A STUDY OF INVESTMENT PATTERN OF BANK OF KATHMANDU LIMITED AND KUMARI BANK LIMITED

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RECOMMENDATION

This is to certify that the Thesis

Submitted by:

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A STUDY OF INVESTMENT PATTERN OF BANK OF KATHMANDU LIMITED AND KUMARI BANK LIMITED

has been prepared as approved by this Department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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VIVA-VOCE SHEET

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and found that the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfilment of the requirements for Master of Business Studies (M.B.S.)

Viva-Voce Committee

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DECLARATION

I hereby declare that this thesis work entitled **A STUDY OF INVESTMENT PATTERN OF BANK OF KATHMANDU LIMITED AND KUMARI BANK LIMITED** submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfilment of the requirements for the Degree of Masters of Business Studies which is prepared under the supervision of Shree Bhadra Neupane and Bhoj Raj Ojha of Shanker Dev Campus.

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ABBREVIATIONS

A/C	:	Account
ATM	:	Automatic Teller Machine
B.S.	:	Bikram Sambat
BOKL	:	Bank Of Kathmandu Limited
C.V.	:	Coefficient of Variation
CRR	:	Cash Reserve Ratio
EBL	:	Everest Bank Limited
e.g.	:	For Example
etc.	:	Etcetera
F.C	:	Foreign Currency
F/Y	:	Fiscal Year
Govt.	:	Government
HBL	:	Himalayan Bank Limited
IBRD	:	International Bank for Reconstruction and Development
i.e.	:	That is
IMF	:	International Monetary Fund
KBL	:	Kumari Bank Limited
Ltd.	:	Limited
MISC	:	Miscellaneous
N.G.	:	Nepal Government

NBL	:	Nepal Bank Limited
NEPSE	:	Nepal Stock Exchange
NIDC	:	Nepal Industrial Development Corporation
NRB	:	Nepal Rastra Bank
P.E.	:	Probable Error
PF	:	Provident Fund
P/L	:	Profit and Loss
RBB	:	Rastriya Banijya Bank
Rs.	:	Rupees
SCBNL	:	Standard Chartered Bank Nepal Limited
S.D.	:	Standard Deviation
T.T.	:	Telegraphic Transfer
T.U.	:	Tribhuvan University
TWF	:	Total Working Fund
VIZ.	:	Such as
VSAT	:	Very small Aperture Terminal

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Nepal is one of the least developed countries with poorest economic condition of the world. It is placed among the lowest per capita income countries. The economic development of the country, which is reflected by the annual GDP growth rate in recent year, is around 5 % and it has also a fluctuating trend. It's population growth rate as high as 2% has affected its economy to a large extent.

The economic growth of under-developed country widely depends upon the utilization of available economic and financial resources. The rapid pace of economic development and self-economic reliance are the must in today's world, these can only be achieved through the accelerated rate of investment and capital formation in the country.

The role of commercial banks in the economy is obviously prime requisite in the formulation of bank's policy. A key factor in the development of the country is the mobilization of domestic resources and their investment in various productive sectors. To make it more effective, commercial banks formulate sound investment policies, which eventually contribute to the economic growth of a country. The banking sector has to play developmental role to boost the economy by adopting the growth oriented investment policy and building up the financial structure for future economic development.

Investment policy is an important ingredient of overall national economic development because it ensures efficient allocation of funds to achieve the material and economic well being of the society as a whole. In this regards, joint venture bank's investment policy drives to achieve priority of commercial sector in the context of Nepal's economic development. The general principle is that the investment can be retired when cash is needed. Investment decision now is the most crucial decision as the future level of wealth is not certain. Time and risk are the two conflicting attributes involved in the investment decision. The term investment covers a wide range of activities. It is commonly known fact that an investment is

only possible where there is adequate saving. Therefore, both saving and investment are interrelated.

Investment decision is very tough one for any business. For this, they have to pay a lot of consideration before taking any action. A healthy development of any bank depends heavily upon its investment policy. A good investment policy attracts borrows and lenders, which helps to increase the volume and quality of deposit, loan and investment. Several principal have to be followed for providing loan in a commercial bank such as length of time, purpose of loan, profit margin, security etc. These fundamental principal of commercial bank's investment are fully considered while making investment policy. Every financial institution should take full care while preparing investment functions. Investment policy should insure minimum risk & maximum profit. Commercial banks play important role in removing problems like inflation & deflation of monetary trade, trade deficit, budget deficit (created by economic problem) by capital formulation for deficits spending units. They also finance in small cottage industries and agricultural sector under priority sector investment scheme to serve the marginal people.

Every commercial bank should consider government & central bank i.e. Nepal Rastra Bank instructions & their interest as well before preparing the investment policies. Nepalese commercial banks however lag far behind in consideration of good investment opportunities. They are more insecure & don't want to take risk by investing in crucial sectors. But formulation of good investment policy may boost their interest on different investment opportunities that may lead for the enrichment of the national economy.

Investors invest their income for future use or to satisfy the individual investor's expectations. In the market, there are three types of investment alternatives, preferred by investors. First those who want to take risk or risk taker, second those who doesn't want to take risk and the third one, who only invest for small return. In the context of Nepal, we can mostly find the third type of investors. Investing is one of the very sensitive parts for investors. Only an individual saving is not enough, because this saving means fixed deposits, which will only be single utilization. As we know drop of water makes full of pot, small amount of saving makes large amount of investment. We should be very careful while making investment, because there is always risk and return characteristics behind investment policy. Without return, investment becomes

ineffective. Investment can help various sectors of the nation like society, business, organization, and infrastructure and so on.

Investing is being used for describing all kinds of activities in financial world. People have many motives for investing. Some people invest in order to gain sense of power or prestige while others invest for monetary advantage. In the former motive, often the control of corporate empires is a driving motivate. According to William N. Geotzmann, "People are willing to invest to make something happen that might not, otherwise people could invest to build a museum, to finance low income housing or to reclaim urban neighborhoods which has not an economic value". For most investors, however, their interest in investments is largely pecuniary to earn a return on their money.

Bank is one of the financial institutions, which regularly involves in finance. Simply, bank collects savings from individuals, and invests in different sectors. Nepal has a central Bank, which coordinates industrial banks, commercial banks & other financial institutions, which directly or indirectly involved in investment. All the financial institutions have their own investment policy as their convenient.

It is better to know the history of origin and development of commercial bank in the world and development of financial sector, especially commercial banking in Nepal.

1.2 Origin and Development of Bank

The earliest evidence of banking is found in Mesopotamia between 3000 & 2000 B.C. when temples were used to store gain and other valuables used in trade. Babylon is credited with the birth of banking and finance at the level of sophistication that rivals our own, with the expectation of the timing advantages that modern communication has allowed.

The word 'bank' is derived from the Italian word 'banco' meaning the portable benches or counters over which the moneychanger comes from. A bank is an institution, which deals with money and credit. Broadly speaking, banks draw surplus money from the people who are not using it at the time, and lend to those who are in a position to use it for productive purposes. Thus the bank accepts deposits from the public, makes the funds available to those who need them and helps in the remittance

of money from one place to another. In general, a bank is an institution with the following features.

- It deals with money, it accepts deposits and advances loan.
- It also deals with credit; it has the ability to create.
- It is a commercial institution, it aims at earning profit.

The origin of commercial banking can be traced back to the early times of human history. In the ancient Rome and Greece, the practice of storing precious metals and coins at safe places and loaning out money for public and private purposes on interest was prevalent. In England, banking had its origin with the London goldsmiths who in the 17th century began to accept deposits from merchant and others for safekeeping of the money and other valuables. As public enterprise, banking made its first appearance in Italy in 1157 AD when the Bank of Venice was founded. The modern banking has three ancestors who are the merchant, the goldsmith, and the moneylender. The merchant banker forms the earliest stage in the evolution of modern banking. Merchants in those days required remittances of money from one place to another while trading which is an important function of a bank. This gave rise to the institution of 'hundi' or the letter of transfer, which these days are done through drafts, cheques, traveler's cheque etc. to remit money to different places.

In England, the goldsmiths were the original representatives of private bank. They charge for safekeeping the money consisting of gold and silver. The bank of England was established in 1694 AD. The next stage in the development of banking arises when the goldsmith becomes a moneylender. The goldsmith realizes that only a contingency reserve was required for the period when withdrawals exceeded deposits. Thus, goldsmith became a banker and started performing the two major functions of a bank. Napoleon founded the Bank of France in 1800 AD. The 19th century comes with the vast scope of development of commercial banking. It with ended not only the phenomenal development of modern problems enabling banks to turn their attention away from old money changing business to many new important jobs that comes in the wake of industrial progress. The 20th century observed the development of various banking institutions highly specialized and sophisticated particularly in advanced countries like USA, UK, and others. Today, various international organization like

IMF, IBRD (now popularly known as the World Bank), ADB etc. have been developed which are influencing the whole business of the modern world.

Commercial banking in India began in 1770 AD with establishment of the first joint stock bank, named the Bank of Hindustan by an English Agency in Calcutta, lots of developments in the banking sector have occurred after the independence.

Nepal being a developing country is trying to embark upon the path of economic development by economic growth rate and developing all sectors of economy. Even though, the process of economic development depends upon various factors however economists are now convinced that capital formation and its proper utilization plays a paramount role. The increase in capital has always been a sort of prime mover in the process of material growth and the rate of capital formation has been the principal variable in setting the overall pace of economic development.

The network of well organized financial system of the country has great bearing in these regards. It collects scattered financial resources from the masses and invests them among those engaged in commercial and economic activities of the country. In this way, the financial institutions provide savers highly liquid divisible assets at a lower risk while the investors receive a large pool of resources. Integrated and speedy development of the country is possible only when competitive financial service reaches nook and corner of the country. It has been well established that the economic activities of any country can hardly be carried forward without the existence and support of financial institutions. Financial institution have catalytic role in the process of economic development.

Banking plays significant role in the development of nation. Economic bank is a financial institution which primary classes in borrowing and lending. Modern bank prefers varieties of functions. Therefore it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the word 'Bank' in different ways. A commercial bank is declared in money and its substitutes for money such as cheques or a bill of exchanges, it also provides a variety of financial services.

Commercial bank mainly concern with reform of banks, maximum utilization of resources and increase in non-cash reserve transaction to reduce the spread between interest rates on deposits and credit. They deploy of funds raised from different

sources into different assets with a primary objective of profit generation. They also play an important role for the economic development and poverty alleviation of the country through providing credit facilities, quality banking services to people both in business community as well as common man. Concerted efforts of all type of banks and financial institution support by a dynamic policy of central bank are needed to achieve the desired economic growth.

Economic growth can be compared with the construction of good house which can only be erected on a solid foundation however it is not sufficient, they must further initiate and activate the necessary resources needed to be acquired to complete the buildings. Bankers therefore have a key responsibility in the building task for economic growth. Policy is an important ingredient of overall national economic development because it ensure efficient also allocation of fund to achieve the material and economic well being of the society as a whole. In this regard, joint venture bank investment policy push drives to achieve priority of commercial sector in the context of Nepal's economic development. Investment alternatives generally fall into two categories; real assets and financial assets. Real assets are tangible while financial assets involve contracts written on pieces of papers such as common stocks, bonds, and debenture. Financial assets are bought and sold in organized security markets. The term investment covers a wide range of activities. It is commonly known fact that an investment is only possible where there is adequate savings. If all the income and savings are consumed to solve the problem hand to mouth and to the other basic needs then there is no existence of investment. Therefore both saving and investment are interrelated. A distinction is often made between investment and savings. Saving is defined as foregone consumption investment is restricted to real investment of the sort that increases national output in the future.

Commercial banks, as financial institutions, perform a number of internal functions. Among them, providing credit is considered as most important one. Credit being the most important function of commercial banks, affects overall development of the country. In consideration of economic development, it is directly related to the quality and quantity of the credit, which is carried out from different financial institutions, especially commercial banks.

American Institute of Banking has laid down the four major functions of the commercial banks as receiving and handling deposits, handling payments for its clients. Making loans and investments and creating money by extension of credit.

Nepal Commercial Bank Act 2031 B.S. has defined commercial bank as stated earlier and it has also emphasized on their functions. Major of them are as follows:

- They accept custody of funds with or without interest and open fixed accounts, current accounts and saving accounts in the name of depositors.
- They supply loan; short term as well as long term debts whatever necessary for trade and commerce or make investment.
- They help to issue shares and debentures of any company or any other corporate body, guarantee or underwrite such shares or debentures and undertake any agency business but not become a managing agent.
- Conduct transaction in bonds, provisionary notes or bills of exchange, foreign exchange relating to commerce or corporation as are redeemable with in the Kingdom.
- They grant overdraft.
- They issue letter of credit, drafts, and traveler's checks.
- They remit or transmit fund to different place within or outside the Kingdom.
- They purchase, sell, or accept the securities of Government.

Nepal Rastra Bank (NRB), the central bank of Nepal, was established in 1956 to discharge the central banking responsibilities including guiding the development of the embryonic domestic financial sector. Since then, there has been a huge growth in both the number and the activities of the domestic financial institutions. To reflect this dynamic environment, the functions and objectives of the bank have been recast by the new NRB Act of 2005, the preamble of which lays down the primary functions of the bank as:

- To formulate necessary monetary and foreign exchange policies to maintain the stability in price and consolidate the balance of payments for sustainable development of the economy of Nepal.
- To develop a secure, healthy and efficient system of payments to make appropriate supervision of the banking and financial system in order to

maintain its stability and foster its healthy development, and to further enhance the public confidence in Nepal's entire banking and financial system.

The bank is eminently aware for the achievement of the above objectives in the present dynamic environment, sustained progress and continued reform of the financial sector is of utmost importance. Continuous aware of this great responsibility, NRB is seriously pursuing various policies, strategies and actions, all of which are conveyed in the annual report on monetary policy which provides a comprehensive review and evaluation of the previous monetary policy and justification and the analysis of the following year's monetary policy. The reengineering of the NRB itself is one of the critical components of the reform agenda. To improve the financial sector legislative framework, some new acts have already come out and there have been amendments to some existing Acts. Enactments of the draft, legislation on bank and financial institutions, secured transactions, insolvency. Management Company and anti money laundering are expected to be soon materialized, all with the goal of strengthening the financial sector through building on its healthy development and improved stability. These activities convey the commitment of the NRB for addressing the present and future challenges of the financial system, especially with its increasing openness and competitive process in the context of growing global financial environment should ensure sustained progress and stability of the financial system under NRB's guidance and leadership.

Every commercial bank should consider Government and central banks i.e., Nepal Rastra Bank's instructions and their own interest as well before preparing the investment policies. Nepalese commercial bank however lags behind in consideration of good investment opportunities. They are more insecure and do not want to take risk by investing in crucial sectors. But formulation of good investment policy may boost their interest on different investment opportunities that may lead for the enlistment of the economy.

The main function of the commercial bank is to accumulate the temporality idle money of general public for trade and commerce. Its main function are accepts deposits and grants loan, exchange, purchase and discount bill for promissory notes, exchange foreign currency, agency functions, overseas trading function, information and other services. Commercial bank earns profit by proper mobilization of their resources. Many commercial banks have been established to provide a suitable

service, according to the customers. The list of licensed commercial banks is as follows:

Table: 1.1

List of Commercial Banks

S.N.	Name of Bank	Established	Operation Date	Head
1	Nepal Bank Ltd.	1994/07/30	1994/07/30	Kathmandu
2	Rastriya Banijya Bank	2022/10/10	2022/10/10	Kathmandu
3	Nepal Investment Bank Ltd.	2042/11/16	2042/11/16	Kathmandu
4	Standard Chartered Bank	2043/10/16	2043/10/16	Kathmandu
5	Himalayan Bank Ltd.	2049/10/05	2049/10/05	Kathmandu
6	Nepal SBI Bank Ltd.	2050/03/23	2050/03/23	Kathmandu
7	Nepal Bangladesh Bank Ltd.	2050/02/23	2050/02/23	Kathmandu
8	Everest Bank Ltd.	2051/07/01	2051/07/01	Kathmandu
9	Bank of Kathmandu Ltd.	2051/11/28	2051/11/28	Kathmandu
10	NCC Bank Ltd.	2053/06/28	2053/06/28	Kathmandu
11	NIC Bank Ltd.	2055/04/05	2055/04/05	Biratnagar
12	Machhapuchhre Bank Ltd.	2057/06/17	2057/06	Pokhara
13	Kumari Bank Ltd.	2056/08/24	2057/12/21	Kathmandu
14	Laxmi Bank Ltd.	2058/06/11	2058/12/21	Birjung
15	Siddhartha Bank Ltd.	2058/06/12	2059/09/09	Kathmandu
16	Agriculture Development	2024	2024	Kathmandu
17	NABIL Bank Ltd.	2041/04/01	2041/04/01	Kathmandu
18	Lumbini Bank Ltd.	2055/04/03	2055/04/03	Kathmandu
19	Global Bank Ltd.	203/18/18	2063/18/18	Birjung
20	Citizens Bank International	2064/01/06	2064/01/06	Kathmandu
21	Prime Commercial Bank	2064/06/04	2064/06/04	Kathmandu
22	Bank of Asia Nepal Ltd.	2064/06/28	2064/06/28	Birat nagar
23	Sunrise Bank Ltd.	2064/06/28	204/06/28	Kathmandu
24	Development Credit Bank	2057/10/09	2057/10/09	Kathmandu
25	NMB Bank Ltd.	2053/08/02	2053/08/02	Kathmandu
26	Kist Bank Limited	2066/01/24	2066/1/24	Kathmandu

(Source: NRB Banking and Financial Statistics; Mid-July 2009: 50)

1.3 Introduction of Sample Organizations

1.3.1 Introduction of Bank of Kathmandu Limited

Bank of Kathmandu limited is one of the reputed commercial bank which is a culmination of a comprehensive vision of the promoters to take the Nepalese economy to a newer realm in the global market. Each promoter of Bank of Kathmandu has successfully demonstrated leadership skills, business acumen and entrepreneurial talents in his/her respective field. Incorporated in 1993, Bank of Kathmandu came into operation in March 1995 with the following predominant objectives.

- Identify business prospects not yet catered by the existing commercial banks and offer new banking products and services.
- Introduce modern banking technology, facilitating bank and business operations and transactions.

Bank of Katmandu's activities globe around deposit mobilization, advancement of various credits, international banking including trade financing, inwards and outwards remittances, funds and portfolio management. Bank of Kathmandu is committed to providing products and services of the higher standards. Bank of Kathmandu has state of art technology for appropriate and efficient management information system (M.I.S.) and rendering quality services, VSAT radio modem for networking, SWIFT for international trade and transfer of funds around the world correspondent banking relationships with over 200 banks worldwide for effective and proficient execution of international trade and remittance activities, gamut of corporate and retail banking products and services and centralized banking operations for better risk management, consistent service deliveries lowering operating cost.

In spite of a number of programmed undertaken by Nepal Government for financial reforms in the country, BOKL has entered into a paperless environment and has implemented various software which help in processing documents without the movement of paper and accelerates the decision making process.

1.3.2 Introduction of 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. 1078.272 million, of which 70 % is contributed from promoters and remaining from public. Kumari Bank Ltd. has been providing wide range of modern banking services through 16 points of representations located in various urban and semi urban part of the country, 11 outside and 5 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like E-Banking and SMS banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The adoption of modern Globus Software for the 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, and various other banking services. Visa Electron Debit Card, which is accessible in entire VISA linked ATMs (including 18 own ATMs) and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customer.

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.

1.4. Statement of the Problem

The economic development of the country is mainly based on the different financial sectors established in the country. The success of these institutions will lead to the development of the economy of the country. Nepal being listed among least developed countries, commercial banks has played a catalytic role in the economic

growth. Its investments range from small scale cottage industries to large-scale industries. In making investment in loans and government securities may always wonder which investment is better.

It can be therefore hypothesized that bank portfolio like loans, investment, cash reserve, deposit and borrowing affects the national income. And also how the government policy affects these variables, such as the effects of interest on the bank portfolio variables is of great concern. Therefore, monitoring money and credit conditions, the central bank has to keep an eye on the bank portfolio behavior.

The term loan plays a crucial role in the development of the any commercial bank. The problem of lending has become very serious in the country like Nepal. This is due to lack of sound investment policy of commercial banks. Commercial banks are nowadays investing only in less risky business. They are not investing in proportion to that of their deposit amount is much higher than that of investment opportunities. They are being safety minded rather considering the profit margin. Nowadays, commercial banks mainly focus on non performing assets that mean they invest the fund as giving loan for non performing activities like house loan, land loan, educational loan, traveling loan etc. So they don't seem to be capable to invest their funds in more productive sectors. They dip high liquid assets and flow lower funds to the productive sectors, which results into lower profitability to commercial banks and ignorance to the national economic growth process. This is due to the effect of the economical, political, demographical & geographical condition of the nation, so this is the main reason for crisis in the commercial banks and in the whole national economy as well.

Nepalese commercial banks have not formulated their investment policy in an organized manner. They mainly rely upon the instructions and guidelines of Nepal Rastra Bank. They don't have clear view towards their own investment policy. Furthermore, the implementation of policy is not practiced in an effective way. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial banks.

Thus the present study will make a modest attempt to analyze investment policy of BOKL and KBL. Some of the research questions relating to investment function of the commercial bank of Nepal have been presented briefly as under.

- Is it maintaining sufficient liquidity position?
- Is fund mobilization & investment policy of the bank effective & efficient?
- What is the relationship of investments & loans & advances with total deposits and total net profits?
- Does the degree of success in investment strategy be successful to utilize its available fund of BOKL and KBL?

1.5 Objectives of the Study

Based on the problem identified, the following objectives have been set for the objective. Investment decision is one of the major decision functions of financial management. The main objective of the study is to assess the investment policy and strategies followed by the bank. The specific objectives are as follows:

- To study and examine the fund mobilization and investment practice of the concerned banks.
- To analyze the liquidity, asset managing, profitability, growth and risk of concerned banks.
- To evaluate the relationship between deposits and loans and advances, deposit and total investments, outside assets and net profit and trend analysis of the above variables.

1.6 Rationale of the Study

The financial sector plays an important role for every country. The economic development of the country depends upon the performance of the financial institutions. The success and prosperity of the bank relies heavily on the successful investment of collected resources to the important sector of economy. Successful formation and effective implementation of investment policy is the prime requisite for the successful performance of commercial banks. Good investment policy has a positive impact on economic development of the country and vice versa. Therefore the effort is made to highlight the investment policy of commercial banks expecting that the study can be bridge gap between deposits and investment policies. On the

other hand, the study would provide information to management of the bank that would help them to take collective action. Similarly, from the study, the shareholders would get information to make decisions while making investment on shares of various banks.

The study of existing investment policy of the BOKL and KBL will help to analyze the position of the Bank among the commercial banks to invest and provide package of suggestions for its improvement. Customers saving should be invested in proper way to get return like in business, industries, development infrastructures etc. which directly or indirectly influences the economy of the country. So it is very important to study the investment policy of the Banks.

1.7 Limitations of the Study

The research has some limitations which will weaken the heart of study. Basically, the study is done for the partial fulfillment for Masters of Business Studies. Inadequate coverage, time constraints, lack of research experience, asymmetry, reliability of financial and statistical tools used and financial problems are the main limitations.

Other limitations are:

- There are many factors that affect investment decision and valuation of the firm. However, this study will concentrate only on the factors that are related with investment.
- Mostly secondary data analyzed and only a period of 5-years trend is considered i.e. from 2004/05 to 2008/09 hence the conclusion drawn confines only to the above period.
- The truth of research result is based upon the available data from the bank.
- Two banks are taken to study of the investment policy.

1.8 Organization of the Study

The study will be organized into five chapters:

Chapter I: Introduction

This chapter deals with subject matters of the study consisting background of the study, origin and development of bank, introduction of sample organizations, statement of the problem, objectives of the study, rationale of the study and limititations of the study.

Chapter II: Review of Literature

This chapter deals with review of the different literature of the study field. Therefore it includes conceptual framework along with the review of major books, journal, research works and thesis etc.

Chapter III: Research Methodology

This chapter deals with research methodology and it includes research design, population and sample, source and technique of data collection, data analysis tools and limitation of the methodology.

Chapter IV: Data Presentation and Analysis

The main part of research is Data Presentation & Analysis. This chapter deals with analysis and interpretation of the data using financial and statistical tools described in chapter three. This chapter also includes the major findings of the study.

Chapter V: Summary, Conclusion and Recommendations

This chapter deals with summary of the study held, the conclusion made and the possible suggestions. Thus it reveals the success or failure of the research. Thereafter bibliography and appendices are also included.

CHAPTER – II
REVIEW OF LITERATURE

In this chapter, the focus has been made on the review of literature relevant to the investment policy of commercial banks. Every possible effort has been made to grasp knowledge and information that are available from the libraries, document collection centers, other information managing bureaus and concerned commercial banks.

This chapter has been planed as followings.

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

2.1 Conceptual Framework

It may be said that a bank must strike balance between liquidity, profitability and safety. "The secret of successful banking is to distribute resumes between liquidity and profitability so that there is cash (on hand modifiable) to meet every claim and at the same time, enough income for the bank to pay its way and earn profits for its shareholders." *(Commercial Bank Act; 2058:26)*

"The business in banking is one of the collecting funds from the community and extending credit making loans, to people for useful purpose. Banks have played a pivotal role in moving money role the lenders to borrowers. Banking is a profit seeking business not a community charity. As a profit seeker it is expected to pay dividends and otherwise add to wealth of its shareholders" *(Commercial Bank Act; 2058: 28)*

"A bank is a business organization that receives and holds deposits of funds from other make loans or extends credits and transfer funds by written orders and depositors." *(Joshi; 2007: 201)*

"Principally commercial banks accept deposits and provide loan, primary to business firms, there by facilitating the transfer of funds in the economy" *(Van Horne; 2007: 201)*
"Commercial bank is a financial institution which accepts demand deposits subject to cheque and makes short term loans to business enterprises, regardless of the scope of its other services." *(Commercial Bank Act; 2058: 30)*

"Commercial banks are required to lend 12% of their loan portfolio to the sector out of which a ratio of 2.5 to 3% should be diverted to the deprived sector. The commercial banks are being penalized for short fall on priority and deprived sectors lending requirement by their maximum lending interest rate." (http:\\www.nrb.org.np\directives)

"Default risk arises firms may eventually go bankrupt. Some default risk is undiversifiable because it is systematically related to the business cycle, which affects almost all investments. However, some default risk may be diversified away in a portfolio of independent investment." Chandler says in this regard, "A bankers seeks optimum combination of earning liquidity and safety, while formulating investment policy." *(Anthoni Saunders; 2007: 201)*

Commercial Bank Act, 2031 has defined commercial bank in following way, "Commercial Bank means a bank which operates currency exchange transactions, accepts deposits, provide loans and performs dealing relating to commerce, and other than those books which have been specified for the co-operative, agriculture, industry of likely any other specific objective." *(Commercial Bank Act; 2031: 31)*

The commercial banks are established under the commercial bank act 2031 in Nepal that has been amended regularly. It has been amended for six times till today. Now commercial bank act, 2049 is active.

Banks play vital role in economic growth of a country. Banking, when properly organized, aids and facilitate the growth of trade and industry and hence of national economy. In the modern economy, banks are to be considered not as dealers of money

but as the leader of development. Banks are not just the share houses of the country's wealth but are the reservoirs of resources necessary for economic development.

"A banker is one who in the ordinary course of business honors cheque drawn up on him by persons from and for whom it receives money on current account."
(Herbert; 2004: 521)

"Commercial banks deal with other people's money. They have to find ways of keeping their assets liquid so that they could meet the demands of their customers. In this anxiety to make profit, the bank cannot afford to lock up their funds in assets, which are not easily releasable. The depositors must be made to understand that the bank is fully solvent. The depositor's confidence could be secured only if the bank is able to meet the demand for cash properly and fully. The banker cannot afford to keep a large possession of his assets in the form of cash. Cash brings in no incomes to the bank. Therefore the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity." *(Joshi; 2008: 24)*

Commercial bank act, 2031 BS of Nepal has defined that a commercial bank is one which exchanges money, accept deposits, grant loans and performs commercial banking functions and which is not a bank meant for co-operative agriculture, industries or for such specific purpose.

A commercial bank must mobilize its deposits and other funds to profitable, secured and marketable sector so that it can earn profit as well as it should be secured and can be converted into cash whenever needed. Obviously, a firm that is being considered for commercial loans must be analyzed to find out why the firm needs money, how much money the firm needs and when it will be able to repay the loan. Investment policy provides the bank several inputs through 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.

2.1.1. Characteristics of Good Investment Policy:

The characteristics of good investment policy help to measure the efficiency. These are as follows:

- Liquidity
- Profitability
- Safety and Security
- Suitability
- Diversification

Liquidity

Liquidity refers to the capacity of the bank to pay cash against deposits. Having confidence that the bank will repay their money whenever it is needed, people deposit money at the bank in different accounts. In order to maintain the confidence to the depositors, bank must be prepared with sufficient degree of liquidity of its assets.

Once the confidence is lost in view of depositors, they may withdraw all their deposits within a brief period without giving any chance to the bank to manage. So, to maintain the confidence of depositors, the bank must keep this point while investing its excess fund in different securities or at time of investment as it can meet the readily demands for cash made by customers.

Profitability

Bank should invest their fund where they earn maximum profit. Banks built up their capital accepting deposits from depositors and issuing share and debenture. The shareholders and debenture holders are liable to get dividend and interest. The profit of banks mainly depends on the interest rate, volume of loans, time period and nature of investment in different securities.

Safety and Security

While investing its funds, the bank must recognize those people who are speculative businessman, who may be bankrupt at once and who may earn million in a minute also. The bank must not finance its fund to those people at all. Only commercial, durable,

marketable and high market valued securities should be accepted. The bank should never investment its fund in those securities that are too volatile since a little difference may cause the great loss.

Suitability

Bank should know that why a customer needs loan or it is for appropriate purpose or not. If the borrower misuse the loan granted by bank, he will never be able to repay the loan which possess heavy bad debts to bank. In order to avoid such situation, advances should be allowed to the selected and suitable borrowers and all the necessary information about the scheme of the project or activities should be demanded and it should be examined before investing. Therefore suitability is the important factor for investment.

Diversification

Diversification of loan helps to sustain loss to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies. This can minimize the loss. In order to minimize risk a bank must diversify its investment on different sectors.

2.2 N.R.B. Directives Based on Investment Policy

(http://www.nrb.org.np/directives)

According to the N.R.B. directives following directions are notable for the source of financial investment of the permitted organization (permission granted by Nepal Rastra Bank).

- Application of Investment policy & Work process with only acceptance.
- Permitted organization should apply the investment policy & work process in the government securities, N.R.B. securities, organizational shares and debentures with accepting through organizational committee.
- Investment Management in Government Securities and N.R.B. Securities.
- There is no prohibition to permitted organization to invest government securities and N.R.B. securities.
- Investment Management of Share and Debenture of Organization.

- Permitted organization should sale the shares to the public and should invest in shares and debentures of that organization which is listed in the share market. If the organization invests in shares and debentures of non listed organization in share market then these investments i.e. share and debenture should be listed within one year otherwise equal amount of investment should be collected in corporate fund. The amount in this fund should not be used until or unless the share and debenture is listed.
- While investing in shares and debentures of any organization by the permitted organization it should not be greater than 10% of own primary capital and shares and debentures of all organization should not greater than 30% of own primary capital in maximum. If the investment is greater than the limit then the more amount of investment will be deducted by the primary capital and rest become capital fund. But the financial company should invest up to 20% of its primary capital. The capital fund of financial company is the deduction of investment in shares and debentures by primary capital.
- Share and Debenture issue management.

2.3. Review of Related Studies

2.3.1. Review of Journals and Articles

In this section, effort has been made to examine and review some of the related articles in different journals.

Agriculture Projects Services Center, (2001), has submitted a report on *"On-going Evaluation of Intensive Banking Program"*. This study has widely covered the whole aspects of banking programs. There is wide network of commercial banks, they have now 346 branches at present and the huge amount of idle funds estimated as Rs.3116 million in 2000/01 with them. The investment of commercial banks in the priority sectors area seems justified. To generate incentive for commercial banks, it has necessary to raise the interest rate which would sufficiently cover-up the cost and generate some profit margin as well.

Subedi, (2004), in his article *"Growth in Major Commercial Banks"* has compared between the first six month of the fiscal year 2002/03 and 2003/04, which shows that there has been noticeable increase in credit outflow by the commercial banks except Nepal Bank Ltd. (NBL) and Rastriya Banijya Bank (RBB) (the government owned banks). There has been increase in credit-deposit (CD) ratios of all commercial banks except of NBL and RBB in which has gone down by 10.41% and 5.99% respectively. It may be because of their concentration only on recovery of the huge Non Performing Assets (NPA). However Mr. Subedi pointed out that no matter whatever be the size of NPA and the circumstances, each bank has to collect the deposit in order to create lending and to invest in the new ventures. Except RBB all banks have increment in deposit collection.

Bajracharya, (2006), in his article, *"Monetary Policy and Deposit Mobilization in Nepal"* has concluded that mobilization of domestic savings is one of the prime objectives of the monetary policy in Nepal and commercial banks and the more active financial intermediary for generating resources in the form of deposit of private sector and providing credit to the investor in different sectors of the economy.

2.3.2. Thesis Review

Many theses were reviewed in course of preparation of this thesis. Among them, some were relevant and some were not. Here, the researcher has tried to include only the relevant theses that are significant for this research. Every research thesis has a long list of its findings, summary, conclusion and recommendations. However, the researcher has tried to edit them for brevity.

Roy, (2000), conducted a research on "*An Investment Analysis of Rastriya Banijya Bank (In Comparison with Nepal Bank Ltd.)*" with the main objectives:

- To evaluate liquidity, activity & profitability ratio of RBB in comparison with NBL & industry average.
- To use trend analysis to compare loan and advances, total investment, total deposits and net profit of RBB and compare the same with others two.

- To analysis relationship of loan and advances and total investment with total deposits and net profit of RBB and to compare it with that of NBL and industry average.
- To examine the loan loss provision of Rastrya Banijya Bank & NBL.
- To provide suggestion and recommendation on the basis of findings.

The findings of the researcher are as follows:

- RBB has good deposit collection, enough loan and advances and small investment in government securities.
- The assets management ratio of RBB is not better than that of NBL.
- The profitability position of RBB is worse in comparison with NBL due to low return on working fund, loans and advances and outside assets.
- The fund collection and mobilization position of RBB is satisfactory in comparison to NBL while considering growing rate.
- In relation to fund flow analysis, the RBB has poor loans and advances issued.
- RBB has better positive relationship between net profit, return on loans and advances and return on investment but RBB has worse performance in income as commission and discount and exchange income.
- There is significant relationship between deposit and loan and advances but there is no significant relation between deposit and investment of both banks RBB and NBL. There is no relationship between outside assets and net profit.

Poudyal, (2001), conducted a study on *"Investment in Priority Sector with Special Reference to Nepal Bank Ltd."* has the following major objectives.

- To analyze the repayment position of the priority sectors.
- To find trends of priority sectors loan.
- To analyze how far Nepal Bank Ltd. is able to grant credit priority sectors.
- To examine the impact of loan on priority sectors.
- To analyze the impact of loan, probable cost of misutilization of the loan by the borrowers.

The major findings of the study are as follows:

- The procedure of loan sanction is rather slow and clumsy.
- Bank was not able to fulfill the proposed target of corresponding loan to the prioritysector.
- Banking procedures are so complicated that the laymen are unable to understand it completely.
- Loan repayment was more satisfactory from agriculture sector than the cottage industries & service sector.
- Loan repayment was mainly due to the misutilization of loan, other important courses are linked with high social expenses in marriage, ceremony, medical treatment etc.
- Loan in priority sector has increased the rural banking system in the rural areas and bank branch expansion.
- The investment amount and percentage of priority sectors investment on total deposit have up growing trend.
- A sort of premier groups like local people, politicians and administrators etc. effect in local granting process.

Karki, (2001), conducted a study on *"An Analysis of Deposit Mobilization of RBB, Lahan Branch, Siraha District, Nepal"* has following objectives:

- To analyze the effectiveness of deposit mobilization of RBB, Lahan branch.
- To analyze the deposit projection for next five years of RBB, Lahan branch.
- To find out the relationship between deposit, and loans & advances, total investment, net profit.
- To examine the loan loss provision of Rastrya Banijya Bank.
- To provide a package of possible guidelines to improve investment policy, it's problems and way to solve some problems and provide suggestions and recommendation on the basis of the study.

The major findings of the researcher are as follows:

- Interest rate has not influenced the deposit collection as well as lending sector of the banks. And due to the lengthy lending, the credit experience is unsatisfactory.

- The procedure of loan granting is very slow and time consuming.
- The Bank has good deposit collection, enough loan and advances and small investment in securities.
- The profitability position of RBB is low due to low return on working fund, loans and advances and outside assets.
- The credit ratio has also increased by the nominal percentage. So, the deposit was not efficiently utilized.

Subedi, (2002), conducted a study on *"A Comparative Study of Financial Performance between Himalayna Bank Ltd. and Everest Bank Ltd."* of the period form 1996 to 2000 with the main objectives as:

- To compare investment policies of the sample banks and discuss the fund mobilization of the sample bank.
- To analyze the deposit utilization and its projection for next five years of HBL and EBL.
- To find out relationship between total investment, deposit and loans & advances, net profit and outside assets and to compare them.
- To evaluate comparatively the profitability and risk position, liquidity, asset management efficiency of HBL and EBL.
- To provide a package of possible guidelines to improve investment policy.

He outlined his major findings as follows:

The mean of total loans and advances to total saving deposits ratio of EBL is greater than that of HBL and the coefficient of variation between the ratios of HBL is less than EBL. It means at the variability of the ratios of HBL is more uniform than EBL. The analysis found that EBL is more employing its saving deposits in term of loans and advances than that of HBL. So, loans and advances to total saving deposit ratio appear better in EBL than HBL.

The mean ratio of total investment to total deposits of EBL is significantly greater then that of HBL but the coefficient of variation between the ratios of HBL is less than EBL. It means that the variability of the ratios of HBL is more consistent than that of EBL.

According to analysis, it is found that EBL is more successful in utilizing its resources on investment. However, he failed to give his overall conclusion regarding the superiority of the financial performance of these two banks during the period of his study.

Shahi, (2002), conducted a study on *"Investment Policy of Commercial Banks in Nepal"* with the main objectives:

- To evaluate the liquidity, assets management, efficiency and the profitability and risk position of Nepal Bank Ltd.
- To discuss fund mobilization & investment policy of Nepal Bank Ltd. with respect to its fee based off balance sheet transaction and fund based on balance sheet transaction in comparison to joint venture bank.
- To find out the empirical relationship between various important variables i.e. deposits, loans and advances, investment, net profit etc. and compare them with the joint venture banks.
- To analyze the deposit utilization and its projection for next five years of the Nepal Bank Ltd. and compare it with other joint venture banks.
- To provide a package of workable suggestions and possible guidelines to improve investments policy of Nepal Bank Ltd. and joint venture banks based on the findings of the analysis for the improvement of financial performance of Nepal Bank Ltd. in future.

The findings of the study are as follows:

- The liquidity position of NBL is comparatively better than that of joint venture banks. Highly fluctuating liquidity position shows that the bank has not formulated any stable policy. It can also be concluded that NBL has more portion of current assets as loan and advances but less portion or investment on government securities.
- The mean ratio of total investment to total deposit of NBL is lower than that of the joint venture banks. The mean ratio of total off balance sheet operation to loan and advances of NBL is found significantly lower than that of joint venture banks. So it is concluded that NBL is comparatively less successful in balance sheet as

well as off balance sheet operations than that of the joint venture banks. It hasn't followed any definite policy with regard to the management of its assets.

- There is comparatively higher risk in NBL than that of the joint venture banks regarding various aspects of banking function.
- It has been found that there is significant relationship between deposits and loans and advances. There is negative relationship between deposits and investment in case of NBL and positive in case of the joint venture banks.

Shrestha, (2002), conducted a study on *"Investment Practice of Joint Venture Banks in Nepal with Special Reference to Nepal Arab Bank Ltd., Standard Chartered Bank Ltd., and Nepal SBI Bank Ltd."* with the following objectives as:

- To compare investment policy of concerned banks and discuss the fund mobilization of the sample bank.
- To find out empirical relationship between total investment, deposit and loans & advances and net profit and outside assets and compare them.
- To analyze the deposit utilization and its projection for next five years of SCBNL and NABIL.
- To evaluate comparatively the profitability and risk position, liquidity, asset management efficiency of SCBNL and NABIL.
- To provide a package of possible guidelines to improve investment policy, it's problems and way to solve some problems and provide suggestions and recommendation on the basis of the study.

The findings of the researcher are as follows:

- It can be concluded that both have good deposit collection. NABIL has the highest cash and bank balance to total deposit, cash and bank balance to current ratio. This makes the bank to be in good position to meet the daily cash requirement.

- SCBNL has successfully maintained and managed its assets towards different income generation activities. SCBNL has made high portion of total working fund in investment on government on share and debentures of other companies.
- The profitability of SCBNL is comparatively lower than NABIL. It indicates that NABIL has maintained its high profit margin regarding profitability position and SCBNL does not have a better position in comparison. It must maintain high profit margin for the well being in future.
- There is comparatively lower risk in SCBNL than NABIL regarding various aspects of banking function.
- The SCBNL has not been more successful to increase in source of funds i.e. deposit and mobilization of loan and advances and total investment.

Joshi, (2003), conducted a study on *"Comparative study of Investment Policy of Standard Chartered Bank Nepal Limited and Everest Bank Limited"* and highlighted the main objectives as:

- To compare investment policy of concerned banks and discuss the fund mobilization of the sample bank.
- To find out empirical relationship between total investment, deposit and loans & advances and net profit and outside assets and compare them.
- To analyze the deposit utilization and its projection for next five years of SCBNL and EBL.
- To evaluate comparatively the profitability and risk position, liquidity, asset management efficiency of SCBNL and EBL.
- To provide a package of possible guidelines to improve investment policy, it's problems and way to solve some problems and provide suggestions and recommendation on the basis of the study.

The findings of the researcher are as follows:

- It can be concluded that both have good deposit collection. EBL has the highest cash and bank balance to total deposit, cash and bank balance to current ratio. This makes the bank to be in good position to meet the daily cash requirement.

- SCBNL has successfully maintained and managed its assets towards different income generation activities. SCBNL has made high portion of total working fund in investment on government on share and debentures of other companies.
- The profitability procession of SCBNL is comparatively better than EBL. It indicates that SCBNL has maintained its high profit margin regarding profitability position and EBL does not have a better position in comparison. It must maintain high profit margin for the well being in future. The finding shows EBL even though paying high interest to the customers for different activities.
- There is comparatively lower risk in SCBNL than EBL regarding various aspects of banking function.
- The SCBNL has not been more successful to increase in source of funds i.e. deposit and mobilization of loan and advances and total investment. It seems SCBNL has not made any effective strategy to win the confidence of shareholders, depositors and its all customers.

CHAPTER – III

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying a problem with certain objectives. It includes construction of research design, nature of data, data gathering procedure, population and sample and data processing procedure. The main purpose of this chapter is to focus on different research methods and conditions used to conduct the study. Each and every study needs a systematic methodology to show the better results of the research. Here also, investment policy of BOKL and KBL needs to appropriate research methodology.

3.2 Research Design

"A plan of study or blue print for study that presents a series of guide posts to enable the researchers to progress in the right direction in order to achieve the goal is called a research design or strategy", *(Joshi, 2001:12)*. A well settled research design is necessary to fulfill the objectives of the study. It means definite procedures and technique that guides to study and propound way for research variability. The study aims to evaluate to managerial efficiency and performance regarding investment policy of BOKL and KBL.

3.3 Population and Sample

When some of the elements are selected with the intension of finding out something about the population from which they are taken that group of elements is referred as a sample and the process of selection is called sampling. For instance, with a single grain of rice a village housewife tests if all the rice in the pot has boiled or not. Similarly, from a cup of tea a tea taster determines the quality of the brand of tea.

At present, Nepalese financial system comprises of 26 commercial banks, 78 finance companies and 16 other non governmental organization performing limited banking activities. It is not possible to study all of them regarding the research topic. Therefore BOKL and KBL are the reputed and well-established commercial banks having similar capital; taken as a sample bank for research study from population (commercial banks).

3.4 Nature and Sources of Data

This research is based on the secondary data. The secondary data have been collected from financial statement, annual report, unpublished official records of concerned companies, journals and from the official web site of NRB and individual sampled companies.

3.5 Data Collection Procedures

Data collection procedures depend upon one's study. It can be collected from different sources among the various sources. Secondary sources are used for data collection.

Secondary Sources:

The study is mainly based on secondary data. The data collected by someone else, used already and is made available to other in form of published statistics are secondary data.

The secondary sources of data collections are those that have been used from published on used by someone previously. The secondary sources of data are Balance sheet, Profit and Loss Account of Concerned Banks, Annual report and Literature Publication of the Concerned Banks. Some supplementary data and information are collected from the authoritative sources like Nepal Rastra Bank, Central Library T.U., Shankar Dev Campus library, Nepal Commerce Campus Library, Nepal Stock Exchange Limited, Security Exchange Board, Economic Survey, Different Journals and Articles, other published and unpublished reports documented by the authorities.

The data for the study are collected from record available of Security Board and Annual Reports of concerned Banks. The various stock exchange publications formed an important supplementary source of the data for this study, particularly on investment policy. The data is collection of raw information taken in stateside manner and prerequisites of any project study.

3.6 Data Analysis Tools

Analysis of data involves a number of closely interrelated operations that are performed to get answers to the research questions. Analysis and presentation of data is the core of the study. This study needs some financial and statistical tools to accomplish the objectives. The financial and statistical tools are most reliable. To achieve the objective of the study, various financial, statistical and accounting tools have been used in this study.

Collected data are to be processed and analyzed for a scientific conclusion and for ensuring that all relevant data are used for making contemplated comparisons and analysis. Processing of data implies editing, coding, classification and tabulation of collected data.

The various results obtained with the help of financial, accounting and statistical tools are tabulated under different heading. Then they are compared with each other to interpret the results. Two kinds of tools have been used to achieve the purpose.

- Financial Tools
- Statistical Tools

1) Financial Tools

Financial tools basically help to analyze the strength and weakness of a firm. Ratio analysis is one of the important financial tools has been used in the study. It helps to show the mathematical relationship between two accounting items or figure and can

measure the financial performance and status of a firm with the other firms. 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. Although there are various types of ratios to analyze and interpret the financial statements, only four ratios have been taken in this study, which are mainly related to investment policy of banks. These are as follows:

A. Liquidity Ratio

Liquidity ratios are applied to measure the ability of the firms to meet short-term obligations. It measures the speed of firms assets into cash to meet deposit withdraws and other current obligations. Various types of liquidity ratios are applied in the study.

I. Current Ratio

It refers to the relationship between current assets and current liabilities of a firm that also measures the short-term solvency of the firm. Current assets involve cash and bank balance, money at call or short notice, loans and advances, overdrafts, bill purchased and discounted investment on government securities and other interest receivables and miscellaneous current assets. Similarly, current liabilities involve deposit and other short-term loans, tax provision, dividend payable, bills payable, staffs bonus, and sundry liabilities.

2:1 standard of current ratio is widely acceptable but accurate standard depends on circumstances and nature of business. Current ratio can be measured as,

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

II. Cash and Bank Balance to Total Deposit Ratio

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 computed as:

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

Where, total deposit consists of deposit on current account, saving account, fixed account and other deposits.

III. Cash and Bank Balance to Current Asset Ratio

This ratio measures the percentage of liquid assets i.e. cash and bank balance among the current assets of a firm. Cash and bank balance includes cash balance, cash with NRB, balance with other commercial banks. 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.

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

IV. 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. This ratio can be calculated dividing the amount of investment on government securities by the total amount of current assets and can be stated as follows,

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

Where, investment on government securities involves treasury bills and development bonds etc.

B. Asset Management Ratio

Asset management ratio is used to indicate how efficiently the selected banks have arranged and invested their limited resources. The following financial ratios related to

investment policy are calculated under asset management ratio and interpretations are made by these calculations.

I. Loan and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the selected banks and finance companies are utilizing their total collection/deposits on loan and advances for the purpose of earning profit. Greater ratio shows the better advances and can be obtained by dividing total loans and advances by total deposits.

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

II. Total Investment to Total Deposit Ratio

Investment is one of the major sources of earning income. This ratio indicates how properly firm's deposits have been invested on government securities and shares and debentures of other companies. This ratio can be computed dividing total amount of investment by total amount deposit collection.

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

III. Loan and Advances to Total Assets Ratio

This ratio indicates the ability of selected banks and finance companies in terms of earning high profit from loan and advances. Loan and advances to total assets ratio can be obtained dividing loan and advance amount by total assets.

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

Where, Total assets includes total amount of assets given in balance sheet which refers to current assets, Net fixed assets, Total loan for development banks and other sundry assets except off balance sheet items i.e., Letter of credit, Letter of guarantee etc.

IV. Investment on Government Securities to Total Assets Ratio

Investment on government securities to total assets ratio shows how much part of total investment is there on government securities in percentage.

Investment on Government Securities to Total Working Fund

$$= \frac{Investment\ on\ Government\ Securities}{Total\ Assets}$$

V. Investment on Share and Debentures to Total Assets Ratio

Investment on shares and debenture to total fund ratio shows the investment of banks and finance companies on the shares and debentures of other companies in terms of total assets. This ratio can be obtained dividing on shares and debenture by total assets.

Investment on Share and Debenture to Total Assets

$$= \frac{Investment\ on\ Share\ and\ Debentures}{Total\ Assets}$$

C. Profitability Ratio

Profitability ratios are used to indicate and measure the overall efficiency of a firm in term of profit and financial position and performance of any institution. For better financial performance, profitability ratios of firm should be higher. Profitability position of the firms can be presented in the following ways:

I. Return on Loans and Advances

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

$$\text{Return on Loans and Advances} = \frac{Net\ Profit}{Loans\ and\ Advances}$$

II. Return on Total Assets (Total Working Fund)

Return on assets ratio measures the profitability position of the selected banks and finance companies in comparison with total assets of those selected firms. It is calculated by dividing return or net profit (loss) by total working fund.

$$\text{Return on Total Assets} = \frac{Net\ Profit}{Total\ Assets}$$

III. Total Interest Earned to Total Assets Ratio

Total interest earned to total assets ratio is calculated to find the percentage of interest earned to total assets. Higher ratio indicates the better performance of financial institutions in the form of interest earning on its assets. This ratio is calculated dividing total interest earned from investment by total assets.

$$\text{Total Interest Earned to Total Assets Ratio} = \frac{Total\ Interest\ Earned}{Total\ Assets}$$

IV. Total Interest Earned to Total Operating Income Ratio

Interest earned to total operating income ratio is calculated to find out the ratio of interest income with operating income of financial institution. This ratio indicates how efficiently the selected banks and finance companies have mobilized their resources to bear the interest on total operating income.

$$\text{Total Interest Earned to Total Operating Income Ratio} = \frac{Total\ Interest\ Earned}{Total\ Operating\ Income}$$

V. Total Interest Paid to Total Assets Ratio

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

$$\text{Total Interest Paid to Total Assets Ratio} = \frac{Total\ Interest\ Paid}{Total\ Assets}$$

D. Risk Ratio

Risk is uncertainty in business transaction and investment management. If a firm bears risk and uncertainty, the profitability and effectiveness of the firm increases. This ratio checks the degree of risk involved in the various financial operations. For this study, following risk ratios are used to analyze and interpret 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 the indicator of bank liquidity needed. The risk will be low if funds are kept idle as cash and bank balance but this reduces profitability. If bank flow loans, profitability increases as well as risk. Thus higher liquidity ratio indicates less risk and less profitable bank and vice-versa. This ratio is calculated by dividing cash and bank balance to total deposit.

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

II. Credit Risk Ratio

Credit risk ratio helps to check the probability of loan non-repayment or the possibility of loan to go into default. Credit risk ratio is calculated in percentage dividing total loan and advances by total assets.

$$\text{Credit Risk Ratio} = \frac{Total\ Loans\ and\ Advances}{Total\ Assets}$$

E. Percentage Analysis of Investment

Percentage analysis of investment includes investment on government securities and shares and debenture in relation with total investment. In this study, the percentage is calculated to achieve the objective of the study.

I. Analysis of Investment on Government Securities

The percentage analysis of government securities in relation with total investment helps to examine the investment practice according to the NRB directives and is calculated by dividing investment on government securities by total investment.

$$\text{Investment on Government Securities to Total Investment} = \frac{Investment\ on\ Government\ Securities}{Total\ Investment}$$

II. Analysis of Investment on Share and Debentures

The percentage analysis of share and debenture in relation with total investment helps to observe the fund mobilization which is calculated by dividing investment on share and debenture by total investment.

Investment on Share and Debenture to Total Investment

$$= \frac{Investment\ on\ Share\ and\ Debentures}{Total\ Investment}$$

F. Growth Ratio

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

- Growth Ratio of Total Deposits
- Growth Ratio of Total Investment
- Growth Ratio of Loan and Advances
- Growth Ratio of Net Profit

2) Statistical Tools

Some important statistical tools have been used, to present and analyze the data for achieving the objective of this study. Co-efficient of variance, correlation analysis, Standard deviation, least square, linear trend analysis etc. have been used for the purpose. The basic statistical analysis related to this study is discussed below:

A. Karl's Pearson's Coefficient of Correlation Analysis

This statistical tool has been used to analyze, identify and interpret the relationship between two or more variables. It interprets whether two or more variables are

correlated positively or negatively. Statistical tool analyzes the relationship between those variables and helps the selected banks to make appropriate investment policy regarding to profit maximization and deposit collection, fund utilization through providing loan and advances or investment on other companies. Karl Pearson's coefficient of correlation has been used to find out the relationship between the following variables:

- Co-efficient of correlation between deposit and loan and advances.
- Co-efficient of correlation between deposit and total investment.
- Co-efficient of correlation between outside assets and net profit.

Simply, Karl Pearson's correlation co-efficient (r) can be obtained as:

$$\text{Correlation coefficient (r)} = \frac{n\Sigma XY - \Sigma X\Sigma Y}{\sqrt{n\Sigma X^2 - (\Sigma X)^2}\sqrt{n\Sigma Y^2 - (\Sigma Y)^2}}$$

Where,

n= number of observations in series X & Y

ΣX= sum of observations in series X

ΣY= sum of observations in series Y

ΣX^2= sum of squared observations in series X

ΣY^2= sum of squared observations in series Y

ΣXY= sum of the product of observations in series X & Y

B. Trend Analysis

This type of statistical analysis interprets the trend of deposits, loan and advances, investments and net profit of BOKL from 2004/05 to 2008/09.The following trend value analysis has been used in this study.

- Trend analysis of total deposits.
- Trend analysis of loan and advances.
- Trend analysis of total investment.
- Trend analysis of net profit.

CHAPTER – IV

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation and Analysis

This is analytical chapter 5where the researcher has analyzed and evaluated major financial items, which mainly effect the investment management and fund mobilization of BOKL and KBL. There are many types of financial ratios, calculated and analyzed which are very important to evaluate fund mobilization of commercial bank.

4.1.1 Financial Tools

Financial analysis is the act of identifying the financial strength and weakness of the organization presenting the relationship between the items of balance sheet. Various financial ratios related to the investment and the fund mobilization are presented and discussed to evaluate and analyze the performance of the bank. Financial ratios are calculated and data are analyzed with the help of those ratios. Some important ratios are calculated from the point of view of fund mobilization and investment policy. The ratios are designed and calculated to highlight the relationship between financial items and figures. It is a kind of mathematical relationship and procedure and is obtained by dividing one item by another; all these calculations are based on financial statements of the bank. The important financial ratios, which are to be calculated for the purpose of this study, are mentioned below:

- Liquidity ratio
- Asset Management ratio
- Profitability ratio
- Risk ratio
- Percentage Analysis of Investment
- Growth Rate Analysis

A. Liquidity Ratio

Commercial banks collect the fund from the community and the bank commit to return their money when they demand. So, they must maintain sufficient liquidity to fulfill the commitment to return depositor's deposit, withdraw, and convert non-cash

assets to cash to satisfy immediate needs without any loss to bank and consequent impact on long run profit.

I. Current Ratio

This ratio indicates the ability of the bank to meet its current obligation. It measures the liquidity position of financial institutions. Current ratio is calculated by dividing current assets by current liabilities.

$$Current\ Ratio = \frac{Current\ assets}{Current\ Liabilities}$$

The current ratio of these banks during the study period is tabulated below.

Table: 4.1

Current Ratio		
Fiscal Year	BOKL	KBL
2004/05	0.784	0.907
2005/06	0.784	0.923
2006/07	0.841	0.922
2007/08	0.873	0.954
2008/09	0.932	1.016
Mean	0.843	0.944
Standard Deviation	0.056	0.039
Coefficient of variation (%)	6.667	4.122

Source: Appendix A/I

This ratio represents the relationship between cash and other current assets to its current obligation. The current ratio of BOKL is more in F/Y 2008/09 where as in F/Y 2004/05 lower. Similarly, KBL has greater ratio in 2008/09 which is greater than that of BOKL. The liquidity position of KBL is better than BOKL. The coefficient of variance for BOKL is 6.667% whereas KBL has only 4.122%. Though the optimal standard of current ratio should be 2:1 but 1:1 considers better for the banks.

II. Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance consist of cash balance, balance with NRB, balance with banks and financial institutions. This ratio measures the availability of banks highly

liquid or immediate funds to meet it unanticipated calls on all types of deposits. The ratio is calculated by dividing cash and bank balance by total deposit.

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

Table: 4.2

Cash and Bank Balance to Total Deposit Ratio

Fiscal Year	BOKL	KBL
2004/05	0.101	0.071
2005/06	0.083	0.050
2006/07	0.106	0.063
2007/08	0.091	0.073
2008/09	0.121	0.113
Mean	0.100	0.074
Standard Deviation	0.013	0.021
Coefficient of variation (%)	12.965	28.526

Source: Appendix A / II

The ratio has fluctuating trend and BOKL has higher ratio 12.1% in F/Y 2008/09 and lower ratio 8.3% in F/Y 2005/06 where as KBL has higher ratio 11.3% in F/Y 2008/09 and lowest ratio 5% in F/Y 2005/06. The analysis shows that the cash and bank balance position of BOKL and KBL with respect to deposit is better. The average ratio of BOKL is greater than KBL i.e. 0.1 vs. 0.074. The variability of KBL is more than BOKL.

III. Cash and Bank Balance to Current Assets Ratio

This ratio examines the bank's liquidity on the basis of its most liquid assets i.e. cash and bank balance. This ratio reveals the ability of the bank to make the quick payment of its customer's deposits. A high ratio indicates the sound ability to meet their daily cash requirement of their customers deposit and vice-versa.

However, both the higher and lower ratios are not desirable. If a bank maintains higher ratio of cash, it has to pay interest on deposits and some earnings may be lost and if a bank maintains low ratio of cash, it may fail to make the payment on customer's demand. Thus, sufficient and appropriate cash reserves should be maintained. This ratio is calculated by dividing cash and bank balance by current assets.

$$Cash\ and\ bank\ balance\ to\ current\ assets = \frac{Cash\ and\ Bank\ Balance}{Current\ Assets}$$

The ratios are presented in the following table.

Table: 4.3

Cash and Bank Balance to Current Assets Ratio

Fiscal Year	BOKL	KBL
2004/05	0.113	0.072
2005/06	0.103	0.052
2006/07	0.117	0.067
2007/08	0.102	0.074
2008/09	0.126	0.106
Mean	0.112	0.0742
Standard Deviation	0.009	0.018
Coefficient of variation (%)	8.000	23.811

Source: Appendix A / III

BOKL has the highest ratio is 0.126 in F/Y 2008/09 and the lowest ratio is 0.102 in F/Y 2007/08. On the basis of mean ratio, BOKL has 0.112 and the coefficient of variation is 8%. KBL has highest ratio is 0.106 in F/Y 2008/09 and lowest in 0.052 in F/Y 2006/07. The mean ratio of BOKL is greater than KBL i.e. 11.2% 7.42% and variability is lesser than KBL.

IV. Investment on Government Securities to Current Assets Ratio

This ratio examines that portion of commercial bank's current assets which is invested on different government securities. Government securities include government treasury bills, saving bonds, NRB bonds etc. More or less, each commercial bank are interested to invest their collected fund on different types of securities issued by government in different times to utilize their excess funds and for other purposes also. Though government securities are not liquid as cash balance of a commercial bank, they can be easily sold in the market or they can be converted into cash in other ways.

This ratio shows that out of total current assets, how much percentage of it has been occupied by the investment on government securities. This ratio is computed by dividing investment on government securities by total current assets.

Investment on Government Securities to Current Assets Ratio

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

These ratios are presented in the following table.

Table: 4.4

Investment on Government Securities to Current Assets Ratio

Fiscal Year	BOKL	KBL
2004/05	0.342	0.182
2005/06	0.300	0.148
2006/07	0.207	0.129
2007/08	0.150	0.116
2008/09	0.101	0.068
Mean	0.220	0.1286
Standard Deviation	0.090	0.038
Coefficient of variation (%)	40.916	29.218

Source: Appendix A / IV

Investment on government securities to current assets ratio has been fluctuating in both the banks during the study period. BOKL has lowest ratio 0.101 in F/Y 2008/09 and the highest ratio is 0.342 in F/Y 2004/05. The mean ratio of investment on government securities to current assets of BOKL is 0.22 and the coefficient of variation is 40.92% where as KBL has highest ratio is 0.182 in F/Y 2004/05 and lowest is 0.068 in F/Y 2008/09. The mean ratio of KBL is 0.128 and BOKL has higher variability.

From the above analysis, we can conclude that the banks have made big amount of investment on government securities, this is because of usability security then other profitable investment sector.

B. Assets Management Ratio

A commercial bank must be able to manage its assets very well to earn higher amount of profit to satisfy its customers and for its own existence. Assets management ratio measures how efficiently the bank manage the resources its commands. The following ratios measure the assets management ability of the BOKL and KBL

I. Loans and Advances to Total Deposit Ratio

This ratio actually measures the bank's success to mobilize the deposits on loans and advances for the purpose of profit generation. This ratio is calculated dividing loan and advances by total deposits.

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

The following table shows the loan and advances to total deposit ratio of BOKL and KBL.

Table: 4.5

Loans and Advances to Total Deposit Ratio

Fiscal Year	BOKL	KBL
2004/05	0.729	0.891
2005/06	0.661	0.887
2006/07	0.759	0.846
2007/08	0.787	0.887
2008/09	0.810	0.929
Mean	0.749	0.886
Standard Deviation	0.052	0.026
Coefficient of variation (%)	6.912	2.976

Source: Appendix B / I

BOKL has the highest loans and advances to total deposit ratio of 0.810 in F/Y 2008/09 and the lowest of 0.661 in F/Y 2005/06. The KBL has highest ratio is 0.929 in F/Y 2008/09 and lowest ratio is 0.846 in F/Y 2006/07. Comparing both the banks, KBL has higher loans and advances to total deposit ratio and has less variability than BOKL.

Thus it can be concluded that the banks has mobilized their total deposit as loan and advances and acquiring high profit. For this, the bank should consider so many factors like risk analysis, diversification, social responsibility, bank's credit policy and limits of lending policy etc.

II. Total Investment to Total Deposit Ratio

A commercial bank may mobilize its deposit by investing its fund in different securities issued by government and other financial or non financial companies. Now

efforts have been made to measure the extent to which the banks are successful in mobilizing the total deposit on investment.

In the process of portfolio management of banks, various factors such as availability of fund, liquidity requirements, central bank norms etc. are to be considered in general. A high ratio is the indicator of high success to mobilize the banking fund as investment and vice versa. This ratio is calculated by dividing total investment by total deposit.

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

The ratio is presented in the following table.

Table: 4.6

Total Investment to Total Deposit Ratio

Fiscal Year	BOKL	KBL
2004/05	0.320	0.190
2005/06	0.291	0.179
2006/07	0.242	0.159
2007/08	0.202	0.167
2008/09	0.154	0.096
Mean	0.242	0.158
Standard Deviation	0.060	0.033
Coefficient of variation (%)	24.696	20.756

Source: Appendix B / II

Both the banks have decreasing total investment to total deposit ratio. BOKL has 0.32 in F/Y 2004/05 and the lowest ratio is 0.154 in F/Y 2008/09. Similarly, KBL has highest ratio 0.19 in F/Y 2004/05 and lowest in 0.096 in F/Y 2008/09. On the basis of mean ratio, BOKL has 0.242 which is higher than that of KBL and the coefficient of variation 24.69% but in case of KBL it is 20.75%. Thus the bank could not make great effort to mobilize its deposit on total investment. Comparing both the banks, BOKL has better capacity to mobilize its deposit on total investment.

III. Loan and Advances to Total Assets Ratio

A commercial bank's total assets play very significant role in profit generation through fund mobilization. This ratio reflects the extent to which the banks are successful in mobilizing their total assets on loan and advances for the purpose of income generation. This ratio is computed by dividing loan and advances by total working fund (total assets).

$$Loans\ and\ Advances\ to\ Total\ Working\ Fund\ Ratio = \frac{Loans\ and\ Advances}{Total\ Assets}$$

The following table exhibits the ratio of loans and advances to total assets fund of BOKL and KBL during the study period.

Table: 4.7

Loans and Advances to Total Assets Ratio

Fiscal Year	BOKL	KBL
2004/05	0.595	0.752
2005/06	0.600	0.765
2006/07	0.645	0.749
2007/08	0.703	0.754
2008/09	0.715	0.787
Mean	0.652	0.761
Standard Deviation	0.050	0.014
Coefficient of variation (%)	7.695	1.825

Source: Appendix B / III

BOKL has the highest loans and advances to total assets ratio of 0.715 in F/Y 2008/09 and the lowest ratio is 0.595 in F/Y 2004/05. Whereas KBL has highest ratio of 0.787 in F/Y 2008/09 and lowest is 0.752 in F/Y 2004/05. When observing the mean ratio, it is 0.652 and 0.761 for BOKL and KBL respectively where as the coefficient of variation are 7.69% and 1.82%. From the table it also reveals that the ratios are increasing. Thus the banks are in strong position to mobilize its totals assets fund as loan and advances.

IV. Investment on Government Securities to Total Assets Ratio

This ratio reveals that the banks are successful in mobilizing their assets fund on different types of government securities to maximize the income. The bank should not utilize all its deposits in loans and advances from security and liquidity point of

view. Therefore commercial banks seem to be interested to utilize their deposit by purchasing government securities. This ratio is calculated by dividing investment on government securities by total working fund.

Investment on Government Securities to Total Working Fund

$$= \frac{Investment\ on\ Government\ Securities}{Total\ Assets}$$

Table: 4.8

Investment on Government Securities to Total Assets Ratio

Fiscal Year	BOKL	KBL
2004/05	0.250	0.151
2005/06	0.218	0.124
2006/07	0.160	0.109
2007/08	0.119	0.098
2008/09	0.085	0.058
Mean	0.166	0.108
Standard Deviation	0.061	0.031
Coefficient of variation (%)	36.619	28.406

Source: Appendix B / IV

Concerning the investment on government securities to total assets ratio during the study period, BOKL has the highest ratio of 0.25 in F/Y 2004/05 and lowest ratio of 0.085 in 2008/09. Whereas KBL has highest ratio of 0.151 in F/Y 2004/05 and lowest ratio is 0.058 in F/Y 2008/09. The mean ratio of BOKL and KBL are 0.166 and 0.108 respectively. Similarly, the coefficients of variation are 36.619% and 28.406% respectively. Thus the variability seems to be higher in both the banks.

The ratio is also decreasing during the study period which seems the banks are weak to mobilize its total assets as investment in government securities. Comparatively, BOKL is more successful to mobilize its total assets as investment in government securities.

V. Investment on Share and Debentures to Total Assets Ratio

Commercial banks invest on share and debentures of other different types of companies as well as in the government securities. During the study period, it seems

most of the commercial banks of Nepal including BOKL and KBL have decreased to invest on government securities and are interested to purchase the share of other companies. Investment on shares and debentures to total assets ratio reflects the extent to which the banks are successful to mobilize their total working fund on purchase of share and debentures of other companies to generate income and utilize excess fund. A high ratio indicates more portion of investment on shares and debentures out to total working fund and vice versa. The ratio is calculated by dividing investment on share and debentures by total assets.

Investment on Share and Debentures to Total Assets

$$= \frac{Investment\ on\ Share\ and\ Debentures}{Total\ Assets}$$

Table: 4.9

Investment on Share and Debentures to Total Assets Ratio		
Fiscal Year	BOKL	KBL
2004/05	0.002317	0.000040
2005/06	0.009333	0.000033
2006/07	0.005971	0.000025
2007/08	0.006264	0.001198
2008/09	0.005855	0.000971
Mean	0.005948	0.000453
Standard Deviation	0.002225	0.000520
Coefficient of variation (%)	37.406	114.753

Source: Appendix B / V

It is found that both the banks have invested nominal amount of total assets into shares and debentures of other companies. These banks also have fluctuating trend of investment on share and debenture to total assets ratio. The highest ratio of BOKL is 0.0093 in F/Y 2005/06 and the lowest ratio is 0.00231 in F/Y 2004/05 whereas KBL has highest ratio is 0.00198 in F/Y 2007/08 and lowest ratio is 0.000025 in F/Y 2006/07.

On the basis of mean ratio, it is 0.0059 and 0.00045 and the coefficient of variation is 37.406% and 114.75%. Because of the higher C.V., the risk percentage is higher in both the banks but KBL is more risky. It is due to lack of efficient and uniform

investment policy with regard to investment on other company's shares and debentures.

C. Profitability Ratio

The main objective of the commercial bank is to earn profit by providing different types of banking services to its customers. To meet various objectives e.g. maintaining good liquidity position, meet fixed internal obligations, overcome the future contingencies, grab investment opportunities, expand banking transaction in different places etc.

Thus the profitability ratios are the best indicators of overall efficiency. Here, mainly those major ratios are presented and analyzed through which help to measure the profit earning capacity of BOKL and KBL.

I. Return on Loans and Advances

Return on loans and advances ratio measures the earning capacity of a commercial bank through its mobilized fund as loans and advances. A high ratio indicates greater success on mobilized fund as loans and advances and vice-versa. This ratio is calculated by dividing net profit by loan and advances.

$$Return\ on\ Loans\ and\ Advances = \frac{Net\ Profit}{Loans\ and\ Advances}$$

The following table shows that return on loan and advances of BOKL and KBL in the study period.

Table: 4.10

Return on Loans and Advances		
Fiscal Year	BOKL	KBL
2004/05	0.022	0.015
2005/06	0.024	0.015
2006/07	0.028	0.019
2007/08	0.029	0.015
2008/09	0.031	0.018
Mean	0.027	0.016
Standard Deviation	0.003	0.002
Coefficient of variation (%)	12.353	10.631

Source: Appendix C / I

BOKL has the highest ratio of 0.031 in F/Y 2008/09 whereas the lowest ratio is 0.022 in F/Y 2004/05. The mean ratio is 0.027 and coefficient of variation is 12.353%. Whereas KBL has highest ratio is 0.019 in F/Y 2006/07 and the lowest ratio is 0.015 in 2004/05. The mean ratio is 0.016 and coefficient of variation is 10.63%. It is observed that the banks have not higher return on its loan and advances. So that it can be said that the bank's profit earning capacity by utilizing available source is very weak.

II. Return on Total Assets

Return on assets ratio is a measuring rod of the profitability for each bank's assets. If the bank's total assets is well managed and efficiently utilized, return on such assets will be higher and vice-versa. The ratio or return on total working fund is calculated by dividing net profit by total assets.

$$Return\ on\ Total\ Assets = \frac{Net\ Profit}{Total\ Assets}$$

The following table shows that profitability position with respect to total assets.

Table: 4.11

Return on Total Assets		
Fiscal Year	BOKL	KBL
2004/05	0.013	0.011
2005/06	0.014	0.011
2006/07	0.018	0.014
2007/08	0.020	0.012
2008/09	0.022	0.014
Mean	0.017	0.012
Standard Deviation	0.003	0.001
Coefficient of variation (%)	20.087	10.939

Source: Appendix C / II

Return on total assets during the study period has slightly fluctuating in both the banks. BOKL has maintained higher ratio as 0.022 in F/Y 2008/09 and the lowest ratio is 0.013 in F/Y 2004/05 and the average ratio of return on assets is 0.017. The coefficient of variation is 20%. Similarly, KBL has highest ratio 0.014 in F/Y 2008/09 and lowest ratio is 0.011 in F/Y 2004/05. The mean ratio is 0.012 and the coefficient of variation is 10.93%. It is also observed that BOKL is in increasing order where as KBL has decreasing order. The analysis shows that both the banks have not been able to get higher return on total assets but have increasing trend.

III. Total Interest Earned to Total Assets Ratio

To represent to the earning capacity of commercial bank in its total assets, total interest earned to total assets ratio is very helpful. In other words, this ratio reflects the extent to which the banks are successful in mobilizing their assets to generate high income. A high ratio is an indicator of high earning power of the bank on its total working fund and vice-versa. This ratio is computed by dividing total interest earned by total assets.

$$Total\ Interest\ Earned\ to\ Total\ Assets\ Ratio = \frac{Total\ Interest\ Earned}{Total\ Assets}$$

The following table shows that total interest earned to total assets ratio of BOKL and KBL throughout the study period.

Table: 4.12

Total Interest Earned to Total Assets Ratio		
Fiscal Year	BOKL	KBL
2004/05	0.060	0.067
2005/06	0.062	0.067
2006/07	0.056	0.066
2007/08	0.058	0.064
2008/09	0.066	0.074
Mean	0.060	0.068
Standard Deviation	0.003	0.003
Coefficient of variation (%)	5.697	5.003

Source: Appendix C / III

It is found that the bank's interest earning ratio with respect to total assets has fluctuating trend. BOKL has highest ratio of 0.066 in F/Y 2008/09 and the lowest ratio is 0.056 in F/Y 2006/07. The mean ratio is 0.06 and coefficient of variation is 5.69% whereas KBL has highest ratio of 0.074 in F/Y 2008/09 and lowest of 0.064 in F/Y 2007/08. The mean ratio is 0.068 and coefficient of variation is 5%. It can be said that the interest earning capacity has almost maintained its consistency.

IV. Total Interest Earned to Operating Income Ratio

Total operating income consists of interest income, commission and discount, dividend income, foreign exchange income, non-interest income etc. Interest earned to total operating income ratio shows the magnitude of interest income in total income. It also indicates how efficiently the bank has mobilized its fund in interest bearing assets i.e. loan and advances, investment in government securities. This ratio is calculated by dividing total interest earned by net operating income.

Total Interest Earned to Total Operating Income Ratio

$$= \frac{Total\ Interest\ Earned}{Total\ Operating\ Income}$$

The following table exhibits the ratio of interest income to the operating income of BOKL and KBL.

Table: 4.13

Total Interest Earned to Operating Income Ratio		
Fiscal Year	BOKL	KBL
2004/05	1.340	1.674
2005/06	1.181	1.833
2006/07	1.212	1.687
2007/08	1.200	1.694
2008/09	1.210	1.922
Mean	1.228	1.760
Standard Deviation	0.057	0.098
Coefficient of variation (%)	4.647	5.590

Source: Appendix C / IV

As concerned to interest earned to operating income ratio during the study period, BOKL has the highest ratio is 1.34 in F/Y 2004/05 and the lowest ratio is 1.181 in F/Y 2005/06 and the average ratio is 1.228 whereas KBL has highest ratio of 1.922 in F/Y 2008/09 and that of the lowest is 1.674 in /Y 2004/05. It can be analyzed that the banks have low mobilized fund into interest bearing assets i.e. government securities, share and debenture of other companies, loan and advances etc. So the bank has to give more importance to the activities to earn higher amount of profit.

V. Total Interest Paid to Total Assets Ratio

This ratio measures the percentage of total interest expenses against total assets. A high ratio indicates higher interest expenses on assets fund and vice-versa. This ratio is calculated by dividing total interest paid by total assets.

$$Total\ Interest\ Paid\ to\ Total\ Assets\ Ratio = \frac{Total\ Interest\ Paid}{Total\ Assets}$$

The following table shows the total interest paid to total working fund ratio.

Table: 4.14

Total Interest Paid to Total Assets Ratio		
Fiscal Year	BOKL	KBL
2004/05	0.030	0.032
2005/06	0.024	0.037
2006/07	0.023	0.033
2007/08	0.024	0.033
2008/09	0.027	0.044
Mean	0.026	0.036
Standard Deviation	0.003	0.004
Coefficient of variation (%)	10.066	12.417

Source: Appendix C / V

The analysis of total interest paid to total assets ratio of the banks during the study period revealed that BOKL has maintained higher ratio of 0.030 in F/Y 2004/05 and that of KBL is and 0.044 in F/Y 2008/09. The lowest ratio of both the banks is 0.023 and 0.032 in F/Y 2006/07 and F/Y 2004/05 of BOKL and KBL respectively. The average interest paid to total assets ratio for BOKL and KBL are 0.026 and 0.036 respectively. So it can be said that the banks are in better position from the payment of interest point of view. It seems that it had not collected total assets funds from more expensive sources.

D. Risk Ratio

Where there is return there is associated risk in the financial world. So, on making investment, various risk factors are to be analyzed. The level of risk increases with the increase in profit. So the banks operating for high profit have to accept the risk and manage efficiently. A bank should analyze the level of risk that is needed to bear while investing the funds. The following ratios are to be measured to identify the level of risk.

I. Liquidity Risk Ratio

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 bank's liquidity sources and deposit, as the liquidity needs. The ratio of a cash and bank balance to total deposit is the indicator of bank liquidity needed.

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

The risk is low if funds are kept idle as cash and bank balance. But this reduces the profitability. When loans flow, profitability increases and as well risk too. Thus higher liquidity ratio indicates less risk and less profitable and vice-versa. This ratio is calculated by dividing cash and balance to total deposit. The following table shows the liquidity risk inherent in BOKL and KBL.

Table: 4.15

Liquidity Risk Ratio

Fiscal Year	BOKL	KBL
2004/05	0.101	0.071
2005/06	0.083	0.050
2006/07	0.106	0.063
2007/08	0.091	0.073
2008/09	0.121	0.113
Mean	0.100	0.074
Standard Deviation	0.013	0.021
Coefficient of variation (%)	12.965	28.526

Source: Appendix D / I

The analysis of liquidity risk reveals that KBL has fluctuating liquidity risk. It is due to the variation in the cash and bank balance and total deposits. BOKL has highest liquidity risk of 0.121 in F/Y 2008/09 and the lowest ratio is 0.083 in F/Y 2005/06. KBL has highest ratio 0.113 in 2008/09 and lowest 0.050 in 2005/06. The average ratio of liquidity risk is 0.1 and 0.074 respectively.

II. Credit Risk Ratio

Bank utilizes its collected fund in providing credit to different sectors. There consists of default risk and interest rate risk. While making investment, bank examines the credit risk involved in the project. This ratio is computed by dividing total loan and advances to total assets.

$$Credit\ Risk\ Ratio = \frac{Loans\ and\ Advances}{Total\ Assets}$$

The following table shows the credit risk ratio of BOKL and KBL under the study period.

Table: 4.16

Credit Risk Ratio

Fiscal Year	BOKL	KBL
2004/05	0.595	0.752
2005/06	0.600	0.765
2006/07	0.645	0.749
2007/08	0.703	0.754
2008/09	0.715	0.787
Mean	0.652	0.761
Standard Deviation	0.050	0.014
Coefficient of variation (%)	7.695	1.825

Source: Appendix B / III

BOKL has recorded its highest credit risk of 0.715 in 2008/09 and lowest ratio as 0.595 in 2004/05 and mean ratio as 0.652 and coefficient of variation 7.69%. On the other hand, KBL has recorded its highest ratio as 0.787 in 2008/09 and lowest ratio as 0.749 in 2006/07 and mean ratio as 0.761 and co-efficient of variation 1.82%. It seems KBL has higher credit risk ratio than that of BOKL and less variability. Credit risk ratio should be low for better performance of bank.

E. Percentage Analysis of Investment

Percentage analysis of investment includes investment on government securities and shares and debenture in relation with total investment. In this study, the percentage is calculated to achieve the objective of the study.

I. Analysis of Investment on Government Securities

The percentage analysis of government securities in relation with total investment helps to examine the investment practice according to the NRB directives and is calculated by dividing investment on government securities by total investment.

Investment on Government Securities to Total Investment

$$= \frac{Investment\ on\ Government\ Securities}{Total\ Investment}$$

The following table shows that investment on government securities with respect to total investment.

Table: 4.17

Analysis of Investment on Government Securities		
Fiscal Year	BOKL	KBL
2004/05	0.957	0.940
2005/06	0.826	0.799
2006/07	0.779	0.773
2007/08	0.659	0.687
2008/09	0.637	0.715
Mean	0.772	0.783
Standard Deviation	0.117	0.088
Coefficient of variation (%)	15.134	11.260

Source: Appendix E / I

The analysis reveals that investment on government securities is in deceasing trend. BOKL has maintained higher percentage of 95.7% in F/Y 2004/05 and the average value is 77.2% whereas KBL has 94% of its investment on government securities in F/Y 2004/05. Lowest percentage of investment on government securities of BOKL is 63.7% in F/Y 2008/9 and that of KBL is 68.7% in F/Y 2007/08. So it can be said that the fund mobilization on government securities is in good position.

II. Analysis of Investment on Share and Debentures

The percentage analysis of share and debenture in relation with total investment helps to observe the fund mobilization which is calculated by dividing investment on share and debenture by total investment.

Investment on Share and Debenture to Total Investment

$$= \frac{Investment\ on\ Share\ and\ Debentures}{Total\ Investment}$$

The following table shows that investment on share and debenture with respect to total investment.

Table: 4.18

Analysis of Investment on Share and Debentures		
Fiscal Year	BOKL	KBL
2004/05	0.00888	0.00025
2005/06	0.03541	0.00022
2006/07	0.02908	0.00018
2007/08	0.03464	0.00842
2008/09	0.04383	0.01192
Mean	0.03036	0.00420
Standard Deviation	0.01171	0.00498
Coefficient of variation (%)	38.585	118.637

Source: Appendix E / II

From the analysis it is found that investment on share and debenture is fluctuating in both the banks but the issue is more serious in case of KBL. The percentage investment on share and debentures of BOKL and KBL are 3.03% and 0.4%. According to the NRB directives, the investment on share and debentures should be not more than 20%. It seems that the banks have invested in share and debentures within the limit.

F. Growth Ratio

Growth ratios are analyzed and interpreted to know how well the commercial banks are maintaining their economic and financial position. Under this topic, four types of growth ratios are discussed i.e. growth ratios of total deposit, loan and advances, total investment and net profit. The high ratio generally indicates better performance of a bank and vice- versa.

Table: 4.19

Growth Rate of Total Deposits (%)		
Fiscal Year	BOKL	KBL
2004/05		
2005/06	15.51479	23.93108
2006/07	38.53724	35.90371
2007/08	27.80917	21.00028
2008/09	14.21083	22.98419
Average Growth Rate (%)	24.01801	25.95481

Source: Appendix F / I

Table: 4.20

Growth Rate of Loans and Advances (%)		
Fiscal Year	BOKL	KBL
2004/05		
2005/06	4.71130	23.40616
2006/07	58.98173	29.57481
2007/08	32.58857	26.94591
2008/09	17.53330	28.74283
Average Growth Rate (%)	28.45373	27.16743

Source: Appendix F / II

Table: 4.21

Growth Rate of Total Investment (%)		
Fiscal Year	BOKL	KBL
2004/05		
2005/06	4.88494	17.39496
2006/07	15.16551	20.11453
2007/08	7.08556	27.41359
2008/09	-13.13983	-29.37325
Average Growth Rate (%)	3.49905	8.88746

Source: Appendix F / III

Table: 4.22

Growth Rate of Net Profit (%)		
Fiscal Year	BOKL	KBL
2004/05		
2005/06	9.44882	22.61905
2006/07	88.48921	65.04854
2007/08	37.78626	2.35294
2008/09	27.70083	50.00000
Average Growth Rate (%)	40.85628	35.00513

Source: Appendix F / IV

It is found that the growth ratio of deposit of BOKL and KBL are 24.01% and 25.95%, growth ratio of loan and advances are 28.45% and 27.16%. The growth ratio of loan and advances of KBL is greater than BOKL and growth ratio of total investment of BOKL and KBL are 3.49% and 8.88% respectively. Whereas growth ratio of net profit of BOKL and KBL are 40.85% and 35% respectively.

With these analyses, it can be said that the banks should emphasize on improving performance in terms of collecting deposit, growth of loan and advances, total investment and profitability. The growth ratio of total investment is not satisfactory thus it needs to improve i.e. collect funds from cheaper way and invest on highly profitable sector to improve the figure of net profit.

4.1.2 Statistical Analysis

Some statistical tools such as correlation analysis between different variables, trend analysis are used to achieve the objective of the study.

A. Coefficient of Correlation Analysis

Correlation analysis is the statistical tool used to describe the direction and degree of linear relationship between dependent variables. It gives the significance by what degree the independent variable affects the other dependent variable to occur in particular direction. Under this topic, Karl Pearson's coefficient of correlation has been used to find out the relationship between different variables such as deposit and loans and advances, deposit and total investment, outside assets and net profit etc.

I. Coefficient of Correlation between Deposit and Loans and Advances

Coefficient of correlation between deposit and loan and advances measures the degree of relationship between these two variables. Here, deposit is an independent variable (X) and loan and advances are dependent variable (Y). To see whether deposits are significantly used as loan and advances in proper way or not, correlation coefficient between these variables has been analysed.

The following table shows the values of correlation coefficient (r), Probable Error P.E.(r), and 6*P.E. of BOKL and KBL during the study period.

Table: 4.23

Correlation between Deposit and Loans and Advances

Bank	r	P.E. (r)	6*P.E. (r)	Result
BOKL	0.9972	0.0017	0.0099	Sisnificantly Correlated
KBL	0.9959	0.0025	0.0184	Sisnificantly Correlated

Source: Appendix G / I

The correlation coefficient between deposit and loans and advances for BOKL and KBL are 0.9972 and 0.9959. There is high degree of positive correlation between these two variables. The result r >> 6*P.E. (r) shows that there is significant relationship between these two variables. It shows that deposits are properly mobilized in terms of loans and advances.

II. Coefficient of Correlation between Deposit and Total Investment

The coefficient of correlation between deposit and investment measures the degree of relationship between these two variables. In correlation analysis, deposit is independent variable (X) and total investment is dependent variable (Y). The purpose of computing coefficient of correlation is to examine whether the deposit are used in proper way or not and also to see the relationship between these two variables. In order to see the relationship, Karl Pearson's coefficient of correlation is calculated and analyzed accordingly. The following table shows the values of correlation coefficient (r), Probable Error P.E.(r), and 6*P.E. of BOKL and KBL during the study period.

Table: 4.24

Correlation between Deposit and Total Investment

Bank	r	P.E. (r)	6*P.E. (r)	Result
BOKL	0.6730	0.1650	0.9901	No Significant Correlation
KBL	0.5644	0.2056	1.2334	No Significant Correlation

Source: Appendix G / II

The correlation coefficient between deposit and total investment for BOKL and KBL are 0.6730 and 0.5644 respectively. There is positive correlation between these two variables. The result r < 6*P.E. (r) shows that there is not significant relationship between these two variables. This means the degree of change in total investment is not same as the degree of change in deposits in both the banks.

III. Coefficient of Correlation between Outside Assets and Net Profit

The outside assets include loan and advances and all types of investment of a commercial bank. In this analysis, total outside assets is independent variable (X) and net profit is dependent variables (Y). The main objective of correlation analysis

is to examine whether the net profit is significantly correlated with total outside assets or not. To analyze the relationship, Karl Pearson's coefficient of correlation is calculated accordingly. The following table shows the correlation of these variables during the study period.

Table: 4.25

Correlation between Outside Assets and Net Profit

Bank	r	P.E. (r)	6*P.E. (r)	Result
BOKL	0.9948	0.0031	0.0188	Sisnificantly Correlated
KBL	0.9651	0.0207	0.1241	Sisnificantly Correlated

Source: Appendix G / III

The correlation coefficient between total outside assets and net profit for BOKL and KBL are 0.9948 and 0.9651 respectively. There is highly positive correlation between these two variables of both the banks. The result r >> 6*P.E. (r) shows that there is significant relationship between these two variables.

B. Trend Analysis and Projection for Next Five Years

Trend analysis attempts to establish the nature of relationship between variables i.e. to study the functional relationship between the variable and there by provide a mechanism for prediction or forecasting. The main objective of this analysis is to analyze the trend of deposit collection, its utilization i.e. loan and advances, total investment and net profit of BOKL and KBL. Granting loans and advances and investing some of the funds in government securities and shares and debentures of other companies by the commercial banks are the utilization of deposits. The trend analysis is used for forecasting the dependent variables for next five years on the basis of the past performance and records.

The projections are based on the following assumptions:

- The main assumption is that other things will remain unchanged.
- The bank will run in this present position.
- The economy will remain in the present stage.
- The forecast will be true only when the limitation of least square method is carried out.
- Nepal Rastra Bank will not change its guidelines to commercial banks.

I. Analysis of Trend Value of Total Deposit

Trend line helps to forecast the values of dependent variable for future periods of time. For this purpose, trend line is computed and estimated the trend values of deposit of BOKL and KBL for five years from F/Y 2009/10 to 2013/14. The trend line of total deposit for BOKL and KBL are as follows.

Y= 4324+2758X (BOKL)

Y= 3448+2389X (KBL)

The following table shows the trend values total deposit of BOKL and KBL for five years from F/Y 2009/10 to 2013/14.

Table: 4.26

Projection of Total Deposit for next five years

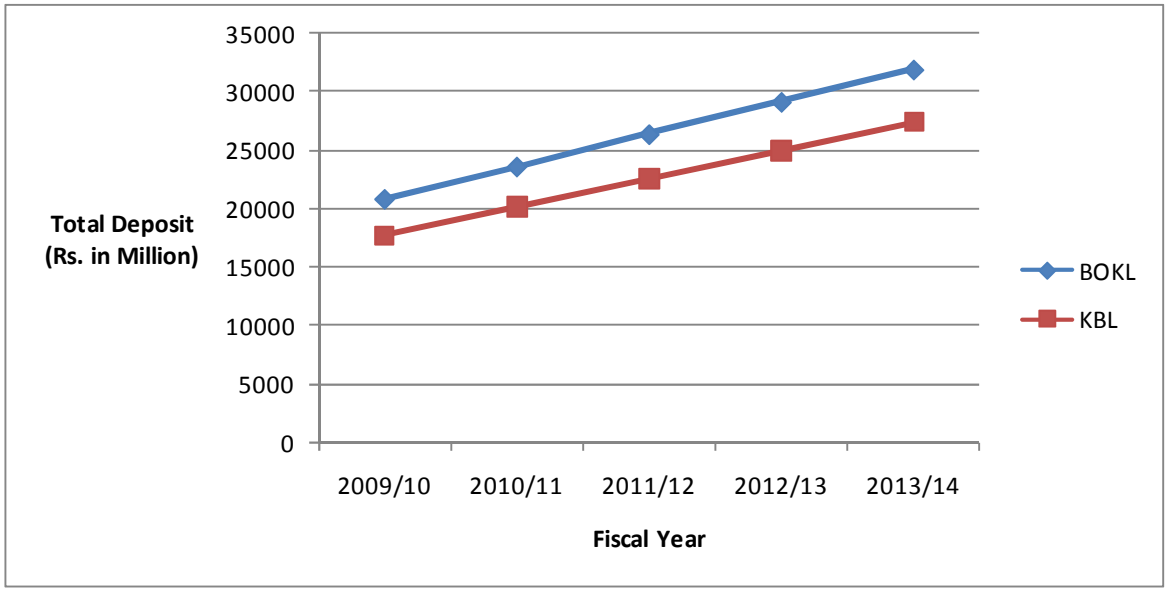
Fiscal Year	X	Total Deposit (Rs. in Million)	
		BOKL	KBL
		Y= 4324+2758X	Y= 3448+2389X
2009/10	6	20872	17782
2010/11	7	23630	20171
2011/12	8	26388	22560
2012/13	9	29146	24949
2013/14	10	31904	27338

Source: Appendix H / I

From the analysis, it is found that total deposit of the bank is in increasing trend. Other things remaining the same or constant, total deposit in 2013/14 is predicted by Rs. 31904 Million. Whereas KBL has predicted value is Rs.27338 Million which is lesser than BOKL. From the above trend analysis, it is quite obvious that BOKL and KBL deposit collection position will be better in future periods also. The above calculated trend values of total deposit of the banks are fitted in the trend lines given below.

Figure: 4.1

Trend Line of Total Deposit



II. Analysis of Trend Value of Loans and Advances

The trend values of loan and advances of BOKL and KBL have been forecasted for five years from F/Y 2009/10 to F/Y 2013/14. The trend line for loans and advances are found as follows.

Y = 2248 + 2455X (BOKL)

Y = 2728 + 2246X (KBL)

Table: 4.27

Projection of Loans and Advances for next five years

Year	X	Loans and Advances (Rs. in Million)	
		BOKL	KBL
		Y = 2248 + 2455X	Y = 2728 + 2246X
2009/10	6	16978	16204
2010/11	7	19433	18450
2011/12	8	21888	20696
2012/13	9	24343	22942
2013/14	10	26798	25188

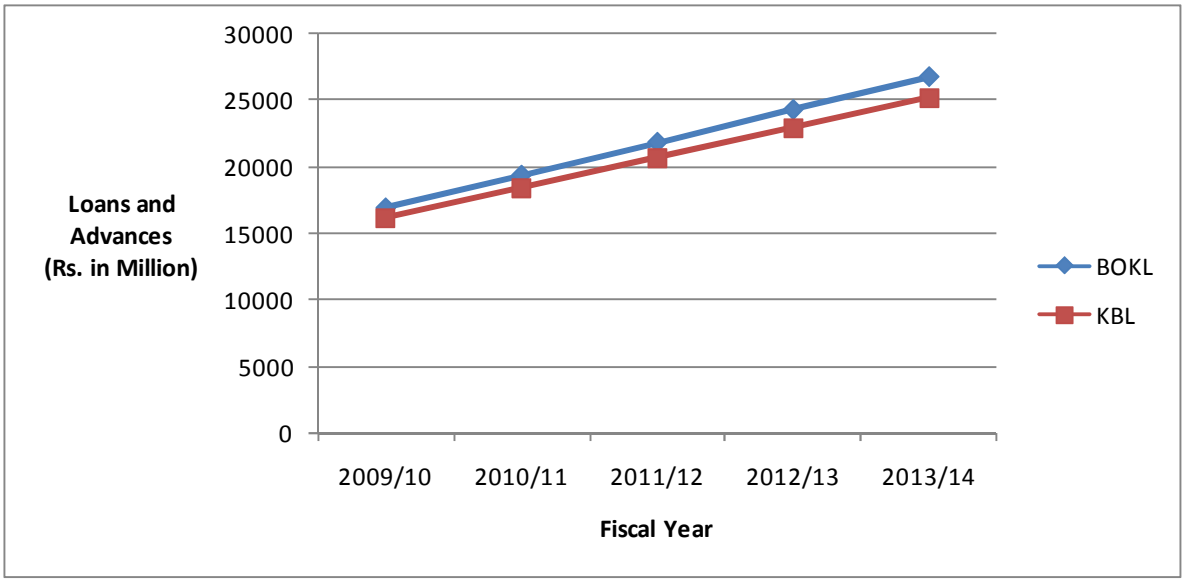
Source: Appendix H / II

The loan and advances of the banks are increasing regularly. Other things remaining same, the loan and advances of BOKL and KBL in F/Y 2013/14 will be Rs. 26798 Million and Rs. 25188 respectively. Thus both the bank's utilization of deposit in

terms of loan and advances is good. The above calculated trend values of loan and advances of the bank are fitted in the trend lines as given below.

Figure: 4.2

Trend Line of Loans and Advances



III. Analysis of Trend Value of Total Investment:

The trend values of total investment of BOKL and KBL have been forecasted for five years from F/Y 2009/10 to F/Y 2013/14. The trend line for total investment is found as follows.

Y = 2445 + 122X (BOKL)

Y = 1167 + 138X (KBL)

Table: 4.28

Projection of Total Investment for next five years

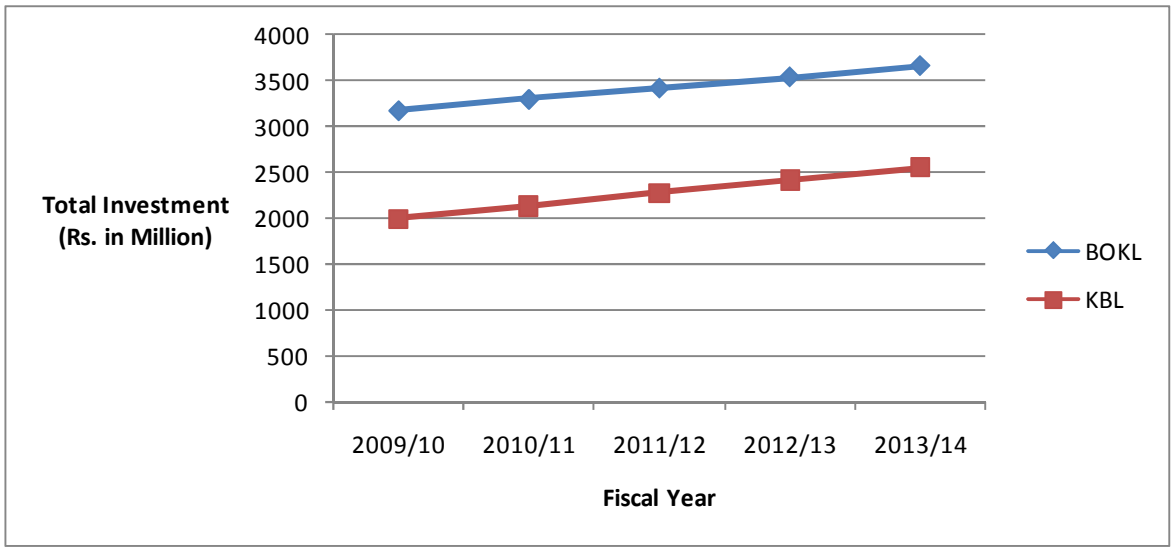
Year	X	Total Investment (Rs. in Million)	
		BOKL	KBL
		Y = 2445 + 122X	Y = 1167 + 138X
2009/10	6	3177	1995
2010/11	7	3299	2133
2011/12	8	3421	2271
2012/13	9	3543	2409
2013/14	10	3665	2547

Source: Appendix H / III

The total investment of the banks is increasing regularly. Other things remaining same, the total investment of BOKL and KBL in F/Y 2013/14 will be Rs. 3655 Million and Rs. 2547 respectively. Thus both the bank's utilization of deposit in terms of investment is satisfactory. Thus we can say that the bank has followed the policy of maximizing the investment. The above calculated trend values of loan and advances of the bank are fitted in the trend lines as given below.

Figure: 4.3

Trend Line of Total Investment



IV. Analysis of Trend Value of Net Profit

Trend line helps to forecast the values of dependent variable for future periods of time. For this purpose, trend line is computed and estimated the trend values of net profit of BOKL and KBL for five years from F/Y 2009/10 to 2013/14. The trend line of total deposit for BOKL and KBL are as follows.

$Y = 3 + 89X$ (KBL)

$Y = 31 + 43X$ (BOKL)

The following table shows the forecasted values of net profit of the bank for 5 years i.e. 2009/10 to 2013/14.

Table: 4.29

Projection of Net Profit for next five years

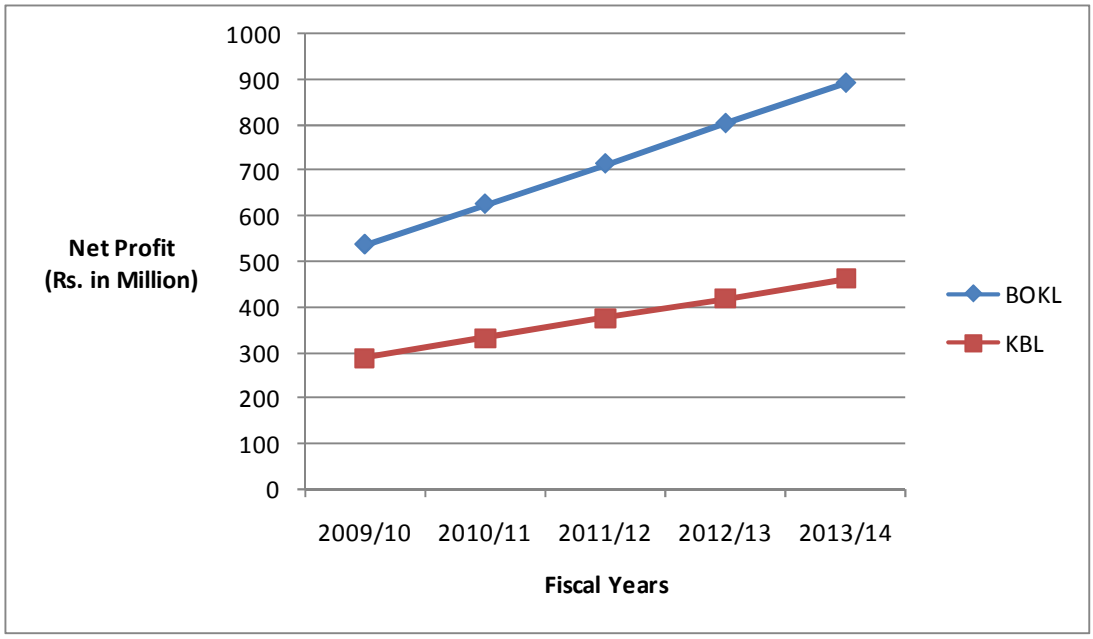
Year	X	Net Profit (Rs. in Million)	
		BOKL	KBL
		Y = 3 + 89X	Y = 31 + 43X
2009/10	6	537	289
2010/11	7	626	332
2011/12	8	715	375
2012/13	9	804	418
2013/14	10	893	461

Source: Appendix H / IV

The analysis shows that net profit of both the banks is increasing. Other things remaining same, the net profit of BOKL and KBL in F/Y 2013/14 will be Rs. 893 Million and Rs. 461 Million respectively. Thus both the bank's utilization of funds to earn the profit is satisfactory. The above calculated trend values of loan and advances of the bank are fitted in the trend lines as given below.

Figure: 4.4

Trend Line of Net Profit



4.2 Major Findings of the Study

The liquidity position in terms of current ratio, KBL has greater than BOKL with lower variability. Both the banks have the ratio below standard. But in terms of cash and bank balance to total deposit ratio BOKL has better position with lower variability than KBL. Thus BOKL has higher capability to meet immediate demand. In terms of cash and bank balance to current ratio, BOKL has better position than KBL and also the variability is lower than KBL which signifies that BOKL has better ability to meet the customer's demand quickly. In terms of investment on government securities to current assets ratio BOKL has better position than KBL but the variability of BOKL is higher. This signifies that BOKL has fluctuating investment on government securities but has higher capability to generate funds from selling those securities when required.

Analyzing the assets management ratio in terms of loans and advances to total deposit ratio, KBL has higher mean ratio and lesser variability which means KBL has has successfully mobilized deposits on loans and advances. In terms of total investment to total deposit ratio, BOKL has higher average ratio but the variability is lesser. It means BOKL has invested greater portion of total deposit in other sector rather than in loans and advances. In terms of loans and advances to total assets ratio KBL has greater average ratio than BOKL and lesser variability. Thus BOKL has successfully mobilized its total assets for the purpose of income generation to some extent. In terms of investment on government securities to total assets ratio BOKL has invested more portion of its total assets in government securities and has higher variability also. Investment on share and debentures to total assets ratio revealed that both the banks have invested very low portion of total assets on share and debentures.

From the profitability point of view, return on loans and advances reveals that BOKL has higher average return on loans and advances than KBL. In terms of return on total assets, BOKL has higher average return on total assets with higher variability than KBL. In terms of total interest earned to total assets ratio KBL has slightly greater average ratio than BOKL with almost same variability. In terms of total interest earned to operating income ratio KBL has greater average ratio than BOKL

and both the banks have almost same variability. In terms of total interest paid to total assets ratio KBL has greater average ratio than BOKL with almost same variability.

From analysis of investment on government securities to total investment, KBL has slightly greater average investment on government securities than BOKL but the variability is greater in case of BOKL. In case of analysis of investment on share and debentures out of the total investment BOKL has higher percentage of investment than KBL. The variability of KBL is much greater than BOKL.

The average growth rate of total deposit and loans and advances of both the banks are almost same and satisfactory but the growth rate of total investment of KBL is greater than that of BOKL whereas growth rate of net profit of BOKL is higher than that of KBL. There is high degree of positive correlation between deposit and loans and advances for both the banks. Whereas the relationship between deposit and total investment is not significant for both the banks but the correlation between outside assets and net profit is highly significant.

From the trend analysis of total deposit, loans and advances, total investment, and net profit the forecasted values of all the parameters for five years are found to be increased satisfactorily.
Some mathematical facts and findings are tabulated below.

Table: 4.30

Mathematical Facts and Findings				
Ratio	BOKL		KBL	
	Mean	C.V. (%)	Mean	C.V. (%)
Current Ratio	0.843	6.67	0.944	4.12
Cash and Bank Balance to Total deposit	0.1	12.96	0.074	28.53
Cash and Bank Balance to Current Asset	0.112	8	0.074	28.53
Investment on Government Securities to Current Asset	0.22	40.92	0.128	29.22
Loans and Advances to Total Deposit	0.749	6.91	0.886	2.98
Total Investment to Total Deposit	0.242	24.69	0.158	20.75
Loans and Advances to Total Asset	0.652	7.69	0.761	1.83
Investment on Government Securities to Total Asset	0.166	36.62	0.108	28.41
Investment on Share and Debentures to Total Asset	0.0059	37.4	0.0004	114.75
Return on Loans and Advances	0.027	12.35	0.016	10.63
Return on Total Assets	0.017	20.08	0.012	10.94
Total Interest Earned to Total Assets	0.06	5.69	0.068	5
Total Interest Earned to Operating Income	1.228	4.65	1.76	5.59
Total Interest Paid to Total Assets	0.026	10.06	0.036	12.42
Liquidity Risk	0.1	12.96	0.074	28.53
Credit Risk	0.652	7.69	0.761	1.83
Investment on Government Securities to Total Investment	0.772	15.13	0.783	11.26
Investment on share and Debentures to Total Investment	0.03	38.58	0.004	118.64
Average Growth Rate (%)				
Average Growth Rate of deposit	24.02		25.95	
Average Growth Rate of Loans and Advances	28.45		27.16	
Average Growth Rate of Investment	3.49		8.88	
Average Growth Rate of et Net Profit	40.85		35	
Correlation coefficient between				
Deposit and Loans and Advances	0.9972		0.0059	
Deposit and Total Investment	0.673		0.5644	
Outside Assets and Net Profit	0.9948		0.9651	

CHAPTER-V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

The last chapter of this study is conclusions and recommendations developed from the completion of analysis part on the investment policy of sample banks. Conclusion and recommendation consists of two parts, the first one is conclusion which is drawn from the major findings of this study and the second one is recommendation to the sample banks to solve the problems found on the basis of analysis and conclusion.

5.1 Summary

The summary of the study are derived on the basis of analysis of financial and statistical analysis of BOKL and KBL.

BOKL has higher capability to meet the current obligation though it has lower current ratio but due to its higher cash and bank balance to total deposit ratio and cash and bank balance to current assets ratio. The proportion of investment on government securities of BOKL is also considerably higher than KBL. In terms of liquidity analysis KBL is considered slightly riskier than BOKL as the variability is higher in KBL while maintaining cash and bank balance. Thus it can be said KBL has not followed stable policy to maintain liquidity.

Assets management ratio measures how efficiently the bank manages its resources to generate profit. Assets management of BOKL seems better than that of KBL because it has higher total investment to total deposit, investment on government securities to total assets, investment on share and debentures to total asset though KBL has higher loans and advances to total assets and loans and advances to total deposit. It is also found that KBL has invested higher proportion of its total investment on loans and advances. The variability of KBL related to investment on share and debentures is much greater than that of BOKL. During the study period, it was found that the investment on share and debenture to total assets fund ratio of the bank is not homogenous.

From the profitability point of view, return on loans and advances reveals that BOKL has higher average return on loans and advances than KBL i.e. 0.027 vs. 0.016 and both the banks have lower variability. In terms of return on total assets, BOKL has higher average return on total assets with higher variability than KBL i.e. 1.7% vs. 1.2% but the fluctuation is greater in BOKL. In terms of total interest earned to total assets ratio KBL has slightly greater average ratio than BOKL i.e. 0.06 vs. 0.068 with almost same variability. In terms of total interest earned to operating income ratio KBL has greater average ratio than BOKL and both the banks have almost same variability. Which shows KBL consists of higher interest earning in its operating income. In terms of total interest paid to total assets ratio KBL has greater average ratio than BOKL with almost same variability. It shows KBL has higher interest expenses but the ratio is lower in both the banks. Thus from the assets management viewpoint, the profitability procession of these banks is not in better position.

Both the banks have lower liquidity risk i.e. BOKL has 0.1 and that of KBL is 0.074 but the variability of KBL is higher i.e. 12.96% vs. 28.53% and credit risk is higher in both the banks. The mean ratio of credit risk of BOKL and KBL are not consistent.

From the analysis of growth ratios of BOKL and KBL, following facts are found.
Growth ratio of total deposit is 24.02% and 25.95%
Growth ratio of loan and advances is 28.45% and 27.16%
Growth ratio of total investment is 3.49% and 8.88%
Growth ratio of Net profit is 40.85% and 35%
From the analysis of the growth ratios it can be concluded that BOKL and KBL are successful to increase in source of funds. The growth on investment shows that banks are not able to mobilize the deposit to the proper investment.

Coefficient of correlation between deposit and loan and advances of both the banks has significantly positive value i.e. 0.9972 and 0.9959. Similarly, the relationship between deposit and total investment of BOKL and KBL has positive correlation i.e. 0.6730 and 0.5644 respectively which is not significant to establish the correlation between these two variables. Coefficient of correlation between outside assets and net profit of BOKL and KBL has highly positive correlation i.e. 0.9948 and 0.9657.

From the trend analysis of the study period, projection of total deposit, loan and advances, total investment and net profit of BOKL and KBL is done for the next five years period with the help of calculated trend line. It is found all of the above variables are increasing with respect to time. The trend lines obtained are as followings.

Total deposit: Y = 4324 + 2758X (BOKL) and Y = 3448 + 2389X (KBL)

Loans and Advances: Y = 2248 + 2455X (BOKL) and Y = 2728 + 2246X (KBL)

Total Investment: Y = 2445 + 122X (BOKL) and Y = 1167 + 138X (KBL)

Net Profit: Y = 3 + 89X (BOKL) and Y = 31 + 43X (KBL)

5.2 Conclusion

The mean ratio of cash and bank balance to total deposit of BOKL is 0.1 and the coefficient of variation of the bank is 12.96 % and that of KBL is 0.106 and KBL is 0.074 and the coefficient of variation 28.53%. Thus KBL is in higher risk position. The mean ratio of investment on government securities to current assets of BOKL is 0.22 and that of KBL is 0.128. Similarly, coefficient of variation is 40.92% and 29.22% respectively. It shows that BOKL has invested more in less riskier sector though it has higher variability.

The assets management ratios of the bank reveal that the mean ratio of loan and advances to total deposit of BOKL is 0.749 and that of KBL is 0.886. It can be said that the banks have used their total deposit to provide greater loans and advances. KBL has comparatively higher proportion of loans and advances with lesser variability. The mean ratio of total investment to total deposit of BOKL is 0.242 and that of KBL is 0.158 and the variability is slightly greater in case of BOKL. It seems though the mean ratio of loans and advances to total deposit fund is lower, BOKL has greater portion of investment in other sector than KBL. Both the banks seems to have lesser proportion of investment in share and debentures but in KBL the variability is much greater i.e. 37.4% vs. 114.75%. During the study period, it was found that the investment on share and debenture to total assets fund ratio of the banks is not homogenous.

From the profitability point of view, return on loans and advances reveals that BOKL has higher average return on loans and advances than KBL i.e. 0.027 vs. 0.016 and both the banks have lower variability. BOKL has higher average return on total assets than KBL i.e. 1.7% vs. 1.2% but the fluctuation is greater in BOKL. Total interest earned to total assets ratio KBL has slightly greater average ratio than BOKL i.e. 0.06 vs. 0.068 with almost same variability. Total interest earned to operating income ratio of KBL has greater average ratio than BOKL i.e. 1.22 vs.1.76 and both the banks have almost same variability. This shows that KBL consists of higher interest earning in its operating income. Total interest paid to total assets ratio of KBL has greater average ratio than BOKL i.e. 0.036 vs. 0.026 and both the banks have almost same variability. It shows KBL has higher interest expenses but the ratio is lower in both the banks. Thus from the assets management viewpoint, the profitability procession of these banks is not in better position.

Both the banks have lower liquidity risk i.e. BOKL has 0.1 and that of KBL is 0.074 but the variability of KBL is higher i.e. 12.96% vs. 28.53% and credit risk is higher in both the banks. The mean ratio of credit risk of BOKL and KBL are not consistent.

From the analysis of growth ratios of BOKL and KBL, following facts are found.
Growth ratio of total deposit is 24.02% and 25.95%
Growth ratio of loan and advances is 28.45% and 27.16%
Growth ratio of total investment is 3.49% and 8.88%
Growth ratio of Net profit is 40.85% and 35%
From the analysis of the growth ratios it can be concluded that BOKL and KBL are successful to increase in source of funds. The growth on investment shows that banks are not able to mobilize the deposit to the proper investment.

Coefficient of correlation between deposit and loan and advances of both the banks has significantly positive value i.e. 0.9972 and 0.9959. Similarly, the relationship between deposit and total investment of BOKL and KBL has positive correlation i.e. 0.6730 and 0.5644 respectively which is not significant to establish the correlation between these two variables. Coefficient of correlation between outside assets and net profit of BOKL and KBL has highly positive correlation i.e. 0.9948 and 0.9657.

From the trend analysis of the study period, projection of total deposit, loan and advances, total investment and net profit of BOKL and KBL is done for the next five years period with the help of calculated trend line. It is found all of the above variables are increasing with respect to time. But the increase in net profit doesn't seem to have smooth growth i.e. fluctuating and the average net profit of these banks is also lower.

5.3 Recommendations

Suggestion is the output of the whole study. It helps to take corrective action in their activities in future. Different analysis was done to arrive in this step. On the basis of above analysis and findings of the study, following suggestions can be forwarded to overcome weakness, inefficiency and satisfactory improvement of the present fund mobilization and investment policy of BOKL and KBL.

Increase Deposit

The main source of commercial bank is collecting deposit from publics who don't need that fund recently. Without enough deposit collection, banks cannot operate smoothly. So it is recommended to collect more amounts as deposit through large variety of deposit schemes and facilities, like cumulative deposit schemes, prize bonds scheme, gift cheques scheme, recurring deposit scheme (life insurance), and monthly interest scheme. From the study it has been found that deposit and loans and advances are highly correlated similarly, outside assets and net profit are also highly correlated thus these facts should be considered by these banks. Similarly, customization of credit card, provide facility of transfer money to their home that live in foreign country. The amount needed to open an account should be minimized so that it will attract other small depositors and entrepreneurs for promoting and mobilizing their small investment.

More Investment in Government Securities

From the study, it shows that the investment in government securities of BOKL and KBL is not satisfactory. Investment on those securities issued by government i.e. Treasury bills, Development bonds , Saving certificates are risk free 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 that other means of investment. It is very important to know that the increase in large amount on assets as cash and bank balance is not considered good from the profitable point of view of the bank as it doesn't earn any return. So BOKL and KBL are 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".

More Investment on Share and Debentures

To get success in competitive market and to raise financial and economic development of the country a commercial bank must mobilize its funds in different sectors such as purchase 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 those companies may get chances to raise their income. The mean ratio of investment on share and debenture of BOKL and KBL is 0.0059 and 0.0004 which is very low. Recent year data shows the downfall of share markets and the boom of real estate investment. Both these markets are not productive in nature for the nation's gross income. Recently, government has controlled the interest rate to reduce such activities. So it is recommended to increase the ratio, with investing its funds in shares and debentures of different types of other companies in different areas.

Investment in Deprive and Priority Sector

NRB has directed to commercial banks to invest their certain percentage in deprives and priority sector and it is also responsible of banks. The study has been found that the banks have earned high profit in last year, it is because of their services are only profitable sector. It reveals that it has not granted loan on priority and deprives sector. So the bank 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.

Effective Portfolio Management

Portfolio Management is very important for every investor. In each investment, risk is involved which may cause the chance of losses or the variability of the returns. The greater is the variability of the returns the riskier will be the project. So it should be 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 BOKL and KBL should be examined time to time and alternation should be made to maintained equilibrium in the portfolio condition as far as possible. So it can be said that all eggs should not be kept in the same basket. The bank should make continuous yielding 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. When the bank grants loan and advances it must be collected after a certain period. 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 BOKL 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.

Policy making is very challenging job for the management of the banks. As per my view formulation policy should follow the under stated mechanism, which will enhance the effectiveness and success of the policy.

Investment Vision

The term investment is very important for commercial bank and main function also. Investment means use of their resource in different income sector. The study shows that the trend of investment of BOKL and KBL is decreasing level. So it is recommended to keep wide vision in investment while they utilizing their recourse and invest in different areas.

Innovate 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 customers so it should be strong and active. Without effective marketing strategy anyone be along behind in today's competitive environment. Different marketing techniques like advertisement through audio visual, published website, documentary etc. are followed. Similarly, attentions of customers through new technologies like, banking internet service, increase investment through their wide international banking network should be introduced. For this purpose the bank should develop an innovative approach of bank marketing.

Extend Branches all over the Country

Economic development of the country depends upon the growth of commercial banks. If the services of commercial banks expand all over the country it collects idle money from every corner of the country and can be utilized for income generation purpose. So that commercial banks should expand its hands all over rural and urban area of the country, not only in capital. Government of Nepal has also encouraged the commercial banks to expand banking service in rural areas and communities without making unfavorable impact in their profit. BOKL and KBL have been confining only in urban areas and are operating with limited branches. Therefore BOKL and KBL recommended expanding its hands and providing banking service and facilities to the rural areas and communities to accelerate the rural areas economic development.

Concluding Remarks

Nepal is a developing country and its economic environment is also not in a good condition. The strong economic structure is needed for the rapid overall development. Commercial bank plays significant role in the economic growth of the developing country like Nepal. Nepal's commercial banks face several problems related to fund mobilization and investment. They are working in traditional method and lacking modern banking technology so that they are needed to be professional business institutions. If commercial banks followed above mentioned suggestions, they would be successful in reaching to the modern innovative and competitive banking market. These suggestions will be helpful to the commercial banks to develop new system in the banking business.

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APPENDICES

Appendix A

I. Calculation of Current Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Current Ratio (X)	$(X\text{-Mean})^2$	Current Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.784	0.003457	0.907	0.001399
2005/06	0.784	0.003457	0.923	0.000458
2006/07	0.841	0.000003	0.922	0.000502
2007/08	0.873	0.000912	0.954	0.000092
2008/09	0.932	0.007957	1.016	0.005127
Total	4.214	0.015787	4.722	0.007577
Mean	0.843		0.944	
Standard Deviation	0.056		0.039	
Coefficient of variation (%)	6.667		4.122	

Current Assets and Current Liabilities					
BOKL					
Particulars	Amount (Rs. in Million)				
Current Assets	2004/05	2005/06	2006/07	2007/08	2008/09
Cash Baalance	139	161	219	536	565
Balance with NRB	643	579	883	606	1324
Balance with Banks and Financial Institu	0	0	213	297	292
Money at call and Short Nootice	272	328	259	72	243
Loans, Advances and Bills Purchase	5646	5912	9399	12462	14647
Other Assets	233	181	278	154	222
Total Current Assets	6933	7161	11251	14127	17293
Current Liabilities					
Borrowing Outstanding	912	6	730	100	100
Deposit liabilities	7741	8942	12388	15833	18083
Bills Payable	38	19	25	51	51
Proposed Dividend Payable	0	0	135	32	77
Income Tax Liabilities	0	0	0	0	0
Other Liabilities	153	167	107	161	241
Total Current Liabilities	8844	9134	13385	16177	18552
KBL					
Particulars	Amount (Rs. in Million)				
Current Assets	2004/05	2005/06	2006/07	2007/08	2008/09
Cash Baalance	111	135	190	565	549
Balance with NRB	219	210	384	244	1120
Balance with Banks and Financial Institu	112	43	96	123	106
Money at call and Short Notice	90	145	372	55	30
Loans, Advances and Bills Purchase	5584	6891	8929	11335	14593
Other Assets	37	93	74	338	380
Total Current Assets	6153	7517	10045	12660	16778
Current Liabilities					
Borrowing Outstanding	401	251	212	100	293
Deposit liabilities	6268	7768	10557	12774	15710
Bills Payable	7	11	16	65	70
Proposed Dividend Payable	0	6	0	0	6
Income Tax Liabilities	0	0.2	11	0	0.2
Other Liabilities	108	107	94	331	432
Total Current Liabilities	6784	8143.2	10890	13270	16511

Source: Balance Sheet; Annual Report of BOKL and KBL

II. Calculation of Cash and Bank Balance to Total Deposit Ratio, Standard Deviation and Coefficient of Variation				
	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.101	0.00000036	0.071	0.00000900
2005/06	0.083	0.00030276	0.05	0.00057600
2006/07	0.106	0.00003136	0.063	0.00012100
2007/08	0.091	0.00008836	0.073	0.00000100
2008/09	0.121	0.00042436	0.113	0.00152100
Total	0.502	0.00084720	0.37	0.00222800
Mean	0.100		0.074	
Standard Deviation	0.013		0.021	
Coefficient of variation (%)	12.965		28.526	

Cash and Bank Balance and Total Deposit					
BOKL					
Particulars	Amount (Rs. in Million)				
Cash and Bank Balance	2004/05	2005/06	2006/07	2007/08	2008/09
Cash Baalance	139	161	219	536	565
Balance with NRB	643	579	883	606	1324
Balance with Banks and Financial Institutions	0	0	213	297	292
Total Cash and Bank Balance	782	740	1315	1439	2181
Total Deposit	7741	8942	12388	15833	18083
KBL					
Particulars	Amount (Rs. in Million)				
Cash and Bank Balance	2004/05	2005/06	2006/07	2007/08	2008/09
Cash Baalance	111	135	190	565	549
Balance with NRB	219	210	384	244	1120
Balance with Banks and Financial Institutions	112	43	96	123	106
Total Cash and Bank Balance	442	388	670	932	1775
Total Deposit	6268	7768	10557	12774	15710

Source: Balance Sheet; Annual Report of BOKL and KBL

III. Calculation of Cash and Bank Balance to Current Asset Ratio, Standard Deviation and Coefficient of Variation				
	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.113	0.000001	0.072	0.000005
2005/06	0.103	0.000085	0.052	0.000493
2006/07	0.117	0.000023	0.067	0.000052
2007/08	0.102	0.000104	0.074	0.000000
2008/09	0.126	0.000190	0.106	0.001011
Total	0.561	0.000403	0.371	0.001561
Mean	0.112		0.074	
Standard Deviation	0.009		0.018	
Coefficient of variation (%)	8.00		23.81	

IV. Calculation of Investment on Government Securities to Current Assets RatioStandard Deviation and Coefficient of Variation				
	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.342	0.014884	0.182	0.002852
2005/06	0.300	0.006400	0.148	0.000376
2006/07	0.207	0.000169	0.129	0.000000
2007/08	0.150	0.004900	0.116	0.000159
2008/09	0.101	0.014161	0.068	0.003672
Total	1.100	0.041	0.643	0.007059
Mean	0.220		0.129	
Standard Deviation	0.090		0.038	
Coefficient of variation (%)	40.92		29.22	

Investment on Government Securities					
BOKL					
Particulars	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
Government Treasury Bills	2110	1559	1387	1281	907
Government Saving Bonds	0	0	0	0	0
Government Securities	261	587	944	832	837
NRB Bonds	0	0	0	0	0
Investment on Government Securities	2371	2146	2331	2113	1744
BOKL					
	2004/05	2005/06	2006/07	2007/08	2008/09
Government Treasury Bills	1061	1055	1242	1278	882
Government Saving Bonds	0	0	0	0	0
Government Securities	58	58	55	190	197
NRB Bonds	0	0	0	0	0
Investment on Government Securities	1119	1113	1297	1468	1079

Source: Balance Sheet; Annual Report of BOKL and KBL

Appendix B

I. Calculation of Loans and Advances to Total Deposit Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.729	0.000408	0.881	0.000025
2005/06	0.661	0.007779	0.887	0.000001
2006/07	0.759	0.000096	0.846	0.001600
2007/08	0.787	0.001429	0.887	0.000001
2008/09	0.810	0.003697	0.929	0.001849
Total	3.746	0.013	4.430	0.003476
Mean	0.749		0.886	
Standard Deviation	0.052		0.026	
Coefficient of variation (%)	6.91		2.98	

Loans and Advances and Total Deposit

BOKL					
Particulars	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
Loans and Advances	5646	5912	9399	12462	14647
Total Deposit	7741	8942	12388	15833	18083
KBL					
Particulars	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
Loans and Advances	5584	6891	8929	11335	14593
Total Deposit	6268	7768	10557	12774	15710

Source: Balance Sheet; Annual Report of BOKL and KBL

II. Calculation of Total Investment to Total Deposit Ratio, Standard Deviation and Coefficient of Variation

Year	BOKL		KBL	
	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.320	0.006115	0.190	0.001011
2005/06	0.291	0.002421	0.179	0.000433
2006/07	0.242	0.000000	0.159	0.000001
2007/08	0.202	0.001584	0.167	0.000077
2008/09	0.154	0.007709	0.096	0.003869
Total	1.209	0.017829	0.791	0.005391
Mean	0.242		0.158	
Standard deviation	0.060		0.033	
Coefficient of variation (%)	24.70		20.76	

Total Investment

Year	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
BOKL	2477	2598	2992	3204	2783
KBL	1190	1394	1678	2138	1510

Source: Balance Sheet; Annual Report of BOKL and KBL

III. Calculation of Loans and Advances to Total Assets Ratio, Standard Deviation and Coefficient of Variation

Year	BOKL		KBL	
	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.595	0.003204	0.752	0.000088
2005/06	0.600	0.002663	0.765	0.000013
2006/07	0.645	0.000044	0.749	0.000154
2007/08	0.703	0.002642	0.754	0.000055
2008/09	0.715	0.004020	0.787	0.000655
Total	3.258	0.012571	3.807	0.000965
Mean	0.652		0.761	
Standard deviation	0.050		0.014	
Coefficient of variation (%)	7.695		1.825	

Total Assets					
Year	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
BOKL	9496	9857	14570	17721	20496
KBL	7428	9010	11918	15026	18538

Source: Balance Sheet; Annual Report of BOKL and KBL

IV. Calculation of Investment on Government securities to Total Assets Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.250	0.006989	0.151	0.001849
2005/06	0.218	0.002663	0.124	0.000256
2006/07	0.160	0.000041	0.109	0.000001
2007/08	0.119	0.002247	0.098	0.000100
2008/09	0.085	0.006626	0.058	0.002500
Total	0.832	0.018565	0.540	0.004706
Mean	0.166		0.108	
Standard deviation	0.061		0.031	
Coefficient of variation (%)	36.62		28.41	

V. Calculation of Investment on Share and Debentures to Total Assets Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.002317	0.000013	0.000040	0.00000017
2005/06	0.009333	0.000011	0.000033	0.00000018
2006/07	0.005971	0.000000	0.000025	0.00000018
2007/08	0.006264	0.000000	0.001198	0.00000055
2008/09	0.005855	0.000000	0.000971	0.00000027
Total	0.029740	0.000025	0.002267	0.00000135
Mean	0.005948		0.000453	
Standard deviation	0.002225		0.000520	
Coefficient of variation (%)	37.41		114.75	

V. Calculation of Investment on Share and Debentures to Total Assets Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.002317	0.000013	0.000040	0.00000017
2005/06	0.009333	0.000011	0.000033	0.00000018
2006/07	0.005971	0.000000	0.000025	0.00000018
2007/08	0.006264	0.000000	0.001198	0.00000055
2008/09	0.005855	0.000000	0.000971	0.00000027
Total	0.029740	0.000025	0.002267	0.00000135
Mean	0.005948		0.000453	
Standard deviation	0.002225		0.000520	
Coefficient of variation (%)	37.41		114.75	

Investment on Share and Debentures

	Amount (Rs. in Million)				
Year	2004/05	2005/06	2006/07	2007/08	2008/09
BOKL	22	92	87	111	120
KBL	0.3	0.3	0.3	18	18

Source: Balance Sheet; Annual Report of BOKL and KBL: Schedule 12

Appendix C

I. Calculation of Return on Loans and Advances, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.022	0.000023	0.015	0.000002
2005/06	0.024	0.000008	0.015	0.000002
2006/07	0.028	0.000001	0.019	0.000007
2007/08	0.029	0.000005	0.015	0.000002
2008/09	0.031	0.000018	0.018	0.000003
Total	0.134	0.000055	0.082	0.000015
Mean	0.027		0.016	
Standard Deviation	0.003		0.002	
Coefficient of variation (%)	12.35		10.63	

Net Profit

	Amount (Rs. in Million)				
Year	2004/05	2005/06	2006/07	2007/08	2008/09
BOKL	127	139	262	361	461
KBL	84	103	170	174	261

Source: Annual Report of BOKL and KBL; Balance Sheet and P/L a/c

II. Calculation of Return on Total Assets, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.013	0.000019	0.011	0.000002
2005/06	0.014	0.000012	0.011	0.000002
2006/07	0.018	0.000000	0.014	0.000003
2007/08	0.020	0.000007	0.012	0.000000
2008/09	0.022	0.000023	0.014	0.000003
Total	0.087	0.000061	0.062	0.000009
Mean	0.017		0.012	
Standard Deviation	0.003		0.001	
Coefficient of variation (%)	20.09		10.94	

III. Calculation of Total Interest Earned to Total Assets Ratio, Standard Deviation and Coefficient of Variation				
	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.060	0.00000016	0.067	0.00000036
2005/06	0.062	0.00000256	0.067	0.00000036
2006/07	0.056	0.00001936	0.066	0.00000256
2007/08	0.058	0.00000576	0.064	0.00001296
2008/09	0.066	0.00003136	0.074	0.00004096
Total	0.302	0.00005920	0.338	0.00005720
Mean	0.060		0.068	
Standard Deviation	0.003		0.003	
Coefficient of variation (%)	5.697		5.003	

Total Interest Earned					
	Amount (Rs. in Million)				
Year	2004/05	2005/06	2006/07	2007/08	2008/09
BOKL	567	607	819	1034	1347
KBL	499	605	791	957	1374

Source: Annual Report of BOKL and KBL; P/L a/c

IV. Calculation of Total Interest Earned to Operating Income Ratio, Standard Deviation and Coefficient of Variation				
	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	1.340	0.012544	1.670	0.008100
2005/06	1.180	0.002304	1.830	0.004900
2006/07	1.210	0.000324	1.690	0.004900
2007/08	1.200	0.000784	1.690	0.004900
2008/09	1.210	0.000324	1.920	0.025600
Total	6.140	0.016280	8.800	0.048400
Mean	1.228		1.760	
Standard Deviation	0.057		0.098	
Coefficient of variation (%)	4.647		5.590	

Net Operating Income					
BOKL					
Particulars	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
Total Interest Eerned	567	607	819	1034	1347
Interest Income	567	607	819	1034	1347
Less: Interest Expenses	286	241	339	417	563
Net Interest Income	281	366	480	617	784
Add: Commission and Discount	77	72	97	129	150
Other Operating Income	1	4	19	23	43
Exchange Gain	64	72	80	93	136
Net Operating Income	423	514	676	862	1113
KBL					
Particulars	Amount (Rs. in Million)				
	2004/05	2005/06	2006/07	2007/08	2008/09
Total Interest Eerned	499	605	791	957	1374
Interest Income	499	605	791	957	1374
Less: Interest Expenses	240	337	397	498	816
Net Interest Income	259	268	394	459	558
Add: Commission and Discount	23	26	40	48	79
Other Operating Income	2	10	15	17	19
Exchange Gain	14	26	20	41	59
Net Operating Income	298	330	469	565	715

Source: Annual Report of BOKL and KBL; P/L a/c

V. Calculation of Total Interest Paid to Total Assets Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.030	0.000019	0.032	0.000014
2005/06	0.024	0.000003	0.037	0.000001
2006/07	0.023	0.000007	0.033	0.000008
2007/08	0.024	0.000003	0.033	0.000008
2008/09	0.027	0.000002	0.044	0.000067
Total	0.128	0.000033	0.179	0.000099
Mean	0.026		0.036	
Standard Deviation	0.003		0.004	
Coefficient of variation (%)	10.07		12.42	

Total Interest Paid					
	Amount (Rs. in Million)				
Year	2004/05	2005/06	2006/07	2007/08	2008/09
BOKL	286	241	339	417	563
KBL	240	337	397	498	816

Source: Annual Report of BOKL and KBL; P/L a/c

Appendix D

I. Calculation of Liquidity Risk (Cash and Bank Balance to Total Deposit Ratio), Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.101	0.00000036	0.071	0.00000900
2005/06	0.083	0.00030276	0.05	0.00057600
2006/07	0.106	0.00003136	0.063	0.00012100
2007/08	0.091	0.00008836	0.073	0.00000100
2008/09	0.121	0.00042436	0.113	0.00152100
Total	0.502	0.00084720	0.37	0.00222800
Mean	0.100		0.074	
Standard Deviation	0.013		0.021	
Coefficient of variation (%)	12.965		28.526	

II. Calculation of Loans and Advances to Total Assets Ratio, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.595	0.003204	0.752	0.000088
2005/06	0.600	0.002663	0.765	0.000013
2006/07	0.645	0.000044	0.749	0.000154
2007/08	0.703	0.002642	0.754	0.000055
2008/09	0.715	0.004020	0.787	0.000655
Total	3.258	0.012571	3.807	0.000965
Mean	0.652		0.761	
Standard deviation	0.050		0.014	
Coefficient of variation (%)	7.70		1.82	

Appendix E

I. Calculation of Investment on Government Securities to Total Investment, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.957	0.034373	0.940	0.024712
2005/06	0.826	0.002959	0.799	0.000262
2006/07	0.779	0.000055	0.773	0.000096
2007/08	0.659	0.012679	0.687	0.009178
2008/09	0.637	0.018117	0.715	0.004597
Total	3.858	0.068183	3.914	0.038845
Mean	0.772		0.783	
Standard Deviation	0.117		0.088	
Coefficient of variation (%)	15.13		11.26	

II. Calculation of Investment on Share and Debentures to Total Investment, Standard Deviation and Coefficient of Variation

	BOKL		KBL	
Year	Ratio (X)	$(X\text{-Mean})^2$	Ratio (Y)	$(Y\text{-Mean})^2$
2004/05	0.0089	0.000461	0.0003	0.000015
2005/06	0.0354	0.000025	0.0002	0.000016
2006/07	0.0291	0.000002	0.0002	0.000016
2007/08	0.0346	0.000018	0.0084	0.000018
2008/09	0.0438	0.000181	0.0119	0.000059
Total	0.1518	0.000686	0.0210	0.000124
Mean	0.0304		0.0042	
Standard Deviation	0.0117		0.005	
Coefficient of variation (%)	38.58		118.64	

Appendix F

I. Growth Rate of Total Deposits

Year	BOKL		KBL	
	Total Deposit (Rs. in Million)	Growth Rate (%)	Total Deposit (Rs. in Million)	Growth Rate (%)
2004/05	7741	0	6268	0
2005/06	8942	15.51	7768	23.93
2006/07	12388	38.54	10557	35.90
2007/08	15833	27.81	12774	21.00
2008/09	18083	14.21	15710	22.98
Average Growth Rate (%)		24.02		25.95

II. Growth Rate of Loans and Advances

Year	BOKL		KBL	
	Loans and Advances (Rs. in Million)	Growth Rate (%)	Loans and Advances (Rs. in Million)	Growth Rate (%)
2004/05	5646	0	5584	0
2005/06	5912	4.71	6891	23.41
2006/07	9399	58.98	8929	29.57
2007/08	12462	32.59	11335	26.95
2008/09	14647	17.53	14593	28.74
Average Growth Rate (%)		28.45		27.17

III. Growth Rate of Total Investment

Year	BOKL		KBL	
	Total Investment (Rs. in Million)	Growth Rate (%)	Total Investment (Rs. in Million)	Growth Rate (%)
2004/05	2477	0	1190	0
2005/06	2598	4.88	1397	17.39
2006/07	2992	15.17	1678	20.11
2007/08	3204	7.09	2138	27.41
2008/09	2783	-13.14	1510	-29.37
Average Growth Rate (%)		3.50		8.89

IV. Growth Rate of Net Profit				
	BOKL		KBL	
Year	Net Profit (Rs. in Million)	Growth Rate (%)	Net Profit (Rs. in Million)	Growth Rate (%)
2004/05	127	0	84	0
2005/06	139	9.45	103	22.62
2006/07	262	88.49	170	65.05
2007/08	361	37.79	174	2.35
2008/09	461	27.70	261	50.00
Average Growth Rate (%)		40.86		35.01

Appendix G

I. Correlation between Deposit and Loans and Advances				
Bank	r	P.E. (r)	6*P.E. (r)	Result
BOKL	0.9972	0.0017	0.0099	Sisnificantly Correlated
KBL	0.9959	0.0025	0.0184	Sisnificantly Correlated

Calculation of Coefficient of Correlation between Deposit and Loans and Advances

BOKL					
Year	Total Deposit (X) (Rs. in Million)	Loans and Advances (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	7741	5646	59923081	31877316	43705686
2005/06	8942	5912	79959364	34951744	52865104
2006/07	12388	9399	153462544	88341201	116434812
2007/08	15833	12462	250683889	155301444	197310846
2008/09	18083	14647	326994889	214534609	264861701
Total	62987	48066	871023767	525006314	675178149
Correlation Coefficient (r)	0.9972				
P.E. (r)	0.0017				
6*P.E. (r)	0.0099				
KBL					
Year	Total Deposit (X) (Rs. in Million)	Loans and Advances (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	6268	5584	39287824	31181056	35000512
2005/06	7768	6891	60341824	47485881	53529288
2006/07	10557	8929	111450249	79727041	94263453
2007/08	12774	11335	163175076	128482225	144793290
2008/09	15710	14593	246804100	212955649	229256030
Total	53077	47332	621059073	499831852	556842573
Correlation Coefficient (r)	0.9959				
P.E. (r)	0.0025				
6*P.E. (r)	0.0148				

II. Correlation between Deposit and Total Investment				
Bank	r	P.E. (r)	6*P.E. (r)	Result
BOKL	0.6730	0.1650	0.9901	No Significant Correlation
KBL	0.5644	0.2056	1.2334	No Significant Correlation

Calculation of Coefficient of Correlation between Deposit and Total Investment

BOKL					
Year	Total Deposit (X) (Rs. in Million)	Total Investment (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	7741	2477	59923081	6135529	19174457
2005/06	8942	2598	79959364	6749604	23231316
2006/07	12388	2992	153462544	8952064	37064896
2007/08	15833	3204	250683889	10265616	50728932
2008/09	18083	2783	326994889	7745089	50324989
Total	62987	14054	871023767	39847902	180524590
Correlation Coefficient (r)	0.6730				
P.E. (r)	0.1650				
6*P.E. (r)	0.9901				
KBL					
Year	Total Deposit (X) (Rs. in Million)	Total Investment (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	6268	1190	39287824	1416100	7458920
2005/06	7768	1394	60341824	1943236	10828592
2006/07	10557	1678	111450249	2815684	17714646
2007/08	12774	2138	163175076	4571044	27310812
2008/09	15710	1510	246804100	2280100	23722100
Total	53077	7910	621059073	13026164	87035070
Correlation Coefficient (r)	0.5644				
P.E. (r)	0.2056				
6*P.E. (r)	1.2334				

III. Correlation between Outside Assets and Net Profit				
Bank	r	P.E. (r)	6*P.E. (r)	Result
BOKL	0.9948	0.0031	0.0188	Sisnificantly Correlated
KBL	0.9651	0.0207	0.1241	Sisnificantly Correlated

Calculation of Correlation Coefficient between Outside Assets and Net Profit

BOKL					
Year	Outside Assets (Rs. in Million)	Net Profit (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	8123	127	65983129	16129	1031621
2005/06	8510	139	72420100	19321	1182890
2006/07	12391	262	153536881	68644	3246442
2007/08	15666	361	245423556	130321	5655426
2008/09	17430	461	303804900	212521	8035230
Total	62120	1350	841168566	446936	19151609
Correlation Coefficient (r)	0.9948				
P.E. (r)	0.0031				
6*P.E. (r)	0.0188				
KBL					
Year	Outside Assets (Rs. in Million)	Net Profit (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	6774	84	45887076	7056	569016
2005/06	8285	103	68641225	10609	853355
2006/07	10607	170	112508449	28900	1803190
2007/08	13472	174	181494784	30276	2344128
2008/09	16103	261	259306609	68121	4202883
Total	55241	792	667838143	144962	9772572
Correlation Coefficient (r)	0.9651				
P.E. (r)	0.0207				
6*P.E. (r)	0.1241				

Calculation of Outside Assets					
BOKL					
	Amount (Rs. in Million)				
Particulars	2004/05	2005/06	2006/07	2007/08	2008/09
Loans and Advances	5646	5912	9399	12462	14647
Total Investment	2477	2598	2992	3204	2783
Total Outside Assets	8123	8510	12391	15666	17430
KBL					
	Amount (Rs. in Million)				
Particulars	2004/05	2005/06	2006/07	2007/08	2008/09
Loans and Advances	5584	6891	8929	11335	14593
Total Investment	1190	1394	1678	2137	1510
Total Outside Assets	6774	8285	10607	13472	16103

Appendix H

I. Trend Analysis of Total Deposit

BOKL					
Fiscal Year	Time (X)	Total Deposit (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	7741	1	59923081	7741
2005/06	2	8942	4	79959364	17884
2006/07	3	12388	9	153462544	37164
2007/08	4	15833	16	250683889	63332
2008/09	5	18083	25	326994889	90415
Total	15	62987	55	871023767	216536
KBL					
Fiscal Year	Time (X)	Total Deposit (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	6268	1	39287824	6268
2005/06	2	7768	4	60341824	15536
2006/07	3	10557	9	111450249	31671
2007/08	4	12774	16	163175076	51096
2008/09	5	15710	25	246804100	78550
Total	15	53077	55	621059073	183121

Computation of Regression Line for BOKL (Total Deposit)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ …..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 62987$ ..... (4)

$15a + 55b = 216536$ ..... (5)

Solving equations (4) and (5),

a = 4324

b = 2758

Hence, the required regression line is **Y = 4324 + 2758X.**

Computation of Regression Line for KBL (Total Deposit)

Regression line of Y on X is

Y = a + bX ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣXY, ΣX^2 in equations (2) and (3), we get,

5a + 15b = 53077 ..... (4)

15a + 55b = 183121..... (5)

Solving equations (4) and (5),

a = 3448

b = 2389

Hence, the required regression line is **Y = 3448 + 2389X.**

Projection of Total Deposit for next five years

Fiscal Year	X	Total Deposit (Rs. in Million)	
		BOKL	KBL
		Y= 4324+2758X	Y= 3448+2389X
2009/10	6	20872	17782
20010/11	7	23630	20171
20011/12	8	26388	22560
20012/13	9	29146	24949
20013/14	10	31904	27338

II. Trend Analysis of Loans and Advances					
BOKL					
Fiscal Year	Time (X)	Loans and Advances (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	5646	1	31877316	5646
2005/06	2	5912	4	34951744	11824
2006/07	3	9399	9	88341201	28197
2007/08	4	12462	16	155301444	49848
2008/09	5	14647	25	214534609	73235
Total	15	48066	55	525006314	168750
KBL					
Fiscal Year	Time (X)	Loans and Advances (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	5584	1	31181056	5584
2005/06	2	6891	4	47485881	13782
2006/07	3	8929	9	79727041	26787
2007/08	4	11335	16	128482225	45340
2008/09	5	14593	25	212955649	72965
Total	15	47332	55	499831852	164458

Computation of Regression Line for BOKL (Loans and Advances)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 48066$ ..... (4)

$15a + 55b = 168750$ ..... (5)

Solving equations (4) and (5),

$a = 2248$

$b = 2455$

Hence, the required regression line is Y = **2248 + 2455X.**

Computation of Regression Line for KBL (Loans and Advances)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 47332$ ..... (4)

$15a + 55b = 164458$..... (5)

Solving equations (4) and (5),

$a = 2728$

$b = 2246$

Hence, the required regression line is **Y = 2728 + 2246X.**

Projection of Loans and Advances for next five years

Fiscal Year	X	Loans and Advances (Rs. in Million)	
		BOKL	KBL
		Y = 2248 + 2455X	Y = 2728 + 2246X
2009/10	6	16978	16204
20010/11	7	19433	18450
20011/12	8	21888	20696
20012/13	9	24343	22942
20013/14	10	26798	25188

III. Trend Analysis of Total Investment					
BOKL					
Fiscal Year	Time (X)	Total investment (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	2477	1	6135529	2477
2005/06	2	2598	4	6749604	5196
2006/07	3	2992	9	8952064	8976
2007/08	4	3204	16	10265616	12816
2008/09	5	2783	25	7745089	13915
Total	15	14054	55	39847902	43380
KBL					
Fiscal Year	Time (X)	Total investment (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	1190	1	1416100	1190
2005/06	2	1394	4	1943236	2788
2006/07	3	1678	9	2815684	5034
2007/08	4	2138	16	4571044	8552
2008/09	5	1510	25	2280100	7550
Total	15	7910	55	13026164	25114

Computation of Regression Line for BOKL (Total Investment)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 14054$ ..... (4)

$15a + 55b = 43380$ ..... (5)

Solving equations (4) and (5),

$a = 2445$

$b = 122$

Hence, the required regression line is **Y = 2445 + 122X.**

Computation of Regression Line for KBL (Total Investment)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 7910$.. ..... (4)

$15a + 55b = 25114$..... (5)

Solving equations (4) and (5),

$a = 1167$

$b = 138$

Hence, the required regression line is **Y = 1167 + 138X.**

Projection of Total Investment for next five years

Fiscal Year	X	Total Investment (Rs. in Million)	
		BOKL	KBL
		Y = 2445 + 122X	Y = 1167 + 138X
2009/10	6	3177	1995
20010/11	7	3299	2133
20011/12	8	3421	2271
20012/13	9	3543	2409
20013/14	10	3665	2547

IV. Trend Analysis of Net Profit					
BOKL					
Fiscal Year	Time (X)	Net Profit (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	127	1	16129	127
2005/06	2	139	4	19321	278
2006/07	3	262	9	68644	786
2007/08	4	361	16	130321	1444
2008/09	5	462	25	213444	2310
Total	15	1351	55	447859	4945
KBL					
Fiscal Year	Time (X)	Net Profit (Y) (Rs. in Million)	X^2	Y^2	XY
2004/05	1	84	1	7056	84
2005/06	2	103	4	10609	206
2006/07	3	170	9	28900	510
2007/08	4	174	16	30276	696
2008/09	5	261	25	68121	1305
Total	15	792	55	144962	2801

Computation of Regression Line for BOKL (Net Profit)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 1351$. ..... (4)

$15a + 55b = 4945$ ..... (5)

Solving equations (4) and (5),

$a = 3$

$b = 89$

Hence, the required regression line is **Y = 3 + 89X.**

Computation of Regression ine for KBL (Net Profit)

Regression line of Y on X is

$Y = a + bX$ ..... (1)

The constants a & b can be obtained by solving two normal equations

$\Sigma Y = na + b\Sigma X$ ..... (2)

$\Sigma XY = a\Sigma X + b\Sigma X^2$ ..... (3)

Substituting the values of n, ΣX, ΣY, ΣXY, ΣX^2 in equations (2) and (3), we get,

$5a + 15b = 792$ ..... (4)

$15a + 55b = 2801$ ..... (5)

Solving equations (4) and (5),

$a = 31$

$b = 43$

Hence, the required regression line is **Y = 31 + 43X.**

Projection of Net Profit for next five years

Year	X	Net Profit (Rs. in Million)	
		BOKL	KBL
		Y = 3 + 89X	Y = 31 + 43X
2009/10	6	537	289
20010/11	7	626	332
20011/12	8	715	375
20012/13	9	804	418
20013/14	10	893	461