

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Banks and other financial institutions are the major component in the financial system. They are playing vital role in the process of economic development of the country. Integrated and speedily development of the country is possible only when competitive banking and financial service reach corner of the country. The network of a well-organized financial system of the country has great bearing in capital formation. It collects spread financial resources from the masses and invests them among those engaged in commercial and economic activities of the country. “The importance of the banking as the nerve center of economic development cannot be over emphasized and it is said that bank which are the need of and great wealth of country have get to be kept very scared. Just as water for irrigation, good banks are for the country’s industry and trade.”¹

Commercial banks are major financial institutions, which occupy quite an important place in the framework of every economy because they provide capital for the development of industry, trade, business and other resource deficit sectors by investing the saving, collected and deposits. Bank collects fund as a saving from the community and invest it into most desirable and highly yielding sectors as a full to a process of economic development. Additionally, it develops saving habits of people. The main objectives of the bank are collection of amount from public in a form of saving and providing short-term loan (for the development of industry, trade, and business) to the ones in need. Bank draws surplus money from the public, who cannot use the money at the time and lends to those who give attention to use for productive purposes.

Banking institutions collect scattered financial resources from the mass and invest it among those who are associated with the economic, commercial and social activities of the country. Beside those, commercial banks render a numerous services to their customer in view of facilitating their economic and social life. Every economic activity of each country is greatly influenced by the commercial banking business of that country. Thus, commercial banks have become the heart of financial system.

¹ (Desai, V.R. Mutalik, “Banking Development in India”. Bombay: Pc Mansktol and Sons PVT LTD, 1967, P-120)

Banking institutions are inevitable for mobilizing resources, for finance and social economic development of any country and which is important to all parties i.e. generally public, business, organization, government and other small financial institution. The development of a country is always measured by its economic development through economic indices. That's why every country has given emphasis on boost up its economy. At present, the financial institutions are viewed as medium in the process of the economic growth. The mobilization of domestic resources is one of the key factors in the economic development of a country.

Sayers defined the bank as "Ordinary banking business consists of changing cash for bank deposits and bank deposits for cash, transferring bank deposits from one person or corporation to another; giving bank deposits in exchange for bills of exchange, government bonds, the secured or unsecured promises of businessmen to reply etc."²

Bank is resource for economic development that maintains economic confidence of various segments and expands credit to people. Bank means "A financial establishment for the deposit, loans exchange or issue of money and for the transmission of funds."³

The development of country's economy is impossible without expansion of banking function in both rural and urban area of the country. Development of trade and industry is dependent upon the development of banking facilities. So it is said that the bank is backbone of economic development in modern society. A new organized financial institution companies, commercial banks and other financial intermediaries play an important role for the development of a country. So, the financial institutions, commercial banks and other financial intermediaries play an important role for the development of a country.

1.1.1 Development of Banks

In Worldwide Context

² (Shakespeare Vaidya, "Banking and Insurance Management." Taleju Prakashan, Bhotahity, Kathamndu. 2001, p-32)

³ (Bhandari, Dilli Raj, "Banking & Insurance", Aayush Publication, Kathmandu, January 2003, P-119)

The word “**Bank**” is orient in medieval age in 1171AD from an Italian word “**Banko.**” That means the place where people come together for different transaction. The “**Bank of Vanice**” was the first bank, which established in Italy in 1157AD as a first modern bank. Then after in 1401AD “**Bank of Barcelona**” is established in Spain, Bank of Geneva established in 1407AD, Bank of Amsterdam established in 1609AD. But the credit of the development of modern banks goes to “**The Bank of England**” which was established in 1694AD in London. The growth of banking accelerated only after the introduction of the banking Act 1883 in United Kingdom as it allowed opening joint stock company banks.

In Nepalese Context

In Nepal, the period of 14th century, Jayasthiti Malla - a king of Kantipur classified people in 64 groups according to their occupations, “**Tanka Dhari**” was one among them who used to lend money at a fixed rate of interest. During the period of Ranodip Singh, the Prime minister, a government institution called “**Tejarath Adda**” was established around 1887 AD for providing easy and cheap credit at 5% interest to the public on securing of gold and silver.

“In the overall development of banking system in Nepal, the “**Tejarath Adda**” may be regarded as the father of modern banking institution and for quite a long time it tendered a good servants as well as to the general public.”⁴

The modern banking business system in Nepal is not much old. The development of modern bank started from the establishment of “**Nepal Bank Limited**” in 1994 B.S. with put forth effort of government and public, as a commercial bank with 10 million authorized capital. The authorized capital was contributed by the government 51% and remaining by public 49%. It is the first step of the modern and systematic financial system in Nepal.

Thus, the government felt the requirement of a central bank and established “**Nepal Rastra Bank**” in 2013 BS. It played leading role in development of banking in Nepal and also controlled the monetary culture in the country. NRB was established with the objective of supervising, protecting and directing the functions of commercial banks.

⁴ (Shrestha, Sunity, “Portfolio Behaviour of Commercial Banks in Nepal,” 1995, P-4)

Likewise, raising of banking function get popular and more complicated, thus NRB suggested for the establishment of another commercial bank and in 2022 BS(1966 AD) “**Rastriya Banijya Bank**” was established as a fully government owned commercial bank. Now its branches are diversified all over the country. It made another milestone in the history of growth of banking.

Apart from this, NIDC was established in 1959 AD & Agricultural Development Bank established in 1976 AD and other development bank and financial institutions were established & continue to establish and are contributing to the economy and banking tradition in Nepal. In 1990 AD, after re-established of democracy, the government took the liberal policy in banking sector. As an open policy of HMG’s to get permission to invest in banking sector from private and foreign investor under Commercial Bank Act 2031 BS, different private bank are getting permission to establish with the joint venture of other countries.

Introduction of Commercial Bank

Commercial banks are the major component in the financial system. They work as the intermediary between depositors & lenders and facilitate in overall development of the economy. The commercial bank collect the scattered saving and put them into productive channels. They hold the deposit of money from people, government establishments and business units. They make funds available through their lending and investing activities firms and government establishment. **According to Commercial Bank Act 2031**, “Commercial bank refers to such type of bank with deals in currency exchange, accepting deposits, advancing loans and commercial transactions except specific banking related to co-operative, agriculture & industry and other objectives”

"The commercial banks are those banks that pool together the saving of the community and arrange for their productive use. They supply the financial needs of modern business by various means" ⁵

“Commercial bank is a corporation which accepts demand deposits subject to check and makes short-term loans to business enterprises, regardless of the scope of its other services.”⁶

⁵ (Shakespeare Vaidya, Banking and insurance management, Taleju prakashan, Bhotahity, Katmandu, 2001, p-38)

⁶ (Principles of Bank Operations” American Institute of Banking, USA, 1972, P-345)

“The commercial bank has its own role and contribution in the economic development. It is a resource for the economic development; it maintains economic confidence of various segments and extends credit to people.”⁷

These banks are established to improve people’s economic welfare and facility, to provide loan to the agriculture, industry and commerce and to offer banking services to the people and the country. It provides internal resources for developing countries economy. It collects diversified capital from different parts of country through its own branches.

Joint Venture Banks

In global prospective, to achieve mutual exchange of goods services and modern technology, joint venture banks are made up through partnership and with negotiations between two or more countries, industries(enterprise), traders and mercantile the purpose of carrying out a specific operation. So, the main purpose of joint venture is to join economic forces in order to achieve certain result, which partners could not achieve separately. Under joint venture basis, to operate a business organization, there should be at least two partners from the different countries. The primary objective of joint venture bank is to earn profit by investing or granting the loan and advances to the people associate with trade, business, industry etc. that means they are required to mobilize their resources properly to acquire profit

"HMG deliberate policy of allowing foreign joint venture banks to operate in Nepal is basically targeted to encourage local traditional run commercial banks to exchange their bankable capacity through competition, efficiency, modernization and mechanization via computerization and prompt customer service." ⁸

“A joint venture is forming of two forces between two or more enterprises for the purpose of carrying out a specific operation (industrial or commercial investment, production trade).”⁹

Role of Joint Venture Banks in Nepal

⁷ (Grywinski, Ronald, “The new Fashioned Banking”, London Howard Business Review, 1991, P-87)

⁸ (M.K. Shrestha, commercial bank a comparative performance evolution, Karmachari Sanchaya Kosh, Kathmandu B.S. 2047, p. - 44-54)

⁹ (Gupta, G. P., “Banking System, its role in Export Development”, 1984, P15-25)

In such manner, joint venture banks are successful to bring healthy competition among banks, increase in foreign investment, promoted and expand export-import trade, introduce new techniques and technologies. The various roles plays by the joint venture banks in Nepal can be classified into three categories:

a. Introducing Advanced Banking Techniques

The joint venture banks in Nepal have been largely responsible for the introduction of new banking techniques such as computerization, hypothecation, consortium finance, fee-based activities and syndicating under the foreign exchange transactions by importers and exporters, merchant banking, inter-bank market for the money and securities, arranging foreign currency loans, etc.

b. Introducing Foreign Investment in Nepal

When looking at the possibility of investing in Nepal, multinational companies are unfamiliar with the local rules, regulations and practices. Though there are many system actually operates during the implementation period. In this context, the joint venture banks help the multinational companies to build up their confidence for investment by providing necessary information and financial support.

c. Bringing in Healthy Competition

The induction of joint venture banks also brings the benefit of healthy competition of which the main beneficiaries are the bank customers and the economy. The increase in competition also force the existing banks to improve their qualities of services by simplifying procedures providing training and motivation to their own staff to respond to the new challenge.

Hence, the entrepreneurial dynamic and pivotal role of the joint venture banks contributes the economic development of the country by providing various new financial services to modernize traditional Nepalese banking system.

Commercial Banking and Joint Venture Banks Scenario in Nepal

The commercial banks of Nepal can be classified into two: Domestic Commercial Banks and Joint Venture Foreign Banks. The first commercial bank of Nepal is Nepal Bank Ltd. This was establishment in the 30th kartik 1994 B.S. under the Banijya Bank Act. B.S.2021 the government lunched Rastriya Banijya Bank. It has rendered a great contribution to the development of the country.

The process of the development of banking system in Nepal was not satisfactory up to 2040. No bank was opened from during this period except extending the branches and sub branches of the banks. So, to improve the status of country some banks are opened on the joint investment. There has been visible expansion in the financial system of Nepal, after the onset of economic liberalization process. Nepalese economy has witnessed several changes in the financial systems as a result of which several JVBs evolved in the last decade.

Nepal Arab Bank Ltd. (NABIL Bank Ltd.) was the 1st joint venture bank established in 1984 AD, joint ventured with United Arab Emirates Bank. Nepal Indosuez Bank Ltd. (Nepal Investment Bank Ltd.) joint venture with Indosuez Bank of France was established in 1986AD, and Nepal Grindlays Bank (Standard Chartered Bank Nepal Ltd.) with ANZ Grindlays was established in 1986 AD. Himalayan Bank Ltd. joint ventured with Habib Bank of Pakistan and SBI Bank Ltd. with State Bank of India was established in 1993 AD. Everest Bank Ltd. joint ventured with Punjab National Bank, India (early it was joint ventured with United Bank of India, Calcutta) and Nepal Bangladesh Bank Ltd. with IFIC Bank of Bangladesh were established in 1991 AD., Bank of Kathmandu joint ventured with SIAM commercial Bank Public Co., Thailand was established in 1995 AD and Nepal Credit & Commerce Bank Ltd. With joint venture with Bank of Ceylon, Sri-Lanka was established in 1996AD. Currently, there are 31 commercial banks operating in Nepali financial market.

Table 1

List of Commercial Banks Operating in Nepal

S.N.	Commercial Banks	Operation Date (A.D)	Head Office
1	Nepal Bank Ltd.	1937/11/15	Kathmandu
2	Rastriya Banijya Bank Ltd.	1966/01/23	Kathmandu
3	NABIL Bank Ltd.	1984/01/07	Kathmandu
4	Nepal Investment Bank Ltd.	1986/02/27	Kathmandu
5	Standard Chartered Bank Nepal Ltd.	1987/01/30	Kathmandu
6	Himalayan Bank Ltd.	1993/01/18	Kathmandu
7	Nepal SBI Bank Ltd.	1993/07/07	Kathmandu
8	Nepal Bangladesh Bank Ltd.	1993/05/06	Kathmandu
9	Everest Bank Ltd.	1994/10/18	Kathmandu

10	Bank of Kathmandu Ltd.	1995/03/12	Kathmandu
11	Nepal Credit & Commerce Bank Ltd.	1996/10/14	Siddarthanagar
12	Lumbini Bank Ltd.	1998/07/17	Narayangadh
13	NIC Asia Bank Ltd.	1998/07/21	Biratnagar
14	Machhapuchhre Bank Ltd.	2000/10/03	Pokhara
15	Kumari Bank Ltd.	2001/04/03	Kathmandu
16	Laxmi Bank Ltd.	2002/04/03	Birgunj
17	Siddhartha Bank Ltd.	2002/12/24	Kathmandu
18	Agricultural Development Bank Ltd	2006/03/16	Kathamandu
19	Global Bank Ltd.	2007/01/02	Birgunj
20	Citizen Bank Ltd	2007/06/21	Kathmandu
21	Prime Commercial Bank Ltd	2007/09/24	Kathmandu
22	Sunrise Bank Ltd	2007/10/12	Kathmandu
23	Development and Credit Bank Ltd.(Grand Bank Ltd.)	2008/05/25	Kathmandu
24	NMB Bank Ltd.	2008/06/05	Kathmandu
25.	Kist Bank Ltd	2009/05/07	Kathmandu
26.	Janata Bank Nepal Ltd.	2010/04/05	Kathmandu
27.	Mega Bank Nepal Ltd.	2010/07/23	Kathmandu
28.	Commerz & Trust Bank Nepal Ltd.	2010/09/20	Kathmandu
29.	Civil Bank Ltd.	2011/01/12	Kathmandu
30.	Century Commercial Bank Ltd.	2011/01/23	Kathmandu
31.	Sanima Bank Ltd.	2004	Kathmandu

Source: Banking and Financial Statistics, NRB, Table No.43 mid-July, 2012

Profile of the Sample Banks

As there has been number of commercial banks established, the research has been taken into consideration of NIBL and KBL. Therefore, short glimpse of these commercial banks are given as:

Nepal Investment Bank Limited

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

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, had acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

Table 2

Share Holding Pattern of NIBL:

Subscription	% Holding
Promoter Share Holders	50%
Rastriya Banijaya Bank	15%
Rastriya Bima Santhan	15%
General Public	20%
Total	100%

Source: www.nibl.com.np

Table 3

Present Capital Structure of NIBL:

Share structure	Amount(Rs)
Authorized capital(4,00,00,000 Shares@ 100)	4,00,00,00,000
Issued capital(2,40,90,977 Shares@ 100)	2,40,90,97,700
Paid up capital(2,40,90,977 Shares @100)	2,40,90,97,700

Source: Annual Report of NIBL 2010/11

Kumari Bank Limited

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs.1,603,800,000 of which 70% is contributed from promoters and remaining from public. **Kumari Bank Ltd** has been providing wide - range of modern banking services through 29 points of representations located in various urban and semi urban part of the country, 20 outside and 9 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like E-Banking and SMS Banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers

that enhance high comfort and value. The adoption of modern Globus Software, developed by Temenos NV, Switzerland and arrangement of centralized data base system enables customer to make highly secured transactions in any branch regardless of having account with particular branch. Similarly the bank has been providing 365 days banking facilities, extended banking hours till 7 PM in the evening, Utility Bill Payment Services, Inward and Outward Remittance services, Online remit Services and various other banking services.

Visa Electron Debit Card, which is accessible in entire VISA linked ATMs (including 33 own ATMs) and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organizational mission. The key focus of the bank is always center on serving unfulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive banking products and services in their door step. The bank always prioritizes the priorities of the valued customers.

Table 4

Share Holding Patterns of KBL:

Subscription	% holding
Promoter Share Holders	70%
General Public	30%
Total	100%

Source: www.kumaribank.com

Table 5

Capital Structure of KBL:

Share structure	Amount(RS)
Authorized Capital(2,00,00,000 shares@ 100)	2,00,00,00,000
Issued & Paid up Capital(1,60,38,000 Ordinary Shares of Rs.100)	1,60,38,00,000

Source: Annual Report of KBL, FY 2010/11

1.2 Statement of Problems

The number of commercial banks and financial institutions are establishing speedily. These institutions have been established to assist the process of economic development of the country. The major problem in almost all under developed countries and Nepal is that capital formation and proper utilization. Various commercial banks have played vital role by accepting deposits and providing different types of loan i.e. invest it in a productive field. The development of the country is directly related to the volume of investment in productive sectors, which is also obtained from commercial Banks. Most of commercial banks (with JVBs) has not made profit and created value and Mobilized resources as well. Risk in the competitive environment is increasing with respect to investment and investment sectors are going to be narrowed down. The investment diversification is also being a problem due to unstable political and security situation. Due to the high competition between the financial institutions, the collected huge amount from public is comparatively lower than fund mobilization and investment practice of collected funds. Therefore, it raised the problems of investment and proper mobilization of collected funds.

Strong fund mobilization activities play a vital role in utilization of collected funds and overall development of the economy of the nation. If the funds are wrongly invested without thinking any financial risk, business risk and other related facts, the bank cannot obtain profitable return as well as it should sometimes lose its principle. Fund mobilization policy may differ from one joint venture banks to another but there is no optimum utilization of shareholders fund to have greater return in any bank. Nepal Rastra Bank has also played significant role to make commercial bank mobilize their fund in good sector. For this purpose, NRB imposed many rules and regulation so that commercial bank can have sufficient liquidity and security. Though most of the joint-venture banks have been successful to earn profit from fund mobilization, none of them seem to be capable to invest their entire fund in more profitable sectors.

Fund mobilization is the most important factor from the shareholder and banks management point of view. Under such situation, this study is a comparative study on fund mobilization of 2 commercial banks in the country namely: Nepal Investment Bank Ltd. and Kumari Bank Ltd. The major problems related to fund mobilization procedures of the joint venture banks of Nepal have been presented briefly as under:

- a) What is the relationship between deposits with total capital raised, deposits with total investment and also deposits with loan and advances?
- b) Which commercial banks have more effective investment policy: NIBL and KBL?
- c) Does the investment decision affect the total earning of the bank or not?
- d) Are they maintaining sufficient liquidity position?
- e) Is there any stability in fund mobilization between NIBL and KBL?

1.3 Focus of the Study

Banking institutions are inevitable for the resource mobilization. Bank collects fund as a saving from public of country and invest in highly return yielding firm. The role of commercial banks in uplifting the economic growth of the country is very important. The uplifting of the development of a nation largely depends upon the development of its economic growth. Bank provides internal resources own branches. The development of the economy is greatly influenced due to the internal management of the bank. So commercial bank is the heart of trade, industry and business in modern age commercial banks earn optimal profit by mobilizing their internal resources properly.

This research focuses on the comparative study of fund mobilization of two banks; Nepal Investment Bank Ltd (NIBL) and Kumari Bank Ltd (KBL). These two banks are compared as per their fund mobilization procedure by taking 7 years data from the year 2006/07 to 2012/13.

1.4 Objective of the study

This study is concerned with whether NIBL and KBL are adopting efficient fund mobilizing policy or not. The main objectives related to this study are presented below:

- ❖ To evaluate the growth ratio of loan and advances and total investment with respective to growth rate of total deposit and net profit of NIBL and KBL.
- ❖ To evaluate liquidity, assets management, efficiency and profitability portions in related to fund mobilization of two commercial banks.
- ❖ To carry out the relationship between deposits and total investment, deposits and loan and also advance and net profits of NIBL and KBL respectively.

- ❖ To evaluate trend of deposits utilization and its projection for the next seven years.
- ❖ To suggest and recommend some measures for improvement of performance of NIBL and KBL.

1.5 Significant of the study

In Nepal, due to the efficient management and professional service and a dynamic role in economy, the commercial banks are widely popular at present but still the banks do not have sufficient investment opportunities, because of the poor economy structure of the country. Fund mobilization activities of commercial banks greatly effects the growth and earning of banks. Effective, stable, appropriate fund mobilizing policy may cause the earning of sufficient return to the banks. Most of the commercial banks have been successful to earn profit from effective fund mobilization.

Optimum utilization of fund makes better impact on the economy of the nation. Fund mobilization activities must consider customer, national and government as well as its shareholders interest. Significance of the fund mobilization can be written as the following manner:

- ❖ By the help of this study, general public can know the funds mobilizing activities of banks.
- ❖ From the study of fund mobilizing policy about bank, shareholders and companies would get information related to the fund mobilizing scheme of the bank and they may know how banks are mobilizing their fund and resources. And it is fruitful to make investment on shares of various commercial banks.
- ❖ The depositor's general public can make decision to deposit their money in the bank after analyzing the fund mobilization of commercial banks.
- ❖ It is also beneficial for the government while formulating policies and rules regarding commercial banks.
- ❖ The study of fund mobilizing policy would provide information to the management of the bank that would be helpful to take corrective action in the bank activities.

- ❖ This study will serve to be a guide to the management of banks, financial institutions, related parties, shareholders, general public (customer, depositors and creditors).

1.6 Limitation of the study

The study has been carried out subject to the following limitations.

- a. This study is focused on the fund mobilization aspects of the banks.
- b. This study will base on secondary data and accuracy depends upon the data collected and provided by the organization.
- c. This study has been only of two commercial banks as sample i.e. NIBL and KBL.
- d. This study concentrates for 7-years period only (i.e. from F.Y. 2006/07 to 2012/13).

1.7 Organization of the study

The entire study has been organized into five chapters.

Chapter-1 Introduction

This chapter deals with the introduction chapter which contains are background of the study, introduction of commercial banks, focus of the study, statement of the problems, objectives of the study, significant of the study, limitation of the study and organization of the study.

Chapter-2 Review of Literature

This chapter is concerned with review of literature. This contains conceptual framework, review from journals, articles, review of research papers and published and unpublished master's thesis of T.U.

Chapter- 3 Research Methodology

This chapter deals with the research methodology used in this study. It includes introduction, research design, sources of data, population and sample, sources and collections of data, data processing procedure and tools and data analysis techniques.

Chapter-4 Presentation and analysis of data

This is the main part of the research and in this part have been systematically presented, analyzed and interpreted, which deals with presentation and analysis of relevant data through definite courses of research methodology with financial and statistical analysis related to investment and fund mobilization of NIBL and KBL. Major findings of the study have been presented at the end of this chapter.

Chapter- 5 Summary, Conclusion and Recommendation

This is the last part of the study, which provides summary and conclusion, suggestions and recommendations for improving the future performance of the sample banks. Finally, an extensive, bibliography and appendices are also presented at the end of the thesis work.

CHAPTER II

REVIEW OF LITERATURE

2.1 Conceptual Framework

This chapter highlights a brief view of the related studies and various related literature. Different definitions or opinion expressed by experts in respect of fund mobilization are considered to be relevant for the proposed study. This chapter is divided into two parts. First part is concerned with the conceptual framework of commercial bank and second part is related with some available literature including review of books, articles, review of journals and review of thesis work performed previously.

2.1.1 Meaning of Banking

Bank is defined as a financial intermediary between depositors and entrepreneurs. It is financial institution that accepts deposits and channels the money into lending activities. It deals with money by accepting deposits from public, corporate bodies, private organization and deploys those deposits for profitable purposes in the form of loan & advance. These days the functions of bank have increased. Thus, a modern bank has various function, it is difficult to include all those functions in single and precise definition. Even though it can be said that a bank is an institution, whose business is to trade in money.

2.1.2. Origin of Bank

To come to the present form of bank, it had passed various stages. It was found that the ancestors of modern banking were merchants, goldsmith and money- lenders, who gave birth to negotiable instruments, bank notes & loans respectively, and there are the major components of banking. Bank as an institution originated from Italy. The first bank in the world was “The bank of Venice” established in 1157 A.D. It is said that the word bank is also derived from the Italian word “banco”, which means bench. Money lenders in Europe used benches for acceptance & payments of Valuables and coin. Similarly in Latin “bencks” means bench and in French “banque” also means bench. So, it is difficult to say how the word bank was derived from.

In Nepal, Nepal Bank Ltd. was established on 30th Kartik 1994 B.S. as a bank to carry out the function of a commercial bank. The need of development of banking sector was fulfilled with formulation monetary policy in 2013 B. S. Nepal Rastra Bank (NRB) was established in 2022 B.S. to fulfill more banking service. Later on, many other banks were established for uplifting economic and industrial sector. In established of banks continuing Nabil Bank was established as first joint venture bank on 2041 B.S. Then other JV banks are also started. Currently, there are more than nine joint venture banks operating in the country.

2.1.3. Definition of Commercial Bank

Commercial banks are those banks, which perform all kinds of banking function such as provide Loan, collects deposits of money from the public, discounting bills, repayable on demand and withdraw by cheques, draft and other functions on behalf of customers. Moreover, commercial banks also provide technical and administration assistance to the industries trade and business entrepreneurs sectors.

According to section 2 (a) of commercial bank Act 2031 (1974) has defined the “commercial bank” means a bank which operates currency exchanges transaction, accepts deposits, provide loans, performs, dealing relating to commerce except the banks, which has been specified for the co-operative., agricultural, industry of similar other specific objective. ¹⁰

Commercial bank is cooperative which accepts demand deposits subject to check and make short-term loans to business enterprises, regardless of the scope of its other services. ¹¹

A financial institution authorized to provide a variety of financial services, including consumer and business loans (generally short term), credit cards, and saving accounts. (www.definition of commercial bank)

¹⁰ (Nepal commercial Bank Act 2031 B.S.)

¹¹ (American Institute of banking, Principles of bank operation, page 345)

According to Vaidya, ‘The commercial banks are those banks that pool together the savings of the community and arrange for their productive use. They supply the financial needs of modern business by various means.’¹²

Commercial banks deal in credit i.e. it creates credit by making advance out of the funds received as deposits to need people. It thus functions as a mobilize of saving in the economy.¹³

According to Dr. Bhandari “commercial banks are considered second types of banks. These banks are established to improve people’s economic welfare & facility, to provide loan to the agriculture industry and commerce and to offer banking services to the people and the country.”¹⁴

The primary function of commercial banker is that of a broker & a dealer in money. By discharging this function effectively, a commercial banker renders very valuable service to the community by increasing the productive capacity of the country and there by accelerating the pace of economy development.¹⁵

Establishment of commercial banks contributes significant role in the formation and mobilization of internal capital & development efforts. They furnish necessary capital needed for trade and commerce for mobilizing the dispersed saving of the individuals and institution.

Therefore, it is concluded that the commercial banks are the financial intermediaries, which accept deposits from the public and provide loans to the needy persons. It provides not only range of investment services but also furnish advice and information outside the scope merely of trade.

Commercial banks can be classified into two commercial banks, domestic commercial banks and joint venture foreign banks. These days there are many competitions between both types of banks.

¹² (Shakespeare Vaidya, Banking and insurance management, Taleju Prakashan, Bhotahity, Kahtmandu.2001 Page – 38)

¹³ (D. M. Mithari, Money Banking, International Trade and public finance, Mumbai. 2000) p-269

¹⁴ (Dilli RAj Bhdari, Banking & insurance, Principle & practice, Aayush publication, Katmandu, Jan 2000, page- 20)

¹⁵ (Shekhar & shekher, Banking the theory and practice, New Delhi: Vikash Publishing pvt. Ltd. 1999 p- 4)

2.1.4 Joint Venture Commercial bank.

Generally, when two commercial banks, from different countries joint together to form an independent enterprise, it is called as joint venture bank. It can be said as the force between two or more enterprise for the purpose of carrying out specific operation such as industrial or commercial investment, production or trade.

Having limit resources and capital in the country, the government has carried out open economic policy with positive attitude. The government policy of economic liberalization has made banking sector open and competitive with limited government control. It has opened its doors to private foreign investment conjunction with Nepalese investors. As a result, joint venture banks had formed in considerable number. Its growth has been substantial since 1990's the policy is made basically target to encourage local traditionally run banks, to improve their banking capacity through competition, Joint venture bank presents healthy competition among the existing commercial bank, which has ultimately affected the profitability of the banks. Hence, to become successful in this competition, banks have increase their quality and services.

In Nepal, the foreign commercial banks have been formed under the company act 1964 and operated under the commercial bank act 1974. All Nepalese Joint Venture banks are operated under the rules, regulations and guidance of Nepal Rastra Bank.

In the economic development of the country, JV's playing dynamic and vital role. Though the functions provide by JVB's are same of other commercial banks. JVB' instrumental way of collecting capital more effectively and they provide quick and quality service to their customers. They are introducing new technology such as automatic teller machine and accepted debit, credit cards etc.

Joint Venture banks pose a serious challenge to the existence of inefficient any very traditional banks. But the same challenge can be taken by domestic banks as an opportunity to modernize themselves and sharper their competitive zeal. ¹⁶

¹⁶ (murari R. sharma, JVB's Nepal Co- existing or crowding out, (prasasan lalitpur the Nepalese Journal of Public Administration. 5th issue, july 1998), p-37

The main roles of commercial banks can be traced out.

1. Creating competitive environment in banking business.
2. Introduction efficient methods and high technology in banking services.
3. Channelizing the additional resources for investment.
4. Providing new services, this was not offered by the domestic commercial banks such as credit cards, 24 hour services, prompt payment etc.
5. Offering better links with international market for Nepalese business.

Therefore, joint venture banks are operating more efficient, having superior performance, while comparing with other commercial banks. Better performance of JVb's is due to their sophisticated technology, modern banking methods and skill. Their better performance is also due to the government is branch policy in rural areas and financing many areas.

2.1.5 Fund Mobilizing Procedure of Commercial Banks

All the banks of entire world were applied their own fund mobilizing procedure. In practice, straightforward and effective fund mobilization procedure has adopted by the bank. Effective fund mobilization is the indicator of banks prosperity and its growth. Banks have some fund mobilizing procedure they are summarized below:

1. Sources of Fund

In the economic activities there are so many sources of fund. In these sources, issuing share and borrowing loan from different sector. The sources of funds can be categorized in two ways.

A. Owned Funds/ Equity Capital of Bank

Following are the sources of owned funds:

a) Ordinary Share

Ordinary sources are the bank's strong and reliable sources of funds. Banks promoters issue ordinary shares to the public in fixed number. Banks collects the fund by selling fixed ordinary shares to the public by adopting fixed rules and regulation. These public make shareholders after purchasing the issued share.

b) Preference Share

It is that kind of share which receive dividend and after liquidation money before ordinary share. But in Nepal, bank cannot issue preference share. But some situation it can issue preference share by taking permission from Nepal Rastra Bank.

c) Bonus Share

Company issue the extra share to the shareholder from the saving from profit and reserve fund by capitalizing these funds is known as bonus share. Bank issue shares to shareholders instead of banks amount. From this share, bank collects some share of funds.

d) Retained Earning

Banks earns profit by investing the funds in different sector through the principle of profit earning. Banks invests its fund in productive or profitable industries and business. Bank earns some amount from these investments.

e) Reserve Fund

Bank separates some share of capital in reserve funds in the time of banking activities. The reserve funds size based on banks earning and rules and regulation. Banks must separate some share of amount from profit in reserve fund. Banks have been earning by investing the reserve funds in liquid sector.

f) Undistributed Dividend

Bank does not distribute all profit to the shareholders. Banks invest some amount from profit by not distributing to shareholders. By this, the invested profit makes sources of funds to the banks.

B. Borrowed Fund of Bank

Bank collects the funds from another source except owned funds. Another source is borrowing from different sector. These types of funds collect borrow and debt capital. Following are the sources of the borrowed fund:

i) Selling of Debenture

Debenture means a “Rinpatra” which is issued by company by keeping or not keeping assets securities for collection of funds. If bank need a fund, it can collect capital by issuing debenture. The money also collects bank capital, which is collected by issuing debenture.

ii) Deposits

The bank performs two-fold functions, i.e. the receipt of the deposits and granting the loans. The bank borrows money by accepting different types of deposits. The bank attracts the deposits from the public. The bank not only undertakes to take care of the deposits but also agrees to honor the demands of the depositor for withdrawal of money from the deposits. Deposits accepted by the bank are of different types namely: Saving, Fixed, Current, Margin and Call.

iii) Loans from the Central Bank

NRB is the central bank of Nepal. All banks should operate their banking activities by maintaining the rules and regulations directed by the NRB. In the time of necessity, NRB provides the loans for the banks. The loan granted by the central bank is a bank capital.

iv) Loan from the Financial Institutions

Financial institutions also provide loan for the banks. Bank can receive loans from financial institutions in the form of borrowing. The loan granted by the financial institutions is also a bank capital.

v) Loan from Commercial Banks

If banks need money, it receives money from other commercial bank also in the form of borrowing which is called Inter-Bank Borrowing. Banks fulfill the need of short-term cash by taking loan from other banks. It is also the types of bank capital.

2.1.6 Mobilization of Funds

Banks utilize its funds in suitable area and right sector. Banks cannot achieve its goals until and unless it mobilizes its funds in right sectors and by performing different activities. Many kinds of activities and other things can originate for the purpose of receiving investment from the bank. But bank should separate the useful and profitable sector for mobilization of its funds. (Banker being only a financial intermediary, we will not be able to make any profit unless he has to pay interest on deposits, meet establishment expenses, meet liquidity of cash balance, and yet allow him some balance from out of which he can build reserve and pay dividend to the shareholder.)

As commercial bank they are expected to make profit. If there is no profit, there will be adverse criticism against public sector banking, both in and outside the parliament when

these banks are asked to open new branches in areas which do not allow profits for years, or asked to grant loan to the priority sectors such as small industries and agriculture with a high incidence of bad debts, there is need for counter balancing profit from elsewhere. Therefore, these banks will have to show an ascending order of profits in order to ensure growth with stability. For this purpose the bank will have to allocate land able resources to different segments in such a manner these banks can ensure adequate profitability while at the same time responding to policies laid down in accordance with national objectives.

Therefore, banks should mobilize its funds in suitable and profitable banking activities and right sector. Generally bank has mobilized its funds in the following activities.

a. Liquid Funds

A bank has kept a volume of amount in liquid funds. The funds have so many responsibilities in banking activities, liquid funds have covered following transactions.

- ❖ Cash in hand
- ❖ Balance with NRB
- ❖ Balance with domestic bank
- ❖ Call money

b. Investment

Bank invests its fund in different banking activities and different fields. Many types of fields are shown in market for investment. But banks invest its funds in profitable and safety activities. Bank invests its fund in the following titles:

- ❖ Share and debenture
- ❖ Government securities
- ❖ NRB bond
- ❖ Government Non-Financial Institutions
- ❖ Other Non-Financial Institutions
- ❖ Non Residents

c. Loan and Advances

Banks mobilize its funds by providing different types of loan and advances to customers, by charging fixed interest. Different types of loan and advances are

- ❖ To government enterprises
- ❖ To provide enterprises

Bank manages the different types of loans i.e. providing loan, business loan, and traditional loan to priority area.

d. Fixed Assets

Land and buildings are essential for the establishment of bank. Bank's funds are used in buying of furniture, vehicle, computer, and other concerned instrument, which are related to banking activities. Bank cannot take direct gain from these assets, but bank should buy it. A bank has a need of fund to purchase fixed assets for the new branches of the bank.

e. Administrative and Miscellaneous Expenses

Bank should manage funds for administrative and other miscellaneous expenses.

The administrative expenses are:

- ❖ Salary of Employee
- ❖ Allowances
- ❖ Pension
- ❖ Advertisement
- ❖ Provident Fund
- ❖ Income tax
- ❖ Insurance e
- ❖ To distribute the dividend to shareholders
- ❖ To bear the loss on sale and purchase of banking assets etc

In this way, bank mobilizes its fund by performing different activities to achieve its desired goals i.e. earning profit. Banks are able to earn sufficient profit by mobilizing its funds in proper way into the different profitable sector. It can utilize its collected fund as well as own funds in all banking activities by performing effective fund mobilization procedure.

2.2 Review of Related Studies

2.2.1 Review of Books

The banks are those institutions which directly deal with money and substitute for money. They deal with credit and credit instruments. So credit is very important to banks, especially good circulation of credit always takes importance in sound banking. Steady and smooth systematic flow of credit with consistent decisions always enhances the economy and the bank as well. Because of this, collected funds should be invested and mobilized into the right sector. An investment of funds may be the question of long-term survivability of the bank.

According to **F. J. Clark**, “An investment is a commitment of money that is expected to generate additional money that is expected to generate additional money. Every investment entails sacrifice for a future uncertain benefit.”¹⁷

Likewise, Dr. Preeti Singh has defined investment in the way, “Investment is the employment of funds with the aim of achieving additional income or growth in value.”¹⁸

According to **Gittman and Jochnk**, “Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns.”¹⁹

According to **William J. Sharpe and Alexander J. Gordon** has defined the term “investment” as the sacrifice of money today for the prospective money tomorrow. They write, “Investment in its broadest sense means the sacrifice of current dollars for future dollars. Two different attributes are generally involved time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all and the magnitude is uncertain. In some cases the element of time predominates (e.g. government bond). In other cases, risk is the dominant attribute (e.g. call option on common stock). In yet both time and risk are important.”²⁰

¹⁷ (Francis, Jack Clark “Investment Analysis and Management” Mc Graw Hill, International Edition, 1991.)

¹⁸ (Singh, Preeti, “Investment Management”, Bombay: Himalayan Publishing House, 1992 P-87)

¹⁹ (Gittman and Jochnk, L.J., “Fundamental of Investment” 4th Edition Harper & Row Publishers, New York, 1990, P-18)

²⁰ (Sharpe, J. William and Gordon, J. Alexander, “Investment”, 5th Edition, New Delhi: Prentice Hall of India, 1996, P-1)

According to **Cheney and Moses** are concerned with the objective of investment and indicate that the risk is in proportion with the degree of returns. They write, “The investment objective is to increase systematically the individual’s wealth, defined as assets minus liabilities. The higher the level of the desired wealth, the higher must be received. An investor seeking higher return must be willing to face higher level of risk.”²¹

James B. Baxley expresses his opinion as “Investment policy fixed responsibilities for the investment disposition of the bank’s assets in term of allocating funds for investment and loan and establishing responsibility for day to day management of those assets.”²²

Charles P. Jones, emphasizing on the proper management of an investor’s wealth says, “Investment is the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor’s wealth, which is the sum of current income and present value of all future income.”²³

V.K. Bhalla has derived a three-pointed basic concept of investment. His view on investment cover:

- ❖ Economic investment that is an economics definition of investment.
- ❖ Investment in a more general or extended sense which is used by the man of street or ordinary people
- ❖ The sense in which we are going to be very much interested namely financial investment.²⁴

In the view of **Reed, Cotter, Gill and Smith**, “commercial banks still remain the heart of our financial system holding the deposits of millions of persons, governments and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms and governments. Commercial banks are the

²¹ (Cheney, John M. and Moses, Edward A., “Fundamental of Investment”, St. Paul; West Publishing Company, P-12)

²² (Baxley, James B., “Banking Management”, Subject Publication, New Delhi, 1987)

²³ (Charles, Jones P., “Investment Analysis and Management,” Bombay: Himalayan Publishing House, 1999, P-2)

²⁴ (Bhalla, V. K., “Investment Management”, Fourth Edition, New Delhi, S. Chand and Company Ltd. 1997)

most important type of financial institutions in the nation in terms of aggregate assets. The primary function of commercial banks is the extension of credit to worthy borrowers. In making credit available, commercial banks are rendering a great social service. Through their action, production is increased, capital investments are expanded, and a higher standard of living is realized. Although the investment activities of commercial banks are usually considered separately from lending, the economic effects and social results are the same.”²⁵

Sakespeare Baidya “sound investment policy of a bank such that its funds are distributed on different types of assets with good profitability on the other hand and provides maximum safety and security to the depositors and banks on the other hand. And ultimately, it protects public fund in the sound and prudent way.”²⁶

Dr. Sunity Shrestha has expressed similar view on investment. She stresses on the fulfillment of credit needs of various sectors which ensures investments. She expressed in her books ‘Portfolio Behaviors of Commercial Banks in Nepal’s writes, “The commercial banks fulfill the credit needs of various economic sectors including policy of commercial banks is based on the profit maximization of the institute as well as the economic enhancement of the country.”²⁷

Emphasizing the importance of investment policy, **H.D. Crosse** puts his opinion like this way, “Lending is the essence of commercial banking, and consequently the formulation and implementation of sound policies are among the most important responsibilities of bank directors and management. Well conceived lending policies and careful lending practices are essential if a bank is to perform its credit creating function effectively and minimize the risk inherent in any extension of credit.”

He further adds “the formulation of sound lending policies for all banks should have adequate and careful consideration over community needs, size of loan portfolio, loan character, and credit worthiness of borrows and asset pledged to security borrowing, interest rate policy, etc. Investment policy provides the bank several inputs through

²⁵ (Reed, Edward W., Gill, Edward K., Cotter, Richard V., Smith, Richard K., “Commercial Banking”, 2nd Edition, Prentice Hall, Inc. Englewood Cliffs, 1980, New Jersey, P 1-5)

²⁶ (Baidya Shakespeare, “Banking Management: Monitor Nepal”, 1997, P-47)

²⁷ (Shrestha, Sunity, “Investment Planning of Commercial Banks in Nepal”, Kathmandu)

which they can handle their investment operation efficiently ensuring the maximum return with minimum exposure to risk, which ultimately leads the bank to the path of success.²⁸

2.2.2 Review of Journals/Articles, Research Papers and Previous Studies

In this section an attempt has been made to review some of the related articles published in different economic journals, Bulletin of World Bank, dissertation papers, newspapers, researchers view and findings towards fund mobilization and other related books.

Chopra, Sunil. In his article, “Role of Foreign banks in Nepal” had conducted that the joint venture banks playing an increasingly dynamic and vital role in the economic development of the country that will undoubtedly increase with time.²⁹

(**World Bank Report; 1996:232**) for the development of any country first, it is required to have enough capital. It is the backbone for the development of the nation. Nepal lacks the adequate capital for its development planning. Due to this reason so many development planning are in pending. If there is enough capital available, it can invest into the profitable project and contributes to a nation’s wealth. When people deposit money in a saving account in a bank for e.g., the bank must invest by lending the funds for carious business companies. These firms in return, may invest the money in new factories and equipments to increase their production. In addition borrowing from the bank, bank must issue stocks and bonds that they sell to investors to raise capital needed for business expansion. Government also issues bonds to obtain funds to invest in capital incentive project, as the construction of dams, road and schools. All such investments by individuals, business and government involves a presto sacrifice of income to get an expected future benefits. As a result, investment raises a nation’s standard of living.

Shrestha, Sunity has analyzed in her article, “Financial performance of commercial banks using both descriptive and diagnostic approach.”³⁰

²⁸ (Crosse, H.D., “Management Policies for Commercial Banks”, Englewood Cliffs, Prentice Hall, Inc., New Jersey, 2nd Edition, 1963, P-3)

²⁹ (Chopra, Sunil, “ Role of Foreign Banks in Nepal”, Nepal Rastra Bank Samachar, NRB-1989, Kathmandu, P 1-2)

³⁰ (Shrestha, Sunity, “Lending operations of Commercial Banks of Nepal and its impact on GDP”, The Business Voice of Nepal (the special issue of Baniyya Sansar), T.U. 1997, P 23-27).

In her studies she has concluded the following points:

- a. The structural ratio of commercial banks show that banks invest on the average 75% of their total deposit on the government securities and the shares.
- b. The analysis of resources position of commercial banks should quit high percentage of deposit as cash reserve.
- c. Return ratio of all the banks show that most of the time foreign banks have higher return as well as higher risk than Nepalese banks.
- d. The debt-equity ratios of commercial banks are more than 100% in most of the time period under study period. It led to conclude that the commercial banks are highly leveraged and highly risk. Joint venture banks had higher capital adequacy ratio but has been dealing every day.
- e. In case of the analysis of the management achievement foreign banks have comparatively higher total management achievement index.

Shrestha, Shiva Raj has presented a short scenario on the “Portfolio Management in Commercial Bank, Theory and Practice.” He has emphasized the issues in the article. The portfolio management becomes very important both for an individual’s as well as institutional investors. Large investors would like to select a best mix of investment assets and subject to the following aspects:

- a. Higher return which is comparable with alternative opportunities available according to the risk class of investor.
- b. Good liquidity with adequate safety on investment.
- c. Economic and efficient investment
- d. Maximum tax concession
- e. Flexible investment
- f. Certain capital gains

However, Mr. Shrestha has also presented the following approaches to be adopted for designing a good portfolio and its management.

1. To find out the investing assets (generally securities) having scope for better returns depending upon individual characteristics like age, health, need deposition, liquidity and tax liquidity etc.
2. To find out the risk of securities depending upon the attitude of investor towards risks.
3. To develop alternative investment strategies for selecting a better portfolio this will ensure a trade-off between risk and return so as to attain the primary objective of wealth maximization at lowest risk.
4. To identify variety of securities for investment to refuse volatility of returns and risk.

Mr. Shrestha has presented two types of investment analysis technique i.e. fundamental analysis and technical analysis to consider any securities such as equity debentures or bonds and other money and capital market instruments. He has suggested that he banks having international network can also offer access to global financial markets. He has pointed out the requirement of skilled manpower, research and analysis team and proper management information system (MIS) in any commercial bank to get success in portfolio management and customer's confidence.³¹

Likewise, **Shrestha, Ramesh Lal**. In his article, "A study on deposit and credit of commercial banks in Nepal"³² concluded that the credit deposit ratio would be 51.30%, other things remaining the same in Nepal, which was the lowest under the period of review. Therefore, he had strongly recommended that the joint venture banks should try to give more credit entering new field as far as possible, otherwise, they might not be able to absorb even the total expenses.

According to **Bajracharya, Mr. Bodi B.** in his article "Monetary Policy and Deposit Mobilization in Nepal" that "the mobilization of domestic saving is one of the prime objectives of monetary policy in Nepal. For this purpose, commercial banks stood as the active and vital financial intermediary for generating resources in form of deposit of the investors in different aspects of the economy."³³

³¹ (Shrestha, Shiv Raj, "Portfolio Management in Commercial Bank, theory and Practice", Nepal Bank Patrika, Baishakh Masanta, 2055, Page-13)

³² (Shrestha, Ramesh Lal, "A study on deposit and credits of commercial banks in Nepal", Nepal Rastra Bank Samachar, NRB-1988)

³³ (Bajracharya, Bodhi B., "Monetary Policy and Deposit Mobilization in Nepal", Rajat Jayanti Smarika, Rastriya Banijya Bank, Kathmandu 2047, P-93-97)

Collecting scattered small amount of capital through different Medias and investing the deposited fund in productive sector with a view increase the income of the depositors is meant deposit mobilization. In other words, investing the colleting fund in the productive sectors and increasing the income of the depositors, it also supports to increase the saving through the investment of increased extra amount.³⁴

Similarly, **Sharma, Bhaskar** has found same results that all the commercial banks are establishing and operating in urban areas, in this study, “banking the future on competition.”³⁵

His achievements are:

Commercial banks are establishing and providing their services in urban areas only. They do not have interest to establish in rural areas. Only the branch of Nepal Bank Ltd. and Rastriya Banijya Bank Ltd. are running in those sectors.

- ❖ Commercial banks are charging higher interest rate on lending
- ❖ They have maximum tax concession
- ❖ They do not properly analyze the system

According to him, “Due to the lack of investment avenues, banks are tempted to invest without proper credit appraisal and on personal guarantee, whose negative side effects would show colors only after four or five years.” He has further included that private commercial banks have mushroomed only in urban areas where large volume of banking transaction and activities are possible.

In the view of **Pradhan, Shekhar Bahadur**. In his articles, “Deposit mobilization, its problem and prospects”³⁶.

He has presented the following problems in the context of Nepal:

- ❖ People do not have knowledge and proper education for saving in institutional manner. They so now know financial organizational process, withdrawal system, depositing system etc.

³⁴ (NRB, Bankers Prakashan, 1984, 24)

³⁵ (Sharma, Bhaskar, “Banking the future on Competition”, Business age, October, 2000, P-13)

³⁶ (Pradhan, Shekhar Bahadur, “Deposit Mobilization, its Problem and Prospects”, Nepal Bank Patrika, Baishakh Masanta, 2053, P-9).

- ❖ Financial institutions do not want to operate and provide their services in rural areas.
- ❖ He has also recommended about how to mobilize the deposit collection by the financial institutions by rendering their services in rural areas, by adding various services.
- ❖ By operating rural banking programs and unit
- ❖ Nepal Rastra Bank must organize training programs to develop the skilled human resources
- ❖ By spreading a numbers of co-operative societies to develop mini banking services and improves the habits of public on deposit collection to the rural areas.

2.2.3 Review of Thesis

Several thesis works have been conducted by various student regarding different aspects of commercial banks. They have importantly elaborated and addressed various aspects or activities of commercial banking such as financial performance, lending practices, investment policy, interest rate structure, resource mobilization, capital structure, etc. Some of them as to be relevant for the study ‘topics’ are presented below.

Mandala, Mahendra. (1998) in his thesis paper “A Comparative Financial Performance Appraisal of Joint Venture Banks.”³⁷

He has studied primarily three joint venture banks i.e. NABIL, NGBL and Nepal Indosuez Bank Ltd. His main objectives is to find out the both banks, NGBL and NABIL have mobilized the debt funds in proper way for generating more return but Nepal Indosuez Bank (NIBL) could not mobilize as NABIL and NGBL. He has recommended that all the banks should provide their facilities in rural areas and encourage the small entrepreneur’s development programs, play merchant role, mobilize the deposit funds in productive sectors and grant priority to the local manpower.

He has not attempted to show the investment policy and concentrated only on financial performance of JVBs, therefore it cannot represent the performance appraisal of JVBs.

³⁷ (Mandala, Mahendra, “A Comparative Financial Appraisal of Joint Venture Banks”, an Unpublished Masters Degree thesis, T.U. Kathmandu, 1998)

His study is comparative study of only three JVBs. His study period is up to FY 1997/98 and it cannot analyze the investment policy after this fiscal year.

Shrestha, Binda. (2003) in her thesis entitled “A comparative analysis of financial performance of the selected joint venture banks” has concluded the NB bank has better liquidity position whereas HBL and Nabil bank have lower. NB bank has efficiently utilizing it deposits on loans and advances however total investment of Nabil is better than that of NB and HBL. It is found that the common situation in all the JVBs is unbalanced capital structure. Decreasing trend of EPS and unstable policy of dividend is the cause of decreasing trend of market values per share of thesis banks. The researcher also recommends that the selected JVBs should increase their equity capital by issue of shares, expending general reserves and retaining more earnings. These JVBs must identify the investment opportunity and assort the risk assets portfolio carefully before accepting higher volume of deposits especially high cost bearing fixed deposit.

Silwal, Udaya Bahadur (2062) has conducted a study on “Lending Policy of Commercial Banks in Nepal”³ having following objectives:

- To analyze the role of commercial banks in its historical perspective
- To show the relationship between deposits and loan and advances
- To identify major weakness of lending policy of the commercial banks

The research was conducted mainly on the basis of secondary data. Findings of this research are summarized below:

- Effectiveness of lending policy is directly based upon a sound banking system. But due to geographical variation, transportation and other regional disparities, it is very difficult to expand branches in different rural areas. So, it can be said that commercial banks in Nepal are not playing an active role to utilize their sources collected from different sectors.
- By paying higher interest rate, the banks are increasing deposits, which in turn increase saving habits of the general people. Then the banks will be able to utilize these idle funds in productive channels. This type of business of commercial bank is really a necessary one in an agricultural country like Nepal, where public investment has limited capacity.

Thapa, Samiksha (2002) in her thesis paper “A Comparative Study on Investment Policy of Nepal Bangladesh Bank Ltd. and other Joint Venture Bank of Nepal”³⁸

She has compared the investment activities of NBBL with only two joint venture bank i.e. Nepal Arab Bank Ltd. and Nepal Grindlays Bank Ltd. by taking five years data. She has recommended in two ways:

- a. Statement Recommendation:** She has suggested about investment in government securities, OBS operation loan recover act, sound credit collection policy, and project oriented approach, effective portfolio management, and innovative approach to bank marketing and banking facilities.
- b. Theoretical Recommendation:** She has suggested about liberal policy and coat management strategy.

Bhattarai, Bimala. (2005) in her thesis paper, “A Study on Fund Mobilization (A Comparative Study of Himalayan Bank Ltd, Everest Bank Ltd and Nepal Investment Bank Ltd)” with the objectives is;

- ❖ To evaluate the growth and risk ratio of loan and advances and total investment with respective to growth rate of total deposit and net profit of HBL, EBL and NIBL.
- ❖ To evaluate comparatively operating, financial and investment efficiency of three joint venture banks.
- ❖ To carry out the relationship between deposits and total investment, deposits and loan and advance and net profits of HBL, EBL and NIBL.
- ❖ To analyze the sources and uses of funds and analysis of cash flow of these three joint venture banks.

On the thesis, the analyst found that the liquidity position of NIBL is comparatively better than HBL and EBL. Similarly, EBL is comparatively successful to invest in productive sector and has mobilized its collected deposits to provide loan and advances. The NIBL is profitable in comparison to other compared banks. HBL has maintained the

³⁸ (Thapa, Samiksha “A study on Fund Mobilizing Policy of Standard Chartered Bank Ltd in Comparison to Nepal Bangladesh Bank Ltd and Himalayan Bank Ltd”, an Unpublished Masters Degree Thesis, T.U., Kathmandu, 2002)

lower liquidity risk and NIBL has maintained lower credit risk. Deposit is the strongest sources of fund whereas borrowings cover fewer portions of sources of fund. NIBL has kept fewer amounts in deposits in comparison to other two banks. Among the uses of funds, loan and advances covers maximum portion and interest accrued covers less portion. Correlation coefficient between deposit and total investment of HBL, EBL and NIBL elucidates the positive relationship or there is high degree of positive correlation. Most of the investment decision of these three banks depends upon deposits and only few decisions are depend upon other variables. The researcher recommends that three banks to follow liberal lending policy when sensations loan and advances with sufficient guaranty and implement a sound collection policy including procedure which rapid identification of bad debtor loans, immediate contact with borrower, continual follow up and as well as legal procedure if require and to collect more amounts as deposits through large variety of deposits schemes and facilities.

Sapkota, Uddab Prasad. (2002) in his thesis paper “A study on fund mobilizing policy of Standard Chartered Bank Ltd in comparison to Nepal Bangladesh Bank Ltd and Himalayan Bank Ltd” having main objectives to examine the fund mobilizing policy adopted by three joint venture banks viz. SCBNL, NBBL and HBL and the way these banks mobilized their funds during five year study period i.e. from 2004/05 to 2008/09.

He found the overall condition of SCBNL seems in satisfactory position in comparison to NBBL and HBL. In other words, he recommends that banks are strongly recommended to provide information about its services, facilities and extension of their services towards rural areas. These three banks are recommended to increase cash and bank balance to meet the need of investment and demand of loan and advances. And banks are to be investing its funds in the purchase of shares and debentures of other financial, non-financial companies, hotels and government companies.

Mr. Sapkota has not explained about the risk ratios which have to be faced by these joint venture banks. His study cannot show the fund mobilizing policy of the selected banks for the succeeding years because of time limitation i.e. up to 2011.

2.3 Research Gap

The review of above relevant literature has contributed to enhance the fundamental understanding and knowledge, which is required to make this study meaningful and

purposeful. There are various researchers conduct on lending practice, credit policy, financial performance and credit management of various commercial banks. Some of the researchers have done the financial performance between two or three different commercial bank. In order to perform those analysis researchers have used various ratio analysis. The past researches in measuring financial performance of bank have been focused on the limited ratios, which are incapable of solving the problems. In this research various ratio are systematically analyzed and generalized. Past Researchers are not properly analyzed about fund mobilization on bank and its impact on the profitability. The ratios are not categorized according to nature. Here in this research all ratios are categorized according to their area and nature.

In this research comparative study of fund mobilization of NIBL and KBL is measuring by various ratios, trend analysis and various statistical tools as well and financial tools are used for analyzing survey data. Since the researcher have used data only five fiscal year but all the data are current and fact. Clearly these are the issue in Nepalese commercial bank the previous scholar could not the present facts. This study tries show fund mobilization by applying and analyzing various financial tools like liquidity ratio, activity ratio, profitability ratio and, lending efficiency ratio as well as different statistical tools like average mean, standard deviation coefficient of correlation and trend analysis. Probably this will be the appropriate research in the area of financial performance of Bank and financial institutions.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction

The Research methodology is the process of the solution of Problem through planned and systematic dealing with the collection, analysis and interpretation of fact and figure. To fulfill this objective of the study, appropriate methodology has been followed. So, this part is concerned with research methodology applied in this study. This covers research design, Source of data, data collection procedure, data processing and tabulation and analytical tools used.

“Research methodology refers to the various sequential steps to be adopted by a research in studying a problem with certain objectives in view.”³⁹

This study is more analytical and empirical. It covers quantitative methodology using financial and statistical tools. The study is mainly based on secondary data gathering from respective annual reports of concerned banks especially from profit and loss account, balance sheet and other publication.

3.2 Research Design

The study is based on analytical and exploratory research design. A research design is purely and simply the framework or plan for a study that guides the collection and analysis of data. A true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion. The research design allows the researchers to take an appropriate measure and direction towards the predetermined goals and objectives.

“A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.”⁴⁰

³⁹ (Kothari, C. R., “Research Methodology; Methods and Techniques”, New Delhi: Willey Easterly Limited, 1989, P-30)

The research examines the facts and postulates in certain frameworks on details and supplies the important information on subject matter, summary of the study, major findings of the study, recommendations, conclusion etc. are the most significant information among them, they are derived with the help of some financial and statistical tools were adapted to evaluate the fund mobilization of joint venture banks viz. NIBL and KBL in consideration not only to research about them but also to facilitate among them.

3.3 Sources of Data

The study is mainly based on secondary data. The secondary sources of data collections are those that have been used from published on used by someone previously. The annual reports & banking and financial statistics reports of NRB of the concerned banks are the major sources of data for the study. Besides the annual reports of the subjected banks, some supplementary data and information have been collected from the authoritative sources like Nepal Rastra Bank, Central Library of T.U., Hari Khetan Multiple Campus Library, Security Exchange Board, Economic Survey, different journals, magazines, websites, booklets and other published and unpublished reports documented by the authorities.

In order to fulfill the objectives of this research work, all the secondary data are compiled, processed and tabulated in time series. And to judge the reliability of data provided by the banks and other sources, they were compiled with the annual reports of auditors. Formal and informal talks with the concerned authorities of the bank were also helpful to obtain the additional information of the related problem.

3.4 Population and Sample

There are altogether 31 commercial banks are operating in Nepal. Among them nine are JVBs and rests are domestic commercial banks. In this study two commercial banks are to be taken for research work. These banks are compared as per fund mobilizing activities NIBL and KBL are selected from population and population is presented below:

⁴⁰ (Kothari,C.R., "Quantitative Techniques" Vikash Publishing House Pvt. Ltd, New Delhi., 1992, P-25)

1. Nepal Bank Ltd.
2. Rastriya Banijya Bank Ltd.
3. Nabil Bank Ltd.
4. Nepal Investment Bank Ltd.
5. Standard Chartered Bank Nepal Ltd.
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank Ltd.
9. Everest Bank Ltd.
10. Bank of Kathmandu Ltd.
11. Nepal Credit and Commercial Bank Ltd.
12. Lumbini Bank Ltd.
13. NIC Asia Bank Ltd.
14. Machhapuchhre Bank Ltd.
15. Kumari Bank Ltd.
16. Laxmi Bank Ltd.
17. Siddhartha Bank Ltd.
18. Agricultural Development Bank Ltd.
19. Global Bank Ltd.
20. Citizen Bank Ltd.
21. Prime Commercial Bank Ltd.
22. Sunrise Bank Ltd.
23. Development Credit Bank Ltd.
24. NMB Bank Ltd.
25. KIST Bank Ltd.
26. Janata Bank Nepal Ltd.
27. Mega Bank Nepal Ltd.
28. Commerz & Trust Bank Nepal Ltd.
29. Civil Bank Ltd.
30. Century Commercial Bank Ltd.
31. Sanima Bank Ltd.

Among all the banks which are presented above only two banks are taken as a sample for comparative study. They are:

- 1. Nepal Investment Bank Ltd (NIBL)**
- 2. Kumari Bank Ltd (KBL)**

These two banks are compared as per fund mobilization procedure, that they are adopting to mobilize their collected funds as well as own funds.

3.5 Data Analysis Tools

Presentation and analysis of the data is the core of each and every research work. Selection of suitable tools and proper analysis makes data effective. This study requires some financial and statistical tools to accomplish the objective of the study. The financial and statistical tools are most reliable. In this study various financial, statistical and accounting tools have been used. These tools make the analysis more effective, convenience and reliable.

To achieve the results obtained with the help of financial and statistical tools are tabulated under different headings. Then they are compared with each other to interpret the results. To achieve the results, two types of tools have been used.

- 1. Financial Tools**
- 2. Statistical Tools**

3.5.1. Financial Tools

Financial tools basically help to identify the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account. Financial tools are categorized into two parts. They are

- I. Ratio Analysis**
- II. Sources and Uses of Funds**

I. Ratio Analysis

Ratio analysis is one of the important financial tools that have been used in the firm. A ratio is simply in number expressed in the terms of another and such it express the

quantitative relationship between any two numbers. Ratio can be expressed in terms of percentage, proportions and as coefficient. “In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of a firm. The relationship between two accounting figure expressed mathematically, is known as a financial ratio or simply a ratio. An accounting figure conveys meaning when it is related to some relevant information.”⁴¹

“A ratio is a mathematical relationship between two variables. It is significant for financial analysis. It also helps us to predict the future performance of a company based on study of ratios of earlier years.”⁴²

Thus, ratio analysis is the part of whole process of analysis of financial statements of any business or industrial concerned especially to take output and credit decision. Ratio indicates a quantitative relationship, which can be, in turn, used to make a qualitative judgment. Even though there are various types of ratios to analyze and interpret the financial statement, only five types of ratios have been taken in this study, which are related to fund mobilization of the banks. They are presented below:

A. Liquidity Ratios

- i)** Current ratio
- ii)** Cash and bank balance to total deposit ratio
- iii)** Cash and bank balance to current assets ratio
- iv)** Investment on government securities to current assets ratio

B. Assets Management Ratios (Activity Ratio)

- i)** Loan and advances to total deposit ratio
- ii)** Loan and advances total working fund ratio
- iii)** Total investment to total deposit ratio
- iv)** Investment on shares and debenture to total working fund ratio
- v)** Investment on government securities to total working fund ratio

⁴¹ Pandey, I.M., “Financial Management” ,7th Revised Edition, Vikash Publishing House Pvt. Ltd., New Delhi, 1975, P-104)

⁴² (Benerjee, Subir Kumar, “Financial Management”, S. Chand & Company Ltd., Ram Nagar, New Delhi, P-950)

C. Profitability Ratios

- i)** Return on loan and advances ratio
- ii)** Return on total working fund ratio
- iii)** Total interest earned to total working fund ratio
- iv)** Total Interest paid to Total Working Fund Ratio

D. Risk Ratios

- i)** Liquidity risk ratio
- ii)** Credit risk ratio

E. Growth Ratios

- i)** Growth ratio of total deposits
- ii)** Growth ratio of loan and advances
- iii)** Growth ratio of total investment
- iv)** Growth ratio of net profit

A. Liquidity Ratios

The liquidity ratios measure the liquidity position and short- term solvency indicating the company's ability to meet short term obligations. It measures the speed of firms to convert the firms asset into cash to meet deposit withdraws and other current obligations. This is quick measure of the liquidity and financial strength of the firm.

“Liquidity ratios examine the adequacy of funds, the solvency of the firm's ability to pay its obligation when due.”⁴³

Various types of liquidity ratios are applied in these studies, which are explained below:

i) Current Ratio

This ratio measure the short-term solvency i.e. its ability to meet short- term obligations. As a measure of creditors versus current assets, it indicates each rupee of current assets available by dividing current assets by current liabilities.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

⁴³ (Hampton, John J., "Financial Decision Making Concept", P-139)

ii) Cash and Bank Balance to Total Deposit

Cash and bank balance are the most liquid current assets of a firm, cash and bank balance to total deposit ratio measures the percentage of most liquid assets to pay depositors immediately. This ratio is computed dividing the amount of cash and bank balance by the total deposits. It can be presented as,

$$\text{Cash and Bank Balance to Total Deposit Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposits}}$$

Where, cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance held abroad. Total deposits consist of deposits on current account, saving account, fixed account, money at call and short notice and other deposits.

iii) Cash and Bank Balance to Current Assets Ratio

This ratio measures the percentage of liquid assets i.e. cash and bank balance among the current assets of a firm. Higher ratio shows the higher capacity of firms to meet the cash demand. This ratio is calculated dividing cash and bank balance by total current assets and can be calculated as,

$$\text{Cash and Bank Balance to Current Assets Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

Hence, cash and bank balance includes cash in hand, foreign cash and foreign banks.

iii) Investment on Government Securities to Current Assets Ratio

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds. It can be mentioned as:

$$\text{Investment on Govt. Securities to Current Assets} = \frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

Where, Investment on government securities involves T Bills and development bonds etc.

B. Assets Management Ratios (Activity Ratio)

The asset management ratios, measures how effectively the firm is managing its assets. These ratios are designed to answer this question: does the total amount of each type of asset as reported on the balance sheet seem reasonable or not. If a firm has excessive

investments in assets then its capital costs will be unduly high and its stock price will suffer.⁴⁴

In this study this ratio is used to indicate how efficiently the selected banks have arranged and invested their limited resources. The following financial ratios related to fund mobilization are calculated under asset management ratio and interpretation is made by these calculations.

i) Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the selected banks are utilizing their total collections or deposits on loan and advances for the purpose of earning profit. Greater ratio shows the better utilization of total deposits. This ratio can be obtained dividing loan and advances by total deposits, which can be shown as,

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Total loan and Advances}}{\text{Total Deposit}}$$

ii) Loan and Advances to Total Working Fund Ratio

The main element of total working fund is loan and advances. This ratio indicates the ability of selected banks in terms of earning high profit from loan and advances. Loan and advances to working fund ratio can be obtained dividing loan and advances amount by total working fund. That is formulized as,

$$\text{Loan and Advances to Total Working Fund Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Working Fund}}$$

Where, total working fund includes total amount of assets given in balance sheet which refers to current assets, net fixed assets, total loans for development banks and other sundry assets except off balance sheet items i.e. letter of credit, letter of guarantee etc.

⁴⁴ (Brigham, Eugene F., "Financial Management", A Harcourt Publishers, International Company, P-74)

iii) Total Investment to Total Deposit Ratio

Investment is one of the major sources of earning of profit. This ratio indicates how properly firm's deposits have been invested on government securities and shares and debentures of other companies. This ratio is computed by using following formula:

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Where, total investment includes investment on government securities, investment on debentures and bonds, share in subsidiary companies, shares in other companies and other investments.

iv) Investment on Shares and Debentures to Total Working Fund Ratio

Investment on shares and debentures to total working fund ratio shows the investment of banks on the shares and debentures of other companies in terms of total working fund. This ratio can be obtained dividing on shares and debentures by total working fund. It is calculated as:

$$\text{Investment on Share and Debenture to TWF Ratio} = \frac{\text{Investment on Shares and debentures}}{\text{Total Working Fund}}$$

Where, total investment includes investment on government securities, investment on debenture and bonds, shares of other companies.

V) Investment on Government Securities to Total Working Fund Ratio

Investment on government securities to working fund ratio shows how much part of total investment is there on government securities in percentage. It can be obtained by:

$$\text{Investment on Govt. Security to TWF Ratio} = \frac{\text{Investment on Government Securities}}{\text{Total Working Fund}}$$

Where, investment on government securities includes investment on debentures, bonds and shares of other companies.

C. Profitability Ratios

The profitability ratio is related to profit. Profitability ratios indicate the degree of success in achieving desired profit. The profitability ratios are calculated to measure the

operating efficiency of the business enterprise. According to M.Y. Khan, “profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency.”

Profitability ratios show the combined effects of liquidity, assets management, and debt on operating results. Profitability ratios are very helpful to measure the overall efficiency of operations of a firm. It is a true indication of the financial performance of each and every business organization. Here profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Some of the important profitability ratio used is as follows.

i) Return on Loan and Advances Ratio

Return on loan and advances ratio shows how efficiently the banks have utilized their resources to earn good return from provided loan and advances. This ratio is computed dividing net profit (loss) by the total amount of loan and advances and can be mentioned as:

$$\text{Return on Loan and Advances Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

ii) Return on Total Working Fund Ratio

Return on total working fund ratio measures the profit earning capacity of the banks by utilizing available resources i.e. total assets. If the bank’s well managed and efficiently utilized its working fund, it will get higher return. Maximizing taxes, this in the legal options available will also improve the return. It is computed as:

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit}}{\text{Total Working Fund}}$$

iii) Total Interest Earned to Total Working Fund Ratio

This ratio reflects the extent to which the banks are successful in mobilizing these total assets to acquire income as interest. This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest. We have,

$$\text{Total Interest Earned to TWF Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

iv) Total Interest paid to Total Working Fund Ratio

This ratio measures the percentage of total interest expenses against total working fund. A high ratio indicates higher interest expenses on total working fund and vice-versa. This ratio is calculated as:

$$\text{Total Interest paid to Total Working fund Ratio} = \frac{\text{Total Interest Paid}}{\text{Total Working fund}}$$

D. Risk Ratios

Generally, risk means uncertainty which lies in the business transaction of investment management. When a firm wants to bear risk and uncertainty, profitability and effectiveness of the firm is increased. This ratio checks the degree of risk involved in the various financial operations. For this study, following risk ratios are used to analyze and interprets the financial data and investment policy.

i) Liquidity Risk Ratio

The liquidity risk of the bank defines its liquidity need for deposit. The cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposit, as the liquidity needs. The ratio of cash and bank balance to total deposit is an indicator of bank's liquidity of need.

This ratio is low if funds are kept idle as cash and bank balance but this reduces profitability. When the bank makes loan, its profitability increases and also the risk. Thus, higher liquidity ratio indicates less profitable return and vice-versa. This ratio is calculated by dividing cash and bank balance to total deposit.

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

ii) Credit Risk Ratio

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk involved in the project. Generally credit risk ratio shows the proportion of non-performing assets in the total investment plus loan and advances of a bank. It is computed as:

$$\text{Credit Risk Ratio} = \frac{\text{Total Investment} + \text{Total Loan and Advances}}{\text{Total Assets}}$$

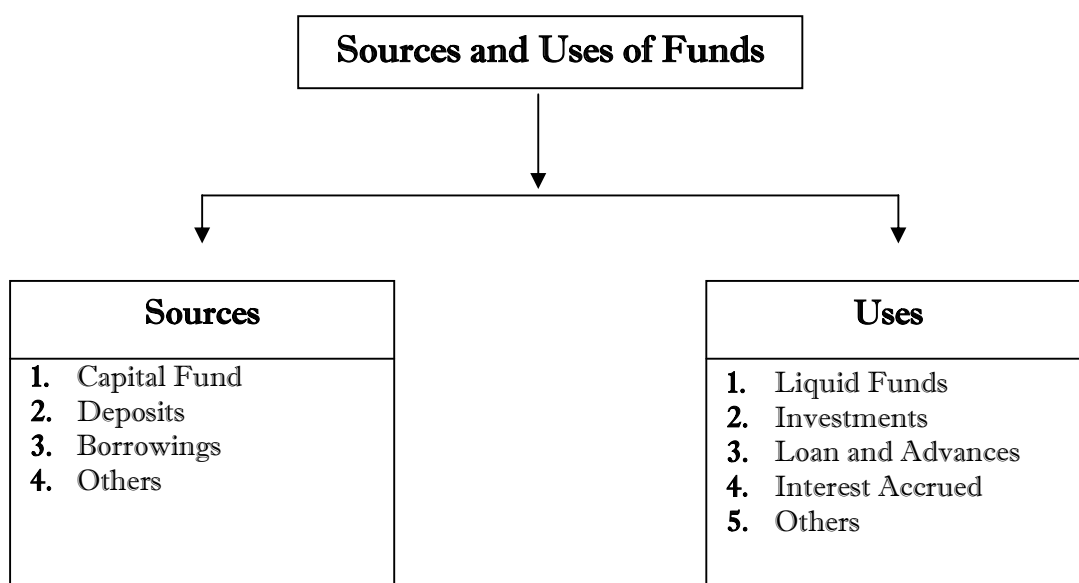
E. Growth Ratios

The growth ratios represent how well the commercial banks are maintaining their economic and financial position. The higher ratios represent the better performance of the selected firms to calculate, check and analyze the expansion and growths of the selected banks the following growth ratios are calculated. Growth ratios are directly related to the fund mobilization and investment of those firms.

- i) Growth ratio of total deposits
- ii) Growth ratio of loan and advances
- iii) Growth ratio of total investment
- iv) Growth ratio of net profit

II. Sources and Uses of Funds

The sources and uses of funds of bank's were categorized and presented below:



3.5.2 Statistical Tools

Some statistical tools are used for analysis in this study. Such as mean, standard deviation, coefficient of variation, coefficient of correlation between different variables, and trend analysis of important variables as well as hypothesis test (t-statistic) has been used, which are presented below:

- i)** Karl Pearson's of Coefficient of Correlation Analysis
- ii)** Coefficient of Variation (C.V)
- iii)** Standard Deviation (S.D)
- iv)** Probable Error (P.E)
- v)** Trend Analysis
- vi)** Testing of Hypothesis
- vii)** T-test

i) Karl Pearson's Coefficient of Correlation Analysis

“Correlation is a statistical tool that we can use to describe the degree to which one variable is linearly related to another.”⁴⁵

“Simply, if the two (or more) variables are so related that the change in the value (s) or one (or more) independent variable (s) result the change in the value of dependent variable then they are said to have ‘correlation’.”⁴⁶

This statistical tool has been used to analyze, identify and interpret the relationship between two or more variables. It deals to determine the degree of relationship between two or more variables. It interprets whether two or more variables are correlated positively or negatively. Statistical tool analyses the relationship between those variables and helps the selected banks to make appropriate investment policy regarding to profit maximization and deposit collection; fund mobilization through providing loan and advances. Among the various methods of finding out coefficient of correlation, in this study Karl's person correlation co- efficient(r) method applied.

⁴⁵ (P.K. Sharma & A. k. Chaudhary, Statistical method, Khanal Books Prakasan, Min Bhawan, 1st edition 2058 P-405.)

⁴⁶ (Dr. Sunity Shrestha & Durba Silwal, Statistical Methods in Management 1st edition (Taleju Prakashan, Kathmandu) 2057, P-313

For the purpose of decision-making, interpretation is based on following term:

-) When $r = 1$, there is perfect positive correlation.
-) When $r = -1$, there is perfect negative correlation.
-) When $r = 0$, there is no correlation.
-) When 'r' lies between 0.7 to 0.999 (-0.7 to 0.999), there is a high degree of positive (or negative) correlation.
-) When 'r' lies between 0.5 to 0.699, there is moderate degree of correlation.
-) When 'r' is less than 0.5, there is low degree of correlation.

Karl Pearson's correlation coefficient has been used to find out the relationship between the following variables:

a) Coefficient of correlation between deposit and loan and advances

Correlation coefficient between deposits and loan and advances measures the degree of relationship between two variables i.e. X and Y. In this analysis, deposit is independent variables (X) and loan and advances is dependent variables (Y). The main purpose of calculating correlation coefficient is to justify whether the deposits are significantly used in proper way or not and whether there is any relationship between these two variables.

b) Coefficient of correlation between deposit and total investment

Correlation coefficient between deposit and investment is to measure the degree of relationship between deposit and total investment. In this analysis, deposit is independent variables (X) and total investment is dependent variables (Y).

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$r = \frac{N \sum XY - \sum X \sum Y}{\left\{ \left[N \sum X^2 - (\sum X)^2 \right] \left[N \sum Y^2 - (\sum Y)^2 \right] \right\}^{1/2}}$$

Where,

n = number of observations in series X and Y

X = sum of observations in series X

Y = sum of observations in series Y

X² = sum of squared observations in series X

Y² = sum of squared observations in series Y

XY = sum of the product of observations in series X and Y

ii) Coefficient of Variation (C.V)

The coefficient of variation is the most commonly used measure of relative variation. It is used in such problems where the researcher wants to compare the variability of more than two years. Greater the C.V, the variable or conversely less consistent, less uniform, more consistent, more uniform, more stable and homogeneous.

$$\text{C.V} = \frac{\text{Standard deviation } (\dagger)}{\text{Expected Return } (\bar{X})} \times 100$$

iii) Standard Deviation (S.D)

The standard deviation is an important and widely used measure of dispersion. The measurement of the scatterness of the mass of figure in a series about an average is known as dispersion. The greater the amount of dispersion, greater the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposites it is denoted by the letter †.

$$\text{S.D } (\dagger) = \sqrt{\frac{1}{N} (X - \bar{X})^2}$$

Where,

N = Number of observations

X = Expected return of the historical data

iv) Probable Error (P.E)

Probable error is measured for testing the reliability of an observed value of correlation coefficient. It is computed to find the extent to which it is dependable. If correlation coefficient is greater than 6 times P.E the observed value of r is said to be significant,

otherwise nothing can be concluded with certainty. But if the calculated (r) is less than the P.E correlation is not at all significant. It is calculated by using following formula:

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

Where,

P.E. (r) = Probable error of correlation coefficient

r = Correlation coefficient

n = Number of observations

v) Trend Analysis

This simple method can be applied in studying the trend (path it move) of the data. Trend analysis tools are used to show gradually increase or decrease of variables over a period of time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be presented clearly. This type of statistical analysis interprets the trend of deposits, loan and advances, investments and net profit of NIBL and KBL from 2004/05 to 2013.

The trend values used in this study are presented below:

- a) Trend Analysis of total investment to total deposits ratio
- b) Trend Analysis of loan and advances to deposit ratio

vi) Test of Hypothesis

Hypothesis test is one of the statistical application tools. A hypothesis test is an assumption that we make about the population parameter. “to test whether the assumption or hypothesis is right or not, a sample is selected from the population, sample statistic is obtained, observe the differences between the sample mean and the population hypothesized values, and test whether the difference is significant or insignificant. Smaller the difference, the sample mean is close to the hypothesized value and, large the difference the hypothesized value has low chance to be correct. The following steps have been followed for the test of hypothesis:

- a) Formulating hypothesis
 - i) Null Hypothesis (H_0)
 - ii) Alternative Hypothesis (H_1)
- b) Computing the t- statistic
- c) Fixing the significance level
- d) Finding critical region
- e) Deciding two-tailed or one-tailed test
- f) Decision making

In the following lines, some of main hypothesis tests are calculated and decision is made according to findings.

Null Hypothesis (H_0): $\mu_1 = \mu_2$ i.e., there is no significant difference between mean ratios of loan and advances to total deposit of NIBL and KBL.

Alternative Hypothesis (H_1): $\mu_1 \neq \mu_2$ i.e., there is significant difference between mean ratios of loans and advances to total deposits of NIBL and KBL.

vii) **t- test**

If we draw a large number of small samples i.e. ($n < 30$) and compute the mean for each sample and then plot the frequency distribution of these means, the resulting sampling distribution would be t-test. On these study sample are taken only for fix years i.e. ($6 < 30$).

Assumptions:

- a) The present population from which the sample is drawn is normal or approximately normal.
- b) The given sample is drawn by random sampling method.
- c) The population standard deviation (σ) is not known.

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

This chapter is primarily concerned with presentation and analysis of data. In this study effort has been made to analyze the filtered data by using financial and statistical tools as well as various graphical presentations. Likewise, comparative balance sheet and comparative profit and loss account from the year 2006/07 to 2012/13 of NIBL and KBL are presented in appendices.

4.1 Ratio Analysis

4.1.1 Liquidity Ratios

4.1.1.1 Cash and Bank Balance to Total Deposit

Cash and bank balance to total deposit ratio is computed by using following formula:

$$\text{Cash and Bank Balance to Total Deposit Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposits}}$$

Table No. 6

Comparative Cash and Bank Balance to Total Deposit Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	9.40	7.07
2007/8	12.44	4.98
2008/9	9.97	6.37
2009/10	10.90	7.31
2010/11	16.96	11.20
2011/12	13.61	15.64
2012/13	16.24	6.88
MEAN	12.79	8.49
SD	2.75	3.41
CV	21.50	40.16

Source: Appendix –A

From the above comparative table, cash and bank balance to total deposit ratio of the two banks followed an increasing & decreasing trend. On an average NIBL has maintained the higher ratio i.e. 12.79% of cash and bank balance to total deposit than KBL during the study period.

The variability of the ratio is lower in NIBL and higher in KBL. It states that NIBL is more consistent than KBL and KBL is inconsistent.

This ratio can be presented by the help of diagram, which is shown below:

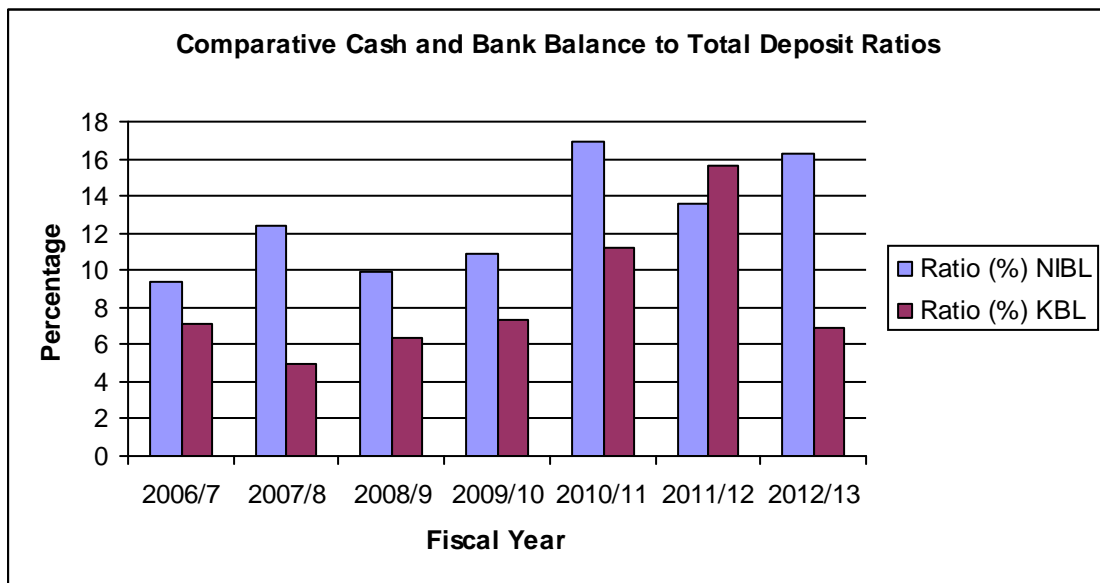


Figure No.1

4.1.1.2 Cash and Bank Balance to Current Assets

This ratio is calculated dividing cash and bank balance by total current assets and can be calculated as,

$$\text{Cash and Bank Balance to Current Assets Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

Table No. 7

Comparative Cash and Bank Balance to Current Assets Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	8.22	5.82
2007/8	10.88	4.17
2008/9	8.78	5.54
2009/10	9.57	6.06
2010/11	14.80	9.34
2011/12	11.68	12.84
2012/13	13.52	5.41
MEAN	11.06	7.03
SD	2.27	2.79
CV	20.52	39.69

Source: Appendix –A

From the above comparative table, it reveals that cash and bank balance to current assets ratios of KBL has less fluctuating trend. The highest ratio of NIBL is 14.80% in the year 2010/11 and lowest ratio is 8.22% in the year 2006/07. Similarly, KBL has highest ratio of 12.84% in the year 2011/12 and lowest ratio of 4.15% in the year 2007/08. Among two banks, NIBL has maintained the highest ratio than KBL i.e. 14.80% and lowest ratio is 8.22%. In an average, NIBL has maintained the higher ratio than KBL i.e. 11.06% & it shows that the capacity to meet the cash demand is higher.

4.1.1.3 Investment on Government Securities to Current Assets

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds. It can be mentioned as:

Investment on Government Securities

Investment on Govt. Securities on Current Assets =
$$\frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

Table No. 8

Comparative Investment on Government Securities to Current Assets Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	11.95	14.71
2007/8	11.66	11.98
2008/9	11.71	10.69
2009/10	8.04	9.54
2010/11	4.73	5.68
2011/12	7.20	8.15
2012/13	7.13	12.99
MEAN	8.92	10.53
SD	2.64	2.82
CV	29.60	26.78

Source: Appendix -A

The above comparative table shows that NIBL has invested their fund in government securities is less fluctuating trend in comparison to KBL. On an average, KBL has invested 10.53% on government securities. Similarly, NIBL has invested 8.92% investment on government securities to total current assets.

4.1.2 Assets Management Ratios

The following financial ratios related to fund mobilization are calculated under asset management ratio and interpretation is made by these calculations:

4.1.2.1 Loan and Advances to Total Deposit

This ratio can be obtained by dividing loan and advances to total deposit, which can be shown as,

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Total loan and Advances}}{\text{Total Deposit}}$$

Table No.9
Comparative Loan and Advances to Total Deposit Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	72.22	88.02
2007/8	68.72	88.69
2008/9	71.39	85.33
2009/10	78.79	89.58
2010/11	77.63	92.57
2011/12	81.23	85.45
2012/13	83.10	87.71
MEAN	76.15	88.19
SD	5.02	2.31
CV	6.60	2.62

Source: Appendix -A

The above comparative table shows that these four banks have mobilized their collected deposits in fluctuating trend as compare to loan and advances during the study period. The highest ratio of loan and advances to total deposit of NIBL and KBL are 83.10% and 92.57% respectively.

NIBL has mobilized 76.15% of its collected deposit in Loan and advances on average which is less than that of KBL in average. Coefficient of variation of KBL is 2.62%, which shows that KBL is more stable than NIBL in mobilizing collected deposit.

This ratio can be presented by the help of graph:

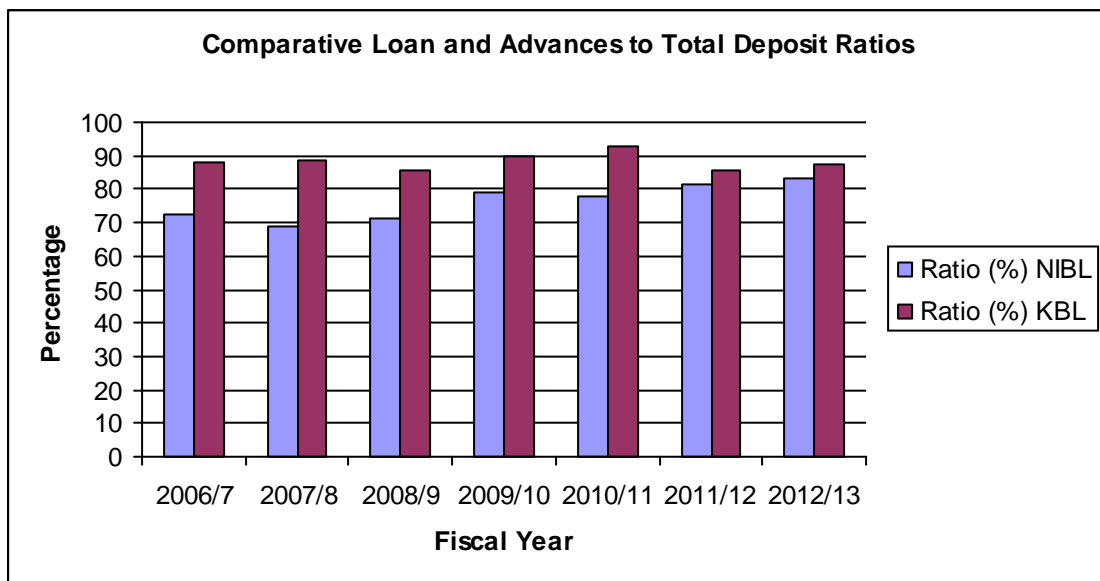


Figure No.2

4.1.2.2 Total Investment to Total Deposit

This ratio is computed by using following formula:

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Table No. 10

Comparative Total Investment to Total Deposit Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	28.58	21.38
2007/8	29.97	14.29
2008/9	26.62	12.29
2009/10	19.97	12.81
2010/11	15.85	7.81
2011/12	15.76	10.06
2012/13	14.81	20.79
MEAN	21.65	14.20
SD	5.73	4.10
CV	26.47	28.87

Source: Appendix -A

From the above comparative table, it can be concluded that the ratios of these two banks are fluctuating trend during the study period. In average NIBL has invested more amount of its total deposit in comparison to KBL i.e. 21.65%. The coefficient of variation of NIBL is 26.47%. It indicates that KBL is more consistent to make investment of total deposits than NIBL.

4.1.2.3 Loan and Advances to Total Working Fund

Loan and advances to working fund ratio can be obtained dividing loan and advances amount by total working fund. That is formulized as,

$$\text{Loan and Advances to Total Working Fund Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Working Fund}}$$

Table No. 11

Comparative Loan and Advances to Total Working Fund Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	61.88	71.72
2007/8	59.10	73.67
2008/9	61.18	73.12
2009/10	67.52	73.30
2010/11	66.35	76.21
2011/12	68.32	69.19
2012/13	67.91	68.02
MEAN	64.61	72.18
SD	3.50	2.59
CV	5.42	3.59

Source: Appendix -A

Above table describes the loan and advances to total working fund ratio of NIBL and KBL in fluctuating trend. During the study period NIBL and KBL have highest ratio of 68.32%, and 73.67% in year 2011/12 and 2007/08 respectively. On average, NBL maintains highest ratio of 72.18% than KBL. The coefficient of variation of KBL is more consistent than NIBL because it has the ratio of lowest variation i.e.3.59%.

4.1.2.4 Investment on Government Securities to Total Working Fund

Investment on government securities to working fund ratio shows how much part of total investment is there on government securities. It can be obtained by:

$$\text{Investment on Govt. Securities to TWF Ratio} = \frac{\text{Investment on Government Securities}}{\text{Total Working Fund}}$$

Table No. 12

Comparative Investment on Government Securities to Total Working Fund Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	11.71	14.56
2007/8	11.46	11.87
2008/9	11.40	10.53
2009/10	7.85	9.41
2010/11	4.63	5.61
2011/12	7.06	8.05
2012/13	7.00	12.81
MEAN	8.73	10.41
SD	2.59	2.80
CV	29.67	26.90

Source: Appendix-A

Above comparative table shows the investment on government securities to total working fund of NIBL and KBL is in fluctuating trend. NIBL and KBL have the highest ratio of 11.71% and 14.56% in the year 2006/07 respectively. Likewise, they have the lowest ratio of 4.63% & 5.61% in the year 2010/11 respectively. On an average KBL has highest mean ratio than NIBL i.e. 10.41%. The coefficient of variation indicates of KBL (i.e. 26.90%) has more stable ratio than that of NIBL.

Diagram showing total deposits, total investment and total loan & advances of NIBL & KBL.

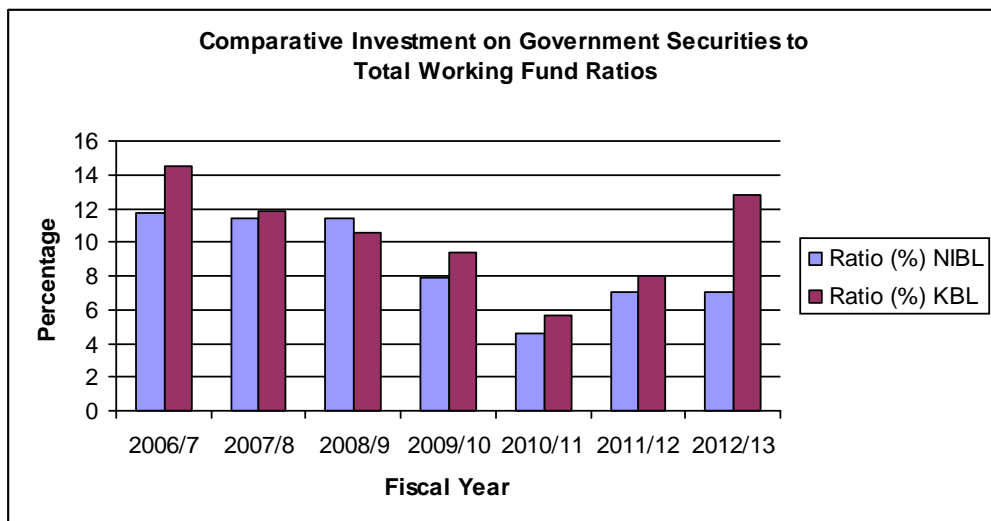


Figure No.3

4.1.2.5 Investment on Shares and Debentures to Total Working Fund

This ratio can be obtained dividing shares and debentures by total working fund. It is calculated as:

$$\text{Investment on Shares and Debenture to TWF Ratio} = \frac{\text{Investment on Shares and Debenture.}}{\text{Total Working Fund}}$$

Table No. 13

Comparative Investment on Shares and Debentures to Total Working Fund Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	12.78	1.56
2007/8	14.32	0.0043
2008/9	14.42	0.0032
2009/10	9.26	10.77
2010/11	8.92	0.82
2011/12	6.20	0.10
2012/13	5.10	3.32
MEAN	10.14	2.37
SD	3.50	3.60
CV	34.52	151.90

Source: Appendix -A

From the above analysis, investment on shares and debentures to total working fund ratio of these banks are in fluctuating trend during the seven years study period. KBL has invested less than 1% of its total working fund in shares and debentures in the year 2007/08, 2008/09, 2010/11 & 2011/12 respectively. NIBL and KBL have the highest ratio of 14.32% and 10.77% in year 2007/08 and 2009/10 respectively during the study period. On an average, NIBL has invested more amounts in shares and debentures i.e. 10.14% than KBL in average. The Coefficient of variation shows that NIBL has more stable ratio than KBL.

4.1.3 Profitability Ratios

Here profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Profitability of the firms can be presented through the following different ways:

4.1.3.1 Return on Loan and Advances

This ratio is computed dividing net profit (loss) by the total amount of loan and advances and can be mentioned as,

$$\text{Return on Loan and Advances Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

Table No. 14

Comparative Return on Loan and Advances Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	2.72	1.70
2007/8	3.15	2.07
2008/9	3.21	3.10
2009/10	3.06	2.55
2010/11	2.71	2.90
2011/12	3.50	3.37
2012/13	3.03	1.61
MEAN	3.05	2.47
SD	0.26	0.72
CV	8.20	29.15

Source: Appendix-A

In the above analysis the return on loan and advances of NIBL and KBL have the ratio of fluctuating trend. During the study period NIBL has the highest ratio of 3.50% in year 2011/12 than KBL i.e. 3.37%. In average, NIBL has the highest mean ratio of 3.05% where as KBL has the mean ratio of 2.72%. Coefficient of variation indicates that NIBL has less variance between seven years of study period than KBL.

4.1.3.2 Return on Total Working Fund

Return on total working fund ratio is computed as:

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Total Working Fund}}$$

Table No. 15

Comparative Return on Total Working Fund Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	1.68	1.22
2007/8	1.86	1.52
2008/9	1.97	2.27
2009/10	2.07	1.87
2010/11	1.80	2.21
2011/12	2.39	2.33
2012/13	2.06	1.09
MEAN	1.98	1.79
SD	0.21	0.48
CV	10.61	26.82

Source: Appendix-A

As per the above comparative table the return on total working fund of NIBL and KBL have the ratio of rising and falling trend. During the study period, NIBL has the highest ratio of 2.39% in year 2011/12 than KBL. KBL has the lowest ratio of 1.09% in year 2010/11. In case of coefficient of variation, NIBL has the lowest C.V. of 1061% than KBL.

4.1.3.3 Total Interest Earned to Total Working Fund

This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest. We have,

$$\text{Total Interest Earned to TWF Ratio} = \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

Table No. 16

Comparative Total Interest Earned to Total Working Fund Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	0.79	0.27
2007/8	0.72	0.42
2008/9	0.61	0.41
2009/10	0.46	0.45
2010/11	0.61	0.47
2011/12	0.37	0.47
2012/13	0.50	0.65
MEAN	0.58	0.45
SD	0.14	0.08
CV	24.14	17.78

Source: Appendix-A

The above analysis shows the NIBL has highest interest earned to total working fund ratio of 0.79% in the year 2006/07 and lowest ratio of 0.37% in the year 2011/12. Likewise KBL has the highest ratio of 0.65% in year 2012/13 & lowest ratio of 0.27 in the year 2006/07. NIBL has 0.586% mean ratio and KBL has mean ratio of 0.45%. The coefficient of variation of KBL is less than NIBL i.e. 17.7%. It indicates that interest earning power of KBL is more consistent than NIBL.

This ratio can be presented by the help of graph as following:

Total Interest Earned to Total Working Fund Ratio

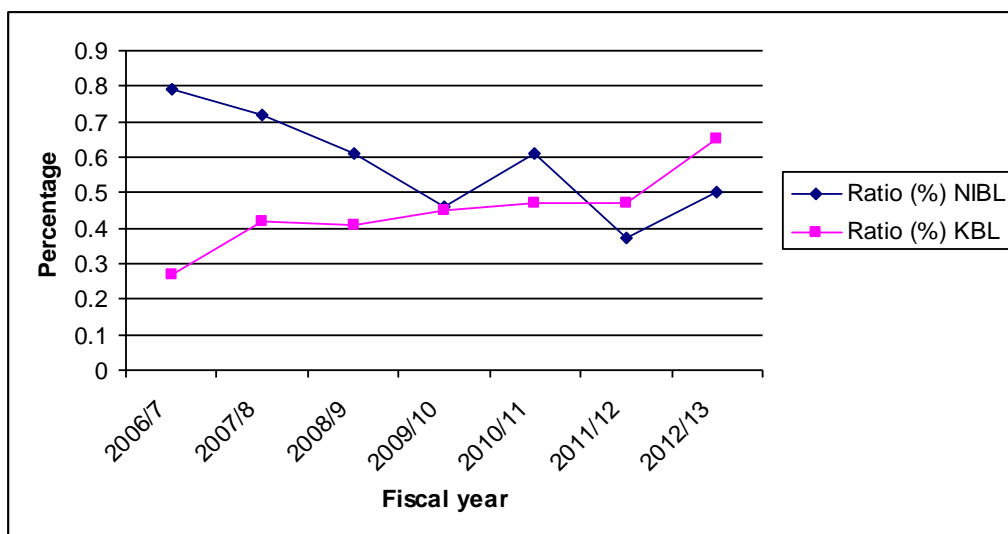


Figure No.4

4.1.3.4 Total Interest paid to Total Working Fund

Total interest paid to total working fund ratio is calculated as:

$$\text{Total Interest paid to Total Working fund Ratio} = \frac{\text{Total Interest paid}}{\text{Total Working fund}}$$

Table No. 17

Comparative Total Interest paid to Total Working Fund Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	0.33	0.08
2007/8	0.35	0.24
2008/9	0.32	0.34
2009/10	0.27	0.34
2010/11	0.28	0.37
2011/12	0.31	0.39
2012/13	0.38	0.52
MEAN	0.32	0.33
SD	0.04	0.13
CV	12.5	39.39

Source: Appendix –A

From the above comparative table, KBL has highest interest paid to total working fund ratio of 0.52% in the year 2012/13. KBL has the ratio of increasing trend from the year 2006/07. NIBL has 0.38% highest ratio in the year 2012/13 and lowest ratio of 0.27% in the year 2009/10. KBL has the highest ratio of 0.52% in year 2012/13 & lowest ratio of 0.08% in the year 2006/07. The coefficient of variation of NIBL is more stable than KBL i.e. 12.5%.

4.1.4 Risk Ratios

For this study, following risk ratios are used to analyze and interpret the financial data and investment policy.

4.1.4.1 Liquidity Risk Ratio

This ratio is calculated by dividing cash and bank balance to total deposit.

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

Table No. 18

Comparative Liquidity Risk Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	9.40	7.07
2007/8	12.44	4.98
2008/9	9.97	6.37
2009/10	10.90	7.31
2010/11	16.96	11.20
2011/12	13.61	15.64
2012/13	16.24	6.88
MEAN	12.79	8.49
SD	2.75	3.41
CV	21.50	40.16

Source: Appendix-A

The above table shows that NIBL has highest cash and bank balance to total deposit ratio of 16.24% in the year 2012/13 and lowest ratio of 9.40% in 2006/07. Whereas KBL has highest ratio of 15.64% in the year 2011/12 and lowest ratio of 4.98% in the year 2007/08.

The mean ratio of KBL is lower than NIBL. It means that KBL has maintained the lower liquidity risk ratio which means it operates with higher risk for higher profit. The coefficient of variation of KBL i.e. 40.16% is highest than NIBL. It shows that the ratio of KBL is more variable than NIBL.

4.1.4.2 Credit Risk Ratio

In general, credit risk ratio shows the proportion of non-performing assets in the total investment plus loan and advances of a bank. It is computed as:

Total Investment + Total Loan and Advances

Credit Risk Ratio = _____

Total Assets

Table No. 19

Comparative Credit Risk Ratios

YEAR	Ratio (%)	
	NIBL	KBL
2006/7	86.37	89.14
2007/8	84.88	85.54
2008/9	84.00	83.65
2009/10	84.63	83.78
2010/11	79.90	82.64
2011/12	81.58	77.34
2012/13	80.00	84.15
MEAN	83.05	83.75
SD	2.37	3.29
CV	2.85	3.93

Source: Appendix-A

The above comparative table shows that NIBL and KBL have the credit risk ratio in fluctuating trend. NIBL and KBL have the highest ratio of 86.37% and 89.14% in the year 2006/07 respectively whereas they have lowest ratio of 79.90% and 77.34% in year 2010/11 and 2012/13 respectively.

On the basis of mean ratio, it can be said that the credit risk of NIBL is lowest than KBL i.e. 83.05%. KBL has the highest coefficient of variation than NIBL i.e. 3.93%.

4.1.5 Growth Ratios

The growth ratios represent how well the commercial banks are maintaining their economic and financial position. To calculate, check and analyze the expansion and growth of the selected banks the following growth ratios are calculated.

4.1.5.1 Growth Ratio of Total Deposits

Table No. 20

Growth Ratio of Total Deposits

(Rs. in Millions)

Banks	Total Deposits							Growth Rate (%)
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	
NIBL	14254.8	18927.3	24488.9	34451.8	46697.9	50094.7	50138.	23.32
KBL	6270.1	7800.4	10560.0	12781.0	15860.6	17408.5	16986.	18.07

Source: Appendix-A

The table presented above shows that the deposits of these two banks are in increasing trend except KBL, where the deposit decreased in the year 2012/13, during seven years of study period. The growth ratio of NIBL and KBL are 23.32% and 18.07% respectively. The growth ratio of total deposits of NIBL is higher than that of KBL.

Growth ratio of total deposit of NIBL and KBL are also shown in the following line chart.

Growth Ratio of Total Deposits of NIBL & KBL

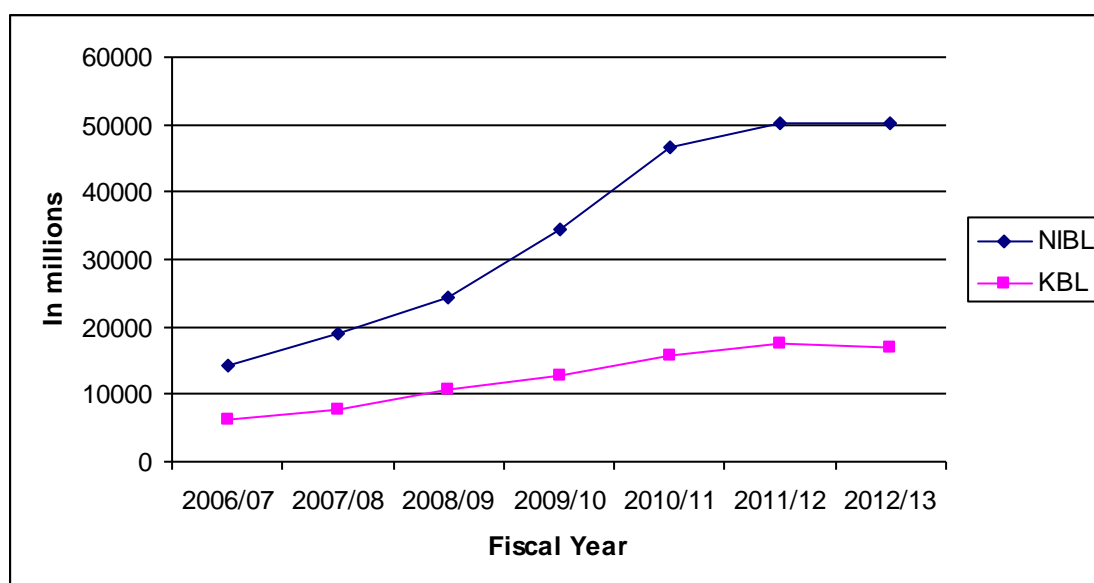


Figure No.5

4.1.5.2 Growth Ratio of Total Investment

Table No. 21

Growth Ratio of Total Investment

(Rs. in Millions)

Banks	Total Investment							Growth Rate (%)
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	
NIBL	1948.5	2522.3	3256.4	3155.0	2531.3	4201.9	4294.6	14.18
KBL	127.3	904.5	951.3	827.4	477.8	1896.5	1238.6	46.11

Source: Appendix-A

The above table shows that NIBL and KBL have increasing trend in its investment from the year 2006/07 to 2008/09 respectively. In the year of 2009/10 & 2010/11, NIBL has decreased its investment and increased later. But In the year of 2007/08 & 2008/09, KBL has decreased its investment and increased in year 2011/12 & again decreased later. NIBL and KBL have the growth rate of 14.18% and 46.11% respectively. Among them KBL has the highest growth rate than NIBL.

It can also be presented with the help of line chart as following:

Growth Ratio of Total Investment of NIBL & KBL

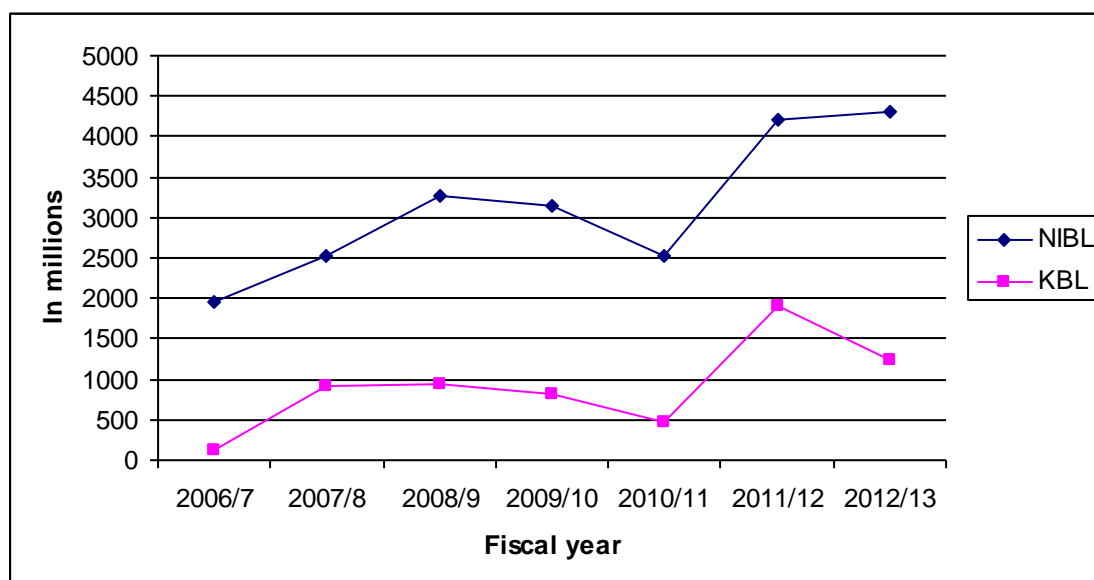


Figure No.6

4.1.5.3 Growth Ratio of Loan and Advances

Table No. 22

Growth Ratio of Loan and Advances

(Rs. in Millions)

Banks	Loan and Advances							Growth Rate (%)
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	
NIBL	10295.4	13007.2	17482.0	27145.5	36250.4	40689.6	41665.2	26.24
KBL	5519.2	6918.3	9011.0	11449.0	14681.8	14875.1	14898.4	18.00

Source: Appendix-A

The above table describes the growth ratio of loan and advances of NIBL and KBL for seven years study period. The table shows the high growth ratio of NIBL is 26.24% and lowest growth ratio of KBL is 18.00%.

Growth ratio of Loan and Advances of NIBL and KBL are also shown in the following line chart.

Growth Ratio of Loan and Advances of NIBL & KBL

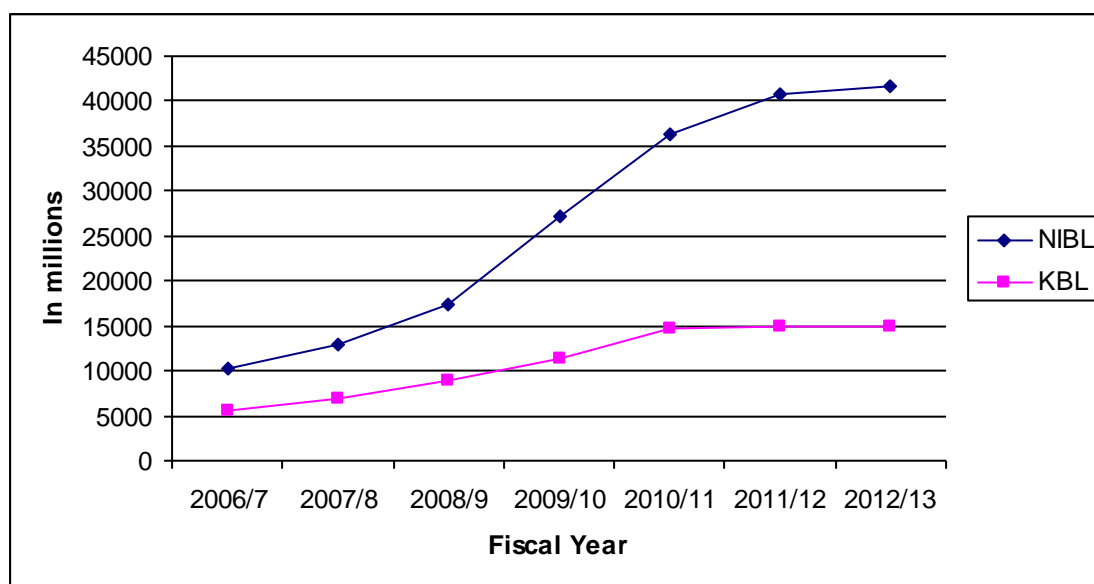


Figure No.7

4.1.5.4 Growth Ratio of Net Profit

Table No. 23

Growth Ratio of Net Profit

(Rs. in Millions)

Banks	Net Profit							Growth Rate (%)
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	
NIBL	280.3	410.0	561.7	830.7	982.0	1422.5	1263.2	28.52
KBL	93.6	142.9	279.7	292.1	425.6	501.1	239.2	16.93

Source: Appendix-A

The above table represents the growth ratio of net profit of NIBL and KBL during seven years study period. It shows that NIBL has the highest growth ratio of 28.52% and KBL has the lowest growth ratio of 16.93%.

The growth ratio of net profit is also shown by the help of line chart which is shown below:

Growth Ratio of Net Profit of NIBL & KBL

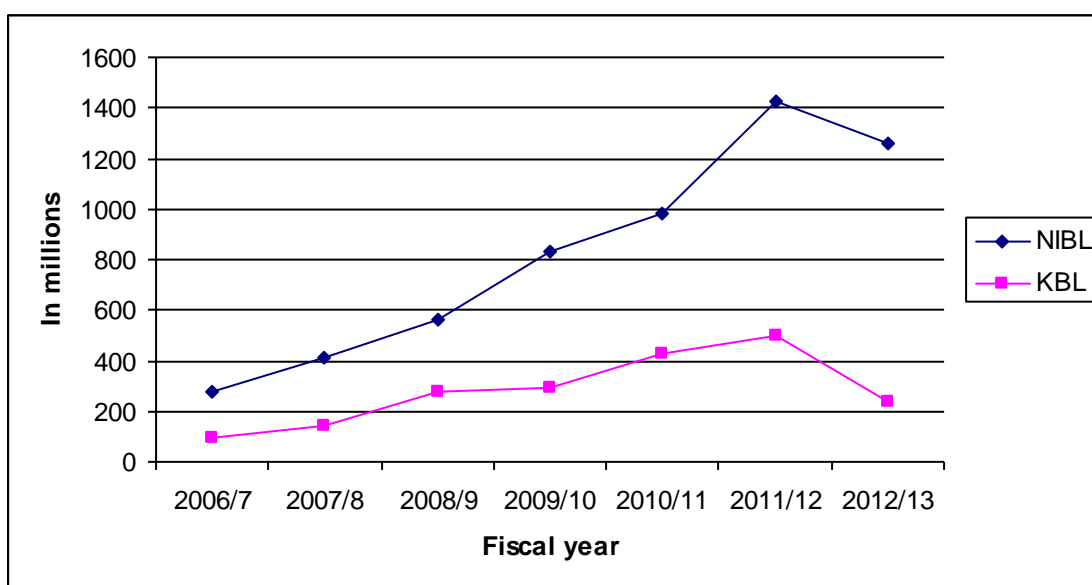


Figure No.8

4.2 Analysis of Sources and Uses of Funds

The following table presents the list of sources and uses of funds of NIBL and it represents the proportionate contribution to the total funds of NIBL.

4.2.1 Analysis of Sources and Uses of Funds of NIBL

Table No. 24

Percentage of Various Sources of Funds from Total Sources of NIBL

Particulars	Years							Total	Average
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13		
1 Capital Fund	7.42	5.26	4.80	4.87	6.26	6.32	7.47	42.4	6.06
2 Deposits	85.68	86.01	85.70	85.69	85.47	84.11	81.72	594.38	84.91
3 Borrowings	0.30	2.50	2.80	2.61	2.00	1.83	2.17	14.21	2.03
4 Others	6.60	6.23	6.70	6.83	6.27	7.74	8.64	49.01	7.00
Total	100	100	100	100	100	100	100	700	100

Table No. 25

Percentage of Various Uses of Funds from Total Uses of NIBL

Particulars	Years							Total	Average
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13		
1 Liquid Funds	8.05	10.70	9.77	9.34	14.50	12.69	13.51	78.56	11.22
2 Investments	11.71	11.46	11.40	7.85	4.63	7.06	7.00	61.11	8.73
3 Loans & Advances	61.88	59.10	61.18	67.52	66.35	68.32	67.91	452.2	64.61
4 Share & Other Inv	12.78	14.32	11.42	9.26	8.92	6.20	5.10	68	9.71
5 Others	5.58	4.42	6.23	6.03	5.60	5.73	6.48	40.07	5.72
Total	100	100	100	100	100	100	100	700	100

From the above analysis, contribution of capital fund out of total sources funds is 6.06% on average. Likewise, deposits contribute more funds out of total sources of funds i.e.

84.91%. Considering the contribution of borrowings to total sources, it occupied only 2.03% of the total sources which is lowest as compare to other sources of funds. Other source of funds is 7.00%. It can be said that Deposit are considered as stronger & main & only one reliable source of funds of NIBL because of greater contribution of total sources of funds.

These above sources of funds are used for different purposes. NIBL has maintained liquid funds of 11.22% on an average out of total sources for the fulfillment of daily cash requirements of the banks. It has maintained sufficient Liquid Funds from the starting period of the study. It makes average investment of 8.73% out of total uses of funds. Similarly, it has provided Loan and Advances in average of 64.61% for its customers & different public enterprises so as to others. Out of total uses of funds, percentage covered by Share & Investment is 9.71% in an average. Lastly, remaining funds are used for other purposes, which occupied the average percentage of 5.72%. NIBL has used more funds for providing loan and advances.

4.2.2 Analysis of Sources and Uses of Funds of KBL

The following table presents the list of sources and uses of funds of KBL. And it represents the proportionate contribution to the total funds of KBL.

Table No.26

Percentage of Various Sources of Funds from Total Sources of KBL

Particulars	Years							Total	Average
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13		
1 Capital Fund	7.27	8.16	7.00	10.22	7.11	7.56	8.98	56.3	8.04
2 Deposits	81.48	83.07	85.68	81.83	82.33	80.97	77.55	572.9	81.85
3 Borrowings	5.22	2.39	1.73	0.64	3.60	3.86	4.84	22.28	3.18
4 Others	6.03	6.38	5.58	7.31	6.96	7.61	8.63	48.51	6.93
Total	100	100	100	100	100	100	100	700	100

Table No.27

Percentage of Various Uses of Funds from Total Uses of KBL

Particulars	Years							Total	Average
	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13		
1 Liquid Funds	6.67	8.664	11.56	9.54	10.79	15.76	7.40	70.384	10.05
2 Investments	15.86	11.866 1	10.531	9.41	5.61	8.05	12.80	74.1271	10.59
3 Loans & Advances	71.72	73.672 6	73.115	73.30	76.21	69.19	68.02	505.227 6	72.18
4 Share & Other Inv	1.56	0.0043	0.003	1.08	0.82	0.10	3.32	6.8873	0.98
5 Others	4.19	5.793	4.791	6.67	6.57	6.90	8.46	43.374	6.20
Total	100	100	100	100	100	100	100	700	100

From the above analysis, contribution of Capital Fund out of total sources of funds is 8.04% on average. Similarly, Deposits contribute more funds in total sources of funds i.e. 81.85%. Borrowings occupied only 3.18% of the total sources which is lowest as compare to other sources of funds. And Other Sources has contribution of 6.93%. It can be said that Deposits are main & only one reliable source of funds of KBL because of greater contribution of total sources of funds.

These above sources of funds are used for different purposes. KBL has maintained Liquid Funds of 10.05% out of total sources on average. It made an average Investment of 10.59%. It provided Loans and Advances of 72.18% to its customer. Percentage covered by Share & Investment is 0.98% and other uses are 6.20% of the total uses of funds.

Sources of Funds of NIBL & KBL based on Mean Ratio

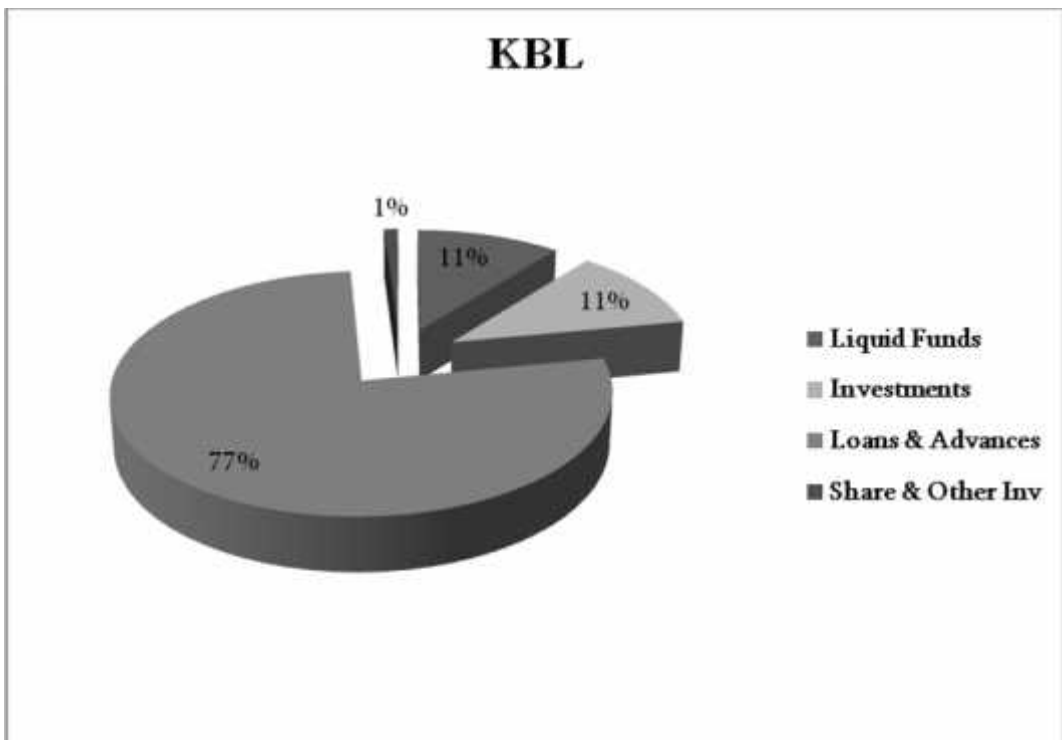
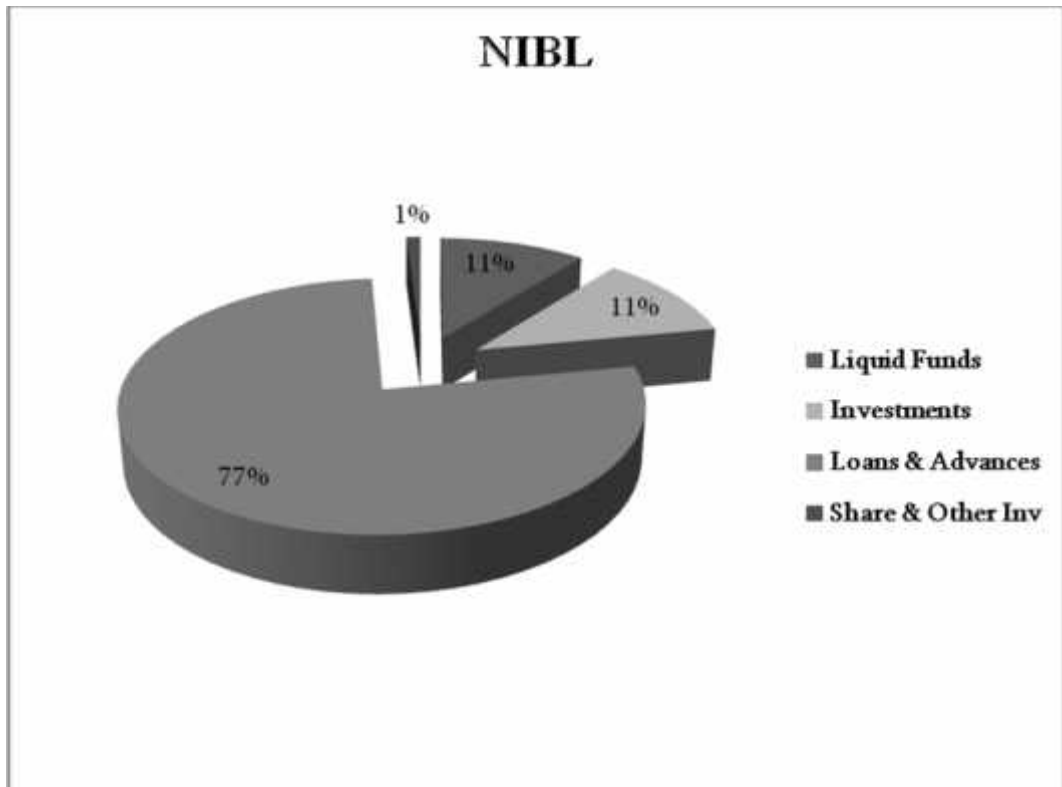


Figure No.9

Uses of Funds of NIBL & KBL based on Mean Ratio

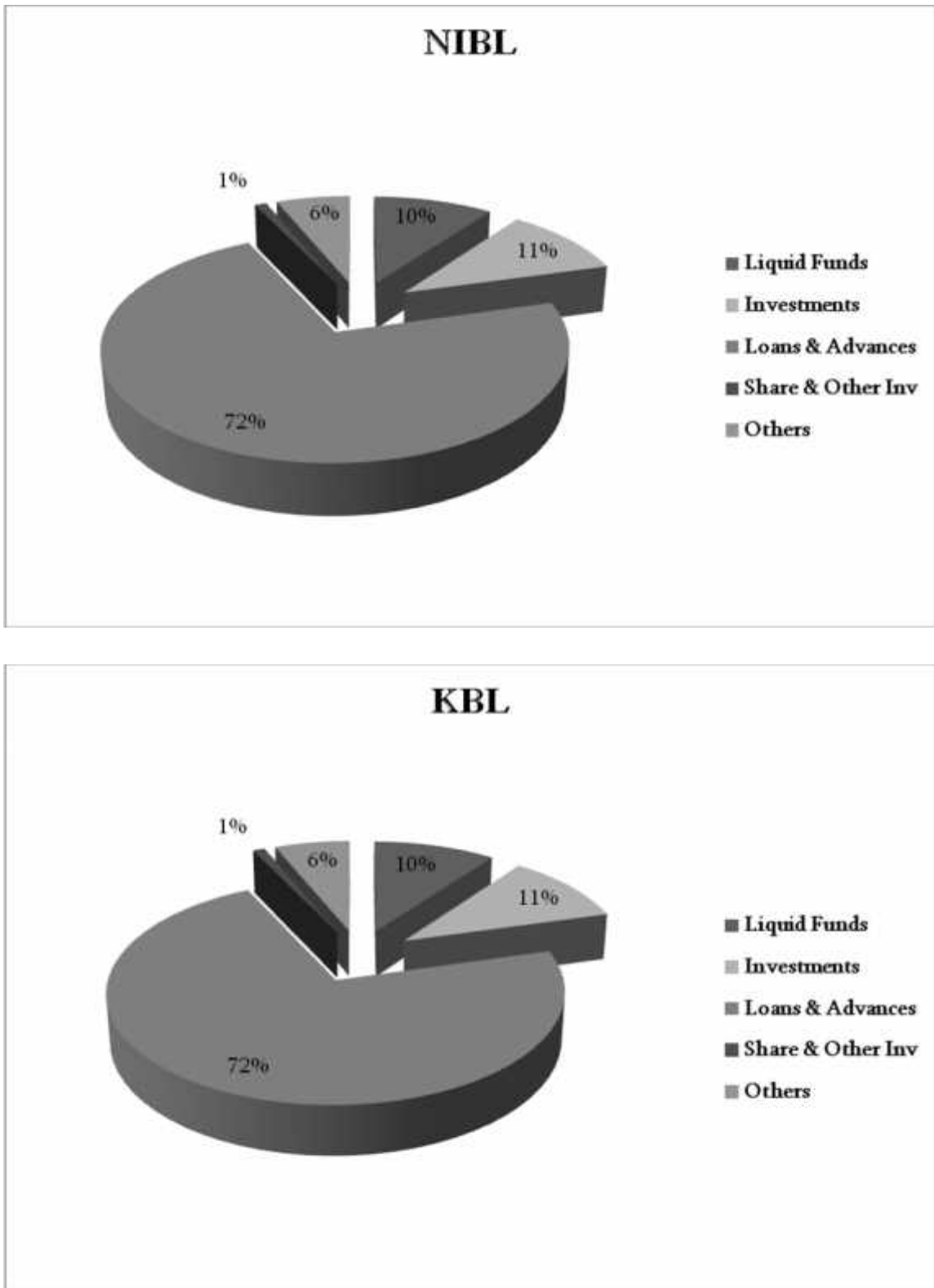


Figure No.10

4.2.5 Comparative Analysis of Sources

The following table shows the average sources of funds of the two joint venture banks.

Table No.28

Comparative average Sources of Funds of NIBL and KBL

Particulars		Average %	
		NIBL	KBL
1	Capital Fund	6.06	8.04
2	Deposits	84.91	81.85
3	Borrowings	2.03	3.18
4	Others	7.00	6.93
	Total	100.00	100.00

From the above analysis, a capital fund of KBL is higher in comparison to NIBL i.e. 8.04%. Capital base of NIBL is 6.06%. Since the deposit contribution to total sources of funds is very high, NIBL seem to be high liquidity sensitive bank. The deposit proportion of NIBL is higher than KBL i.e. 84.91% and 81.85% respectively. Considering the contribution of borrowings to total sources, KBL has borrowed proportionately more funds than NIBL i.e. 3.18% whereas NIBL has nominal proportion of borrowings i.e. 2.03%. Lastly, others source of funds proportion of KBL is lower than that of NIBL i.e. 6.93% & 7.00% respectively.

4.2.6 Comparative Analysis of Uses

The subsequent table shows the average uses of funds of the two joint venture banks.

Table No.29

Comparative average Uses of Funds of NIBL and KBL

Particulars	Average %	
	NIBL	KBL
1 Liquid Funds	11.22	10.05
2 Investments	8.73	10.59
3 Loans & Advances	64.61	72.18
4 Share & Other Inv	9.71	0.98
5 Others	5.72	6.20
Total	100.00	100.00

NIBL has maintained high liquid funds than KBL i.e. 11.22%. KBL is successful to make investment in different sectors in comparison to NIBL i.e. 10.59% which is greater than investment of NIBL. KBL has greater portfolio of Loan and Advances i.e. 72.18%. Investment in Shares and Others of NIBL is greater than KBL i.e. 9.71%. Other Investment of KBL is greater i.e. 6.20%. Thus, KBL has better portfolio in dividing total funds of the bank.

4.3 Correlation Analysis

Correlations between the important variables are analyzed under this heading.

4.3.1 Analysis of Correlation Coefficient between Deposits and Total Investment

The following table describes the relationship between deposits and total investment of NIBL and KBL for seven years study period. In this case, deposit is independent variables (X) and total investment is dependent variable (Y).

Table No.30

Correlation Coefficient between Deposits and Total Investment

Banks	Base of Evaluation			
	R	R ²	P.E.	7×P.E.
NIBL	0.74	0.55	0.11	0.77
KBL	0.59	0.35	0.17	1.19

From the above table, it is found that coefficient of correlation between deposits and total investment of NIBL is 0.74. And the value of coefficient of determination (R²) is 0.55 which means 55% of investment decision is depend upon deposit and only 45% investment is depend upon other variables. Similarly probable error (P.E.) is 0.11 and 7P.E. is 0.77 which shows that 'r' is lower than 7P.E. Therefore it reveals that relationship between deposit and investment is not significant.

Likewise in case of KBL, coefficient of correlation between investment and deposit is 0.59. Coefficient of determination (R²) is 0.35, which means 35% of investment decision is depend upon deposit and 65% investment is depend on other variables. And its P.E. is 0.17 and similarly 7P.E. is 1.19 which is greater than 'r'. It means correlation of coefficient between deposit and Investment of KBL is significant.

4.3.2 Analysis of Correlation Coefficient between Deposits and Loan and Advances

The following table describes the relationship between deposits and Loan and Advances of NIBL and KBL for seven years study period. In this case, deposit is independent variables (X) and Loan and Advances is dependent variable (Y).

Table No.31

Correlation Coefficient between Deposits and Loan and Advances

Banks	Base of Evaluation			
	R	R ²	P.E.	7×P.E.
NIBL	0.99	0.98	0.006	0.042
KBL	0.99	0.98	0.006	0.042

From the above table, it is found that coefficient of correlation between deposits and Loan and Advances of NIBL is 0.99. And the value of coefficient of determination (R²) is 0.98 which means 98% of Loan and Advances decision is depends upon deposit and

only 2% Loan and Advances is depends upon other variables. Similarly probable error (P.E.) is 0.006 and 7P.E. is 0.042 which shows that 'r' is highly greater than 7P.E. Therefore it reveals that relationship between deposit and Loan and Advances is significant.

Likewise in case of KBL, coefficient of correlation between deposit and Loan and Advances is 0.99. Coefficient of determination (R^2) is 0.98 which means 98% of Loan and Advances is depends upon deposit and only 2% Loan and Advances is depends on other variables. And its P.E. is 0.006 and similarly 7P.E. is 0.042 which is lower than 'r' i.e. 0.99. It means correlation of coefficient between deposit and Loan and Advances of KBL is significant.

4.4 Trend Analysis

4.4.1 Trend Analysis of Total Investment to Total Deposits Ratio

Under this topic, an effort has been made to calculate the trend values of total investment to total deposit ratio of NIBL and KBL with comparatively for seven years study period and projects the trend for next two years.

The following table describes the trend values of total investment to total deposit ratio of NIBL and KBL for nine years.

Table No. 32

Trend Values of Total Investment to Total Deposit Ratio of NIBL and KBL (2006/07–2014/15)

Years	Banks (Trend Value)	
	NIBL	KBL
2006/7	30.28	15.78
2007/8	27.40	15.25
2008/9	24.53	14.73
2009/10	21.65	14.20
2010/11	18.78	13.68
2011/12	15.90	13.15
2012/13	13.03	12.63
2013/14	10.15	12.10
2014/15	7.28	11.58

From the above comparative table, it has been found that the total investment to total deposit ratios of these two banks are in decreasing trend. Other things remaining the same, the ratio of total investment to total deposits of NIBL and KBL will be 7.28 and 11.58 respectively in the year ended 2014/15.

Trend Line of Total Investment to Total Deposit Ratio of NIBL and KBL is shown below:

Trend Values of Total Investment to Total Deposit Ratio of NIBL and KBL (2004/07–2014/15)

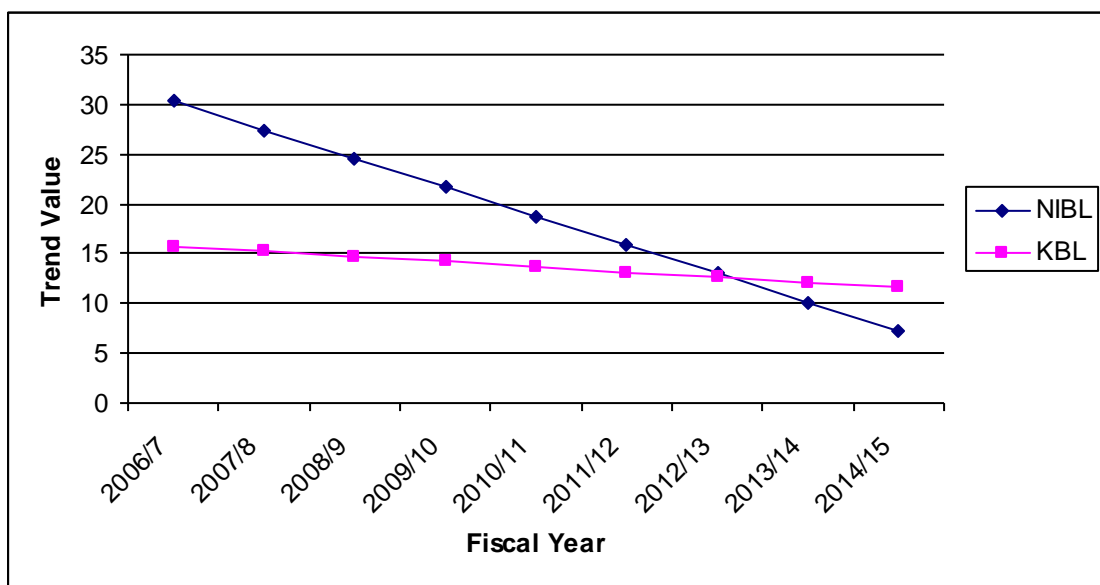


Figure No.11

4.4.2 Trend Analysis of Loan and Advances to Total Deposits Ratio

Under this topic an attempt has been made to analyze the trend of loan and advances to total deposits ratio of NIBL and KBL with comparatively for seven years study period and projects the trend for next two years.

The following table describes the trend values of loan and advances to total deposit ratio of NIBL and KBL for nine years.

Table No. 33

Trend Values of Loan and Advances to Total Deposit Ratio of NIBL and KBL
(2004/05-2012/13)

Years	Banks (Trend Value)	
	NIBL	KBL
2006/7	60.14	73.99
2007/8	61.63	73.39
2008/9	63.12	72.78
2009/10	64.61	72.18
2010/11	66.10	71.57
2011/12	67.59	70.96
2012/13	69.08	70.36
2013/14	70.57	69.75
2014/15	72.06	69.15

From the above comparative table, it has been found that the loan and advances to total deposits ratio of KBL is in decreasing trend but NIBL is in highly increasing trend. Other things remaining the same, the loan and advances to total deposit of NIBL will be 72.06 whereas KBL will be 69.15 respectively in the year 2015.

Trend Line of Loan and Advances to Total Deposit Ratio of NIBL and KBL is shown below:

Trend Values of Loan and Advances to Total Deposit Ratio of NIBL and KBL (2006/07-
2014/15)

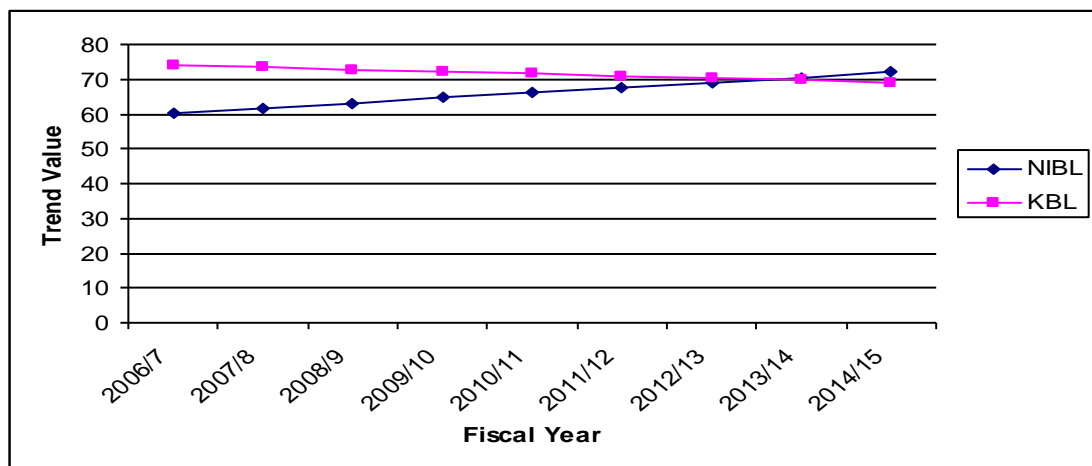


Figure No. 13

4.5 Test of Hypothesis

Under this analysis an effort has been made to test the significance level regarding the parameter of the population on the basis of sample drawn from the population.

4.5.1 Test of Hypothesis on Loans and Advances to Total Deposit Ratio

In this analysis ratios of loan and advances to total deposits of NIBL and KBL are taken and are carried out under t-test of significance difference.

Table No. 34

Test of Hypothesis on Loans and Advances to Total Deposit ratios between NIBL and KBL

S.N.	Fiscal Year	NIBL			KBL		
		X_1	x_1	x_1^2	X_2	x_2	x_2^2
1	2006/7	72.22	3.93	15.44	88.02	-0.17	0.03
2	2007/8	68.72	-7.43	55.20	88.69	0.5	0.25
3	2008/9	71.39	-4.76	22.66	85.33	-2.86	8.18
4	2009/10	78.79	2.64	6.97	89.58	1.39	1.93
5	2010/11	77.63	1.48	2.19	92.57	4.38	19.18
6	2011/12	81.23	5.08	25.81	85.45	-2.74	7.51
7	2012/13	83.1	6.95	43.43	87.71	-0.48	0.23
	Total	533.08		$x_1^2 = 171.70$	617.35		$x_2^2 = 37.31$
		$\bar{X}_1 = 76.15$			$\bar{X}_2 = 88.19$		

Here,

$$\bar{X}_1 = \frac{X_1}{n_1} = \frac{533.08}{7} = 76.15,$$

$$\bar{X}_2 = \frac{X_2}{n_2} = \frac{617.35}{7} = 88.19,$$

Again,

$$x_1 = X_1 - \bar{X}_1$$

$$x_2 = X_2 - \bar{X}_2$$

a) Test of Significance of difference between NIBL and KBL

Here,

Null Hypothesis (H₀): $\bar{X}_1 = \bar{X}_2$ i.e. there is no significant difference between mean ratios of loans and advances to total deposit of NIBL and KBL.

Alternative Hypothesis (H₁): $\bar{X}_1 \neq \bar{X}_2$ i.e. there is significant difference between mean ratios of loans and advances to total deposit of NIBL and KBL (Where \bar{X}_1 is mean ratio of NIBL and \bar{X}_2 is mean ratio of KBL).

Under H₀, the test statistic is given by,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$S^2 = \frac{1}{n_1 + n_2 - 2} \left[\sum x_1^2 - \frac{(\sum x_1)^2}{n_1} + \sum x_2^2 - \frac{(\sum x_2)^2}{n_2} \right] = \frac{1}{7 + 7 - 2} [71.70 - \frac{7^2}{7} + 37.31 - \frac{7^2}{7}] = 17.42$$

Now,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{76.15 - 88.19}{\sqrt{17.42 \left(\frac{1}{7} + \frac{1}{7} \right)}} = -5.40$$

Hence, |t| = 5.40

Degree of freedom = $n_1 + n_2 - 2 = 7 + 7 - 2 = 12$

The tabulated value of t for 12 d.f. at 5% level of significance for two tailed test is 2.1788.

Conclusion:

Since, the calculated value of $|t|$ i.e. 5.40 is greater than the tabulated value i.e. 2.1788. It is significant, null hypothesis is rejected hence alternative hypothesis is accepted which means that there is significant difference between mean ratios of loan and advances to total deposit of NIBL and KBL.

4.5.2 Test of Hypothesis Total Investment to Total Deposit Ratio

In this analysis ratio of total investment to total deposits of NIBL and KBL are taken and are carried out under t-test of significance difference.

Table No. 35

Test of Hypothesis on Total Investment to Total Deposit ratios between NIBL and KBL

S.N	Fiscal Year	NIBL			KBL		
		X ₁	x ₁	x ₁ ²	X ₂	x ₂	x ₂ ²
1	2006/7	28.58	6.93	48.02	21.38	7.18	51.55
2	2007/8	29.97	8.32	69.22	14.29	0.09	0.0081
3	2008/9	26.62	4.97	24.70	12.29	-1.91	3.65
4	2009/10	19.97	-1.68	2.82	12.81	-1.39	1.93
5	2010/11	15.85	-5.8	33.64	7.81	-6.39	40.83
6	2011/12	15.76	-5.89	34.69	10.06	-4.14	17.14
7	2012/13	14.81	-6.84	46.79	20.79	6.59	43.43
	Total	151.56			99.43		
		$\bar{X}_1 = 21.65$		$x_1^2 = 259.88$	$\bar{X}_2 = 14.20$		$x_2^2 = 158.5381$

Here,

$$\bar{X}_1 = \frac{X_1}{n_1} = \frac{151.56}{7} = 21.65$$

Again,

$$x_1 = X_1 - \bar{X}_1$$

$$\bar{X}_2 = \frac{X_2}{n_2} = \frac{99.43}{7} = 14.20$$

$$x_2 = X_2 - \bar{X}_2$$

a) Test of Significance of difference between NIBL and KBL

Here,

Null Hypothesis (H₀): $\bar{X}_1 = \bar{X}_2$ i.e. there is no significant difference between mean ratios of total investment to total deposit of NIBL and KBL.

Alternative Hypothesis (H₁): $\bar{X}_1 \neq \bar{X}_2$ i.e. there is significant difference between mean ratios of total investment to total deposit of NIBL and KBL (Where \bar{X}_1 is mean ratio of NIBL and \bar{X}_2 is mean ratio of KBL)

Under H₀, the test statistic is given by,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where,

$$S^2 = \frac{1}{n_1 + n_2 - 2} \sum (x_1^2 + x_2^2) - \frac{(\sum x_1)^2 + (\sum x_2)^2}{n_1 + n_2} = \frac{1}{7+7-2} [259.88 + 158.5381] = 34.87$$

Now,

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{21.65 - 14.20}{\sqrt{34.87 \left(\frac{1}{7} + \frac{1}{7} \right)}}$$

$$= 2.36$$

Degree of freedom = n₁+n₂-2 = 7+7-2 = 12

The tabulated value of t for 12 d.f. at 5% level of significance for two tailed test is 2.1788

Conclusion:

Since, the calculated value of t i.e. 2.36 is more than the tabulated value i.e. 2.1788. It is significant, null hypothesis is rejected. Hence, alternative hypothesis is accepted which means that there is significant difference between mean ratios of total investment to total deposit of NIBL and KBL.

4.6 Major Findings of the Study

Basically in this research work, all the data has been obtained from secondary sources. Data has been analyzed by using financial as well as statistical tools. This topic focuses on the major findings of the study, which are derived from the analysis of fund mobilization of NIBL and KBL with comparatively applying seven years data from 2006/07 to 2012/13.

The major findings of the study derived from the analysis of financial tools of NIBL and KBL are given below:

1. Findings from Liquidity Ratios

- i) The mean ratio of cash and bank balance to total deposits of NIBL is higher than KBL. KBL has lowest mean ratio. It states that the liquidity position of NIBL is better in this regard. The ratio of NIBL is less consistent and KBL is more consistent which shows KBL has taken more risk to meet the daily cash requirements.

- ii) The mean ratio of cash and bank balance to current assets of NIBL is higher than KBL. KBL has lowest mean ratio. It reveals that liquidity position of NIBL is better than KBL. It also indicates that NIBL has the higher capacity to meet the cash demand of its customer deposit than that of other commercial banks. The ratio of KBL is less consistent and NIBL is more consistent.

- iii) The average ratio of investment of government securities to current assets of KBL is higher than that of NIBL. It reveals that investment on government securities of KBL is stronger than NIBL. Analysis shows that investment on government securities of KBL is more consistent.

The above result shows that the liquidity position of NIBL is comparatively better than KBL. Again NIBL has the highest cash and bank balance to total deposit and cash and bank balance to current assets ratio. KBL has made enough investment on government securities than NIBL. At last, it can be concluded that NIBL has good deposit collection and higher ability to meet the cash requirements but comparatively KBL is more consistent bank than NIBL bank in the sample.

2. Findings from Assets Management Ratios

- i) The mean ratio of loan and advances to total deposit of KBL is greater than NIBL. The variability ratio of KBL is as well lower than that of NIBL. It seems more consistent than NIBL.
- ii) The average ratio of total investment to total deposit ratio of NIBL is higher than that of KBL. The variability ratio NIBL is lower than KBL. It seems more consistent than KBL.
- iii) The average ratio of loan and advances to total working fund of KBL is higher than NIBL. The variability ratio of KBL is lower than NIBL. It is the indication of more consistency of loan and advances.
- iv) The average ratio of investment on government securities to total working fund of KBL is higher than NIBL. But the variability ratio of KBL is lower than NIBL. It seems more consistent to make investment on government securities.
- v) The mean ratio of investment on shares and debentures to total working fund of NIBL is higher than KBL and lower variability of the ratio. It shows the stable investment on shares and debentures.

From the above analysis it helps to conclude that KBL is comparatively successful to provide loan and advances of its collected deposits. And to invest in productive sector, government securities and share & debenture NIBL seems stronger than KBL.

3. Findings from Profitability Ratios

- i)** The mean ratio of return on loan and advances of NIBL is higher than KBL. The variability ratio of NIBL is lower than KBL. It seems NIBL has stable return.
- ii)** The mean ratio of return on total working fund of NIBL is greater than KBL & the variability ratio of NIBL is lower than KBL. It indicates that the return on total working fund of NIBL is stable.
- iii)** In case of mean ratio of total interest earned to total working fund of NIBL is higher KBL. The variability ratio of KBL is lower than NIBL It reveals that NIBL is mobilizing its working fund successfully so that it has high earning capacity.
- iv)** The mean ratio of total interest paid to total working fund of NIBL is lower than KBL. It reveals that NIBL has not paid high interest as KBL. The ratio of NIBL is more consistent than that of KBL.

From the above analysis of profitability ratios, it is difficult to conclude any one bank is profitable in comparison to other bank.

4. Findings from Risk Ratios

- i)** The mean ratio of liquidity risk of KBL is lower than KBL. Degree of risk and variability of risk is lower in NIBL in comparison to KBL which states liquidity risk ratio of NIBL is more consistent.
- ii)** In case of credit risk ratio, KBL has the higher risk than NIBL. The variability ratio of NIBL is lower than KBL. It indicates that the credit risk ratio of NIBL is consistent.

From the above analysis, KBL has maintained the lower liquidity risk and NIBL has maintained lower credit risk. And lower liquidity risk means higher risk for higher profit.

5. Findings from Growth Ratios

- i)** The growth ratios of total deposits of all banks are increasing every year except KBL. Deposit of KBL has decreased in the year 2012/13. Out of two banks growth rate of total deposits of NIBL is greater than KBL. It shows that NIBL has increased its deposit collection capacity and KBL is facing problem in collecting deposits due to liquidity crunch.
- ii)** The growth rate of total investment of KBL is higher than NIBL.
- iii)** The growth ratio of loan and advances of these two banks are in increasing trend. Growth rate of NIBL is higher than KBL. Though KBL is providing more funds in loan and advances it appears to be weak in growth rate point of view.
- iv)** The growth ratio of net profit of the banks are in increasing trend the during study period except the year 2012/13. NIBL has the highest growth ratio of net profit and KBL has lowest growth ratio of net profit.

From the above findings it can be observed that the NIBL has maintained the higher growth ratio in total deposits, loan and advances and net profit. KBL has maintained higher growth ratio in Investment. The growth ratios of these banks are better.

6. Findings from Analysis of Sources and Uses of Funds

- i)** Capital base of KBL has been found significantly higher than NIBL. It can be said that KBL has been able to generate high volume of profit from operation than that of NIBL. NIBL is moderate in the same parameter.
- ii)** NIBL has been remained very successful in case of mobilizing deposits during the study period. Whereas deposits condition of KBL is lower in comparison to NIBL. NIBL is considered as a high liquidity sensitive bank.

- iii)** In case of borrowings of funds from different sources, KBL frequently depends upon borrowings to discharge its obligation. This is an indication that the internal fund management of KBL is not satisfactory towards meeting liquidity needs. Whereas NIBL has been borrowing low proportion in comparison KBL.
- iv)** Among two banks NIBL is successful to generate funds from other sources than KBL.
- v)** NIBL has maintained high liquid funds than KBL. Considering liquidity, it is good for holding necessary liquid in the banks but holding necessary liquid funds is not favorable for income generation.
- vi)** KBL has been successful to make investment in different sectors in comparison to NIBL. NIBIL has low investment than KBL.
- vii)** KBL has proportionately provided more funds as a loan and advances & NIBL mobilizes low amount in loan and advances than KBL.
- viii)** NIBL is comparatively able to invest more on Share and Other Investment. Whereas KBL is low in terms of investing in Share and Other Investment than NIBL.
- ix)** KBL more proportion of allocation of funds under other assets followed by NIBL. High allocation of such assets leads a bank to a less liquid position and vice-versa.

7. Findings from Coefficient of Correlation Analysis

- i)** Correlation coefficient between deposit and total investment of NIBL is higher than KBL. It indicates that NIBL is successfully mobilizing its deposits as investment. There is significant relationship between correlation coefficient of deposit and total investment of NIBL and KBL.

- ii) NIBL and KBL have the equal highest degree of correlation coefficient between deposit and loan and advances. It states that the both are in better position of mobilization of deposit as loan and advances. There is significant relationship between correlation coefficient of deposit and loan and advances.

8. Findings from Trend Analysis

- i) The total investment to total deposit ratio of NIBL & KBL are in decreasing trend. It indicates that NIBL is more successful to utilize its deposit in investment.
- ii) The trend value of loan and advances to total deposit ratio of NIBL is increasing trend and KBL is in decreasing trend. Loan and advances to total deposit ratio of NIBL is proportionately better than other banks

9. Findings from Test of Hypothesis

- i) There is significant difference between mean ratios of loan and advances to total deposit of NIBL and KBL.
- ii) There is significant difference between mean ratios of total investment to total deposit of NIBL and KBL.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Basically the entire research work focuses on the comparative study on fund mobilization of two banks namely Nepal Investment Bank Ltd. & Kumari Bank Ltd. These two banks are composed as per their fund mobilization activities by taking seven years data from the year 2006/07 to 2012/13.

The study is mainly based on secondary sources. All data are taken from NRB official website, concerned banks annual report, literature publication, balance sheet, profit and loss account, previous thesis report, different website, related books and booklets, journals and articles. After collecting data from different sources, it is analyzed by using financial and statistical tools. Findings are drawn by applying various financial tools viz. liquidity ratio, assets management ratio, profitability ratio, growth ratio, risk ratio and sources and uses of funds. Similarly, statistical tools have been used viz. mean, standard deviation, coefficient of variation, coefficient of correlation and trend analysis.

In an attempt to fulfill the objectives of the research work, all secondary data are compiled, processed and tabulated as per necessity and figures, diagrams, different types of chart are also used.

This study suffers from different limitations; it considers two banks only and time and resource are the constraints of the study. Therefore the study may not be generalized in all cases and accuracy depends upon the data collected and provided by the organization.

5.2 Conclusion

From the analysis of liquidity ratio, the liquidity position of NIBL is comparatively better than KBL. NIBL has the highest cash and bank balance to total deposit and cash and bank balance to current assets ratio. KBL has made enough investment on government securities. NIBL has invested less part of current assets in government securities.

Considering asset management aspect of two banks, KBL is relatively providing more loan and advances for the purpose of earning profit while NIBL is providing less. But NIBL is investing more of its collected deposits in comparison to KBL. In comparison to NIBL, KBL seems more successful in mobilizing total fund on different types of government securities to maximize its earning capacity. Again, NIBL has successfully invested more working funds in debentures and shares whereas KBL is in weak position to make investment on shares and debentures.

NIBL appears to be more successful to earn profit on loan and advances than KBL. Profit earning capacity of KBL is considered weak. The average ratio of return on total working fund indicates that working fund of NIBL is well managed and efficiently utilized whereas total working fund of KBL has not well managed. Again, KBL was not able to receive high interest on its total working fund in comparison with NIBL and NIBL has mobilized its working fund properly to earn interest and its earning capacity is also high. NIBL is in better position from the view point of interest expenses. It seems to be successful to collect its working fund from less expensive sources in comparison to KBL.

The liquidity risk ratio of NIBL is higher than that of KBL which specified that KBL has kept idle funds in the form of cash and bank balance but this reduces profitability. NIBL has the lowest credit risk ratio. Credit risk involved in loan and advances and total investment of KBL is more than NIBL. It may arise due to default risk or non-repayment of loan.

Growth ratio of total deposits and net profit of KBL seems weak in comparison to NIBL but high growth ratio of total investment. KBL has low growth ratio of loan and advances in comparison to NIBL. NIBL has maintained high growth ratios in total deposit, loan and advances and net profit. Therefore, we must say that the bank is successful to increasing its sources of funds and its mobilization.

Deposit is the strongest sources of fund whereas borrowings cover fewer portions of sources of fund. NIBL has highest amounts in deposits contribution followed by KBL in terms of total sources of fund of the bank. Among the uses of funds, loan and advances covers maximum portion and interest accrued covers less portion. KBL has invested more amounts into loan and advances in comparison to NIBL.

Correlation coefficient between deposit and total investment of NIBL & KBL elucidates the positive relationship or there is high degree of positive correlation. Most of the investment decision of NIBL and KBL depends upon deposits and only few decisions are depend upon other variables. Moreover by considering the probable error, the value of coefficient of determination of NIBL is less than 6 P.E. so it is insignificant i.e. there is no significant relationship between deposits and total investment though there is positive relation between them.

Correlation coefficient between deposits and loan and advances indicates the positive relationship between the variables of these two banks NIBL and KBL. In almost all cases it has been found that loan and advance decision depends upon the deposits and only few decisions depend upon other variables. A considering the probable error, the value of coefficient of determination of all banks is greater than that of 6 P.E. So it can be concluded that the value of correlation coefficient is significant i.e. there is significant relationship between total deposits and loan and advances.

By considering the trend values, both banks are in decreasing trends but in average, NIBL is more decreasing than KBL. So, KBL is successful to utilize its total collected deposit in investment than NIBL. Trend analysis of loan and advances to total deposits states NIBL more successful bank.

In case of testing of hypothesis, we can conclude that there is significant difference between mean ratio of loan and advances to total deposits of NIBL & KBL. Again, there is significant difference between mean ratio of total investment to total deposits of NIBL and KBL.

5.3 Recommendations

Suggestion is the output of the whole study. It helps to take corrective action in their activities in future. Different analysis were done till arrive this step. On the basis of above analysis and findings of the study, following suggestions may be referred to overcome weakness, inefficiency and to fund mobilization of NIBL and KBL.

➤ **To maintain effective liquidity position**

The liquidity position of a bank may be affected by internal as well as external factors. The affecting factors may be interest rates, supply and demand position of loan and advances as well as savings, investment situations, central banks directives, the lending policies, capability of management, strategic planning and funds flow situations. The ratio of cash and bank balance to total deposit and current assets of NIBL is higher than that of KBL. It means NIBL has higher cash and bank balance than KBL and it indicates NIBL has higher idle cash and bank balance. It may decrease profit of bank. NIBL is recommended to mobilize its idle cash and bank balance in profitable sector as loan and advances.

➤ **To increase deposit collection**

The main source of commercial banks is collecting deposit from public who don't need that fund recently. So, it is recommended to collect more amounts as deposits through large variety of deposits schemes and facilities like cumulative deposit scheme, prize bonds scheme, gift cheques scheme, recurring deposit scheme (life insurance), monthly interest scheme, house building scheme, direct finance housing scheme, education loan scheme and many others.

➤ **To make more investment in government securities**

From the study, it has been revealed that NIBL has not invested more funds in government securities than that of KBL. NIBL has made lower investment amount on government securities. Increasing large amount on assets, as cash and bank balance is not considered good from the profitability point of view of the bank as it doesn't earn any return. NIBL's investment on government securities is not in satisfactory position. Investment on those securities issued by government i.e. treasury bills, development bonds, saving certificates are free of risk and highly liquid in nature and such securities yield the low interest rates of a particular maturity due to lowest risk in future, it is more better in regard to safety than other means of investment. So, NIBL is strongly recommended to give more importance to invest

more funds in government securities instead of keeping them idle with this proverb “something is better than nothing”

➤ **To make more investment on share and debentures**

To get success in a competitive market and to raise financial and economic development of the country a commercial bank must mobilize its fund in different sectors such as purchase of share and debenture of other financial and non-financial companies and other government and non-government companies. It is also genuine means of utilization of resource. Thus these companies may get chances to rise and that help to development of the country. Out of total working fund, investment on shares and debentures of KBL is lower than NIBL. KBL is suggested to invest more of its fund in share and debentures of different companies.

➤ **To make profitable return**

As a private sector, commercial banks cannot keep their eyes closed from the profit motive. They should be careful in increasing profit motive. They should be careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and all its customers. KBL’s profitability position is worse than that of NIBL. So, KBL is strongly recommended to utilize risky assets and shareholders fund to gain highest profit margin. Similarly, it should reduce its expenses and should try to collect cheap fund being more profitable.

➤ **To prefer aggressive-defensive policy**

Observing the findings of growth analysis and trend of growth, it has noticed that NIBL has been adopting an aggressive policy in all the parameters including loan and advances. As the economy has not been able to show the survival growth, the aggressive policy may prove to be harmful in future. NIBL should rather prefer an aggressive-defensive policy in mobilizing the resources into loans.

➤ **To invest deprive and priority sector**

NRB has directed to commercial banks to invest their certain percentage in deprives and Priority sector and it is also responsibility of banks. Although the collected data did not classified the loan and advances, but the study has found that commercial banks are earning high profit because their services are only for profitable sector. It reveals that it has not granted enough loans on priority and deprives sector. So it is recommended to thoroughly follow the directives issued by NRB and invest in priority and deprive sector and also to invest on other small-scale industries like, public utilities, health, sanitation and drinking water, education and agricultural etc.

➤ **To make effective portfolio management**

The total fund of a bank is the aggregation of different portfolios such as deposits, capital fund, borrowings and other deposit liabilities. It is need not to state that deposit liability is the major contributing source. Considering the position of all four banks, the contribution of deposit to total sources of funds is very high. It is because the deposits are the prime sources of every bank. It is recommended to enhance its capital base and operational resources of funds in order to have an appropriate combination to the total funds of the bank. High contribution of deposits to the total sources of funds demands high level of liquid assets and it is the threat of withdrawals.

Portfolio management is very important for every investor. In each investment, risk is involved. Risk is the chance of loss or the variability of the returns of a period. The greater the variability of the returns project will be riskier. So it is kept in mind while investing in the project which would be lower risk and higher return. Portfolio management plays vital role with dividing total investment in different areas. Portfolio management of the bank assets basically means allocation of funds in different components of banking assets having different degrees of risk and varying rate of return in such a way that the conflicting goal of maximum yield and minimum risk can be achieved. So, portfolio conditions of NIBL and KBL should be examined carefully from time to time and alteration should be made to maintain equilibrium in the portfolio condition as far as possible. So, it can be said “all eggs should not be

kept in the same basket”. The bank should make continuous efforts to explore new, competitive and high yielding investment opportunities to optimize their investment portfolio.

➤ **Liberal lending policy and sound credit collection policy**

To get success in competitive banking market, commercial bank must utilize their deposit as loan and advances. Loan and advances are the main source of income and also means of utilization resources of commercial banks. Negligence in administrating these assets could be the cause of liquidity crisis in bank and one of the main reasons of the bank failure. Collection of loan has been most challenging task of commercial banks these days, increasing on non-performing assets discloses the failure of commercial banks in recovery of loan. Therefore, it is recommended to NIBL and KBL to follow liberal lending policy when sensations loan and advances with sufficient guaranty and implement a sound collection policy including procedure which rapid identification of bad debtor loans, immediate contact with borrower, continual follow up and as well as legal procedure if require.

➤ **To adopt innovative approach to bank marketing**

In the light of growing competition in the banking sector, the business of the bank should be customer oriented. Marketing is an effective tool to attract and retain the customers. Without effective marketing strategy anyone be along behind in today’s competitive environment. Different marketing techniques like advertisement through audio-visual, published web site, documentary etc. are flowed. Similarly, draw attentions of customers through new technologies like, E-banking, mobile banking, increase investment through their wide international banking network should be introduced by those who have not.

➤ **To extend branches all over the country**

Economic development of the country depends upon the growth of commercial banks. If the service of commercial banks expands all over the country it collects idle money from every corner of the country and can be utilized for income generation purpose. HMG/N has also encouraged the joint venture banks to expand banking

service in rural areas and communities without making unfavorable impact in their profit. Therefore, all banks are recommended to expand their branch and providing banking service and facilities to the rural areas and communities to accelerate the economic development of the country.

Being a developing country, economic environment of Nepal is not in a good condition. The strong economic structure is needed for the rapid overall development. Commercial banks play vital role in the developing country like Nepal. Commercial banks are facing several problems related to fund mobilization. They have to rush with modern banking technology so that, they would be a professional institutions. If commercial banks follow above- mentioned suggestions, they would be successful in reaching to the modern innovative and competitive banking market.

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Appendix A

I. Ratio Analysis

A. Liquidity Ratios

i) Current Ratio

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

ii) Cash and Bank Balance to Total Deposit

$$\text{Cash and Bank Balance to Total Deposit Ratio} = \frac{\text{Cash and Bank Balance (Cash Balance + Bank Balance)}}{\text{Total Deposits (Current + Savings + Fixed + Call Deposits + Others)}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	374.2+966.2/ 14254.8 =9.40	562.5+1792.4/ 18927.3 =12.44	764.0+1677.5/ 24488.9 =9.97	1464.5+2290.5/ 34451.8 =10.90	1833.4+6084.6/ 46697.9 =16.96	1525.4+5290.4/ 50094.7 =13.61	1718.7+6421.7/ 50138.1 =16.24
KBL	111.2+332.1/ 6270.1 =7.07	135.8+252.5/ 7800.4 =4.98	190.8+481.4/ 10560.0 =6.37	565.6+368.2/ 12781.0 =7.31	549.1+1227.2/ 15860.6 =11.20	574.1+2149.4/ 17408.5 =15.64	524.8+643.7/ 16986.3 =6.88

iii) Cash and Bank Balance to Current Assets Ratio

$$\text{Cash and Bank Balance to Current Assets Ratio} = \frac{\text{Cash and Bank Balance (Cash Balance + Bank Balance)}}{\text{Current Assets (Total Assets - Fixed Assets)}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	(374.2+966.2)/ (16637.9-335.9) =8.22	562.5+1792.4/ (22007.2-372.5) =10.88	764.0+1677.5/ (28572.8-759.5) =8.78	1464.5+2290.5/ (40205.5-970.1) =9.57	1833.4+6084.6/ (54634.5-1126.5) =14.80	1525.4+5290.4/ (59554.7-1191.1) =11.68	1718.7+6421.7/ (61357.0-1147.3) =13.52
KBL	111.2+332.1/ (7695.5-81.5) =5.82	135.8+252.5/ (9390.6-89.7) =4.17	190.8+481.4/ (12324.4-189.3) =5.54	565.6+368.2/ (15619.0-221.9) =6.06	549.1+1227.2/ (19265.1-247.9) =9.34	574.1+2149.4/ (21499.7-285.2) =12.84	524.8+643.7/ (21902.7-305.8) =5.41

iv) Investment on Government Securities to Current Assets Ratio

$$\text{Investment on Govt. Securities to Current Assets} = \frac{\text{Investment on Government Securities}}{\text{Current Assets (Total Assets - Fixed Assets)}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	1948.5/ (16637.9-335.9) =11.95	2522.3/ (22007.2-372.5) =11.66	3256.4/ (28572.8-759.5) =11.71	3155.0/ (40205.5-970.1) =8.04	2531.3/ (54634.5-1126.5) =4.73	4201.9/ (59554.7-1191.1) =7.20	4294.6/ (61357.0-1147.3) =7.13
KBL	1120.3/ (7695.5-81.5) =14.71	1114.3/ (9390.6-89.7) =11.98	1297.9/ (12324.4-189.3) =10.69	1469.1/ (15619.0-221.9) =9.54	1080.1/ (19265.1-247.9) =5.68	1729.9/ (21499.7-285.2) =8.15	2804.8/ (21902.7-305.8) =12.99

Appendix B

B. Assets Management Ratios (Activity Ratio)

i) Loan and Advances to Total Deposit Ratio

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Total loan and Advances}}{\text{Total Deposit}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	10295.4 /14254.8 =72.22	13007.2 /18927.3 =68.72	17482.0 /24488.9 =71.39	27145.5 /34451.8 =78.79	36250.4/46697.9 =77.63	40689.6 /50094.7 =81.23	41665.2/50138.1 =83.10
KBL	5519.2 /6270.1 =88.02	6918.3 /7800.4 =88.69	9011.0 /10560.0 =85.33	11449.0 /12781.0 =89.58	14681.8/15860.6 =92.57	14875.1 /17408.5 =85.45	14898.4/16986.3 =87.71

ii) Loan and Advances to Total Working Fund Ratio

$$\text{Loan and Advances to Total Working Fund Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Working Fund (Total Assets)}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	10295.4 /16637.9 =61.81	13007.2 /22007.2 =59.10	17482.0 /28572.8 =61.18	27145.5 /40205.5 =67.52	36250.4/54634.5 =66.35	40689.6 /59554.7 =68.32	41665.2/61357.0 =67.91
KBL	5519.2 /7695.5 =71.72	6918.3 /9390.6 =73.67	9011.0 /12324.4 =73.12	11449.0 /15619.0 =73.30	14681.8/19265.1 =76.21	14875.1 /21499.7 =69.79	14898.4/21902.7 =68.02

iii) Total Investment to Total Deposit Ratio

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment (Investments+ Shares \& Others Investments)}}{\text{Total Deposit}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	(1948.5+2125.7)/ 14254.8 =28.58	(2522.3+3150.6)/ 18927.3 =29.97	(3256.4+3262.2)/ 24488.9 =26.62	(3155.0+3724.4)/ 34451.8 =19.97	(2531.3+4871.8)/ 46697.9 =15.85	(4201.9+3694.5)/ 50094.7 =15.76	(4294.6+3130.5)/ 50138.1 =14.81
KBL	(1220.7+120.0)/ 6270.1 =21.38	(1114.3+0.4)/ 7800.4 =14.29	(1297.9+0.41)/ 10560.0 =12.29	(1469.1+68.2)/ 12781.0 =12.81	(1080.1+158.3)/ 15860.6 =7.81	(1729.9+21.9)/ 17408.5 =10.06	(2804.8+727.5)/ 16986.3 =20.79

iv) Investment on Shares and Debentures to Total Working Fund Ratio

$$\text{Investment on Share and Debenture to TWF Ratio} = \frac{\text{Investment on Shares and debentures}}{\text{Total Working Fund}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	2125.7/16637.9 =12.78	3150.6/22007.2 =14.32	3262.2/28572.8 =14.42	3724.4/40205.5 =9.26	4871.8/54634.5 =8.92	3694.5/59554.7 =6.20	3130.5/61357.0 =5.10
KBL	120.0/7695.5 =1.56	0.4/9390.6 =0.0043	0.4 /12324.4 =0.0033	68.2/15619.0 =10.77	158.3/19265.1 =0.82	21.9/21499.7 =0.10	727.5/21902.7 =3.32

v) Investment on Government Securities to Total Working Fund Ratio

$$\text{Investment on Govt. Security to TWF Ratio} = \frac{\text{Investment on Government Securities}}{\text{Total Working Fund}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	1948.5/16637.9 =11.78	2522.3/22007.2 =11.46	3256.4/28572.8 =11.40	3155.0/40205.5 =7.85	2531.3/54634.5 =4.63	4201.9/59554.7 =7.06	4294.6/61357.0 =7.00
KBL	1120.3/7695.5 =14.56	1114.3/9390.6 =11.87	1297.9/12324.4 =10.53	1469.1/15619.0 =9.41	1080.1/19265.1 =5.61	1729.9/21499.7 =8.05	2804.8/21902.7 =12.81

Appendix C

C. Profitability Ratios

i) Return on Loan and Advances Ratio

$$\text{Return on Loan and Advances Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	280.3 /10295.4 =2.72	410.0/13007.2 =3.15	561.7/17482.0 =3.21	830.7/27145.5 =3.06	982.0/36250.4 =2.71	1422.5/40689.6 =3.50	1263.2/41665.2 =3.03
KBL	93.6/5519.2 =1.70	142.9/6918.3 =2.07	279.7/9011.0 =3.10	292.1/11449.0 =2.55	425.6/14681.8 =2.90	501.1/14875.1 =3.37	239.2/14898.4 =1.61

ii) Return on Total Working Fund Ratio

$$\text{Return on Total Working Fund Ratio} = \frac{\text{Net Profit (Loss)}}{\text{Total Working Fund}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	280.3 /16637.9 =1.68	410.0/22007.2 =1.86	561.7 /28572.8 =1.97	830.7 /40205.5 =2.07	982.0 /54634.5 =1.80	1422.5 /59554.7 =2.39	1263.2 /61357.0 =2.06
KBL	93.6 /7695.5 =1.22	142.9 /9390.6 =1.52	279.7 /12324.4 =2.27	292.1 /15619.0 =1.87	425.6 /19265.1 =2.21	501.1 /21499.7 =2.33	239.2 /21902.7 =1.09

iii) Total Interest Earned to Total Working Fund Ratio

$$\text{Total Interest Earned to TWF Ratio} = \frac{\text{Total Interest Earned (Accrued Interests)}}{\text{Total Working Fund}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	131.2 /16637.9 =0.79	158.1 /22007.2 =0.72	174.7 /28572.8 =0.61	184.0 /40205.5 =0.46	333.7 /54634.5 =0.61	220.1 /59554.7 =0.37	305.4 /61357.0 =0.50
KBL	20.9 /7695.5 =0.27	39.4 /9390.6 =0.42	50.7 /12324.4 =0.41	69.6 /15619.0 =0.45	89.8 /19265.1 =0.47	101.0 /21499.7 =0.47	141.4 /21902.7 =0.65

iv) Total Interest paid to Total Working Fund Ratio

$$\text{Total Interest Paid to Total Working fund Ratio} = \frac{\text{Total Interest Paid (Interest Suspense a/c)}}{\text{Total Working fund}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	54.1 /16637.9 =0.33	78.0 /22007.2 =0.35	90.5 /28572.8 =0.32	106.7 /40205.5 =0.27	153.7 /54634.5 =0.28	185.3 /59554.7 =0.31	230.5 /61357.0 =0.38
KBL	5.9 /7695.5 =0.08	22.9 /9390.6 =0.24	42.1 /12324.4 =0.34	53.8 /15619.0 =0.34	71.6 /19265.1 =0.37	83.2 /21499.7 =0.39	113.1 /21902.7 =0.52

Appendix D

D. Risk Ratios

i) Liquidity Risk Ratio

$$\text{Liquidity Risk Ratio} = \frac{\text{Cash and Bank Balance (Cash Balance+Bank Balance)}}{\text{Total Deposit (Current+Savings+Fixed+Call Deposits+Others)}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	374.2+966.2/ 14254.8 =9.40	562.5+1792.4/ 18927.3 =12.44	764.0+1677.5/ 24488.9 =9.97	1464.5+2290.5/ 34451.8 =10.90	1833.4+6084.6/ 46697.9 =16.96	1525.4+5290.4/ 50094.7 =13.61	1718.7+6421.7/ 50138.1 =16.24
KBL	111.2+332.1/ 6270.1 =7.07	135.8+252.5/ 7800.4 =4.98	190.8+481.4/ 10560.0 =6.37	565.6+368.2/ 12781.0 =7.31	549.1+1227.2/ 15860.6 =11.20	574.1+2149.4/ 17408.5 =15.64	524.8+643.7/ 16986.3 =6.88

ii) Credit Risk Ratio

$$\text{Credit Risk Ratio} = \frac{\text{Advances Total Investment (Investments+ Shares \& Others Investments) +Total Loan and}}{\text{Total Assets}}$$

Banks	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	(1948.5+2125.7+ 10295.4)/16637.9 =86.37	(2522.3+3150.6+ 13007.2)/22007.2 =84.88	(3256.4+3262.2+ 17482.0)/28572.8 =84.00	(3155.0+3724.4+ 27145.5)/40205.5 =84.63	2531.3+4871.8+ 36250.4)/54634.5 =79.90	4201.9+3694.5+ 40689.6)/59554.7 =81.58	(4294.6+3130.5+ 41665.2)/61357.3 =80.00
KBL	1220.7+120.0+ 5519.2)/7695.5 =89.14	(1114.3+0.4+ 6918.3)/9390.6 =85.54	(1297.9+0.41+ 17482.0)/28572.8 =83.65	3155.0+3724.4+ 11449.0)/15619.0 =83.78	(1080.1+158.3+ 14681.8)/19265.1 =82.64	(1729.9+21.9+ 14875.1)/21499.7 =77.34	2804.8+727.5+ 14898.4)/21900.7 =84.15

Appendix E

E. Growth Ratios

i) Growth ratio of Total Deposits

Banks	Total Deposits (Rs. in Millions)						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	14254.8	18927.3	24488.9	34451.8	46697.9	50094.7	50138.1
KBL	6270.1	7800.4	10560.0	12781.0	15860.6	17408.5	16986.3

Calculation of Growth Rate of NIBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y 2004/05}(1+g)^{n-1} \\ \text{F/Y 2004/05}(1+g)^{n-1} & \\ 50138.1 &= 14254.8(1+g)^{7-1} \\ \text{Or, } 50138.1/14254.8 &= (1+g)^6 \\ \text{Or, } 1+g &= (50138.1/14254.8)^{1/6} \\ \text{Or, } g &= (50138.1/14254.8)^{1/6} - 1 \\ \therefore g &= 23.32\% \end{aligned}$$

Calculation of Growth Rate of KBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of} \\ & \\ 16986.3 &= 6270.1(1+g)^{7-1} \\ \text{or, } 16986.3/6270.1 &= (1+g)^6 \\ \text{or, } 1+g &= (16986.3/6270.1)^{1/6} \\ \text{or, } g &= (16986.3/6270.1)^{1/6} - 1 \\ \therefore g &= 18.07\% \end{aligned}$$

ii) Growth ratio of Loan and Advances

Banks	Loan and Advances (Rs. in Millions)						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	10295.4	13007.2	17482.0	27145.5	36250.4	40689.6	41665.2
KBL	5519.2	6918.3	9011.0	11449.0	14681.8	14875.1	14898.4

Calculation of Growth Rate of NIBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y2004/05}(1+g)^{n-1} \\ 41665.2 &= 10295.4(1+g)^{7-1} \\ \text{Or, } 41665.2/10295.4 &= (1+g)^6 \\ \text{Or, } 1+g &= (41665.2/10295.4)^{1/6} \\ \text{Or, } g &= (41665.2/10295.4)^{1/6}-1 \\ \therefore g &= 26.24\% \end{aligned}$$

Calculation of Growth Rate of KBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y2004/05}(1+g)^{n-1} \\ 14898.4 &= 5519.2(1+g)^{7-1} \\ \text{or, } 14898.4/5519.2 &= (1+g)^6 \\ \text{or, } 1+g &= (14898.4/5519.2)^{1/6} \\ \text{or, } g &= (14898.4/5519.2)^{1/6}-1 \\ \therefore g &= 18.00\% \end{aligned}$$

iii) Growth ratio of Total Investment

Banks	Total Investment (Rs. in Millions)						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	1948.5	2522.3	3256.4	3155.0	2531.3	4201.9	4294.6
KBL	127.3	904.5	951.3	827.4	477.8	1896.5	1238.6

Calculation of Growth Rate of NIBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y2004/05}(1+g)^{n-1} \\ 4294.6 &= 1948.5(1+g)^{7-1} \\ \text{Or, } 4294.6/1948.5 &= (1+g)^6 \\ \text{Or, } 1+g &= (4294.6/1948.5)^{1/6} \\ \text{Or, } g &= (4294.6/1948.5)^{1/6}-1 \\ \therefore g &= 14.18\% \end{aligned}$$

Calculation of Growth Rate of KBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y2004/05}(1+g)^{n-1} \\ 1238.6 &= 127.3(1+g)^{7-1} \\ \text{or, } 1238.6/127.3 &= (1+g)^6 \\ \text{or, } 1+g &= (1238.6/127.3)^{1/6} \\ \text{or, } g &= (1238.6/127.3)^{1/6}-1 \\ \therefore g &= 46.11\% \end{aligned}$$

iv) Growth ratio of Net Profit

Banks	Net Profit (Rs. in Millions)						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
NIBL	280.3	410.0	561.7	830.7	982.0	1422.5	1263.2
KBL	93.6	142.9	279.7	292.1	425.6	501.1	239.2

Calculation of Growth Rate of NIBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y2004/05}(1+g)^{n-1} \\ 1263.2 &= 280.3(1+g)^{7-1} \\ \text{Or, } 1263.2/280.3 &= (1+g)^6 \\ \text{Or, } 1+g &= (1263.2/280.3)^{1/6} \\ \text{Or, } g &= (1263.2/280.3)^{1/6}-1 \\ \therefore g &= 28.52\% \end{aligned}$$

Calculation of Growth Rate of KBL

$$\begin{aligned} \text{Total Deposit of F/Y 2010/11} &= \text{Total Deposit of F/Y2004/05}(1+g)^{n-1} \\ 239.2 &= 93.6(1+g)^{7-1} \\ \text{or, } 239.2/93.6 &= (1+g)^6 \\ \text{or, } 1+g &= (239.2/93.6)^{1/6} \\ \text{or, } g &= (239.2/93.6)^{1/6}-1 \\ \therefore g &= 16.93\% \end{aligned}$$

Appendix F

II. Sources and Uses of Funds

Percentage of Various Sources of Funds from Total Sources of Fund of NIBL

Sources of Funds	Percentage						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1 Capital Fund	1234.5/16637.9 =7.42	1158.1/22007.2 =5.26	1370.8/28572.5 =4.80	1959.0/40205.5 =4.87	3421.1/54634.5 =4.26	3765.2/59554.7 =6.32	4585.4/61357 =7.47
2 Deposits	14254.8/16637.9 =85.68	18927.3/22007.2 =86.01	24488.9/28572.5 =85.70	34451.8/40205.5 =85.69	46697.9/54634.5 =85.47	50094.7/59554.7 =84.11	50138.1/61357 =81.72
3 Borrowing	50.0/16637.9 =0.30	550.0/22007.2 =2.50	800.0/28572.5 =2.80	1050.0/40205.5 =2.61	1088.8/54634.5 =2.00	1087.3/59554.7 =1.83	1330.8/61357 =2.17
4 Others	(14.3+804.0+280.3)/16637.9 =6.60	(18.8+943.0+410.0)/22007.2 =6.23	(32.4+1308.2+10.8+561.7)/28572.5 =6.70	(78.8+1835.2+830.7)/40205.5 =6.83	(75.5+2369.2+982.0)/54634.5 =6.27	(27.2+3154.3+3.6+1422.5)/59554.7 =7.74	(8.3+4020.5+10.7+1263.2)/61357.0 =8.64
Total	100	100	100	100	100	100	100

Remarks

- a) % of Capital Fund= Total of Capital Fund/Total Sources of Funds for the Year
b) % of Deposits= Total of Deposits/Total Sources of Funds for the Year
c) % of Borrowings= Total of Borrowings/Total Sources of Funds for the Year
d) % of Others= Total of Others(B/P+Other Liabilities+Reconciliations A/c+P/L A/c)/Total Sources of Funds for the Year

Percentage of Various Uses of Funds from Total Uses of Funds of NIBL

Uses of Funds	Percentage						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1 Liquid Funds	1340.4/16637.9 =8.05	2354.9/22007.2 = 10.70	2791.5/28572.5 =9.77	3755.0/40205.5 = 9.34	7918.0/54634.5 = 14.50	7558.4/59554.7 =12.69	8290.4/61357.0 =13.51
2 Investments	1948.5/16637.9 =11.71	2522.3/22007.2 =11.46	3256.4/28572.5 =11.40	3155.0/40205.5 =7.85	2531.3/54634.5 = 4.63	4201.9/59554.7 = 7.06	4294.6/61357.0 =7.00
3 Loans & Advances	10295.4/16637.9 =61.88	13007.2/22007.2 = 59.10	17482.0/28572.5 = 61.18	27145.5/40205.5 = 67.52	36250.4/54634.5 =66.35	40689.6/59554.7 = 68.32	41665.2/61357.0 =67.91
4 Share & Other Inv	2125.7/16637.9 =12.78	3150.6/22007.2 = 14.32	3262.2/28572.5 = 11.42	3724.4/40205.5 = 9.26	4871.8/54634.5 = 8.92	3694.5/59554.7 = 6.20	3130.5/61357.0 =5.10
5 Others	(195.0+0.0+335.9+392.3+4.6+0.1)/16637.9 =5.58	(164.3+0.0+372.5+432.5+2.9+0.0)/22007.2 = 4.42	(287.1+0.0+759.5+729.7+4.4+0.0)/28572.5 =6.23	(383.8+0.0+970.1+1063.0+1.5+0.0+7.2)/40205.5 =6.03	(576.8+0.0+1126.5+1358.2+0.0+0.0)/54634.5 =5.60	(259.2+0.0+1191.1+1960.1+0.0+0.0)/59554.7 =5.73	(222.5+0.0+1147.3+2606.6+0.0+0.0)/61357.0 =6.48
Total	100	100	100	100	100	100	100

Remarks

- a) % of Liquid Funds= $\frac{\text{Total Liquid Funds (Cash Balance+Bank Balance) for the Year}}{\text{Total Uses of Funds for the Year}}$
- b) % of Investments= $\frac{\text{Total Investment for the Year}}{\text{Total Uses of Funds for the Year}}$
- c) % of Loans & Advances= $\frac{\text{Total Loans & Advances for the Year}}{\text{Total Uses of Funds for the Year}}$
- d) % of Share & Other Investment= $\frac{\text{Total share & Other Investment for the Year}}{\text{Total Uses of Funds for the Year}}$
- e) % of Others= $\frac{\text{Total of Others (Bill Purchased+Loan Agnst. Collected Bills+Fixed Assets+Others Assets+Exps.not Written Off+NBA+Reconciliation A/c) for the year}}{\text{Total Uses of Funds for the Year}}$

Percentage of Various Sources of Funds from Total Sources of Fund of KBL

Sources of Funds	Percentage						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1 Capital Fund	559.7/7695.5 =7.27	766.8/9390.6 =8.16	863.2/12324.4 =7.00	1595.6/15619.0 =10.22	1370.0/19265.1 =7.11	1624.5/21499.7 =7.56	1966.2/21902.7 =8.98
2 Deposits	6270.1/7695.5 =81.48	7800.4/9390.6 =83.07	10560.0/12324.4 =85.68	12781.0/15619.0 =81.83	15860.6/19265.1 =82.33	17408.5/21499.7 =80.97	16986.3/21902.7 =77.55
3 Borrowing	401.8/7695.5 =5.22	224.4/9390.6 =2.39	213.0/12324.4 =1.73	100.0/15619.0 =0.64	693.4/19265.1 =3.60	829.7/21499.7 =3.86	1060.9/21902.7 =4.84
4 Others	(7.3+363.0+93.6)/7695.5 =6.03	(11.9+444.2+142.9)/9390.6 =6.38	(16.6+391.9+279.7)/12324.4 =5.58	(65.3+784.9+292.1)/15619.0 =7.31	(70.0+845.5+425.6)/19265.1 =6.96	(42.3+1093.5+501.1)/21499.7 =7.61	(8.1+1642.0+239.2)/21902.7 =8.63
Total	100	100	100	100	100	100	100

Remarks

- e) % of Capital Fund= Total of Capital Fund/Total Sources of Funds for the Year
 f) % of Deposits= Total of Deposits/Total Sources of Funds for the Year
 g) % of Borrowings= Total of Borrowings/Total Sources of Funds for the Year
 h) % of Others= Total of Others(B/P+Other Liabilities+Reconciliations A/c+P/L A/c)/Total Sources of Funds for the Year

Percentage of Various Uses of Funds from Total Uses of Funds of KBL

Uses of Funds	Percentage						
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1 Liquid Funds	513.2/7695.5 =6.67	813.6/9390.6 =8.664	1424.6/12324.4 =11.56	1490.7/15619.0 =9.54	2078.7/19265.1 =10.79	3388.5/21499.7 =15.76	1620.0/21902.7 =7.40
2 Investments	1220.7/7695.5 =15.86	1114.3/9390.6 =11.8661	1297.9/12324.4 =10.531	1469.1/15619.0 =9.41	1080.1/19265.1 =5.61	1729.9/21499.7 =8.05	2804.8/21902.7 =12.80
3 Loans & Advances	5519.2/7695.5 =71.72	6918.3/9390.6 =73.6762	9011.0/12324.4 =73.115	11449.0/15619.0 =73.30	14681.8/19265.1 =76.21	14875.1/21499.7 =69.19	14898.4/21902.7 =68.02
4 Share & Other Inv	120.0/7695.5 =1.56	0.4/9390.6 =0.0043	0.4/12324.4 =0.003	68.2/15619.0 =1.08	158.3/19265.1 =0.82	21.9/21499.7 =0.10	727.5/21902.7 =3.32
5 Others	(37.7+81.5+20.9+0.0+0.0)/7695.5 =4.19	(91.8+89.7+357.7+0.0+4.8+0.3)/9390.6 =5.793	(51.5+189.3+34.8+0.1+4.8+0.0)/12324.4 =4.791	(81.8+221.9+730.9+0.0+7.4+0.0)/15619.0 =6.67	(117.0+247.9+87.9+0.1+0.0+21.9)/19265.1 =6.57	(96.0+285.2+110.3+0.0+0.0+0.0)/21499.7 =6.90	(28.0+305.8+8.2+0.0+0.0+0.0)/21902.7 =8.46
Total	100	100	100	100	100	100	100

Remarks

- f) % of Liquid Funds= $\frac{\text{Total Liquid Funds (Cash Balance+Bank Balance) for the Year}}{\text{Total Uses of Funds for the Year}}$
- g) % of Investments= $\frac{\text{Total Investment for the Year}}{\text{Total Uses of Funds for the Year}}$
- h) % of Loans & Advances= $\frac{\text{Total Loans & Advances for the Year}}{\text{Total Uses of Funds for the Year}}$
- i) % of Share & Other Investment= $\frac{\text{Total share & Other Investment for the Year}}{\text{Total Uses of Funds for the Year}}$
- j) % of Others= $\frac{\text{Total of Others (Bill Purchased+Loan Agnst. Collected Bills+Fixed Assets+Others Assets+Exps.not Written Off+NBA+Reconciliation A/c) for the year}}{\text{Total Uses of Funds for the Year}}$

Appendix G

Coefficient of Correlation Analysis

Correlation Coefficient(r) can be obtained by the following formula:

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum Y^2 - (\sum Y)^2\}}^{1/2}} \quad \text{or} \quad \text{Correl}(X,Y) = \frac{\sum (x-\bar{x})(y-\bar{y})}{\sqrt{\sum (x-\bar{x})^2 \sum (y-\bar{y})^2}}$$

Where,

n = number of observations in series X and Y

\bar{X} = Mean of observations in series X

X = sum of observations in series X

\bar{Y} = Mean of observations in series Y

Y = sum of observations in series Y

X² = sum of squared observations in series X

Y² = sum of squared observations in series Y

XY = sum of the product of observations in series X and Y

Analysis of Correlation Coefficient between Deposits and Investment of NIBL

Year	Deposits(X)	Investments(Y)	(X - \bar{X})	(Y - \bar{Y})	(X - \bar{X}) ²	(Y - \bar{Y}) ²	(X - \bar{X})(Y - \bar{Y})
2006/07	14254.8	1948.5	-19895.7	-1181.5	395838878.5	1395942.25	23506769.55
2007/08	18927.3	2522.3	-15223.2	-607.7	231745818.2	369299.29	9251138.64
2008/09	24488.9	3256.4	-9661.6	126.4	93346514.56	15976.96	-1221226.24
2009/10	34451.8	3155	301.3	25	90781.69	625	7532.5
2010/11	46697.9	2531.3	12547.4	-598.7	157437246.8	358441.69	-7512128.38
2011/12	50094.7	4201.9	15944.2	1071.9	254217513.6	1148969.61	17090587.98
2012/13	50138.1	4294.6	15987.6	1164.6	255603353.8	1356293.16	18619158.96
Total	239053.5	21910			Sum of Total 1388280107	4645547.96	59741833.01
$\bar{X} = 34150.5, \bar{Y} = 3130$							

Here,

Computation of Correlation (r) Coefficient between Deposits & Investment of NIBL

$$\begin{aligned} \text{Correl}(X,Y) &= \frac{\sum (x-\bar{x})(y-\bar{y})}{\sqrt{\sum (x-\bar{x})^2 \sum (y-\bar{y})^2}} \\ &= \frac{59741833.01}{\sqrt{1388280107 * 4645547.96}} \\ &= \frac{59741833.01}{80307669.74} \\ &= 0.743911923 \\ &= 0.74 \end{aligned}$$

Probable Error (P.E)

It is calculated by using following formula:

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

$$= 0.6745 \times \frac{1-(0.74)^2}{\sqrt{7}} = 0.11$$

Again,
= 7P.E.
= 7 × 0.11
= 0.77

Analysis of Correlation Coefficient between Deposits and Investment of KBL

Year	Deposits(X)	Investments(Y)	(X- \bar{X})	(Y- \bar{Y})	(X- \bar{X}) ²	(Y- \bar{Y}) ²	(X- \bar{X})(Y- \bar{Y})
2006/07	6270.1	1220.7	-6253.742857	-310.27143	39109299.72	96268.35939	1940357.73
2007/08	7800.4	1114.3	-4723.442857	-416.67143	22310912.42	173615.0794	1968123.683
2008/09	10560.0	1297.9	-1963.842857	-233.0714	3856678.768	54322.29082	457715.6602
2009/10	12781.0	1469.1	257.1571429	-61.871429	66129.79612	3828.073673	-15910.6798
2010/11	15860.6	1080.1	3336.757143	-450.87143	11133948.23	203285.0451	-1504448.46
2011/12	17408.5	1729.9	4884.657143	198.9286	23859875.4	39572.57653	971697.8673
2012/13	16986.3	2804.8	4462.457143	1273.829	19913523.75	1622639.229	5684405.407
Total	87666.9	10716.8		Sum of Total	120250368.1	2193530.654	9501941.209
$\bar{X} = 12523.84286, \bar{Y} = 1530.971429$							

Computation of Correlation Coefficient (r) between Deposits & Investment of NIBL

$$\begin{aligned} \text{Correl}(X, Y) &= \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} \\ &= \frac{9501941.209}{\sqrt{120250368.1 * 2193530.654}} \\ &= \frac{9501941.209}{16241085.82} = 0.585055785 = 0.59 \end{aligned}$$

Probable Error (P.E)

It is calculated by using following formula:

$$\text{P.E.} = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-(0.59)^2}{\sqrt{7}} = 0.17$$

Now, 7P.E. = 7×0.17 = 1.19

Analysis of Correlation Coefficient between Deposits and Loans & Advances of NIBL

Year	Deposits(X)	Loan & Advances (Y)	(X- \bar{X})	(Y- \bar{Y})	(X- \bar{X}) ²	(Y- \bar{Y}) ²	(X- \bar{X})(Y- \bar{Y})
2006/07	14254.8	10295.4	-19895.7	-16352.5	395838878.5	267404256.3	325344434.3
2007/08	18927.3	13007.2	-15223.2	-13640.7	231745818.2	186068696.5	207655104.2
2008/09	24488.9	17482	-9661.6	-9165.9	93346514.56	84013722.81	88557259.44
2009/10	34451.8	27145.5	301.3	497.6	90781.69	247605.76	149926.88
2010/11	46697.9	36250.4	12547.4	9602.5	157437246.8	92208006.25	120486408.5
2011/12	50094.7	40689.6	15944.2	14041.7	254217513.6	197169338.9	223883673.1
2012/13	50138.1	41665.2	15987.6	15017.3	255603353.8	225519299.3	240090585.5
Total	239053.5	186535.3		Sum of Total	1388280107	1052630926	1206167392
$\bar{X} = 34150.5, \bar{Y} = 26647.9$							

Computation of Correlation Coefficient (r) between Deposits & Loan & Advances of NIBL

$$\begin{aligned} \text{Correl}(X, Y) &= \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} \\ &= \frac{1206167392}{\sqrt{1388280107 * 1052630926}} \\ &= \frac{1206167392}{1208861685} \\ &= 0.997771214 \\ &= 0.99 \end{aligned}$$

Probable Error (P.E)

It is calculated by using following formula:

$$\text{P.E.} = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-(0.99)^2}{\sqrt{7}} = 0.006$$

Now,
=7P.E.
= 7×0.006
=0.042

Analysis of Correlation Coefficient between Deposits and Loans & Advances of KBL

Year	Deposits(X)	Loan & Advances(Y)	(X- \bar{X})	(Y- \bar{Y})	(X- \bar{X}) ²	(Y- \bar{Y}) ²	(X- \bar{X})(Y- \bar{Y})	
2006/07	6270.1	5519.2	-6253.742857	-5531.2	39109299.72	30594173.44	34590702.49	
2007/08	7800.4	6918.3	-4723.442857	-4132.1	22310912.42	17074250.41	19517738.23	
2008/09	10560.0	9011	-1963.842857	-2039.4	3856678.768	4159152.36	4005061.123	
2009/10	12781.0	11449	257.1571429	398.6	66129.79612	158881.96	102502.8371	
2010/11	15860.6	14681.8	3336.757143	3631.4	11133948.23	13187065.96	12117099.89	
2011/12	17408.5	14875.1	4884.657143	3824.7	23859875.4	14628330.09	18682348.17	
2012/13	16986.3	14898.4	4462.457143	3848	19913523.75	14807104	17171535.09	
Total	87666.9	77352.8			Sum of Total	120250368.1	94608958.22	106186987.8
$\bar{X} = 12523.84286, \bar{Y} = 11050.4$								

Computation of Correlation Coefficient (r) between Deposits & Loan & Advances of KBL

$$\begin{aligned}
 \text{Correl}(X, Y) &= \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}} \\
 &= \frac{106186987.8}{\sqrt{120250368.1 * 94608958.22}} = \frac{106186987.8}{106661905.3} = 0.99554745 = \mathbf{0.99}
 \end{aligned}$$

Probable Error (P.E)	
It is calculated by using following formula:	
$ \text{P.E.} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - (0.99)^2}{\sqrt{7}} = 0.006 $	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Now, 7P.E. = 7 × 0.006 = 0.042 </div>

Appendix H

Trend Analysis

Trend Analysis can be obtained by the following formula:

$Y = a + bx$ <p>Here,</p> $b = \frac{n \sum(xy) - \sum x \sum y}{n \sum(x^2) - (\sum x)^2}$ $a = \frac{\sum y - b \sum x}{n}$	<p style="text-align: center;">OR,</p> $Y = mx + b$ <p>Here,</p> $m = \frac{\sum(x - \bar{X})(y - \bar{Y})}{\sum(x - \bar{X})^2}$ $b = \bar{Y} - m \bar{X}$ <p>x = years for calculation of trend value</p>
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Trend Analysis of Total Investment to Total Deposits Ratio of NIBL

Year(x)	Ratio(y)	(x - \bar{X})	(y - \bar{Y})	(x - \bar{X})(y - \bar{Y})	(x - \bar{X}) ²
5	28.58	-3	6.93	-20.97	9
6	29.97	-2	8.32	-16.64	4
7	26.62	-1	4.97	-4.97	1
8	19.97	0	-1.68	0	0
9	15.85	1	-5.80	-5.80	1
10	15.76	2	-5.89	-11.78	4
11	14.81	3	-6.84	-20.52	9
$\bar{X} = 8$	$\bar{Y} = 21.65$			$\sum(x - \bar{X})(y - \bar{Y}) = -80.50$	$\sum(x - \bar{X})^2 = 28$

$m = \frac{\sum(x - \bar{X})(y - \bar{Y})}{\sum(x - \bar{X})^2} = \frac{-80.50}{28} = -2.88$	$b = \bar{Y} - m \bar{X} = 21.65 - (-2.88 \times 8) = 44.69$ $Y = mx + b = -2.88x + 44.69$ <p>Now, Calculation of trend Value for the Year given below</p>
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Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	12/13	13/14
Trend Value	30.29	27.41	24.53	21.65	18.77	15.89	13.01	10.13	7.25

Trend Analysis of Total Investment to Total Deposits Ratio of KBL

Year(x)	Ratio(y)	(x - \bar{X})	(y - \bar{Y})	(x - \bar{X})(y - \bar{Y})	(x - \bar{X}) ²
5	21.38	-3	7.18	-21.54	9
6	14.29	-2	0.09	-0.18	4
7	12.29	-1	-1.91	-1.91	1
8	12.81	0	-1.39	0	0
9	7.81	1	-6.39	-6.39	1
10	10.06	2	-4.14	-8.28	4
11	20.79	3	6.59	19.77	9
$\bar{X} = 8$	$\bar{Y} = 14.20$			$\sum(x - \bar{X})(y - \bar{Y}) = -18.53$	$\sum(x - \bar{X})^2 = 28$

$m = \frac{\sum(x - \bar{X})(y - \bar{Y})}{\sum(x - \bar{X})^2} = \frac{-18.53}{28} = -0.66$	$b = \bar{Y} - m \bar{X} = 14.20 - (-0.66 \times 8) = 19.48$ $Y = mx + b = -0.66x + 19.48$ <p>Now, Calculation of trend Value for the Year given below</p>
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Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	12/13	13/14
Trend Value	16.18	15.52	14.86	14.20	13.54	12.88	12.22	11.56	10.9

Trend Analysis of Loan & Advances to Total Deposits Ratio of NIBL

Year(x)	Ratio(y)	(x- \bar{X})	(y- \bar{Y})	(x- \bar{X})(y- \bar{Y})	(x- \bar{X}) ²
5	72.22	-3	-3.93	11.79	9
6	68.72	-2	-7.43	14.86	4
7	71.39	-1	-4.76	4.76	1
8	78.79	0	2.64	0	0
9	77.63	1	1.48	1.48	1
10	81.23	2	5.08	10.16	4
11	83.10	3	6.95	20.85	9
$\bar{X}=8$	$\bar{Y}=76.15$			$\Sigma(x-\bar{X})(y-\bar{Y})=63.9$	$\Sigma(x-\bar{X})^2=28$

$m = \frac{\Sigma(x-\bar{X})(y-\bar{Y})}{\Sigma(x-\bar{X})^2} = \frac{63.9}{28} = 2.28$	$b = \bar{Y} - m\bar{X} = 76.15 - 2.28 \times 8 = 57.91$ $Y = mx + b = 2.28x + 57.91$ <p>Now, Calculation of trend Value for the Year given below</p>
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Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	12/13	13/14
Trend Value	69.31	71.59	73.87	76.15	78.43	80.71	82.99	85.27	87.55

Trend Analysis of Loan & Advances to Total Deposits Ratio of KBL

Year(x)	Ratio(y)	(x- \bar{X})	(y- \bar{Y})	(x- \bar{X})(y- \bar{Y})	(x- \bar{X}) ²
5	88.02	-3	-0.17	0.51	9
6	88.69	-2	0.5	-1	4
7	85.33	-1	-2.86	2.86	1
8	89.58	0	1.39	0	0
9	92.57	1	4.38	4.38	1
10	85.45	2	-2.74	-5.48	4
11	87.71	3	-0.48	-1.44	9
$\bar{X}=8$	$\bar{Y}=88.19$			$\Sigma(x-\bar{X})(y-\bar{Y})=-2.71$	$\Sigma(x-\bar{X})^2=28$

$m = \frac{\Sigma(x-\bar{X})(y-\bar{Y})}{\Sigma(x-\bar{X})^2} = \frac{-2.71}{28} = -0.10$	$b = \bar{Y} - m\bar{X} = 88.19 - (-0.10 \times 8) = 88.99$ $Y = mx + b = -0.10x + 88.99$ <p>Now, Calculation of trend Value for the Year given below</p>
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Year	06/07	07/08	08/09	09/10	10/11	11/12	12/13	12/13	13/14
Trend Value	88.49	88.39	88.29	88.19	88.09	87.99	87.89	87.79	87.69

Appendix I

Standard Deviation & Coefficient of Variation

Standard Deviation & Coefficient of Variation can be obtained by the following formula:

$$\text{S.D.} (\sigma) = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}, \quad \text{C.V.} = \frac{\text{Standard deviation} (\sigma)}{\text{Expected Return} (\bar{X})} \times 100$$

Calculation of Standard Deviation & C.V. of Cash and Bank Balance to Total Deposit Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	9.40	-3.39	11.4921	7.07	-1.42	2.0164	
2007/8	12.44	-0.35	0.1225	4.98	-3.51	12.3201	
2008/9	9.97	-2.82	7.9524	6.37	-2.12	4.4944	
2009/10	10.90	-1.89	3.5721	7.31	-1.18	1.3924	
2010/11	16.96	4.17	17.3889	11.20	2.71	7.3441	
2011/12	13.61	0.82	0.6724	15.64	7.15	51.1225	
2012/13	16.24	3.45	11.9025	6.88	-1.61	2.5921	
MEAN	12.79		$\sum(X - \bar{X})^2 = 53.102$	MEAN = 8.49		$\sum(X - \bar{X})^2 = 81.282$	
SD	2.75	CV	21.50	S.D.	3.41	C.V.	40.16

Calculation of Standard Deviation & C.V. of Cash and Bank Balance to Current Assets Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	8.22	-2.84	8.0656	5.82	-1.21	1.4641	
2007/8	10.88	-0.18	0.0324	4.17	-2.86	8.1796	
2008/9	8.78	-2.28	5.1984	5.54	-1.49	2.2201	
2009/10	9.57	-1.49	2.2201	6.06	-0.97	0.9409	
2010/11	14.80	3.74	13.9876	9.34	2.31	5.3361	
2011/12	11.68	0.62	0.3844	12.84	5.81	33.7561	
2012/13	13.52	2.46	6.0516	5.41	-1.62	2.6244	
MEAN	11.06		$\sum(X - \bar{X})^2 = 35.9401$	MEAN = 7.03		$\sum(X - \bar{X})^2 = 54.5213$	
SD	2.27	CV	20.52	S.D.	2.79	C.V.	39.69

**Calⁿ of Standard Deviation & C.V. of Investment on Govt. Securities to Current Assets Ratios
of NIBL & KBL**

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	11.95	3.03	9.1809	14.71	4.18	17.4724	
2007/8	11.66	2.74	7.5076	11.98	1.45	2.1025	
2008/9	11.71	2.79	7.7841	10.69	0.16	0.0256	
2009/10	8.04	-0.88	0.7744	9.54	-0.99	0.9801	
2010/11	4.73	-4.19	17.5561	5.68	-4.85	23.5225	
2011/12	7.20	-1.72	2.9584	8.15	-2.38	5.6644	
2012/13	7.13	-1.79	3.2041	12.99	2.46	6.0516	
MEAN	8.92		$\Sigma(X- \bar{X})^2=48.9656$	MEAN = 10.53		$\Sigma(X- \bar{X})^2=55.8191$	
SD	2.64	CV	29.60	S.D.	2.82	C.V.	26.78

Calculation of Standard Deviation & C.V. of Loan & Advances to Total Deposit Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	72.22	-3.93	15.4449	88.02	-0.17	0.0289	
2007/8	68.72	-7.43	55.2049	88.69	0.50	0.25	
2008/9	71.39	-4.76	22.6576	85.33	-2.86	8.1796	
2009/10	78.79	2.64	6.9696	89.58	1.39	1.9321	
2010/11	77.63	1.48	2.1904	92.57	4.38	19.1744	
2011/12	81.23	5.08	25.8064	85.45	-2.74	7.5076	
2012/13	83.10	6.95	48.3025	87.71	-0.48	0.2304	
MEAN	76.15		$\Sigma(X- \bar{X})^2=176.5763$	MEAN = 88.19		$\Sigma(X- \bar{X})^2=37.303$	
SD	5.02	CV	6.60	S.D.	2.31	C.V.	2.62

Calculation of Standard Deviation & C.V. of Total Investment to Total Deposit Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	28.58	6.93	48.0249	21.38	7.18	51.5524	
2007/8	29.97	8.32	69.2224	14.29	0.09	0.0081	
2008/9	26.62	4.97	24.7009	12.29	-1.91	3.6481	
2009/10	19.97	-1.68	2.8224	12.81	-1.39	1.9321	
2010/11	15.85	-5.8	33.64	7.81	-6.39	40.8321	
2011/12	15.76	-5.89	34.6921	10.06	-4.14	17.1396	
2012/13	14.81	-6.84	46.7856	20.79	6.59	43.4281	
MEAN	21.65		$\Sigma(X- \bar{X})^2=259.8883$	MEAN = 14.20		$\Sigma(X- \bar{X})^2=158.5405$	
SD	6.09	CV	28.13	S.D.	4.76	C.V.	33.52

Calculation of Standard Deviation & C.V. of Investment in Govt. Securities to TWF Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	11.71	2.98	8.8804	14.56	4.15	17.2225	
2007/8	11.46	2.73	7.4529	11.87	1.46	2.1316	
2008/9	11.40	2.67	7.1289	10.53	0.12	0.0144	
2009/10	7.85	-0.88	0.7744	9.41	-1	1	
2010/11	4.63	-4.1	16.81	5.61	-4.8	23.04	
2011/12	7.06	-1.67	2.7889	8.05	-2.36	5.5696	
2012/13	7.00	-1.73	2.9929	12.81	2.4	5.76	
MEAN	8.73		$\Sigma(X- \bar{X})^2=46.8284$	MEAN = 10.41		$\Sigma(X- \bar{X})^2=54.7381$	
SD	2.59	CV	29.67	S.D.	2.80	C.V.	26.90

Calculation of Standard Deviation & C.V. of Investment on Share & Debenture to TWF Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	12.78	2.64	6.9696	1.56	-0.81	0.6561	
2007/8	14.32	4.18	17.4724	0.0043	-2.37	5.606709	
2008/9	14.42	4.28	18.3184	0.0032	-2.37	5.609316	
2009/10	9.26	-0.88	0.7744	10.77	8.4	70.56	
2010/11	8.92	-1.22	1.4884	0.82	-1.55	2.4025	
2011/12	6.20	-3.94	15.5236	0.10	-2.27	5.1529	
2012/13	5.10	2.64	25.4016	3.32	0.95	0.9025	
MEAN	10.14		$\Sigma(X- \bar{X})^2=85.9484$	MEAN = 2.37		$\Sigma(X- \bar{X})^2=90.89$	
SD	3.50	CV	34.52	S.D.	3.60	C.V.	151.90

Calculation of Standard Deviation & C.V. of Return on Loans & Advance Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	2.72	-0.33	0.1089	1.70	-0.77	0.5929	
2007/8	3.15	0.1	0.01	2.07	-0.4	0.16	
2008/9	3.21	0.16	0.0256	3.10	0.63	0.3969	
2009/10	3.06	0.01	0.0001	2.55	0.08	0.0064	
2010/11	2.71	-0.34	0.1156	2.90	0.43	0.1849	
2011/12	3.50	0.45	0.2025	3.37	0.9	0.81	
2012/13	3.03	-0.02	0.0004	1.61	-0.86	0.7396	
MEAN	3.05		$\Sigma(X- \bar{X})^2=0.4631$	MEAN = 2.47		$\Sigma(X- \bar{X})^2=2.8907$	
SD	0.26	CV	8.20	S.D.	0.64	C.V.	25.91

Calculation of Standard Deviation & C.V. of Return on Total Working Fund Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	1.68	-0.3	0.09	1.22	-0.56	0.3136	
2007/8	1.86	-0.12	0.0144	1.52	-0.26	0.0676	
2008/9	1.97	-0.01	0.0001	2.27	0.49	0.2401	
2009/10	2.07	0.09	0.0081	1.87	0.09	0.0081	
2010/11	1.80	-0.18	0.0324	2.21	0.43	0.1849	
2011/12	2.39	0.41	0.1681	2.33	0.55	0.3025	
2012/13	2.06	0.08	0.0064	1.09	-0.69	0.4761	
MEAN	1.98		$\Sigma(X-\bar{X})^2=0.3195$	MEAN =1.79		$\Sigma(X-\bar{X})^2=1.5929$	
SD	0.21	CV	10.61	S.D.	0.48	C.V.	26.82

Calculation of Standard Deviation & C.V. of Total Interest Earned to Total Working Fund Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	0.79	0.21	0.0441	0.27	-0.18	0.0324	
2007/8	0.72	0.14	0.0196	0.42	-0.03	0.0009	
2008/9	0.61	0.03	0.0009	0.41	-0.04	0.0016	
2009/10	0.46	-0.12	0.0144	0.45	0	0	
2010/11	0.61	0.03	0.0009	0.47	0.02	0.0004	
2011/12	0.37	-0.21	0.0441	0.47	0.02	0.0004	
2012/13	0.50	-0.08	0.0064	0.65	0.2	0.04	
MEAN	0.58		$\Sigma(X-\bar{X})^2=0.1304$	MEAN =0.45		$\Sigma(X-\bar{X})^2=0.0757$	
SD	0.14	CV	24.14	S.D.	0.10	C.V.	22.22

Calculation of Standard Deviation & C.V. of Total Interest Paid to Total Working Fund Ratios of NIBL & KBL

YEAR	NIBL			KBL			
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²	
2006/7	0.33	0.01	0.0001	0.08	-0.25	0.0625	
2007/8	0.35	0.03	0.0009	0.24	-0.09	0.0081	
2008/9	0.32	0	0	0.34	0.01	0.0001	
2009/10	0.27	-0.05	0.0025	0.34	0.01	0.0001	
2010/11	0.28	-0.04	0.0016	0.37	0.04	0.0016	
2011/12	0.31	-0.01	0.0001	0.39	0.06	0.0036	
2012/13	0.38	0.06	0.0036	0.52	0.19	0.0361	
MEAN	0.32		$\Sigma(X-\bar{X})^2=0.0088$	MEAN = 0.33		$\Sigma(X-\bar{X})^2=0.1121$	
SD	0.04	CV	12.5	S.D.	0.13	C.V.	39.39

Calculation of Standard Deviation & C.V. of Liquidity Risk Ratios of NIBL & KBL

YEAR	NIBL			KBL		
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²
2006/7	9.40	-3.39	11.4921	7.07	-1.42	2.0164
2007/8	12.44	-0.35	0.1225	4.98	-3.51	12.3201
2008/9	9.97	-2.82	7.9524	6.37	-2.12	4.4944
2009/10	10.90	-1.89	3.5721	7.31	-1.18	1.3924
2010/11	16.96	4.17	17.3889	11.20	2.71	7.3441
2011/12	13.61	0.82	0.6724	15.64	7.15	51.1225
2012/13	16.24	3.45	11.9025	6.88	-1.61	2.5921
MEAN	12.79		$\frac{\Sigma(X-\bar{X})^2}{n}=53.1029$	MEAN = 8.49		$\frac{\Sigma(X-\bar{X})^2}{n}=81.282$
SD	2.75	CV	21.50	S.D.	3.41	C.V. 40.16

Calculation of Standard Deviation & C.V. of Credit Risk Ratios of NIBL & KBL

YEAR	NIBL			KBL		
	X	X- \bar{X}	(X- \bar{X}) ²	X	X- \bar{X}	(X- \bar{X}) ²
2006/7	86.37	3.32	11.0224	89.14	5.39	29.0521
2007/8	84.88	1.83	3.3489	85.54	1.79	3.2041
2008/9	84.00	0.95	0.9025	83.65	-0.1	0.01
2009/10	84.63	1.58	2.4964	83.78	0.03	0.0009
2010/11	79.90	-3.15	9.9225	82.64	-1.11	1.2321
2011/12	81.58	-1.47	2.1609	77.34	-6.41	41.0881
2012/13	80.00	-3.05	9.3025	84.15	0.4	0.16
MEAN	83.05		$\frac{\Sigma(X-\bar{X})^2}{n}=39.1561$	MEAN = 83.75		$\frac{\Sigma(X-\bar{X})^2}{n}=74.7473$
SD	2.37	CV	2.85	S.D.	3.27	C.V. 3.90