

CHAPTER – 1

INTRODUCTION

1.1 Background of the study

According to the statistics of HDI of 2010 AD published by UNDP, it ranks 157 in out of 185 countries. Even though government of Nepal has made various plan and programs for its economic development, it is not being able to implement them due to lack of sufficient capital, misuse of capital mobilization and political instability. Recently the government of Nepal has adopted the policy of privatization and liberalization for economic growth.

There are various organizations established for the economic development of the country. Some of them are manufacturing and some are non-manufacturing. Financial institutions are one of them which fall under non-manufacturing institutions.

Finance is the initial resource to operate any kind of business firms. The operation of business firms is quite impossible in the absence of finance. The success and failure of a business firm depends on the availability of finance and its proper management. Sometimes misuse and improper use of finance also may be one of the causes of unsuccessful business. Financial management can be defined as the process of acquiring and using funds to accomplish a financial objective.

The institutions related to the financial and monetary activities are simply defined as financial institutions. Financial institutions are the lifeblood of economic development of the country. They help to mobilize the existing resources of the country and bring infrastructural development in the country. They provide job opportunity in the country.

They help to mobilize the frizzed saving of the people and play an intermediary role to invest the collected fund in the several fields for the people. In the context of Nepal, there is very slow development, we can see in the financial fields due to unclear provision and focus made by the government.

At present banking activities are highly appreciated in the world. Banks are the most important and essential financial institutions of the nation for its economic growth. Simply bank refers to the organization which carries out monetary activities. It activates to deal with money by accepting various types of deposits, disbursing loan and rendering other financial services. It collects the deposits from several parties, provides loan to those people who need it for different purposes and provides certain interest at the deposits of the people and interest for the loan provided to outsiders. It also helps the people of different sectors like individual, professionals, traders, businessmen, farmers, industrialists etc. by providing short term or long term loan and plays important role in the economic development of the country.

Banks carry out many functions but they specialize some functions such as dealing on foreign exchange, financing on industry and agriculture sector, providing loan, collecting deposit etc. On the basis of functions, banks can be classified in the following types.

1.1.1 Development Bank

It is the bank which has paid up capital of Rs. 640 millions. It works for the infrastructural development of country by providing financial and technical assistance in the particular field.

1.1.2 Agriculture Bank

It functions for agricultural development by providing loan and technical help to the farmers.

1.1.3 Industrial Bank

It provides financial and technical help for the promotion and development of industries of the country.

1.1.4 Commercial Bank

It links with the commercial activities. It accepts deposits, provides loan to the customers and performs commercial banking activities.

“A commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and performing commercial banking transaction.”¹

“Commercial bank is a corporation which accepts demand, deposits subject to check and make short-term loan to business enterprises regardless of the scope of its other services.”²

1.1.5 Micro – Finance Company

Micro-Finance is coined as the financial service rendered to the deprived group of the people and small entrepreneurs to help them in developing self-employment opportunities and various income generating activities. It is a program that serves a large number of clients with reference to women/deprived people and works at a grassroots level with financial sustainability.

Nepal has three decades of experience in Micro-Finance. It has focused on poverty alleviation program mainly. In Nepal, agriculture based cooperatives were initiated in the 1950s as a first step in Micro-

¹ Commercial Bank Act 2031 B. S.

² American Institute of Banking, “Principal of Bank Operation”, USA, 1992, Pg: 345

finance by establishing Small Farmers Development Programs [SFDP] on a pilot basis in 1975 by ADB/N. Later other micro-finance development programs such as Priority Sector Lending Program [PSLP], Intensive Banking Program [IBP], Production Credit for Rural Women [PCRF] and Rural Self-Reliant Fund [RSRF] were implemented. In the 1990's, as a replicator of Grameen Model, some NGOs like Nirdhan [1991], CSD [1991], Chhimek, Deprose [1994] were established to extend credit facility to the rural area.

The small size of the loan, regular savings, small-scale entrepreneurs, diversified utilization and simple and flexible terms and conditions are the determining characteristics of Micro-finance. The main objective of a micro-finance program is to provide quality service to largest number of the deprived populace.

1.2 Evolution of banking industry

The history of banking is closely related to the history of money. Deposits initially consisted of grain and later other goods including cattle, agricultural implements, and eventually precious metals such as gold, in the form of easy-to-carry compressed plates. Temples and palaces were the safest places to store gold as they were constantly attended and well built.

According to historical sources, the word 'Bank' is derived from Italian word 'Banco' which means a bench. The Italian goldsmiths used to conduct monetary tasks by sitting on the bench, which was called Banco in Italy. At that time, there was no well managed money market as in present day. Gradually, it developed into a well-managed form and people started to use the word 'bank' for the certain place whereby the monetary transactions were conducted.

Earlier Goldsmiths used to store gold charging nominal charges and issued receipts to depositors for payment. It was done for safety at that time. Slowly they started charging certain interests and performing the functions of modern banking system such as accepting and deposit and advancing loan.

We can trace modern-day banking to practice in the Medieval Italian cities of Florence, Venice and Genoa. In 1157 AD, 'Bank of Venice' was established to finance the monarch in the wars and their lavish lifestyle. Similarly, 'Bank of Barcelona' and 'Bank of Genoa' were established in 1401 AD and 1407 AD respectively. By the end of 16th century and during the 17th, the traditional banking functions of accepting deposits, money lending, and money changing and transferring funds were combined with the issuance of bank debt that served as a substitute for gold and silver coins. Similarly, banking activities spread throughout Europe and slowly spread all over the world. Since the 1960's banking has become much more universal due to rapid growth in the number of multinational companies.

1.3 Development of Banking Industry in Nepal

The development of banking system can be seen from the period of Ranas. During the regime of Prime Minister Ranoddip Singh, the first step in the development of banking system was done by establishing 'Tejarath Bandobasta Adda' in 1933 BS. But it didn't accept the deposits of people and couldn't perform the task mobilizing resources in productive sectors.

Bank was truly started in Nepal in 1994 BS by establishing the first commercial bank of Nepal, Nepal Bank Limited. It was established on 30th Kartik, 1994 BS by Juddha Shumsher Rana with 51% authorized capital contributed by the government and rest 49% by general public. It

has carried out the functions of commercial banks. Later Nepal Rastriya Bank was established on 14th Baishak, 2013 BS as central bank of Nepal under Nepal Rastriya Bank Act 2012. It has carried out the function formulating monetary policy as the prime objective.

The Land Reform Savings Corporation was established in 1966 AD to deal with finances related to land reforms. In the mid-fifties, the government of Nepal adopted development programs but there was lack of policies to mobilize the financial resources. So Rastriya Banijya Bank was established on 10th Magh, 2022 BS under Banijya Bank Act 2021 as fully government owned commercial bank. Furthermore, Nepal Industrial Development Corporation, Agriculture Development Bank and Security Exchange Center were established in 2016 BS, 2024 BS and 2051 BS respectively.

In this way, the trend of establishing financial institutions and banks started in Nepal. The government of Nepal made the provision Commercial Bank Act 2031 BS to establish joint venture banks to uplift country's economy. Here, for the purpose of the study, four commercial banks, namely, Nepal Investment Bank Limited [NIBL], Nabil Bank Limited [NBL], Nepal SBI Bank Limited [NSBL] and Kumari Bank Limited [KBL] have been included.

A short description of mentioned banks is as follows:

1.3.1 Nepal Investment Bank Limited [NIBL]

The previous name of Nepal Investment Bank Limited was Nepal Indosuez Bank. It was established on 26th Falgun, 2042 BS with the joint venture between Nepalese and French partners to bring some of the revolutionary reforms in the banking sectors of Nepal and to help in the economic development. The French partners holding 50% of its capital was credit Argicole Indosuez, a subsidiary of one of the largest banking

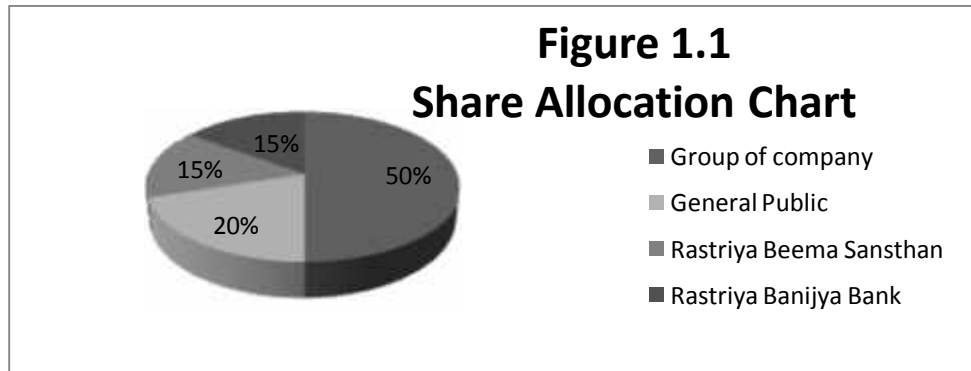
group of the world. The name has been changed to Nepal Investment Bank Limited after the approval of bank's Annual General meeting.

It has ventured into the Remittance with exclusive partnership with Maybank in Malaysia and Bank AlBilad in Saudi Arabia and has substantial presence in the Middle East in the Remittance industry. It was also awarded with 'Best Remittance Award 2010' by Bank Al Bilad, on the basis of steady performance level, outstanding support and excellent customer relation. At present, it has 40 branches and 70 ATMs throughout the country in total.

It believes on the customer oriented service, culture with special emphasis on customers care and convenience, to increase the market share by following a disciplined growth strategy to leverage our technology platform and pen sealable system to achieve cost effective operation and improved delivery capacity. It has recently released an electronic payment gateway, enabling secure VISA, Master card and PayPal transaction and e-commerce on the internet for the ebanking customers.

Share Allocation

Share subscription of NIBL has been divided into four parts. A group of company holds 50% of total share capital, RastriyaBanijya Bank and Rastriya Beema Sansthan hold 15% of total share capital in each and General Public holds 20% of total.



1.3.2 Nabil Bank Limited [NABIL]

The previous name of Nabil Bank Limited was Nepal Arab Bank Limited. It is the first foreign joint venture bank of Nepal which started operating on 12th July, 1984 AD with technical service assistance with Dubai Bank Limited. It was incorporated with the objective of extending international standard modern banking service to various sector of the society looking for its objectives. It serves all from grassroots to colossal through corporate bodies covering all the stratum of society through its 49 points of representation and a chain of 63 ATMs service outlet throughout the nation.

Highly qualified and experienced management team manages operation of the bank. The bank is fully equipped with modern technology which includes ATM service, credit card, state of art, world renewed software from Infosys technology system, Bangalore, India internet banking system and Tele banking system.

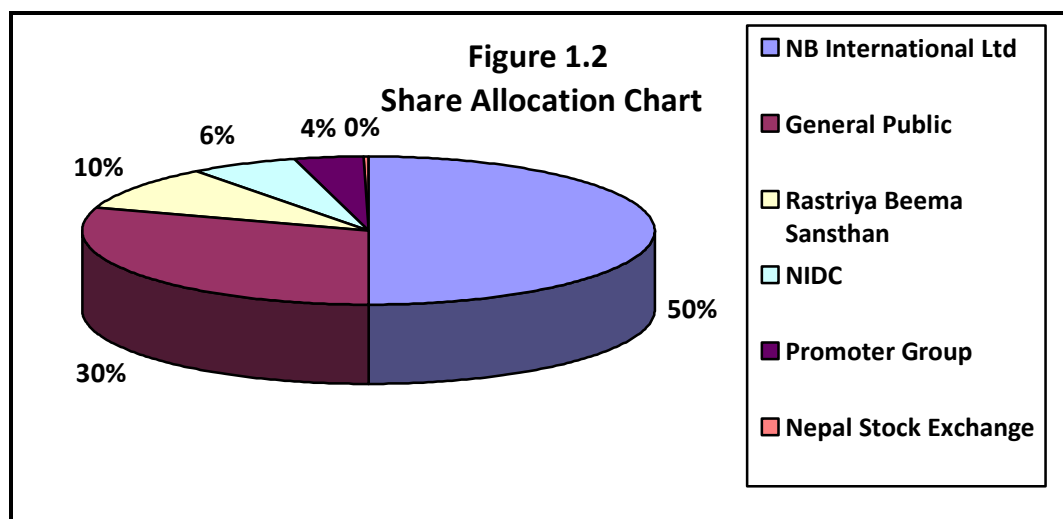
In the Fiscal Year 2009/10, with the mission of being the **1st Choice Provided of Complete Financial Solution**, the Bank has made changes in its organization structure and created/ added various Strategic Business Units [SBUs] to look after some business exclusively. Similarly it strengthened IT, operation and risk management units to improve customer service and compliance. It has also set up Nabil Investment

Banking Limited for merchant and investment banking activities and introduced new businesses like Banc assurance – an insurance solution.

Share Allocation

The share of NABIL has been subscribed as the following:

<u>Shareholders</u>	<u>Share Allocation</u>
NB [International] Ltd.	50%
General Public	30%
Rastriya Beema Sansthan	9.67%
NIDC	6.15%
Promoter Group	3.85%
Nepal Stock sExchange	0.33%
Total	100%



1.3.3 Nepal SBI Bank Limited [NSBI]

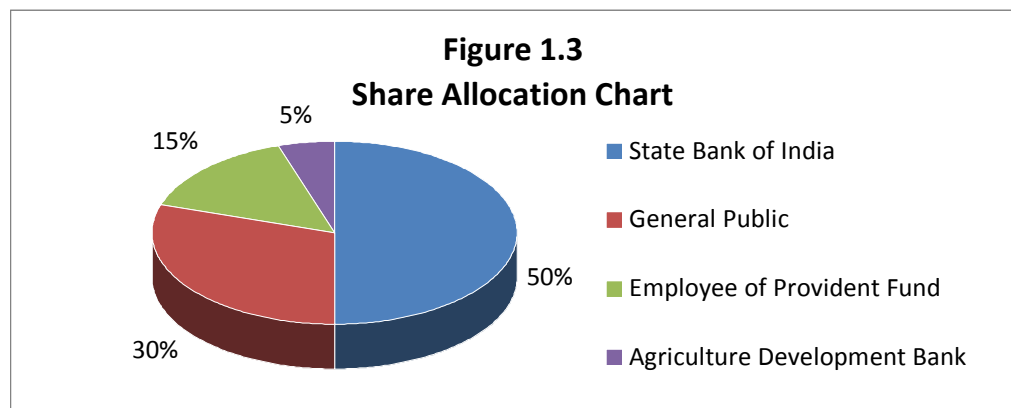
It is newly formed joint venture bank established in Nepal. It was established in 2050 BS under the Company Act 2021 and Banijya Bank Act 2031 BS with the partnership of State Bank of India. It was established with the authorized capital Rs. 240 million and Paid up capital of Rs. 12 million. There are 50% shares owned by State Bank of India, 15% by Employee of Provident Fund, 5% by Agriculture Bank and rest 30% by General Public.

It has extended to 23 districts through 50 physical outlets including 43 branches, 6 extension customers through delivery points like ATM, which number 50 and e-banking service for corporate and retail clients with the concept of ‘The Banker to Every Nepali’.

Although, it is new in the banking and financial market of Nepal, it has proved its capacity by showing its outstanding performance. It has come to gain its popularity by carrying the strategy of customer friendly relation and international banking transaction.

Share Allocation

Share subscription of NSBI is divided into four parts. State Bank of India holds 50% of total share capital, General Public holds 30% of total and Employee of Provident Fund and Agriculture Development Banks hold 15% and 5% of total share capital respectively.



1.3.4 Kumari Bank Limited [KBL]

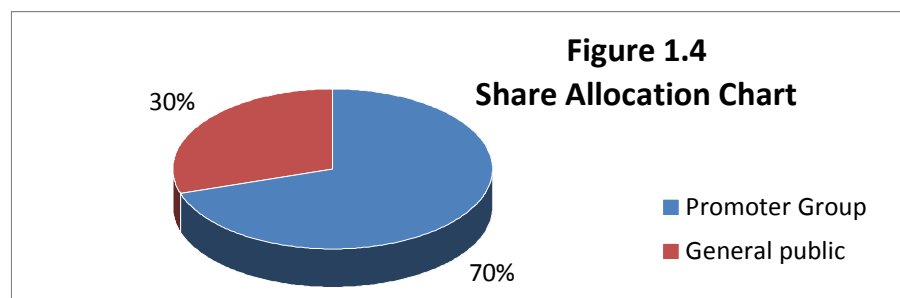
KumariBank Limited is the bank operated by the Nepalese investment. It started its banking service in Nepal from Chaitra 21, 2057 BS with the objective of competitive and modern banking service. It has been providing a wide range of modern banking service. The bank has adopted Global Banking Software developed by Temenos NV Switzerland to provide centralized data base system to all its branches.

It has been able to recognize itself as an innovative and growing institution to enhance customer value and satisfaction of banking transparent business practice professional management. By the end of Fiscal Year 2009/10, the bank has 28 branches and 26 ATMs in total.

Since its inception, it has been providing IT based solutions like internet banking, SMS banking and globally accepted electronic VISA debit cards. It has launched the own e-remittance platform, Kumari Remit to cater to the ever increasing Nepalese diaspora across the world. In Fiscal Year 2009/10, it introduced Kumari Mobile Cash that uses mobile phone to provide access to financial service. It has been also providing 'Mobile Wallet Service' which allows users to store cash balance in their mobile phone. Users can deposit or withdraw cash from their mobile phone and use the stored cash value to remit to anyone, anything, anywhere, with the push of a few buttons.

Share Allocation

Share subscription of KBL is divided into two parts. Promoter Group holds 70% of total share capital and General public holds 30% of total.



1.4 Statement of Problem

Nepal is running through many crises. Mainly its political condition is not as good as required to the banking sectors. There is high insecurity in this country especially for the investment in the banking sectors. Similarly, financial market of this country is unstable according

to the policy of the government. The frequent change of the government directly effects on the financial market of Nepal. Despite many financial institutions are being established in Nepal they are not getting sufficient environment and security for the investment. So these institutions mainly focus on the urban area for its investment than rural area as there is high possibility of profit maximization.

Although commercial banks are seemed operating after the government of Nepal adopted open liberal and market oriented economic policy, the financial sectors are not being capable to mobilize the existing resources and need of economy as expected earlier due to lack of capital structure. The strong commercial banks highly contribute to the national economy attracting foreign policy.

In fact a comparative study on capital structure of the bank is a mirror of strengths and weaknesses of that bank. The research may be beneficial to answer the problems of commercial banks. Hence this study helps to identify whether the banks [Nepal Investment Bank Ltd., Nabil Bank Ltd., Nepal SBI Bank Ltd. and Kumari Bank Ltd.] are economically and financial sound or not.

1.5 Objective of the study

Every research work has certain objectives. The study of four sampled banks has been done to evaluate capital structure and make comparison among their financial transaction. Some of the basic objectives of the study can be listed below:

- ❖ To evaluate the position of capital structure management of the mentioned banks.
- ❖ To show the relationship between EBIT and DPS
- ❖ To evaluate the efficiency of the banks in debt and equity.

- ❖ To find out Earning per Share.
- ❖ To evaluate the profitability position of the mentioned banks.
- ❖ To observe the financial strength and weakness of the banks and provide necessary suggestion and guidelines to the management of the banks.

1.6 Limitation of the study

Each and every work has certain limitation of criteria of doings in the world. Like others, this study is mainly conducted to analysis the position of capital structure of four major financial banks and their banking activities. In other sense, it is concerned to suggest appropriate capital structure of stated financial banks. So, some of the limitations are listed below:

- ❖ The study is mainly based on the four commercial Banks: Nepal Investment Bank Ltd., Nabil Bank Ltd., Nepal SBI Bank Ltd. and Kumari Bank Ltd.
- ❖ The study is limited to capital structure of the banks.
- ❖ Most of the data used here secondary basis, derived from the website of each bank.
- ❖ Result may mislead in case of incorrect data.
- ❖ The study has used five years' data of each bank.
- ❖ The data used for study are taken in Rs. million to avoid the errors.
- ❖ Fiscal Year 2063/64 is assumed as base year of the study.

1.7 Significance of the study

Financial institutions are the most concerned with firm's long term financial strategy. Capital structure and profitability of the firm are worthy to examine the financial position of the firm. Capital structure may help to indicate appropriate mix of debt and owner's equity

financing the firm's assets and profitability indicates the earning from various sources. A firm having sound return and efficient management is always supposed to be better and bright in future.

This study is based on the capital structure management of the financial banks. It may play some significance role in the managerial and financial decisions. This study on behalf of firm's capital structure and profitability and its relationship might be the specific subject matter to maximize the wealth increasing the stock price and to minimize overall cost of capital or Weighted Average Cost of Capital [WACC]. It may be helpful to find out strength and weakness of the managerial aspect. It also becomes one of the sources to know the risk factors related to capital structure management and assist financial managers as a guideline and minimize the opportunity cost of capital and maximize shareholders' wealth. Overall it may provide guidelines to improve the capital structure position to increase company's EPS and show weakness and strengths of the banks. It helps to enhance the efficiency of banks to raise its funds in future and makes the management helpful in policy making. The stakeholders, management, investors and interested researchers might be advantaged from some of the conclusion of this study.

1.8 Organization of the study

The study on capital structure management of four commercial banks has been divided into five chapters which are as follows:

Chapter – 1 : Introduction

It includes Background of the study, Evolution of Banking industry, Development of Banking industry in Nepal, Statement of the problem, objective of the study, significance of study, limitation of the study.

Chapter –2: Review of Literature

This chapter consists of Conception Framework, Theories of Capital Structure, Approaches to Capital Structure, Leverage, Review of Related studies.

Chapter – 3: Research Methodology

It includes Introduction, Research Design, Data collection and procedure, Data Analysis tools [Financial and Statistical tools].

Chapter – 4:Data Presentation and Analysis

It includes Profitability Ratio Analysis, Coefficient of Correlation Analysis, Leverage Analysis and Capital Structure Analysis.

Chapter – 5: Summery, Conclusion and Recommendation

It consists of Summary, Conclusion and Recommendation.

CHAPTER – 2

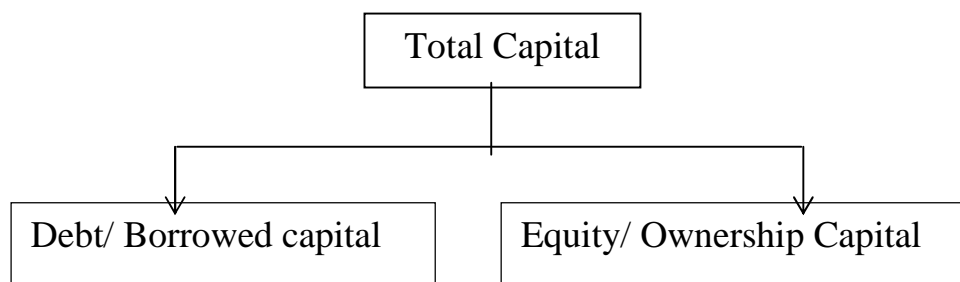
REVIEW OF LITERATURE

2.1 Introduction

It is the chapter which concerns with the review of books, journals, research studies to justify the work and make clear about the concept of capital structure recalling the previous studies. It helps providing enough information and descriptions of related subjects. “The purpose of reviewing literature is to develop some expertise in one’s area to see what new contributions can be made and to receive some ideas for developing research design”³.

2.2 Conceptual Framework

The term “capital” denotes the long term funds of the firms raised from long term debt, preferred stock, and common equity. All the items on the liabilities side of firm’s balance sheet excluding current liabilities are source of capital. It is very important resource to operate any kind of business. The total capital can be divided into two components. They can be presented below:



Debt capital is the long term fund raised from bond/ debenture or long term loan.

³ Howard K Wolf and Prem R. Pant, “A Handbook for social Science Research and Thesis Writing 2nd Edition, 1996 Pg:30”

Equity capital is the long term fund provided by the owner of the company.

“Capital Structure is the composition of long term debt, preferred stock and common equity, including reserves and surpluses, that is retained earnings. It represents the relationship among different kinds of long term sources of capital and amount.”⁴ It is a part of financial structure of a firm. In equation, it is shown as below:

Capital Structure= Long Term Debt + Preferred Stock + Common Equity

“Capital Structure refers to the mix of long term sources of funds, such as debentures, long term debt, preference share capital and equity share capital including reserves and surpluses”.⁵

“Capital Structure is a combination of long term debt and equity; it is a part of financial structure i.e. compromised 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”.⁶

“The term ‘Capital Structure’ is used to represent the proportionate relationship between debt and equity”.⁷

“Capital Structure is the proportions of debt instruments and preferred and common stock on a company’s balance sheet”.⁸

⁴ Rishi Raj Gautam and Kiran Thapa, Capital Structure Management, Edition 2008, Pg:3

⁵ Bhattarai Rabindra, Capital Structure Management, Edition 2006 Pg: 1

⁶ Iqbal Mathur, ;Introduction to Financial Management’, Mac Mellian Co. Ltd., New York, 1981, Pg: 239

⁷ Pandey, I. M. ‘Financial Management’, 9th edition, 2005, Vikash Publishing House Pvt. Ltd., India, Pg: 289

⁸ Van Horne, James C, Financial Management Policy, 12th edition, 2004, Pg: 253

“Capital Structure is the mix or proportion of a firm’s permanent long-term financing represented by debt, preferred stock, and common stock equity”.⁹

“Capital Structure is defined as the composition of a firm’s long-term financing represented by its long-term debt, preferred stock and common equity.”¹⁰

“If there is an optimal capital structure for a company it’ll minimize the opportunity cost of capital and maximize the shareholder’s wealth.”¹¹

“Capital Structure is determined by the mix of long-term debt and equity, a firm utilizes in financing its operations.”¹²

In short, capital structure is a main part of financial structure, which includes only long-term capital such as equity share capital, preference share capital and long-term debt. Good capital structure management leads the firm in successful path.

2.3 Theory of Capital Structure

Capital Structure is one of the parts of financial structure. It is concerned with the long-term financing of any firm such as common equity, preferred share, long term debt and debenture etc. It deals with the relevance of the proportion of debt and equity to the value and cost of capital. So it is important for a firm to develop an optimum capital structure. The optimum capital structure is that structure which

⁹ Van Horne, James C and Wachowicz, JR., John M, Fundamentals of Financial Management, 10th edition 2000, Published by Asoke K Ghosh, Prentice - Hall of India Pvt. Ltd., Pg: 460

¹⁰ Glenn V – Henderson, 1984, Pg: 434

¹¹ Weston, J. Fred and Copelent Thomas E. (1998). ”Managerial Financial,”, The Dryden Press 9th Edition, Pg: 565

¹² Lawrence J. Gitmar, “Principles of Managerial Finance”, 3rd Edition, Harper and Row Publishers New York

maximizes the value of firm and minimizes the Overall Cost of Capital or Weighted Average Cost of Capital [WACC].

The theory of capital structure is categorized into six different groups:

- ❖ Traditional Theory
- ❖ Modigliani Miller Theory
- ❖ Trade off Theory
- ❖ Free Cash Flow Theory
- ❖ Pecking Order Theory
- ❖ Stakeholder Theory

2.3.1 Traditional Theory

It is the first theory of capital structure. It deals clearly that lowest WACC will maximize the firm's market value. It means that WACC decreases only within the reasonable limit of financial leverage and reaching the minimum level. It starts increasing with financial leverage. Hence, a firm will have an optimum capital structure that occurs when WACC is minimum, maximizing the value of the firm. "According to this view, a judicious mix of debt and equity capital can increase the value of the firm by reducing the WACC up to certain level of debt".¹³

This theory avoids financing all with debt even though it is cheaper to finance debt fund than equity because the risk of non-payment increases after a certain level of debt. In such case financiers and debt-holders demand a higher compensation.

¹³ Pandey, I. M. (2005), 9th Edition, "Financial Management", India, Vikash Publishing House Pvt. Ltd. Pg: 316

2.3.2 Modigliani- Miller Theory

The Modigliani- Miller theorem states that if the capital structure decision has no effect on the cash flows generated by a firm, the decision will have no effect – in the absence of transaction cost- on the total value of firm's debt and equity although it is not a realistic theory. It indicates that there is no relationship between firm's market value and capital structure. This theory is based on a perfect capital market.

The theory contains some assumptions, which are:

- i. Capital market is perfect.
- ii. There are no taxes.
- iii. Companies can be divided in homogeneous risk classes.
- iv. There are no transaction costs of buying and selling securities.
- v. Relevant information is readily available and is cost-free to obtain.
- vi. Borrowing and lending can be done at same rate.

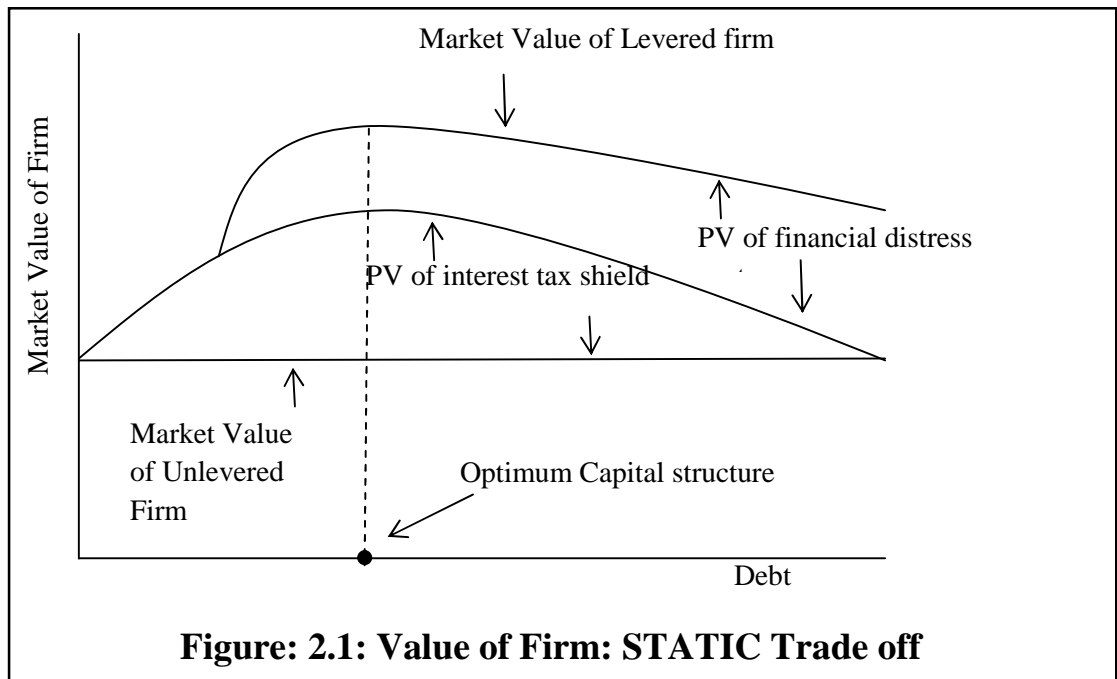
2.3.3 Trade off Theory

The optimum debt ratio is determined by the trade off between the costs and returns of debt financing. The firm considers this ratio as a target debt ratio because the ratio will maximize the value of the firm. Brealey Myer assumes that firms need to adapt their capital structure to reach that ratio but it [capital structure] needs time and cost for adaptation. So it is possible that present debt ratio may differ from target ratio.

According to Brealey Myer, "A static trade off frame-work in which the firm is viewed as setting a target debt to value ratio and moving gradually towards to it, in much the same way that a firm adjusts dividends to move towards a target payment ratio".¹⁴

¹⁴ Myeks, Brealey: (2005), "Principal of Corporate Finance", Tata Mc. Graw – H, Publishing Company Ltd., Pg: 509

Generally, high profit means low debt. But, this theory predicts just opposite relationship i.e. higher profit means more amount available for debt service and more taxable income to shield. They should mean higher target debt ratio. In theory, it sounds, but in practice, business prefers to avoid financial distress and situation of bankrupting.



2.3.4 Free Cash Flow Theory

The Free Cash Flow Theory presumes that there are vast conflicts of interest between stockholders and shareholders. This also implies that the manager's decision is not always in favor of maximizing the market value the firm. A Free Cash Flow is the balance of money, when all projects with positive net present value are financed.

Debt reduces the agency cost of Free Cash Flow by reducing the cash flow available for spending at the discretion of managers. It also reduces the freedom of decisions, because the firm is forced to pay at certain time interest and payoffs in future. Hence, there will be risk that causes managers to lead a firm more efficient.

2.3.5 Pecking Order Theory

The theory assumes that firms have performance by choosing a way to finance their projects. It is also based on the assertion that managers have more information about their firms than investors. Managers issue debt when they are positive about their firm's future prospects and will issue equity when they are not sure. The company expects steady cash flow as a commitment is made to pay to fixed amount of interest and principal to debt holders.

The followings are the assumptions of this theory:

- i. Firms prefer internal ways to finance projects.
- ii. Firms adapt their target dividend payout ratios to available investment resources.
- iii. Internal resources of firm are fluctuating because of unpredictable fluctuations of profitability.
- iv. When firms need extra resources, they prefer the safest way of getting fund; it means firms prefer debt to convertible stocks and common stocks.

The result of this theory is that a firm doesn't have a certain target debt ratio. The target ratio is dependent on the way of firm, financing its project in the past. This theory also studies the cost of asymmetrical information and cost of bankruptcy. When these costs exist, a firm does not always choose to finance projects with positive net present value. A positive net present value doesn't determine whether a firm finances a project or not, but the way in which a firm is able to finance projects.

2.3.6 Stakeholder Theory

Cornell and Shapiro [1987] assume that not only investors have an interest in a firm. There are different groups of non-investors

stakeholders, and some of them have a lot of influence in the financial policy of a firm or as Cornell and Shaprio wrote; “Financial structure may also depend on a firm’s net organizational capital and on the nature of its stakeholders”. Customers, employees and suppliers are the examples of non-investor stakeholders.

Non-investor stakeholders hold implicit claims which are non-written promises and rights such as right to provide service to customers of job security for employees.

2.4 Approaches to Capital Structure

Following approaches have been developed under the relevancy of capital structure to measure the value of firm and cost of capital:

- ❖ Traditional Approach
- ❖ Net Income Approach
- ❖ Net Operating Income Approach
- ❖ Modigliani-Miller’s Approach

The above approaches are based on the following assumptions:

- ❖ There are no corporate or personal taxes.
- ❖ The ratio of debt to equity of a firm can change many times but the total assets remain constant.
- ❖ There are no transaction cost and bankruptcy cost.
- ❖ All earning is paid out as dividend.
- ❖ Only two types of capital are employed; Long term debt and common stock.
- ❖ Operating earnings of the firm remain constant; that is growth rate is equal to zero.

- ❖ The expected values of the subjective probability distributions of expected future operating earnings [EBIT] of each company are same for all investors in the market.
- ❖ The firm's business risk is constant over time and is independent of its capital structure and financial risk.
- ❖ The firm is expected to continue indefinitely.

In addition, it uses the following basic definitions and symbols:

Debt,

$$\text{Cost of Debt } (K_d) = \frac{I}{B}$$

$$\text{Value of Debt } (V) = \frac{I}{K_d}$$

Equity of Common Stock,

$$\text{Cost of Equity } (K_e) = \frac{NI}{S}$$

$$\text{Value of Equity } (S) = \frac{NI}{K_e}$$

Weighted Average Cost of Capital (K_o)

$$\text{WACC } (K_o) = W_d \cdot K_d + W_e \cdot K_e$$

Or

$$K_o = \left(\frac{B}{V}\right)K_d + \left(\frac{S}{V}\right)K_e$$

$$K_o = \left(\frac{B}{B+S}\right)K_d + \left(\frac{S}{B+S}\right)K_e$$

Total Value of Firm (V)

$$V = B + S$$

Or

$$V = \left(\frac{I}{K_d}\right) + \left(\frac{NI}{K_e}\right)$$

Where,

I = Annual Interest

B = Market value of debt

NI = Earnings available for common stockholders

K_d = Cost of debt before tax

S = Market value of equity

K_e = Cost of equity

WACC = Weighted Average Cost of Capital

W_d = Weight/ Proportion of debt

W_e = Weight/ Proportion of equity

V = Value of firm in total

K_o = Overall Cost of Capital/ WACC

2.4.1 Traditional Approach

Traditional Capital Structure Theory, which is taken as middle ground position is also known as an intermediate approach because this approach assumes the capital structure is relevant matter for the value and cost of capital of the firm. It is the compromise between the Net Income Approach and Net Operating Income Approach. This approach strikes a balance between these two approaches. It resembles the Net Income Approach in arguing that cost of capital and total value of the firm aren't independent of the capital structure. But it does not subscribe to the view of Net Income Approach that value of a firm will necessarily increase for all degree of leverage. It shares a feature that, beyond a certain degree of leverage, the Overall Cost increases leading to a decrease in the total value of the firm under NOI approach.

“According to this approach, there is an optimal capital structure therefore the firm can increase the total value of the firm through the wise use of leverage. The firm initially can lower its Overall Cost of Capital through the use of cheapest cost of debt and raise its total value through leverage. But, increase in leverage increases the risk to the debt holders and the debt holders demand high interest rate as a result the Overall Cost of Capital also increases.

Graphically, it is shown as below.

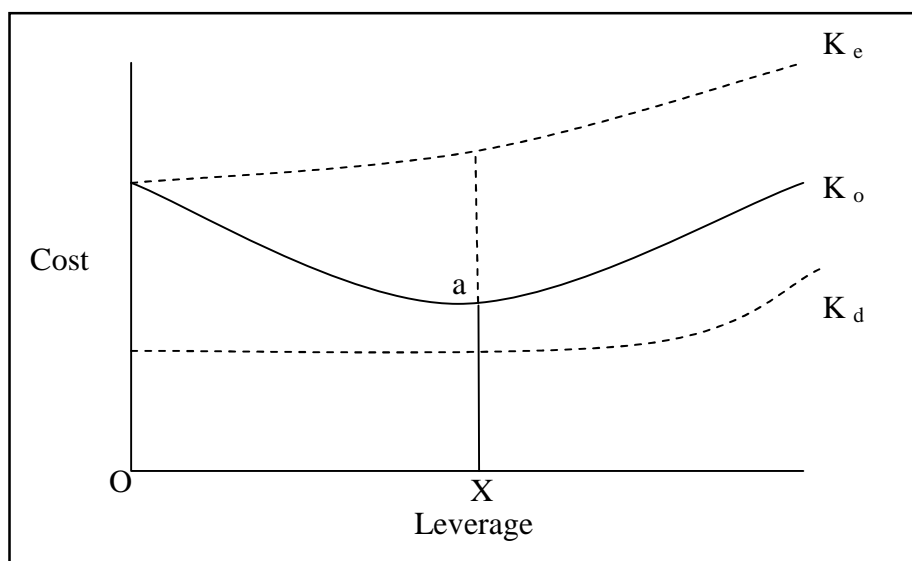


Figure: 2.2: Capital Cost: Traditional Approach

In the given figure, at first, Overall Cost of Capital [K_o] declines with increase in debt ratio because the rise in cost of equity [K_e] does not entirely offset the use of cheaper debt funds. As a result, the WACC [K_o] declines with moderate use of leverage. After a point, however, the increase in K_e is more than offsets the use of cheaper debt funds in the capital structure, and K_o begins to rise. The rise in K_o is supported further on cost of debt [K_d] begins to rise. The optimal capital structure is the point at which K_o bottoms out. In this figure, the optimal capital structure is constituted at point X. Thus, the traditional position implies that cost of capital is not independent of the capital structure.”¹⁵

According to the traditional approach, the manner in which the Overall Cost of Capital reacts to changes in capital structure can be divided into three stages.

2.4.1.1 First Stage: Increasing Value

In the first stage, the cost of equity at which, the shareholders capitalize their net income, remains constant or rises slightly with debt.

¹⁵ Bhattarai Rabindra, Capital Structure Management, Kanchan Printing Press, Nepal (2006), Pg: 346 – 347

The cost of equity does not increase fast enough to offset the advantage of low cost debt. Similarly, the cost of debt [K_d] remains constant or rises negligibly since the market views the use of debt as a reasonable policy. Thus, the value of the firm increases with increasing leverage and WACC falls down.

2.4.1.2 Second Stage: Optimum Value

In this stage when the firm reaches the certain degree of leverage, increase in leverage will have negligible effect on the value or cost of equity due to added financial risk exactly offsets the advantage of the low cost of debt. Thus, within that range or at the specific point, the value of firm will be maximum and cost of capital will be minimum.

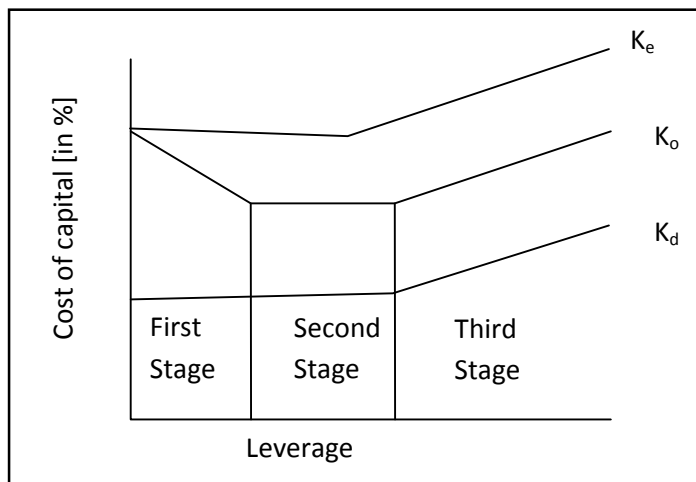


Figure: 2.3: The Cost of Capital Behavior [Traditional Approach]

2.4.1.3 Third Stage: Declining Value

Beyond the acceptable limit of leverage, the value of firm decreases with leverage as WACC increases with leverage. This occurs because investors perceive a high degree of financial risk and demand a higher equity capitalization rate that offsets the advantage of low cost of debt.

The overall effect of above three stages is to imply that cost of capital is a function of leverage. At first, it declines with leverage and starts rising after reaching at minimum level.

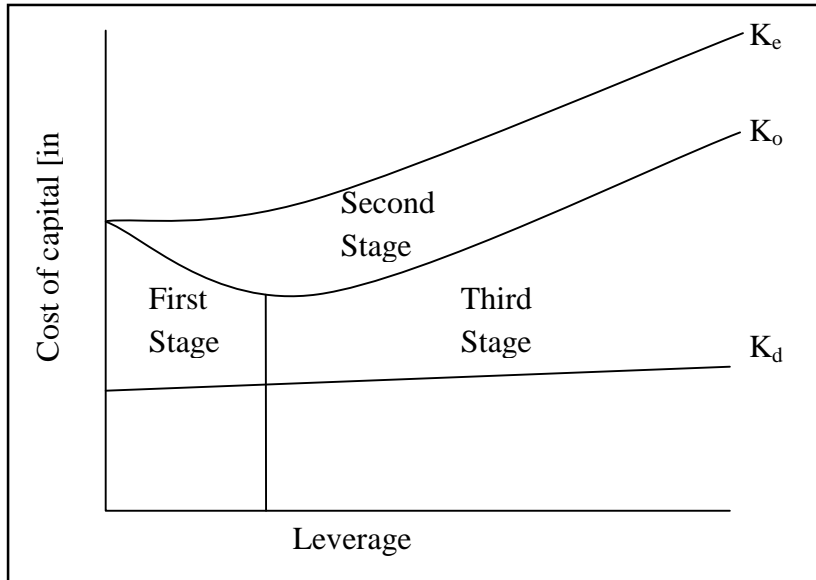


Figure: 2.4: The cost of capital Behavior

The figure 2.3 states that the Overall Cost of Capital curve [K_o] is a saucer shaped in a horizontal range which implies that there is a range of capital structure in which the cost of capital is minimized. Cost of capital [K_e] is expected to increase slightly at first and then at a faster rate.

The figure 2.4 states that Overall Cost of Capital [K_o] curve is U-shaped. In this situation, there is a precise point at which cost of capital would be minimum. This point defines the optimum capital structure.

2.4.2 Net Income Approach

Net Income Approach was suggested by David Durand in 1958 AD. It is a relevant theory of capital structure. “According to this approach, the capital structure is relevant to the valuation of the firm and the overall cost of capital. In other words, a change in the financial leverage [proportion of debt in the capital structure] will lead to a

corresponding change in the overall cost of capital as well as the total value of the firm.”¹⁶

It indicates that increase in the ratio of debt in the capital structure will decline the Weighted Average Cost of Capital and increase the value of firm and market price of shares and vice-versa.

NI Approach is based on the following assumptions:

- I. There are no taxes.
- II. The cost of debt is less than the equity capitalization rate or cost of equity.
- III. Both, cost of equity and cost of debt remain constant.
- IV. Net Operating Income remains constant.
- V. WACC decreases as leverage increases.

The effect of leverage on the cost of capital and total market values of the firm is graphically shown below:

The above graphical figures indicate the effect of leverage on the cost of capital and total market value of the firm. Figure 2.5 shows a continuous decrease in K_o with the increase in debt-equity ratio. The effect can be seen in the value of firm which is increasing in Figure 2.6. Under NI Approach, financial leverage is an important variable in the capital structure decision of a firm. The firm can lower the cost of capital by increasing the amount of leverage. The use of debt, in NI Approach, does not change the risk perception of investors. Similarly, cost of equity and cost of debt are assumed to be constant, under this approach. As a result, when proportion of debt is increased, the overall cost of capital decreases.

¹⁶ Bhattarai Rabindra, Capital Structure Management, Kanchan Printing Press, Nepal (2006), Pg: 342 - 343

2.4.3 Net Operating Income Approach

Net Operating Income Approach is also known as modern theory or an independent hypothesis of capital structure. It is an irrelevant theory developed by David Durand in 1952 AD. This theory assumes that the capital structure [proportion of debt and equity] is irrelevant to the value of firm and Overall Cost of Capital. “Under this approach, net operating income is capitalized at an overall capitalization rate to obtain the total market value of firm. The market value of the debt, then, is deducted from the total market value of firm to obtain the market value of the stock.”¹⁷ It can be shown as follows:

$$\text{Value of firm [V]} = \frac{NOI}{WACC}$$

$$\text{Value of stock [S]} = \text{Value of firm [V]} - \text{Value of debt [B]}$$

It assumes that the cost of debt and Overall Cost of Capital remain constant with the firm’s financial leverage. As the firm increases its relevant debt, the cost of equity capital increases but the overall capitalization [K_o] of the firm is not affected by the leverage of debt. This theory also assumes that the equity holders do react to higher leverage risk and demand higher rate of return for higher debt equity ratio.

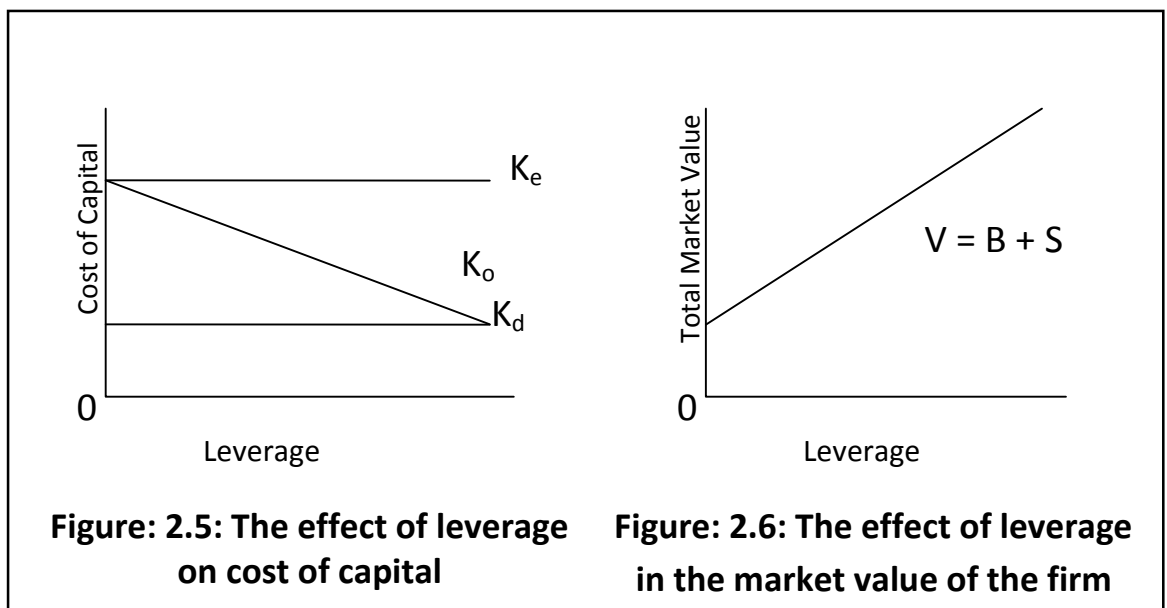
NOI Approach is just opposite from NI Approach with the respect to the assumption of the behavior of equity holder and debt holder. This approach is linked with the following assumptions.

- I. There are no taxes.
- II. The cost of debt is less than the equity capitalization rate or cost of equity.

¹⁷ Bhattarai Rabindra, Capital Structure Management, Kanchan Printing Press, Nepal (2006), Pg: 344 – 345

- III. Cost of debt remains constant.
- IV. The market uses an overall capitalization rate [K_o] which depends on the business risk. If business risk remains unchanged the cost of equity is constant.
- V. The market capitalizes the value of firm as a whole, thus the split between debt and equity is not important.
- VI. The use of less costly debt funds increases the risk of shareholders. This causes the equity-capitalization rate to increase. Thus, the advantage of debt is offset exactly by the increase of equity capitalization rate.

The relationship between financial leverage and cost of capital [K_e], cost of debt [K_d] and Overall Cost of Capital [K_o] can be presented in the following graph.



In the above diagram, Figure 2.7 states that K_o and K_d curve are parallel and there is no change with the change in leverage. K_e is continuously increasing along with the increase in the proportion of debt. Thus, there is no optimum point of capital structure. From the figure, we

can be clear that the use of low cost of debt has caused the equity-capitalization rate to increase as risk of shareholders increases. Similarly, Figure 2.8 states that the total market value of firm remains constant. “At the extreme degree of financial leverage, hidden cost becomes very high. Hence, the firm’s cost of capital and its market value is not influenced by the use of additional cheap fund.”¹⁸

2.4.4 Modigliani - Miller Approach [MM Approach]

Till the decade of 1950s, it was believed that the judicious mix of debt and equity capital, in the capital structure, decreases the overall cost of capital, increases the value of firm and helps in determining an optimum capital structure. But, 1958 AD, Nobel Prize winners, Franco Modigliani and Merton Miller published a research article, “The Cost of Capital, Corporation Finance and the Theory of Investment”, giving a new concept of capital structure which is also known as MM- Theory. MM –Approach states that the value of firm and cost of capital, in a perfect capital market without taxes and transaction costs, remain invariant to capital structure changes. However, MM-approach is based on the following assumptions.

- I. There exists a perfect capital market. It means investors are free to buy or sell securities. They can borrow without restriction at the same terms as the firms do.
- II. There are no transaction costs of buying and selling securities.
- III. Relevant information is readily available to all investors and is cost-free to obtain.
- IV. There are no personal and corporate taxes.
- V. All firms are homogeneous in risky.

¹⁸ Shrivastab R. M., “Financial Management”, Prentice – Hall of India, 1985, Pg: 874

- VI. All cash flows are perpetuities, that is; all firms expect zero growth.
- VII. All investors are rational and have homogeneous expectations of a firm's earnings.
- VIII. A sufficient number of buyers and sellers exist in the market; so no single investor can have a significant influence on security prices.

“In the no-tax MM case, the cost of debt and the overall cost of capital are constant regardless of a firm's financial leverage position, measured as the firm's debt to equity ratio. As a firm increases its relative debt level, the cost of equity capital increases, reflecting the higher return requirement of stock holders due to the increased risk imposed by additional debt. The increased cost of equity capital exactly offsets the benefit of the lower cost of debt, so that the overall cost of capital does not change with changes in capital structure.”¹⁹

The MM approach can be explained in terms of Proposition-I and Proposition-II.

Proposition – I

“MM's proposition – I states that the total market value of a firm is equal to its expected operating income divided by the discount rate approximate to its risk class.”²⁰

Symbolically, it can be presented as follows:

$$V = S + B \text{ or } \frac{NOI}{P_k}$$

Where,

V = Total market value of firm

S = Total market value of equity

¹⁹ Bhattarai Rabindra, “Capital Structure Management”, Pg: 348
²⁰ Prasanna Chandra, “Financial Management”, Tata McGraw – Hill Publishing Company Ltd., New Delhi, Pg: 558 - 559

B = Total market value of debt

NOI = Net Operating Income

P_k = Discount rate applicable to the risk class cost of equity to which the firm belongs;

“MM’s preposition-I argues that for the same risk class, the total market value is independent of that debt-equity mix and is given by capitalizing the expected net operating income by the capitalization rate appropriate to the risk class”.²¹ The statement can be expressed as following in equation.

Total market value of firm = Total market value of equity + Total market value of debt

$$V = S+B$$

For a levered firm,

$$\text{Value of firm } [V_L] = \frac{\text{Net Operating Income}}{\text{Opportunity Cost of Capital}} = \frac{\text{NOI}}{K_o}$$

Or,

$$= \frac{\text{Earning Before Interest and Taxes (EBIT)}}{\text{Overall Cost of Capital (} K_o \text{)}}$$

For an unlevered firm,

$$\text{Value of firm } [V_u] = \frac{\text{EBIT}}{K_{e(U)}}$$

Where, $K_{e(U)} = K_o$

In the case of unlevered firm, the entire NOI is the shareholders’ net income. Therefore, WACC or K_d is equal to its opportunity cost of capital.

Under this preposition, the firm’s K_o can be expressed as the ratio of NOI to the market value of firm.

²¹ Ibit, Pg: 226

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

Or,

$$= \frac{NOI}{B + S}$$

Here, K_o is the Weighted Average of the expected rate of return of equity plus debt. The overall cost of capital function of MM is graphically shown below.

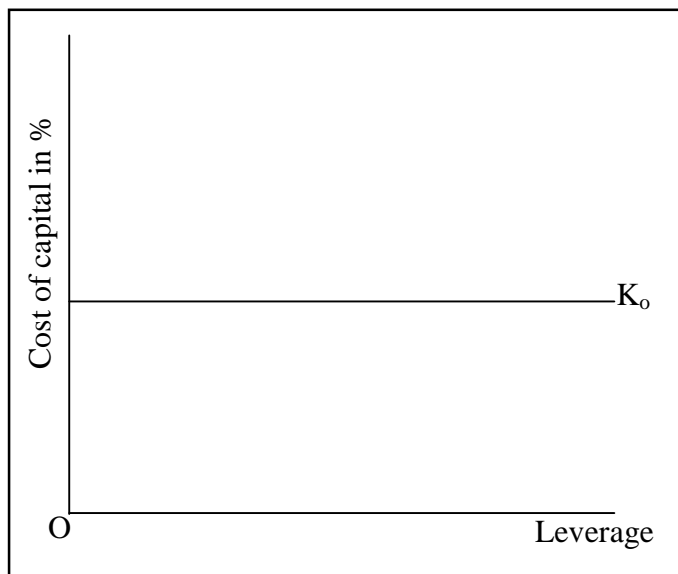


Figure: 2.7: Cost of Capital [MM] Proposition I]

From the above graph, we can know that, since the value of both, levered and unlevered firm exists unchanged with the change in financial leverage, WACC or K_o also remains unchanged. Here, this proposition states that the K_o of levered and unlevered, two identical firms will be equal to its opportunity cost of capital resulting no effect on shareholder's wealth by financial leverage.

Proposition-II

MM's Proposition-II states that the higher the financial risk, the higher the shareholders' required rate of return of the cost of equity. It implies that the change in financial leverage effects on return [EPS and

ROE] of shareholders. It means EPS and ROE increase with leverage when interest rate is less than the firm's return in assets. The cost of equity rises proportionately with the increase in leverage to compensate in the form of premium for bearing additional risk. It assumes that only the equity shareholders adjust the capitalization rate for the degree of financial leverage risk. It means that K_e increases as debt-equity ratio increases but K_d remains same.

The cost of equity capital for a levered firm $K_{e[L]}$ is equal to the cost of equity of an unlevered firm $K_{e[U]}$ plus a risk premium. Risk premium is equal to the difference between $K_{e[U]}$ and K_d , times the debt-equity ratio.

$$K_{e[L]} = K_{e[U]} + \text{Risk premium}$$

Where,

$$\text{Risk premium} = [K_{e(U)} - K_d] \times \frac{B}{S}$$

Since, $K_{e[U]} = K_{o[U]}$,

$$K_e = K_{o(U)} + [K_{o(U)} - K_d] \times \frac{B}{S}$$

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

2.4.4.1 Capital Structure with Corporate Tax

According to MM's hypothesis the value of firm is calculated with the assumption that the corporate tax does not exist. In fact, corporate income tax exists and interest paid to debt holders is deducted from its earnings. In such cases, the value of firm is calculated on the following basis;

Valuation of levered firm,

$$V_L = V_U + B \times T$$

Valuation of unlevered firm,

$$V_U = \frac{EBIT(1-T)}{K_{e(U)}}$$

Where,

V_L = Market value of levered firm

V_U = Market value of unlevered firm

B = Market value of debt

T = Corporate tax rate

$K_{e[U]}$ = Cost of equity of unlevered firm

EBIT = Earnings before Interest and Tax

2.4.4.2 Capital Structure with corporate tax, agency cost and bankruptcy cost

$V_L =$	Value of unlevered firm	+	Present Value of debt tax shield	-	Present Value of financial distress [bankruptcy] cost	-	Present Value of debt tax shield
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2.4.4.3 Capital Structure with corporate and personal tax

$$V_L = V_U + B \left[1 - \frac{(1-T_c)(1-T_{ps})}{(1-T_{pd})} \right]$$

Where,

T_c = Corporate tax rate

T_{ps} = Personal tax on stock income

T_{pd} = Personal tax on debt income

2.5 Leverage

The sources of fund with fixed return have implication for those who are entitled to variable return. After paying a stated rate of interest to

debt capital and dividend to preferred stock, the residual portion only can be received by the equity shareholders. If there is no such a debt in a company, all the earnings can be received can be received by equity shareholders. Thus the amount receivable by the equity shareholders is affected by debt and preferred capital. In other words, it can be stated that such an effect is known as 'Leverage'. The term 'Leverage' can be defined as to use the fixed cost found for maximizing the profit share of owner's equity. Moreover, it can be defined as an attempt to increase the return rate of ownership capital with maximum using low interest rate borrowed capital. "The used of the fixed charges along with the owner equity in the capital structure is described as financial leverage or trading on equity"²².

There are three types of leverage:

- I. Financial Leverage
- II. Operating Leverage
- III. Combined Leverage

I. Financial Leverage:

Financial Leverage reflects the amount of debt capital used in the capital structure of the firm. The use of the source of funds with fixed charges such as debt and preference capital with the owner's equity in the capital structure is explained as Financial Leverage. The leverage will be high in the case of higher proportion of borrowed capital in the total capital structure and it will be '**One**' if the capital structure does not consist of borrowed capital. It measures the relationship between the EBIT and EPS. It is also the ratio between the percentage of change on EBT and EBIT.

²² O. P. Cit, Pandey I. M., Pg: 633 – 634, 1992

II. Operating Leverage:

Operating Leverage is related with fixed cost. It is the firm's ability to use fixed cost to magnify the effect of changes in sales on its EBIT. Thus operating leverage can be defined as a ratio between the percentage of changes in EBIT and percentage of changes on sales. It can be defined as the ratio between contribution margin and EBIT.

It is the way of measuring the business risk of a firm. It reflects the extent that the fixed costs are utilized in the business firm. A firm is said to have high degree of operating leverage, if it is using higher percentage of fixed cost. There will be no operating leverage, if there is no fixed cost.

III. Combined Leverage:

The combination between Financial and Operating Leverage is known as Combined Leverage. It measures the relationship between sales and EBT [EPS].

2.6 Review of the Related Studies

2.6.1 Review of Journal

Sharma and Rao Study:

They conducted the test of MM hypothesis on the influence of debt on the value of a firm's to a non-regulated industry. They agreed that estimate of cost of capital arrived through this model will be accurate only when their hypothesis on debt and dividends are correct, this is an essential condition for the employment of this model. They used samples of 30 engineering equation for three cross-sections year; 1962, 1964 and 1965 for their studies. Calculation of variable was done in exactly the same way that was done by MM with two exceptions. They experimented

with total assets and sales for reflecting variables and results were meaningful. When the growth rate of fixed assets was used as the growth variable, the results were somewhat inconsistent with the economic reasoning. They included no-tax advantage to debt. Thus this paper supported that the investors prefer corporate to personal leverage and therefore, the value of a firm rises up to a leverage rate considers judicious.

Daven Part's study:

Daven Part made a study of three unrelated industries; Chemical, Food and Metal manufacturing industries using the British data. He concluded that the result of his study did not support the MM's contention that the overall cost of capital is independent of proportion of debt and preference shares in capital structure of firm. He supported the traditional view of cost of capital and leverage because his result showed 'U' shaped cost of capital with respect to leverage.

Wipern Study:

Wipern study focused on the test of empirical relationship between financial structure and value of the fund. He tried to eliminate the principal problem of empirical study on the leverage and attempted to offer what were hoped to be more fruitful alternatives in the determination of relationship between leverage and cost of capital. He argued that the leverage either the ratio of debt to equity at book values, both of these measures contain important conceptual basis.

Weston's Study:

"A test of cost of capital proportion", a research work of Weston, made some important improvement in the cost of capital model. He

included firm's size and growth as additional explanatory variable in his model.

From his research, he found that the regression co-efficient of leverage to be positive and significant, when he used MM model. However, when multiple regression was run, he found that the correlation co-efficient is significant and the regression co-efficient is negative and significant. When the influence of growth is isolated, leverage is found to be negatively correlated with the cost of capital.

He also concluded that apparent lack of influence of leverage on the overall cost of capital observed by MM was due to the negative correlation of leverage with earning growth. Weston also tested MM proposition-II.

2.6.2 Review of Thesis

Mr. Ravi Prakash Choudhary, [Choudhary, Ravi Prakash, "Capital Structure of Joint Venture Commercial Bank of Nepal", with the reference of Nabil Bank Ltd., Himalayan Bank Ltd., Standard Chartered Bank Ltd., and Everest Bank Ltd., unpublished Master's Thesis, TU , Biratnagar, 2010]

The basic objectives of the study are to analysis capital structure ratio, find out factors affecting capital structure management decision, find out profitability position of the sampled banks and to examine long-term solvency of the sampled banks.

The study has concluded the followings:

- I. Deposit trend of all selected banks seem to be increasing over the last five years. In the capital structure of any financial institutions deposit play the vital role because it is very essential for any financial organizations.

- II. Total liabilities of Nabil Bank Ltd., Himalayan Bank Ltd., Standard Chartered Bank Ltd., Everest Bank Ltd. and Nepal SBI Bank Ltd. also seem to be increasing over the year.
- III. Capital structure [Leverage] ratio has been used to analysis the long term solvency of the selected banks. This ratio also shows the manner by which capital structure is formed.
- IV. The computation of debt assets is in terms of total debt to total assets reveals that the commercial banks are highly leveraged on five time horizon. It means the assets of selected banks have been financed more funds collected from creditors.
- V. According to DFL study, NBL, HBL and SCBL have good financial leverage, while leverage of EBL and NSBL is quite high.

Mrs. Sujata Guragain, [Guragain, Sujata, “Capital Structure of Commercial Banks” with the reference of Nepal SBI Bank Ltd., Laxmi Bank Ltd., and Everest Bank Ltd., unpublished Master’s Thesis, TU, Biratnagar,2008]

The main objectives of the study are to examine long-term solvency of the selected banks, calculate capital structure ratio, and evaluate debt serving capacity of the sampled banks and to find the capital adequacy/ sufficiency ratio of banks.

The study has concluded the followings:

- I. The Reserve and Surplus of NSBL and EBL is in the increasing trend. However R/S of Laxmi Bank Ltd. has decreased in the Fiscal Year 2060/61. After that, it is also in the increasing trend and the trend is very high in each Fiscal Year. Increasing R/S will reduce the shareholder’s profit.

- II. NSBL and LBL had borrowed from the local and foreign institution. The trend of total borrowing of both banks is very fluctuating. EBL had borrowed from outside only in the Fiscal Year 2061/62.
- III. The deposit trend of NSBL, LBL and EBL seem to be increasing over the last five years.
- IV. The total liabilities of NSBL, LBL and EBL seem to be increasing over the studied years.
- V. Debt equity ratio of LBL and EBL is in increasing trend and NSBL is in decreasing trend.

Mrs. Kopila Khanal, [Khanal, Kopila, “Comparative Analysis of Capital Structure of Commercial Bank”, with the reference of Nepal SBI Bank Ltd., Kumari Bank Ltd. and Nabil Bank Ltd., unpublished Master’s Thesis, TU , Biratnagar, 2009]

The main objectives of the study are to calculate capital structure ratio, evaluate debt serving capacity of banks and to show trend of composition and capital of bank.

- I. The reserve and surplus of NBL, EBL and NSBL is in the increasing trend.
- II. NBL and NSBL had borrowed from the local and foreign institutions. The trend of borrowing of NBL is very fluctuating and NSBL is increasing. KBL had not borrowed from outside in the Fiscal Year 2059/ 60 and 2060/ 61 and borrowing of KBL is decreasing thereafter.
- III. According to the DFL, KBL and NSBL have higher degree of financial leverage in the Fiscal Year 2059/60. But DFL of NBL is quite fluctuating in each year and in increasing trend.

- IV. The trend of Debt Assets ratio of NBL, KBL and NSBL is fluctuating over the studied premium.
- V. D/E ratio of NBL and KBL is increasing over the studied period and NSBL is fluctuating.

Mr. Keshav Kumar Adhikari, [Adhikari, Keshav Kumar, “Capital Structure Management of Commercial Banks of Nepal”, with the reference of NSBL, EBL, Bank of Kathmandu Ltd. and Himalayan Bank Ltd., unpublished Master’s Thesis, TU, Biratnagar, 2011]

The main objectives of the study are to examine the relationship of capital structure with other variable such as EPS, DPS and Net worth to measure the relationship between debt and equity.

It has made the following conclusions;

- I. EPS of selected banks is in increasing trend.
- II. D/E ratio of HBL is lowest among the selected bank and NSBL is highest whereas EBL and BoKL is average type.
- III. The equity capitalization ratio of NSBL is the lowest among the selected banks and HBL is highest.

Mr. Nabaraj Poudel, [Poudel, Nabaraj, “A Comparative study of Capital Structure and Profitability”, with reference of Nepal Bangladesh Bank Ltd. and Himalayan Bank Ltd., unpublished Master’s Thesis, TU, Biratnagar, 2011]

The main objectives of the study are to analysis the relationship between capital structure and profitability and to study the debt serving capacity of NBBL and HBL.

It has made the following conclusions:

- I. Both banks have extremely used debt capital.

- II. Both banks are able to maintain capital and equity ratio.
- III. HBL seems to be better in terms of profitability and capital structure than NBBL.
- IV. NBBL is not able to utilize shareholder equity in efficient manner whereas HBL seems able to utilize shareholder equity in moderate level.

CHAPTER – 3

RESEARCH METHODOLOGY

3.1 Introduction

The term 'Research' simply, refers to the activity of investigation, experiment or careful study in any topic, in a systematic way, with the aim and objective to discover a new fact, conclusion or information. In other side, methodology is that methods, process or procedures used to follow up the research activity. Hence, it can be defined as the process or methods applied to make a deep study on a topic to find out certain result. It can be also expressed as the procedures to make the research mark complete in a systematic way.

"A system of model, procedures and techniques used to find the results of a research problem is called a research methodology."²³

Research methodology helps to solve the problem raised in the research activity. Research methodology depends in various aspects of the research project such as the size of project, the objective of project, impact and importance of project, time frame of project, etc.

Research Methodology is a working system of research which helps to solve the existing problem in the work setting and generate a new knowledge in a particular area. Hence, Research Methodology can be referred as various steps adopted to complete a research work.

3.2 Research Design

Research Design is a next step of research which provides a complete guideline for data collection. It is a plan for collection and

²³ R. Pannerselvon, "Research Methodology", Prentice – Hall of India Pvt. Ltd., 2008, Pg: 2

analyzing data is an efficient and relevant mannered. "Research design is the plan, structure and strategy of investigation conceived so to obtain answers to research questions and control variable"²⁴. Research design has normally two purposes to answer the research questions and to control variance.

It is a plan of action that arranges the essential conditions for collection and analysis of data in a form that aims to combine relevance to research purpose with economy in the procedure. Research design provides the framework to the study which is also the outline of a plane to test the hypothesis. It conceptualizes the structure of research and refers to the process of planning research study.

Hence, the research study is considered to analyze the capital structure of four commercial banks, NBL, KBL, NIBL, and NSBL. Historical data is used for the study. Therefore the study has adopted the past financial statements of last five years such as balance sheet, Income Statement.

3.3 Data collection procedure

Data is the most important factor in the research without which a research is incomplete. Mainly there are two sources of data; Primary and secondary. Almost secondary data have been used under these studies such as annual report of sampled banks through websites. During the period of research, most of the data and information have been collected through discussion and inquires.

3.3.1 Sources of Data

Mainly, secondary data such as Balance sheet and profit and loss all from the published annual report of sampled banks through websites

²⁴ Sharma Manoj, "Research Methodogy", Anmol Publication Pvt. Ltd., New Delhi, 2004

have been collected and used for the study. Along with it other supplementary data are collected from other institutions like Nepal Rastriya Bank Nepal Stock Exchange Ltd. etc.

3.3.2 Population and Sample

Basically, population means the number of total people living in a particular area. For this study, all the commercial banks are the population size. There are currently 32 commercial Banks. Some some of these populations are as follows;

- i. Nepal Bank Ltd.
- ii. Nabil Bank Ltd.
- iii. Nepal Investment Bank Ltd.
- iv. Himalayan Bank Ltd.
- v. Nepal S.B.I. Bank Ltd.
- vi. Kumari Bank Ltd.
- vii. Nepal Bangladesh Bank Ltd.
- viii. Everest Bank Ltd.
- ix. Bank of Kathmandu Ltd.
- x. Lumbini Bank Ltd.
- xi. Nepal Crest and Commerce Bank Ltd.
- xii. Standard chartered Bank Ltd.
- xiii. KIST Bank Ltd.

Out of 32 commercial Bank four major commercial banks; NBL, NSBI, NIBL and KBL are considered as the samples to carry out this thesis.

3.3 Tools of Analysis

For the purpose of data analysis, various financial and statistical tools have been used to the objectives of the study. These tools can help to evaluate capital structure management of four commercial banks.

3.4.1 Financial tools

Financial tools help to measure financial strengths and weakness of the firm with the help of financial statements or reports. Some of the important financial tools that are used to financial position of firms are leverage or capital structure ratio analysis and profitability ratio.

3.4.1.1 Ratio Analysis

A ratio is commonly known as an arithmetical relationship between two figures, dividing one with other. Ratio analysis is a technique of analyzing and interpreting the financial statement through mathematical expression. It may be defined as the mathematical expression of the relationship between two accounting figures. It is also termed as to evaluate the different performances of a firm from ratio of different accounting figures.

3.4.1.2 Leverage or capital structure Ratio

Leverage ratio is also known as capital structure Ratio. It indicates the relation between debt and equity. It is calculates to measure the financial risk and the firm's ability of using debt for the shareholder's benefit. The following ratios are computed under the ratios.

a) Debt Equity Ratio

It is the relationship between long term debt and owners equity. It is also the ratio of total debts and total assets. It indicates the relative proportion of capital contributed by creditors and owner to finance the assets of the bank.

Debt equity ratios can be calculated as follows:

$$\text{Debt Equity Ratio} = \frac{\text{Long term debt}}{\text{Shareholder's Equity}} \text{ or } \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

Where,

$$\text{Total debt} = \text{Long Term debt} + \text{Current Liabilities}$$

$$\text{Shareholder's equity} = \text{Net worth}$$

Interpretation :

Higher ratio implies that more of funds invested in the business are provided by outsider, so it is not preferable lower ratio implies that more funds invested in the business are provided by owners, so it is preferable.

b) Debt to Total Capital Ratio

This ratio shows the relationship between long – term debt and total capital. Here total capital includes shareholder's equity as well as long term debt. It is a test of long term solvency. It can be computed by the following formula.

$$\text{Debt to Total Capital Ratio} = \frac{\text{Long term debt}}{\text{Capital Employed}} \text{ or } \frac{\text{Total Debt}}{\text{Total Capital}}$$

Where,

$$\text{Total Capital} = \text{Capital Employed} + \text{Long Term Debt}$$

Interpretation:

Since it is variation of Debt-Equity ratio, it gives similar indication as Debt-Equity ratio.

Higher ratio is not favorable for firm whereas lower ratio is favorable.

c) Interest Coverage ratio

It is also termed as interest earned ratio. It is the ratio that indicates ability of a firm to pay interest charges on its borrowed capital. It is calculated as follows.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before Interest and Taxes (EBIT)}}{\text{Interest Expenses}}$$

Interpretation:

Higher the coverage ratio, the greater the ability of the firm to pay its annual interest.

3.4.1.3 Profitability Ratio

The main objective of a firm is profit maximization. It is very essential to earn high profit for the successful running of a business concern. The profitability ratio is related to profit. It shows overall efficiency of banks. The ratio contains the following ratios.

a. Return on Total Assets

This ratio indicates the relationship between net profit and total assets and measures the rate of return on assets earned by the banks.

It is acquired by the followings;

$$\text{Return on Total Assets} = \frac{\text{Net Profit after Interest and Taxes}}{\text{Total Assets}}$$

Interpretation:

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

b. Return on shareholder's equity

It shows the relationship between the net profit and Total shareholder's fund. It shows how efficiently the shareholder's fund has been used. It can be computed by the following;

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

Where,

Shareholder's equity = Equity share capital + preference shares capital + Reserve and surplus + Reserve fund + General Reserve + Capital Reserve + fictitious assets

Interpretation:

Higher ratio shows the efficient utilization and management of shareholder's fund.

c. Return on net assets or capital employed

This ratio indicates the relationship between Net assets after tax and capital employed. It shows whether the amount of capital employed has been efficiently used or not. It measures the efficiency of firm on the utilization of total capital. It is computed as follows;

$$\text{Return of Capital Employed} = \frac{\text{Net Profit after Taxes}}{\text{Capital Employed or Total Capital}}$$

Interpretation:

Higher ratio shows the efficient use of capital employed.

d. Dividend per share

Dividend per share is considered as the earning distributed or fund as cash dividend on equity share. It is calculated as follows;

$$\text{Dividend per Share} = \frac{\text{Dividend Fund to Equity Shareholder's}}{\text{Number of Equity Shares}}$$

Interpretation:

Higher the ratio, greater the attraction towards the banks from the part of investors.

e. Earning per share

The earning of per share is known as earning per share. It is calculated as follows;

$$\text{Earning Per Share} = \frac{\text{Net Profit after Taxes - Preference Dividend}}{\text{Number of Common Share}}$$

Interpretation:

Higher per share return shows excellent performance of the firm.

3.4.1.4 Leverage Analysis

The degree of financing leverage analyses the leverage of a firm. It is the ratio between percentage change in earning available to common stock (EPS) and EBIT. It is calculated as follows;

$$DFL = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}} = \frac{EBIT}{EBT} = \frac{EBIT}{EBIT - I}$$

Interpretation:

Higher ratio of DFL indicates higher financial risk as well as higher fixed charges of the firm.

3.3.1.5 Capital Structure Analysis

To evaluate the capital structures position of the banks, NI and NOI approaches are used among various approaches.

Value of firm (V) = Value of debt (B) + value of equity (S)

$$\text{Overall cost of capital (K}_o\text{)} = \frac{\text{EBIT (NOI)}}{V}$$

$$\text{Equity capitalization risk (K}_e\text{)} = \frac{NI}{S}$$

3.4.2 Statistical Tool

This statistical tools help to evaluate the position of capital structure of the firm and help the manager to observe the position of banks. Under these methods, following have been used to analysis the capital structure of four banks.

a. Arithmetic Mean

It is the average mean of observation. It is calculated dividing total observation by Number of observation.

$$\text{Arithmetic Mean } (\bar{x}) = \frac{\sum x}{N}$$

Where,

$\sum x$ = Total value of observation

N = Number of Observation

\bar{x} = Mean or Average

b. Standard deviation

Standard deviation is a statistical measure of variability of a set of observations. It is the positive square root of the deviation of return and the arithmetic mean of observations. It is a tool to know the risk of the bank.

It is computed as;

$$\text{Standard deviation } (\sigma) = \sum_{i=0}^n (r^i - \bar{R})^2 \text{ or } \sqrt{\frac{\sum x^2}{N} - \left(\frac{\sum x}{N}\right)^2}$$

Or

$$\sqrt{\sum (R_t - \bar{R})^2 \times P}$$

Where,

R_t = Return of observation

N= Number of observation

\bar{R} = Arithmetic Mean of observation.

P = Probability of observation

Interpretation;

Higher the standard deviation, higher the risk and vice – versa.

c. Correlation coefficient

The correlation coefficient is a statistical tool which studies the relationship between two variables. It helps to determine the extent to which the two variables are corrected. It ranges between +1 to – 1.

It is computed as follows:

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

Interpretation :

- i) When $r = +1$, perfectly positive correlation
- ii) When $r = -1$, perfectly negative correlation
- iii) When $r = 0$, there is no correlation

d. Coefficient of variation (CV)

CV is another method of measuring the risk. It is the standardized measure of the risk per unit of return, calculated as the standard deviation divided by the expected return. It shows the risk per unit of return.

$$CV = \frac{U}{x} \times 100$$

Interpretation :

Less than CV, more the uniformity or consistency.

More the CV, less the uniformity or consistency.

3.5 Trend Analysis

Trend is a tending of time increase or decrease order. Trend analysis is an important tool to evaluate the financial position of bank over a period of time. Various data related to capital structure have been analyzed to show the trend percentage of Share capital, Reserve and Surplus, Borrowings, total deposits and total investment.

$$\text{Trend Percentage} = \frac{\text{Index Yearly Amounted}}{\text{Base Year Amount}} \times 100\%$$

CHAPTER – 4

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

Data presentation and analysis is an important measure to evaluate and analysis the capital structure management of the four sampled commercial banks. This chapter provides actual and practical information of the sampled banks in terms of annual data of these banks. It also helps in conclusion and recommendation.

Furthermore, various financial variables have been presented in numerical form to achieve the financial decisions. Similarly, ratio analysis, leverage analysis, capital structure analysis, trend analysis, arithmetic mean, standard deviation, co-relation coefficient etc have been applied to analyze the position of capital structure management of these sampled banks as a main tool.

4.2 Profitability Ratio Analysis

Profitability is net result of a large number of policies and decision. It gives final answer about how efficiently the firm is being managed. The profitability ration of NABIL, NIBL, NSBI and KBL is presented below using following table.

4.2.1 Earning Per Share (EPS)

Earning per Share is the ratio between net profit after tax and number of shareholders. It is a widely used ratio in assessing the profitability of a firm from the owners' point of view. It measures the percentage of profit available to the equity holders in per share basis. It is calculated dividing total earnings available to common stockholders by

number of common shares outstanding. The following table shows the EPS of NABIL, NIBL, NSBI and KBL.

Table - 4.1
Earning Per Share

(Rs. in millions)

F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	137.08	108.31	106.76	78.60	65.91	99.33	24.93	25.10
NIBL	62.57	57.87	37.41	52.55	48.84	51.85	8.59	16.57
NSBI	39.35	28.33	36.18	23.69	24.85	30.48	6.22	20.41
KBL	22.70	16.35	27.46	24.24	16.92	21.53	4.29	19.92

Source: Appendix-I

The above table reveals that the EPS of NABIL has ranged from Rs. 65.91 to Rs. 137.08. The nature of ratio is decreasing over the studied period. The average EPS of bank is Rs. 99.33, S.D. is 24.93% and C.V. is 25.10%.

The EPS of NIBL is fluctuated over the last five Fiscal Years. The EPS of bank ranged between Rs. 37.41 and Rs. 62.57. The EPS in F/Y 2065/66 is lowest due to low income. The average EPS of bank is Rs. 51.85 and C.V. is 16.57%.

The EPS of NSBI is also fluctuated over the studied period. Its average EPS is Rs. 30.48 and which is the lowest among the sampled banks and C.V. is 20.41% which is moderate.

Similarly, the EPS of KBL ranged between Rs. 16.35 and Rs. 27.46. The nature of EPS is fluctuated. The EPS of bank is not satisfactory comparing to other sampled banks. The average EPS is Rs. 21.53 which is the lowest average earning.

4.2.2 Dividend per Share (DPS)

Dividend is the portion of net profit which is distributed to the shareholders as return on their investment. DPS is the cash dividend paid

on equity/ common share on a per share basis. It is calculated dividing total number of proposed dividend by number of equity shares.

DPS of four sampled banks can be presented in the given table.

Table - 4.2
Dividend per Share

(Rs. in millions)

F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	140	100	85	70	30	85	36.05	42.41
NIBL	30	40.83	20	25	50	33.17	10.88	32.80
NSBI	47.59	0	42.10	17.58	17.50	24.95	17.54	70.31
KBL	21.05	10.61	9.61	12.00	8.44	12.34	4.51	36.55

Source: Appendix-II

The above table shows that DPS of NABIL has ranged from Rs. 30 to Rs. 140. The average DPS is Rs. 85 which is the highest among other sampled banks. The C.V. is 42.41% which indicates fluctuation in the payment of dividend.

The average DPS of NIBL is Rs. 33.17 ranging from Rs. 20 to Rs. 50. The C.V. of bank is 32.80%.

The average DPS of NSBI is Rs. 24.95. The bank has not paid dividend in the F/Y 2064/65. It has high fluctuation. The C.V. of bank is 70.30% which is the highest.

The average DPS of KBL is Rs. 12.34 which is the lowest among the selected banks. It indicates the bank is unable to generate maximum earning.

Comparatively, NABIL has the highest DPS and it is attractive among other selected banks.

4.2.3 Return on Total Asset Ratio (ROA)

ROA ratio is examined to measure the profitability of all financial investment in the banks. It is the percentage of Net Profit after Tax on the Total Assets of bank. The ROA of sampled banks is computed in the below table.

Table - 4.3
Return on Total Assets

(in ratio)

F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	2.47	2.01	2.35	2.18	2.30	2.26	0.024	1.07
NIBL	1.82	1.79	1.70	2.21	2.02	1.91	0.183	9.6
NSBI	1.83	1.44	1.02	1.03	1.00	1.26	0.327	25.98
KBL	1.43	1.16	1.39	1.54	1.23	1.35	0.137	10.16

Source: Appendix-III

The above table reveals that ROA of NABIL is quite better than other three banks. Its average ROA is 2.26% which is the highest among three. The C.V. is also 1.07% which is the lowest and less risky.

The mean ROA of NIBL is 1.91 which is second highest. The C.V. is 9.6% which indicates that it is more risky than NABIL.

The ROA of NSBI and KBL is 1.26% and 1.35% respectively. It is lower than last two banks NABIL and NIBL. It indicates that their earning ratio is very slow. The C.V. of these two banks is very high comparing to NABIL and NIBL. So, these two banks are considered as high risky bank in earning.

From the above analysis, it is concluded that NABIL has shown better performance in the last five years with high ROA and low C.V.

4.2.4 Return on Shareholder's Equity (ROE)

It is the ratio between Net Income and shareholder's equity (which includes Share capital and Reserve and surplus). It is a measure of

profitability of firm in respect of the utilization of total shareholder's fund.

The calculated ROE of four sampled banks is presented below.

Table - 4.4
Return on Shareholder's Equity

F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	32.76	30.63	32.94	29.70	29.30	31.07	1.52	4.89
NIBL	26.70	25.93	23.05	27.61	22.80	25.22	1.95	7.72
NSBI	21.91	17.51	18.47	15.98	16.13	18.00	9.16	12.00
KBL	16.60	12.82	15.90	17.78	11.35	14.88	2.40	16.12

Source: Appendix-III

The table states that ROE of NABIL has ranged from 29.30% to 32.94%. The mean ROE is 31.07% which is the highest and C.V. is 4.89% which is the lowest. It means the bank is able to utilize the equity capital effectively.

Similarly, NIBL comes in second in the proper utilization of equity capital. The average ROE and C.V. of bank is 25.22% and 7.72% respectively. The ROE over the studied years is fluctuating.

NSBI stands in the third stage in the utilization of shareholder's fund. The ROE of this bank ranges from 15.98% to 21.91% in the fluctuation order which indicates inadequate use of shareholder's fund. The C.V. of this bank is 12% which is higher than NABIL and NIBL.

KBL is seen very weak in the presentation of ROE. From the above table, it is found that the bank is unable to make proper use of shareholder's fund. The C.V. of bank is 16.12% which shows the highest risk. Similarly, ROE is 14.88% which is very low in the comparison of other sampled banks.

Hence, here NABIL has strong position to utilize the shareholder's fund representing sound management and effective administration.

4.2.5 Return on Capital Employed (ROCE)

This ratio basically deals the relationship between Net Income and Capital Employed. The ROCE ratio of four selected banks can be presented below.

Table - 4.5
Return on Capital Employed

		(In %)						
F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	9.00	6.70	8.78	6.04	6.16	7.34	1.29	17.57
NIBL	4.92	5.96	5.43	5.63	4.78	5.34	0.44	8.23
NSBI	3.70	3.28	1.63	1.58	1.49	2.34	0.95	40.71
KBL	4.48	3.14	3.94	3.37	2.71	3.53	0.62	17.55
<i>Source: Appendix-IV</i>								

The table shows that the ROCE of NABIL ranges from 6.04% to 9.00%. The average ROCE is 7.34% and C.V. is 17.57%. It has high average ROCE and moderate C.V.

The ROCE of NIBL is fluctuated. The average ROCE of NIBL is 5.34% and C.V. is 8.23%. It indicates moderate average ROCE and lowest C.V.

The ROCE of NSBI is 2.34% which is the lowest and C.V. is 40.71% which is the highest. It indicates that the bank has low return on capital with high risk. The bank has low return in F/Y 2066/67 and 2067/68.

The ROCE of KBL is fluctuated. The ROCE ranges from 2.71% to 4.48%. It has low return during the F/Y 2067/68. The average ROCE is 3.53%, S.D. is 0.62 and C.V. is 17.55%.

In conclusion, NABIL is successful bank in earning high profit but more risky than NIBL and KBL.

4.2.6 Debt to Total Capital Ratio

It is used to measure the relative share of the debt in total capital of four sampled banks. It shows the relationship between total debt and permanent capital including current liabilities.

The given table can present Debt to Total Capital Ratio of sampled banks.

Table - 4.6
Debt to Total Capital Ratio

(In ratio)

F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	336.30	311.41	346.97	256.37	246.81	299.57	40.95	13.67
NIBL	252.21	309.79	295.96	234.72	216.35	261.81	35.67	13.62
NSBI	185.12	186.23	150.92	143.54	138.97	160.96	20.54	12.76
KBL	286.49	245.52	258.14	199.50	197.20	237.37	34.52	14.54

Source: Appendix-IV

The above table of D/TC ratio indicates that D/TC of NABIL for last two years is below its average and it indicates that the bank's leverage is at safe level but first three years' D/TC ratio is highly risky.

The D/TC ratio of NIBL in the F/Y 2063/64, 2066/67 and 2067/68 is quite safe because they are less than its average. The C.V. of bank is 13.62% which indicates high risk.

The D/TC ratio of NSBI for last three years is less than its average D/TC. It indicates it is at safe level and the C.V. of the bank is also less i.e. 12.76% than other selected banks.

Similarly, the D/TC ratio of KBL in the first three years is more than its average D/TC i.e. 237.37. But D/TC for F/Y 2066/67 and 2067/68 are less. Comparatively, NABIL is more risky and NSBI is less risky in terms of C.V.

4.2.7 Interest Coverage Ratio

It is the ratio of EBIT and Interest expenses which measures the ability of banks to meet the annual interest expenses to its debt holders. It is also known as Time Interest Earned Ratio. It is presented in the following table.

Table – 4.7
Interest Coverage Ratio

(in ratio)

F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V. (in %)
NABIL	279.05	243.58	228.21	182.91	164.54	216.66	41.38	18.84
NIBL	205.52	202.80	176.98	170.80	146.35	180.49	21.89	12.13
NSBI	183.58	176.50	153.72	137.29	131.18	156.45	20.74	13.26
KBL	162.60	151.62	144.97	138.48	122.88	144.11	13.28	9.21

Source: Appendix-V

The above table reveals that ICR of NABIL is in decreasing position. Its ICR ranges between 279.05% to 164.54%. The maximum ICR of bank is 279.05% in F/Y 2063/64 and minimum is 164.54% in F/Y 2067/68. It indicates that the bank has been able to pay its annual interest on time. The C.V. of NABIL is 18.84% in the last five year Fiscal Year which indicates it has comparatively strong power of interest payment.

NIBL's ICR is also in decreasing state in the last five year which indicates it has been able to maintain interest payment. Its average ICR is 180.49% and C.V. is 12.13% which reveals that it has average type of interest payment. It also indicates that it is weaker than NABIL in payment of interest.

ICR of NSBI and KBL is also in decreasing order. They both are able to maintain interest payment. The average ICR of NSBI is 156.45% and, highest is 183.58% in F/Y 2063/64 and lowest is 131.18 in F/Y 2067/68. The C.V. of NSBI is 13.26% which is comparatively better than NIBL and KBL but worst than NABIL. Similarly, KBL's average ICR is

144.11%, highest ICR is 162.60% in the F/Y 2063/64 and lowest is 122.88% in the F/Y 2067/68.

Comparatively KBL is seen the weakest bank in the interest payment as it has the lowest C.V. 9.21% and NIBL is strong in the payment of interest.

4.2.8 Debt- Equity Ratio

The debt-equity ratio shows the relationship between total debt (Long Term Debt, Short Term Debt and Shareholder's fund). It is also known as External and Internal equity ratio.

The D/E ratio of sampled banks is presented below.

Table- 4.8
Debt-Equity Ratio

		(In %)						
F/Y Bank	063/64	064/65	065/66	066/67	067/68	Mean	S.D.	C.V.
NABIL	1224.80	1423.58	1301.40	1259.90	1173.28	1276.59	84.68	6.63
NIBL	1369.06	1346.83	1256.51	1149.73	1031.00	1230.63	126.28	10.26
NSBI	1095.00	1114.96	1705.241	1452.61	1500.68	1373.70	235.32	17.13
KBL	1062.05	1000.94	1040.87	1049.23	825.62	995.74	87.48	8.78

Source: Appendix-VI

The above table reveals that the D/E ratio of NABIL ranges between 1173.28% and 1423.58%. The bank is able to maintain this ratio in last four years. The C.V. of bank is lowest among the four banks which indicate it has less risk.

The D/E ratio of NIBL ranges between 1031% to 1369.06% which is in decreasing order. It indicates that the bank is able to maintain this ratio over last five years. The C.V. of bank is 10.26% which is average in the comparison of four banks.

The D/E ratio of NSBI ranges from 1095% to 1705.24%. the average D/E ratio is 1373.70% which is highest among the four sampled

banks. There is fluctuation over the period to maintain D/E ratio. It is unable to maintain D/E ratio during the F/Y 2065/66 to 2067/68. The C.V. of this bank is 17.13% which is the highest among the four sampled banks which indicates the increasing risk yearly.

Similarly, the average D/E ratio of KBL is 995.74% which is the lowest among all. Its annual D/E ratio ranges from 825.62% to 1062.05%. There is fluctuation in the maintenance of D/E ratio over the evolution period of this bank. It is second riskier with the C.V. of 8.78%.

4.2.9 Debt- Total Assets Ratio

It is the relationship between total debt and total assets. It is also known as Debt ratio. It helps to know the contribution of total debt to total assets. The following table presents the Debt- Assets ratio of four sampled banks.

Table - 4.9
Debt-Total Assets Ratio

		(In %)						
F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68	Mean	S.D.	C.V.
NABIL	92.45	93.44	92.88	92.65	92.15	92.71	0.43	0.46
NIBL	93.19	93.09	92.63	92.00	91.16	92.41	0.76	0.82
NSBI	91.63	91.77	94.46	93.56	93.75	93.03	1.13	1.21
KBL	91.39	90.92	91.23	91.30	89.20	90.81	0.82	0.90

Source: Appendix-VII

The above table shows the debt assets ratio of four sampled banks. The average D/A ratio of NABIL is 92.71% and C.V. is 0.46%. The D/A ratio of bank in F/Y 2064/65 is increased to 93.44% which indicates maximum use of debt and decreased to 92.15% in F/Y 2067/68 which is good for bank.

The D/A ratio of NIBL are decreasing over the studied period. It indicates that the use of external debt is reducing over the period. The average D/A ratio are 92.41% and C.V. is 0.82%.

The D/A ratio NSBI is fluctuated over the studied period. The D/A ratio bank in the F/Y 2065/66 are 94.46%. It indicates that the bank has optimum use of debt during that year. The average D/A ratio of bank is 93.03% and C.V. is 1.21% which is not good for bank.

Similarly, the D/A ratio of KBL are also fluctuated over the studied period. The D/A ratio of bank have decreased to 89.20% which indicates low use of debt. The average D/A ratio are 90.81% and C.V. is 0.90%.

In conclusion, KBL is better in the mobilization of debt. This bank has been minimizing the use of debt over the studied period.

4.3 Capital Structure Analysis

Capital structure is the proportion of debt, preferred stock and equity in a company's balance sheet. It can be analyzed under Net Income Approach and Net Operation Income Approach. These approaches have been presented below.

4.3.1 Net Income Approach

Table - 4.10
Comparative position of Overall Capitalization Rate
Under NI Approach

F/Y	NABIL		NIBL		NSBI		KBL	
	WACC (K _o)	Value	WACC (K _o)	Value	WACC (K _o)	Value	WACC (K _o)	Value
2063/64	5.69	27253.39	5.11	27590.85	5.44	13901.20	5.42	11918.31
2064/65	4.97	37132.76	5.18	38873.31	4.67	17187.45	5.03	15026.60
2065/66	6.00	43861.40	5.63	53010.80	4.10	30916.68	6.38	18538.57
2066/67	6.87	52150.24	7.62	57305.41	5.21	38047.68	8.02	20522.47
2067/68	8.36	58141.44	9.08	58356.83	5.96	46088.23	9.40	20491.79
Total	31.89	218539.22	32.62	235137.20	25.38	146141.24	34.25	86497.73
Mean	6.38	43707.84	6.58	47027.44	5.08	29228.25	6.85	17299.55
S.D.	1.16	10895.93	1.57	11950.43	0.64	12204.85	1.64	3353.71
C.V.	18.24	24.93	23.87	25.41	12.60	41.76	23.94	19.39

Source: Appendix-VIII

From the table it is seen that the Overall Capitalization Rate of NABIL ranges between 4.97% and 8.36%. The average equity capitalization rate is 6.38% which is satisfactory among the selected banks. It is less risky than others.

The average equity capitalization rate of NIBL and KBL is 6.58% and 6.85% respectively. The K_o of NIBL has been increasing over the studied period which indicates that financial leverage has been decreasing periodically. The both banks have high Overall Cost of Capital and high risk.

NSBI has fluctuated Overall Cost of Capital which ranges from 4.10% to 5.96%. The average cost of capital of NSBI is 5.08% which is the lowest in comparison to other banks. Similarly, C.V. is 12.60% which is the lowest.

In conclusion, considering the risk, NSBI has good performance because its average K_o is 5.08% and C.V. is 12.60%.

4.3.2 Net Operating Income Approach

Table - 4.11
Comparative position of the effect of Debt and Equity Capitalization Rate under NOI Approach

F/Y	NABIL		NIBL		NSBI		KBL	
	K_e	LTD	K_e	LTD	K_e	LTD	K_e	LTD
2063/64	48.37	5435.19	38.52	8316.69	29.62	5717.47	24.23	2776.48
2064/65	44.67	8704.09	37.96	8994.23	24.60	7054.88	18.86	4199.55
2065/66	47.24	8640.71	33.23	12683.38	25.87	17638.40	22.59	4927.05
2066/67	42.38	15011.15	39.43	17875.15	21.97	22348.95	25.62	7606.20
2067/68	41.77	17140.83	32.52	19428.30	22.69	28213.55	16.19	7054.66
Total	224.43	54931.97	181.66	67297.75	124.75	80973.25	21.50	26563.94
Mean	44.89	10986.39	36.33	13459.55	24.95	16194.65	21.50	5312.79
S.D.	2.60	4372.71	2.87	4519.16	2.71	8691.61	3.49	1795.26
C.V.	5.79	39.80	7.90	33.58	10.87	53.67	16.22	33.79

Source: Appendix-IX

The equity capitalization rate of NABIL ranges between 47.77% and 48.37%. The average K_e of bank is 44.89%. The bank has been increasing debt every year.

The equity capitalization rate of NIBL ranges from 32.52% to 39.43%. The average K_e is 36.33% and C.V. is 7.90%.

The K_e of NSBI ranges from 21.97% to 29.62%. The K_e is decreased in the first two years and increased in last two years. The average K_e is 24.95% and C.V. is 10.87%.

The K_e of KBL is fluctuated. The average K_e is 21.50% and C.V. is 16.21%. The C.V. is the highest and K_e is the lowest comparing to other banks.

In conclusion, the average K_e of KBL is satisfactory because it has lowest K_e .

4.4 Leverage Analysis

Financial leverage refers to the firm's use of fixed income securities, such as debt and preferred stock and financial risk is additional risk placed on the common stock leverage. Degree of Financial Leverage refers to the ratio between the percentage of change on EBT and EBIT.

The DFL of four sampled banks is presented below.

Table – 4.12
Degree of Financial Leverage

							(In times)		
F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68	Mean	S.D.	C.V.	
NABIL	1.56	1.70	1.78	2.21	2.55	1.96	0.37	18.68	
NIBL	1.95	1.97	2.30	2.41	3.16	2.36	0.44	18.62	
NSBI	2.19	2.31	2.86	3.68	4.21	3.05	0.78	25.68	
KBL	2.60	2.94	3.22	3.60	5.37	3.55	0.97	27.30	

Source: Appendix-X

The DFL of NABIL ranges from 1.56 to 2.55 times. It is in increasing trend. The C.V. is 18.68% which is second lowest.

The DFL of NIBL ranges from 1.95 to 2.41 times. It is in increasing trend up to the first four years and decreased to 3.16 in the F/Y 2067/68. It has the lowest C.V.

The DFL of NSBI is in increasing trend from the ratio of 2.19 to 4.21 times. The average DFL is 3.05 and C.V. is 25.62% which are the second highest.

The DFL of KBL ranges from 2.60 to 5.37 times. It is in increasing trend. The average DFL is 3.55 times and C.V. is 27.30%.

In conclusion, NABIL is the best among the sampled banks because it has the lowest DFL and C.V.

4.5 Correlation Coefficient Analysis

Correlation analysis is the statically tool that can be used to describe the degree to which one variable is linearly related to another variable. There are three types of correlation i.e. simple, practical and multiple correlations. Simple correlation based on Pearson's Coefficient is focused here. This analysis fails to relate upon the cause and effect relationship between the variables. The correlation coefficient is denoted by 'r'.

4.5.1 Total Debt to Shareholder's Equity

The total debt includes all types of long-termed borrowed fund, as fixed deposit, current liabilities and provisions and Shareholder's equity includes Share capital and Reserve and Surplus. The correlation between total debt and shareholder's equity is presented below.

Table - 4.13
Correlation Coefficient between Total Debt and Shareholder's Equity

Bank	Correlation Coefficient (r)	Relation
NABIL	0.98	Positive
NIBL	0.97	Positive
NSBI	0.97	Positive
KBL	0.91	Positive
<i>Source: Appendix-XI</i>		

The above table shows that the correlation coefficient between TD and SE of NABIL, NIBL, NSBI and KBL is 0.98, 0.97, 0.97 and 0.91 respectively. NABIL has highest and KBL has lowest correlation coefficient. The sampled banks are positively correlated. Both the TD and Share holder's equity are proportionately risky and dependent to each other.

4.5.2 EBIT and Interest

EBIT is operating profit of the bank and interest is the amount paid as return to debt holders. The correlation between EBIT and Interest indicates that whether they are positively or negatively correlated. It is presented below.

Table No. 4.14
Correlation Coefficient between EBIT and Interest

Bank	Correlation Coefficient (r)	Relation
NABIL	0.9967	Positive
NIBL	0.99	Positive
NSBI	1.00	Perfectly Positive
KBL	0.99	Positive
<i>Source: Appendix-XII</i>		

The above table reveals that the correlation between EBIT and Interest of NABIL, NIBL, NSBI and KBL is 0.9967, 0.99, 1.00 and 0.99 respectively. The EBIT and Interest of NSBI is perfectly correlated. It

indicates that both EBIT and Interest are proportionately risky and profitable for the banks.

4.5.3 EBIT and DPS

The dividend paid to equity or common shareholders annually on a per- share basis is known as DPS and EBIT is operating profit of the company. Here, the correlation between EBIT and DPS is computed below.

Table – 4.15
Correlation Coefficient between EBIT and DPS

Bank	Correlation Coefficient (r)	Relation
NABIL	- 0.95	Negative
NIBL	0.13	Positive
NSBI	- 0.24	Negative
KBL	- 0.63	Negative
<i>Source: Appendix-XIII</i>		

The above table shows that the correlation between EBIT and DPS of NIBL is positive and NABIL, NSBI and KBL are negative. It indicates that the EBIT and DPS of NIBL are positively dependent and NABIL, NSBI and KBL are negatively dependent. NIBL is the best among the four banks.

4.5.4 Long Term Debt and EPS

Long term debt is the source of long term financing, borrowing or funds and EPS is the income per share of a firm in a Fiscal Year. The correlation between LTD and EPS is calculated below.

Table – 4.16
Correlation Coefficient between LTD and EPS

Bank	Correlation Coefficient ®	Relation
NABIL	- 0.98	Negative
NIBL	- 0.44	Negative
NSBI	- 0.64	Negative
KBL	- 0.03	Negative
<i>Source: Appendix-XIV</i>		

The above table reveals that the relation of LTD and EPS of four sampled banks is perfectly negative. Among them KBL has the lowest negative relation. It indicates that LTD and EPS is negatively correlated. Increase in debt results to reduce the EPS of banks.

4.6 Trend Analysis

Trend analysis reveals the percentage change in several successive years. Trend analysis indicates that pattern of change. The following trends are calculated for the sampled banks to know the pattern of change and major activities of the banks.

4.6.1 Share Capital Trend

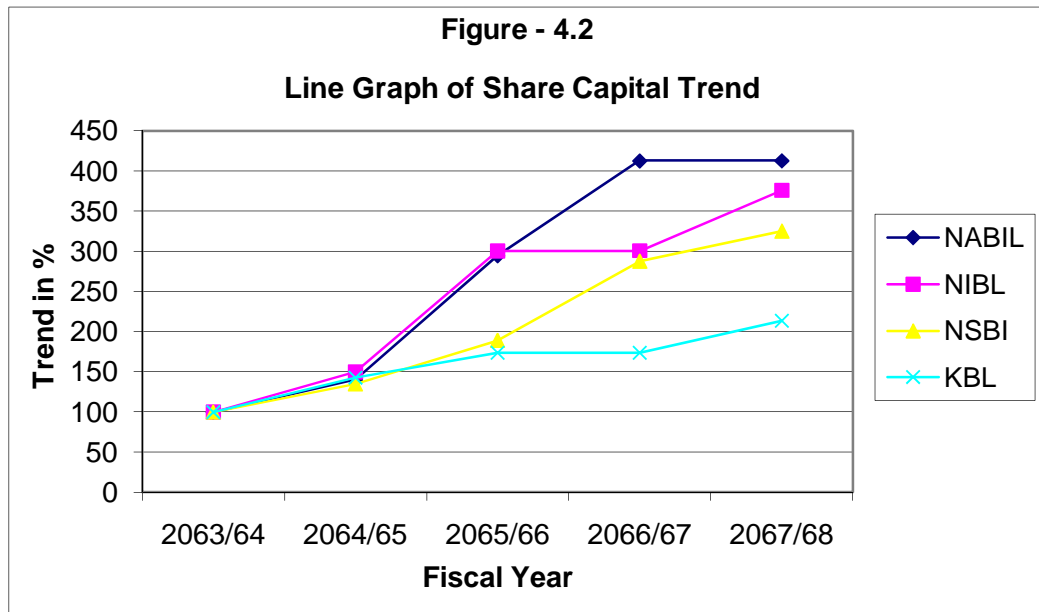
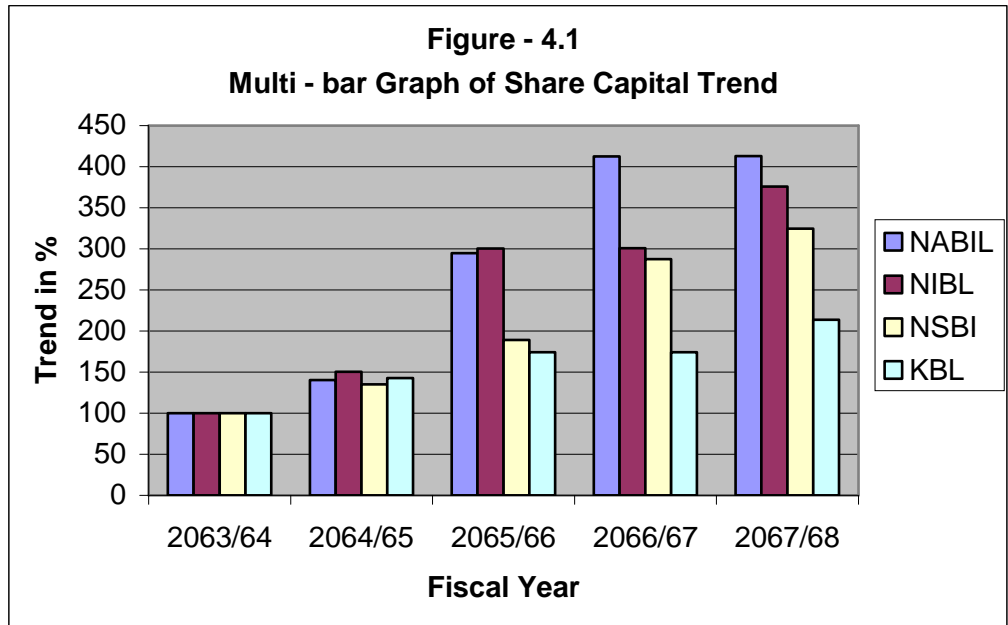
Share capital is the fully paid up or issued capital of the concerned banks. The table shows the trend of share capital of NABIL, NIBL, NSBI and KBL.

Table – 4.17
Share capital Trend

F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68
NABIL	100	140.18	294.64	412.64	412.84
NIBL	100	150.23	300.37	300.63	375.78
NSBI	100	135.00	189.00	287.33	324.63
KBL	100	142.67	174.00	174.13	213.84

Source: Appendix-XV

The above trend analysis can be graphically shown below.



The above figure and table indicate the comparative study of share capital of four sampled banks. It can display the increasing stage of share capital. NABIL has maintained 100% to 412.64% of share capital during the period. It is the best performance among the four banks.

4.6.2 Reserve and Surplus Trend

It refers to the total capital of the banks and includes general reserve, share premium and other reserves. The trend of reserve and surplus is presented here.

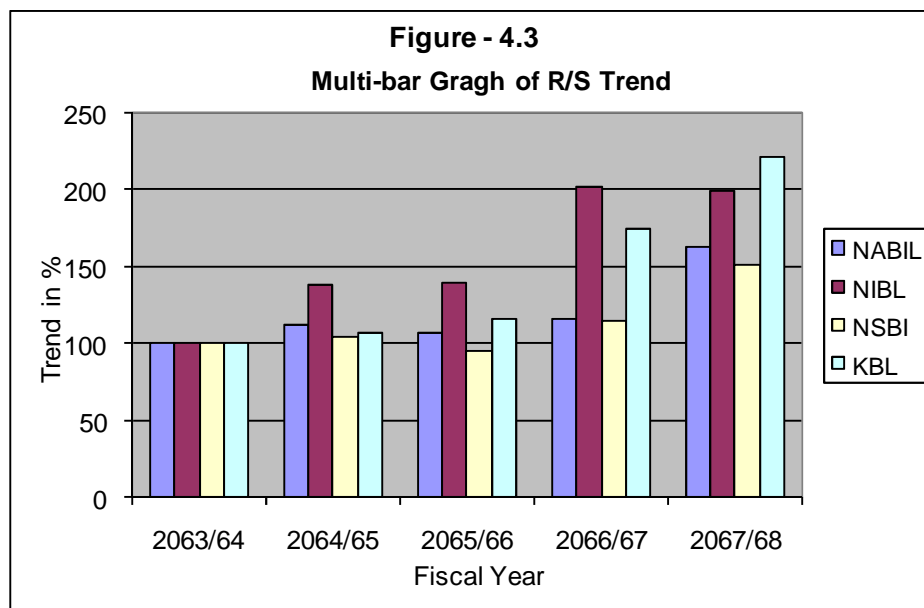
Table – 4.18

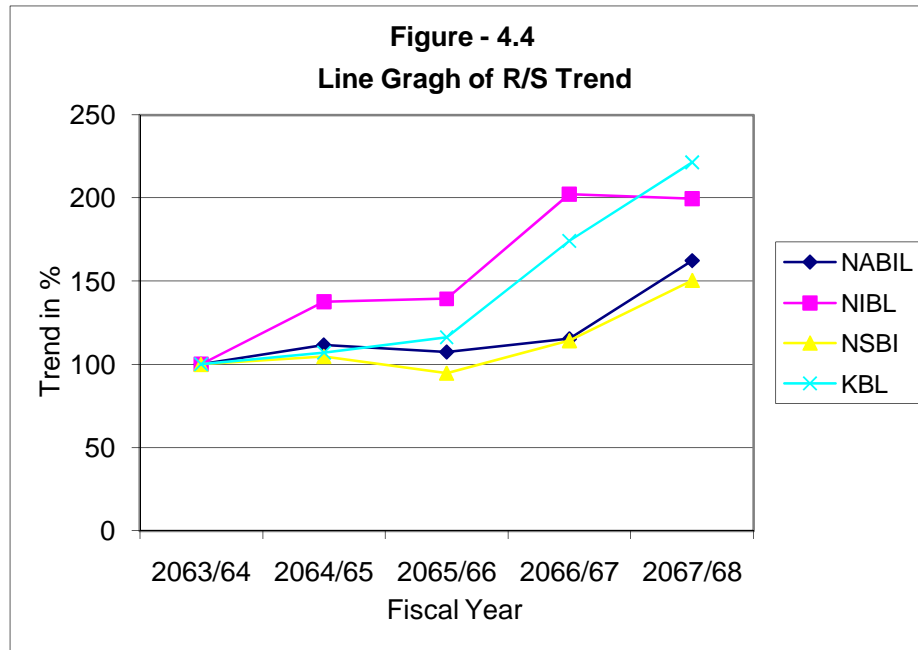
Reserve and Surplus Trend

F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68
NABIL	100	111.66	107.42	115.37	162.52
NIBL	100	137.71	139.38	202.11	199.52
NSBI	100	104.78	94.72	114.30	150.60
KBL	100	106.98	116.10	174.05	221.32

Source: Appendix-XVI

The above trend analysis can be graphically shown below.





The above table and figure indicate the comparative study of Reserve and Surplus. From the above table and graph, it is seen that R/S of NABIL is decreased to 107.48% from 111.66% in the F/Y 2065/66 and increased thereafter. The R/S of NIBL is in increasing trend but it is decreased in the F/Y 2067/68. Similarly, R/S of NSBI is decreased in the F/Y 2065/66 and KBL is in increasing trend over the period of study.

4.6.3 Borrowing Trend

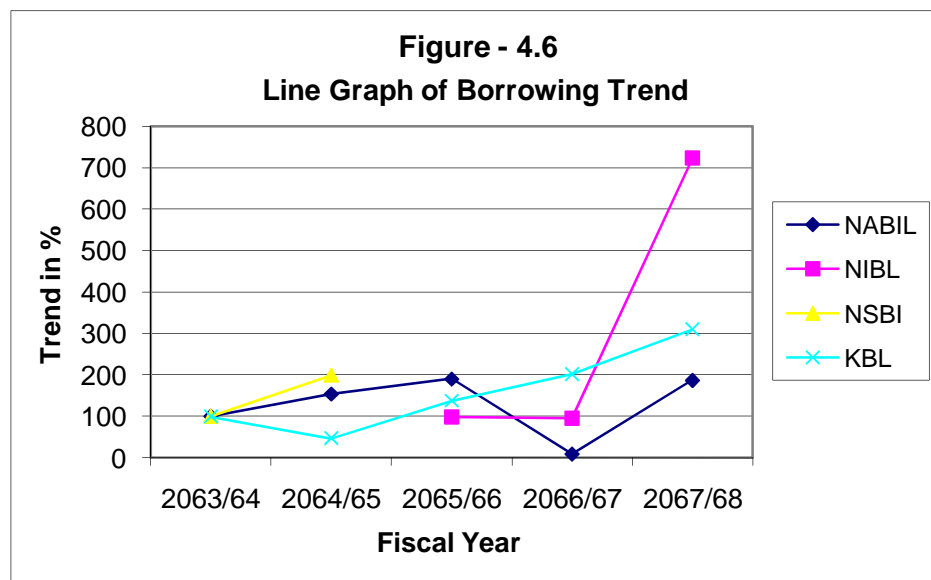
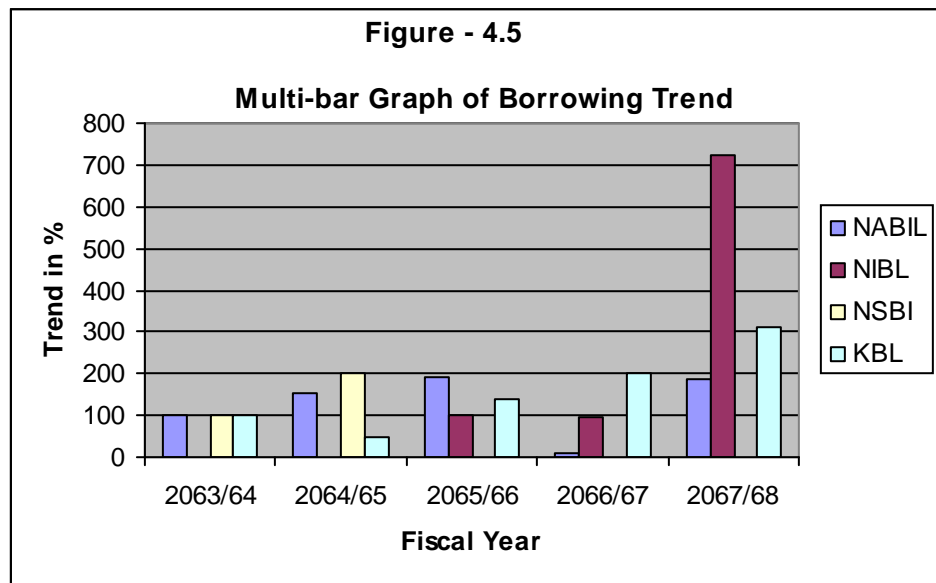
It is an amount taken by the banks from different sectors. It includes both local and foreign borrowing. The Borrowing Trend of four sampled banks is presented below.

Table – 4.19
Borrowing Trend

F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68
NABIL	100	154.09	190.50	8.49	187.02
NIBL	-	-	100	96.16	723.61
NSBI	100	199.60	-	-	-
KBL	100	46.95	137.77	201.78	310.33

Source: Appendix-XVII

The above trend analysis can be graphically shown below.



The above trend graph and table indicate fluctuating stage of borrowing trend of all four sampled banks. The trend of NABIL is increased till F/Y 2065/66 and decreased to 8.49% in F/Y 2066/67 which indicates payment of borrowing. The borrowing of NIBL is very high in the F/Y 2067/68. However, it has not borrowed in the first two Fiscal Year i.e. 2063/64 and 2064/65 which is good aspect of bank. NSBI has not taken any borrowing since the last three Fiscal Year 2065/66 to

2067/68 which indicates excellent performance. Similarly, KBL has been increasing its borrowing over the studied period.

4.6.4 Total Deposits Trend

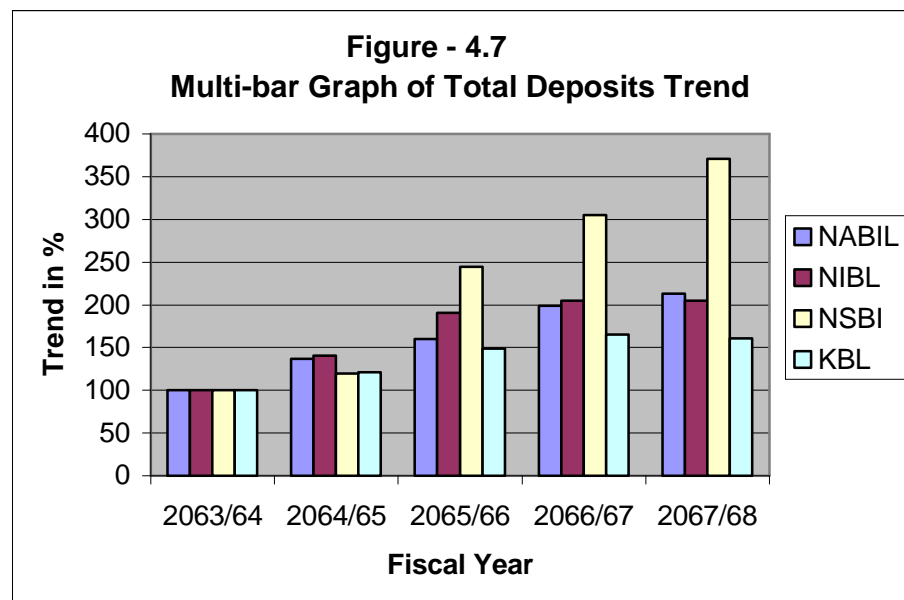
The total deposits of the banks include current deposits, fixed deposits, call deposits and certificate of deposits. It is the main source of collecting funds for the banks from deposits. The trend of total deposits is presented in the following table.

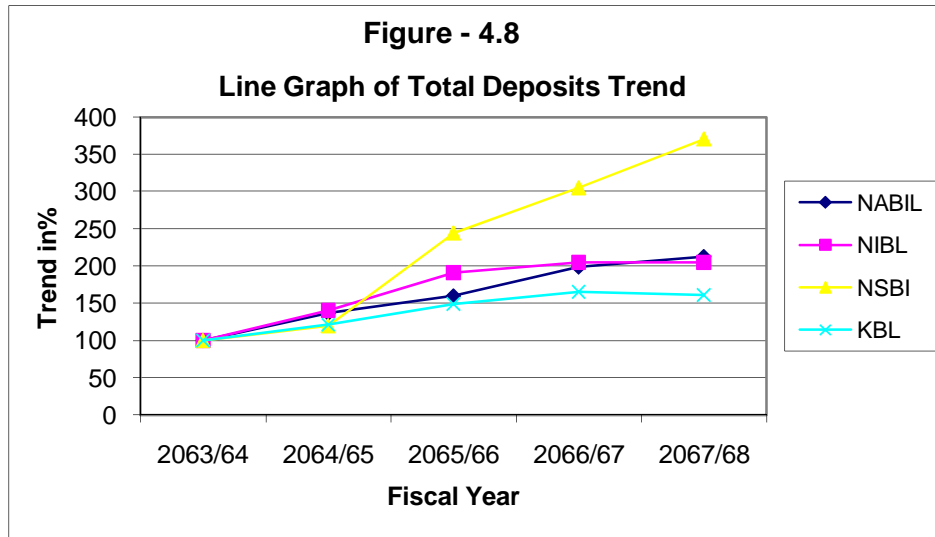
Table – 4.20
Total Deposits trend

F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68
NABIL	100	136.73	160.00	198.83	212.90
NIBL	100	140.68	190.69	204.56	204.74
NSBI	100	119.83	244.27	304.90	370.59
KBL	100	121.00	148.81	165.12	160.90

Source: Appendix-XVIII

The above trend analysis can be graphically shown below.





The above table and graph reveal that the total deposits of NABIL, NIBL, NSBI and KBL is in increasing trend every year. The percentage of total deposits of NABIL has increased to 212.90% in F/Y 2067/68 by 112.90%, the percentage of total deposits of NIBL has increased to 204.74% in the F/Y 2067/68 by 104.74% and NSBI has increased to 370.59% in the F/Y 2067/68 by 270.59%. The deposits of KBL has increased to 162.12% in the F/Y 2066/67 and decreased to 160.90% in the F/Y 2067/68. Comparatively, NSBI has collected the highest deposits in the last five years.

4.6.5 Total Investment Trend

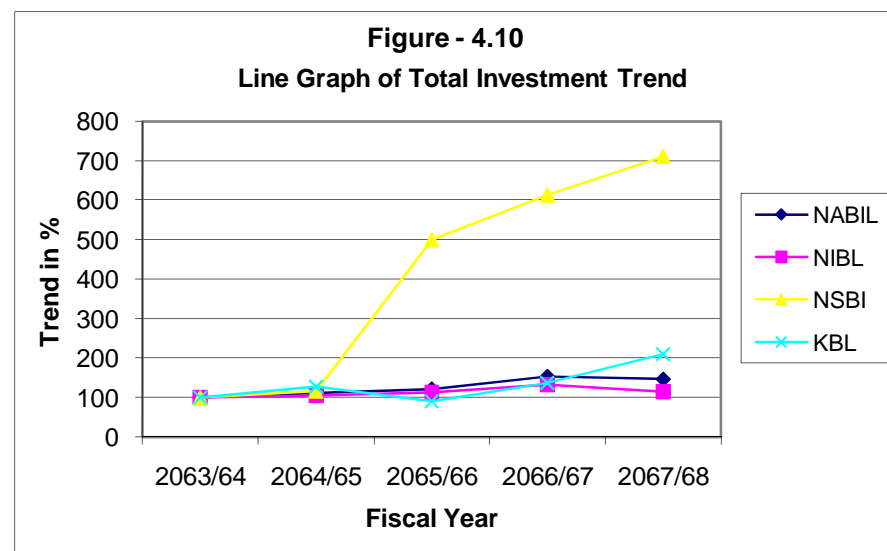
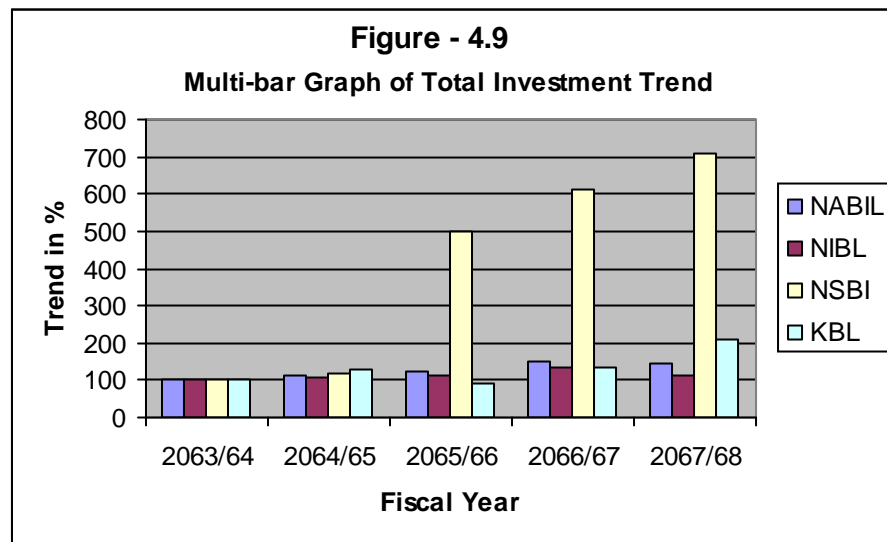
The investment includes investment in loan advance, Government securities, bills discounted and purchased money at call and short notice etc. The trend of total investment is presented below.

Table – 4.21
Total Investment trend

F/Y Bank	2063/64	2064/65	2065/66	2066/67	2067/68
NABIL	100	111.09	121.02	152.83	146.23
NIBL	100	105.66	113.74	132.74	114.10
NSBI	100	116.15	499.58	613.12	711.09
KBL	100	127.43	90.00	136.85	210.53

Source: Appendix-XIX

The above trend analysis can be graphically shown below.



The above table and graph reveal that the total investment trend of sampled banks is not smoothly increasing except NSBI. The trend of NABIL has decreased to 146.23% in the F/Y 2067/68 from 152.83% in the F/Y 2066/67. The trend of NIBL has decreased in F/Y 2067/68. Similarly, the trend of KBL has also decreased in the F/Y 2065/66 and 2067/68. The trend of NSBI has increased during the studied period.

CHAPTER – 5

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The study is a Research upon the capital structure management of the commercial banks in Nepal. The study includes four commercial banks which represent the study of the capital structure of commercial banks in Nepal. The research study covers the period of five years from 2063/64 B.S. to 2067/68 B.S. This chapter summarizes the whole study draws the major findings, conclusions and forwards the recommendation for the better capital structure management of commercial banks in Nepal. The previous (fourth) part of the study is to deal the presentation and analysis of data.

5.2 Summary

The data, analyzed and processed using various financial and statistical tools, of NABIL, MMIBL, NSBI and KBL is summarized in this section of study.

5.2.1 Profitability Ratio:

- i. The average EPS of NABIL, NIBL, NSBI and KBL is Rs 99.33, Rs.51.85, Rs. 30.48 and Rs. 21.53 respectively and their CV ratio is 25.10%, 16.57% , 20.41% and 19.92% respectively.
- ii. The average of DPS BABIL, NIBL, NSBL and KBL is Rs 85, Rs. 33.17, Rs. 24.95 and Rs. 12.34 and their CV is 42.41%, 32.80%, 70.31% and 36.55% respectively.

- iii. The average ROA of NABIL, NIBL, MSBI and KBL is 2.26%, 1.91%, 1.26% and 1.35% and their CV is 1.07%, 9.6%, 25.98% and 10.16% respectively.
- iv. The average ROE of NABIL, NIBL, NSBI and KBL is 31.07%, 25.22%, 18.00% and 14.88% and CV is 4.89%, 7.72%, 12.00% and 16.12% respectively.
- v. The average ROE of NABIL, NIBL, NSBI and KBL is 7.34%, 5.34%, 2.34% and 3.53% and their CV is 17.57%, 8.23%, 40.71%, and 17.55% respectively.

5.2.2 Leverage or Capital Structure Ratio

- i. The average debt to total capital ratio of NABIL, NIBL, NSBI and KBL is 299.57%, 216.81%, 160.96% and 237.37% and their CV is 13.67%, 13.62%, 12.76% and 14.54% respectively.
- ii. The average ICR of NABIL, NIBL, NSBI and KBL is 219.66%, 180.49%, 156.45% and 144.11% and their CV is 18.84%, 12.13%, 13.26% and 9.21% respectively.
- iii. The average Debt Equity Ratio of NABIL, NIBL, NSBI and KBL is 1276.59%, 1230.63%, 1373.70% and 995.74% and their CV is 6.63%, 10.26%, 17.13% 12.76% and 9.21% respectively.
- iv. The average debt to total asset ratio of NABIL, NIBL, NZSBI and KBL is 92.71%, 92.41%, 93.03% and 90.81% and their CV is 0.46%, 0.82%, 1.12% and 0.90% respectively.
- v. The average overall cost of capital (K_o) of NABIL, NIBL, NSBI and KBL is 6.38%, 6.58%, 5.08% and 6.85 and their CV is 18.23% 23.11%, 12.60% and 23.94% respectively.
- vi. The average equity capitalization rate of NABIL, NIBL, NSBI and KBL is 44.89%, 36.33%, 24.95% and 21.50% and their CV is 5.78%, 7.90, 10.87% and 16.12% respectively.

- vii. The DFL of NABIL, NIBL, NSBI and KBL is 1.96 times, 2.36times, 3.05 times and 3.55 times and CV is 18.68%, 18.62%, 25.68% and 27.30% respectively.

5.2.3 Correlation Coefficient Analysis

- i. The correlation between Total debt and Shareholder's equity of NABIL, NIBL, NSBI and KBL is 0.98, 0.97, 0.97 and 0.91 respectively. There is perfect and positive relation between Total debt and Shareholder's equity.
- ii. The correlation between EBIT and Interest expenses of NABIL, NIBL, NSBI and KBL is 0.9967, 0.99, 1.00 and 0.99 respectively. There is perfect and positive relation between EBIT and Interest expenses.
- iii. The correlation between EBIT and DPS of NABIL, NSBI and KBL is -0.95, -0.24 and -0.63 respectively. They are negatively correlated but NIBL is positively correlated.
- iv. The correlation between Long term debt and EPS NABIL, NIBL, NSBI and KBL is -0.98, -0.44, -0.64 and -0.03 respectively. They are negatively correlated.

5.2.4 Trend Analysis

- i. The trend of share capital of NABIL, NIBL, NSBI and KBL is increasing throughout the study period. Among these banks, NABIL has highest share capital.
- ii. The trend of Reserve and Surplus of NIBL and KBL is increasing where NABIL and NSBI has decreased in the F/Y 2065/66. Among these banks, KBL has higher Reserve and Surplus.
- iii. The trend of borrowing of NABIL and NIBL is decreased in the F/Y 2066/67 and KBL is decreased in the F/Y 2064/65 whereas NSBI has no borrowing since the F/Y 2065/66 to 2067/68.

- iv. The trend of total deposits of NABIL, NIBL and NSBI is increasing throughout the study period whereas KBL is decreased in the F/Y 2067/68. NSBI has the highest deposit trend among all.
- v. The trend of total investment of NSBI is increasing throughout the study period and NABIL, NIBL and KBL is decreased in the F/Y 2067/68 and F/Y 2065/66 respectively.

5.3 Conclusion

From the analysis of the financial and statistical indicators of all the sampled banks, it has been concluded that these banks have different financial performance. Based on the above data analysis, the following conclusion has been made.

- i. EPS explains net income for each share which reveals the market position of the bank. The average EPS of NABIL is the highest among the sampled banks.
- ii. DPS is the earning distributed to shareholders. The analysis shows that the average DPS of NABIL is the highest which is the best.
- iii. The analysis of ROA shows that NSBIL has better performance among the sampled banks.
- iv. ROE represents the profitability of bank in respect of utilization of shareholder's fund. The analysis reveals that NABIL is better in the proper utilization of Shareholder's fund.
- v. The analysis of Return of Capital Employed shows that NABIL is earning better return on capital in high risk.

- vi. The analysis of debt to total capital ratio implies that NSBI is better than other as it has lower ratio and C.V.
- vii. Interest Coverage Ratio explains how effectively the interest is paid to debt holder. From the study, it is concluded that NABIL is paying its annual interest easily to its debt holder.
- viii. The analysis of debt equity ratio indicates that NSBI is using its debt more effectively.
- ix. Under the Net Income Approach, the interest rate and cost of equity are dependent hypothesis of capital structure. As leverage increases the Overall Cost of Capital declines and the total value of firm as well as market price of ordinary shares will increase. From the analysis, NSBI has optimum capital structure because it has lowest average cost of capital.
- x. Net Operating Income Approach is an independent hypothesis of capital structure. Any changes in financial leverage will not lead to any change in the total value of the firm and market price of shares. From the study of average equity capitalization rate, KBL has optimum capital structure because it has lowest average equity capitalization rate.
- xi. DFL shows the financial risk of banks. The average DFL of NABIL is lowest, so it is the best among the sampled banks to reduce financial risk.
- xii. There is perfectly positive correlation between Total debt and Shareholder's equity of NABIL, NIBL, NSBI and KBL. Among these banks, NABIL has highest and KBL has lowest correlation in comparison.

- xiii. There is perfect negative correlation between Long term debt and EPS of NABIL, NIBL, NSBI and KBL.
- xiv. There is perfect positive correlation between EBIT and DPS of NABIL, NIBL, NSBI and KBL.

5.4 Recommendation

This section includes recommendation which will be helpful in taking prompt and effective decision about capital structure management. These recommendations are pointed to follow.

- i. The banks are using more current liabilities as a source of short-term financing. Certainly, over use of current liabilities may be adversely impact to the short- term solvency position of the banks.
- ii. Trend of borrowing except in NSBI is excessively increasing which is not good.
- iii. The banks should consider the betterment of EPS because it is the indicator from the stakeholder and investors to make them more confident on the investment.
- iv. The banks are not seen in satisfactory level from the analysis of financial leverage. So, the banks need to increase their leverage position.
- v. The banks should be serious about capital structure matter. It is recommended that the theoretical aspect of capital structure management should be maintained according to find out the causes and effects between or among the components of capital structure of firms.

- vi. Banks are recommended to expand their assets and branches which ultimately affect in the capital structure of banks.
- vii. From the study, it is found the service of banks is still non-approachable to rural area. So, they are suggested to meet their social responsibilities in rural area; especially mobilizing fund.
- viii. The sampled banks have been found no definite dividend policy. This policy may have negative impression to investors. So, they are suggested to follow stable dividend policy.
- ix. Debt assets ratio suggests reducing the outsider's fund as far as possible because there is low difference between debt and total assets.
- x. There should be appropriate facilities to merge the banks.

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Appendix – I

Earning Per Share (EPS)

$$\text{EPS} = \frac{\text{Net Profit after Tax - Preference Dividend}}{\text{Number of Common Share}}$$

DPS of NABIL

(in millions)

F/Y	Net Profit After Tax	No. of Shares	EPS
2063/64	673.960	4.916544	137.08
2064/65	746.468	6.89216	108.31
2065/66	1031.053	9.65747	106.76
2066/67	1139.099	14.49124	78.60
2067/68	1337.745	20.2977	65.91

DPS of NIBL

(in millions)

F/Y	Net Profit After Tax	No. of Shares	EPS
2063/64	501.399	8.013526	62.57
2064/65	696.731	12.039154	57.87
2065/66	900.619	24.070689	37.42
2066/67	1265.949	24.090977	52.55
2067/68	1176.641	24.090977	48.84

DPS of NSBI

(in millions)

F/Y	Net Profit After Tax	No. of Shares	EPS
2063/64	254.909	6.478	39.35
2064/65	247.771	8.7453	28.33
2065/66	316.373	8.7453	36.18
2066/67	391.742	16.5362	23.69
2067/68	464.565	18.693	24.85

DPS of KBL

(in millions)

F/Y	Net Profit After Tax	No. of Shares	EPS
2063/64	170.263	7.500	22.7
2064/65	174.93	10.700	16.35
2065/66	258.379	13.049	27.46
2066/67	316.542	13.060	24.24
2067/68	251.237	14.850	16.92

Appendix – II

Dividend Per Share (DPS)

$$\text{DPS} = \frac{\text{Dividend Fund to Equity Shareholder's}}{\text{Number of Equity Shares}}$$

Where,

Total Dividend = Proposed cash dividend + Proposed stock dividend

DPS of NABIL

(in millions)

F/Y	Proposed Cash Dividend	Proposed Stock Dividend	Total Dividend	No. of Shares	DPS
2063/64	491.654	196.662	688.316	4.916544	140
2064/65	413.53	275.686	689.216	6.89216	100
2065/66	338.011	482.873	820.884	9.65747	85
2066/67	434.737	579.65	1014.387	14.49124	70
2067/68	608.931	0	608.931	20.2977	30

DPS of NIBL

(in millions)

F/Y	Proposed Cash Dividend	Proposed Stock Dividend	Total Dividend	No. of Shares	DPS
2063/64	40.068	200.388	240.456	8.013526	30.00
2064/65	90.294	401.305	491.599	12.039154	40.83
2065/66	481.414	0	481.414	24.070689	20
2066/67	602.274	0	602.274	24.090977	25
2067/68	602.274	602.274	1204.548	24.090977	50

DPS of NSBI

(in millions)

F/Y	Proposed Cash Dividend	Proposed Stock Dividend	Total Dividend	No. of Shares	DPS
2063/64	81.554	226.729	308.283	6.478	47.58
2064/65	0	0	0	0	0
2065/66	18.411	349.811	368.222	8.7453	42.11
2066/67	83.080	207.700	290.780	16.5362	17.58
2067/68	93.465	233.663	327.128	18.693	17.5

DPS of KBL

(in millions)

F/Y	Proposed Cash Dividend	Proposed Stock Dividend	Total Dividend	No. of Shares	DPS
-----	------------------------	-------------------------	----------------	---------------	-----

2063/64	7.894	150.000	157.894	7.500	21.05
2064/65	5.675	107.827	113.502	10.700	10.61
2065/66	6.584	118.837	125.421	13.049	9.612
2066/67	156.816	0	156.816	13.060	12.01
2067/68	6.582	118.800	125.382	14.850	8.443

Appendix – III

Return on Total Assets (ROA) and Return on Total Equity (ROE)

$$\text{Return on Total Assets} = \frac{\text{Net Profit after Interest and Taxes}}{\text{Total Assets}}$$

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

D/A ratio of NABIL

(in

%)

Statement	063/64	064/65	065/66	066/67	067/68
Net Income	673.960	746.468	1031.053	1139.099	1337.745
Total Assets	27253.393	37132.759	43867.397	52150.237	58141.437
Total Equity	2057.049	2437.199	3130.24	3834.755	4566.517
ROA	2.47	2.01	2.35	2.18	2.30
ROE	32.76	30.63	32.94	29.70	29.30

D/A ratio of NIBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Net Income	501.398	696.731	900.619	1265.949	1176.641
Total Assets	27590.845	38873.307	53010.803	57305.413	58356.827
Total Equity	1878.123	2686.786	3907.84	4585.393	5159.759
ROA	1.82	1.79	1.70	2.21	2.02
ROE	26.70	25.93	23.05	27.61	22.80

D/A ratio of NSBI

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Net Income	254.909	247.771	316.373	391.742	464.565
Total Assets	13901.200	17187.446	30916.682	38047.679	46088.284
Total Equity	1163.29	1414.645	1712.607	2450.554	2879.293
ROA	1.83	1.44	1.02	1.03	1.00
ROE	21.91	17.51	18.47	15.98	16.13

D/A ratio of KBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Net Income	170.263	174.930	258.379	316.542	251.237
Total Assets	11918.311	15026.599	18538.565	20522.474	20491.785
Total Equity	1025.63	1364.885	1624.953	1785.759	2213.837
ROA	1.43	1.16	1.39	1.54	1.23
ROE	16.60	12.82	15.90	17.72	11.35

Appendix – IV

Debt to Total Capital Ratio and Return to Total Capital Ratio

$$\text{Debt to Total Capital Ratio} = \frac{\text{Total Debt}}{\text{Total Capital}} \times 100\%$$

$$\text{Return to Total Capital Ratio} = \frac{\text{Net Profit}}{\text{Total Capital}} \times 100\%$$

Where,

Total Capital = Shareholder's equity + LTD

D/c and R/C of NABIL

(in %)

F/Y	Total Debt	Total Capital	Net Profit	D/C ratio	R/C ratio
063/64	25196.34	2057.049+5435.19=7492.24	673.96	336.30	9.00
064/65	34695.56	2437.199+8704.09=11141.29	746.47	311.41	6.70
065/66	40737.16	3130.240+8610.71=11740.95	1031.05	346.97	8.78
066/67	48315.483	3834.755+15011.15=18845.90	1139.10	256.37	6.04
067/68	53574.921	4566.247+17140.83=21707.08	1337.745	246.81	6.16

D/c and R/C of NIBL

(in %)

F/Y	Total Debt	Total Capital	Net Profit	D/C ratio	R/C ratio
063/64	25712.720	1878.12+8316.69=10194.81	501.40	252.21	4.92
064/65	36186.520	2686.786+8994.23=11681.02	696.731	309.79	5.96

065/66	49102.464	$3907.840+12683.23=16591.07$	900.619	295.96	5.43
066/67	52720.019	$4585.393+17875.15=22460.54$	1265.95	234.72	5.63
067/68	53197.067	$5159.759+19428.30=24588.06$	1176.64	216.35	4.78

D/c and R/C of NSBI

(in %)

F/Y	Total Debt	Total Capital	Net Profit	D/C ratio	R/C ratio
063/64	12737.909	$1163.29+5717.47=6880.76$	254.91	185.12	3.70
064/65	15772.801	$1414.645+7054.88=8469.52$	277.77	186.23	3.28
065/66	29204.074	$1712.607+17638.40=19351.01$	316.37	150.92	1.63
066/67	35597.125	$2450.554+22348.95=24799.50$	391.74	143.54	1.58
067/68	43208.940	$2879.293+28213.55=31092.84$	464.56	138.97	1.49

D/c and R/C of KBL

(in %)

F/Y	Total Debt	Total Capital	Net Profit	D/C ratio	R/C ratio
063/64	10892.681	$1025.63+2776.48=3802.11$	170.26	286.49	4.48
064/65	13661.714	$1364.885+4199.55=5564.43$	174.93	245.52	3.14
065/66	16913.613	$1624.953+4927.05=6552.00$	258.38	258.14	3.94
066/67	18736.715	$1785.759+7606.20=9391.96$	316.54	199.50	3.37
067/68	18277.948	$2213.837+7054.66=9268.50$	251.24	197.20	2.71

Appendix – V

Interest Coverage Ratio (I/C Ratio)

$$\text{Interest Coverage Ratio} = \frac{\text{Net profit before interest and taxes (EBIT)}}{\text{Interest Express}}$$

Where,

EBIT = Profit before tax + Interest expenses

I/C ratio of NABIL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Profit from all the activities	1094.550	1197.889	1626.534	1787.701	2098.421
Provision for staff bonus	(99.505)	(108.899)	(147.867)	(162.518)	(190.943)
Profit before tax	995.045	1088.99	1478.667	1625.183	1907.478
Interest expenses	555.710	758.436	1153.280	1960.108	2955.431
EBIT	1550.755	1847.426	2631.947	3585.291	4862.909
I/C Ratio	279.058	243.584	228.214	182.913	164.541

I/C ratio of NIBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Profit from all the activities	795.713	1121.956	1428.461	1989.032	1845.832
Provision for staff bonus	(72.337)	(101.996)	(129.860)	(180.821)	(167.803)
Profit before tax	723.376	1019.960	1298.601	1808.211	1678.029
Interest expenses	685.530	992.158	1686.973	2553.848	3620.337
EBIT	1408.906	2012.118	2985.574	4362.059	5298.366
I/C Ratio	205.521	202.802	176.978	170.803	146.352

I/C ratio of NSBI

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Profit from all the activities	379.049	382.837	487.335	592.198	718.815
Provision for staff bonus	(34.459)	(34.803)	(44.303)	(53.836)	(65.346)
Profit before tax	344.590	348.034	443.032	538.362	653.469
Interest expenses	412.261	454.917	824.700	1443.693	2096.038
EBIT	756.851	802.951	1267.732	1982.055	2749.507
I/C Ratio	183.585	176.505	153.720	137.291	131.176

I/C ratio of KBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Profit from all the activities	273.415	283.180	403.739	503.234	394.310
Provision for staff bonus	(24.856)	(25.743)	(36.703)	(45.748)	(35.846)
Profit before tax	248.559	257.437	367.036	457.486	358.464
Interest expenses	397.053	498.734	816.203	1188.919	1566.551
EBIT	645.612	756.171	1183.239	1646.405	1925.015
I/C Ratio	162.601	151.618	144.969	138.479	122.882

Appendix – VI

Debt-Equity Ratio

$$\text{Debt Equity Ratio} = \frac{\text{Long term debt}}{\text{Share holder's Equity}} \text{ OR } \frac{\text{Total Debt}}{\text{Shareholde's Equity}}$$

Where,

Total Debt = Long term debt + Current liabilities

D/E ratio of NABIL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Debt Detail					
Debenture and Bond	0	240.000	30.000	300.000	300.000
Borrowings	882.572	1360.000	1681.305	74.900	1650.599
Deposits	23342.285	31915.047	37348.256	46410.701	49696.113

Bills Payable	83.515	238.422	463.139	425.444	415.768
Proposed and undistributed dividend	509.418	437.373	338.011	434.737	608.931
Income Tax Liabilities	0	38.777	80.232	24.904	44.104
Other Liabilities	378.552	465.941	526.213	644.797	859.406
Total Debt	25196.342	34695.56	40737.156	48315.483	53574.921
Share Capital	491.654	689.216	1448.62	2028.774	2029.769
Reserve & Surplus	1565.395	1747.983	1681.62	1805.981	2536.748
Total Equity	2057.049	2437.199	3130.24	3834.755	4566.517
D/E Ratio	1224.80	1423.58	1301.40	1259.90	1173.28

D/E ratio of NIBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Debt Detail					
Debenture and Bond	800.000	1050.000	1050.000	1050.000	1050.000
Borrowings	0	0	38.3	37.315	280.764
Deposits	24488.856	34451.726	46698.1	50094.725	50138.122
Bills Payable	32.401	78.839	82.338	38.144	8.250

Proposed and undistributed dividend	43.65	93.468	481.414	602.274	602.274
Income Tax Liabilities	0.295	24.083	38.297	37.195	0
Other Liabilities	347.519	488.404	714.015	860.366	1117.657
Total Debt	25712.721	36186.52	49102.464	52720.019	53197.067
Share Capital	801.353	1203.915	2407.069	2409.098	3011.372
Reserve & Surplus	1076.77	1482.871	1500.771	2176.295	2148.387
Total Equity	1878.123	2686.786	3907.84	4585.393	5159.759
D/E Ratio	1369.065	1346.833	1256.512	1149.738	1031.000

D/E ratio of NSBI

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Debt Detail					
Debenture and Bond	200.000	200.000	200.000	200.000	200.000
Borrowings	815.365	1627.48	727.466	0	0
Deposits	11445.286	13715.395	27957.221	34896.424	42415.443
Bills Payable	48.856	75.115	62.947	72.368	80.685
Proposed and undistributed dividend	91.024	12.229	24.905	83.080	93.465
Income Tax Liabilities	0	0	0	0	0
Other Liabilities	137.378	142.582	231.535	345.253	419.347
Total Debt	12737.909	15772.801	29204.074	35597.125	43208.94
Share Capital	647.798	874.528	1224.339	1861.324	2102.966
Reserve & Surplus	515.492	540.117	488.268	589.23	776.327

Total Equity	1163.29	1414.645	1712.607	2450.554	2879.293
D/E Ratio	1095	1114.965	1705.241	1452.615	1500.679

D/E ratio of KBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
Debt Detail					
Debenture and Bond	0	400.000	400.000	400.000	400.000
Borrowings	212.97	100.000	293.420	429.739	660.925
Deposits	10557.091	12774.281	15710.396	17432.253	16986.279
Bills Payable	16.554	65.297	70.087	42.313	8.118
Proposed and undistributed dividend	0	0	6.584	156.816	6.582
Income Tax Liabilities	11.007	-9.65	0.235	0	0
Other Liabilities	95.059	331.786	432.891	275.594	216.044
Total Debt	10892.681	13661.714	16913.613	18736.715	18277.948
Share Capital	750.000	1070.000	1304.936	1306.016	1603.8
Reserve & Surplus	275.63	294.885	320.017	479.743	610.037
Total Equity	1025.63	1364.885	1624.953	1785.759	2213.837

D/E Ratio	1062.048	1000.942	1040.868	1049.230	825.623

Appendix – VII

Debt-Assets Ratio

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

D/A ratio of NABIL (in %)

Statement	063/64	064/65	065/66	066/67	067/68
Total Debt	25196.342	34695.560	40737.156	48315.483	53574.921
Total Assets	27253.393	37132.759	43867.397	52150.237	58141.437
D/A ratio	92.452	93.436	92.877	92.647	92.146

D/A ratio of NIBL (in %)

Statement	063/64	064/65	065/66	066/67	067/68
Total Debt	25712.720	36186.520	49102.464	52720.019	53197.067
Total Assets	27590.845	38873.307	53010.803	57305.413	58356.827
D/A ratio	93.193	93.088	92.627	91.998	91.1582

D/A ratio of NSBI (in %)

Statement	063/64	064/65	065/66	066/67	067/68
Total Debt	12737.909	15772.801	29204.074	35597.125	43208.94
Total Assets	13901.200	17187.446	30916.682	38047.679	46088.284
D/A ratio	91.632	91.769	94.460	93.56	93.75

D/A ratio of KBL (in %)

Statement	063/64	064/65	065/66	066/67	067/68
Total Debt	10892.681	13661.714	16913.613	18736.715	18277.948
Total Assets	11918.311	15026.599	18538.565	20522.474	20491.785
D/A ratio	91.394	90.917	91.235	91.298	89.20

Appendix – VIII

Overall Cost of Capital under NI Approach

$$\text{Overall Cost of Capital (K}_o\text{)} = \frac{\text{EBIT}}{\text{Value of Firm}}$$

K_o of NABIL (in %)

Fiscal Year	EBIT	Value of Firm	Overall Cost of Capital (K _o)
2063/64	1550.755	27253.393	5.69
2064/65	1847.436	37132.759	4.97
2065/66	2631.947	43867.397	6.00
2066/67	3585.291	52150.237	6.87
2067/68	4862.909	58141.437	8.36

K_o of NIBL (in %)

Fiscal Year	EBIT	Value of Firm	Overall Cost of Capital (K _o)
-------------	------	---------------	---

2063/64	1408.906	27590.845	5.11
2064/65	2012.118	38873.307	5.18
2065/66	2985.574	53010.803	5.63
2066/67	4362.059	57305.413	7.62
2067/68	5298.368	58356.827	9.08

K_o of NSBI

(in %)

Fiscal Year	EBIT	Value of Firm	Overall Cost of Capital (K_o)
2063/64	756.851	13901.200	5.44
2064/65	802.951	17187.446	4.67
2065/66	1267.732	30916.682	4.10
2066/67	1982.055	38047.679	5.21
2067/68	2749.507	46088.234	5.96

K_o of KBL

(in %)

Fiscal Year	EBIT	Value of Firm	Overall Cost of Capital (K_o)
2063/64	645.612	11918.311	5.42
2064/65	756.171	15026.599	5.03
2065/66	1183.239	18538.565	6.38
2066/67	1646.405	20522.474	8.02
2067/68	1925.015	20491.785	9.40

Appendix – IX

Equity Capitalization Rate (K_e) under NOI Approach

$$\text{Equity Capitalization Rate (K}_e\text{)} = \frac{\text{EBT}}{\text{Shareholder's Equity}} \times 100\%$$

K_e of NABIL

(in %)

Fiscal Year	EBT	Shareholder's equity	Equity Capitalization Rate (K _e)
2063/64	995.045	2057.049	48.37
2064/65	1088.99	2437.199	44.68
2065/66	1478.667	3130.240	47.24
2066/67	1625.183	3834.755	42.38
2067/68	1907.478	4566.247	41.77

K_e of NIBL

(in %)

Fiscal Year	EBT	Shareholder's equity	Equity Capitalization Rate (K _e)
2063/64	723.376	1878.123	38.52
2064/65	1019.960	2686.786	37.96
2065/66	1298.601	3907.840	33.23
2066/67	1808.211	4585.393	39.43
2067/68	1678.029	5159.759	32.52

K_e of NSBI

(in %)

Fiscal Year	EBT	Shareholder's equity	Equity Capitalization Rate (K _e)
2063/64	344.590	1163.29	29.62
2064/65	348.034	1414.645	24.60
2065/66	443.032	1712.607	25.87
2066/67	538.362	2450.554	21.97
2067/68	653.469	2879.293	22.69

K_e of KBL

(in %)

Fiscal Year	EBT	Shareholder's equity	Equity Capitalization Rate (K_e)
2063/64	248.559	1025.63	24.23
2064/65	257.437	1364.885	18.86
2065/66	367.036	1624.953	22.59
2066/67	457.486	1785.759	25.62
2067/68	358.464	2213.837	16.19

Appendix – X

Degree of Financial Leverage

$$DFL = \frac{\% \text{ change in EPS}}{\% \text{ change in EBIT}} = \frac{EBIT}{EBT} = \frac{EBIT}{EBIT - I}$$

DFL ratio of NABIL

(in

%)

Statement	063/64	064/65	065/66	066/67	067/68
EBIT	1550.755	1847.436	2631.947	3585.291	4862.909
EBT	995.045	1088.99	1478.667	1625.183	1907.478
DFL	1.56	1.70	1.78	2.21	2.55

DFL ratio of NIBL

(in %)

Statement	063/64	064/65	065/66	066/67	067/68
EBIT	1408.906	2012.118	2985.574	4362.059	5298.366

EBT	723.376	1019.960	1298.601	1808.211	1678.029
DFL	1.95	1.97	2.30	2.41	3.16

DFL ratio of NSBI (in %)

Statement	063/64	064/65	065/66	066/67	067/68
EBIT	756.851	802.951	1267.732	1982.055	2749.507
EBT	344.590	348.034	443.032	538.362	653.469
DFL	2.19	2.31	2.86	3.68	4.21

DFL ratio of KBL (in %)

Statement	063/64	064/65	065/66	066/67	067/68
EBIT	645.612	756.171	1183.239	1646.405	1925.015
EBT	248.559	257.437	367.036	457.486	358.464
DFL	2.60	2.94	3.22	3.60	5.37

Appendix - XI

Correlation Coefficient between Total Debt and Shareholder's Equity

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

Where,

x= Total debt

y= Total Equity

N = No. of observations

Correlation Coefficient of NABIL

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	25196.342	2057.049	51830110.11	634855650.2	4231450.588
2064/65	34695.56	2437.199	84559984.14	1203781884	5939938.966
2065/66	40737.156	3130.24	127517075.2	1659515879	9798402.458
2066/67	48315.483	3834.755	185278040	2334385898	14705345.91
2067/68	53574.921	4566.247	244636322.3	2870272160	20850611.67
Total	Σx=202519.46	Σy=16025.49	Σxy=693821531.8	Σx ² =8702811471	Σy ² =55525749.59

$$r = \frac{5 \times 693821531.8 - 202519.46 \times 16025.49}{\left(\sqrt{5 \times 8702811471 - 202519.46^2} \right) \left(\sqrt{5 \times 55525749.59 - 16025.49^2} \right)}$$

$$= 0.98$$

Correlation Coefficient of NIBL

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	25712.72	1878.123	48291650.82	661143969.8	3527346.003
2064/65	36186.52	2686.786	97225435.32	1309464230	7218819.01
2065/66	49102.464	3907.84	191884572.9	2411051971	15271213.47

2066/67	52720.019	4585.393	241742006.1	2779400403	21025828.96
2067/68	53197.067	5159.759	274484045.2	2829927937	26623112.94
Total	$\Sigma x=216918.79$	$\Sigma y=18217.9$	$\Sigma xy=853627710.4$	$\Sigma x^2=9990988511$	$\Sigma y^2=73666320.38$

$$r = \frac{5 \times 853627710.4 - 216918.79 \times 18217.9}{\left(\sqrt{5 \times 9990988511 - 216918.79^2} \right) \left(\sqrt{5 \times 73666320.38 - 18217.9^2} \right)}$$

$$= 0.97$$

Correlation Coefficient of NSBI

Fiscal Year	x	y	xy	x ²	y ²
2063/64	12737.909	1163.29	14817882.16	162254325.7	1353243.624
2064/65	15772.801	1414.645	22312914.07	248781251.4	2001220.476
2065/66	29204.074	1712.607	50015101.56	852877938.2	2933022.736
2066/67	35597.125	2450.554	87232677.06	1267155308	6005214.907
2067/68	43208.94	2879.293	124411198.5	1867012496	8290328.18
Total	$\Sigma x=136520.85$	$\Sigma y=9620.389$	$\Sigma xy=298789773.3$	$\Sigma x^2=398081319$	$\Sigma y^2=20583029.92$

$$r = \frac{5 \times 298789773.3 - 136520.85 \times 9620.389}{\left(\sqrt{5 \times 398081319 - 136520.85^2} \right) \left(\sqrt{5 \times 20583029.92 - 9620.389^2} \right)}$$

$$= 0.97$$

Correlation Coefficient of KBL

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	10892.681	1025.63	11171860.41	118650499.4	1051916.897
2064/65	13661.714	1364.885	18646668.51	186642429.4	1862911.063
2065/66	16913.613	1624.953	27483826.19	286070304.7	2640472.252
2066/67	18736.715	1785.759	33459257.44	351064489	3188935.206
2067/68	18277.948	2213.837	40464397.57	334083383.1	4901074.263
Total	Σx=78482.671	Σy=8015.064	Σxy=131226010.1	Σx ² =1276511106	Σy ² =13645309.68

$$r = \frac{5 \times 131226010.1 - 78482.671 \times 8015.064}{\left(\sqrt{5 \times 1276511106 - 78482.671^2} \right) \times \left(\sqrt{5 \times 13645309.68 - 8015.064^2} \right)}$$

$$= 0.91$$

Appendix - XII

Correlation Coefficient between EBIT and Interest

Where,

x= EBIT

y= Interest

N = No. of observations

Correlation Coefficient of NABIL

Fiscal Year	X	Y	xy	x ²	y ²
2063/64	1550.755	555.71	861770.0611	2404841.07	308813.6041
2064/65	1847.426	758.436	1401154.386	3412982.825	575225.1661
2065/66	2631.947	1153.28	3035371.836	6927145.011	1330054.758
2066/67	3585.291	1960.108	7027557.571	12854311.55	3842023.372
2067/68	4862.909	2955.431	14371992.01	23647883.94	8734572.396
Total	Σx=14478.328	Σy=7382.965	Σxy=26697845.86	Σx ² =49247164.4	Σy ² =14790689.3

$$r = \frac{5 \times 26697845.86 - 14478.328 \times 7382.965}{\left(\sqrt{5 \times 49247164.4 - 14478.328^2} \right) \times \left(\sqrt{5 \times 14790689.3 - 7382.965^2} \right)}$$

$$= 0.9967$$

Correlation Coefficient of NIBL

Fiscal Year	X	Y	xy	x ²	y ²
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2063/64	1408.906	685.53	965847.3302	1985016.117	469951.3809
2064/65	2012.118	992.158	1996338.971	4048618.846	984377.497
2065/66	2985.574	1686.973	5036582.728	8913652.109	2845877.903
2066/67	4362.059	2553.848	11140035.65	19027558.72	6522139.607
2067/68	5298.366	3620.337	19181870.47	28072682.27	13106839.99
Total	$\Sigma x=16067.023$	$\Sigma y=9538.846$	$\Sigma xy=38320675.15$	$\Sigma x^2=62047528.06$	$\Sigma y^2=23929186.38$

$$r = \frac{5x38320375.15 - 16067.023x9538.846}{\left(\sqrt{5x62047528.06 - 16067.023^2}\right)\left(\sqrt{5x23929186.38 - 9538.846^2}\right)}$$

$$= 0.99$$

Correlation Coefficient of NSBI

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	756.851	412.261	312020.1501	572823.4362	169959.1321
2064/65	802.951	454.917	365276.0601	644730.3084	206949.4769
2065/66	1267.732	824.7	1045498.58	1607144.424	680130.09
2066/67	1982.055	1443.693	2861478.929	3928542.023	2084249.478
2067/68	2749.507	2096.038	5763071.153	7559788.743	4393375.297
Total	Σx=7559.096	Σy=5231.609	Σxy=10347344.87	Σx ² =14313028.93	Σy ² =7534663.475

$$r = \frac{5 \times 10347344.87 - 7559.096 \times 5231.609}{\left(\sqrt{5 \times 14313028.93 - 7559.096^2} \right) \times \left(\sqrt{5 \times 7534663.475 - 5231.609^2} \right)}$$

$$= 1.00$$

Correlation Coefficient of KBL

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	645.612	397.053	256342.1814	416814.8545	157651.0848
2064/65	756.171	498.734	377128.1875	571794.5812	248735.6028
2065/66	1183.239	816.203	965763.2215	1400054.531	666187.3372
2066/67	1646.405	1188.919	1957442.186	2710649.424	1413528.389
2067/68	1925.015	1566.551	3015634.173	3705682.75	2454082.036
Total	Σx=6156.442	Σy=4467.46	Σxy=6572309.95	Σx ² =8804996.141	Σy ² =4940184.449

$$r = \frac{5x6572309.95 - 6156.442x4467.46}{\left(\sqrt{5x8804996.141 - 6156.442^2}\right)\left(\sqrt{5x4940184.449 - 4467.46^2}\right)}$$

$$= 0.99$$

Appendix - XIII

Correlation Coefficient between EBIT and DPS

Where,

x= EBIT

y= DPS

N= No. of observation

Correlation Coefficient of NABIL

Fiscal Year	X	y	xy	x ²	y ²
2063/64	1550.755	140	217105.7	2404841.07	19600
2064/65	1847.426	100	184742.6	3412982.825	10000
2065/66	2631.947	85	223715.495	6927145.011	7225
2066/67	3585.291	70	250970.37	12854311.55	4900
2067/68	4862.909	30	145887.27	23647883.94	900
Total	Σx=14478.328	Σy=425	Σxy=1022421.435	Σx ² =49247164.4	Σy ² =42625

$$r = \frac{5 \times 1022421.435 - 14478.328 \times 425}{\left(\sqrt{5 \times 49247164.4 - 14478.328^2} \right) \times \left(\sqrt{5 \times 42625 - 425^2} \right)}$$

$$= -0.95$$

Correlation Coefficient of NIBL

Fiscal Year	X	y	xy	x ²	y ²
2063/64	1408.906	30	42267.18	1985016.117	900
2064/65	2012.118	40.83	82154.77794	4048618.846	1667.08
2065/66	2985.574	20	59711.48	8913652.109	400
2066/67	4362.059	25	109051.475	19027558.72	625
2067/68	5298.366	50	264918.3	28072682.27	2500
Total	Σx=16067.023	Σy=165.83	Σxy=558103.2129	Σx ² =62047528.06	Σy ² =6092.08

$$r = \frac{5 \times 558103.2129 - 16067.023 \times 165.83}{\left(\sqrt{5 \times 62047528.06 - 16067.023^2} \right) \times \left(\sqrt{5 \times 6092.08 - 165.83^2} \right)}$$

$$= 0.13$$

Correlation Coefficient of NSBI

Fiscal Year	x	y	xy	x ²	y ²
2063/64	756.851	47.589	36017.78224	572823.4362	2264.712921
2064/65	802.951	0	0	644730.3084	0
2065/66	1267.732	42.105	53377.85586	1607144.424	1772.831025
2066/67	1982.055	17.58	34844.5269	3928542.023	309.0564
2067/68	2749.507	17.5	48116.3725	7559788.743	306.25
Total	Σx=7559.096	Σy=124.774	Σxy=172356.5375	Σx ² =14313028.93	Σy ² =4652.850346

$$r = \frac{5 \times 172356.5375 - 7559.096 \times 124.774}{\left(\sqrt{5 \times 14313028.93 - 7559.096^2} \right) \left(\sqrt{5 \times 4652.850346 - 124.774^2} \right)}$$

$$= -0.24$$

Correlation Coefficient of KBL

Fiscal Year	X	y	xy	x ²	y ²
2063/64	645.612	21.05	13590.1326	416814.8545	443.1025
2064/65	756.171	10.608	8021.461968	571794.5812	112.529664
2065/66	1183.239	9.611	11372.11003	1400054.531	92.371321
2066/67	1646.405	12	19756.86	2710649.424	144
2067/68	1925.015	8.44	16247.1266	3705682.75	71.2336
Total	Σx=6156.442	Σy=61.709	Σxy=68987.6912	Σx ² =8804996.141	Σy ² =863.237085

$$r = \frac{5 \times 68987.6912 - 6156.442 \times 61.709}{\left(\sqrt{5 \times 8804996.141 - 6156.442^2} \right) \left(\sqrt{5 \times 863.237085 - 61.709^2} \right)}$$

$$= -0.63$$

Appendix- XIV

Correlation Coefficient between Long-Term Debt and EPS

Where,

x= Long Term Debt

y= EPS

N= No. of observations

Correlation Coefficient of NABIL

Fiscal Year	X	Y	xy	X ²	Y ²
2063/64	5435.19	137.08	745055.8452	29541290.34	18790.9264
2064/65	8704.09	108.31	942739.9879	75761182.73	11731.0561
2065/66	8610.71	106.76	919279.3996	74144326.7	11397.6976
2066/67	15011.15	78.6	1179876.39	225334624.3	6177.96
2067/68	17140.83	65.91	1129752.105	293808053.1	4344.1281
Total	Σx=54901.97	Σy=496.66	Σxy=4916703.728	Σx ² =98589477.2	ΣY ² =52441.7682

$$r = \frac{5 \times 4916703.728 - 54901.97 \times 496.66}{\left(\sqrt{5 \times 98589477.2 - 54901.97^2} \right) \times \left(\sqrt{5 \times 52441.7682 - 496.66^2} \right)}$$

$$= -0.98$$

Correlation Coefficient of NIBL

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	8316.69	62.57	520375.2933	69167332.56	3915.0049
2064/65	8994.23	57.87	520496.0901	80896173.29	3348.9369
2065/66	12683.38	37.41	474485.2458	160868128.2	1399.5081
2066/67	17875.15	52.55	939339.1325	319520987.5	2761.5025
2067/68	19428.3	48.84	948878.172	377458840.9	2385.3456
Total	Σx=297.75	Σy=259.24	Σxy=3403573.934	Σx ² =1007911462	Σy ² =13810.298

$$r = \frac{5 \times 3403573.934 - 297.75 \times 259.24}{\left(\sqrt{5 \times 1007911462 - 297.75^2}\right) \left(\sqrt{5 \times 13810.298 - 259.24^2}\right)}$$

$$= -0.44$$

Correlation Coefficient of NSBI

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	5717.47	39.35	224982.4445	32689463.2	1548.4225
2064/65	7054.88	28.33	199864.7504	49771331.81	802.5889
2065/66	17638.4	36.18	638157.312	311113154.6	1308.9924
2066/67	22348.95	23.69	529446.6255	499475566.1	561.2161
2067/68	28213.55	24.85	701106.7175	796004403.6	617.5225
Total	Σx=80973.25	Σy=152.4	Σxy=2293557.85	Σx ² =1689053919	Σy ² =4838.7424

$$r = \frac{5 \times 2293557.85 - 80973.25 \times 152.4}{\left(\sqrt{5 \times 1689053919 - 80973.25^2} \right) \left(\sqrt{5 \times 4838.7424 - 152.4^2} \right)}$$

$$= -0.64$$

Correlation Coefficient of KBL

Fiscal Year	X	Y	XY	X ²	Y ²
2063/64	2776.48	22.7	63026.096	7708841.19	515.29
2064/65	4199.55	16.35	68662.6425	17636220.2	267.3225
2065/66	4927.05	27.46	135296.793	24275821.7	754.0516
2066/67	7606.2	24.24	184374.288	57854278.44	587.5776
2067/68	7054.66	16.92	119364.8472	49768227.72	286.2864
Total	ΣX=26563.94	ΣY=107.67	ΣXY=570724.6667	ΣX ² =157243389.3	ΣY ² =2410.5281

$$r = \frac{5 \times 570724.6667 - 26563.94 \times 107.67}{\left(\sqrt{5 \times 157243389.3 - 26563.94^2} \right) \left(\sqrt{5 \times 2410.5281 - 107.67^2} \right)}$$

$$= -0.03$$

Appendix – XV

Share Capital Trend

$$\text{Trend Percentage} = \frac{\text{Index Yearly Amounted}}{\text{Base Year Amount}} \times 100\%$$

Share Capital Trend of NABIL

Fiscal Year	Share Capital	Trend %
063/64	491.654	100
064/65	689.216	140.18
065/66	1448.620	294.64
066/67	2028.774	412.64
067/68	2029.769	412.84

Share Capital Trend of NIBL

Fiscal Year	Share Capital	Trend %
063/64	801.352	100
064/65	1203.915	150.23

065/66	2407.069	300.37
066/67	2409.098	300.63
067/68	3011.372	375.78

Share Capital Trend of NSBI

Fiscal Year	Share Capital	Trend %
063/64	647.798	100
064/65	874.528	135
065/66	1224.339	189
066/67	1861.324	287.33
067/68	2102.966	324.63

Share Capital Trend of KBL

Fiscal Year	Share Capital	Trend %
063/64	750	100
064/65	1070	142.62
065/66	1304.935	174
066/67	1306.016	174.13
067/68	1603.80	213.84

Appendix – XVI

Reserve and Surplus Trend

Reserve and Surplus Trend of NABIL

Fiscal Year	Reserve and Surplus	Trend %
063/64	1565.39	100
064/65	1747.98	111.66
065/66	1681.620	107.42
066/67	1805.98	115.37
067/68	2536.75	162.52

Reserve and Surplus Trend of NIBL

Fiscal Year	Reserve and Surplus	Trend %
063/64	1076.77	100
064/65	1482.87	137.71
065/66	1500.77	139.38
066/67	2176.29	202.11
067/68	2148.39	199.52

Reserve and Surplus Trend of NSBI

Fiscal Year	Reserve and Surplus	Trend %
063/64	515.49	100

064/65	540.12	104.78
065/66	488.27	94.72
066/67	589.23	114.30
067/68	776.32	150.60

Reserve and Surplus Trend of KBL

Fiscal Year	Reserve and Surplus	Trend %
063/64	275.63	100
064/65	294.88	106.98
065/66	320.02	116.10
066/67	479.74	174.05
067/68	610.04	221.32

Appendix – XVII

Borrowing Trend

Borrowing Trend of NABIL

Fiscal Year	Borrowing	Trend %
063/64	882.57	100
064/65	1360.00	154.09
065/66	1681.30	190.50
066/67	74.90	8.49
067/68	1650.60	187.02

Borrowing Trend of NIBL

Fiscal Year	Borrowing	Trend %
063/64	0	0
064/65	0	0
065/66	38.8	100
066/67	37.31	96.16
067/68	280.76	723.61

Borrowing Trend of NSBI

Fiscal Year	Borrowing	Trend %
063/64	815.36	100
064/65	1627.48	199.60
065/66	0	0
066/67	0	0
067/68	0	0

Borrowing Trend of KBL

Fiscal Year	Borrowing	Trend %
063/64	212.97	100
064/65	100	46.95
065/66	293.42	137.77
066/67	429.74	201.78
067/68	660.92	310.33

Appendix – XVIII

Deposits Trend

Deposits Trend of NABIL

Fiscal Year	Deposits	Trend %
063/64	23342.28	100
064/65	31915.05	136.73
065/66	37348.25	160.00
066/67	46410.70	198.83
067/68	49696.11	212.90

Deposits Trend of NIBL

Fiscal Year	Deposits	Trend %
063/64	24488.85	100
064/65	34451.73	140.68
065/66	46698.10	190.69
066/67	50094.72	204.56
067/68	50138.12	204.74

Deposits Trend of NSBI

Fiscal Year	Deposits	Trend %
063/64	11445.29	100
064/65	13715.39	119.83
065/66	27957.22	244.27
066/67	34896.42	304.90
067/68	42415.44	370.59

Deposits Trend of KBL

Fiscal Year	Deposits	Trend %
063/64	10557.09	100
064/65	12774.28	121
065/66	15710.39	148.81
066/67	17432.25	165.12
067/68	16986.28	160.90

Appendix – XIX

Investment Trend

Investment Trend of NABIL

Fiscal Year	Investment	Trend %
063/64	8945.31	100
064/65	9937.77	111.09
065/66	10826.38	121.02
066/67	13670.92	152.83
067/68	13081.20	146.23

Investment Trend of NIBL

Fiscal Year	Investment	Trend %
063/64	6505.68	100
064/65	6874.02	105.66
065/66	7399.81	113.74

066/67	8635.53	132.74
067/68	7423.12	114.10

Investment Trend of NSBI

Fiscal Year	Investment	Trend %
063/64	2659.45	100
064/65	3088.89	116.15
065/66	13286.18	499.58
066/67	16305.63	613.12
067/68	18911.02	711.09

Investment Trend of KBL

Fiscal Year	Investment	Trend %
063/64	1678.42	100
064/65	2138.80	127.43
065/66	1510.83	90.00
066/67	2296.87	136.85
067/68	3533.62	210.53

Appendix – XX

Calculation of Long term capital

LTD = Debenture + Fixed Deposits

LTD of NABIL (in millions)

Fiscal Year	Debenture	Fixed Deposits	Long term debt
2063/64	0	5435.19	5435.19
2064/65	240	8464.09	8704.09
2065/66	300	8310.71	8610.71
2066/67	300	14711.15	15011.15
2067/68	300	16840.83	17140.83

LTD of NIBL (in millions)

Fiscal Year	Debenture	Fixed Deposits	Long term debt
2063/64	800	7516.69	8316.69
2064/65	1050	7944.23	8994.23
2065/66	1050	11633.38	12683.38
2066/67	1050	16825.15	17875.15
2067/68	1050	18378.30	19428.30

LTD of NSBI

(in millions)

Fiscal Year	Debenture	Fixed Deposits	Long term debt
2063/64	200	5517.47	5717.47
2064/65	200	6854.88	7054.88
2065/66	200	17438.40	17638.40
2066/67	200	22148.95	22348.95
2067/68	200	28013.550	28213.55

LTD of KBL

(in millions)

Fiscal Year	Debenture	Fixed Deposits	Long term debt
2063/64	0	2776.48	2776.48
2064/65	400	3799.55	4199.55
2065/66	400	4527.05	4927.05
2066/67	400	7206.20	7606.20
2067/68	400	6654.66	7054.66