Dividend per share (DPS)		
	EBL	KBL	SBI
2005/06	20	-	-
2006/07	-	11.58	-
2007/08	25	30	5
2008/09	10	15	12.59
2009/10	20	25.04	-
Average	15	16.32	3.25

Source: Appendix 9

In the above calculation it is shows that the comparative position of DPS of sample bank. In case of EBL the dividend per share of fiscal year 2005/06 is 20%. In the fiscal year 2006/07 the DPS is nil which means the bank has not distribute the dividend. Similarly in fiscal year 2007/08, 2008/09 and 2009/10 DPS are 25, 10, and 20 respectively.

Similarly, in case of KBL, the DPS in fiscal year 2005/06 is nil which means the bank has not distributed the dividend. In fiscal year 2006/07, 2007/08, 2008/09 and 2009/10 DPS are 11.58, 30, 15 and 25.04 respectively. The average DPS ratio is 16.32.

Like wise the DPS of SBI bank in fiscal year 2005/06, 2006/07 is nil. This means the bank has not distributed the dividend in this year. Similarly the DPS in fiscal year 2007/08, 2008/09 are 5, 12.59 respectively. In F\Y 2009/10 DPS is nil. Because it doesn't distribute its dividend. The average DPS ratio is 3.52.

Here, the S.D of KBL is highest of 11.17 and S.D of SBI is lowest of 5.53. Likewise, the C.V of EBL has lowest of 66.67 and the SBI has highest of a 157.10. It ranges from 66.67 to 157.10.

4.4. Leverage Analysis:

Leverage and capital structure are closely related concepts linked to cost of capital and capital structure budgeting decision. Leverage results from the use of fixed cost or trends to magnify return to the firm's owners changes in leverage results in changes in level of return and associated risk. Generally increase in leverage result in increase in return and risk where as decrease in leverage result in decrease return and risk. The amount of leverage in the firm's capital structure or the mix of long term debt and equity maintained by the firm can significantly affect its value by affecting return and risk .Because of its value the financial Manager must understand how to measure and evaluate leverage when attempting to create the best capital structure.

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

the greater will be the volatility of its return. There are three types of leverage: - Operating leverage, financial leverage and combine leverage. Operating leverage is the function of fixed cost, contribution margin and sales volume.

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

The operating leverage is indicates the impact of changes in sales. An operating income and financial leverage exit when the capital structures of the firm comprise debt capital. Financial leverage is related to the capital structure of the firm. So, financial leverage is relevant issue of this study, which is explained in this section.

4.4.1 Analysis of Financial Leverage

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

Two methods either dividing percentage change into EPS by percentage change into EBIT or dividing percentage change into EBT by EBIT can calculate degree of financial leverage. In this analysis of financial leverage second method is chosen. The higher the degree of financial leverage the more volatile EPS will be, all other things remaining the same. The degree of financial leverage of sampled banks is presented in the following table. The formula is follows.

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

Comparative Position of Financial Leverage:

Table No: 4.12

F\Y	Degree of financial leverage		
	EBL	KBL	SBI
2005/06	2.50	2017	3.34
2006/07	2.19	2.08	3.06
2007/08	2.16	1.97	2.68
2008/09	2.14	2.07	2.20
2009/10	1.97	1.87	2.31
Average	2.19	2.03	2.72

Source: Appendix 13

In the above table it shows the comparative degree of financial leverage of sample bank. In fiscal year 2005/06 the degree of financial degree is 2.50. In fiscal year 2006/07, 2007/08, 2008/09 and 2009/10 is 2.19, 2.16, 2.14 and 1.97 respectively which is in the decreasing trend. The average DFL is 2.19.

Similarly the degree of financial leverage of KBL is in fiscal year 2005/06, 2006/07, 2007/08 is 2.17, 2.08 and 1.97 respectively which is in decreasing trend. But in fiscal year 2008/09 is increase to 2.07. In fiscal year 2009/10 the degree financial leverage is 1.87. The average DFL is 2.03.

Likewise, the degree of financial leverage of SBI in fiscal year 2005/06, 2006/07, 2007/08, 2008/09 and 2009/10 is 3.34, 3.06, 2.68, 2.20 and 2.31 respectively which is in decreasing trend. The average DFL is 2.72.

4.4.2 Correlation Analysis:

Correlation analysis enables us to have an idea about the degree and direction of the relationship between the two or more variables, the correlation is statistical tools which studies the relationship between two or more variables and correlation analysis involves various methods and technique used for studying and measuring the extent of the

relationship between the two or more variables. It is denoted by 'r' it fails to reflect upon the cause and effect relationship between the variables.

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

- Total debt and shareholders equity.
- Long term debt and earning per share.
- EBIT and Interest.
- EBIT and DPS.

4.4.2.1 Total debt and shareholders equity:

The relationship between total debt and shareholders equity has been shown in the following table below. The total debt includes all types of long term borrowed funds, current liabilities and provisions, whereas shareholders equity included share capital, reserve and surplus. This correlation indicates whether there is positive or negative correlation coefficient between TD and SHE and their respective probable error is also presented. PE interprets the value of correlation coefficient. It also helps to determine applicability for the measurement of reliability of the computed value of the correlation coefficient (r). Details calculations are presented in the appendix 14

Correlation coefficient between TD and SHE with probable error.

Table No: 4.13

EBL		KBL		SBI	
Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)
0.96	0.14	0.92	0.28	0.98	0.072

Source: Appendix 14

Karl Pearson's correlation coefficient between total debt and shareholders equity of EBL is 0.96. There is positive correlation between TD and SHE. The probable error 6(P.E) of EBL is 0.14. P.E is less than correlation coefficient(r).

Similarly the correlation coefficient of KBL is 0.92 there is also positive correlation between TD and SHE. Probable Error 6(P.E) of KBL is 0.28 which is less than (r).

Incase of SBI the correlation coefficient is 0.98 which is closer to 1 and positive so, it also good correlated. The P.E of respected correlation is 0.072 here also the (r) is greater than P.E.

4.4.2.2 Long term debt and earning per share:

Long term debt is the source of long term financing or long term funds. Company should pay interest for this debt capital. Where as earning per share (EPS) is earning of a share of a firm from one year business. EPS has positive relationship with companies earning. In this section the relationship between these two variables has been shows using Karl's Pearson's correlation coefficient method. It tries to analyze that the increment in LTD leads to increment in the EPS or not. The calculated correlation coefficient and their respective probable error has been shown in the following table referred form appendix 15

Correlation coefficient between Long Term debts (LTD) and earning per share (EPS) and their respective 'probable error'.

Table No: 4.14

EBL		KBL		SBI	
Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)
0.63	1.08	0.56	1.24	0.74	0.82

Source: Appendix 15

In the basis of above table correlation coefficient between long term debt and earning per share of EBL is 0.63 it is positive. The 6 P.E of EBL of respected correlation is 1.08 which is greater then the correlation coefficient.

Incase of KBL the correlation coefficient between LTD and EPS is found to be 0.56 there is positive correlation between LTD and EPS. The 6 P.E of respected correlation is 1.24 which is greater then correlation coefficient(r).

Similarly in case of SBI the correlation coefficient is 0.74, which is positive and its respective 6 P.E is 0.82.

4.4.2.3 EBIT and INTEREST:

Long term debt holders get the interest as return and EBIT is operating profit of the company. Here correlation coefficient of interest and EBIT has been presented of concerned companies to analyze whether there is positive or negative correlation between interest and operating profit those are calculation on the basis of Karl Pearson's correlation coefficient. Following table shows the relationship between these variables of sampled banks which are included in this study and to check the significance of these calculated correlations. P.E is also presented which is referred from appendix 16.

Correlation coefficient between EBIT and INTEREST and their respective probable error.

Table No: 4.15

EBL		KBL		SBI	
Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)
0.85	0.50	0.99	0.04	1.01	0.036

Source: Appendix -16

In the above table, correlation coefficient between EBIT and Interest is found 0.85 which is positive and its respective 6 P.E is 0.50 it lower then its (r).

Incase of KBL, the correlation coefficient between EBIT and interest is 0.99. it is positive and closer to (1). The PE of respected correlation is 0.004 which is less then correlation coefficient.

Similarly in case of SBI the correlation coefficient is 1.01 which is positive and almost closer to (1) and its P.E is 0.036 which is less then the correlation coefficient.

4.4.2.4 EBIT and DPS:

Shareholders get the dividend as return and EBIT is operating profit of the company here correlation coefficient of EBIT and DPS has been presented of concerned bank to analyze whether there is positive or negative correlation between dividend and operating profit. Following table shows the relationship between these variables of sampled banks and to check the significance of there calculated correlations P.E is also presented which is referred from appendix -17.

Correlation coefficient between EBIT and DPS and their respective probable error:

Table No: 4.16

EBL		KBL		SBI	
Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)	Correlation coefficient(r)	Probable error 6(P.E)
0.27	1.67	0.73	0.84	0.49	1.37

Source: Appendix -17

In the above table correlation coefficient of EBL is found to be 0.27 there is positive correlation between EBIT and DPS. It's respected P.E is1.67which is greater than correlation coefficient.

Similarly, in case of KBL the correlation coefficient between EBIT and DPS is 0.49 which is positive and its respective P.E is 0.84 which is also greater than its correlation coefficient.

But in case of SBI, the correlation coefficient between EBIT and DPS is 0.49 which is positive correlation. Its respective P.E is 1.37 which is higher than its correlation coefficient.

4.5 Major findings of the study:

1. The debt to equity ratio shows the claim of creditors on the total assets of the company. The trend analysis shows fluctuating trend in all the sampled banks used for this study. The average debt to equity ratio of EBL shows that the creditors have 21% claims on the assets of EBL. It shows that the bank has used higher amount of debt for financing and has highest amount to be paid as interest on debt. KBL has lowest debt to equity ratio among the three banks with the average of 0.098. Likewise SBI, the average ratio of 0.10 which shows 10% claim of creditors.
2. The analysis shows that all the sampled bank under this research study EBL, KBL and SBI are able to pay the interest coverage ratio of 1.98 and SBI has lowest of 1.63. In the case of EBL the trend is increasing with the average of 1.84 which is a good sign.
3. On this part EBL is the front runner with the highest average return on assets of 1.49. The overall return of KBL is 1.34 while SBI has the fluctuating trend with an average of 1.08.
4. The percentage of total debt of the firm covered by long term debt is indicated by long-term debt to total debt ratio EBL has 1.47% of average long term debt to total debt ratio and KBL and SBI is 0.97% and 0.89% respectively. In all three cases the total debt is contributed by current liabilities to large extent. The analysis of all three banks reveals the fluctuating trend of long term debt to total debt ratio. Among these banks SBI has used Minimum long term debt in comparison to EBL

and KBL has stopped using long term debt and SBI has stopped using long term debt financing in Fly 2005/06 to 2006/07.

5. The next analysis of long term debt to capital employed ratio shows that debt to capital employed ratio shows that SBI has least and KBL has the highest long term debt to capital employed ratio of 0.09 and 0.22 respectively. This indicates that KBL is using more long term debt for financing its capital. Similarly EBL has the average ratio of 0.19 which is also higher than SBI.
6. The long term debt in comparison to their total assets used by all three banks for financing is very minimum or negligible. Hence the debt to total assets ratio of EBL, KBL and SBI is negligible.
7. The return of shareholders equity of SBI is fluctuating and of EBL and KBL is showing increasing trend. The EBL has average return of 23.15 which indicates that the shareholders earn 23.15 paisa investing one rupee. Likewise KBL and SBI have average return of 15.79 and 13.87 respectively. The return of EBL is highest and SBI is lowest among the sampled banks.
8. The earning per share explains net income for each unit share. It shows that the market position of the firm. The average earning per share of EBL, KBL and SBI is 66.54, 55.92 and 22.70 respectively. In this analysis we can see that the EPS of EBL is the highest with 66.54 and continuous strong growth in the past 5 years, which that of SBI is the lowest with 22.70.
9. Dividend per share is the earning distributed to ordinary shareholders. The analysis shows that KBL paid the highest DPS on average with 16.32 and SBI with lowest of 3.52 on average. It didn't paid DPS to its ordinary shareholders in F/Y 2005/06, 2005/06 and 2009/10 while DPS of EBL is an average is 15.
10. Under the NI approach the interest rate and the cost of equity are dependent of the capital structures with the increased used of leverage overall cost of capital declines and the total value of firm raise. From the calculation we can say that SBI has some what optimum capital structure because it has the least cost of capital and high value of firm. On the contrary we can assume the EBL has bad capital and lowest value of firm.

11. Net operating income (NOI) approach is an independent hypothesis of capital structure. Any change in leverage will not lead to any change in the total value of the firm and market price of the share. From the position of average cost of equity of 3.30% with an average long term debt of 120 which is lowest among the three sampled banks under this study. The value of EBL is higher with 4.73% where as KBL is 4.68% and its long term debt is 2.88. So we can say that KBL has optimum capital structure among the three. The financial leverage analysis helps to evaluate the financial risk of the firm. The average degree of EBL, KBL and SBI are 2.19, 2.03 and 2.72 respectively from the analysis. We can say that SBI is bearing the highest DFL. So, we can say its EPS is quite volatile. Meanwhile KBL is bearing the lowest risk among the three.
12. The correlation coefficient between EBIT and Interest of all three sampled bank under this study are positive. The entire three banks have significant value since is greater than P.E. In case of SBI P.E is almost negligible and its correlation coefficient is almost '1'.
13. The correlation coefficient between EBIT and DPS of EBL, KBL and SBI is 0.27, 0.73 and 0.49 respectively which is positive. The P.E of all banks is 1.67, 0.84 and 1.37 respectively which is greater than correlation coefficient (r). So it is insignificant.
14. EBL has positive Correlation between TD and SHE of 0.96 and its respective P.E is 0.14 which is less than Correlation Coefficient i.e. relationship between TD and SHE is significant. In case of KBL the Correlation Coefficient is 0.92 and its respective P.E. is 0.28 which is also less that Correlation which shows that the value of ' r ' is significant.
15. Likewise in case of SBI Correlation Coefficient is 0.98 and its respective P.E is 0.072 which is significant correlation coefficient and P.E. ratios between long term debt and Earning per share of EBC, KBL and SBI is 0.63, 0.56 and 0.74 respectively and shows positive correlation but P.E is greater than that of calculate value (r). So, it is insignificant.

CHAPTER-V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Although this chapter is the important chapter for the research because this chapter is the extracts of all the previously discussed chapters. This chapter consists of mainly three parts: summary, conclusion and recommendation. In summary part, revision or summary of all four chapters is made. In recommendation part, suggestion and recommendation is made based on the result and experience of thesis. Recommendation is made for improving the present situation to the concerned parties as well as for further research.

5.1. Summary

Financial institution includes banks, finance companies, co-operative organizations and insurance companies. All of them do contribute something to the economy of the country. Financial institutions play a vital role in the proper functioning of an economy. Among them, banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector, which deals in the process of channel zing the available resources in the needed sectors. It is the intermediary between the deficit and surpluses of financial resource.

Every business needs capital to operate business smoothly and the capital is said to be blood of the business. Capital is a scare sources and much more essential to maintain smooth operation of any firm. As in order form, capital structure is crucial part for banking industry too. The study had been carried based on commercial bank i.e. Everest Bank Ltd, Kuamri Bank Ltd and Nepal SBI Bank for Capital Structure and Profitability Management.

In this section of study, we are about to analyze capital structure of the three commercial bank that have been chosen for this study. These banks are Everest Bank Ltd, Kumari Bank Ltd and Nepal SBI Bank Ltd. All these banks are listed in NEPSE. To make the

study more reliable, the whole study has been divided into five chapters. The summaries of each chapter are presented below.

First chapter: First chapter starts with historical background of the study. On this chapter an introduction of the banking industry in Nepal, introduction of the bank selected for the study, description of the capital structure is presented briefly. This study endeavors to evaluate capital structure of commercial banks with references to EBL, KBL and SBI. The main question presented as the 'focus of the study' are what is the condition of capital structure of the selected Joint venture bank of Nepal whether or not they are using an appropriate financial mix. If not, what may be suggestion to improve or to maximize the value of the firm in the context of Nepalese banks?

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

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

Finally, significance of the study and limitation of the study are also presented on first chapter.

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

Management journals, articles as well as related Nepalese studies have been presented as well.

Third chapter: In this chapter the steps to adopt realistic study needed for the researchers have been presented. The Methodology researcher can use to get appropriate guidelines and knowledge about the various Sequential steps to adopt a systematic analysis has been explained in this chapter. Most of the data used in this study are secondary in nature that is annual reports provided by concerned banks. Five years old data are taken as sample years and are analyzed by using financial and statistical tools such as ratio analysis leverage analysis, capital structure analysis, correlation analysis, probable error etc. Method which the study is going to use is exhibited in this chapter.

Four chapters: The data mentioned in the third chapter are presented and analyzed in this chapter using Methods mentioned in the chapter third such as ratio analysis, leverage analysis, correlation, probable error and chapter structure analysis. Details calculations presented in this chapter are shown as appendix which is presented after fifth chapter.

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

5.2. Conclusion

- Long term debt to capital employed ratio highlights the portion of fund financed by long term debt in the capital employed by the firm. The data shows EBL has the average ratio of 0.1917. Similarly KBL has the average ratio of 0.22. At the same time in case of SBI it has the average ratio of 0.09 times. We can conclude that all the banks do not have appropriate ratio of long term debt to capital employed and among these three banks KBL has employed more of the long term debt in comparison than other sample banks.

- Debt to total assets ratio express the relationship between creditors fund and total assets the debt ratio or debt to total assets ratio of EBL, KBL and SBI is negligible which concludes that the debt used as the capital are negligible.
- Debt to equity ratio analysis shows that the creditors have 21% claims on the assets of EBL which is very higher among the three banks. It also indicates that EBL higher amount to be paid as interest on debt. Just the opposite in case of KBL and SBI the creditors have 9.8% and 10% claimed on the assets.
- All banks have used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsider's claim in total assets of the bank is higher than owner claim.
- Longer term debt to total debt ratio shows that all of the sample banks have fluctuating trend of long term debt to total debt ratio. EBL has average of 1.47% long term debt to total debt ratio which means 98.53% of the total debt is contributed by current liabilities. Similarly KBL has the average of 0.97% Likewise, SBI has 0.89% average long term debt to total debt ratio.
- Interest coverage ratio shows whether or not the banks are capable in paying interest. The conclusion drawn by the study is the average interest coverage ratio of EBL is 1.84, KBL is 1.98 and SBI is 1.63. This clearly shows that all the sampled bank are able to clear the interest but since the higher interest coverage ratio is better in this regard KBL seems to be in the front.
- On the position of return on total assets of the three Joint venture banks, EBL seems to have the highest return with 1.49, then KBL and SBI with return of 1.34 and 1.08 respectively.

- Since shareholders are the real owners of the company they obviously want good return on their investment. On this part we can conclude from our analysis that EBL has highest average return of 23.15% with fluctuating trend with average ROSHE of 15.79%. Likewise SBI have the average of ROSHE of 13.87%. All of them quite show they have satisfactory return the extend to which this objective has been accomplished.
- EPS explains net income for each unit of share. The three banks under our study show the average of 66.54 for EBL, likewise 55.92 for KBL, and 22.70 for SBI bank. Among the for EBL has the highest earning per share.
- Dividend per share shows the amount of earning distributed to ordinary shareholders. The investors invest in those companies which pay adequate amount of dividend. Our analysis concludes that average dividend per share of EBL is 15 that of KBL is 16.32 and 3.52 of SBI bank. Among the three KBL has the highest and SBI has the lowest SBI should think seriously if it wants to earn the goodwill of the investors it should give dividend on regular basis.
- Net income approach are the dependent hypothesis of capital structure which states that with the increased use of leverage, overall cost of capital declines and the total values of firm raise. According to this hypothesis the firm with the highest value and least cost of capitalization rate is considered to have the best capital structure. The average value of firm of EBL, KBL and SBI are 7205.41, 11605.73 and 11359.07 respectively. From the calculation we can say that this approach is well adequate with this study as the value of banks has increased as the cost of capital has decreased.
- Net operating income approach is the independent hypothesis of the capital structure decisions of the firm. According to this hypothesis any change in the leverage will not lead to any change in total value of the firm and market price of

the share. As the overall cost of capital is independent of the degree of leverage. From the position of K_e we can conclude that EBL has highest K_e with 4.73 and SBI has lesser K_e with 3.30% and KBL has average K_e of 4.68%

- When the company employs debt or other fund carrying fixed charges in the capital structure financial leverage exists. From the calculation we can conclude that SBI is bearing the highest risk among the three banks with average DFL of 2.72 but we can conclude that it is taking corrective actions to decrease its risk since trend look decreasing. Among the three KBL has lesser financial risk and EBL has moderate financial risk.
- In case of EBIT and DPS all the sample bank EBL, KBL and SBI bank has positive correlation coefficient. But its β (P.E) ratio is higher than that of its correlation coefficient than its P.E showing insignificant relationship.
- The operating profit of all the commercial banks have going up, so as the provision for loans loss. In brief, we can say that the banking sector in Nepal is somehow doing well enough through it has to face a lot of political and other hurdles in the past years.
- In the case of EBIT and INTEREST the correlation coefficient are positive and higher than its β (P.E) which is significant.
- Similarly in case of LTD and EPS the correlation coefficient EBL, KBL and SBI are positive. But β (P.E) is greater than correlation coefficient. The relationship but LTD and EPS is insignificant.

5.3. Recommendations

By looking at some of the aspect of capital structure management like LTD to capital total debt ratio, capital employed ratio EBL seems to be in the weaker position.

While observing interest coverage ratio, return on total assets, return on shareholders equity KBL seems to be in the better position. The banks are recommended to minimize their financial and other expenses so that the interest coverage ratio could be improved.

Nepalese share holders are very much concerned about the payment of cash divided by the bank rather than financial statement. But while observing the areas like, EPS and DPS. EPS is far ahead than other two banks in this area SBI have performed poorly. It should work seriously because it may demoralize the shareholders if it continuous to retain its earning by not distributing to its real owner that is the shareholders.

On the DFL part, we know that shareholders not only seek high return from their investment but also consider the risk of their investment. So it is recommended to all these banks under our study to plan their financial leverage will by analyzing the possible alternatives considering the high return and less risk.

They are also recommended to use less debt, improve strategy of promotion activities analyze and evaluate before making investment.

It is visible that all of these three are playing significant role in contributing in the modern banking system to uplift the economical development of the nation. But it can be seen that almost all of the commercial banks are urban based, they should try to make their operation broad by moving to rural areas. The saving from the rural areas are seemed to be neglected by the banks without which they can't contribute to the economic development of the country.

So, it is recommended that they should try to adopt more cooperative approach and should expand its branches by covering all the inner parts of the country. So that all the Nepalese living in any nooks and corner of the country can enjoy the banking facility and can benefit from it.

First of all from the study we can clearly say that the banks lack the theoretical knowledge regarding the capital structure. They have not given significant attention to the capital structure matter. Capital structure is a serious matter. It affects EPS, value of firm, cost of capital etc.

So it is recommended that these banks should follow the theoretical aspects of the capital structure management or given some seriousness in this matter and try to manage their activities accordingly.

Since, there are lots of commercial banks in the market and lots are certain to be established in the near future. They should seriously adopt customer oriented strategy if not they may have to lose their loyal customer and in return their business.

Since, human resources are the main source to make the banking activity successful they should give more priority in regular, training, conduct regular workshop which will give staff the new information about the modern banking industry in the world.

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APPENDICES

APPENDIX - 1

Long Term Debt to total debt

$$\text{LTD/TD} = \frac{\text{Long term Debt}}{\text{Total Debt}} \times 100$$

Long Term Debt to Total Debt of EBL

Table No: 4.16

F\Y	Long term Debt	Total Debt	(LTD/TD) %
2005/06	-	8928.24	-
2006/07	300.00	10896.57	2.75
2007/08	300.00	14996.45	2.00
2008/09	300.00	20215.75	1.48
2009/10	300.00	27149.34	1.10
Average			1.47

Long Term Debt to Total Debt of KBL

Table No: 4.1 7

F\Y	Long term Debt	Total Debt	(LTD/TD) %
2005/06	-	23437.85	-
2006/07	360.00	26302.94	1.36
2007/08	360.00	27694.21	1.30
2008/09	360.00	31372.64	1.15
2009/10	360.00	33662.54	1.06
Average			0.97

Long Term Debt to Total Debt of SBI

Table No: 4.18

F\Y	Long term Debt	Total Debt	(LTD/TD) %
2005/06	-	7813.77	-
2006/07	-	9656.36	-

2007/08	200	12053.46	1.65
2008/09	200	12737.91	1.57
2009/10	200	15772.80	1.26
Average			0.89

APPENDIX - 2

Long Term Debt to capital Employed

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

Long Term Debt to capital Employed Ratio of EBL

Table No: 4.19

F\Y	Long term Debt	Capital Employed	LTD/C.E
2005/06	-	501.90	-
2006/07	300	888.53	0.3376
2007/08	300	1262.81	0.2375
2008/09	300	1501.52	0.1997
2009/10	300	1634.60	0.1835
Average			0.1917

Long Term Debt to capital Employed ratio of KBL

Table No: 4.20

F\Y	Long term Debt	Capital Employed	LTD/C.E
2005/06	-	706.21	-
2006/07	360	1161.67	0.31
2007/08	360	1288.75	6.28
2008/09	360	1355.19	6.27
2009/10	360	1426.30	6.25
Average			0.22

Long Term Debt to capital Employed ratio of SBI

F\Y	Long term Debt	Capital Employed	LTD/C.E
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2005/06	-	626.64	-
2006/07	-	689.01	-
2007/08	200	1182.37	0.17
2008/09	200	1363.29	0.15
2009/10	200	1614.64	0.12
Average			0.09

APPENDIX - 3

Total Debt to Total Assets Ratio

$$\text{Debt to total assets ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Debt to Total Assets Ratio of EBL

F\Y	Total Debt	Total Assets	TD/TA
2005/06	8928.25	9608.57	0.93
2006/07	11022.51	11732.51	6.90
2007/08	14996.45	15959.28	0.92
2008/09	20321.05	21432.57	0.93
2009/10	25228.10	27149.34	6.92
Average			0.92

Debt to Total Assets Ratio of KBL

Fly	Total Debt	Total Assets	TD/TA
2005/06	23493.19	25729.78	0.91
2006/07	26707.50	28871.34	0.92
2007/08	27334.20	30579.80	0.89
2008/09	31005.15	33519.14	0.93
2009/10	33662.54	36858.06	0.91
Average			0.91

Debt to Total Assets Ratio of SBI

F\Y	Total Debt	Total Assets	TD/TA
2005/06	7813.77	8440.41	0.92
2006/07	9656.35	10345.37	0.93
2007/08	12053.46	13035.84	0.92
2008/09	12737.91	13901.20	0.91
2009/10	15772.80	17187.44	0.91
Average			0.91

APPENDIX - 4

Debt to Equity Ratio

$$\text{Debt to equity ratio} = \frac{\text{Longtermdebt}}{\text{Shareholders equity}}$$

Debt to equity ratio of EBL

F\Y	Long term Deft	Shareholders equity	(D/E ratio) %
2005/06	-	680.31	-
2006/07	300	769.62	0.38
2007/08	300	962.80	0.31
2008/09	300	1201.51	0.24
2009/10	300	1921.23	0.15
Average			0.21

Debt to equity ratio of KBL

F\Y	Long term Deft	Shareholders equity	(D/E ratio) %
2005/06	-	2291.92	-
2006/07	360	2568.39	0.14
2007/08	360	2885.59	0.12

2008/09	360	2942.42	0.12
2009/10	360	3195.46	0.11
Average			0.098

Debt to equity ratio of SBI

F\Y	Long term Deft	Shareholders equity	(D/E ratio) %
2005/06	-	626.64	-
2006/07	-	689.01	-
2007/08	200	982.37	0.20
2008/09	200	1163.29	0.17
2009/10	200	1414.64	0.14
Average			0.10

APPENDIX - 5

Interest coverage ratio

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

Interest coverage ratio of EBL

F\Y	EBIT	Interest	(I/C ratio) %
2005/06	527.49	316.37	1.67
2006/07	552.29	299.57	1.84
2007/08	746.00	401.40	1.86
2008/09	971.88	517.17	1.80
2009/10	1291.29	632.60	2.04
Average			1.84

Interest coverage ratio of KBL

F\Y	EBIT	Interest	(I/C ratio) %
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2005/06	911.81	491.54	1.85
2006/07	1084.50	561.96	1.92
2007/08	1321.23	648.84	2.03
2008/09	1484.81	767.41	1.93
2009/10	1772.57	823.74	2.15
Average			1.98

Interest coverage ratio of SBI

F\Y	EBIT	Interest	(I/C ratio) %
2005/06	365.45	255.92	1.43
2006/07	383.62	258.43	1.48
2007/08	534.53	334.77	1.60
2008/09	756.85	412.26	1.84
2009/10	802.94	454.91	1.70
Average			1.63

APPENDIX - 6

Return on Total Assets

$$\text{Return to total Assets} = \frac{\text{Net profit after tax}}{\text{Total Assets}}$$

Return to Total Assets Ratio of EBL

F\Y	NPAT	Total Assets	ROA
2005/06	143.57	9608.57	1.4942
2006/07	168.21	11732.57	1.4337
2007/08	237.38	15959.28	1.4874
2008/09	296.41	21432.57	1.3830
2009/10	451.4	27149.34	1.6620
Average			1.4921

Return to Total Assets Ratio of KBL

F\Y	NPAT	Total Assets	ROA
2005/06	263.05	25729.78	1.02
2006/07	308.27	28871.34	1.07
2007/08	457.45	30579.80	1.50
2008/09	491.82	34314.86	1.43
2009/10	635.86	36858.06	1.72
Average			1.34

Return to Total Assets Ratio of SBI

F\Y	NPAT	Total Assets	ROA
2005/06	60.85	8440.41	0.72
2006/07	57.39	10345.37	0.55
2007/08	117.00	13035.84	0.90
2008/09	254.91	13901.20	1.83
2009/10	247.77	17187.44	1.44
Average			1.08

APPENDIX - 7

Return on Shareholders Equity

$$\text{Return on Shareholders equity} = \frac{\text{Net profit After Tax}}{\text{Shareholders equity}}$$

Return on Shareholders equity Ratio of EBL

F\Y	NPAT	Shareholders equity	ROE
2005/06	143.57	680.31	21.10
2006/07	168.21	769.62	21.86
2007/08	237.38	962.80	24.66
2008/09	296.41	1201.51	24.67
2009/10	451.21	1921.23	23.49

Average		23.15
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Return on Shareholders equity Ratio of KBL

F\Y	NPAT	Shareholders equity	ROE
2005/06	263.05	2291.92	11.48
2006/07	308.27	2568.39	12.00
2007/08	457.45	2885.59	15.85
2008/09	491.82	2942.22	16.72
2009/10	635.86	3195.46	19.90
Average			15.79

Return on Shareholders equity Ratio of SBI

F\Y	NPAT	Shareholders equity	ROE
2005/06	60.85	626.64	9.71
2006/07	57.39	689.02	8.32
2007/08	117.00	982.38	11.90
2008/09	254.91	1163.29	21.91
2009/10	247.77	1414.64	17.51
Average			13.87

APPENDIX - 8

Earning Per Share

$$\text{EPS} = \frac{\text{NetIncome}}{\text{No of share outstanding}}$$

Earning per share of EBL

F\Y	EBIT	Interest	Tax	EAT	No. of Shares	EPS
2005/06	527.49	316.37	67.55	143.57	3150000	45.58
2006/07	552.29	299.57	81.91	170.81	3150000	54.22
2007/08	746.00	401.40	108.31	237.38	3780000	62.78
2008/09	971.88	517.17	153.30	296.41	3780000	78.30
2009/10	1300.72	632.60	216.91	451.21	4914000	91.82
Average						66.54

Earning per share of KBL

F\Y	EBIT	Interest	Tax	EAT	No. of Shares	EPS
2005/06	911.81	491.54	151.22	263.05	5362500	49.05
2006/07	1084.50	561.96	214.26	308.28	6435000	47.91
2007/08	1321.23	648.84	214.94	457.45	7722000	59.24
2008/09	1484.81	767.41	225.58	491.82	8108100	60.66
2009/10	1772.57	823.74	312.97	635.86	10135120	62.74
Average						55.92

Earning per share of SBI

F\Y	EBIT	Interest	Tax	EAT	No. of Shares	EPS
2005/06	365.45	255.92	48.68	60.85	4268759	14.25
2006/07	383.62	258.43	67.80	57.39	4318668	13.28
2007/08	534.53	334.77	82.76	117.00	6402361	18.27
2008/09	756.85	412.26	89.68	254.91	6477984	39.39
2009/10	802.94	454.91	100.26	247.77	8745278	28.33

Average						22.70
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APPENDIX - 9

Dividend per Share

$$\text{Dividend per share} = \frac{\text{Total Dividend}}{\text{No. of Share outstanding}}$$

Dividend per Share of EBL

F\Y	Total Dividend	No. of Share	DPS.
2005/06	63000000	3150000	20
2006/07	-	3150000	-
2007/08	945000000	3780000	25
2008/09	37800000	3780000	10
2009/10	98280000	4914000	20
Average			15

Dividend per Share of KBL

F\Y	Total Dividend	No. of Share	DPS.
2005/06	-	536200	-
2006/07	74517300	6435000	11.50
2007/08	231660000	7722000	30
2008/09	121620000	8108100	15
2009/10	253780000	10135120	25.04
Average			16.32

Dividend per Share of SBI

F\Y	Total Dividend	No. of Share	DPS.
2005/06	0	4268759	-
2006/07	0	4318668	-
2007/08	32010000	6402361	5

2008/09	81550000	6477984	12.59
2009/10	-	8745278	-
Average			3.52

APPENDIX - 10

Calculation of NI Approach

Market value of equity (s) = No. of shares X closing MPS
 Market value of firm (V) = Market value of Debt (B) + Market value of Equity(s)

Value of firm of EBL

F\Y	No. of Shares	Closing MPS	Market value of Shares (S)	Market value of Debt	V=S+B
2005/06	3,50,000	680	2142000,000	107100,000	2249100000
2006/07	3,50,000	870	2740500,000	137025,000	2877525000
2007/08	37,80,000	1379	5212620,000	260631,000	5473251000
2008/09	37,80,000	2430	9185400,000	367416,000	9552816000
2009/10	49,14,000	3132	1539048,000	483725,000	15874373000

Value of firm of KBL

F\Y	No. of Shares	Closing MPS	Market value of Shares (S)	Market value of Debt	V=S+B
2005/06	5362500	840	4504500000	406980000	4911480000
2006/07	6435000	920	5920200000	534830868	6455030868
2007/08	7722000	1100	8494200000	767366028	9261566028
2008/09	8108100	1740	10628094000	956528460	1158422460
2009/10	10135120	2450	24831044000	984937620	25815981620

Value of firm of SBI

F\Y	No. of Shares	Closing MPS	Market value of Shares (S)	Market value of Debt	V=S+B
2005/06	4268759	307	1310509013	3352270000	4662779013
2006/07	4318668	335	1446753780	4086360000	5333113780
2007/08	6402361	612	3918244932	6316170000	1023414932

2008/09	6477984	1176	7618109184	5717470000	1335579184
2009/10	8745278	1850	16178764300	6850750000	23029514300
Average					

APPENDIX- 11

Calculation of overall capitalization (KO)

$$\text{Cost of overall capitalization Rate (KO)} \quad X \frac{EBIT}{\text{TotalMarketvalueoffirm}}$$

Calculation of overall capitalization Rate of EBL:

Fly	EBIT	Value of Firm	KO
2005/06	527.49	2249.10	0.234
2006/07	552.29	2877.52	0.192
2007/08	746.00	5473.25	0.136
2008/09	971.88	9552.81	0.101
2009/10	1300.72	158737	0.081
Average			0.149

Calculation of overall capitalization Rate of KBL

F\Y	EBIT	Value of Firm	KO
2005/06	911.81	4911.48	0.185
2006/07	1084.50	6455.03	0.168
2007/08	1321.23	9261.56	0.142
2008/09	1484.81	11584.62	0.128
2009/10	1772.57	25815.98	0.068
Average			0.138

Calculation of overall capitalization Rate of SBI

F\Y	EBIT	Value of Firm	KO
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2005/06	365.45	4662.77	0.078
2006/07	338.62	5533.13	0.069
2007/08	534.53	10234.41	0.052
2008/09	756.85	13335.57	0.056
2009/10	802.94	23029.51	0.034
Average			0.058

APPENDIX-12

Calculation of 'NOI' Approach

$$\text{Cost of equity (Ke)} = X \frac{\text{Earning Available To Common Stockhold}}{\text{Market Value Of Stock (S)}}$$

Calculation of equity capitalization rate of EBL

Fly	Net Income	Market Value of Stock(S)	Ke
2005/06	143.57	2142.00	0.0670
2006/07	170.81	2740.50	0.0623
2007/08	237.29	5212.62	0.0455
2008/09	296.41	9185.4	0.0323
2009/10	451.21	15390.64	0.0293
Average			0.0473

Calculation of Equity Capitalization Rate of KBL

F\Y	Net Income	Market Value of Stock(S)	Ke
2005/06	263.05	4504.50	0.058
2006/07	308.28	5920.20	0.052
2007/08	457.45	8494.20	0.053
2008/09	491.82	10628.09	0.046
2009/10	635.86	24831.04	0.025

Average		0.0468
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Calculation of Equity Capitalization Rate of SBI

F\Y	Net Income	Market Value of Stock(S)	Ke
2005/06	60.85	1310.51	0.0464
2006/07	57.39	1446.75	0.0397
2007/08	117.00	3918.24	0.0299
2008/09	254.91	7618.11	0.0335
2009/10	247.77	16178.76	0.0153
Average			0.0330

APPENDIX-13

Degree of Financial Leverage

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

Degree of financial leverage of EBL

F\Y	EBIT	EBT	DFL
2005/06	527.49	211.12	2.50
2006/07	552.29	252.72	2.19
2007/08	746.00	344.60	2.16
2008/09	971.88	454.71	2.14
2009/10	1300.72	658.69	1.97
Average			2.19

Degree of financial leverage of KBL

F\Y	EBIT	EBT	DFL
2005/06	911.81	420.57	2.17
2006/07	1084.50	522.54	2.08

2007/08	1321.23	672.36	1.97
2008/09	1484.81	717.40	2.07
2009/10	1772.57	948.83	1.87
Average			2.03

Degree of financial leverage of SIB

F\Y	EBIT	EBT	DFL
2005/06	365.45	109.53	3.34
2006/07	383.62	125.19	3.06
2007/08	534.53	199.76	2.68
2008/09	756.85	344.59	2.20
2009/10	802.94	348.03	2.31
Average			2.72

APPENDIX- 14

Correlation coefficient between total debt and shareholders equity with probable error.

$$\text{Correlation coefficient (v)} = \frac{N\phi_{xy} - \frac{\sum \phi_x \phi_y}{N}}{\sqrt{N\phi_x^2 - \frac{(\sum \phi_x)^2}{N}} \sqrt{N\phi_y^2 - \frac{(\sum \phi_y)^2}{N}}}$$

Where,

N = Number of observation

X and are variable

$$P.E. = \frac{0.6745}{N} \sqrt{\sum Zr^2 A}$$

V= Correlation coefficient

N= Number of pair of observation

Correlation Coefficient between ID and SHE of EBL:

F\Y	T.D (x)	SHE (x)	XY	X ²	Y ²
2005/06	8928.25	680.31	6073977.75	79713648.06	462821.70
2006/07	11022.51	769.62	8483144.14	121495726.70	592314.94
2007/08	14996.45	962.80	14438582.06	224893512.60	926983.84
2008/09	20231.05	1201.51	24307808.89	409295384.10	1443626.28
2009/10	25228.10	1921.23	48468982.56	636457029.60	3691124.71
	80406.36	5535.47	101772495.4	147185530.01	7116871.47

$$r = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$r = \frac{5 | 101772495.4 - 80406.36 | 5535.47}{\sqrt{5 | 147185530.01 - 80406.36^2} \sqrt{5 | 7116871.47 - 5535.47^2}}$$

$$= 0.96$$

$$P.E = \frac{0.6745 | \sum f_i r^2}{\sqrt{N}}$$

$$= 6 | \frac{0.6745 | \sum f_i 0.96^2}{\sqrt{5}}$$

$$= 6 | \frac{0.6745 | 0.92}{2.24}$$

$$= 0.14$$

Coefficient between TD and SHE of KBL:

F\Y	T.D (x)	SHE (x)	XY	X ²	Y ²
2005/06	23493.19	2291.92	53844512.02	551929976.4	5252897.29
2006/07	26707.50	2568.39	68595275.93	713290556.3	6596627.19
2007/08	27334.20	2885.59	78875294.18	747158489.6	8326629.65
2008/09	31005.15	2942.22	91223972.43	961319325	8656658.53
2009/10	3366.54	3195.46	107567300.10	1133166599	10210964.61
	142202.58	13883.58	400106354.7	410686494.8	39043777.27

$$r = \frac{\sum \phi_{xy} \sqrt{\sum \phi_x \phi_y}}{\sqrt{\sum \phi_x^2} \sqrt{\sum \phi_y^2}}$$

$$= \frac{5 | 400106354.7 | 13883.58}{\sqrt{5 | 410686494.8 | 42202.58} \sqrt{5 | 390477727 | 13883.58}}$$

$$= 0.92$$

Probable error (P.E) $P.E. = \frac{0.6745 \sqrt{r^2}}{\sqrt{N}}$

$$= \frac{0.6745 \sqrt{0.92^2}}{\sqrt{6}}$$

$$= 0.28$$

Coefficient between TD and SHE of SBI:

F\Y	T.D (x)	SHE (x)	XY	X ²	Y ²
2005/06	7813.77	626.64	4896420.83	61055001.4	392671.68
2006/07	9656.35	689.01	6653321.71	93245095.32	474734.78
2007/08	12053.46	982.37	11840957.50	145285898	965050.81
2008/09	12737.19	1163.29	14817883.32	1622543051.2	1353243.62
2009/10	15772.80	1414.64	22312833.79	248781219.8	2001206.33
	58034.29	4875.95	60521447.15	710621565.90	5186913.22

$$r = \frac{\sum \phi_{xy} \sqrt{\sum \phi_x \phi_y}}{\sqrt{\sum \phi_x^2} \sqrt{\sum \phi_y^2}}$$

$$= \frac{5 | 60521417.15 | 4875.95}{\sqrt{5 | 710621565.9 | 710621565.90} \sqrt{5 | 5186913.32 | 4875.95}}$$

$$= 0.98$$

Probable Error $P.E. = \frac{0.6745 \sqrt{r^2}}{\sqrt{N}}$

$$= \frac{0.6745 \sqrt{0.98^2}}{\sqrt{6}}$$

$$= 6 \left| \frac{0.6745 \sqrt{0.98^2 A}}{\sqrt{5}} \right|$$
$$= 0.072$$

APPENDIX- 15

**Correlation Coefficient between long terms debt and EPS with probable error of
EBL:**

F\Y	LTD (x)	EPS (Y)	XY	X²	Y²
2005/06	-	45.58	-	-	2077.53
2006/07	300	54.22	16266	90000	2939.80
2007/08	300	62.78	18834	90000	3941.32
2008/09	300	78.30	23490	90000	6130.89
2009/10	300	91.82	27546	90000	8430.91
	1200	332.70	86136	360000	23520.45

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}}$$

$$= \frac{5 | 86136 | 332.70}{\sqrt{5 | 360000 |} \sqrt{5 | 23520.45 |}}$$

$$= 0.63$$

$$\text{Probable error } P.E. = \frac{0.6745 \sqrt{r^2}}{\sqrt{N}}$$

$$= \frac{0.6745 \sqrt{0.63^2}}{\sqrt{5}}$$

$$= 1.08$$

**Correlation Coefficient between Long term debt and EPS with probable error of
KBL:**

F\Y	LTD (x)	EPS (Y)	XY	X²	Y²
2005/06	-	49.05	-	-	2405.90
2006/07	360	47.91	17247.60	129600	2295.37
2007/08	360	59.24	21326.40	129600	3509.38

2008/09	360	60.66	21837.60	129600	3679.64
2009/10	360	62.74	22586.40	129600	3936.31
	1440	279.60	82998	578400	15826.60

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

$$= \frac{5 | 82998 | 1440 | 279.60}{\sqrt{5 | 518400 | (1440)^2} \sqrt{5 | 15826.60 | (279.60)^2}}$$

$$= 0.56$$

$$\text{Probable Error (P.E)} = 6 \left| \frac{0.6745(1 - r^2)}{\sqrt{n}} \right|$$

$$= 6 \left| \frac{0.6745(1 - 0.56^2)}{\sqrt{5}} \right|$$

$$= 1.24$$

Correlation Coefficient between LTD and EPS with probable error of SBI:

Fly	LTD (x)	EPS (Y)	XY	X ²	Y ²
2005/06	-	14.25	-	-	203.06
2006/07	-	13.38	-	-	179.02
2007/08	200	18.27	3654	40000	333.79
2008/09	200	39.35	7870	40000	1548.42
2009/10	200	28.33	5666	40000	802.59
	600	113.58	17190	120000	3066.88

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

$$= \frac{5 | 17190 | 600 | 113.58}{\sqrt{5 | 120000 | (600)^2} \sqrt{5 | 3066.88 | (113.58)^2}}$$

$$= 0.74$$

$$\begin{aligned} \text{Probable Error (P.E)} &= 6 \left| \frac{0.6745(1 Z r^2)}{\sqrt{\rho}} \right. \\ &= 6 \left| \frac{0.6745(1 Z 0.74^2)}{\sqrt{5}} \right. \\ &= 0.82 \end{aligned}$$

APPENDIX-16

Correlation coefficient between EBIT and interest with probable error of EBL

F\Y	EBIT(X)	Interest(Y)	XY	X ²	Y ²
2005/06	527.49	316.37	166882.01	278245.70	136588.28
2006/07	552.29	299.57	165449.52	305024.24	89742.18
2007/08	746.00	401.40	299444.40	556516.00	161121096
2008/09	971.88	517.17	502627.18	944530.73	267464.81
2009/10	1300.72	632.60	822835.47	1691872.52	400182.76
	4098.38	2167.11	1957238.58	377620919	1049099.99

$$\begin{aligned} r &= \frac{N \phi_{xy} Z \phi_x \phi_y}{\sqrt{N \phi_x^2 Z \phi_x} \sqrt{N \phi_y^2 Z \phi_y}} \\ &= \frac{5 \left| 1957238.58 Z 4098.38 \right| 2167.11}{\sqrt{5 \left| 377620919 Z (4098.38)^2 \right|} \sqrt{5 \left| 1049099 Z (2167.11)^2 \right|}} \end{aligned}$$

$$= 0.85$$

$$\begin{aligned} \text{Probable Error (P.E)} &= 6 \left| \frac{0.6745(1 Z r^2)}{\sqrt{\rho}} \right. \\ &= 6 \left| \frac{0.6745(1 Z 0.85^2)}{\sqrt{5}} \right. \\ &= 0.50 \end{aligned}$$

Correlation coefficient between EBIT and interest of KBL

F\Y	EBIT(X)	Interest(Y)	XY	X ²	Y ²
2005/06	911.81	491.54	448191.09	831397.48	241611.57
2006/07	1084.50	561.96	609445.62	1176140.25	315799.04
2007/08	1321.23	648.84	857266.87	1745648.71	420993.35
2008/09	1484.81	767.41	1139458.04	2204660.74	588918.11
2009/10	1772.57	823.74	1460136.81	3142004.41	678547.59
	6574.92	3293.49	4514498.43	9099851.59	2245869.66

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}}$$

$$= \frac{5 \mid 4514498.43 \mid 3293.49}{\sqrt{5 \mid 9099851.59} \sqrt{5 \mid 2245869.66}}$$

= 0.99

$$\text{Probable Error (P.E)} = 6 \mid \frac{0.6745(1 - r^2)}{\sqrt{n}}$$

$$= 6 \mid \frac{0.6745(1 - 0.99^2)}{\sqrt{5}}$$

= 0.04

Correlation coefficient between EBIT and interest of SBI:

F\Y	EBIT(X)	Interest(Y)	XY	X ²	Y ²
2005/06	365.45	255.92	9352.96	133533.70	65495.05
2006/07	383.62	258.43	99655.78	147164.36	66786.06
2007/08	534.53	334.77	178944.61	285722.32	112070.95
2008/09	756.85	412.26	312018.98	572821.92	169958.31
2009/10	802.94	454.91	365265.44	644712.61	206943.11

	2843.39	1716.29	1049410.77	1783974.88	621253.48
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$$r = \frac{N\phi_{xy} Z\phi_x\phi_y}{\sqrt{N\phi_x^2 Z\phi_x^2} \sqrt{N\phi_y^2 Z\phi_y^2}}$$

$$= \frac{5 | 1049410.77 Z 2843.39 | 1716.29}{\sqrt{5 | 1783974.88 Z (2843.39)^2} \sqrt{5 | 621253.48 Z (1716.29)^2}}$$

$$= 1.01$$

$$\text{Probable Error (P.E)} = 6 | \frac{0.6745(1 Z r^2)}{\sqrt{\rho}}$$

$$= 6 | \frac{0.6745(1 Z 1.01^2)}{\sqrt{5}}$$

$$= 0.036$$

APPENDIX-17

Correlation coefficient between EBIT and DPS of EBL

F\Y	EBIT(X)	DPS(Y)	XY	X ²	Y ²
2005/06	527.49	20	10549.80	278245.70	400
2006/07	552.29	-	-	305024.24	-
2007/08	746.00	25	18650.00	556516.00	625
2008/09	971.88	10	9718.80	944550.73	100
2009/10	1300.72	20	26014.40	1691872.52	420
	4098.38	75	64933.00	3776209.19	1525

$$r = \frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}}$$

$$= \frac{5 \mid 64933.00 \mid 75}{\sqrt{5 \mid 3776209.19} \sqrt{5 \mid 1525}}$$

$$= 0.27$$

$$\text{Probable Error (P.E)} = 6 \mid \frac{0.6745(1 - r^2)}{\sqrt{n}}$$

$$= 6 \mid \frac{0.6745(1 - 0.27^2)}{\sqrt{5}}$$

$$= 1.67$$

Correlation coefficient between EBIT and DPS of KBL:

F\Y	EBIT(X)	DPS(Y)	XY	X ²	Y ²
2005/06	911.81	-	-	831397.47	-
2006/07	1084.50	11.58	12558.51	1176140.25	434.10
2007/08	1321.23	30	39636.90	1745648.71	900
2008/09	1484.81	15	22272.15	2204660.73	225

2009/10	1772.57	-	44385.15	3142004.43	627
	6574.92	81.62	118852.71	9099851.59	1886.10

$$r = \frac{\sum N\phi_{xy} Z\phi_x \phi_y}{\sqrt{\sum N\phi_x^2 Z\phi_x^2} \sqrt{\sum N\phi_y^2 Z\phi_y^2}}$$

$$= \frac{5 \mid 118852.71 \mid 81.62}{\sqrt{5 \mid 9099851.59 \mid (6574.92)^2} \sqrt{5 \mid 1886.10 \mid (81.62)^2}}$$

$$= 0.73$$

$$\text{Probable Error (P.E)} = 6 \mid \frac{0.6745(1 \mid Zr^2)}{\sqrt{\rho}}$$

$$= 6 \mid \frac{0.6745(1 \mid Z0.73^2)}{\sqrt{5}}$$

$$= 0.84$$

Correlation coefficient between EBIT and DPS of SBI:

F\Y	EBIT(X)	DPS(Y)	XY	X ²	Y ²
2005/06	365.45	-	-	133553.70	-
2006/07	383.62	-	-	14716430	-
2007/08	534.53	5	2672.65	285722.32	25
2008/09	756.85	12.59	9528.74	572821.92	158.51
2009/10	802.94	-	-	644712.64	-
	2843.39	17.59	12201.39	1783934.88	183.51

$$r = \frac{\sum N\phi_{xy} Z\phi_x \phi_y}{\sqrt{\sum N\phi_x^2 Z\phi_x^2} \sqrt{\sum N\phi_y^2 Z\phi_y^2}}$$

$$= \frac{5 \mid 12201.39 \mid 17.59}{\sqrt{5 \mid 1783934.88 \mid (2843.39)^2} \sqrt{5 \mid 183.51 \mid (17.59)^2}}$$

$$= 0.49$$

$$\begin{aligned} \text{Probable Error (P.E)} &= 6 \left| \frac{0.6745(1 Z r^2)}{\sqrt{\rho}} \right. \\ &= 6 \left| \frac{0.6745(1 Z 0.49^2)}{\sqrt{5}} \right. \\ &= 1.37 \end{aligned}$$

APPENDIX - 18

Calculation of Standard Deviation and Coefficient of Variation of Long term Debt to T.D:

F\Y	EBL	KBL	SBI
	$(\epsilon Z \bar{\epsilon})^2$	$(\epsilon Z \bar{\epsilon})^2$	$(\epsilon Z \bar{\epsilon})^2$
2005/06	-	-	-
2006/07	1.64	0.15	-
2007/08	0.28	0.11	0.58
2008/09	0.0001	0.03	0.46
2009/10	0.14	0.01	0.14
$\phi(\epsilon Z \bar{\epsilon})^2$	2.06	0.30	1.18
$\dagger X \sqrt{\frac{\phi(\epsilon Z \bar{\epsilon})^2}{\rho Z 1}}$	0.72	0.72	0.55
$C.V = \frac{\dagger}{\epsilon} 100$	48.98	28.87	61.80

APPENDIX - 19

Calculation of S.D and Coefficient of Variation of Long term Debt to capital employed

F\Y	EBL	KBL	SBI
	$(\epsilon Z \bar{\epsilon})^2$	$(\epsilon Z \bar{\epsilon})^2$	$(\epsilon Z \bar{\epsilon})^2$

2005/06	0.0367	0.0484	0.0081
2006/07	0.0213	0.0081	0.0081
2007/08	0.0021	0.0036	0.0064
2008/09	0.0001	0.00250	0.0036
2009/10	0.0001	0.0009	0.0009
$\phi(\varepsilon Z\bar{\varepsilon})^2$	0.0603	0.0637	0.0271
$\dagger X \sqrt{\frac{\phi(\varepsilon Z\bar{\varepsilon})^2}{\rho Z1}}$	0.12	0.13	0.08
$C.V = \frac{\dagger}{\varepsilon} 100$	62.60	59.09	88.89

APPENDIX - 20

Calculation of S.D and C.V of Debt to total assets ratio

F\Y	EBL	KBL	SBI
	$(\varepsilon Z\bar{\varepsilon})^2$	$(\varepsilon Z\bar{\varepsilon})^2$	$(\varepsilon Z\bar{\varepsilon})^2$
2005/06	0.0001	-	0.0001
2006/07	0.0004	0.0001	0.0004
2007/08	0	0.0004	0.0001
2008/09	0.0001	0.0004	-
2009/10	0	-	-
$\phi(\varepsilon Z\bar{\varepsilon})^2$	0.0006	0.0009	0.0006
$\dagger X \sqrt{\frac{\phi(\varepsilon Z\bar{\varepsilon})^2}{\rho Z1}}$	0.014	0.015	0.014
$V = \frac{\dagger}{\varepsilon} 100$	1.52	1065	0.66

APPENDIX - 21

Calculation of S.D. and C.V of Debt to equity ration

Fly	EBL	KBL	SBI
	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$
2003\04	0.0441	0.0096	0.0100
2004\05	0.0289	0.0018	0.0100
2007\08	0.0100	0.0005	0.0100
2008\09	0.0009	0.0005	0.0049
2009\10	0.0036	0.0001	0.0016
$\phi(\varepsilon Z \bar{\varepsilon})^2$	0.0875	0.0125	0.0365
$\dagger X \sqrt{\frac{\phi(\varepsilon Z \bar{\varepsilon})^2}{\rho Z1}} =$	0.15	0.06	0.095
$C.V = \frac{\dagger}{x} 100$	71.43	61.21	95.39

APPENDIX - 22

Calculation of S.D and C.V of I/C ratio:

F\Y	EBL	KBL	SBI
	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$
2005\06	0.0289	0.0169	0.0400
2006\07	0	0.0036	0.0225
2007\08	0.0004	0.0025	0.009
2008\09	0.0016	0.0025	0.0441
2009\10	0.0400	0.0289	0.0225
$\phi(\varepsilon Z \bar{\varepsilon})^2$	0.0709	0.0544	0.1381
$\dagger X \sqrt{\frac{\phi(\varepsilon Z \bar{\varepsilon})^2}{\rho Z1}} =$	0.13	0.12	0.19
$C.V = \frac{\dagger}{\varepsilon} 100$	7.07	6.06	11.66

APPENDIX - 23

Calculation of S.D and C.V of ROTA

F\Y	EBL	KBL	SBI
	$(\epsilon Z\bar{\epsilon})^2$	$(\epsilon Z\bar{\epsilon})^2$	$(\epsilon Z\bar{\epsilon})^2$
2005/06	-	0.1024	0.1296
2006/07	0.0036	0.0729	0.2809
2007/08	-	0.0256	0.0324
2008/09	0.0119	0.0081	0.5625
2009/10	0.0289	0.1444	0.1296
$\phi(\epsilon Z\bar{\epsilon})^2$	0.0442	-	1.1350
$\dagger X \sqrt{\frac{\phi(\epsilon Z\bar{\epsilon})^2}{\rho Z1}}$	0.11	0.30	6.53
$C.V = \frac{\dagger}{\epsilon} 100$	7.38	22.30	49.07

APPENDIX - 24

Calculation of S.D and C.V of ROSE

F\Y	EBL	KBL	SBI
	$(\epsilon Z\bar{\epsilon})^2$	$(\epsilon Z\bar{\epsilon})^2$	$(\epsilon Z\bar{\epsilon})^2$
2005/06	4.2025	18.5761	17.3056
2006/07	0.6641	14.3641	30.8025
2007/08	2.2801	0.0036	3.8809
2008/09	2.3104	0.8649	64.6416
2009/10	0.1156	16.8921	13.9129
$\phi(\epsilon Z\bar{\epsilon})^2$	10.5727	50.7008	130.5435

$\dagger X \sqrt{\frac{\phi(\varepsilon Z \bar{\varepsilon})^2}{\rho Z 1}}$	1.63	3.56	5.71
$C.V = \frac{\dagger}{\varepsilon} 100$	7.04	22.55	41.19

APPENDIX - 25

Calculation of S.D and C.V of EPS

F\Y	EBL	KBL	SBI
	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$
2005/06	439.32	47.20	71.40
2006/07	151.78	64.14	88.74
2007/08	14.14	11.02	19.62
2008/09	138.30	22.47	277.22
2009/10	639.08	46.51	31.70
$\phi(\varepsilon Z \bar{\varepsilon})^2$	1382.62	191.34	488.68
$\dagger X \sqrt{\frac{\phi(\varepsilon Z \bar{\varepsilon})^2}{\rho Z 1}}$	18.59	6.92	11.05
$C.V = \frac{\dagger}{\varepsilon} 100$	27.97	12.37	48.68

APPENDIX- 26

Calculation of S.D and C.V of DPS:

F\Y	EBL	KBL	SBI
	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$	$(\varepsilon Z \bar{\varepsilon})^2$
2005/06	25	266.47	12.59
2006/07	225	22.47	12.59

2007/08	100	187.17	2.19
2008/09	25	1.74	82.26
2009/10	25	76.04	12.59
$\phi(\varepsilon Z \bar{\varepsilon})^2$	400	553.86	122.22
$\dagger X \sqrt{\frac{\phi(\varepsilon Z \bar{\varepsilon})^2}{\rho Z 1}}$	10	11.77	5.53
$C.V = \frac{\dagger}{\varepsilon} 100$	66.67	72.12	157.10