A COMPARATIVE STUDY OF CAPITAL STRUCTURE MANAGEMENT BETWEEN KUMARI BANK LTD. AND SIDDHARTHA BANK LTD.

A THESIS

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RECOMMENDATION

This is to certify that the thesis

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DECLARATION

I here by declare that the work reported in this thesis entitled **A comparative analysis of Capital Structure Management between Kumari Bank Ltd. and Siddhartha Bank Ltd.** submitted to Thakur Ram Multipal Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master's Degree in Business Study (M.B.S.) under the supervision of Mr. Sanjay Shrestha

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Rohit Shrestha

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ABBREVIATIONS

A.D.	ANNO DOMINI/ AFTER DEATH
ADB	ASIAN DEVELOPMENT BANK
AGM	ANNUAL GENERAL MEETING
BOK	BANK OF KATHMANDU
CDS	CERTIFICATES OF DEPOSITS
DB	DEVELOPMENT BOND
DER	DEBT EQUITY RATIO
FY	FISCAL YEAR
HBL	HIMALAYAN BANK LIMITED
JMF	JUDDHA MATCH FACTORY
JVB	JOINT VENTURE BANK
KBL	KUMARI BANK LIMITED
MOF	MINISTRY OF FINANCE
NA	NOT AVAILABLE
NBB	NEPAL BANGLADESH BANK
NCDS	NEGOTIABLE CERTIFICATES OF DEPOSITS
NEPSE	NEPAL STOCK EXCHANGE
NEA	NEPAL ELECTRICITY AUTHORITY
NIB	NEPAL INVESTMENT BANK LIMITED
NRB	NEPAL RASTRA BANK
NSB	NATIONAL SAVINGS BOND
NSCS	NATIONAL SAVING CERTIFICATES
NSML	NEPAL SHARE MARKETS LTD.
OTC	OVER-THE COUNTER
SB	SAVING BOND
SBL	SIDDHARTHA BANK LIMITED
SCB	STANDARD CHARTER BANK
SEBON	SECURITIES BOARD OF NEPAL
SEC	SECURITIES EXCHANGE CENTER
SLR	STATUTORY LIQUIDITY RATIO
TB	TREASURY BILLS/ T- BILLS, T- BONDS
T-NOTES	TREASURY NOTES

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Chapter-I
INTRODUCTION

1.1 Economic Background of the Country

Economic development is the backbone of the development of a nation. The economic development of Nepal is backward in comparison to other developed and developing countries. . Economic development is a challenging task in Nepal not just due to lack of resources but it is due to lack of proper utilization of the available resources in efficient manner. This problem needs to be researched and requires proper planning and strategy development.

Nepal is a predominantly agricultural landlocked country in the world with population 27 million. Nepalese economy underwent a structural change in the last decade. The contribution of agriculture and industries services sector expanded gradually. The contribution of agriculture, industries and services sectors to the real GDP remained at 36.1 %, 16.8% and 47.1% respectively in 2006/07 these ratios were 39.8%, 23.2% and 37.0% in 1996/97.

Productivity gain in agricultural is very important for the overall economic development of the county. Nepalese agriculture continues to be locked in conventional method and monsoon rain dependency. This sector needs to be modern technology oriented and to set on a course of commercial scale farming, which will thereby help develop industrial base. Development of these twin approaches is highly desirable also be reduce poverty, which stands us the major challenge today. Enabling real farmers access to cultivable land by compatible distribution, more productive use of land, and operations of minor irrigation systems according to the needs of the local level are among the preconditions of farming modernization. So are the prompt access to the agriculture credit and regular supply of quality agriculture inputs. Private

sector investment in development and construction of agriculture infrastructure is equally desirable for the promotion of commercial farming. Agricultural research based development of crops is another area to be emphasized. Modernization of agriculture continues to lag due to inadequate irrigation facilities. Hence, minor irrigation needs to be promoted. In sum, if agriculture production is to be increased, policies and programs need to be geared towards addressing these challenges.

Industrial production has suffered a lot due to continued unfavorable situation faced by this sector during the past years. Serious disturbances like frequent strikes, lock-outs, donation increase load shedding, carteling by truckers; raw material supply disturbances, recurring cases of misunderstanding between management of labour, lack of industrial security etc. were at worked to disturb industrial production. As a result, the emerged situation remains unfriendly to provide sector investment promotion. So much so that the investors in the field are discouraged and pessimistic. Capital flight threat is looming large. All these pose a daunting challenge to the industry sector demanding improvement measures of political, administrative, policy and process based perspectives.

Nepal has emerged as one of the major tourist destinations of the world and holds ample opportunities for further developing this sector. Benefits are numerous, enhancement of foreign exchange earning, creation of additional employment opportunities, promotion of cottage and handicraft industry, broadcasting of country focus, enhancement of awareness and promotion of Nepalese art and culture. Eventually the government will also benefit from increased revenue, peoples living standards will be expected to improve, and regional imbalance may also be corrected. The task therefore of taking measures for developing and expanding tourism sector lies ahead.

With the end of the long internal conflict, the nation has now started to move fast along the trajectory of sustainable peace. In this context, there is the need to expedite the implementation of various development projects that were affected due to the disturbed peace and security environment in the past. Equally important is the task of restructuring the projects that were destroyed. To give priority to the effective implementation of the projects in roads, bridges, drinking water, electricity, irrigation etc and facilitates the development process that was disrupted in the past due to the conflict have become urgent. Poverty reduction has become the national priority as well as the challenge. Many cottage and handicrafts industries that were based on the locally available resources but could not strengthen their position due to the emerging global competitive environment have faced constraints in the given context while the rural agricultural situation is also weak. As a result self employment opportunities that could be promoted at the local level have been reduced. This consequence has erased problem in the process of attaining national objectives of poverty reduction. Taking this into account there is the need to improve the condition of cottage industries and the agricultural activities at the local level, which would make the way of creation of self employment opportunities as the major instruction for the poverty reduction in the rural areas. For such an arrangement to be made effective, the challenge lies in formulating and running smoothly programs like “rural self employment for the poverty reduction” and “modern agricultural system for the upliftment of the rural sector”.

Poverty alleviation remains as a national challenge. Cottage and handicraft based industries which came into operation in economic liberalization policy environment are in the course of closures while rural agriculture is not performing well. Potential source of self employment opportunities at local

level are therefore in jeopardy. Taking quick initiatives towards designing and implementing programs of rural self employment and modern technology oriented agriculture practices in the rural areas have become the order of day to address poverty alleviation issues.

1.2 Background of the Study

We know very well that Nepal is a poor country. Its economy is all most based on agriculture. Though dependence on agriculture is decreasing day by day, approximately -80% of the total population is still hanging on agriculture. Thus a major source of income of the people as well as the country is agriculture. But the position of the agriculture of the country is very bad. Due to the lack of sufficient capital, fertilizer, irrigation, higher technology, professionalism in agriculture, supportive government policy and stable government, entire country is loosing its revenue from agriculture day by day. People are unable to handle their livelihood from this profession and they are changing their profession toward trade and industry.

Capital or fund is the most essential part for the development of any sector. Development of trade and industry could not be thought in the absence of sufficient capital. In the context of capital flows the bank play a vital role as a financial intermediary. In the absence of banks, capital flow could not be systematic. In the situation of present competitive business market no one can operates his/her business successfully only with their own capital. Everyone should depend upon financial intermediary even for the small scale business for the fund. Thus the bank plays the key role for the economic development of the country.

Banks are essential financial institutions. They are the principal source of credit that provide short term working capital finance. They contribute to the economy in different manner. They collect money from savers and invest in lucrative sectors. They make profit by paying less for savings than what they charge to the borrowers. Therefore, banks could play a key role in reducing poverty through income distribution and by producing income opportunities. Commercial banks are Business Corporations regulated and controlled by the central bank. They need to be studied constantly in comparison to other firms as they hold more mportance than others. They hold saving of the regulators and the common people which determine the health of the economy, maximizing the value of shareholder's wealth at an accepted level of risk.

The business world today is entirely different from the past. The social needs have increased tremendously in quantity and quality as well. To survive in the world, the establishment of business and expansion of business is essential and it is impossible of there is no sufficient fund. The type of finance needed by a firm largely depends upon the type of the enterprise varies from one firm to another.

There are two sources of financing for the business internal and external. An internal source of financing mainly consists of retained earnings of enterprise, different kinds of reserves and the provision for depreciation. But with the development of money, finance and financial institutions, now it is no longer necessary for an enterprise to finance from its internal sources alone and have a balanced budget. Furthermore the innovation of corporate firm of business organization with the principal of limited liability and efficient technique of acquiring capital through the issue of various ownership and debt securities have enable investors to satisfy their diverse assets preferences. This has made it possible for a corporate enterprise to satisfy their diverse assets preferences.

This has made it possible for a corporate enterprise to attract the external funds from the public by issuing shares and debentures. Issuing shares to the public is made compulsory under government rules and regulations.

Success or failure of any bank or organization mainly depends upon the structure of its optimum capital. So it is said to be the heart of the bank. It determines the profit making power of the bank as well as it helps to reduce its risk to minimum level. Increase in equity capital decrease the earning power as well as risk to its shareholders and increase in debt capital increases the profit as well as risk to the shareholders. So the bank should manage its capital structure in such a way that profit and risk both could be managed well.
Hence banking is a resource for economic development. And the bank itself should be strong and sufficient to mobilize the funds into a profitable direction and as we know that without smooth and sound capital structure a bank could not be able to maintain the financial position into a desired goal.

The target capital structure

Firm should first analyze a number of factors then establish a target capital structure. The target may change over time as conditions change but at any given moment. Management should have a specific capital structure in mind. If the actual debt ratio is below the target level, expansion capital should generally be raised by issuing debt, whereas if the debt ratio is above the target, equity should generally be issued.

Capital structure policy involves a trade-off between risk and return.

- Using more debt raises the risk borne by stockholders.
- However using more debt generally leads to a higher expected rate of return on equity.

Higher risk tends to lower or stocks price, but a higher expected rate of return raises it. Therefore the optimal capital structure must strike a balance between risk and return so as to maximize the firm's stock price.

primary factors influence capital structure decisions.

1. Business risk or the riskiness inherent in the firm's operation if it used no debt. The greater the firms business risk, the lower its optimal debt ratio.
2. The firm's tax position, a major reason for using debt is that interest is tax deductible, which lowers the effective cost of debt. However if most of firms income is already sheltered from taxes by depreciating tax shields, by increase on currently outstanding debt of by tax loss carry forwards its taxes rate will be low, so additional debt will not be as advantageous as it would be to a firm with a higher effective tax rate.
3. Financial flexibility, or the ability to raise capital on reasonable terms under adverse conditions, corporate treasures know that a steady supply of capital is necessary for stable operations, which is vital for long run success. They also know that when money is tight in the economy, or when a firm is experiencing operating difficulties, suppliers of capital prefer to provide funds to companies with strong balance sheets. Therefore both the potential future need for funds and the consequences of a funds shortage influence the target capital structure the greater the probable future need for capital and the worse the consequences of a capital shortage the stronger the balance sheet should be.
4. Managerial conservatism or aggressiveness: some managers are more aggressiveness than others; some firms are more inclined to use debt in an effort to boost profits. This factor does not affect the true optimal or value maximizing, capital structure but it does influence the manager determined target capital structure.

These four points largely determine the target capital structure but operating conditions can cause the actual capital structure to vary from the target. For example, a company may have a target debt ratio of 50% but unforeseen circumstances may force it to write down its common equity which in turn would raise its debt ratio above the target level. Presumably, this company would face steps in the future to return the capital structure to its target level.

1.3 Statement of the Problem

Business accept various types of deposits from the general public and lend them to various sectors for generating some return at the same time assuming some level of risk associated with the specific sector. This means risk and return runs both way. To minimize risk for a given level of return and/or to maximize return for a given level of risk, banks have to manage their optimum capital structure. But in case of our country Nepal, banks are not paying enough attention towards this fact. The two oldest government involved banks (Nepal Bank Ltd and Rastriya Banijya Bank Ltd) face loss despite their strong capital and deposit base is due to the lack of their capability in capital structure management. In other words the reason behind the weak financial position of these banks is the inability of their proper management of capital structure, which causes higher cost of fund. The matter of assisting in economic growth of the country by these banks is far away from the reality in this context of being burden to themselves with the proposition of non performing loan about 20% of their total loan portfolio. Meanwhile the authorities are also going on with their campaign to bring these two largest and oldest banks of the country back to their health.

Other commercial banks are also not showing enough consciousness towards the capital structure management. Every bank seems to go after a few lucrative

business sectors or business houses and go for under price war. This has disproportionately benefited a few business people at the cost of a larger section of the population. The risk return trade off has not been properly analyzes before making capital proportion, which has resulted the higher cost of fund then the acceptable level and is in comparatively increasing trend. Current situation of banking sector shows the growth of non performing assets (NPA) has been faster than the growth of credit due to the higher cost of fund and poor management of loan.

Since few years back, the trend of launching joint venture banks seems stopped and also reversed. Some of the foreign banks have withdrawn their investment from Nepal. Certainly the withdrawal of foreigners is as the result of some anomalies in Nepali banking sector irrespective of what the withdrawing foreign bank would say officially to the Nepali authorities and/or the general public. If such situation of short sightedness prevails for longer, Nepalese banking sector may fail into the crisis as in East Asia and Argentina in past and even the public deposits made in these banks may be unsecured. To avoid such potential crisis the concerned authority (i.e Nepal Rastra Bank and the commercial banks themselves) have to pay their proper attention in their capital structure management. Rare researches made regarding this issue also indicate the less perceived importance for such a sensitive fact.

The main attempts of this study will be to answer the following questions:

1. How far have Kumari Bank Limited (KBL) and Siddhartha Bank Ltd (SBL) been able to maintain the optimum capital structure?
2. How far KBL and SBL are able to generate the income from utilization of debt efficiently?
3. What are the factors affecting financial efficiency?
4. What extent the investors of these banks are getting benefits from its current operation?

5. Where is the actual overall financial condition of these banks?
6. Is return level of the banks under study satisfactory in relation to the risk?
7. Is there proper capital structure management in the banks under study?

1.4 Objective of the study

The main objective of the study is to highlight the comparative study of capital structure and its impact upon overall banks performance of these two commercial banks. The optimum capital structure maximizes the valuation of the banks and minimizes the overall cost of capital. Besides this following are also special objectives of the study.

1. To find out comparative position in capital structure between two banks.
2. To analyze the various source of capital and their cost.
3. To highlight the relationship between operating profit and interest expenses to measure the debt service capacity of the banks.
4. To analyze the return on capital in relation to capital employed.
5. To study capital structure & adequacy ratio.

1.5 Justification of the study

This study is concern with the capital structure management of Kumari Bank Limited and Siddhartha Bank Ltd.

As very rare researches have been performed regarding this issue it is expected that this study will significantly contribute towards the field of capital structure.

The bank's capital structure should be managed in such a way that the fund could be provided efficiently and effectively. The goal of the study is to examine the efficiency and the performance of these two banks management

and reflected in the financial records and reports. Especially the following points justify the study.

a. The study makes me to specify the entire glory of these two commercial banks especially in the sector of capital structure.
b. This study focuses on these two banks regarding capital structure, its appraisal and analysis as comparative case study. It helps to find out which bank is showing comparatively performance. It helps to indicate strengths and weakness of these banks especially in the sector of capital structure.
c. The study will help to show the financial position of the banks to the investors as a social work point of view and at the same time to the concerned management as management finance student point of view.
d. Optimum capital structure is the secret of success of the banks. Due to the lack of sound capital structure many organization are facing the failure in Nepal so this study will contribute to help NRB to develop policy guidelines regarding capital adequacy norms.
e. This study will also helpful to depositors, lenders, borrowers, management, shareholders and customers of the banks under research.

1.6 Limitations of the study

Every works have been its own restriction and limitation due to the lack of time, resources and knowledge the work is completed within the periphery of its limitation. Despite ample efforts on the part of the researcher this study is not free from limitation. This study also will have some limitations which will be as follows:

a. This study is based on secondary data. Thus the result of the analysis depends on accuracy of available information.
b. The study covers only the latest five fiscal years from 2003/04 to 2007/08.

c. The study is mainly conducted on the basis of secondary sources of data eg. Annual reports of various banks, NRB and governments publications and other related journals, the primary data will be included where matters.
d. The study only covers the capital structure management and its impact on non return trade off of only Kumari Bank Limited and Siddhartha Bank Limited.
e. Standard normal performance level is not available as benchmark, especially in Nepalese context. So interpretations of data depend upon judgment.

1.7 Organization of the study

The study has been organized into five chapters as per Tribhuvan University's prescribed specimen of master thesis. Each devoted to some aspects of the study of capital structure of these two commercial banks in Nepal. The titles of each of these chapters are as follows:

Chapter I: Introduction- This chapter contains the introductory part of the study where the general backgrounds of the study the major issues to be investigated and the objectives of the study were presented.

Chapter II: Review of Literature- This chapter is concerned toward the review of literature of related studies. It contains conceptual framework, major studies in general and reviews of major studies in Nepal.

Chapter III: Research Methodology- This chapter describes the research methodology employed in the study. It includes the research design, nature and source of data selection or enterprises, method of analysis, use of statistical tools. Limitations of the study and the definitions of the used terms.

Chapter IV: Presentation and Analysis of data- This chapter deals with the presentation and analysis of data. It consists of analyzing of capital structure of these two commercial banks in Nepal.

Chapter V: Summary, Major Findings and Recommendation- This chapter states summary and conclusion of the study. Also presents the major findings compare them with theory and other empirical evidence to the extent possible. The bibliography and appendixes have been incorporated at the end of the study.

Chapter – II

REVIEW OF LITERATURE

This chapter has been organized through the study of different books; articles published in journals, NRB directives for Banks and financial institutions and master's level thesis as below:

- Conceptual Framework
- Review of Journals and Articles
- Review of NRB Directives
- Review of Thesis

2.1 Conceptual Framework

2.1.1 History of Banking

Financial development of the country largely depends upon effective mobilization of its internal resources. Banks and financial institutions play pivotal role in the development of the country by performing the tasks of effective mobilization of its internal resources. It helps the growth of agriculture, trade, commerce, and industry of the national economy. The banking sector is largely responsible for collecting public deposits in various types and deploying these in the society by lending in different sectors of economy.

"Banking concept was also in existence even in period when the goldsmiths and the richer people used to issue receipt to common people against the promise to safe keeping their valuables items. On the presentation if receipt the

depositor would get back their gold & valuables after paying a small amount for safekeeping and saving." (*Samuelson; 1989:112)*

"Banking has crossed various phases to come to the modern form. Some sort of banking activities had been carried out since the time immemorial traditional forms of banking were traced during the civilization of Greek, Rome and Mesopotania. Merchants, goldsmiths and money lenders are said to be the ancestors of modern banking." *(Dahal and Dahal; 2002:8)*

Merchants: Business activities have been carried out since the time immemorial. Merchants had to remit money from one place to another. It was very difficult to carry physical money (coins) each time when trading was executed. The merchants were so popular and credit worthy that the letters issued by them were treated as good as money. They used to make trading activities based on these letters and settle the outstanding (due to/form) actual coins on periodical basis. These letters gave birth to modern negotiable instruments.

Goldsmiths: Goldsmiths had very sound credit standing in the society. They used to have safe to keep valuables. Fear of theft and robbery led people keep their valuables (gold, silver, metallic coins) in the custody of goldsmiths. Goldsmiths used to charge commission for safekeeping and used to return on demand. The depositors had to visit goldsmith for part and full withdrawal of gold silver and coins. In order to remove the inconvenience, goldsmiths started issuing a receipt to any depositor with a notation "I owe y (IOU)" which could be transferred to any person the depositor wished. This gave birth to the bank note.

Money Lenders: Money lenders used to give loan to the needy public out of their own treasury. Latter on, savers started depositing their savings/deposits with the money lenders.

Goldsmiths and moneylenders experienced that all the money deposited with them were not withdrawn at a time. Some used to deposit while some used to withdraw, but a large amount used to remain with them. They started offering interest on those deposits and started utilizing those funds to disburse the loans to needy people. They used to keep a fraction of total deposit in the form of cash to honor withdrawal demands and rest was lent. The principle of fractional reserve is the foundation of liquidity theory in modern banking.

Such tasks previously performed by merchants, goldsmiths and moneylenders are now a days performed by various types of banks in modern ways. Banks refer to any firms that are basically concerned with the transaction of money; however today's banks are established for different purposes.

2.1.2 Emergence of Commercial Banks in the economy

"Regarding the origin of modern banking "Bank of Venice" is the first bank of the world, which was established in 1157 A.D. Subsequently bank of Barcelona (1401) and Bank of Geneva (1407) were established. These modern banks gradually replaced goldsmiths and moneylenders. Although bank of England was established in 1694, the growth of banks accelerated only after the introduction of Banking Act-1883 in United Kingdom as it allowed opening joint stock company banks. The bank of Hindustan established in 1770, is regarded as the first bank in India." *(Dahal and Dahal; 2002:10)*

"This history of modern financial system in Nepal was begun in B.S 1994 with the establishment of Nepal Bank Ltd as the first commercial bank of Nepal. The bank was established to render service to the people and for the economic

progress of the country. Prior to the establishment of Nepal Rastra Bank, it plays the role of Central bank also. The establishment of Nepal Rastra Bank, the central bank of Nepal in 2013 B.S. under the Nepal Rastra Bank Act-2012, was a significant dimension in the development of the banking sector. Realizing the importance of industrial development, HMG/N and NRB established the Nepal Industrial Development Corporation (NIDC) in 1959. The NRB created the agriculture credit fund in 1959/60 and handed it over to HMG/N for the establishment of the co-operative bank in 1963. The Agriculture Development Bank (ADB/N) was set up in 1968 under the Agriculture Development Act, 1967 by incorporating the assets and liabilities of the co-operative bank. HMG/N had established the land reform saving corporation in 1966 to make credit to village communities and reform saving corporation was merged with ADB/N in 1973 and ADB became the only financial institution for providing the rural and agricultural credit in Nepal till 1974." *(Shrestha; 2000:68)*

The second commercial bank, the Rastriya Banijya Bank was established in the public sector in 1966, with the equity participation of HMG/N and the NRB under the Rastriya Banijya Bank Act 1967. A large number of non banking financial institutions were set up between 1962 and 1977 such as the Employ Provident Fund (1962), The National Insurance Company (1967), The Nepal Insurance Corporation (1968), the Credit Guarantee Corporation (1974) and Securities Market Center (1977). The legislation of the Commercial Bank Act 1974 set out regulation for licensing, supervision and cancellation of license of commercial banks and encouraged the establishment of other commercial banks in Nepal.

"Liberal and market oriented economic policy adapted by Nepalese government since mid 1980s, allowed foreign banks and joint venture basis to

operate in the country on the approval of Nepal Rastra Bank. As a result, Nepal Arab Bank Ltd (NABIL Bank Ltd), Nepal Indosuez Bank (Nepal Investment Bank Ltd) and Nepal Grindlays Bank (Standard Chartered Bank Nepal Ltd)were established in 2041, 2042 and 2043 B.S. respectively." *(Dahal and Dahal; 2002:13)*

To regulate the commercial banks and accommodate them into the main stream of the national economy "Commercial Bank Act-2031" was enacted in 2031 B.S.

Table: 2.1

List of 'A' class financial Institutions as on October 2009

S.N	NAME OF THE BANKS	OPERATION DATE	HEAD OFFICE
1	Nepal Bank Limited	15.11.1937	Kathmandu
2	Rastriya Banijya Bank Limited	23.01.1966	Kathmandu
3	Nabil Bank Limited	16.07.1984	Kathmandu
4	Nepal Investment Bank Limited	27.02.1986	Kathmandu
5	Standard Chartered Bank Nepal Limited	30.01.1987	Kathmandu
6	Himalayan Bank Limited	18.01.1993	Kathmandu
7	Nepal Bangladesh Bank Limited	05.06.1993	Kathmandu
8	Nepal SBI Bank Limited	07.07.1993	Kathmandu
9	Everest Bank Limited	18.10.1994	Kathmandu
10	Bank of Kathmandu Limited	12.03.1995	Kathmandu
11	Nepal Credit & Commerce Bank Limited	14.10.1996	Siddharthanagar
12	Lumbini Bank Limited	17.07.1998	Narayangadh
13	NIC Asia Bank Limited	21.07.1998	Biratnagar
14	Machhapuchhre Bank Limited	03.10.2000	Pokhara
15	Kumari Bank Limited	03.04.2001	Kathmandu
16	Laxmi Bank Limited	03.04.2001	Birgunj
17	Siddhartha Bank Limited	24.12.2002	Kathmandu
18	Agriculture Development Bank limited	16.03.2006	Kathmandu
19	Global IME Bank Limited	02.01.2007	Birgunj

20	Citizens Bank International Limited	21.06.2007	Kathmandu
21	Prime Commercial Bank Limited	24.09.2007	Kathmandu
22	Sunrise Bank Limited	12.10.2007	Kathmandu
23	Bank of Asia Nepal Limited	12.10.2007	Kathmandu
24	Grand Bank Nepal Limited	23.01.2007	Kathmandu
25	NMB Bank Limited	26.11.1996	Kathmandu
26	KIST Bank Limited	07.05.2009	Kathmandu
27	Janata Bank Nepal Limited	05.04.2010	Kathmandu
28	Mega Bank Limited	23.07.2010	Kathmandu
29	CommerezandTrustBankNepalLimited	20.09.2010	Kathmandu
30	Civil bank limited	26.11.2010	Kathmandu
31	Century Commercial Bank Limited	10.03.2011	Kathmandu

(Source: Banking & Financial Statistics; 2011)

These commercial banks have given a new horizon to the financial sector of the country regarding healthy competition, foreign capital investment, technological transfer, experience, expertise and skills.

2.1.3 Status of Commercial Banks' Assets and Liabilities

"Along with increase in the number of financial institutions and their activities, the total assets/liabilities of the whole financial system witnessed continuous growth over the last six and half year. During the period of 2001 to 2007 the total assets/liabilities increased by on an average of 13.51 %. Propelled by the strong growth of the major component of total assets/liabilities, the overall assets/liabilities of financial system increased by higher rate of 16.49% in the first six months of 2007/08 over 4.79% in the same period of last year." (*Banking & Financial Statistics, Mid Jan 2008)*

"In the mid Jan 2008, the total assets/liabilities of financial system reached to Rs.678516.93 million from Rs. 582477.30 million in mid July 2007. It was recorded Rs. 273946.20 million at the end of Mid July 2001." *(Banking and Financial Statistics, Mid Jan 2008)*

"The ratio of total assets/liabilities of the financial system to GDP at nominal prices climbed by 2.55% point to 82.66% at mid-January 2008 from 80.11% in mid July 2007." *(Banking & Financial Statistics, Mid –January 2008)*

Banking sector, as being the largest financial sector, alone held more than 80% of the total assets/liabilities of the financial system. As of mid Jan 2008 commercial banks group occupied the 82.11% followed by finance companies 10.52%, development banks 4.72%, micro credit development bank 1.77% and others
0.88%. Likewise the respective shares were 84.23%, 3.89%, 9.18%, 1.77% and 0.93% in mid July 2007.

2.1.4 Profile of the organization

The organizations under research are:

i) Kumari Bank Limited (KBL)

ii) Siddhartha Bank Limited (SBL)

i) Kumari Bank Limited (KBL)

"Kumari Bank limited came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs 1078.272 million, of which 70% is contributed from promoters and remaining from public." *(www.kumaribank.com, 3rd July, 2013)*

"Kumari Bank Limited has been providing wide range of modern banking services through 16 points of representations located in various urban and semi urban parts of the country, 11 outside and 5 inside the valley. The bank is pioneer in providing some of the latest/lucrative banking services like e-banking and SMS Banking services in Nepal. The bank always focus on

building sound technology driven internal system to carter the changing needsof the customers that enhance high comfort and value. The adoption of modern Globus software, developed by Temenos NV, Switzerland and arrangement of centralized database system enables customers to make highly secured transactions in any branch regardless of having account with particular branch.

Similarly, the bank has been providing 365 days banking facilities, extended banking hours till 7 PM in the evening, utility bill payment services, inward & outward remittance services and various other banking services." *(www.kumaribank.com, 3rd July, 2013)*

VISA Electron Debit Card, which is accessible in entire VISA linked in ATM's (Including 18 own ATM's) and POS (Point of Sale) terminals both in Nepal and India, has also added convenient to customers.

The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organizational mission.

The key focus of the bank is always center on fulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive products and services in their doorsteps. The bank always prioritizes the priorities of the valued customers.

ii) Siddhartha Bank Limited (SBL)

"Siddhartha Bank Limited (SBL) commenced operations in 2002. The Bank is promoted by a group of highly reputed Nepalese dignitaries having wide commercial experience. SBL provides a full range of commercial banking services

through its thirteen branches established in Kathmandu, Birgunj, Biratnagar, Pokhara, Damak, Narayangarh, Patan & other parts of Nation along with an extension counter at B & B Hospital." *(www.siddharthabank.com, 3rd July, 2013)*

The environment of Nepalese banking sector is undergoing a rapid transformation. With liberalization in financial markets and integration of domestic market with external markets, bank operations have become more complex and dynamic. SBL is geared to meet the challenges and keep abreast with the changes.

"The Vision statement of the Bank describes the core values and purposes that guide the Bank as well as an envisioned future. Fundamentally, in all dealings

SBL earnestly believes in transparency, financial soundness, efficiency and better technology. " *(www.siddharthabank.com, 3rd July 2013)*

2.1.5 Concept of capital Structure

Before knowing the capital structure, we must know about the financial structure. Financial structure refers to the way the firm's assets are financed. Financial structure is represented by the liabilities side of the balance sheet. It includes short-term debt and long term debt as well as shareholders equity. Shareholders equity includes common stock, paid-in or capital surplus, different kinds of reserves and accumulated amount of retained earning.

Capital structure or the capitalization of the firm is the permanent financing. It includes long term debt, preferred stock and shareholders' equity. Thus a firm's

capital structure is only a part of its financial structure. The determination of the degree of liquidity of a firm is not a simple task. In the long run, liquidity may depend on the profitability of a firm, but whether it survives to achieve long run profitability depends to some extent on its capital structure. This term includes only long-term debt and total stockholders' investment. Some companies do not plan their capital structure, and it develops as a result of the financial decision taken by the financial manager without any formal planning.

These companies may prosper in the short run but ultimately they may face considerable difficulties in raising funds to finance their activities. With unplanned capital structure, these companies may also fail to economize the use of their funds. Theoretically, the financial manager should plan an *optimal* capital structure for his company. The optimal capital structure is obtained when the market value per share become maximum. In practice, the determination of an optimal capital structure is a formidable task, and one has to beyond the theory.

There are significant variations among industries and among individual companies within any industry in terms of capital structure. Since a number of factors influence the capital structure decision of a company, the judgment of the person making the capital structure decision plays a crucial part. These factors are highly psychological, complex and qualitative and do not always follow accepted theory, since capital markets are not perfect and the decision has to be taken under imperfect knowledge and risk.

Capital structure planning is a key to the objective of profit maximization ensures minimum cost of capital and the maximum rate of return to equity holders. The amount of capital a firm need is not its only financial consideration and equally important is the capital mix; the kind of capital that form the company's financial

base. How much will be the equity money representing funds owned by the stockholders in the enterprises? How much will be borrowed? How much will be raised by other means? A financial manager determines the mix of debt and equity securities, which would maximize the value of the equity stock. To maximize the shareholders' wealth as well to minimize the opportunity cost of capital optimal capital structure is required. Debt is an important part of capital structure and determines the leverage of the firm. It is two-edged sword. It increases shareholders return when the firm has high operating income, but makes them worse than they otherwise would be when the firm has low operating income.

Capital means money or fund in the dictionary. Without capital no one can do any thing. The capital has both features of risk as well as return. So optimal capital mix is required to obtain high return in tolerable amount of risk. And management of this optimal capital mix is called capital structure management. Capital rises from debenture, long-term debt, preference shares, equity raises, short-term debt including retained earning, reserve and surplus also. Every types of fund have risk. They require different rate of return. Common stock is riskier and it require higher rate of return. Preference shares are riskier than debt. So, its required rate of return will be higher than that of debt.

Therefore it is necessary that the firm should make a portfolio of such types of capitals, which results higher return with low cost of capitals. The firm should also able to generate at least sufficient cash flow to pay investors and creditors (i.e. shareholders, preference shareholders and debt holders). So the firm should yield more cash flow than to just satisfy the investor's expectation to maximize shareholders wealth. And the firm should try to obtain necessary funds in lowest cost as soon as possible.

The cost of capital will depend upon the proportion of capital (debt and equity) when capital structure is optimal it get optimal risk which makes entrepreneurs capable to hold the market in this competitive business environment for long period. On the basis of priority to achieve the money in the liquidation of the firm long-term debt get first priority, short term debt get second priority, preference share get third priority and equity share get last priority. The capital structure should be planned generally keeping in view the interest of the equity shareholders and the financial requirement of a company. However the interest of other groups, such as employees, customers, creditors, society and government, should also be given reasonable consideration. The management of a company may fix its capital structure near the top of this range in order to make maximum use of favorable leverage, subject to other requirements such as flexibility, solvency, control and norms set by the financial institutions, the Security Exchange Board of Nepal and stock exchanges.

“The firm's mix of different securities is known as capital structure. The choice of capital structure is fundamentally a marketing problem. The firm can issue dozen's of various securities in countless combination but it attempts to find the combination which maximizes its overall market value.” *(Bearly and Mytes; 1994: 397)*

“Different sources of financing are used to finance current and fixed assets. The sources of financing may be short-term and long-term, but they are usually grouped into debt and equity which characterized the firm's capital structure.” *(Pradhan; 1996:356)*

A distinction is usually made between financial and capital structure. Financial structure refers to all sources, both short and long term that are used to finance the entire assets of a firm, Where as capital structure is taken as the capitalization part of a firm's total financing which includes only the long term sources such as long term debt and equity. Thus, the capital structure is a part of the financial structure.

"The composition of capital structure could differ from company to company which is directly guided and controlled by management of the company. However a reasonable satisfactory capital structure can be determined considering relevant factors and analyzing the impact of alternative financing proposals on the earning per share." *(Chandra; 1985:176)*

"The capital structure is the combination of long-term debt and equity. It is a part of financial structure i.e. comprised to the total combination of preferred stock, common stock, long term debt and current Liabilities. If current Liabilities are removed from it we get capital structure." *(Mathur; 1979:92)*

One of the financial manager's principal goals is to maximize value of firm. For this purpose the firm should select a financial mix (Financial leverage), which will help in achieving the objective of financial management with a view to, maximize the value of share. In order to attain this business goal, firm should select an appropriate capital structure. Given the objective of the firm to maximize the value of equity share, the firm should select a financial mix which helps in achieving the objective of financial management. "If the capital structure decision affects the total value of the firm, a firm should select such a financial mix as will maximize the shareholders wealth. Such a capital

structure is referred to as the optimum capital structure." *(Khan and Jain; 1995: 473)*

"An optimum capital structure would be obtained at the combination of debt and equity that minimizes the weighted average cost of capital." *(Pandey; 1995:11)*

"Optimum capital structure can be defined as that mix of debt and equity this will maximize the market value of company. If such an optimum does exist it is two fold. It maximizes the value of company and hence the wealth of its owners; it minimizes the company's cost of capital which in turn increase its ability to find new wealth creation investment opportunities." *(Solman; 1969:92)*

"Capital structure is the permanent financing of the firm represented primarily by long term debt, preferred stock and common stock, capital surplus and accumulated retained earrings." *(Weston and Brigham; 2004:434)*

"Capital structure is defined as the composition of a firm's long term financial represented by its long-term debt, preferred stock and common stock. When current liabilities are included, the total generally is called financial structure." *(Henderson, Trennepehl and Wert; 1984:434)*

"Leverage and capital structure are closely related concepts linked to cost of capital and therefore capital budgeting decision. Leverage results from the use to fixed-cost assets of tend to magnify return to the firm's owners. Changes in leverage result 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 decreased return and risk. The amount of leverage in the firm's capital structure the mix of long term debt and equity maintained by the firm, can significantly affect its value by affective return and risk. Because of its effect on value, the financial manager must understand how to measure and evaluate leverage when attempting to create the best capital structure." *(Gitman; 1988:43)*

"Financial leverage generally raises expected EPS, but it also increases the risking of the firm's securities. Because the risk its stock and bonds increases as the debt/assets ratio rises, so do the interest rate in debt and the required rate of return on equity Thus, leverage produces two opposing effects: higher EPS which leads to a higher stock price, but increased risking which depresses stock price. There is, however, a debt/assets ratio that strikes an optimal balance between these opposing effects; this ratio is called optimal capital structure, and it is the one that maximizes the price of the firm' stock." *(Brigham; 1980:341)*

Thus the capital structure management means the appropriate mix of long-term capital and short-term capital, which gives the company sufficient profit. Optimal capital structure has certain risk and appropriate return. This is done by a good management. In this study, one gets certain question, which is "How much debt is appropriate varies company to company as well as firm to firm. In this reference, Prasanna Chandra has given the following suggestion in tanning the capital structure for establishing new company.

I. The debt-equity ratio does not exceed 2:1 for large capital-intensive projects a higher debt-equity ratio of 4:1 or even 6:1 may be allowed.

(Debt for this purpose is defined as long-term debt plus preference capital, which is redeemable after 12 years)

II. The ratio of preference capital to equity does not exceed 1:3

III. Promoters hold at least 25% of the equity capital.

The factors listed above given information's to the financial manager should adhere in proper maximizes the value and minimizes the overall cost of capital of the firms. There are four-dimensional lists when thinking about capital structure decision.

(I) Taxes: - If a company is a tax-paying entity, the increase in leverage reduces the income tax paid by the company and increases the tax paid by them investors. If the company has a large accumulated loss; an increase in leverage cannot reduce corporate tax, but does increase personal taxes.

(II) Bankruptcy cost: - With presence of bankruptcy cost, financial distress is costly other things equal, distress is more likely for the firms generally issue less debt.

(III) Assets type: - The cost of distress is likely to be greater for firms whose value depends on growth opportunity or intangible assets. These firms are likely to pursue more profitable opportunities and if default occurs, their assets may erode rapidly. Hence, firms whose assets are weighted forward intangible assets should borrow significantly less on average their holding assets they can kick.

(IV) Financial slack: - In the long run, a company's value rests more on its capital investment on operating decisions than on financing. Therefore, you

need to make sure that your firm has sufficient financial slacks, so that financing is quickly accessible when good investment opportunity arises. Financial slack is most valuable to firms that have able positive NPV growth opportunity. That is another reason why growth company usually sticks to conservation capital structure.

2.1.5.1 Assumptions of theories of capital structure.

In order to grasp, the capital structure and the value of the firm on the cost of capital controversy properly we make the following assumptions:-

I. Firms employ only two types of capital debt and equity.

II. The total assets of the firms are given. The degree of leverage can be changed by selling debt to repurchase shares or selling shares to retire debt.

III. Investors have the same subjective probability distributions of expected future operating earnings for a given firm.

IV. The firm has a policy of paying 100% dividends.

V. The operating earnings of the firm are not expected to grow.

VI. The business risk is assumed to be constant and independent of capital structure.

VII. The corporate and personal income taxes do not exist. This assumption is relaxed later on.

In the theoretical analysis of capital structure one shall use the following symbols.

B = Total market value of debt.

S = Total market value of stock.

V = Total market value of firm (B+S)

K_e = Equity capitalization rate.

K_d = cost of debt/yield on debt.

K_o = overall capitalization rate

I = Total amount of capital interest

EBIT or NOI = Earning before interest & taxes or net operating income.

(a) Cost of debt (K_d) = $\frac{Interest}{Debt} = \frac{I}{B}$

(b) Cost of equity (K_e) = $\frac{EBIT - I}{S}$ $\frac{NOI - I}{S}$

(c) Overall cost of capital (K_o) = $\frac{NOI}{V}$

$\therefore K_o = K_d(^B/_V) + K_e(^S/_V)$

(d) Value of the firm (V) = B+S

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

2.1.5.2 Theories of capital structure

The approaches / theories to explain the relationship between capital structure, cost of capital and value of the firm are: -

I. Net income approach

II. Net operating income approach

III. Traditional approach

IV. Modiglianni-Miller (m-m) approach

   a. Without taxes

   b. With taxes

I. **Net income (NI) approach: -** In this theory, the cost of debt and cost of equity are assumed to be independent to the capital structure. The weighted average cost of capital declines and the total value of the firm rise with increased use of leverage.

The crucial assumptions of this approach are as follows

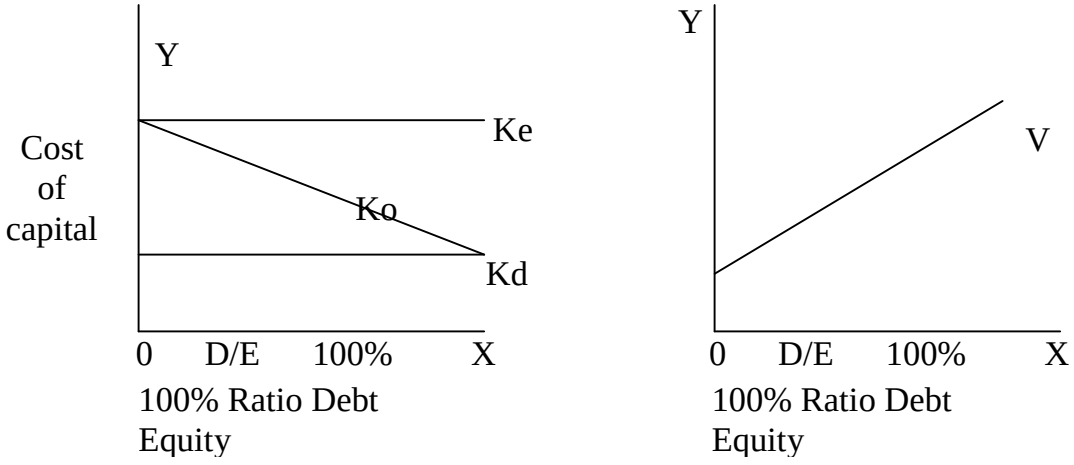
II. The use of debt does not change the risk perception of investors; as a result, the equity capitalization rate (K_e) and the debt capitalization rate (K_d) remain constant with change in leverage

III. The debt capitalization rate is less than the equity capitalization rate (i.e. $K_d<K_e$)

IV. The corporate income tax do not existFrom above assumption, we know about NI, if K_e and K_d are constant, increased use of debt, by increasing the shareholder's earning will result in higher value of the firm via higher value of equity. Consequently, the overall cost (Ko) will decrease.

Figure: 2.1

The effect of leverage on the cost of capital under NI approach



(Source: Van Horne; 2005:255)

In the above figure, Y-axis called cost of capital and X-axis called degree of leverage. Under approach, 'Ke' and 'Kd' are assumed as constant. As the proportion of debt is increase in the capital structure, being less costly it causes weighted average cost of capital to decrease approach the cost of debt. The optimum capital structure would occur at the pointing where the value of the form is maximum and overall cost of capital is minimum.

As the whole assumption of 'NI', Ke' and 'Kd' are constant and Kd is less than the 'Ke' Therefore, Ko decreases, when B/V increase. Also Ke=Kd and S=V

When B/V =0	Also
∴ Ko = EBIT/V or NOI/V	∴ Ko = Ke-(Ke-Kd) B/V

(II) Net operating income approach: - This theory was identified by David Durand. Under the net operation income (NOI) approach, the cost of equity is assumed to increase linearly with leverage. As a result, the weighted average cost of capital remains constant and the total value of the firm also remains constant as

leverage is changed critical assumptions of the net operating income (NOI) approach are: -

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

II. The market uses an overall capitalization rate, (K_o to capitalize the net operating income. K_o depends on the business risk and the business risk is assumed to remain unchanged. K_o is constant.

III. The use of less costly debt funds increase. Thus, the advantage of debt is offset exactly by the increase in the equity capitalization rate, K_e.

IV. The debt capitalization rate. K_d is a constant.

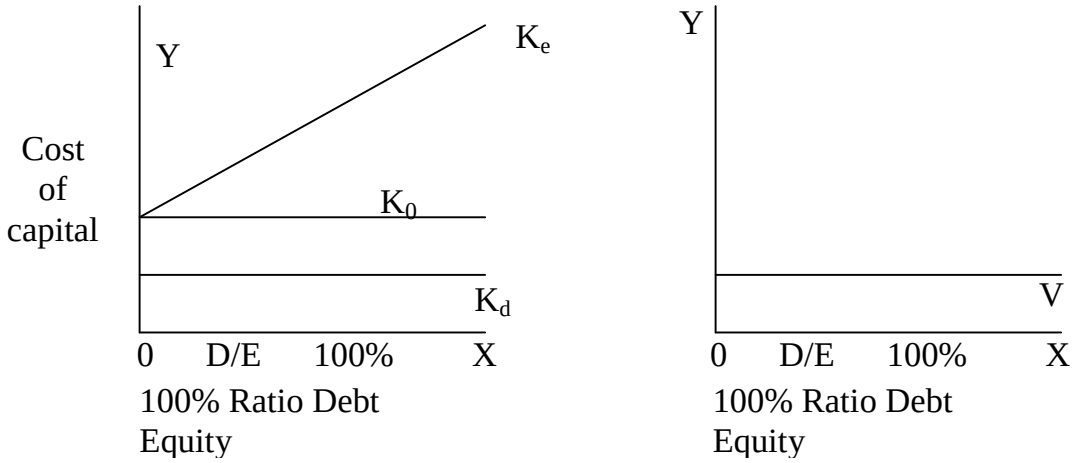
V. The corporate income taxes do not exist.

From above assumption we know that the leverage/capitalization structure decision of the firm is irrelevant. Any change in leverage will not lead to 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.

Figure: 2.2

The effect of Leverage on cost of capital



(Source: Van Horne; 2005:256)

In the above figure, it shows that K_0 and K_d are constant and K_e is continuously increased. As the firm increases it's degree of leverage the fixed charge increases, with the result that the financial risk also increases. As long as K_d remains constant, K_e is a constant linear function of the debt to equity ratio. K_0 cannot be altered through leverage. The NOI approach implies there is no one optimum capital structure.

The cost of equity capital is found as follow.

$$\therefore K_e = K_0 + (K_0 + K_d)B/S$$

$$\therefore K_e = \frac{NOI - I}{V - B}$$

(III) Traditional approach: - "In this theory, the value of the firm is determined by adding the market value of the firm's debt to the market value of its equity. Once market value has been determined the overall cost of capital or overall capitalization rate, can be found." *(Gitman; 1988:43)*

It is also known as an intermediate approach, it comprises between net income approach & operating income approach. From this view, we know that the value of firm can be judicious mix of debt and stock of the firm

"The cost of capital decline with leverage because debt capital is cheaper than equity capital within reasonable, or acceptable, limit of debt. The statement that debt funds are cheaper than equity fund carries the clear implication that the cost of debt, plus the increased cost of equity, together on a weighted basic, will be less than the cost of equity which existed on equity before debt financing." *(Alexander; 1963:11)*

At last we know that from traditional approach, overall cost of capital will decrease with the use of debt financing. From traditional approach, the manners in which the overall cost of capital reacts to changes in capital structure can be divided into three stages are given below.

Stage - 1

In this stage, the cost of equity Ke, remains constant of less slightly with debt. But when it increases, it does not increase fact enough to offset the advantage of low cost debt. Kd, remains constant or rises negligibly. Since the market views the use of debt as a reasonable policy. As a result, the value of the firm 'V' increases or the overall cost of capital, Ko=X/V

$\therefore$ Ko = Ke (S/V) + Kd (B/V), falls with increase Leverage.

Stage - 2

"In this stage, the firm has reached a certain degree of leverage increases in leverage have a negligible effect on the value, or the cost of capital of the firm. This is so because the increases in the cost of equity due to the added financial risk offset the advantage of low cost of debt. Within that range of at the specific pint, the value of the firm will be maximum or the overall cost of capital will be minimum." *(Pandey; 1995:633)*

Stage - 3

In this stage, the value of the firm decreases with leverage or the cost of the capital increases with leverage. This happens because investors perceive a high degree of financial risk and demand a higher equity capitalization rate, which offsets the advantage of low cost debt. From above stage we know,

I. Increase valuation and decreased overall cost of capital.

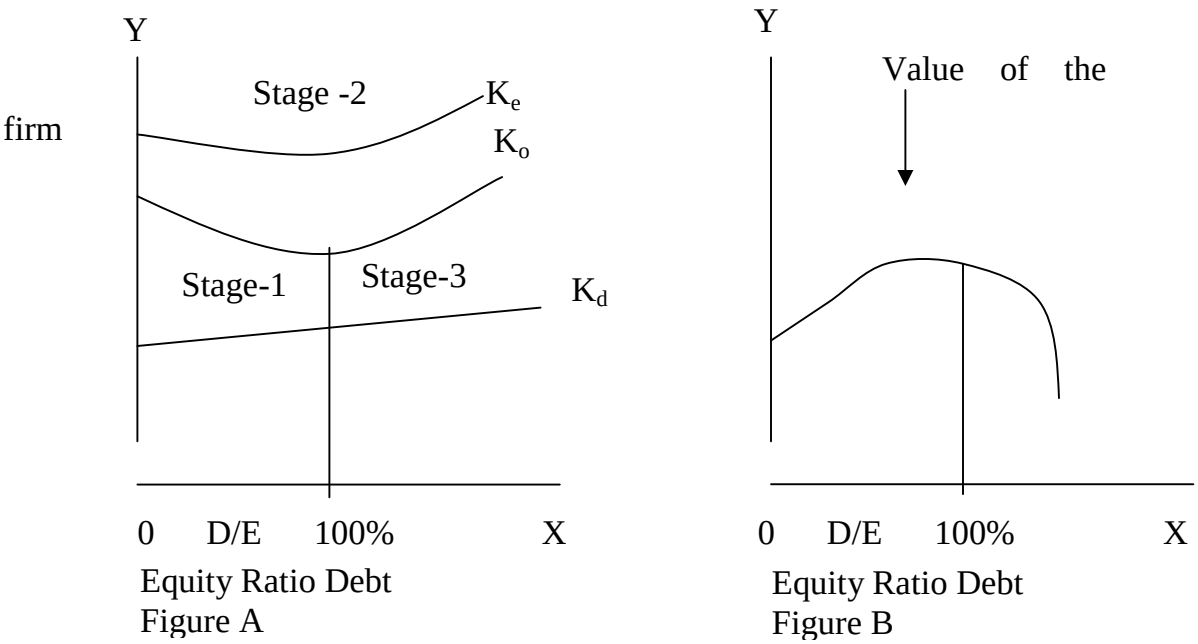
II. Optimum valuation and optimal overall cost of capital.

III. Declined valuation and increased overall cost of capital.

Thus, the overall effect of these three stages is to suggest that the cost of capital is a function of leverage. It declines with leverage and after reaching a minimum point or range starts raising. The relation between cost of capital and leverage is graphically shown as follows.

Figure: 2.3

Relationship between cost of Capital and Leverage



(Source: Van Horne; 2005:257)

In the above figure 'A' the cost of equity, Ke, increases with increase in leverage, but much more rapidly than the cost of debt. The cost of debt will remain fixed as leverage increases, until a point is reached where lenders feel that the firm is becoming financially risky. At this point, the cost of debt, K_d, will increase. The overall cost is optimal in 'O' line and then after K_o is increasing upward. In figure 'B' the firm value is optimal until the line of 'O' then it gives downward value.

(IV) Modigliani-Miller (M-M) theory: - Before 1958, all management believed that optimal capital structure made by judicious mix of debt and equity capital. Optimal capital structure decreases the overall cost of capital and increases the value of the firm. After 1958, MODIGLIANT AND MILLER (M-M) argue that in the absence of taxes a firm's market value and the cost of capital remain invariant to the capital structure changes. The M-M theory is based on following assumption.

Prefect capital markets: - This specifically means that (a) investors are free to buy or sell securities; (b) they can borrow without restriction at the same term as the firms do; and (c) they behave rationally. It is also implied that the transaction costs, the cost of buying and selling securities do not exist.

Homogeneous risk classes: - Firms can be grouped into homogeneous risk classes. Firms would be considered to belong to a homogeneous risk class if their expected earning has identical risk characteristics. It is generally implied under the M-M hypotheses that firms within same industry constitute the homogeneous class.

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

Full Payout: - Firm's distribute all net earnings to the shareholders, which mean a 100% payout.

No taxes: - In the M-M theory hypothesis assume that no corporate income taxes exist.Terminology and notation used in Modigliani Miller (M-M) theory are given below.

Terminology: -

I. Levered: - A firm that uses debt and equity in its capital structure is called levered firm.

II. Un-levered:- A firm that uses only equity in capital structure is called un-levered firm.

III. Risk Premium: - Risk premium is the expected additional return required by the equity holders for making a risky investment.

Notation: - K_{eu} = Equity capitalization rate of an un-levered firm.

K_{el} = Equity capitalization rate of a levered firm.

K_d = The debt capitalization rate.

K_{ou} = Overall capitalization rate of un-levered firm.

V_u = Value of an un-levered firm.

V_L = Value of a levered firm.

T = Corporate tax-rate.

BT = Present value of tax-shield benefits of debt/PV of interest tax-shield.

In this theory, it is not mentioned about tax in the calculation. As a clear about it proposition are given below.

Proposition (1)

In this proposition, the overall cost of capital (K_o) and the value of the firm (V) are independent of its capital structure. The 'K_o' and 'V' are constant for all degree of leverage. The total value is given by capitalizing the expected stream

of operating earnings at a discount rate appropriate for its risk class. This is their preposition-1 and can be expressed as follows.

$\therefore V = EBIT/K_o$ or NOI/K_o

For unlevered firm $K_o = K_e$

$\therefore V_o = NOI/Kou = NOI/K_{eu}$

And

For a levered firm

$\therefore V = NOI/K_{ou}$

From the above proposition, M-M theory conclude that the total market value of the firm is unaffected by financing mix, it follows that the cost of capital is independent of the capital structure.

This proposition states the implication of the earlier propositions for investment decision-making. It emphasizes the point that investment and financing decisions are independent because the average cost of capital is not affected by the financing decision.

Proposition -II

This proposition states that the K_e is equal to the capitalization rate of a pure equity stream plus a premium for financial risk equal to the difference between the pure equity capitalization rate (K_e) and (K_d) times the ratio of debt to equity. In other words, K_e increases in a manner to offset exactly the use of a less expensive source of funds represented by debt. The cost of equity capital for levered firm (K_{el}) is equal to the cost of equity of an unlevered firm (K_{eu}) plus a risk premium equal to the difference between K_{eu} and K_d multiplied by the debt equity ratio.

$\therefore K_{el} = K_{eu} + (K_{eu}-K_d)\ B/S$

Since, $K_{eu} = K_{ou}$. So,

$\therefore K_{el} = K_{ou} + (K_{ou}-K_d)\ B/S$

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

M-M Theory (With taxes):- In this theory, M-M's hypothesis that the value of the firm is independent of its debt policy is based on the critical assumption that the corporate income taxes do not exist. In reality, corporate income taxes exist, and interest paid to debt holders is treated as deductible expenses. Dividends paid to shareholders on the hand, are not tax deductibles.

"Thus, unlike dividends, the return to debt holders is not subject to the taxation at the corporate level. This makes debt financing advantageous. In their 1963 article, M-M shows that the value of the firm will increase with debt due to the deductibility of interest charges for tax computation, and the value of the levered firm will be higher than the unleveled firm." *(Pandey; 1995:633)*

Thus, the value of the levered firm is equal to the value of the un-levered firm plus the present value of the interest tax-shield as shown below.

$\therefore$ Value of a levered firm = Value of an un-levered firm + PV of interest tax-shied.

$$VL = V_u + DT$$

The value of an un-levered firm when corporate taxes exist is

$$\therefore V_u = \frac{NOI\ (1 - T)}{K_{ou}} = \frac{NI}{K_{eu}}$$

Where, NI = net income after tax. Also, when a firm is un-levered,

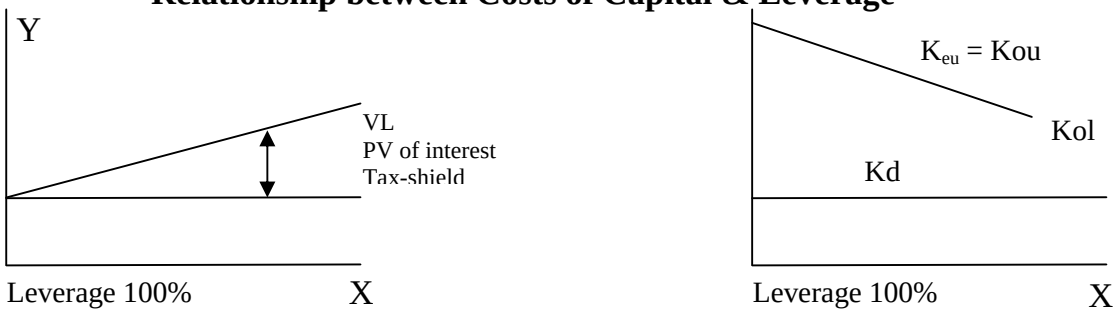
$K_{ou} = K_{eu}$, thus

$$\therefore VL = \frac{NI}{K_{eu}} + DT$$

From above equation implies that when the corporate tax rate, T, is positive (T>0), the value of the levered firm will increase continuously with debt. Thus, theoretically the value of the firm will be maximized when it employs 100 percent debt. As a broad, the figures are presented below.

Figure: 2.4

Relationship between Costs of Capital & Leverage



(Source: Van Horne; 2005:269)

The above figure shows that because of the tax deductibility of interest charges, a firm can increase it value or lower its cost of capital continuously with leverage. Thus the optimum capital structure is reached when the firm employs 100% debt.

In practice, firms neither employ large amount of debt, nor lenders ready to lend beyond certain limits.

“Why do companies not employ extreme level of debt in practice? There could be two possibilities: First, we need to consider the impact of both corporate and personal taxes for corporate borrowing-personal income tax may offset the advantage of the interest tax-shield. Second, borrowing may involve extra costs (in addition to contractual interest cost) of financial distress which may also offset the advantage of the interest shield.” *(Pandey; 1995:633)*

Determinants of capital structure decision

Capital structure refers to the mix of long-term sources of fund, which maximizes value of the firm/equity holders. Concepts/definitions of capital structure give the main theme of optimal capital structure.

“Theoretically, the financial manager should plan an optimum capital structure for his company. The optimum capital structure is obtained when the market value per share is maximum. The values will be maximized when the marginal cost of each source of funds is the same. In practice, the determination of an optimum capital structure is a formidable task and one has to go beyond the theory. There are significant variations among industries and among individual companies within an industry in term of capital structure. Since a number of factors influence the capital structure decision of a company, the judgment ofthe person making the capital structure decision plays a crucial part. Generally, the factors listed below and briefly discussed, all have an important bearing on the firm's capital structure decision.” *(Weston and Brigham; 2004:619)*

(1) Asset structure: - The firm, whose assets are suitable as security for loans tend to use debt heavily, Thus real estate companies are tends to be highly levered. While manufactures with heavy investment in specialized machinery and work in progress employ less debt.

(2) Operating Leverage: - Other thing the same, a firm with less operating leverage is better able to employ financial leverage because, the Interaction of operating and financial leverage determines the overall impact of a decline in sales on operating income and net cash-flows.

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

(4) Profitability: - One often observes that firm's with very high rate of return on investment use relatively little debt. Although there is on theoretical justification for this fact, the practical reason seems to be that very profitable firm's such as IBM and KODAK simply do not need to do much debt financing. Their high rates of return enable them to do most of their financing with retained earnings.

(5) Growth Rate: - Other things remain the same, faster growing firm must rely more heavily on external capital. Further, the flotation costs involved in selling common stock exceed those incurred in selling debt. Thus, to minimize financing costs, rapidly growing firms tend to use somewhat more debt than do slower-growth companies.

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

(7) Controls :- A management concerned about control may prefer to issue debt rather that (voting) common stock to raise funds of course, if marks condition are favorable, a firm can sell non-voting equity shares or make a pre-empty offering, allowing each share holders to maintain proportionate ownership. Generally, only in closely held firms or firms threatened by takeover control become a major concern in the capital structure decision process.

(8) Market Condition: - Conditions in the stock and bond markets undergo both long and short-run changes, which can have an important bearing on a firm's optimal capital structure. For example, during the credit crunch in the winter of 1982, there was simply no market at any "reasonable" interest rate for new long-term bonds. Low rated companies that needed capital were forced to go to the stock market or to the short term debt market. Action such as this do not represent permanent changes in target capital structure but are of temporary departures from targets, the important point, however, is that stock and bond market conditions do influence the type of securities used for a give financing.

(9) Lenders and Rating Agency Attitude: - Regardless of manager's own analysis of the proper leverage factors for their firms there is no question that the lender's and rating agencies attitudes are frequently important determinants of financial structure. In the majority of cases, the corporation discusses its financial structure with lenders and rating agencies and gives much weight of their advice. But when management is so confident of the future that it seeks so

use leverage beyond the norms for its industry, lenders may be unwilling to accept such debt increases or may do so only at a high price.

(10) Management Attitude: - In the absence of proof that one capital structure will lead to higher stock prices than another, management can exercise its own judgment about a proper choice. Some management tends to be more conservative than other and thus use lesser amount of debt than the average firm in their industry, while for other management the reverse is true.

(11) The Firm's Internal Condition: - A firm's own internal condition can also have a bearing on its target capital structure. For example, suppose a firm has just successfully completed a Research & Development program and it projects higher earning in the immediate future. However, the new earning is not yet anticipated by investors and hence is not reflected in the price of the stock. This company would not want to issue stock, it would prefer to finance with debt until the higher earning materialize and are reflected in the stock price at which time it might want to sell an issue of common stock, retire the debt and return to its target capital structure.

(12) Cash Flow: - The key concern of the firm, when considering a new capital structure, must center on its ability to generate the necessary cash flows to meet obligation. Cash forecast reflecting ability to service debt (and preferred stock) must support any capital structure shift.

(13) Contractual Obligation: - A firm may be contractually constrained with respect to the type or form of funds it subsequently raises. For example a contract describing condition of an earlier bond issue might prohibit the firm

from selling additional debt except where the claims of holders of such debt are made subordinate to the existing debt. Contractual constraints on the sale of additional stock as well as the ability to distribute dividends on stock might also exist.

(14) Timing - Timing decisions will have to be necessary based on expected development in a hard-to-predict market. If the price of the company's equity stock is currently depressed but is expected to rise in the wake of better performance and / or bullish development in the market, it may be advantageous to resort to debt finance now and equity finance later. On the other hand, if the price of company's equity stock is balanced, it may be desirable to resort to equity finance now and debt finance later.

This above consideration is must important for developing aim of financing about debt and stock. “The management of company may fix its capital structure near top of those ranges in order to make maximum use of favorable leverage for further detail, subject to other requirement as given below.” *(Pandey; 1995:649)*

Profitability: - The capital structure of the company should be the most advantageous. Within the constraints, maximum use of leverage at a minimum cost should be made.

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

Flexibility: - The capital structure should not be inflexible to meet the changing condition. It should be possible for a company to adopt its capital structure with a minimum cost and delay if warranted by a changed situation. It should also be possible for the company to provide funds whenever needed to finance its profitable activities.

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

Control: - The capital structure should involve minimum risk of loss of control of the company. The owners of closely held companies are particularly concerned about dilution of control.

The above considerations are the general features of an appropriate capital structure. The particular characteristics of a company may reflect some additional specific features. The company will have to plan its capital structure initially at the time of its promotion. Subsequently, whenever funds have to be raised to financial investment, a capital structure decision is involved.

2.1.5.3 Important tools of capital structure

Decision: - In the management, basic tools are necessary for getting appropriate decision. Financial manager should determine the capital structure that best to the company. It is appropriate, when the company will have optimal capital structure.

When the cost of capital tends to increase due to more debt, the use of more debt makes the capital structure Volatile.

There are two approaches given below, which give the manager basic for taking decision.

I. EBIT-EPS Analysis.

II. Cash flow Analysis.

EBIT-EPS Analysis: - In our search for an appropriate capital structure, we need to understand how sensitive is earnings per share (EPS) to changes in earnings before interest and tax (EBIT) under different financial alternatives. Finance manager always wants to know about, what is the effect of leverage on risk?" A precise answer to this question is not possible with the help of EBIT-EPS analysis.

The finance manager may do two things: (a) Compare the expected value of EBIT with its indifference value, and (b) assess the probability of EBIT falling below its indifference value. If the most likely value of EBIT exceeds the indifference value of EBIT, the debt financing option, may be advantageous. The larger the differences between expected value of EBIT and its indifference value, the stronger the case for debt financing, other things being equal.

“Given the variability of EBIT, arising out of the business risk of the company, the probability of EBIT falling below the indifference level of EBIT may be assessed. If such probability is negligible, the debt financing option is advantageous. On the other hand, if such probability is high, the debt financing alternative is risky.” *(Chandra; 1985:577)*

The EBIT-EPS analysis is an important tool in the hands of financial manager to get an insight into the firm's capital structure management. He/She can consider the possible fluctuations in EBIT and examine their impact on EPS under different financial plan. If the probability of earning a rate of return on the firm's assets less than the cost of debt is insignificant, a large amount of debt can be used by the firm in its capital structure to increases the earnings per share. This may have a favorable effect on the market value per share. On the other hand, if the probability of earning a rate of return of the firm's assets less than the cost of debt is very high, the firm should stop in employing debt capital. It may, thus be concluded that the greater the level of EBIT and lower the probability of downward fluctuation, the more beneficial it is to employ debt in the capital structure. However, it should be realized that the EBIT-EPS is a first step in deciding about a firm's capital structure.

Cash Flow Analysis: - Cash flow analysis is most important part of the company. Cash flow analysis gives us information about liquidity position of the company. A Company with sound liquidity position will be able to pay fixed charges on basis of its cash generation. Fixed charges include.

I Principal and interest payments on debt

II. Lease payment.

III. Preferred stock dividends and etc

If firm unable to pay its fixed charges, it suffer form difficulty as market domination. It is bad for reputed company. The firm, therefore, must estate and analyze expected future cash flows, before committing itself of fixed charges.

A company must note the following two generalizations.

I. The greater the expected future cash flows, the greater the debt capacity of the firm.

II. The more stable the expected future cash flows, the greater the debt capacity of the firm.

2.2 Review of NRB Directives

Qualifying capital consist of Tier 1 (Core) Capital and Tier 2(Supplementary) capital elements, net of required deductions from capital. Thus, for the purpose of calculation of regulatory capital banks are required to classify their capital in two parts as follows:

i. Core Capital (Tier 1)

"The key elements of the capital on which the main emphasize should be placed is the Tier 1 (core) capital, which comprised of equity capital and disclosed reserves. This key element of capital is the basis on which most market judgments of capital adequacy are made; and it has a crucial bearing on profit margins and a banks ability to compete." *(NRB; Capital Adequacy Framework, 2007:5)*

"The BCBS has therefore concluded that capital, for supervisory purposes, should be defined in two tiers in a way, which will have the effect of requiring at least 50% of a banks capital base to consist of a core element comprised of equity capital and published reserves from post-tax retained earnings." *(NRB; Capital Adequacy Framework, 2007:5)*

"In order to rank as Tier 1, capital must be fully paid up, have no fixed servicing or dividend costs attached to it and be freely available to absorb

losses ahead of general creditors. Capital also needs to have a very high degree of permanence if it is to be treated as Tier 1." *(NRB; Capital Adequacy Framework, 2007:5)*

ii. Supplementary Capital (Tier 2)

"The supplementary (Tier 2) capital includes reserves which though unpublished, have been passed through the profit and loss account and all other capital instruments eligible and acceptable for capital purposes. Elements of the Tier 2 capital will be reckoned as capital funds up to a maximum of 100 percent of Tier 1 capital arrived at, after making adjustments referred to in 2.4. Incase, where the Tier 1 capital of a bank is negative, the Tier 2 capital for regulatory purposes shall be considered as zero and hence the capital fund, in such cases, shall be equal to the core capital." *(NRB; Capital Adequacy Framework, 2007:5)*

i. Elements of Tier 1 capital:

a. Paid up Equity capital
b. Irredeemable non-cumulative preference shares which are fully paid-up and with the capacity to absorb unexpected losses. These instruments should not contain any clauses whatsoever, which permit redemption by the holder of issuer upon fulfillment of certain condition. Banks should obtain prior approval of NRB for this kind of instruments to qualify as a component of core capital.
c. Share premium
d. Proposed Bonus Equity Share
e. Statutory General Reserve
f. Retained Earnings available for distribution to shareholders.

g. Un-audited current year cumulative profit, after all provisions including staff bonus and taxes. Where such provisions are not made, this amount shall not qualify as Tier 1 capital.
h. Capital Redemption Reserves created in lieu of redeemable instruments.
i. Dividend Equalization Reserves.
j. Any other type of reserves notified by NRB from time to time for inclusion in Tier 1 capital.

Elements of Tier 2 Capital

a. Cumulative and/or redeemable preference shares with maturity of five years and above.
b. Subordinated term debt fully paid up with a maturity of more that 5 years; unsecured and subordinated to the claim of other creditors, free of restrictive clauses and not redeemable before maturity. Since, subordinated term debt is not normally available to participate in the losses; the amount

c. eligible for inclusion in the capital adequacy calculations is limited to 50% of core capital. Moreover, to reflect the diminishing value of these instruments as a continuing source of strength, a cumulative discount (amortization) factor of 20% per annum shall be applied for capital adequacy computations, during the last 5 years to maturity. The banks should obtain written approval of NRB for including any subordinated debt instruments (like Debenture/Bonds) in supplementary (Tier 2) capital.

d. Hybrid capital instruments. Those instruments which combine certain characteristics of debt and certain characteristics of equity. Each such

instrument has a particular feature, which can be considered to affect its equity as capital. Where these instruments have close similarities to equity, in particular when they are able to support losses on an ongoing basis without triggering liquidation, they may be included in Tier 2 capital with approval from Nepal Rastra Bank.

e. General loan loss provision limited to a maximum of 1.25% of total risk weighted exposures. General loan loss provision refers to the provisions created in respect of Pass Loans only and it does not include provisions of rescheduled/restructured and classified loans. The additional loan loss provisions created in respect of Personal Guarantee loans and loans in excess of Single Obligor Limits are specific provisions and hence cannot be included under this category. Such provisions however can be deducted from the gross exposures while calculating risk weighted exposures for credit risk.However, provisions created in excess of the regulatory requirements or provisions which is not attributable to identifiable losses in any specific loans shall be allowed to be included in the General Loan Loss Provision and shall be eligible for Tier II capital subject to a maximum of 1.25% of total risk weighted exposures.

f. Exchange equalization reserves created by banks as a cushion for unexpected losses arising out of adverse movements in foreign currencies.

g. Investment adjustment reserves created as a cushion for adverse price movements in banks investments falling under “Available for Sale” category.

h. Revaluation reserves often serve as a cushion against unexpected losses but may not be fully available to absorb unexpected losses due to the subsequent deterioration in market values and tax consequences of revaluation. Therefore. Revaluation reserves will be eligible up to 50%

i. for treatment as Tier 2 capital and limited to a maximum of 2% of total Tier 2 capital subject to the condition that the reasonableness of these revalued amounts is duly certified by the internal auditor of the bank.

j. Any other type of reserves notified by NRB from time to time for inclusion in Tier 2 capital.

Deductions from Core (Tier 1) Capital:

Banks shall be required to deduct the following from the Tier 1 capital for capital adequacy purposes. The claims that have been deducted from core capital shall be exempt from risk weights for the measurement of credit risk.

a. Book value of goodwill.
b. Miscellaneous expenditure to the extent not written off. E.g. VRS expense, preliminary expense, share issue expense, deferred revenue expenditure, etc. However, software expenditure of software development expenditure, research and development expenditure, patents, copyrights, trademarks and
c. leasehold developments booked as deferred revenue expenditure are subject to 100% risk weight and may not be deducted from Tier 1 capital.
d. Investment in equity of financial institutions licensed by Nepal Rastra Bank.
e. All investments in equity of institutions with financial interest.

f. Investments in equity of institutions in excess of the prescribed limits.
g. Investments arising out of underwriting commitments that have not been disposed within a year from the date of commitment.
h. Reciprocal crossholdings of bank capital artificially designed to inflate the capital position of the bank.
i. Any other items as stipulated by Nepal Rastra Bank, from time to time.

Capital Funds:

"The capital fund is the summation of Tier 1 and Tier 2 capital. The sum total of the different components of the Tier 2 capitals will be limited to the sum total of the various components of the Tier 1 capital net of deductions as specified in 2.4. In case the Tier 1 capital is negative, Tier 2 capital shall be considered to be "Nil" for regulatory capital adequacy purposes and hence, in such situation, the capital fund shall be equal to the Tier 1 capital." *(NRB; Capital Adequacy Framework, 2007:8)*

Minimum Capital Requirements:

Unless a higher minimum ratio has been set by Nepal Rastra Bank for an individual bank through a review process, every bank shall maintain at all times, the capital requirement set out below:

a. A Tier 1 (core) capital of not less than 6 percent of total risk weighted exposure.
b. A total capital fund of not less than 10 percent of its total risk weighted exposure.

"The Capital Adequacy Ratio (CAR) is calculated by dividing eligible regulatory
capital by total risk weighted exposure. The total risk weighted exposure shall comprise of risk weights calculated in respect of banks credit, operational and market risks." *(NRB; Capital Adequacy Framework, 2007:8)*

2.3 Review of Thesis

During the study, several thesis works has been carried out by the pervious students. Among them some research are found to be relevant for this study. They are presented as follows:

Dhakal, (2007), in his thesis, *"A Comparative Analysis of Capital Structure Management between Nepal Bangladesh Bank Limited and Himalayan Bank Limited"*, has the following objectives:

- To find out comparative position in capital structure between two banks.
- To analysis the various source of capital and determine their cost.
- To analyze the return on capital in relation to capital employed.
- To suggest the appropriate capital structure and profitability trend.
- To study capital adequacy ratio to measure strength of the capital base.

His thesis analyzes and studies the secondary data and major findings of this study are:

- The proportion of shareholders' equity is found much lower in both the banks. On the basis of average of entire study period it is found that the proposition of shareholders equity of NBBL is higher than that of HBL. But the fluctuation of the proposition of shareholder' equity is more in HBL as compare to NBBL.
- Higher total debt to total assets ratio of both banks shows that both banks are using maximum leverage, which might be dangerous to these banks.
- Higher overall capitalization rate of HBL in every year shows that HBL is more capable to utilize the value of the firm compare to NBBL.

Shrestha, (2007), has conducted a thesis on the topic of *"Capital Adequacy of Banks in Nepalese Context"*. His main objective is to study the capital adequacy of the banks. He has suggested that banks should deal in highly risky transaction to maintain strong capital base. However, the capital base should neither be too much leading to inefficient allocation of scarce resources nor too weak as to expose to extreme risk. The study accepts that the operations of banks and the degree of risk associated with are subject to change country-wise, bank-wise and period-wise. Henceforth, the study suggests preparing standard capital adequacy ratio for each individual bank keeping in mind the various relevant features.

Pradhan, (2007), in her thesis, *"A Comparative Analysis of Capital Structure Management between Nepal Bangladesh Bank Limited and Himalayan Bank Limited"*, has the following objectives:

- To find out comparative position in capital structure between two banks.
- To analysis the source of capital and determine their cost of capital of NBBL and HBL.
- To measure the structure, risk and efficiency of the bank.
- To suggest measure to attain appropriate capital structure.

The research was conducted mainly on the basis of secondary data. The research findings of the study summarized as follows:

- All Joint Venture banks have used high percentage of total debt in raising the assets. The higher ratio constituted that the outsider's claim in total assets of the bank is higher than owner's claim.
- The interest coverage ratio shows that all banks are able in paying interest. In comparison Himalayan Bank Ltd is operating efficiently in terms of interest coverage ratio.
- The private sector banks have been successful in increasing their deposits and credit portfolio is remarkable over the last few years. The

- figures also show that most of the banks have been cautious about loans and advances. The operating profit to Joint Venture bank has gone up, so have the provision for loan loss. In short, the banking sector in Nepal is somehow
- doing well even though it has to face a number of challenges during the past few years.

Shrestha, (2008), in her thesis, *"Analysis of the Capital Structure of the Joint Venture Banks of Nepal"*, has the following objectives:

- To analysis the relationship of the capital structure and the cost of capital of the selected Joint Venture banks.
- To analyze the comparative capital structure of selected JVBs in terms of the financial and statistical tools.
- To analyze the profitability position of the banks.
- To provide suggestion and recommendations on the basis of analysis to impose the financial weakness of JVBs.

Her thesis analyzes and studies mainly secondary data. The research finding of this thesis summarized as follows:

- All JVBs has used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsider's claim in total assets of the banks is higher than owner's claim. The financial risk of the SBI bank average degree of financial leverage constitutes 5.04 times which indicates the higher degree of financial risk.

- The NI approach implies that proportion of higher leverage consequently increase the value of the firm. This approach is well acquainted with this study as the value of the banks has increased in accordance to the increasing portion of leverage. The K0 of five banks

is positive even though the rate of return is in decreasing trend except Nabil Bank.

- The private sector banks have been successful in increasing their deposit and credit portfolio remarkably over the study period. The figures also show that most of these banks have been cautious about loans and advances. The operating profits of all the private sector commercial banks have gone up, so has the provision for loan loss. In short, the banking sector in Nepal is somehow doing well even though it has to face a number of hurdles during the past few years.

Malik, (2009), in his thesis, *"Capital Structure Management in Nepal"*, has following objectives:

- To show the trend of composition of assets and capital structure
- To analyze the return on equity and assets
- To analyze the value of the firm
- To analyze the aggregate liability bearing capacity of the selected organization
- To analyze the relationship between liability and assets of the organization
- To analyze the profitability of the selected organization

His thesis analyzes and studies the secondary data, major findings of this study are:

- Being big financial houses NTC and NEA dominates other organization in volume related issues so the gearing of other organizations is not seen in the figure. Other than these houses don't have debt transaction during the Sampled period too
- Comparatively, total loan liabilities to shareholders fund ratio of NIBL is highest, ratio of NABIL is in second position, NEA is in third position, HGICL is in forth position and NTC is in fifth position.

- Comparatively, total debt to total assets ratio of NIBL is highest, ratio of NABIL is higher, NEA is in third position HGICL is in forth position and NTC is in fifth position.
- Interest bearing capacity of NTC is higher than other organization and HGICL is in moderate capacity to bear the load of interest expenses and
- other organization are seem very weak in the concern of interest expenses bearing.
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Chapter-III
RESEARCH METHODOLOGY

3.1 Introduction

"Research Methodology refers to the four various sequential steps to be adopted by a researcher in studying a problem with certain objective in view." *(Kothari; 1984:19)*

"Research methodology basically describes the methods, processes, tools and techniques applied in the entire process of a scientific research. Research is the process of systematic and in-depth study or search for any particular topic, subject or area of investigation backed by collection, presentation and interpretation or relevant details or data." *(Michael; 1985:26)*

To achieve the basic objective of the study, the following methodology has been adopted which includes research design, population and sample, data gathering procedure, data processing procedure techniques of analysis and so on.

In this chapter, the topics, "Capital structure management" of two banks has been analyzed. It gives to know about the capital structure management of these two banks. The major objectives of this study include measuring the relationship between debt and equity capital to analyze the comparative trend of various variables, to analysis the financial decision through correlation analysis. So this chapter is divided into different subheadings like: research design, population and sample, source of data, data collection techniques, data analysis tools, limitations of the methodology and review of related studies.

3.2 Research Design

"Research design is important for scientific Investigation. Research design gives students/investigator direction to research systematically; a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure." *(Sellitz and Others; 1962: 50)*

Since this study seeks to analyze the capital structure management in terms of risks and returns of Kumari Bank Ltd. and Siddhartha Bank Ltd. to establish the nature of relationship between the returns of the selected banks and the market return as well as between the selected banks themselves, the research design of the study is analytical and correlation type. Since this study is based on the process of collecting, verifying and synthesizing past evidences systematically and objectively to reach a conclusion, this is also a historical research. Moreover, as the study is concentrated on the comparative study of the capital structure management of the two selected banks, it can be also considered as a case study research as well as a comparative research.

The study first of all analyses the risk and return of KBL and SBL on the basis of income from investing activities. For this purpose the study determines the average, standard deviation and coefficient of variation of the return of KBL and SBL. The study also analyses the risks of the respective banks in terms of coefficient of variance and correlation coefficient. Besides, the study also focuses on analyzing the different variables related to the capital structure management of both banks.

Secondly, the study analyses the risks and return of KBL and SBL on the basis of net return. Thirdly, the study concentrates on the hypothesis testing to test the

significance of observed correlation coefficient and the significance of computed average returns.

3.3 Populations and Sample

Population is the universe about which the study has aimed to enquire and the sample is the representative of the population. Since the study is concerned with the capital structure management of the selected two commercial banks, the population for the study has, therefore been all the twenty five commercial banks which are currently in operation in our country.

The census of the population is neither feasible nor desirable for the study of this nature, a sample from the population has, therefore been selected for the purpose of study. For the selection of the sample from the population, judgmental sampling method has been followed. As the study comparatively analyses the capital structure performances of the two comparable commercial banks has been selected from 31 commercial banks as population which are

1. **Kumari Bank Ltd.**
2. **Siddhartha Bank Ltd.**

In addition, financial data of each of the sampled commercial banks are taken for the period of five years, during FY 2007/08 to FY 2011/12.

3.4 Natures and Type of Data

Since the study is basically analytical and historical on nature, most of the data are based on the past performance of the sampled commercial banks. For the purpose of the study, all the data used are second-hand published data of the respective banks under study. Such data have been derived from the financial statements of the companies concerned.

3.4.1 Sources of data

All the data used in this study are obtained from the secondary sources. The main sources of the data are the financial statements of the selected commercial banks under study and of other banks also. The required financial statements has been obtained from the website of *Nepal Stock Exchange Limited* www.nepalstock.com, www.nepalstockmarket.com.np, www.kumaribank.com,

www.siddharthabank.com, *Annual Reports* of the selected commercial banks and *Banking and Financial Statistics* published by NRB. Moreover, some of the data required for this study has also been obtained from the *Economic Survey 2007*, a publication of Nepal Government, ministry of finance and *Economic Review*, a NRB publication.

3.4.2 Data Gathering Procedure

After identification of the sources of data, the required data for the study have been gathered through the following procedures:

- To obtain the data from Nepal Stock Exchange Limited, first of all, the financial statements of all the listed commercial banks were-down loaded on the PC. Secondly, all the downloaded financial statements were transcribed into computer printouts and the data required for the study were taken there from.

- To get the separate annual reports of the selected commercial banks, the authorized staffs of the respective banks were approached and required data were used selectively for the study & respective website of the banks were accessed for the same.

- To have the data from NRB publications (Economic Review and Banking and financial Statistics), website of NRB (www.nrb.org.np) was accessed.
- The required data of the government publications were also gathered from the website of Ministry of Finance, Nepal.
- Other books and journals had also been consulted.

3.4.3 Data Processing Procedure

Data thus gathered through different procedures have been further processed according the requirements of the study. First of all the collected data were

thoroughly studied to identify the required data for the study for the analytical purpose. Secondly, all the required data were extracted from those sources as per need of the study. Then after these data have been applied for the analysis of the risk and return of KBL and SBL on the basis of income from investing activities.

For this purpose the data have been used to determine the average return, standard deviation and coefficient of variation of KBL and SBL. The data have been also processed for the analyses the risks of the respective banks in terms of coefficient of variance and correlation coefficient. Besides, they have been used for capital structure performance measure of the selected banks. The data have also been applied for the analysis of the risks and return of KBL and SBL on the basis of net return. The data have also been used for the purpose of hypothesis testing (i.e. testing the significance of the observed correlation coefficients and significance of the computed mean values). Further more the collected data have been processed for the comparative analysis of the selected banks on the basis of capital adequacy risks, liquidity risks and credit risks.

3.5 Techniques of Analysis

Although the separate sections of the techniques of analysis have not been presented in the study, the descriptive, correlation and inferential techniques of analysis have been applied through out the study. For the purpose of descriptive

analysis, risk and return of the banks under study have been analyzed on the basis of interest income and net income of the respective banks. During this course of analysis, return of the selected commercial banks along with their averages, standard deviation and coefficient of variation have been computed and arranged in the tabular form for their descriptive analysis to observe the variability of the return over the period of the study. The risks of the selected banks have also been analyzed descriptively with respect to covariance with correlation coefficient. Descriptive analysis has also been used to analyze the risk return tradeoff to the

selected banks on the basis of net return on total investments and the capital adequacy risks, liquidity risks and credit risks of the banks under study.

The technique of correlation analysis has also been applied for the study while calculating correlation coefficient of the returns of the selected banks.

For inferential analysis, null and alternative hypothesis have been formulated and tested with the help of Student's t-test. By applying the inferential technique of analysis, the significance of the observed correlation coefficients and the significance of the computed mean returns have been analyzed. If the calculated t-values are less than the tabulated values at 5% level of significance for the given degree of freedom, the null hypothesis is accepted and alternative hypothesis is rejected and vice versa.

3.6 Tools of Analysis

For the analysis of the data and to reach to a conclusion, different tools of analysis have been applied for the study. Mainly, the accounting tools, statistical tools and financial tools have been used as mentioned below:

3.6.1 Accounting Tools

Different ratios have been used to measure the performance of the sampled banks:

Ratio Analysis

Ratio is the numerical relationship between two variables. It is generally expressed in percentage. It is obtained by dividing one variable to another variable and multiplied by 100.

3.6.2 Statistical tools

The statistical tools applied in this study are Expected rate of return, Standard Deviation, Coefficient of Variation, Karl Pearson's Coefficient of Correlation and Student's t-test. As this research is related to financial subject matter so statistical tools and formula are expressed in financial terms except correlation coefficient,

coefficient of (multiple) determination (r^2) and Student's t-test. Due to the most use of average and standard deviation in financial sector also the researcher has used the financial notation for these statistical tools.

3.6.2.1 Expected rate of return or average rate of return

Expected rate of return or average rate of return is the most popular and widely used measure of representing the entire data. Expected rate of return has been used to compute the average rate of return of the variable of the selected two commercial banks. It is the sums of multiply of the variables with their respective probability distribution.

Symbolically,

$$\text{Expected rate of return } E(X) = \sum_{i=1}^{N} X(P_i)$$

Where,

E (X) = Expected rate of return

X = Variables

P_i = Probability distribution of i^{th} variables for each study period

3.6.2.2 Standard Deviation

The standard deviation measures the absolute value of risk, i.e., variability of the returns from the mean returns. It is also known as root mean square deviation for the reason that it is the square root of the mean of the squared deviations from the arithmetic mean.

Symbolically,

$$\text{Standard Deviation } (\sigma) = \sqrt{\sum_{i=1}^{N} P_i \mid [X-E(X)]^2}$$

Where,

σ = The Greek Letter Sigma, which denotes the standard Deviation.

P_i = Probability distribution of i^{th} variables for each study period.

$[X-E(X)]^2$ = Mean Deviation squared

3.6.2.3. Coefficient of Variation

As noted above the standard deviation is the absolute measure of risk. In the case of the different mean returns, it misleads to the invalid decision. Hence, to overcome on such a problem, a standardized per unit risk can be used to measure the risk which is called Coefficient of Variation. It indicates risk per unit of average return. Variability in return (i.e. the risk) has therefore been measured by the coefficient of variation. In our study, coefficient of variation has been computed to show the Bank-wise variability or risk return relationship in respect of interest rate and rate of return on total investments. It can be computed by dividing the standard deviation by average rate of return. Symbolically,

$$\text{Coefficient of Variation (C.V.)} = \frac{\exists_x}{E(x)}$$

Where,

σ =Standard Deviation.

E (X) =Mean Rate of Return.

3.6.2.4. Karl Pearson's Correlation Coefficient

Correlation is defined as the 'relationship' (or association) between (among) the one dependent variable (or factor) and one (or more than one) independent variable(s) or factor(s). In other words, correlation is the relationship between (or among) two or more variables (i.e. only one dependent variable and one or more independent variable(s). Thus, correlation is a statistical tool, with the help of which, we can determine whether or not two or more variables are correlated and if they are correlated the degree (extent) and direction of correlation is determined. Stated differently, it helps in studying the covariance

of two or more variables. There are several methods of analyzing the correlation between the two variables such as, Graphic Method, Karl Pearson's Coefficient of Correlation, Concurrent Deviation method, Least Square Method and so on. Among them, Karl Pearson's Correlation Coefficient is most widely used in practice. In our study, Karl Pearson's Correlation Coefficient has been used in order to establish the relationship between the returns of KBL and SBL. Karl Pearson's Correlation Coefficient is denoted by the symbol r, which is mathematically defined as;

$$\text{Correlation coefficient between X and Y } (r_{XY}) = \frac{\phi xy}{\sqrt{\phi x^2}\ \sqrt{\phi y^2}}$$

Where,

X and Y = variables

r_{XY} = correlation coefficient between variables X and Y

$\sum_{xy}$ = summation of multiple of mean deviation of variables X and Y

$\sum x^2$ = summation of mean deviation squared of variable X

$\sum y^2$ = summation of mean deviation squared of variable Y

3.6.2.5. Coefficient of (multiple) determination (r^2)

The coefficient of (multiple) determination is a measure of the degree of linear association or correlation between two variables one of which happens to be independent and other being depended variable(s). It measures the percentage total variation in dependent variables explained by independent variable(s). The value of the coefficient of (multiple) determination can range from zero to one (i.e. $0 > r^2 < 1$). If r^2 is equal to 0.75, it indicates that independent variables used in regression model explain 75 percentage of the total variation in the dependent variable. It is calculated as,

$$r^2 = \frac{\text{Explained variables}}{\text{Total variation}}$$

Chapter - IV

DATA PRESENTATION AND INTERPRETATION

4.1 Capital Structure Analysis

Capital structure of the bank is analyzed incorporating the analysis of relationship between fixed deposits and shareholders' equity, its composition and index, financial mix ratios analysis and capitalization rate analysis.

4.1.1 Fixed Deposits Analysis

Fixed deposit of bank is considered as long term debt collected from the depositors. Fixed deposit is only one long term source of debt capital for these two banks, KBL and SBL so far. The following table shows the position of fixed deposits in the bank over the past five years (i.e. 2007/08 to 2011/12).

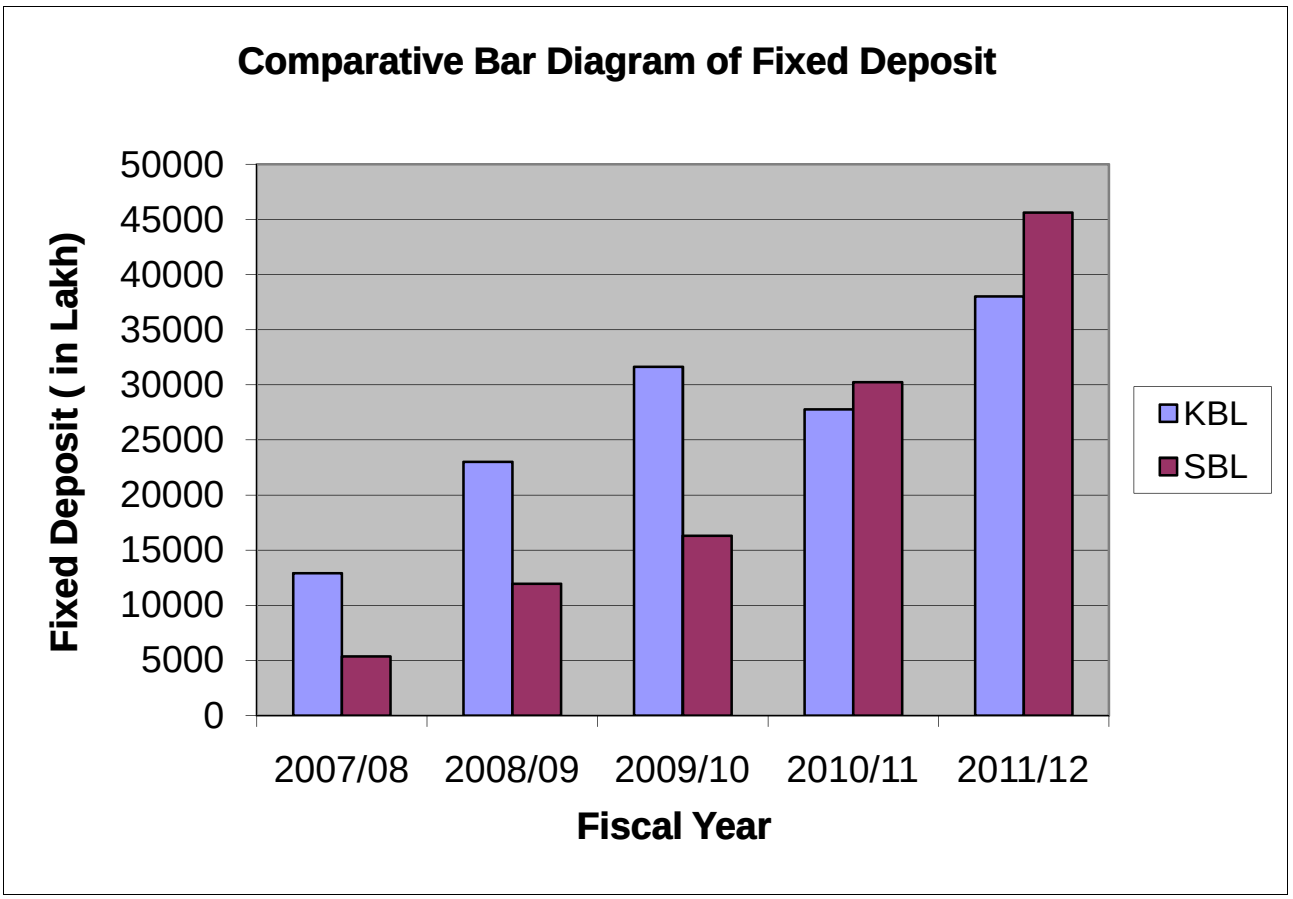
Table: 4. 1

Fixed Deposits Position & Index Table of KBL & SBL

	KBL			SBL		
FY	FIXED DEPOSIT (NPR)	INDEX	% INC. OR DEC.	FIXED DEPOSIT (NPR)	INDEX	% INC. OR DEC.
2007/08	1,292,449,200.00	100		537,195,000.00	100.00	
2008/09	2,302,087,622.00	178.12	78.12	1,196,505,353.00	222.73	122.73
2009/10	,162,833,667.00	244.72	37.39	1,632,091,068.00	303.82	36.40
2010/11	2,776,480,794.00	214.82	-12.22	3,022,555,568.00	562.66	85.20
2011/12	3,799,556,049.00	293.98	36.85	4,562,723,943.00	849.36	50.96
		AVERAGE	35.04		**AVERAGE**	73.82

Figure: 4.1

Comparative Bar Diagram of Fixed Deposit



Fixed Deposits of KBL is increased during study period except in fiscal year 2010/11. The fixed deposit of the bank is increased by 78.12% in fiscal year 2008/09, which is the highest increment during the study period.

Similarly fixed deposit of SBL is also increased every year. Bank's fixed deposit is increased by 122.73% in FY 2008/09. It was just third year of bank's operation so fixed deposit increase rate is very high then average increased rate. On average fixed deposit increasing rate is higher for SBL than KBL and in volume also SBL has more fixed deposit than that of KBL for final fiscal year of our study period (i.e. 2011/12). Both the banks were found increasing fixed deposits in their financial mix.

Table: 4.2

Fixed deposit as percentage of total liabilities of KBL & SBL

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	23.52	30.95	35.10	23.30	25.29	27.63	5.19	18.78
Change		7.43	4.15	-11.80	1.99			
SBL	28.10	38.61	34.31	38.00	39.10	35.62	4.60	12.91
Change		10.51	-4.3	3.69	1.10			
Combined Average =31.63								

The percentage of fixed deposits to total liabilities of KBL is highest in fiscal year 2009/10 (i.e 35.10%). Percentage of fixed deposit to total liabilities of KBL is in increasing trend every year except in fiscal year 2010/11. For fiscal year 2010/11 the ratio is recorded 23.30%, which is minimum through out the study period.

Similarly ratio of fixed deposit to total liabilities of SBL is 39.10% for fiscal year 2011/12 which is the highest fixed deposit portion in total liabilities of the bank over the study period. Percentage of fixed deposit to total liabilities of SBL is in increasing trend except if fiscal year 2009/10.

When combined average is considered the ratio of SBL is found higher then the average 31.63% over the study period but the ratio of KBL is lower than that the average through out the study period. This shows that SBL has higher portion of fixed deposits in total liabilities or claim on assets than that of KBL.

Table: 4.3

Fixed deposit to total debt of KBL & SBL

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	26.05	33.89	38.86	25.52	27.79	30.42	5.77	18.97
Change		7.84	4.97	-13.34	2.27			
SBL	36.69	44.13	39.30	42.27	43.12	41.1	3.05	7.42
Change		7.44	-4.83	2.97	0.85			
Combined Average=35.76								

Total debt includes borrowing from banks, deposits, bills payable, bills for collection and other liabilities. The portion of fixed deposit of KBL in total debt is in average of 30.42%. It is highest of 38.86% in fiscal year 2009/10 and the lowest of 25.52% in fiscal year 2010/11.

In case of SBL, portion of fixed deposit to total debt is the highest of 44.13% if fiscal year 2008/09 and the lowest of 36.69% in fiscal year 2007/08 throughout the study period. And on average percentage of fixed deposit to total debt is 41.1% for SBL.

The volume of fixed deposit to total debt fluctuated more in KBL than in SBL (i.e. CV=18.97%>7.42%). The ration of fixed deposit to total debt of KBL is found below the combined average of 35.76% throughout the study period except in fiscal year 2009/10 but average ratio of SBL is above the combined average. Above figures show that SBL has higher portion of fixed deposits in total debt than that of KBL.

4.1.2 Analysis of Shareholders' Equity

The shareholders' equity of the banks include paid-up capital, general reserve, capital reserve, proposed dividend, other reserve, retained earning and exchange equalization fund. For the analysis of shareholders equity, this researcher has presented its composition and net-worth per share.

The following table No. 5 (a) and 5(b) represents the composition of shareholders' equity of the banks (KBL and SBL) and net-worth per share.

Table: 4.4 (a)

Composition of Shareholders' Equity of KBL (in Rs.)

Particulars	2007/08	2008/09	2009/10	2010/11	2011/12
Paid up Capital	500,000,000.00	500,000,000.00	625,000,000.00	750,000,000.00	1,070,000,000.00
General Reserve	12,499,408.00	30,075,520.00	50,808,874.00	84,861,456.00	119,847,501.00
Capital Reserve		100,000,000.00	37,500,000.00	-	20,000,000.00
Proposed Dividend	-	-	125,000,000.00	150,000,000.00	107,827,200.00
Other Reserve	3,725,817.00	3,725,817.00	-	-	-
Retained Earning	17,177,955.00	11,640,199.00	20,211,002.00	35,031,460.00	41,357,165.00
Exchange Equal. Fund	-	-	5,330,681.00	5,737,242.00	5,853,403.00
Shareholders' Equity	533,403,180.00	645,441,536.00	863,850,557.00	1,025,630,158.00	1,364,885,269.00
No. of Shares	5,000,000.00	5,000,000.00	6,250,000.00	7,500,000.00	10,700,000.00
Net worth per Share	106.68	129.09	138.22	136.75	127.56

Table: 4.4(b)

Composition of Shareholders' Equity of SBL (in Rs.)

Particulars	2007/08	2008/09	2009/10	2010/11	2011/12
Paid up Capital	350,000,000.00	350,000,000.00	500,000,000.00	600,000,000.00	828,000,000.00
General Reserve	3,496,516.92	14,055,958.83	27,106,521.00	46,167,587.00	74,802,184.00
Capital Reserve	-	23,559,905.71	74,871,788.00	56,190,572.00	36,555,158.00
Proposed Dividend	-	-	-	90,000,000.00	124,200,000.00
Retained Earnings	12,701,812.89	-	-	-	1,122,283.00
Exchange Equal. Fund	-	272,778.27	1,163,146.00	1,351,781.00	3,666,461.00
Shareholders' Equity	366,198,329.81	387,888,642.81	603,141,455.00	793,709,940.00	1,068,346,086.0
No. of Shares	3,500,000.00	3,500,000.00	5,000,000.00	6,000,000.00	8,228,000.00
Net worth per share	104.63	110.83	120.63	132.28	129.84

Table: 4.5

Net worth to total liabilities of KBL & SBL (in %)

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	10.75	9.50	10.61	9.42	9.98	10.05	0.61	6.07
Change		-1.25	1.11	-1.19	0.56			
SBL	23.68	14.32	14.52	11.09	10.09	14.74	6.66	45.18
Change		-9.36	0.2	-3.43	-1			

The proportion of shareholders' equity i.e. net-worth in total claims of assets (total liabilities) is found very low in KBL compared to SBL. On average the ratio is 10.05% for KBL whereas it is 14.74% for SBL. But fluctuation of the proportion of shareholders' equity is more in SBL as compared to KBL (i.e. C.V = 45.18%>6.07%).

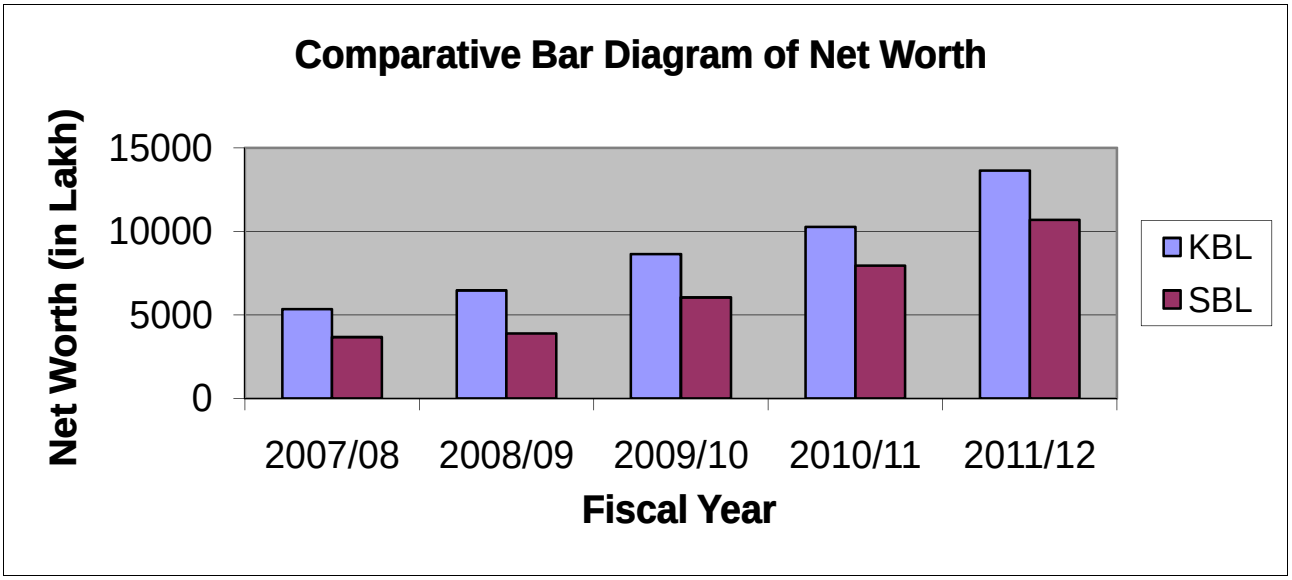
Table: 4.6

Shareholders' Equity Composition & Index of KBL & SBL

Bank	KBL			SBL		
FY	Net worth (Rs.)	Index	% Increase or Decrease	Net Worth (Rs.)	Index	% Increase or Decrease
2007/08	533,403,180.00	100.00	-	366,198,329.81	100.00	-
2008/09	645,441,536.00	121.00	21.00	387,888,642.81	105.92	5.92
2009/10	863,850,557.00	161.95	33.84	603,141,455.00	164.70	55.49
2010/11	1,025,630,158.00	192.28	18.73	793,709,940.00	216.74	31.60
2011/12	1,364,885,269.00	255.88	33.08	1,068,346,086.00	291.74	34.60
	Average Change		26.66	**Average Change**		31.90

Figure: 4.2

Comparative Bar Diagram if Net Worth



4.1.3 Analysis of Financial Mix of the Banks

This research has analyzed financial mix of the banks using ratio analysis as financial tool for the data available from the concerned banks annual reports.

4.1.3.1 Debt to Equity Ratio (DER)

It shows the relationship between borrowed funds and owners' capital. This ratio reflects the relative claims of creditors and shareholders against the assets of the firm. This ratio is widely popular measure of the long term financial viability of a firm and it is important to appraise the financial structure of a firm.

A higher ration shows a large share of financing by the creditors relatively to the owners. Therefore, there is a large claim against the assets of the firm which is a dangerous signal for the creditors. It would be riskier to the

creditors. A high proportion of debt in the financial structure would lead to inflexibility in the operation of the firm because firm is largely liable to pay the interest even if the firm is suffering from the losses, where a smaller ratio shows smaller claim of creditors. To the creditors relatively high stake of the owners implies sufficient safety margin and substantial protection against shrinkage in assets. Debt equity can be calculated in various ways.

i. Debt to Equity Ration in-terms of Fixed Deposits to Net-worth.
   DER= Fixed Deposits/Net-worth
ii. Debt to Equity Ratio in-terms of total debt to net-worth.
   DER=Total Debt/Net-worth

i. DER in-terms of Fixed Deposit to Net-worth (FD/NW)

Table: 4.7

Fixed deposit to net worth ratio of KBL & SBL (in %)

Bank/FY	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**Average**	**S.D**	**C.V**
KBL	242.30	356.67	366.13	270.71	278.38	302.84	55.22	18.23
Change		114.37	9.46	-95.42	7.67			
SBL	146.70	308.47	270.6	380.81	427.08	306.73	108.27	35.30
Change		161.77	-37.87	110.21	46.27			
					Combined Average	304.79		

The above table shows the debt equity ratio in terms of fixed deposits (FD) to shareholders equity (NW) of the banks (KBL and SBL). The ratio is more significant to determine whether a fixed deposits financing is educate the strengthen of the profitability of the bank. Both the banks have more DER i.e. greater claims of the creditors than that of owners.

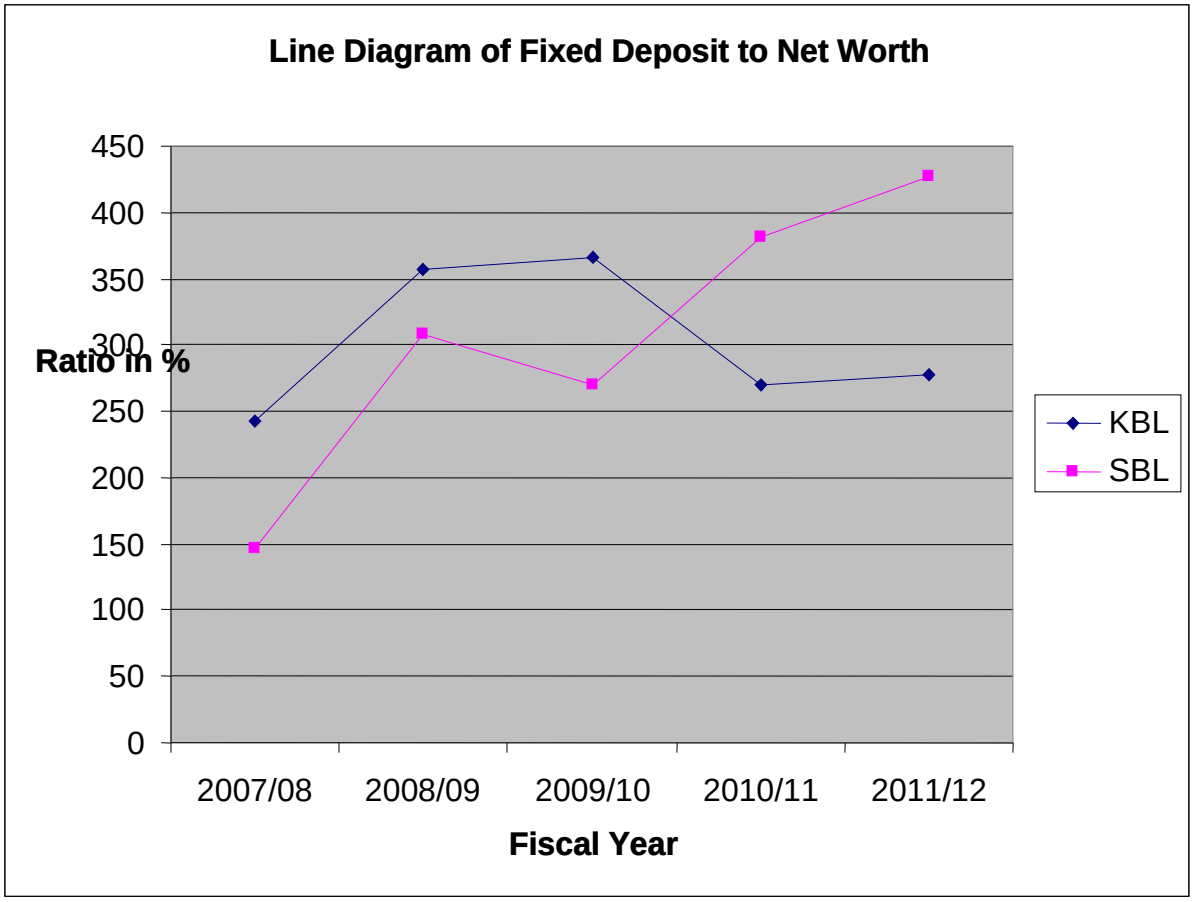
DER of KBL is 366.67% in Fiscal year 2008/09 which is the highest ratio during the study period. It is minimal of 242.30% in fiscal year 2007/08 and average DER of KBL is 302.84%.Similarly for SBL, DER is highest in fiscal year 2011/12 i.e. 427.08% and minimum of 146.70% in fiscal year 2007/08. Average DER ratio for SBL is 306.73%.

On average this ratio is slightly higher for SBL than that of KBL. But on the basis of coefficient of variation (C.V), the C.V of SBL is found higher than the CV of KBL i.e. 35.30% > 18.23%. This shows that the variability of fixed deposits to net-worth ratio is higher in SBL than in KBL.

If we consider the average ratio of fixed deposit to net-worth, it is higher for SBL than that of KBL. This explains that SBL has more claims of creditors than that of owners. Further it depicts that SBL has higher portion of fixed deposits than shareholders equity in its capital structure in comparison to KBL, but the figures are highly variated during the study period so we can not interpret the results on the basis of average.

Figure: 4.3

Line Diagram of Fixed Deposit to Net Worth



ii. DER in-terms of Total Debt to Net-worth

Table: 4.8

Total Debt to Net Worth Ratio of KBL & SBL (in %)

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	930.02	1052.37	942.27	1062.05	1000.94	997.53	0.61	0.06
Change		122.35	-110.10	119.77	-61.11			
SBL	422.13	698.94	688.69	901.62	991.58	740.59	2.21	0.30
Change		276.81	-10.25	212.92	89.96			
					Combined Average	869.06		

The above calculation shows the portion of total debt in shareholders' equity. In Fiscal year 2007/08, KBL has 930.02% of debt to net-worth which is the lowest return throughout the study period. KBL has highest return of 1062.05% in fiscal year 2010/11 having average debt to net-worth of 997.53%.

Similarly SBL has 422.13% of debt capital in every 100% net-worth in fiscal year 2007/08 which is the lowest ratio throughout the study period. SBL has highest ratio of 991.58% in fiscal year 2011/12 having an average total debt to net-worth of 740.59%.

The ratio of KBL is found above the combined average of 869.06% throughout the study period where the ratio of SBL is below the combined average except in fiscal year 2010/11 and 2011/12. This depict that KBL has employed high total debt capital or outside funds as compared to equity fund, since the bank is extremely levered than SBL.

A minor fluctuation on the ratio has been noticed in both the banks however the CV is lower in KBL than in SBL, which shows that the ratio of KBL is more consistent than that of SBL.

From the above table, we can say that both banks are extremely levered. Both the banks are facing heavy burden of interest payment due to the employment of more debts. Both the banks financial structure shows the dangerous signals to the creditors. In future the banks may lead to inflexibility in the operation. But by nature banks capital structure heavily depends on that capital.

4.1.3.2 Debt to Total Capital Ratio (D/CR)

The relationship between creditors' fund and owners' capital can also be shown by debt to capital ratio. This type of capital structure ratio is deviated

from the debt equity ratio. Here, it states that the outsiders' liabilities are related to the total capitalization to the firm and not only to the shareholders' equity. There are various related ratios i.e.

i. Fixed Deposit to Capital Employed (FD/CE)

Where capital employed includes shareholders equity and fixed deposits

D/CR = FD/CE

ii. Total Debt to Total Assets (TD/TA)

D/C R= TD/TA

j. DER in-terms of Fixed Deposit to Capital Employed

k.

Table: 4.9

Fixed Deposit to Capital Employed of KBL & SBL (in %)

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	70.79	78.10	78.55	73.02	73.57	74.81	3.54	4.73
Change		7.32	0.44	-5.52	0.55			
SBL	59.46	75.52	73.02	79.20	81.03	73.65	8.48	11.51
Change		16.05	-2.50	6.19	1.83			
					Combined Average	74.23		

The ratio of fixed deposit to capital employed has been fluctuated for both banks over the study period. KBL has recorded the ratio 78.55% in fiscal year 2009/10 which is the highest ratio during the study period. KBL has lowest ratio of 70.79% in fiscal year 2007/08 having average ratio of 74.81%.

Similarly, DER in-terms of fixed deposit to capital employed of SBL is 59.46% which is the lowest ratio during the study period. SBL has the highest ratio of 81.03% in fiscal year 2011/12 having average ratio of 73.65%.

The CV of KBL is found less than that of SBL i.e. 4.73 %< 11.51%, this shows that the variability of ratio is extremely more in KBL.

iii. D/C in-terms of Total Debt to Total Assets (TD/TA)

Table: 4.10

Total Debt to Total Assets of KBL & SBL (in %)

Bank/FY	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**Average**	**S.D**	**C.V**
KBL	90.29	91.32	89.35	91.39	90.92	90.65	0.85	0.94
Change		1.03	-1.97	2.05	-0.48			
SBL	80.85	87.48	87.32	89.96	90.79	87.28	3.90	4.47
Change		6.64	-0.16	2.64	0.83			
					Combined Average	88.97		

The above computation of D/C in-terms of total debt to total assets shows that the share of total assets is financed by the outsiders' fund. The ratio shows that the assets of the banks, the banks have been financed more by funds collected from creditors.

The ratio of total debt to total assets of KBL is 89.35% in fiscal year 2009/10 which is the lowest ratio during the study period but for 2010/11 it is increased to 91.39% recording the highest ratio during the study period. KBL has an average D/C ratio of 90.65% in-terms of total debt to total assets.

Whereas the same ratio of SBL is 80.85% for fiscal year 2007/08, which is the lowest ratio for the study period. SBL recorded highest D/C in fiscal year 2011/12 having average ratio of 87.28%.

The ratio is highly fluctuated in SBL than in KBL i.e. 4.47% > 0.94%

The ratio of total debt to total assets is recorded over 80% in both banks that show that both banks are found using higher debt capital to finance their assets. In both banks, creditors' margin of safety is very low. It is found around 10 % to 12% of average which indicates higher risk. However, the ratio is found much higher in SBL than that of KBL.

Analysis of Capital Adequacy of the banks.

Table: 4.11

Capital Adequacy Ratio (in %) Core Capital

Bank/FY	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**Average**	**S.D**	**C.V**
KBL	12.50	10.20	11.28	10.26	10.40	10.93	0.98	8.97
Change		-2.30	1.08	-1.02	0.14			
SBL	16.04	12.77	13.29	10.78	10.19	12.61	2.32	18.39
Change		-3.27	0.52	-2.51	-0.59			
					Combined Average	11.77		

Figure: 4.4

Line Diagram of Capital Adequacy Ratio (Core Capital)

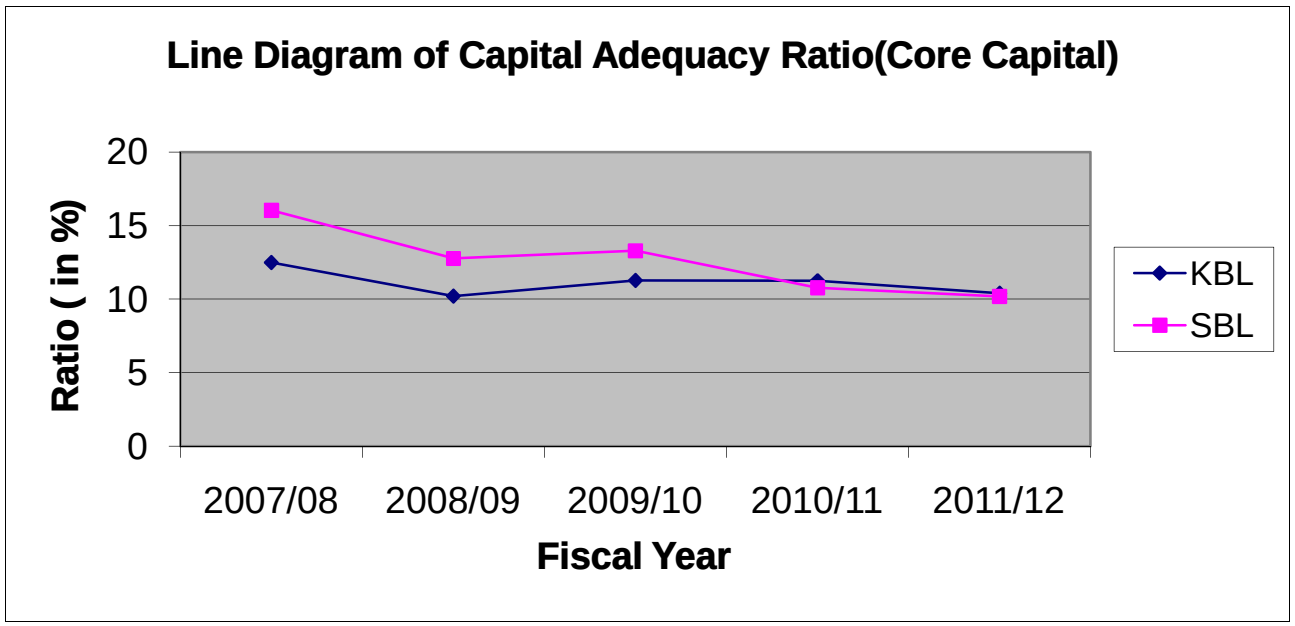


Table: 4.12

Capital Adequacy Ratio (in %) Supplementary Capital

Bank/FY	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	Average	S.D	C.V
KBL	0.91	1.01	1.08	0.96	4.01	1.59	1.35	84.69
Change		0.10	0.07	-0.12	3.05			
SBL	0.72	0.87	0.87	1.05	0.95	0.89	0.12	13.45
Change		0.15	0.00	0.18	-0.10			
					Combined Average	1.24		

Figure: 4.5

Line Diagram of Capital Adequacy Ratio (Supplementary Capital)

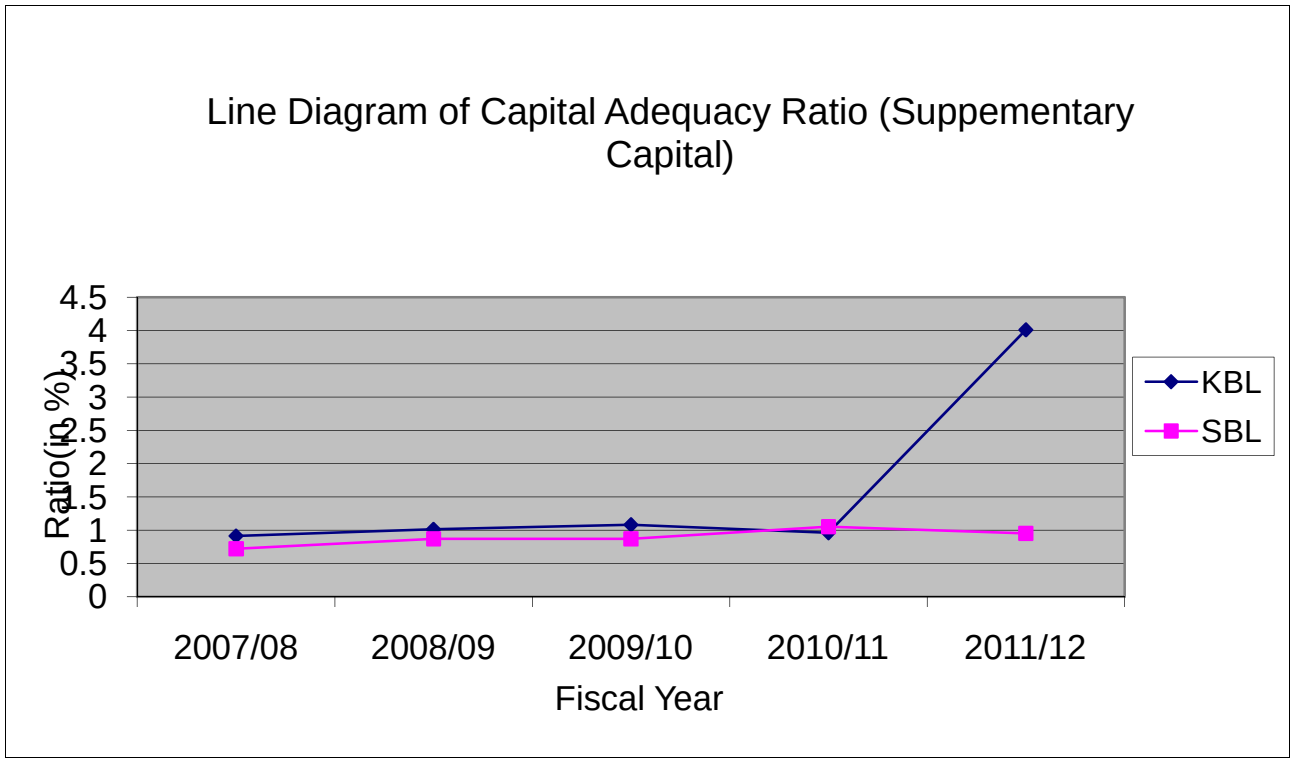


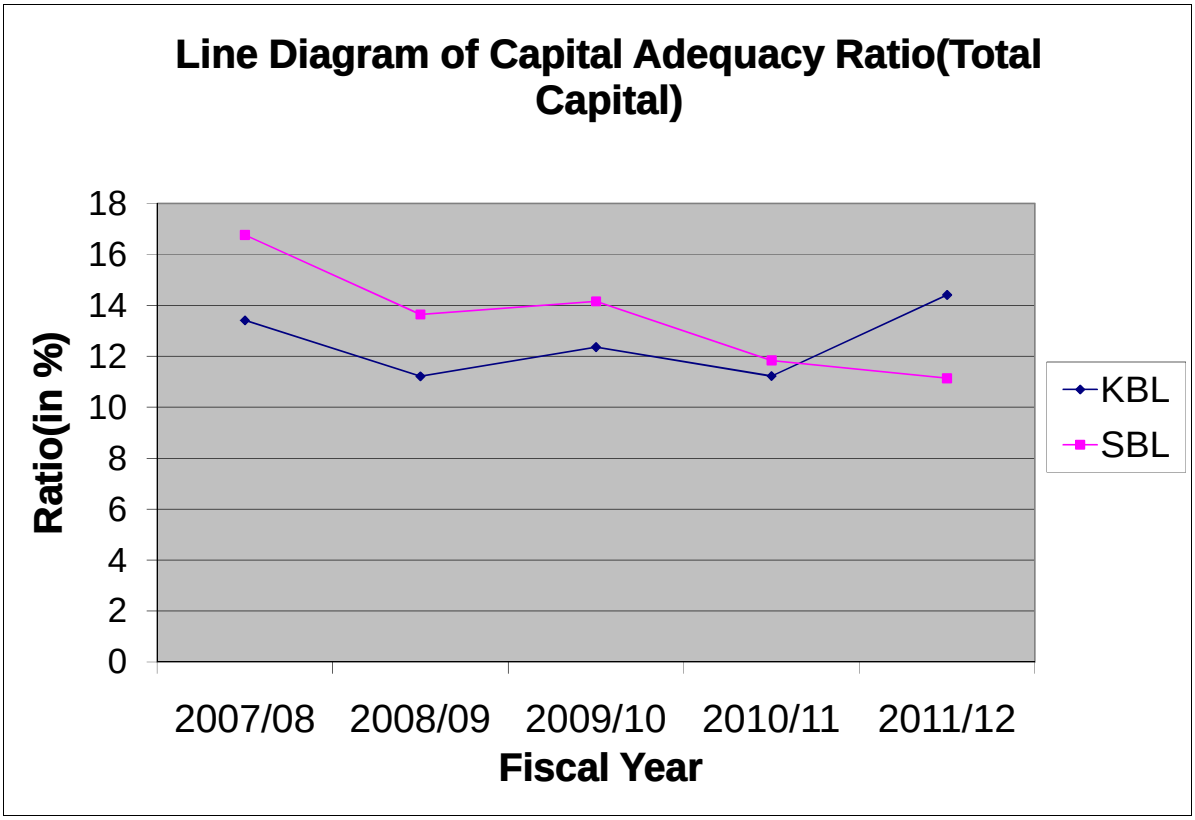
Table: 4.13

Capital Adequacy Ratio (in %) Total Capital Fund

Bank/FY	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	Average	S.D	C.V
KBL	13.41	11.21	12.36	11.22	14.41	12.52	1.40	11.18
Change		-2.20	1.15	-1.14	3.19			
SBL	16.76	13.64	14.16	11.84	11.14	13.51	2.20	16.29
Change		-3.12	0.52	-2.32	-0.70			
					Combined Average	13.02		

Figure: 4.6

Line Diagram of Capital Adequacy Ratio (Total Capital)



The capital adequacy ratio of KBL is 11.21% is fiscal year 2008/09 which is the lowest ratio during out study period. KBL registered highest capital adequacy ratio of 14.41% in fiscal year 2011/12 having average capital adequacy ratio of 12.52%. Capital adequacy ratio is found above the ratio of minimum capital requirement of 10% in all the periods.

Similarly capital adequacy ratio of SBL is ranged between higher 16.76% to lower 11.14%. The ratio is recorded 16.76% in fiscal year 2007/08 which is the

highest ration during our study period. SBL registered the lowest capital adequacy ratio of 11.14% in fiscal year 2011/12 having average capital adequacy ratio of 13.51%. For SBL, capital adequacy ratio is found above the ratio of minimum capital requirement of 10% in all the periods.

The CV of SBL is higher than that of KBL, which depicts that the fluctuation is greater in SBL than that of KBL. KBL has been able to maintain the capital adequacy ratio higher than the normal rate of 10% (prescribed minimum capital requirement) where the ratio of SBL is found much higher than the normal rate.

4.1.5 Analysis of the Debt Capacity of the Banks

To analyze debt capacity of the banks or to indicate the firm's ability to meet interest obligation; interest coverage ratio is calculated. Interest coverage ratio is one of the most conventional coverage ratios which measure the relationship between what is normally available from operation of the firm and the claims of outsiders'. It is used to taste firms' debt servicing capacity. It is determined by dividing operating profit by the fixed interest charges on debt.

Interest Coverage Ratio = EBIT/Interest

From the view point of the creditors, the larger the coverage ratio greater the ability of firm to handle fixed charges and assurance of payment of interest to creditors. However, too high or low ratio as well is unfavorable to the firms, high ratio implies that firms is very conservative in using debt and low ratio implies that firm is using excess debt and doesn't have the ability to offer assured payment of interest to creditors.

Table: 4.14

Interest coverage ratio of KBL SBL (times)

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	1.47	1.60	1.48	1.69	1.57	1.56	0.09	5.76
Change		0.13	-0.12	0.21	-0.12			
SBL	1.62	2.06	1.66	1.56	1.61	1.70	0.20	11.75
Change		0.44	-0.40	-0.10	0.05			
					Combined Average	1.63		

The interest coverage ratio of KBL was 1.47 times, which is the lowest ratio during our study period recording the highest ratio of 1.69 times in fiscal year 2010/11. KBL maintained average interest coverage ratio of 1.56 times. Throughout the study period interest coverage ratio of KBL is below the normal standard of two times.

Similarly, interest coverage ratio of SBL is 2.06 times in fiscal year 2008/09 which is the highest ratio during our study period recording the lowest ratio of 1.56 times in fiscal year 2010/11. SBL maintained its average interest coverage ratio of 1.70 times. Throughout the study period interest coverage ratio of SBL is below normal standard of two times except in fiscal year 2008/09.

Both banks have interest coverage ratio below the normal ratio i.e. 2 times, which could be considered as tight debt service capacity. So far SBL is observed in better condition than KBL in their debt service capacity.

The variation of the ratio of KBL is observed less in comparison to SBL i.e. CV of KBL is 5.76 whereas 11.75 is recorded in SBL, which indicates that interest coverage ratio of KBL is consistent than that of SBL.Both banks are able to meet the interest obligation. In banking business, interest coverage ratio should not be tight so that banks could be able to service the debt coverage ratio. Moreover, the ratio of KBL in fiscal year 2007/08 is 1.47 times

only, which is very tight to meet its interest obligation. The banks should have to pay more attention in this matter either increase its EBIT or maintaining its interest obligation (cost of fund).

4.1.6 Capital Structure Position of the Banks

When debt and equity are properly mixed, it minimizes the cost of capital and maximizes the value of firm. In-order to analyze the value of banks, fixed deposits and equity share capitals are taken into consideration. Net income approach is considered to fix out the overall capitalization rate of banks.

In-order to analyze the capital structure management of banks value of the firm is calculated as below. The value of firm is determined by adding debt and equity. The structure of banks is of fixed deposits and equity share capital only.

Table: 4.15

Capital Structure Mix of KBL (Rs.)

FY	Fixed Deposit	Equity Share	Total Value of Firm	Proportion
2007/08	1,292,449,200.00	533,403,180.00	1,825,852,380.00	0.71:0.29
2008/09	2,302,087,622.00	645,441,536.00	2,947,529,158.00	0.78:0.22
2009/10	3,162,833,667.00	863,850,557.00	4,026,684,224.00	0.79:0.21
2010/11	2,776,480,794.00	1,025,630,158.00	3,802,110,952.00	0.73:0.27
2011/12	3,799,556,049.00	1,364,885,269.00	5,164,441,318.00	0.74:0.26

Table: 4.16

Capital Structure Mix of SBL (Rs.)

FY	Fixed Deposits	Equity Share	Total Value of Firm	Proportion
2007/08	537,195,000.00	366,198,329.81	903,393,329.81	0.59:0.41
2008/09	1,196,505,353.00	387,888,642.81	1,584,393,995.81	0.76:0.24
2009/10	1,632,091,068.00	603,141,455.00	2,235,232,523.00	0.73:0.27
2010/11	3,022,555,568.00	793,709,940.00	3,816,265,508.00	0.79:0.21
2011/12	4,562,723,943.00	1,068,346,086.00	5,631,070,029.00	0.81:0.19

The proportion of debt capital to equity of KBL is above 70% in all fiscal year during our study period. The proportion was 0.71:0.29 in fiscal year 2007/08 which is the lowest proportion of debt to equity over the study period. KBL recorded the highest proportion of 0.79:0.21 in fiscal year 2009/10.

Likewise, the proportion of debt capital to equity of SBL is highly fluctuated ranged from 0.59:0.41 to 0.81:0.19. The proportion is 0.59:0.41 in fiscal year 2007/08 which is the lowest proportion of debt to equity over the study period. SBL recorded highest proportion of debt to equity of 0.81:0.19 in fiscal year 2011/12.

4.1.7 Overall Capitalization Rate (K_0)

The overall capitalization rate is calculated under net income approach, which measures the degree of leverage of firm. This approach assumes that cost of debt is less than cost of equity. So, if the degree of financial leverage is increased weighted average cost of capital will decline. As a result value of firm will increase. Higher the use of cheaper debt lowers the cost and consequently increases the value. Overall capitalization rate is calculated as:

KV_0 = EBIT/ Value of Firm

Table: 4.17

Overall capitalization rate of KBL SBL (in %)

Bank	**KBL**		**SBL**	
FY	**K_0**	**Change**	**K_0**	**Change**
2007/08	13.18	0	8.18	0
2008/09	13.07	0.11	11.93	-3.75
2009/10	12.39	0.68	11.38	0.55
2010/11	17.63	-5.24	11.13	0.25
2011/12	15.14	2.49	11.49	-0.36
Average				
Combined Average				

Average overall capitalization rate (K_0) is 14.28% of KBL. The maximum overall capitalization rate of KBL is 17.63% in fiscal year 2010/11 due to increase in EBIT in comparison to its value, whereas the capitalization rate is recorded minimum of 12.39% in fiscal year 2009/10 because of its decrease in EBIT.

Similarly the average overall capitalization rate of SBL is 10.82% which is less than of KBL. In addition the K_0 of SBL in all period is lower than that of KBL. The highest K_0 of SBL is 11.93% found in 2008/09 and the lowest is 8.18% in fiscal year 2007/08.

From the above it is found that increase in financial leverage there is decrease in K_0. This shows that cost of debt is lower than cost of equity.

4.2 Return on Capital Employed (ROCE)

Return on capital employed ratio is another ratio related to the profitability of long term funds. The ratio provides us a test of profitability related to the sources of long term funds and sufficient insights into how efficiently long term funds of owners and creditors are being used. It explains net income for each unit of long term funds. The higher the ratio, more efficient is the use of capital employed.

From the point of view of judging operational efficiency return on capital employed is also more useful measure. The ratio is formulated as:

ROCE = Net Income/ (Fixed Deposits + Net worth)

Table: 4.18

Return on Capital Employed (in %)

Bank/FY	2007/08	2008/09	2009/10	2010/11	2011/12	Average	S.D	C.V
KBL	2.67	2.98	2.57	4.48	3.39	3.22	0.72	22.38
Change		0.32	-0.41	1.90	-1.09			
SBL	1.94	4.44	2.92	2.50	2.54	2.87	0.95	33.15
Change		2.50	-1.52	-0.42	0.05			

Return on capital employed of KBL is 2.67% in fiscal year 2007/08 and it is decreased to the lowest figure of 2.57% in fiscal year 2009/10. However KBL recorded its highest return on capital employed of 4.48% in fiscal year 2010/11 having average return on capital employed of 3.22%.

On the other hand return on capital employed of SBL is highly fluctuating. It is lowest return on capital employed of 1.94% on fiscal year 2007/08 but it increased to height figure of 4.44% in fiscal year 2008/09 and it is in declining trend for subsequent years having an average return on capital employed of 2.87%.

On the ground of combined average of 3.04%, the ratio of SBL is found below than combined average in all periods except in 2008/09 at the same time coefficient of variation of SBL is more than that of KBL. This shows that ratio of SBL is highly fluctuated throughout the period i.e. CV = 33.15% > C.V = 22.38%. This further explains that SBL is not able in handling long term funds properly.

4.3 Return on Equity (ROE)

This ratio carries the relationship of return to the source of funds. This ratio shows whether the banks have earned a satisfactory return from its internal sources or not. Return on capital employed has expressed, previously, the profitability of the banks in relation to the funds supplied by the creditors and owners together. But this ratio is used to measure exclusively return on owners' fund.

Hence, this ratio reveals how profitably the owners' fund has been utilized by the banks and indicates whether a bank can compete for private source of capital in the company. Higher the ratio, higher will be the investment, which the shareholders will undertake. Return of equity ratio can be formulated as:

ROE = Net Income/ Net worth

Table: 4.19

Return on Equity (in %)

Bank/FY	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**Average**	**S.D**	**C.V**
KBL	9.13	13.62	12.00	16.60	12.82	12.83	2.70	21.04
Change		4.49	-1.62	4.60	-3.78			
SBL	4.77	18.12	10.82	12.01	13.40	11.82	4.82	40.76
Change		13.34	-7.30	1.19	1.39			
Combined Average								

The return on equity of KBL is lowest of 9.13% and that is the highest of 16.60% in fiscal year 2010/11 and decreased to 12.82% in fiscal year 2011/12. Average return on equity of KBL is 13%.

The return on equity of SBL is found fluctuating in nature. The ratio is lowest of 4.77% in fiscal year 2007/08 and reached to the highest of 18.12% in fiscal year 2008/09 and again it decreased to 10.82% in fiscal year 2010/11. But it is in increasing trend than after having an average return on equity of 11.82%
Coefficient of variation shows that return on equity ratio of SBL is highly fluctuated than the ratio of KBL i.e. CV = 40.75% > CV = 24.69%. KBL seems more consistent in respect of return on equity than that of SBL.

Both the banks has satisfactory return of equity of above 10% except in fiscal year 2007/08 which shows that both banks have utilized their shareholders' equity in satisfactory manner.

4.4 Statistical Analysis

This Chapter incorporates some statistical tools, which are used to analyze the data to achieve the objective of the study. Such statistical tools are Karl Pearson's Correlation Coefficient & multiple regression analysis.

4.4.1. Correlation Coefficient Analysis

Correlation analysis deals with the statistical technique which measures the degree of relationship (or association) between the variables. In other words, it helps us in analyzing the co-variation of two or more variables. If two quantities vary such that movement in one variable accompanied by movement in other, then they are said to be correlated.

4.1.1.1. Coefficient of Correlation between EBIT & Interest Payment

The relationship between EBIT & Interest payment is evaluated in order to measure debt-serving capacity of the banks. It is assumed that there is significant relationship between EBIT & Interest payment. Here interest payment (X) is dependent variable and EBIT (Y) is independent variable. The following result obtained for KBL & SBL

Table: 4.20

Correlation coefficient between EBIT & Interest Payment

	KBL		SBL	
Year	**Interest(X)**	**EBIT(Y)**	**Interest(X)**	**EBIT(Y)**
2007/08	163,902,663.00	240,706,096.00	45,505,567.33	73,863,368.82
2008/09	240,130,179.00	385,285,870.00	91,980,953.67	189,051,222.21
2009/10	337,056,145.00	498,889,225.00	153,708,962.00	254,406,119.00
2010/11	397,053,120.00	670,468,010.00	271,710,950.00	424,755,999.00
2011/12	498,734,222.00	781,914,109.00	401,888,955.00	646,869,033.00
R		0.9989		0.9987
r2		0.9978		0.9973
P.E.		0.0007		0.0008
6P.E.		0.0040		0.0049
Relation		Positive		Positive
Significant/ Insignificant		Significant		Significant

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

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

The correlation between EBIT & Interest payment of KBL is 0.9989 and it is 0.9987 in SBL, which shows higher positive relationship in both the banks.

Coefficient of determination (r2) of KBL indicated that 99.78% variation in interest payment is explained by the independent variable EBIT, where as in the case of SBL 99.73% of the variation in the interest payment is explained by EBIT.

Considering the probable error (P.E.), the value of 'r' of both the banks are greater than six times of the P.E. Therefore, we can say that the value of 'r' is significant i.e., there is significant relationship between EBIT & Interest payment. This depicts us that the banks are significantly able to service their debt.

4.4.1.2 Correlation Coefficient between Return & Debt Capital

The relationship between return and debt capital of both the banks is analyzed in order to examine whether debt capital is significant in generating more return. It is assumed that there is significant relationship between return and debt capital.

Here, Return(X) is dependent variable and Debt Capital (Y) is independent variable. The following result is obtained for KBL & SBL.

Table: 4.21

Correlation Coefficient between Return & Debt capital

	KBL		SBL	
Year	**EBIT(X)**	**Debt Capital(Y)**	**EBIT(X)**	**Debt Capital(Y)**
2007/08	240,706,096.00	4,960,773,398.00	73,863,368.82	1,545,840,957.00
2008/09	385,285,870.00	7,692,440,589.00	189,051,222.21	2,711,107,671.27
2009/10	498,889,225.00	8,139,846,680.00	254,406,119.00	4,153,793,994.00
2010/11	670,468,010.00	10,892,681,270.00	424,755,999.00	7,156,217,694.00
2011/12	781,914,109.00	13,661,713,906.00	646,869,033.00	10,593,473,022.00
R		0.9985		0.9992
r2		0.9970		0.9984
P.E.		0.0009		0.0006
6P.E.		0.0054		0.0036
Relation		Positive		Positive
Sign. /Insign.		Significant		Significant

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

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

From the above, correlation between return and total debt capital in case of KBL was 0.9985 which shows high positive relationship. This refers that increase in total capital increases return. Coefficient of determination (r2) of the bank is 99.70%, indicated that 99.70% of the variation in the return is explained by the debt capital. The probable error (6 P.E.) of the bank is 0.0009 less than value of 'r'. This indicated that there is significant relationship between the variables. This depicts that debt capital of the bank is significant in generating more returns.

Similarly, correlation between return and total debt capital of SBL is 0.9992 which showed that the variables are highly positively correlated. This refers that increase in debt capital increases return. Coefficient of determination (r2) of the bank indicated that 99.84% of the variable in dependent variable (return) is explained by independent variable (total debt capital). Considering the probable error (P.E.), the value of 'r' of the bank is greater than six times of the P.E. This depicts that debt capital of SBL is significant in generating more returns.

4.4.1.3 Coefficient of Correlation between Debt Equity Ratio (DER) & Return on Equity (ROE)

The correlation between DER(X) and ROE(Y) of both the banks is analyzed in order to know whether increase in debt capital portion in the capital structure increase return on equity. The following result is obtained for KBL & SBL.

Table: 4.22

Correlation Coefficient between Debt equity Ratio(DER) & Return on Equity(ROE)

	KBL		SBL	
Year	**DER(X)**	**ROE(Y)**	**DER(X)**	**ROE(Y)**
2007/08	930.02	9.13	422.13	4.77
2008/09	1052.37	13.62	698.94	18.12
2009/10	942.27	12.00	688.69	10.82
2010/11	1062.05	16.00	901.62	12.01
2011/12	1000.94	12.82	991.58	13.40
R	0.9919		0.9589	
r2	0.9838		0.9194	
P.E.	0.0049		0.0243	
6P.E.	0.2934		0.1459	
Relation	Positive		Positive	
Significant/Insignificant	Significant		Significant	

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

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

From the above table, correlation between ROE and DER, ROE being dependent on DER, it is found positive relationship in both banks i.e., increase

in leverage, increases ROE (Which is the objective of financial leverage). Coefficient of determination (r2) indicated that 98.38% of the variation in ROE is explained by DER of KBL where as in case of SBL 91.94% of the variable in ROE is explained by DER.

Considering probable error (P.E.), it is found that the value of 'r' is greater than six times P.E. of KBL. So, it can be concluded that the value of 'r' is significant. The value of 'r' is found more than six times P.E. of SBL. So it can be concluded that value of 'r' is significant. This means that debt equity ratio of SBL is significant in generating more returns on equity. Thus there is proper relationship between ROE & DER.

4.4.1.4 Coefficient of Correlation between Overall Capitalization Rate (K0) & Debt Equity Ratio (DER)

The correlation coefficient between overall capitalization rate(X) and debt equity ratio (Y) in terms of fixed deposits to net worth is calculated in order to measure whether increase in the debt equity ratio decrease overall capitalization rate of the banks. Applying Karl Pearson's correlation coefficient, the following result is obtained for KBL & SBL.

Table: 4.23

Correlation Coefficient between Overall Capitalization Rate (K0) & Debt Equity Ratio

	KBL		SBL	
	K0(X)	**DER(Y)**	**K0(X)**	**DER(X)**
2007/08	13.18	930.02	8.18	422.13
2008/09	13.07	1052.37	11.93	698.94
2009/10	12.39	942.27	11.38	688.69
2010/11	17.63	1062.05	11.13	901.62
2011/12	15.14	1000.94	11.49	991.58
R		0.9943		0.9824
r2		0.9972		0.9651
P.E.		0.0009		0.0105
6P.E.		0.0051		0.0631
Relation		Positive		Positive
Significant/Insignificant		Significant		Significant

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

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

From the above result, correlation between overall capitalization rate and debt equity ratio of KBL is found highly positive relationship of 0.9943, which indicated that increase in debt capital portion in capital structure increases overall capitalization rate. Similar type of relationship is found in case of SBL. Coefficient of determination (r2) indicated that 99.72% and 96.51% (of KBL & SBL respectively) of the variation in overall capitalization rate is explained by DER. Considering the probable error (P.E.), the value of 'r' of both the banks is found greater than six times their P.E., which indicate that there is significant relationship between DER and overall capitalization rate.

Chapter- V

SUMMARY, MAJOR FINDINGS AND RECOMMENDATION

5.1. Summary

The prosperity of every developing country can only be ensured by its economic growth. The role of Commercial Banks in the economic growth of the nation can be fairly estimated to be very prominent. By mobilizing the scattered idle resources from the savers, commercial banks, pools the fund in a sizable volume in order to feed to the fund requirement of productive sector of the economy. Such investments in the productive sector promote trade and industrialization in the country thereby raising the employment opportunities and earning to the laborers and materials & service providers to such industries and trades, which as a chain effect, promotes saving into the banks and more saving means more funds available in the Bank for further investment. In this way, as the chain moves rolling on, the economy of the nation also grows.

To remain as the major contributing factor to the growth of the nation's economy, the banks also have to have sustainable existence and growth of themselves. For the sustainable existence and growth of a bank, it must ensure reasonable profitability for which capital structure management decision is one of the important functions of its management. As the Banks are formed as joint stock companies promoted by shareholders investment, it must primarily concerned with determining an optimal capital structure in the view of providing reasonable return on the fund of the shareholders.

For the accomplishment of this objective, it needs a rational evaluation of the alternative courses of actions, which entails risk and return analysis as risk and return are involved in each of the alternative courses of action. By analyzing the capital structure of a commercial bank in terms of involved risk and return, it can restructure its capital to attain its optimum Capital structure. With this activity, the bank can increase its return in its risk level and/or lower its risk level in the same class of return. Further a rational capital structure decision leads to further profit making opportunity and it may choose to increase its capital base to make it stronger and more sustainable for facing any future threat that may come up.

Therefore, capital structure of any investing entity is the main key to ensure its return and make it more sustainable even in adverse environment. A commercial Bank also, being a commercial and investing institution (investor), has to plan for the reasonable capital structure.

When an individual and a firm affect savings for the expectation of greater degree of future utility, financial system allow them to earn an additional income on the accumulated savings, which is termed as a return on investment. Rate of Return on investment, therefore, is cash plus accrued capital gain. It is generally expressed on the basis of annual percentage rate.

Risk on the other hand is the chances of loss. More formally, risk can be thought of as the possibility that actual return from holding a security will deviate from an expected return. An asset is considered as risky if its future returns are highly volatile. The risk pertaining to an investment can be measured by computing standard deviation, coefficient of variation, covariance coefficient beta coefficient and so on of the stream of returns.

Investors always want to secure a higher return from their holding taking a minimum level of risk. But theoretically, if they want to secure a higher return should also assume a higher risk and assuming a lower risk they should remain satisfied with lower return as there is positive relationship between risk and return.

Capital is the base for a business firm. In the absence of money or capital no one can even imagine the existence of a business firm. Its importance for a business firm can be compared with the importance of blood for a life. For the smooth running of business firm different types of capital in optimum level is required. Normally there are two types of capital are famous, one is debt capital and another is equity capital. Equity is owner's capital where as debt is the capital of creditors.

Debt capital also can be divided into two parts viz. short term debt and long term debt.

Kumari Bank Limited is one of the well-run commercial bank in Nepal established in the year 2001 with an objective of providing competitive and modern banking service in the Nepalese financial market. It has completed its eighth years of operation. Similarly, Siddhartha Bank Limited has served Nepalese economy since 2002. The Bank is promoted by a group of highly reputed Nepalese dignitaries having wide commercial experience. Thus, history of both banks is not long in comparison to other older Banks RBB, NBL, and Nabil Bank etc.

This study has tried to cover the various aspects of capital structure of the banks under study covering the time period of five years, from F/Y 2003/04 to 2007/08. In the first introductory chapter, this study report has tried to give brief history and introduction of banking and its relation to the economy, status

of commercial banks' resources and their uses, brief profile of the concerned bank, general concepts to capital structure, the problem statement, objective of the study and its limitations and significance.

During the research works, an extensive review of various literatures, books, past thesis, journals have been made and Internet materials from relevant web site were also consulted. The works were compiled into the chapter two titled as 'Review of Literature' of this study report.

Study gathered data from annual reports of the banks under study publications of NRB and web site of Nepal Stock Exchange is also used. (1) Financial tools to calculate expected rate of return. (2) Statistical tools such as mean, standard deviation, coefficient of variance, correlation coefficient & coefficient of determination (3) other banking tools along with details of research methodologies followed for this research works are mentioned in the Chapter three titled as 'Research Methodology'

Data relating to various activities of the Bank has been collected presented in tabular and various pie charts, figures and bars diagrams form and are tried to be interpreted in the study report in logical ways. Data are then analyzed applying various accounting financial, mathematical and statistical tools and findings of the study have been listed in a systematic manner. All these works are compiled in the forth chapter titled as 'Data Presentation and Analysis' of this study.

Finally, the summary, major findings and the recommendation made by the researcher by this study are hereby being presented in this current chapter, chapter five titled as 'Summary, major findings and recommendations.'

5.2. Major findings

Major findings of this study are presented hereunder.

1. Total fixed deposit of KBL is in continuous increasing trend during the study period except in fiscal year 200809. Fixed deposit of KBL is higher than that of SBL for the first three year however it is lower for last two year of our study period. On the other hand total fixed deposit of SBL is in continuous increasing trend during the entire study period. On average fixed deposit increasing rate is higher for SBL than KBL.

2. The percentage of fixed deposit to total liabilities of KBL is continuously increasing during the study period except in fiscal year

3. 2010/11. Similarly percentage of fixed deposit to total liabilities of SBL is continuously increasing during the study period except in fiscal year 2009/10. This ratio of SBL is higher than that of KBL for every fiscal year except in fiscal year 2005/06. Lower C.V. of SBL compare to KBL shows that the fluctuation is more in KBL than in SBL.

4. The percentage of fixed deposit to total debt of SBL is higher than KBL in all the five fiscal year. The ratio of the KBL is in increasing trend however it is decreased in fiscal year 2010/11. Similarly the ratio of SBL is also in increasing trend except in fiscal year 2009/10. The lower C.V. of SBL than KBL shows that less volatile of the ratio in SBL

5. The shareholder's equity of both the banks is in increasing trend during the entire study period.

6. The proportion of shareholder's equity i.e. net-worth in total claims of assets is found very low in KBL compared to SBL. But fluctuation of the proportion of shareholders' equity is more in SBL as compared to KBL.

7. Fixed deposit to net worth ratio of KBL has increased in first three fiscal years then it has decreased in fiscal year 2010/11 but it has further increased in fiscal year 2011/12. Likewise the fixed deposit to net-worth ratio of SBL has increased in first year and it has decreased for fiscal year 2009/10 then it has increased for two consecutive years. The higher C.V. of SBL shows that variability of the ratio is higher in SBL than in KBL.

8. Total debt to net worth of booth the banks is fluctuating during the study period. On average total debt to net-worth ratio of KBL is higher than that of SBL. The C.V. is lower in KBL than in SBL, which shows that the ratio of KBL is more consistent than that of SBL.

9. The ratio of fixed deposit to capital employed for both banks is fluctuating during the entire study period. The ratio of KBL is increasing in year 2008/09 & 2009/10 after that it is decreased in 2010/11 then it further increases in year 2011/12. Likewise the ratio of SBL has increased in year 2008/09 and decreasing the in 2009/10 it has increased for two consecutive years. The C.V. analysis shows at variability of the ratio is extremely more in SBL compare to KBL.

10. The ratio of total debt to total assets is recorded over 80% in both banks that show that both banks are founded using higher capital to finance their assets. In both banks, creditors' margin of safety is very low. The fluctuation of ratio is higher in SBL than in KBL.

11. Capital Adequacy Ratio (CAR) of both banks is fluctuating during the study period. For the first four year CAR is lower in KBL than in SBL but in fiscal year 2007/08 this ratio is much higher in KBL than in SBL. KBL has been able to maintain the CAR higher than the normal rate of 10 %(prescribed minimum capital required) where the ratio of SBL is found much higher than the normal rate.

12. Both banks are able to meet the interest obligation. Interest coverage ratio of SBL is higher in every year than KBL except in fiscal year 2010/11. This shows that SBL has the greater ability to handle the fixed charges and to make the payment of interest to the creditors. But the interest coverage ratio of KBL is consistent than that of SBL.

13. The proportion of debt capital to equity capital of KBL is more consistent then that of SBL ranging from 71% to 79%. But the same ratio of SBL is highly fluctuated ranged from 59% to maximum of 81%.

14. Higher overall capitalization rate of KBL is more capable to utilize the value of the firm compare to SBL. It is found that increase in financial leverage there is decrease in K_0. This shows that cost of debt is lower than cost of equity.

15. Correlation between overall capitalization rate and debt equity ratio of both the banks is found highly positive relationship, which indicates that increase in debt capital portion in capital structure increase overall capitalization rate. Coefficient of determination (r2) indicates that 99.72% and 96.56%(of KBL & SBL respectively) of the variation in overall capitalization rate is explained by DER.

16. Return on capital employed of KBL is higher for first year but it is higher in SBL for fiscal year 2008/09 & 2009/10 after that it is higher in KBL for fiscal year 2010/11 & 2011/12. Fluctuation of the ratio is more in SBL but the average ratio is higher in KBL than that of SBL. This result indicates that KBL is more capable to utilize its long-term capital.

17. Both the banks have satisfactory return on equity of above 10% except in fiscal year 2007/08 which shows that both banks had utilized their shareholders' equity in satisfactory manner. On average return on equity is higher for KBL than that of SBL. Approximately two times more C.V. of SBL than KBL indicates that the ratio is massively fluctuating in SBL. This ratio is very bad sign for the bank.

18. Correlation coefficient between EBIT & Interest payment of both banks is highly positive, which shows higher positive relationship. 99.78% of variation in interest payment is explained by the independent variable EBIT of KBL and the same for SBL is 99.73%. The relationship between EBIT and Interest payment of both banks is significant and they are significantly able to serve their debt.

19. Correlation coefficient between EBIT and debt capital of both banks is showing high positive relationship. This refers that increase in total debt capital increases return. 99.70% of coefficient of determination of KBL shows that 99.70% of the variation in the return is explained by the debt capital. In the case of SBL 99.84% of the variation in dependent variable (return) is explained by independent variable (total debt capital). The debt capital of banks is significant in generating the more return.

20. High positive correlation coefficient of both banks between ROE and DER indicates that increase in leverage increases ROE (objective of financial leverage. Analysis shows that 98.38% of variation of KBL and 92.94% variation of SBL in ROE is explained by DER. And debt equity ratio of both banks is significant in generating more return on equity.

5.3 Major Recommendations:

There are many recommendations for the management of both banks. But due to the time constraints and limitations of the thesis only major recommendations are mentioned as below.

a. Interest coverage ratio of both banks is very poor however SBL is in better position as compared to KBL in its debt servicing capacity. So management should increase the EBIT more as compare to interest expenses to increase its capacity to handle the fixed charge and its capacity to handle the fixed charge and to make the payment of interest to the creditors easily which will make the management capable to achieve the money in future. To increase the EBIT it is recommended to increase the commission base business of the banks.

b. SBL should give more attention towards its overall capitalization rate because it is less capable to utilize the value of the firm as compare to KBL.

c. The value of the firm can be maximized by minimizing the overall cost of capital. The organizations should focus more on optimal capital structure rather than increasing debt portion or equity.

d. It is recommended that cost and benefit should be analyzed before raising fund from different source of capital. Although debt creates tax benefit and increase ROE.

e. The capital structure decisions are not found to be considered properly by the banks. It affects the value of the firm and overall cost of capital so every investment and financing decision of the company should be taken by considering the capital structure of the firm.

f. The capital structure of both the 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 it is difficult to pay interest and principal, ultimately lead to liquidation bankruptcy. For such, the banks should reduce the high use of debt capital.

g. The banks should give continuity in providing both conceptual and practical training to the staff to enhance their knowledge, skill and competency level, they should remain consistency vigilant in enhancing their moral and motivation. The banks have to enhance effectiveness, efficiency and proper coordination of its department tasks by continuously reviewing its structural design in accordance with the need of the changing time and situation.

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APPENDIX

Table: 4.2

Fixed deposit as percentage of total liabilities of KBL & SBL

YEAR	KBL(x)	SBL(y)	(x-x)2	(y-y)2
2007/08	35.10	34.31	41.68	24.21
2008/09	23.30	38.00	28.52	1.51
2009/10	25.29	39.10	11.22	0.02
2010/11	24.42	40.03	17.81	0.64
2011/12	35.11	44.71	41.86	30.03
TOTAL	143.22	196.15	141.09	56.41

1. Calculation of mean: (Kumari Bank Ltd)

$$\overline{x} = \frac{\sum x}{N}$$

= 143.22/5

= 28.64

2. Calculate the standard deviation

$$s = \sqrt{\frac{\sum (x - \overline{x})^2}{N - 1}}$$

= sqr141.09/5-1

= srq35.28

= 5.94

3. Calculate the coefficient Variation

$$(C.V) = \frac{S}{\overline{X}} \times 100$$

= (5.94/28.64)*100 = 20.74

1. Calculation of mean: (Siddhartha Bank Ltd)

$$\overline{x} = \frac{\sum x}{N}$$

= 196.15/5

= 39.23

2. Calculate the standard deviation

$$s = \sqrt{\frac{\sum (x - \overline{x})^2}{N - 1}}$$

= sqr56.41/5-1

= srq14.11

= 3.76

3. Calculate the coefficient Variation

$$(C.V) = \frac{S}{\overline{X}} \times 100$$

= (3.76/39.23)*100

= 9.57

(* Note similarly other calculations are done.)