A STUDY ON LIQUIDITY MANAGEMENT OF NEPALESE COMMERCIAL BANKS

(With Reference to Kumari Bank, Bank of Kathmandu and Machhapuchchhre Bank)

A THESIS

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VIVA- VOCE SHEET

We have conducted the Viva- Voce examination of thesis prepared by

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DECLARATION

I hereby declare that the thesis **A STUDY ON LIQUIDITY MANAGEMENT OF NEPLESE COMMERCIAL BANKS (With Reference to Kumari Bank, Bank of Kathmandu and Machhapuchhchhre Bank)** submitted to Nepal Commerce Campus, the Faculty of Management, Tribhuvan University is my original work done for the partial fulfillment of requirements for the Master's Degree of Business Studies (M.B.S.) under the supervision **Dr. Sushil Bhakta Mathema and Rajeshwor Neupane, Nepal Commerce Campus.**

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Needless to say 'to err is human' and I cannot to the expectation. For any remaining error in the calculation and the description reported in this dissertation are, of course, entirely my responsibilities. I hope the possible errors would be covered by the subsequent studies in this field in this future.

Rasna Joshi

Researcher

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ABBREVIATIONS

BOK	: Bank of Kathmandu
CD	: Credit Deposit
CEO	: Chief Executive Officer
CRR	: Cash Reserve Ratio
CV	: Coefficient of Variation
ETC	: Etcetera
F/Y	: Fiscal Year
IMF	: International Monetary Fund
KBL	: Kumari Bank Limited
L/C	: Letter of Credit
Ltd.	: Limited
MBL	: Machhapuchhchhre Bank Limited
NBB	: Nepal Bank Limited
NIDC	: Nepal Industrial Development Corporation
NPA	: Non Performing Assets
NRB	: Nepal Rastra Bank
PE	: Probable Error
Pvt.	: Private
RBB	: Rastriya Banijya Bank
SD	: Standard Deviation
SLR	: Statutory liquidity Ratio

CHAPTER - I
INTRODUCTION

1.1 Background of the Study

Economic development of any country can be active only through a balance growth in the field of trade, commerce, industry and agriculture. It has equally self-evidenced that the development on these fields cannot made possible without achievement of sound banking system in the country. Many countries aspiring for the rapid economic development have developed banking and non- banking.

Therefore for the development of any country finance plays significant role to upgrade the economic condition of the country. In context of our country Nepal development in financing sector is in developing process. Now from every prospect there is gradual increase in significant process. So, from every condition financing sector need to be progress.

Finance, is the art and science of managing money. it affect the lives of every person and every commercial organization. Finance is concerned with the process, institutions, market and instruction involved in the transfer of money among and between individual, business and government. Previously finance was limited for only use of long-term fund.

Banking plays significant role in the economic development of a country. Bank is a resource for the economic development which maintains the self- confidence of various segments of society and extends credit to the people. So, commercial banks are those financial institutions mainly dealing with activities of the trade, commerce, industry and agriculture that seek regular financial and other helps from them for growing and flourishing, the objectives of commercial banks is to mobilized idle resources into the most profitable sector after collecting them from scattered sources commercial bank contributes significantly n the formation and mobilization of internal capital and development effort.

The concept of the banking has been developed from the ancient history with the effort of ancient goldsmiths who developed the practice of storing people's gold and valuables under such arrangement the depositors would leave their gold for safekeeping would get back their gold and valuable after paying a small amount as fee for safekeeping and serving.

The role of money in an economy is very important. Proper and well planned management of money directs, determines and enhances the health and productivity of total financial sector and the performance of financial sector affect the growth of economy. Hence, Money is the topic to manage and banks are the manager. The existence of a bank is for the change in every aspect of human being and its presence is for the upliftment of people. Banks are the back bone of the economy.

In the economic development of the country the banks are playing vital role, so if there is insufficiencies of banking and financial facilities, the growth of the economic development become slow. The main objectives of the commercial are to earn profit by proper mobilization of resources. It is fairly safe to say that banks are not the outcome of the economic development but are the courses for it. Specially, commercial banks provide different facilities to the people engaged in trade, commerce and industry. That is why; they are being the means to uplift the society. Commercial banks functions are different way such as accepting deposit, providing interest. In the formulation of capital performing agency functions which make business easier and they also play an important role in credit creation when economy is in boom commercial banks increase interest rate which reduce the profitability of inflation and incase of depression they reduce interest rate. So that, people interested in financial sector.

Banking industry has acquired a key position in mobilizing resources for finance and social economic development of a country. No function is important to the economy and its constituent part than financing. “Bank assists both the flow of goods and services from the products to the consumers and financial activities of the government. Banking provides the country with the monetary system of making payment and is in important part of the financial system, which makes loans to maintain and increase the level of consumption and production in the economy” (American Institute of Banking, 1972:162).

Bank is an organization that transacts money. It collects funds as a saving from public and invests them full into most desirable and highly yielding sector as full to a process of economic development. It develops saving habit of people so bank and banking has always played a significant role for the financial activities in the business.

The main objectives of the bank are collection of amount from public in a form of saving and providing short-term loan (for the development of industry, trade, and business) to the ones in need. The development of country's economy is possible when banking operation exist in both rural and urban area of the country. Development of banking facilities leads to the development of trade and industry. So it is said that he bank is backbone of economic development in modern competitive business world. At present financial institutions are viewed as catalyst in the process of the economic growth. The economic activities of a country can hardly be carried forward without the assistance of financial institutions. They are the indispensable part of the development process. Banking institutions are inevitable for mobilizing resources for finance and social economic development of a country and which is important to all parties i.e. generally public, business, organization, government and other small financial institutions. The development of any country is always measured by its economic development though economic indices. That's why every country has given emphasis on boost up its economic. The mobilization of domestic resources is one of the key factors in the economic development of a country.

"The importance of the banking as the nerve center of economic development can't be over emphasized and it is said that bank which are the need of and great wealth of country water irrigation good banks are for the country's industry and trade" (Desai:1967). The bank draws surplus money from the public, who can't use the money at the time and lend to those who give attention to use for productive purpose. Bank lends loan to the customers, gain interest amount, the bank draw the money from institution or in divided or people pay the interest amount by interest rate. Banking institutions collects scattered financial resources from the mass and invest them among those who are associated with the economic, commercial and social activities of the country.

The economic activities of a country can hardly be carried forward without the assistance of financial institutions. They are the indispensable part of the development process. It is the fact that the unorganized financial system leads the country nowhere. Therefore, central bank plays a major role on keeping the financial system of a country organized by providing those guidelines and directives.

Overall national development of any country depends upon the economic development of that country and economic development largely depends upon the financial infrastructure of

that country. Therefore, the primary goal of any nation including Nepal is rapid economic development to promote the welfare of the people and the nation as well. Nepal being one of the least developed countries has been trying to embark upon the path of economic development by economic growth rate and developing all sectors of economy.

Bank is a financial institution, which is established for depositing, withdrawing, borrowing and lending money. It is a intermediary accepting deposits and granting loans offers the widest menu of services of any financial institution (Rose, 2002:2).Bank is an Institution which deals with money and credit. It accepts deposit from the public and mobilizes the fund to productive sectors. It also provides remittance facility to transfer money from one place to another. Generally a bank accepts deposit from business institutions and individuals, which is mobilized into productive sectors mainly business and consumer lending. Bank is, therefore known as a dealer of money. As present context bank is not only confined to accepting deposits and disbursing loan. In addition to this, a bank may be engaged in different types of functions such as remittance, discounting bills etc. "Indeed, many financial institutions-including security dealers, brokerage firms, mutual funds, and insurance companies are trying to be as similar as possible to banks in the services they offers" (Rose, 2002:2). A modern bank performs such a variety of functions that it is difficult to give a precise and general definition of a bank.

1.2 Statement of the Problem

The main objective of any commercial bank is collection of fund and its proper lending in productive areas. Now-a-days, the banking institutions are facing the problems from the external factors, such as political, legal, economical, social, infrastructure, quality of work etc. The unstable politics is the main problem of banking institutions. The other common problems are lack of general awareness in the public mass, lack of proper information about share market, limited user of money and capital market, disqualified management team, low activity of NEPSE, day to day increasing security problem etc. In this regard three commercial banks (BOK, KBL and MBL) are able to meet their fund requirement from collection and mobilization view is main research problem of the study.

Liquidity is maintained to meet regular operation and make schedule payment. Every bank tries to maintain its liquidity position for fulfillment of mainly two purposes. They are precaution motive for unexpected needs and contingencies due to irregularities in cash flow. To fall in this area may severely damage public confidence upon bank. We can imagine the reaction of customers if the cash counter and teller machines is to be closed one morning because the bank is temporarily out of cash and cannot cash cheques. So and must give high priority to meet demands for liquidity. Meanwhile, as we know that the financial institutions are profit oriented and there should be optimum disbursement of deposits in loan and advances so that more and more income can be generated. Hence it is clear that the problem of liquidity or excess liquidity to be specific is a regular phenomenon in the developing economics. The most important problem that the financial institutions want to know is the appropriate level of liquid assets to meet the threat of withdrawals, give away loans to the customers and to invest in profitable ventures. Without the proper management of liquidity, the above mentioned daily operation of financial institution cannot be met.

Managing liquidity has become very vital in financial institutions. Every bank is therefore, concentrating on liquidity management. They are searching the areas that can safeguard there liquidity to make liquidity position fluently as much as possible. Thus, the specific research questions regarding liquidity management in Nepalese Commercial Banking sector are identified as follows:

- Are the banks maintaining sufficient liquidity?
- Are the banks aware for the liquidity requirements?
- Do the liquidity positions of the banks satisfy their requirement?
- How are the banks going to manage their liquidity positions to the sufficient balance?

1.3 Objectives of the Study

Based on this aspect this field work tries to deal with the study of liquidity position of Nepalese commercial banks.

The Specific Objectives of the Study are:

- To analyze the existing liquidity position of the Nepalese commercial banks.
- To evaluate the trend of deposit mobilization of the Nepalese commercial banks.
- To examine the relationship between liquidity and profitability of the Nepalese commercial banks.
- To provide suggestion and recommendation on the basis of major findings.

1.4 Significance of the Study

There are more than 32 Commercial banks functioning in our country at present. But there are only few researches in liquidity management of Nepalese commercial bank. Liquidity is one of the main functions of commercial bank where the whole banking business is rested upon. thus the study three Nepalese commercial bank and especially in their liquidity policies carry a great significance to the banking professional, to the share holder of the banks and to the student who wants to know about liquidity policy of commercial bank. The proposed bank namely BOK, KBL and MBL are significantly similar in many aspects of their volume and quality of operation.

1.5 Limitations of the Study

This study is simply a partial study for the fulfillment of MBS degree, which has to be finished within limited period. Hence, this study is not far from several limitations of its own kind, which weaken the scope of the study to some extent.

Some of such limitations are as follows.

- The study is mainly based on secondary data collected from different sources.
- The study period will be covered by only five fiscal year i.e. from 2007/08 to 2010/2011.
- Out of the numerous affecting factors, this study concentrates only on those factors, which are related with investment policy, and available in the form required for analyzing the different issues.
- Due to wide range of data deficiencies only simple technique have been used for the analysis of the data.
- Only there commercial banks have been selected as sample for the study, i.e. BOK, KBL and MBL.
- This study has been carried out for the partial fulfillment of master's degree, faculty of management of TU. So the time and resource are major limitations of the study.

1.6 Organization of the Study

This thesis has been organized into five major chapters.

Chapter 1. Introduction

This chapter includes the introductory framework of the study introduction of the study, statement of the problems, objectives of the study, focus of the study, limitations of the study and other related of the study.

Chapter 2. Review of Literature

This chapter deals with the review of previous research in this field in the form of books, journals and unpublished materials. This is an independent research on the related field.

Chapter 3. Research Methodology

This chapter consists of the research design, sources of data, data collection procedure, tools for analysis (statistical and financial tools), method of data analysis and hypotheses testing tools.

Chapter 4. Presentation and Analysis of Data

This chapter concerns with the application of defined research method on the collected data and information. The general result after the application of research method on the data was also analyses and interpreted in this chapter.

Chapter 5. Summary Conclusions and Recommendations

To summaries the whole thesis report, it presents the summary and concluding remark whit a suggestive package as recommendation. At the end of this thesis, bibliography and appendices also included.

CHAPTER - II
LITERATURE REVIEW

The purpose of literature review is thus to find out what research studies have been conducted in ones field of study, and what remains to be done. Review of literature provides foundation to the study. The literature survey also minimizes the risk of pursuing the dead-end in research. to make meaningful research study conceptual review has been done through the study of various books, journals and articles and researches conducted by the previous researchers in the field of working capital i.e. research work, thesis and dissertation

2.1 Conceptual Review

Banking industry in Nepal

The specific date of beginning of money and banking transaction in Nepal is unknown. The banking functions were carried out in unorganized sectors. It is found that minted coins, copper coins, silver coins, and gold coins were introduced by different kings.

Institutional development of modern banking in Nepal had begun from early 1990s. With the establishment of Nepal Bank Limited in 1994 B.S, the new era of banking sector had started in Nepal. As a central bank, Nepal Rastra bank was established in 2013 B.S. under provision of Nepal Rastra Bank Act 2012with the objectives of helping in the development of monetary and financial sector by undertaking various functions. Another step was added when Rastriya Banijya Bank was established in 1966(2022BS) under the Banijya Bank Act 1965(2021BS). Likewise, Agriculture Development Bank was established in 1965(2024BS) with the objective of increasing the life standard of those people who are involved in agriculture.

The Bank opened before the decade of 1980s was by the government. No private sector was permitted to open banks in Nepal. The process of development adopted liberalized economic policies to develop the financial sector. As a pre-condition to economic liberalization, the foreign investment and Technology Transfer Act, 1981 came into existence. The government allowed private sectors to open banks. Joint venture projects were also allowed. Many joint venture commercial banks and financial institutions were established. As a result, Nepal Arab Bank Limited was established as a first joint venture commercial bank in 1985 under the provision of commercial bank Act, 1974 and Company Act 1965. Then, Nepal Indosuez

Bank Limited was established in 1985 and Nepal Grind lays Bank Limited has been changed into Standard Chartered Bank Nepal Limited and Nepal Indosuez Bank Limited has been changed into Nepal Investment Bank in 2002 which has not foreign share now. After the restoration of multiparty democracy, the newly formed government adopted liberalized policies aimed at accelerating economic growth and considerably reducing state interference in business. The governments encouraged foreign and private investment by offering attractive incentives and facilities including 100% foreign ownership in all but few sectors. This help to create conductive business environment for banking. As a result, additional commercial banks come into existence. When the internal violence shows green signal to manage and Nepal Rastra Bank make ease for rules and regulations, many new commercial banks are coming existence and exiting development banks and financial institutions are upgrading them as commercial banks.

Concept of Commercial Bank

In general, commercial banks are these financial institutions, which play the role of financial intermediary in collection and disbursement of funds from surplus unit to deficit unit. Upadhaya and Tiwari (2037) have stressed that the commercial bank is established with a view to provide short term debt necessary for trade and commerce of the country along with other ordinary banking business such as collecting the surplus in the form of deposit, lending debts by discounting bills of exchange, accepting valuable goods in security, acting as an agent of the client etc. In the same way, Abrol and Gupta (2002) explain accept deposits and provides loans primarily to business firm. On the other hand the broad concept of commercial bank holds that the commercial bank is a banking institution other than central banks. The commercial bank is the only institution other than central bank permitted to accept demand and deposits.

Functions of Commercial Banks

Commercial bank performs different functions such as core function and support to the business world as well as general people. Core function includes two type of functions- fund based and non-fund based functions. Similarly, which are carried out to fulfill the core functions American institute of Banking (1972), has fixed out four major functions of a commercial bank receiving payments, handling payments, making loans & investment and creating money by extension of credit. Similarly, Upadhaya & Tiwari (2037) have argued that there are three major functions of commercial bank. These three functions are:-

I. Primary functions
   - Accept deposits
   - Provide loans & Credit

II. Agency functions
   - Sales and purchase of securities.
   - Working as an agent & trustee of a customer.
   - Transfer of funds
   - Provide financial information.

III. General functions
   - Safe custody of valuable assets.
   - Issue of credit instruments.
   - Dealing with foreign exchange.
   - Competition of trade information & statistics.

Concept of Liquidity

Liquidity is the status and part of asset, which can be used to meet the obligation. Simply it can be viewed in term of liquidity stored in the balance sheet and in term of liquidity available through purchased funds. The degree of liquidity depends upon the relationship between cash assets plus those assets, which can be quickly turned into cash and the liability awaiting payment (Engune; 1972: 110).

The liquidity position of banks is very important to maintain the public faith upon the banks. When a bank fails to repay deposited money on demanded, it leads to the loss of faith upon banks. Lack of adequate liquidity is often one of the first sings that a bank is in serious financial trouble. Therefore in banking, liquidity is very fundamental for smooth operation of daily banking activities.

Liquidity of the bank should be maintained according to the standard. Excess liquidity as well as lack of liquidity can be considered as bad symptoms to the firm. On the other hand the bank cannot operate its internal and other marketing function properly. If the bank does not hold adequate liquidity, it will not be able to take advantage of favorable business opportunities and meet emergencies such as fires or competitors marketing campaign. A very

high degree of liquidity is also bad, here assets remain idle which adds nothing to bank's earning. The firm's funds will be unnecessarily tied up in current assets which could be used otherwise.

"Liquidity is the banker's ability to satisfy demand for cash in exchange for deposit" (R.S Sayers; 1992: 231).

"An asset is completely liquidity if its owner can count with absolute certainty on leaning into cash at a very short notice and without loss" (Manning Decay; 1989:240).

As there are differing views of different writers about liquidity so is the issue of maintaining liquidity according to its principle i.e. the real bills doctrine, the shiftability theory, the anticipated income theory and liability management theory. The prediction of liquidity needs is always not earning and accumulating. So every institution should mange their liquidity in such a way that they will be able to ensure the fund-capacity to meet all normal business commitment at a reasonable price at all time. The earning of liquidity should refer to the money stock in the banks and financial institutions and the assets that can be converted as soon as the demand made or the capacity of commercial banks to fulfill the need of depositors for cash.

Thus, researcher can say that the skill of bank to hold adequate liquidity helped to earn its reputation. Thus, researcher can say that it is optimum necessity of the bank to maintain a proper balance between high liquidity and low liquidity. Liquidity is the word that the banker uses to describe his ability to satisfy demand for cash in exchange for deposit. Therefore liquidity management is much more important than we realize, because a bank can be closed if it cannot raise enough liquidity even though technically it may still be solvent.

2.1.1 Forms of Liquidity

The liquid resources of a firm may be kept in various forms: cash balance in current account, reserve drawing power under a cash credit or overdraft arrangement, short term marketable securities like treasury bills, and short-term deposits with other companies (called inter-corporate deposits) (Chandra;1984:112).

Here are some of the pros and cons of the forms of maintaining liquidity.

Cash balance in current account provides the highest degree of liquidity. However, the interest earned on current account balance is nil. Hence it is costly to keep cash balance in current account. Yet, no firm can conceivably do without some balances in current accounts.

Reserve drawing power under a cash credit or overdraft arrangement may appear to be an economical way of maintaining liquidity. The firm is not required to pay any interest on the unutilized portions of the cash credit or overdraft limits, yet it has a ready access to the undrawn amounts. There is, however, a catch here. If a part of the cash credit or overdraft limit, kept in reserve to meet contingencies, remains unutilized over a prolonged period of time, the bankers may reduce the cash credit or overdraft limit. This seems to be the reason why may firms draw fully on these limits, for some periods of time at least, even if it means keeping the funds virtually idle in their current accounts.

Investment in treasury bills and other short-term marketable securities earns a low rate of interest. Further, unless these are held till date of maturity the firm may incur more transaction costs. This form of liquidity very secured, but may not have much appeal to corporate firms.

Depositing money with other companies, on a short-term basis, is fairly attractive in terms of rate of return. Presently, inter-corporate deposits earn 15 to 21 percent rate of interest. Typically, these deposits are made for a period of 2 to 6 months, often with a right to recall at a month's notice. While very attractive form the point of view of rate of return, inter-corporate deposits suffer form tow disadvantages: (i) a minimum of one month's time may be required to convert them into cash, and (ii) degree of risk associated with them is higher compared to other forms of maintaining short-term liquidity which are virtually risk free (Chandra; 1984:112).

2.1.2 Theories of Liquidity

Basically the principle theories are specially designed for banking sectors but it seems not much difference between application of banking sector and financial sector. So in this prospect conflicts between objective of liquidity, safety and probability relating to finance companies can also be highlighted firm given theories. Hence economists have tried to resolve these conflicts by laying down certain theories form time to time. These principle or theories, in face govern the distribution of assets keeping in view these objectives. They have also come to be known as the theories of liquidity management, which are discussed as under:

- The real bills doctrine
- The shiftability theory
- The liability management

i) The Real Bill Doctrine

The real bills doctrine states that any bank should advance only short-term self-liquidating productive loans to business firms. Self liquidating loans are those, which are meant to finance the production, storage, transportation and distribution. Which such goods are ultimately sold, the loans are considered to liquidate themselves automatically such short-term self-liquidation productive loan passes three advantage. Firstly they possess liquidity that is why, they liquidate themselves automatically. Second since they mature in the short run and are for productive purpose there is not risk of their running into bad debts. Thirdly, being productive such loans earn income for the bank.

ii) The Shiftability Theory

H.G Mouiton who asserted that if any bank should maintain a substantial amount of assets that can be shifted into the other banks for cash without material loss incase of necessity, then there is no need to rely on maturities propounded the shifted ability theory of liquidity. According to this view, an asset to be perfectly shifted able must be immediately transferable without capital loss when the need for liquidity arises. But in general crises requires that all banks should possess such asses which can be shifted into the central bank which is the lender of the last resort. This theory has certain elements of truth.

iii) The Anticipated Income Theory

H.V Porch developed the anticipated income theory in 1944 on The basis of the practice of extending term loans by the United State of America (USA) commercial bank of the practice of extending term loan by U.S.A commercial banks. According to this theory, regardless of the nature and character of a borrower's business, the bank or any financial institution plans the liquidation of the long term loan form the anticipated income of the borrower. A term loan is for a period exceeding one year and extending to less than five years. It is granted against the hypothecation of machinery, stock and even immovable property. The bank puts restriction on the financial activities of the borrower while granting loan. At the time of granting a loan, the bank takes into consideration not only the security but also anticipates earning of the borrower. In fact, anticipated income is the main consideration.

This theory is superior to the real bill doctrine and the shiftability theory because it fulfills these objectives of liquidity, safety and profitability. Liquidity is assured to the bank when the borrower saves and repays the loans regularly in installment. It satisfies the safety

principle because the bank grants a loan not only on the basis of a good security but also on the ability of the borrower to term loan is assured of regular income. Lastly, the term loan is highly beneficial for the business community, which gets fund for medium-term.

iv) The Liabilities Management Theory

This theory was developed in The 1960's. According to this theory there is no need for banks to grant self-liquidating loans and keep liquidity assets because they can borrow reserve money in the money market in case of need. A bank can acquire reserves by crating additional liabilities against it, form different sources. These sources include issuing of tie, certificates of deposit, borrowing form other commercial banks, borrowing form central bank, raising of capital funds by issuing shares, and plugging back profit.

2.1.3 Determinants of Liquidity Management

Bank needs liquidity to meet loan demands, deposit withdrawal and for maintaining cash reserve ratio as prescribed by central bank. So far the proper management of banking needs good strategy to follow. Many factors affect the liquidity of a bank. They are:

The External Factor Includes:

- Primary Interest Rate of bank: If interest rate is high cash demand is low and liquidity need is low.
- Saving and investment situation: If income and saving scale of people is high, lows liquidity. If investment in commercial field is high, high liquidity
- Growth and scheming position of the financial market: If financial market of bank is in growth and prosperity then low liquidity and it opposite, high liquidity.
- Central Bank requirement
- If the Supply and demand position of loan, saving and investment situation

The Internal Factors are:

1. Lending policy: great quantity of long term investment needs high liquidity. If short term loan policy, low liquidity.
2. Management Capacity: If management is efficient and ready to bear rise, low liquidity is needed.
3. Strategic planning and funds flow situation: Liquidity depends upon planning and strategy.

The degree of liquidity depends upon the relationship between cash, assets plus those assets, which can be quickly converted into cash. The bank should have proper strategy to invest in those assets which can be quickly converted into cash.

2.1.4 Measuring Liquidity

Liquidity measures are needed in order to estimate the likelihood of a firm being able to meet its fixed financial obligation, especially payments to creditors. In measuring the ability of a firm to generate cash, here we are using the term "Liquidity", although some analysts would prefer the term "solvency" when the analysis is measuring the long-run survival ability of the firm.

Both managers and external observers of a corporation must frequently rely on financial reports to judge the liquidity of the firm. For example, a bank officer considering a loan request will use financial statements in an attempt to measure a corporation's financial liquidity to determine the likelihood to the firm being able to repay the loan when it comes due. Since bank loans are generally for short periods of time, bank officer will primarily be interested in the firm's short-term survival prospects. But even a long-term investor, such as a bond buyer or an investor in survive in the short run for it to prosper in the long run. Thus, the measures of financial liquidity of a corporation are important information inputs for all persons evaluating the financial affairs of a corporation.

2.1.5 Technique of Liquidity Management

i. Traditional Model

According to traditional model of liquidity management, it is related to strong liquidity in bank investment or to use control background to use as temporary sources of fund. As this idea is to swift liquid assets into cash and to meet the needs of bank for increased loans demand or deposit to withdrawal is also called as shift ability or assets conversion approach. This approach of liquidity is based on safety at the expresses of profitability; under this approach storing of liquidity can be classified into four types.

- **Primary Reserve**

The primary reserve is that part of bank, cash or reserve which can be arranged more than the required statutory such as Cash Reserve Ratio (CCR) or Statutory Liquidity Ratio (SLR). Here the excess statuary reserve can be used for working reserve to avoid impressing cash storage.

- **Secondary Reserve**

It includes storing of liquidity in short term government securities such as insuring in treasury bills. It also includes high quality securities with very low default risk.

- **Territory Reserve**

It is arranged to provide liquidity protection against long term requirement which is related to increase loan demand or reduce deposit inflow government securities with maturity period of one or two year are includes in it.

- **Investment Reserve**

The security with maturity period of more than 2 years is included on investment reserve.

ii. Liquidity Management Model

Under the liquidity management, any institution may generate liquidity by managing its profitability. Although traditional model shows and important part of cash management, it doesn't help to show the appropriate utilization of fund. Therefore several models have been developed to determine cash balance and to maintain profit position. One of the techniques of mixing the cash balance with loan investment is Baumol Model which is based on the high low cash balance. The following models are described as follows:

- **Baumol Model**

According to this model, minimizing the opportunity cost of holding cash and maximizing the return on the fund, the cash balance should be maintained at A minimum level and the funds not required for immediate use, be invested. Baumol model identifies the cash maintenance as analogous to inventory maintenance and demonstrates that the model of economic order quantity.

Baumol model is based on the assumption that:

i. Cash is used to constant rate
ii. The periodic cash requirement is more or less save
iii. There are some cost such as transaction cost that decrease cash balance

Hence Baumol has conducted that minimum size is the amount of cash that is enough to start with at the beginning of a period to meet the cash need of that period transaction.

- **Miller Mode**

Due to high opportunity cost, all liquidity need should not be maintained in cash that bears no returns. It is necessary to maintain cash balance for transition and compensation balance requirement but the liquidity need for the other purpose doesn't need to be in cash. Therefore any financial institution can take advantage by appropriately balancing the available funds between cash and loan investment. The size of cash needs depends on the pattern & degree of regulating inflow and outflows. Hence, Miller had developed a model known as Miller Model, which takes into account the realistic pattern of cash flow and prescribes which and how much to transfer format to investment account vice-versa. This model is based on the assumption that the daily net cash flows receipt minus payments is random is size as well as in the matter of negative or positive flow. Hence this model set to rang of high and low limits within which cash balance is allowed to fluctuate and set the target cash balance between these two limits.

2.1.6 Importance of Liquidity

Commercial banks are business firm like all other business firms which attempt to earn profit as high as possible. The bank earns its profit primarily in the form of interest on its earning assets, loan and investment in maximizing profit, it seems reasonable that bank should invest as much as possible it could result into great danger if it could not repay its depositors as demand liquidity is important too, to gain outside confidence and for bank's own survival through difficulties and day to day transaction. The main importance of liquidity is explained below:

- **To Meet the Demand do Depositors**

The bank must safe guard its position by maintaining sufficient liquidity. The bank should be able to make prompt payment of cash as demanded by its depositors otherwise will looses its customer's confidence.

- **To Meet the Loan Demand**

In order to increase profitability, bank should maintain adequate liquidity to meet demand or borrowers. In case the demand for loan by excellent borrowers could be fulfilled, the bank may loose its customers who are the sources of its high profits.

- **To Maintain Cash Reserve Ratio**

Each bank must follow the directive of the central bank; otherwise the very bank may be punished. The bank can maintain minimum cash reserve ratio only if it is in good liquidity position.

- **To Maintain Administrative Expenses**

A bank having good liquidity position holds adequate cash enough for its internal operation or says administrative expenses, the bank should satisfy its personnel by allowing attractive salary, and bonus etc and it will be able to meet other expenses relating to its management affairs.

- **To Maintain Contingencies**

Bank should maintain certain position of liquidity for contingencies which may be required to save the bank form future risk such as fire, stickers' competitors etc and other economic instabilities.

- **Expansion and Growth**

Nature and environment is changing continuously. Bank should adopt the environmental factors for continuous existence. For continuous survival, bank should expend amount on expand and growth program for which liquidity is needed. In this point of view, also liquidity is the most important factor of modern bankers.

Thus form above explanation researcher can conclude that maintaining adequate liquidity is fundamental function of bank. Good liquidity position of any bank helps to earn its goodwill.

2.1.7 Demand and Supply of Bank Liquidity

Bank should maintain sufficient level of liquidity in order to meet immediate nature liabilities and to satisfy the depositors claim for cash when demanded. To maintain the sufficient amount, the bank should observe demand and supply of bank liquidity.

Demand of Bank Liquidity

In the bank business, liquidity is demanded for following purpose:

- **To Meet Depositors Claim**

In order to operate banking business, sufficient cash balance or sufficient level of liquid assets must be maintained by all bankers. The requirement of maintaining cash balance as liquid assets depends upon amount of depositors.

- **To Meet Cash Reserve Ratio (CRR)**

Each commercial bank must maintain satisfactory minimum cash reserve ratio as prescribed by central bank because the directive of central bank must be followed by each commercial bank. At present in Nepal each commercial bank must maintain at least 2% cash in hand in their safety valve 7% of total value of current and saving account and 4.5% of total fixed deposit must be maintain as cash reserve with Nepal Rastra Bank. When cash reserve ratio is increased by the central bank, the demand for liquidity is also simultaneously increased.

- **To Disburse Loans and Advances**

Commercial banks should earn profit for survival .So they must advance loan against interest. After maintaining minimum liquidity balance (cash reserve ratio, and statutory liquidity ratio), bank liquidity also demanded by the borrowers. Hence banks need to maintain certain level of liquidity to approve loan proposal.

- **Operating Expenses and Taxes**

It is the expenses incurred selling banking services. It also includes taxes. Banks need certain liquidity to meet administration expenses such as payment for salary, rent stationery, telephone, electricity, taxes etc. Bank should control the administration expenses to minimize the level of liquidity and maximize the investment.

- To meet off balance sheet liabilities like Letter of Credit (L/C) outstanding, guarantee outstanding, forward contact etc.
- To meet contingencies like priority sector lending
- Payment of interest, commissions, dividends

Supply of Bank Liquidity

The supply of liquidity of the banks will arise from the following headings of its assets and liabilities:

- **Cash Balance**

The main supply of liquid of a bank comes from cash balance held by it. So cash balance is the first source of liquidity. Cash balance is also called the first line of defense of bank

- **Balance with Other Banks**

The commercial bank should maintain current account with local and foreign banks for transaction purpose. The banks may maintain more balance with the central bank in excess of required cash reserve ratio will be the source of liquidity.

- **Money of Call and Short Notice**

Bank utilize some portion of fund in inter bank call money or overnight placement of fund or advancing for very short period. These funds can be called back with short notice. So it is called as second line of defense of liquidity.

- **Public Deposits**

The main source of supply of liquidity is the deposit received from different individuals and institutional deposition. This is the most important source of bank liquidity because majority of bank fund is collected through this source. The successful operation and existence of a commercial bank depends upon the proper and profitable mobilization of deposit.

- **Loan Repayment**

Bank loans have predetermined time period of maturity and rate of interest. All loans are repaid into bank after expiry of due date. Hence repayment of loan is also known as the source of bank liquidity.

- **Reserve Funds**

Banks should open different types of reserve funds to use when needed. Reserve fund are created form the profit. Certain percentage of annual profit is appropriated to various reserve funds such as general reserve, reserve for doubtful debts, depreciation fund etc. Such reserve funds are also one to the source of bank liquidity.

- **Line of Credit From Agency Bank**

The other sources of short term capital may be available from foreign banks such as line of credit and over drafting facility allowed by different foreign banks outside the country.

- **Investment in Government (Govt.) Securities**

At the tome of surplus fund the bank may invest such funds in government securities is also good sources of investment.

2.1.8 Predicting Banks Liquidity Needs

Banks liquidity needs can be predicted from following factors:

- **Growth of Banking Habit**

Incase people don't transact their business activities like receipts and payment through cheque and credit cards the actual cash payment by the bank will decline thus resulting in the decline of liquidity based in same ratio in the other hand of all most people transact through bank then bank is included to maintain sufficient liquidity.

- **Existence of Clearing House**

If there is clearing house arrangement the bank will not need to handle all cash because settlement of going and receiving payments will be done through the debit and credit entries made in the a\c book of trading house.

- **The Type and Size of Deposit Accounts**

If the bank holds deposit accounts mainly it needs not maintain more liquidity because these deposit will be repaid only after the expiry of fixed period in case of saving account (a\c) withdrawals will be regulated and incase of current a\c deposits are withdraw periodically. The withdrawals might be expected at the time of price fluctuations.

- **Occasion and Festival Period**

When people are in festival mood like in Dashain or Tihar or when they are to celebrate certain occasions like marriage ceremonies, they need mote money at that time more liquidity needs can be predicted.

- **Nature of Advance and Facilities of Refinance**

The liquidity need of the bank depends in the credit policy of central bank of securing and refinance facility or the loans already granted by commercial banks and discounting of bills if

a bank has utilized discounting business and approved loans then the central bank may provide refinancing facilities in this case bank can predict less liquidity needs.

2.2 A Brief Overview of Liquidity

Basically, liquidity gives a brief idea about the continuous cash flow management. Liquidity is the availability of cash at the time needed at a reasonable cost. The capacity of bank to exchange cash for deposit is the liquidity. It is the asset of the banks in form of cash and near about cash. Near about cash means the asset, which can be converted into cash immediately without losing the value of them. The bank's capacity to meet immediate maturing liabilities is the liquidity of banks.

Liquidity is that part of the total assets, which can be paid immediately to meet the current obligation. A commercial bank needs a high degree of liquidity in its assets. The liquidity of an asset refers to the ease and certainty with which it can be turned into cash. Banks must hold sufficient liquidity in form of cash and liquid asses such as government securities CRR in central banks. So those banks never fail to meet daily cash demand. Ensuring adequate liquidity is one of the most important task faced by the bank management. A bank is considered to be liquid if only it has ready access to immediately spendable funds at reasonable cost at the time these funds are needed. This suggests that a liquid bank has the right amount of immediately spendable funds.

The commercial banks or financial institution should keep the stock of liquid assets according to the ratio of liability of deposit fixed by the bank according to section (25) of financial company Act 2042 (1985). The term of liquid assets represent the assets mention as follows:

- Nepalese bank notes and currencies deposited in the company.
- Deposit of the company in the bank or any other commercial banks.
- Government Bonds
- Any other assets as specified by the bank form time to time

It defines the liquid assets of the commercial banks and regarded liquid assets as cash stock of the commercial banks, short term and security, short-term business securities, the government and the treasury bills. It is clear form it that the liquid assets mean the cash and the asset, which can be converted immediately in the time of need.

All assets (real and financial) differ in degrees of liquidity. Generally, financial assets, especially bank deposit and stocks and bonds issued by major corporations tend to be highly liquid. Money is the most liquid asset because it need not be converted into any other form to be spent. Unfortunately, the most liquid assets, including money, tend to carry the lowest rate return. One measures of the cost of holding money is the income forgone by the owner who fails to convert his or her money balances into more profitable investment in real or financial assets. The rate of interest determined by the financial system is a measure of the penalty suffered by an investor for not converting into income-earning assets. Thus liquidity management is much more important than we may realize because a bank can be closed if it cannot raise enough liquidity even though technically it may still be solvent.

Present section deals about concept or findings of earlier scholars on the concerned field of the study. It helps to develop the study as link in a chain of research that is developing and emerging the knowledge about the related field.

The effort has been made in this present section to examine and review some related articles published in different economic journals, bulletins, magazines and newspapers.

A central bank is regular controller and supervisors of all banking and monetary system in any nation as such central bank in any country issue directive for maintaining liquidity of each commercial bank. The directive of a central bank of each country of the world depends upon economy and monitory situation for particular nation from time to time as such in Nepal. Nepal Rastra Bank (NRB) issue directive of maintaining liquidity to all commercial banks which does not follow its directive of maintaining required liquidity. In this contest NRB has been issuing several instructions related to criteria of measuring bank liquidity from time to time as we need of the situation of the country.

As defined in the directives effective from 2049 push 13th to 2050 Ashad 31st each commercial bank has to maintain a type of liquidity which was known as statutory ratio:

- **Statutory Liquidity Ratio**

1. Each commercial bank must incest at least 22% of its total deposit liability in Govt bond treasury bills and NRB bonds.
2. Each commercial bank must maintain at least 4% of total deposit in its treasury sand at least 18%of total deposit must credits with NRB a\c

In 1st shrawan 2050, the compulsory account investment of 22% of total deposit by each commercial bank on government bonds treasury bills NRB bonds were cancelled. According from time to time each commercial bank has to maintain cash reserve ratio of 12% of total deposit by keeping 4% of cash balance with itself and 8% with NRB.

According to Nepal Rastra Bank act of Bhadra 25th 2058, Nepalese finance company has to maintain the cash under following heading.

- Each finance company has to maintain 7% cash reserve ratio into current and saving account.
- Each finance company has to maintain cash reserve ratio of 4.5% under fixed deposit.
- Each finance company has to maintain 2% cash in hand in their safety valve

So Nepal Rastra Bank as the central bank of Nepal has issued directives of mainly of liquidity to all finance companies operating in Nepal. Nepal Rastra bank can take strong direct action against ant finance companies, which doesn't follow its directives instruction related to criteria of measuring of bank liquidity form time in accordance with the nee of situation of the country regarding the maintenance of cash.

According to NRB act, commercial bank has to maintain 10% reserve of the total deposit that was collected 4 weeks before from the general public this reserve is calculated by taking 4 week's average. From that 7% must be should be kept as statutory liquid ratio (SLR) by the commercial bank themselves in their safety vault.
If these reserves are not maintained according to the NRB act or less than require is maintained then they are fined according to section 32's sub-section 2. In this case for the first week 0.03% for the second week 0.05% and 0.1% for the third week or more shall be fined in the remaining amount. Despite several policy changes, the problem of excessive liquidity in the banking sector could not be resolved. From 3903% in 1997 the liquidity in the banking sector now stands at 4401%

In the very first month of 2055 NRB lowered the compulsory cash reserved ratio by 2% to encourage bank to reduce the spread between their interest rates on lending and deposits. As if failed to generate the desired response, NRB later directed the banks to reduce their interest on leading by 2% and deposit by 1%. NRB also changed a statutory requirement for finance

companies. Of the reserve that the companies are required to maintain at 8% of their risky assets 5% must be in the form of primary reserves according to the revision. As compared to only 4% required earlier.

2.3 Review of Articles

Pradhan (1986) in the article entitled "Financial Liquidity assessment and discriminate analysis" had observed the financial ratio to judge the liquidity position of enterprise has become a conventional approach to deal with the problem. However, it does not mean to say that the ratio analysis is not useful in assessing financial liquidity. It is useful but seems inadequate.

It may sometime produce misleading results. Moreover, the limitations of ratio analysis arise from the fact that methodology is basically unvaried. That is each ratio is examined in isolation. The combined effects of several ratios are based solely on the judgment of the financial analyst. Therefore to overcome these shortcomings of ratio analysis, it is necessary to combine different ratio into a meaningful prediction model. For that purpose the discriminate analysis has been proposed and Altman appeared to be the first person to use it in bankruptcy prediction context in this paper, an effort has been made to show how a discriminate analysis may be useful in assessing the financial liquidity position of the selected pubic useful, if not optimal result.

Amihud and Mendelson's (1988) A study carried on "Liquidity and Assets Prices; Management Implication" assert that the greater the liquidity of assets the greater its value. They examine the benefits and increasing liquidity, and the role of a number of financial management polices and institutional arrangements as liquidity enhancing investment. However this study was not directly related to the stock market but gives clear picture that what is liquidity why it is important in financial management decisions. They suggested in their study that firms should carry out policies which increase the liquidity of financial claims they issue, since this may lower the required return on these claims and increase its market value. Which implies that other thing being equal, a firm could increase its market value by increasing the liquidity of the claims it issues. Increasing liquidity is however costly; thus firm has to balance the benefits of increased liquidity with the costs. Amihud and Medelson suggested and observed variety of means which form can use to increase the liquidity of the claims. The observed corporate financial policies and institutional arrangement are

standardization of claims, corporate borrowing, disclosure of inside information, underwriting new public issues, stock denominations listings on organized stock exchange etc.

Subedi (2002) in the article entitled "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 of 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 case it has gone down by 10.41% and 5.99% respectively. It may be because their concentration was only on recovery of the huge Non Performing Assets (NPA). However, Mr. Subedi pointed out that no matter what the size of NPA is and the circumstances are, each bank has to collect the deposit in order to create a lending and to invest in the new ventures. Except RBB all banks have increment in deposit collection.

Khatri (2005**)**, has analyzed the ordinance pros and cons, in general speaking termed as Umbrella Act. He has expressed his disagreement in the ordinance regarding the qualification of the Board of Director's composition. The qualification set is out of the total number of directors, two thirds have to be graduates in specified disciplines-management, commerce, economics, accounting, finance, law, banking and statistics. Another requirement is five years work experience either in banking or public limited companies or in a gazette level government posts. He argues why a science graduate or someone with engineering background cannot be the director, it is not justifiable to question on the capacities of the people with these background as the in the past some successful General Manager and Directors in Nepal Industrial Development Corporation (NIDC) were engineers. He further writes that activities like project financing and asset valuation require engineers and similarly that there cannot be any reason for the position of director in banks to be graduates in some specific fields only. CEO of the "Ka" category qualification required is Master Degree in the chosen few subject and the term would be four year. The act however does not mention the renewal of the CEOs term. The Board or AGM of the institution should be decided the CEO's tenure.

2.4 Review of Previous Thesis

Giri (2006) conducted a study on "A Study on Investment Policy of Nepal Investment Bank Ltd. In Comparison to Nepal EBL Bank Ltd." With the objective of:

- To examine the liquidity, asset management and profitability position and investment policy of NIBL in comparison to Nepal EBL Bank Ltd.
- To study the growth ratios of loans and advances and investment to total deposit and net profit of NIBL in comparison to Nepal EBL bank ltd.
- To analyses relationship between deposit and investment, deposits and loan & advances, net profit and outside assets of Nepal Indosuez Bank Ltd. In comparison to Nepal EBL Bank Ltd.

The research findings of the study are as follows:

- Current ratios for both the banks are satisfactory.
- Although Cash reserve ratio is managed by both banks as per Nepal Rastrya Bank directives, both banks have not paid sufficient insight towards cash management. Their cash reserves have fluctuated in a high degree.
- Nepal EBL Bank ltd. has increased investment in government securities where as Nepal Indosuez Bank has decreased.
- Nepal Indosuez Bank Ltd. has maintained both current ratio and cash reserve ratio better than Nepal EBL Bank Ltd. But its cash and bank balance, investment in government securities and loan and advances in comparison to current assets are lower than that of Nepal EBL Bank Ltd.
- Deposit utilization of Nepal Investment Bank Ltd. is less effective than that of Nepal EBL Bank Ltd. Further Nepal Investment Bank Ltd. has invested lesser amount on government securities and shares and debenture than that of Nepal EBL Bank.
- Nepal Indosuez Bank Ltd. did a better performance in return on total assets and loan and advances and interest earning, but it paid lower interest amount to working fund.

- The analysis of growth ratios shows that growth ratios of total deposit, loan and advances, total investment and net profit of Nepal Indosuez Bank are less than that of Nepal EBL Bank.
- The trend value of loan and advances to total deposits ratio is decreasing in case of both banks. The trend value of total investment to total deposits ratio is also decreasing in case of both banks.

Thapa (2007) in his thesis, "Investment Policy of the Joint Venture Banks in Nepal" had analyzed between investment policy and different variables like deposits, commission and discount, net profit, interest on loan and investment. He applied correlation, ratio analysis, t-test, and standard deviations.

He concluded that there is significant relationship between deposit and loan and advances as well as outside assets and net profit but not deposits and total investment in case of NABIL and other joint venture banks. Most of the joint venture banks have focused their banking services especially to big clients such as to purchase shares and debentures of other financial and non-financial companies.

Bhattarai,(2008) in his thesis paper "Liquidity and Investment Position of Joint Venture Commercial Bank in Nepal" had made an attempt to evaluate liquidity and investment of joint venture Banks special reference to Everest Bank limited and NABIL .He has conducted that liquidity position of EBL is comparatively better than NABIL's. Growth rate of investment is higher in EBL than NABIL. He further found the banks do not have constant and consistent liquidity and investment policy. There is no standard and uniform rate or ratio for maintaining liquid assets by the commercial banks. A commercial bank at its own judgment may decide to maintain an appropriate level of liquid assets. So he has recommended exploring such investment and to increase its investment on share and debenture and the bank should have laid down policy for timely review of portfolio and to maintain risk and return.

Bhattarai, (2009) in her thesis 'Implementation of Directives issued by Nepal Rastra Bank' with reference to the Nepal KBL bank and Nepal Bangladesh bank limited has focused to the legal implementations of non-performing loan of commercial banks. She concluded the impact of new directives issued by NRB has a negative impact to the commercial banks. She writes the new directive compels the bank to provide additional loan loss provision for

outstanding loans, which ultimately reduces the operating profits of banks. However, it strengthens the position of banks and increases the quality assets of banks.

Khadka (2010) conducted a study on **"A study on the investment policy of NABIL Bank Ltd. in Comparison to Other Joint venture banks of Nepal"** The research findings of the study are as follows:

1 Liquidity position f NABIL bank Ltd. is comparatively worse than that of other JVBs. NABIL Bank has more portions of current assets as loan and advances but less portion as investment on government securities.

2 NABIL Bank Ltd. is comparatively less successful in on-balance sheet operation as well as off-balance sheet operations than that of other JVBs.

3 Profitability position of NABIL Bank Ltd. is comparatively not better than that of other JVBs. The mean ratio of return on loan and advances of NABIL bank Ltd. has been found slightly lower than that of other JVBs. Similarly, the mean ratio of total interest earned to total outside assets of NABIL bank Ltd. has been found slightly lower than that of other JVBs.

4 Though NABIL Bank Ltd. seems to be more successful to increase its sources of funds as well as mobilization of it by increasing loan and advances and total investment, it seems to be failure to maintain its high growth rate of profit in comparison to that of other JVBs (i.e. Nepal Grindlays Bank Ltd. and Nepal Indo Suez bank ltd.).

5 There is significant relationship between deposit and loan and advances as well as outside assets and net profit but not between total deposits and total investment in case of both NABIL bank Ltd. and other JVBs.

A study done by **Poudel (2011)** entitled with the "Liquidity & Investment position of joint-venture commercial banks in Nepal (with special reference to Everest Bank Ltd and BOK Bank Ltd.)" focused on the financial statements of both banks for five years period.On the study he found that the liquidity position of MBL is comparatively better that BOK's. In all the parameters MBL has achieved a comparatively liquid position. However, there are some instances where MBL has maintained liquid funds more than requirement. The interest receivable ratio of MBL similar to BOK's though it is a small bank in terms of volume of

business. It is because of the poor assets quality of MBL, which in turn, hits liquidity position of the bank.

2.5 Research Gap

On review of various studies related to liquidity management and financial performance of various banks, it has been noticed that studies are focusing on the policies implemented by banks for their financial performance but none of them have given focus to actual position of banks due to their financial position as revealed by the data. This has resulted the lack of criticism to the banks, which helps them to improve their performance by minimizing the areas of weakness because banks do not provide their actual internal policies. Due to this, study will not be complete and helpful to explore the main objective.

So, this study is entirely focused to expose the actual position of BOK, KBL and MBL in term of its liquidity. Only analysis of lending has been chosen in order to minutely explore the liquidity status of the bank as revealed by the actual data of bank and its impact to the profitability and shareholders' investment as well. From this study we can see whether the bank has been properly managing the liquidity management.

CHAPTER - III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology describes the method and process applied in the study. This chapter describes the methodology employed in the study. Research methodology refers to various sequential steps these are adopted by a researcher in studying a problem with certain objectives. In other words, research methodology describes the method and process applied in the entire aspect of the study. It is the process of arriving at a solution of the problem through planned and systematic dealing with the collection, analysis, and interpretation of facts and figures. Research is a systematic method of finding right solutions for the problem whereas research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. In other words, research methodology refers to the various methods of practices applied by the researcher in the entire aspect of the study.

3.2 Research Design

Research design is an integrated framework of the whole study that guides the researches in formulating, implementing and controlling the research work. This study is designed within the framework of descriptive and analytical research design. Descriptive research seeks to find out the fact by the help of sufficient data and information. Thus the study is performed in and around the most important point to fulfill the research objectives.

Keeping in the mind the objectives of the study, descriptive cum analytical research design will be followed. The study is based on the wide range of variables and factors influencing financial decision of the Commercial Banks. Comparative data of Commercial Banks are presented in such a way, so as to make the research informative to the readers.

3.3 Nature and Sources of Data

The sources of the information required for any study will be either primary or secondary data. The data possessing original character and collected from actual field by the researcher or through agent for the first time is known as primary data. The data are utilized when secondary data are not accessible easily. The data compiled by previous researchers for their

purpose is known as secondary data. The use of secondary data reduces the considerable amount of time and tension of collecting information from the actual workplace. For the study, secondary data are basically used for analyzing the subject matter of the thesis. The data obtained from these sources are unstructured. Secondary data is collected or applied for the study will be obtained form journals, books, web sites, newspapers and other sources. Official records and publications on related field are also used for the study. The sources of data selected are authentic and reliable and cross checking of data has been done. The secondary data used are internal reports, annual reports, news letter and published materials of kumara bank, Nepal Rastra Bank directives and other sources.

3.4 Population and Sample

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

Nowadays a number of commercial banks have been emerging rapidly. Some have already been established and others are in the process of establishment. Currently, there are 32 commercial banks are in Nepal. In this study, all the commercial banks are population of the study. Among them Bank of Kathmandu, Kumari Bank and Machhapuchchhre Bank have been selected as samples for the present study on the basis of well financial performance.

3.5 Data Collecting Procedures

The research consists of both primary and secondary data, basically the latter one. Since the nature of these two types of data is different, the data collection procedure also varies. To collect the secondary data, published materials are viewed in various spots. Books by different writers, unpublished thesis reports, journals, magazines, internet, and AGM reports of the relevant Banks etc. are reviewed. To collect these secondary data, the researches visited BOK, KBL and MBL library, Central library, NRB library and library of Nepal Commerce Campus. On the other hand, the primary data are collected through questionnaire with the staffs of concerned Banks.

3.6 Method of Analysis

Various financial analysis tools have been used in this study. The analysis of data will be done according to pattern of data available. The relationship between different figures related to study topic will be drawn out using ratio analysis. The carious calculated results are then tabulated under different heading which are later on compared with each other to interpret the

result. The details of calculation that cannot be shown in the body part are presented in the appendices at the end.

3.7 Analysis of Tools & Techniques

On the basis of historical data both financial and statistical tools are used to analyze different variables.

3.7.1 Financial Analysis Tools

Financial ratios are the basic tools of financial analysis. The financial problems of a bank can be ascertained by examining the behavior of these ratios. Liquidity ratios measure the bank's ability to pay current debts while profitability ratios measure the bank's overall efficiency of operation. Similarly turnover ratio measures the utilization of bank's resources. These financial ratios help us to find the symptoms of problems. The cause of any problem may be determined only after locating the symptoms. As far as our concern, the objective of the ratio analysis is to determine whether or liquidity position, profitability and risk position of the banks.

3.7.1.1 Liquidity Ratio

The liquidity of a business firm is measured by its ability to satisfy its short-term obligation as they come due. Liquidity ratios measure the bank's ability to meet its maturing short-term obligations. It is a well known fact that assets vary with respect to the time and effort required to liquidate them. Liquidity thus refers to 'nearness to cash'. The nearer an investment is to cash, the lower is its rate of return. The large size of cash is associated with high liquidity and low profitability. The practice of holding a large size of cash is an expensive affair. With too much liquidity the possibility of its misuse becomes high. On the other hand, too little liquidity may lead to server cash problems which can result in iBOKity to depositor's demand. Banks usually maintain liquidity as a means of meeting short-term expected and unexpected requirements for net cash outlays, such as unanticipated investment opportunities and unanticipated expenses.

i) Current Ratio

This ratio shows the relation between current assets and current liabilities. The current ratio is calculated by dividing current assets by current liabilities. The objective of this ratio is to measure the ability of the firm to meet its short term obligation.

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. The standard ratio is 2:1 but accurate standard depends upon circumstances and nature of business. Current ratio can be measured as,

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

ii) Cash and Bank Balance to Current Assets Ratio

This ratio measures the percentages of liquid assets i.e. cash and Bank balance among the current assets of a firm. Higher ratio shows the higher capacity of firms to meet the cash demand.

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

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

iii. Liquid Fund to Current Liabilities Ratio

Since cash and bank balances is first line of defenses , measuring its liquidity ratio depending on liquid fund is more significant .Liquid fund comprises of those assets, which can be converted into cash within short period without any decline in their value . Cash in hand, balance with NRB, balance with other financial institution, balance with domestic bank balance held abroad, call money are included in calculating the liquid fund. This ratio measures banks ability to discharge its current liability in an adverse condition without undergoing its liquidity risk.

$$\text{Liquid Fund to Current Liabilities Ratio} = \frac{\text{Liquid Fund}}{\text{Current Liabilities}}$$

iv. Liquid Fund to Total Deposit Ratio

The deposit constitutes the major parts of the bank liability. Flow of this liability is always certain in the banks liquidity management. Hence, the ratio of liquid fund to total deposits indicates the banks strength to meet uncertain outflow of deposit.

$$\text{Liquid Fund to Total Deposit Ratio} = \frac{\text{Liquid Fund}}{\text{Total Deposit}}$$

v) Investment on Government Securities to Current Asset 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,

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

vi) Loan and Advances to Current Assets Ratio

Bank's major earning source is loan. Loans are also taken as current assets as most of them are maturing within a period of one year and represent short term disbursement. A Bank should not allocate all funds in loan and advances so it must maintain in an appropriate level. In order to calculate the proportion of loan and advances to total current assets, the ratio is obtained by dividing loan and advances by current assets.

$$\text{Loan \& Advances to Current Assets Ratio} = \frac{\text{Total Loan \& Advances}}{\text{Current Assets}}$$

vii. Saving Deposit to Total Deposit Ratio

Saving deposit is deposited by public in a bank with an explicit objective of increasing their wealth. So interest rate plays a significant role. In other deposits like fixed and current deposits are not interests sensitive. Fixed deposits have fixed term to maturity and fluctuation in interest rate does not allow its movement in short-term. Current deposit does not carry an interest rate. So, it is not sensitive towards interest rate. Saving deposit to total deposit ratio measure the banks ability to meet its sudden outflow of saving deposits due to change in interest rate. This ratio can be calculated by dividing the amount of saving deposit by the amount of total deposit which is given as under:

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

viii) 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 presented as,

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

Where, total deposits consist of deposits on current account; saving account; fixed account, money at call and other deposits.

ix) Investment on Government Securities to Total Deposit Ratio

This ratio is used to find the percentage of total deposit 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 total deposit and can be stated as follows,

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

3.7.1.2 Turnover Ratio

These ratios indicate the efficiency with which a bank employs its resources. Turnover ratios involve comparisons between the level of loan and advances and various deposits. These ratios state that there should be a kind of balance between deposit and loan and advances. This study simply reviews the behaviors of turnover ratios over the period of time so as to see whether or not there has been efficiency utilization of various deposits.

i) Total Investment to Total Deposit Ratio

Investment is one of the major sources of earning money. This ratio includes how properly firms' deposits have been invested on government securities and shares and debentures of other companies. This ratio can be computed diving total amount of investment by total amount deposit collection, which can be shown as;

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

ii) 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 collections/deposits on loan and advances for the purpose of earning profit.

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

iii) Loan and Advances to Saving Deposit Ratio

Bank's major earning source is loan. Loans are also taken as saving deposit as most of them are maturing within a period of one year and represent short term disbursement. A Bank should not allocate all funds in loan and advances so it must maintain in an appropriate level. In order to calculate the proportion of loan and advances to saving deposit, the ratio is obtained by dividing loan and advances by saving deposit.

$$\text{Loan \& Advances to Saving Deposit Ratio} = \frac{\text{Total Loan \& Advances}}{\text{Saving Deposit}}$$

iv) Total Investment to Saving Deposit Ratio

Investment is one of the major sources of earning money. This ratio includes how properly firms' saving deposits have been invested on government securities and shares and debentures of other companies. This ratio can be computed diving total amount of investment by total amount saving deposit collection, which can be shown as;

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

3.7.1.3 Profitability Raito

In every bank profitability is major concern. Profit is the objective of all the policies framed and decisions taken by management. These ratios enable one to judge the overall performance of the corporation. Here, we analysis interest income to interest expenses ratio, interest earned to working fund ratio, Interest paid to working fund ratio, Net profit to working fund ratio, Net profit to total deposit ratio.

i) Total Interest Earned to Interest Expenses

This ratio shows the relationship between interests earned amount and interest expenses borrowed by the Bank. Total interest earned is that amount which is earned investing in different sectors by the Bank in an accounting year. Whereas, interest expenses is that

amount which is expenses in different sectors by the Bank in an accounting year. This ratio is calculated as follows;

$$\text{Total Interest Earned to Interest Expenses} = \frac{\text{Total Interest Earned}}{\text{Interest Expenses}}$$

ii) Return on Loan and Advances Ratio

Return on loan and advances ratio shows how efficiency of the Banks and finance companies have utilized their resources to earn good return from provided loan and advances. This ratio is computed to divide net profit/loss by the total amount of loan and advances. It can be mentioned as;

$$\text{Return on Loan \& Advances Ratio} = \frac{\text{Net Profit or Loss}}{\text{Total Loan \& Advances}}$$

iii) Return on Total Assets

This ratio establishes the relationship between net profit and total assets. This ratio is also called 'profit to assets ratio'. It is calculated dividing return on net profit/loss by total working fund and can expressed as;

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

iv. Net Profit to Total Deposit Ratio

Net Profit to total deposit ratio reflects the extent to which the banks are success to mobilize deposit to earn profit. Higher ratio is preferable. We have,

$$\text{Net Profit to Total Deposit} = \frac{\text{Net Profit}}{\text{Total Deposit}}$$

3.7.2 Statistical Analysis Tools

The following statistical tools are specifically used in the study.

3.7.2.1 Mean or Average

The average value is a single value within the range of the data that is used to represent all the values in the series. Since an average is somewhere with in the range of data, it is also

called a measure of central value. Since an average represent the entire data, its value lies somewhat in between the two extremes i.e. the largest and the smallest items there are various types of average. Among them, we take arithmetic mean for measuring average. It is so popular that the word Mean or Average alone without qualification is implied to denote these particular types of average value is obtained by adding together all the terms and by dividing this total by the number of items. The formula is given below:

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

Where,

$\overline{X}$ = Arithmetic Average

$\sum X$ = Summation for total value of the variables

N = Numbers of items

3.7.2.2 Standard Deviation

The standard deviation measures the absolute dispersion. It is said that higher the value of standard deviation the higher the variability and vice versa.

The formulas to calculate the Standard Deviation are given as follows:

$$\sigma = \sqrt{\frac{\sum d^2}{N}}$$

Where,

σ = Standard Deviation

$\sum d^2$ = Sum of the squares of the deviations measured form the arithmetic average

N = Number of Items

The standard deviation calculated in the above formula gives an absolute measure of dispersion. Hence, where the mean value of the variables is not equal, it is not appropriate to compare two pairs of variables based in Standard Deviation only.

3.7.2.3 Coefficient of Variation

The coefficient of variation is the corresponding relative measure of dispersion comparable across distribution, which is defined as the ration of the standard deviation to the mean expressed in resulting percentage. It is used in such problem where we want to compare the variation is greater is said to be more variable or conversely less consistent, less uniform, less stable or less homogeneous. On the other hand , the series for which co-efficient of variation is less is said to be less variable or more consistent more uniform, more sable or more homogeneous The coefficient of variation measures the relative measures of dispersion, hence capable to compare two variables independently in terms of their variability.

$$\text{Coefficient of variation} = \frac{\text{Standard Deviation}}{Mean} \times 100\%$$

$$\text{C.V.} = \frac{\sigma}{\bar{X}}$$ Where,

C.V = Co-efficient of variation

σ = Standard deviation

$\bar{X}$ = Mean / or average

3.7.2.4 Measures of Correlation

We examine the relation between the various variables. The correlation between the different variables of a bank is compared to measure the performance of these banks. The correlation coefficient between two variables describes the degree of relationship between those two variables. The reliability of the value of Coefficient of Correlation is measured by probable error.

Correlation refers to the degree of relationship between two variables. Thus, measures of correlation calculate the mathematical relationship between two variables. "The measures of correlation called the correlation coefficient or correlation index summarizes in one figure the direction and degree of correlation" *(Gupta, 1989:169).*

The Karl Pearson Coefficient of Correlation (r) = $\frac{\sum XY}{N\sigma x \sigma y}$

Where,

$X = \left(X - \overline{X}\right)$

$Y = \left(Y - \overline{Y}\right)$

σ_x = Standard Deviation of Series x

σ_y = Standard Deviation of series y

N = No. of pairs of Observation

Probable Error of r (P.Er.) = $0.6745\frac{1-r^2}{\sqrt{N}}$

The Karl Pearson Coefficient of Correlation (r) always falls between -1 to +1. The value of correlation in minus signifies the negative correlation and in plus signifies the positive correlation. As the value of correlation coefficient reaches near to the value of zero, it is said there is no significant relationship between the variables.

The Coefficient of Correlation shall be interpreted based on probable error (P.E.r). If the value of correlation coefficient is greater than 6 times the value of probable error, the correlation coefficient is deemed as significant and reliable. If the value of correlation coefficient is less than probable error, the correlation coefficient is said to be insignificant and there is no evidence of correlation.

CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

This chapter is the major body of the research work. This chapter presents and analyses the collected data for the achievement of the objective of this study and helps the researcher to reach to the conclusion. This chapter is divided into major two parts. The first is financial analysis and the second is statistical analysis.

4.1 Financial Ratio

4.1.1 Liquidity Ratio

i. Current Ratio

Current ratio is one of the most widely used measures of liquidity. It measures the degree to which current assets cover current liability. A higher ratio indicates greater assurance of ability to pay current liability. A low ratio indicates that the bank may not be able to meet short-term obligation. A high ratio indicates excessive current assets lending to under utilization of the bank's resources. Whether a current ratio is high or low is difficult to determine. For this the financial analyst has to consider the bank past ratios and /or the ratios of similar bank.

The current assets include cash and bank balance, cheques in hand, balance with NRB, money at call and short notice, investment in government securities, bills purchased and discounted, loans and advances and other current assets. Similarly, current liability includes borrowing form other banks, deposits, bills payable and other current liabilities. We have,

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

The current ratios of BOK, KBL and MBL during the study period are presented in the table below.

Table No. 4.1

Current Ratio

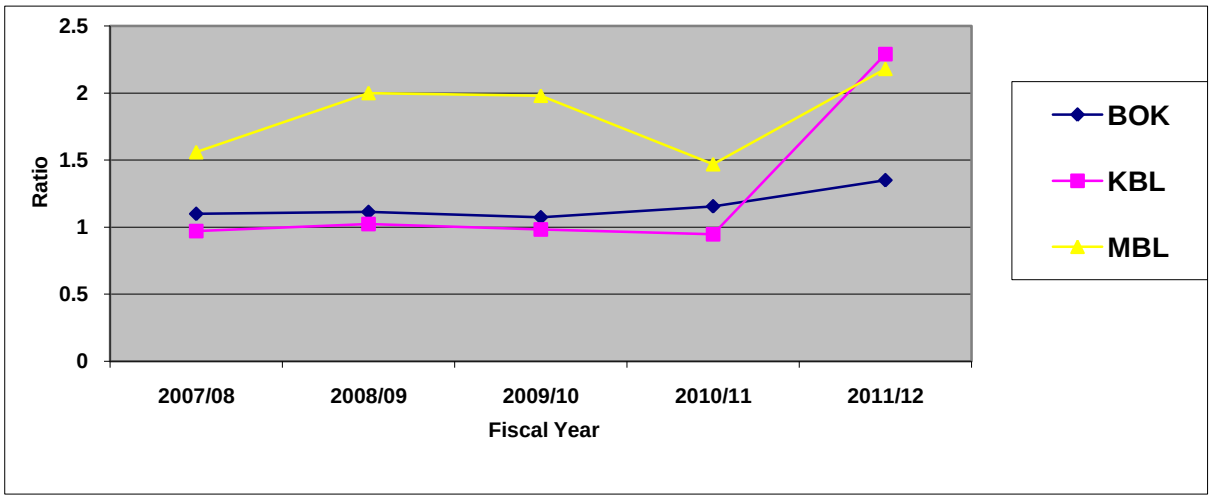
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	1.099	1.113	1.0732	1.155	1.35	**1.16**	**0.1308**	**11.27%**
KBL	0.9698	1.0226	0.981	0.946	2.29	**1.24**	**0.5859**	**47.25%**
MBL	1.56	2.00	1.98	1.47	2.18	**1.84**	**0.3088**	**16.78%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure presents the current ratios of BOK, KBL and MBL during the study period.

Figure No. 4.1

Current Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The above chart and table show the current ratios of BOK, KBL and MBL comparatively. The ratio has been ranged form 1.099 to 1.35 of BOK in 2007/08 and 2011/12. The ratio of BOK increased constantly up to 2008/09 and then decreased in one year and again increasing during the study period. But the ratio of KBL and MBL are fluctuated trend till the last year during the study period.

Measuring the current ratio of all three commercials banks on an average, all seems to meet its standard level (i.e. 2:1) but somehow KBL do not seem to be able to meet the standard

(i.e. 1). But in year 2011/12 it was able to meet the standard. The current ratio of MBL is highest i.e. 1.84 and followed by KBL and BOK i.e. 1.24 and 1.16 respectively. This implies low level of liquidity ratio. But conventional measure of liquidity is not applicable in banking business. Banking business holds big portion of deposits as a core deposits (the minimum level of deposits which the commercial banks hold at all the times) and deposits remain all the time through out the year. This core deposits forms the fixed liabilities of the bank though it is current in nature.

Where as measuring the total risk, MBL bank has the higher risk factor than the other banks. In one sense the chance of risk fluctuation is higher with MBL bank where as BOK and KBL has lower chance of facing risk. From the C.V analysis also BOK seems more consistence than KBL and MBL.

ii. Cash and Bank Balance to Current Assets Ratio

Cash and bank balance is said to be the first line of defense of every bank. This ratio shows the bank's liquidity capacity in the basis of cash and bank balance that is the most liquid assets. High ratio indicates the bank's ability to meet the daily cash requirements of their customer deposits and vice versa. But the high ratio is not preferred, as the bank has to pay more interest in deposit and will increase the cost of fund. Lower ratio is also very dangerous as the bank may not be able to make the payment against the cheuqes presented by the customers. Therefore, bank has to balance the cash and bank balance to current assets ratio in such a manner that it should have the adequate cash for the customer's demand against deposit when required, and less interest is required to be paid against the cash deposit. We have,

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

Cash and bank balance to current assets ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.2

Cash and Bank Balance to Current Assets Ratio

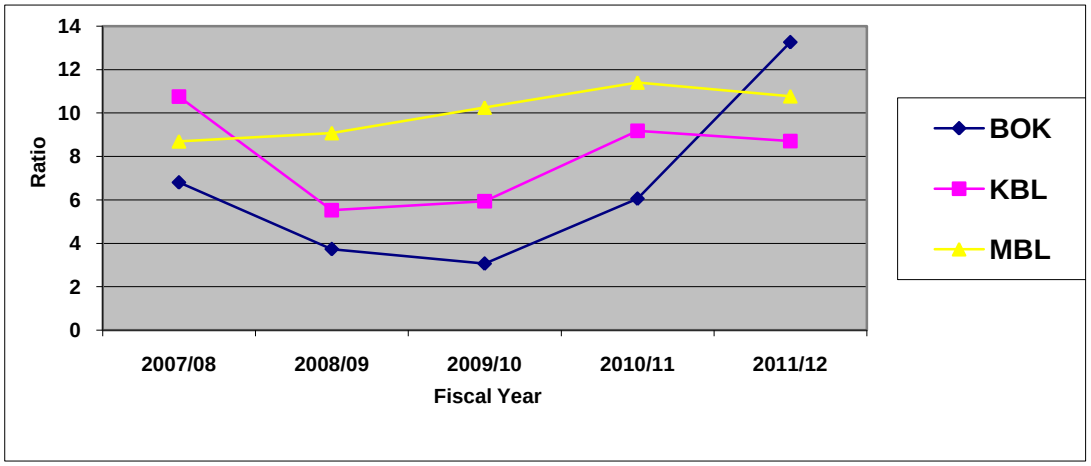
Banks	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	6.81	3.74	3.07	6.06	13.27	**6.59**	**5.05**	**76.60%**
KBL	10.76	5.53	5.94	9.18	8.71	**8.02**	**2.88**	**35.95%**
MBL	8.70	9.08	10.25	11.40	10.77	**10.04**	**1.04**	**10.32%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure presents the cash and bank balance to current assets ratios of BOK, KBL and MBL during the study period.

Figure No. 4.2

Cash and Bank Balance to Current Assets Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The above table and diagram show the cash and bank balance to current assets ratios of three banks have fluctuated between 3.07 of BOK to 13.27 of BOK. In case BOK, highest ratio is 13.27 in year 2011/12 and lowest ratio are 3.07 in year 2009/10. Similarly, the highest ratios of KBL and MBL have 10.76 in year 2007/08 and 10.77 in year 2011/12 and lowest ratios are 5.53 in year 2008/09 and 8.70 in year 2007/08. Measuring the cash and bank balance to current assets ratios on average, BOK has low mean ratio than other. Though this ratio is frequently used in assessing short-term financial liquidity, it should not be consider perfect measure. A low cash and bank balance may indicate extraordinary managerial skill rather than reflect financial weaknesses.

In the comparative study, the CV of BOK is 76.60% and the CV of KBL is 35.95% and MBL has 10.32% respectively. It shows the cash and bank balance to current ratio of MBL is more consistence than the other.

iii. Liquid Fund to Current Liabilities Ratio

Since cash and bank balances are first line of defenses, measuring its liquidity ratio depending on liquid fund is more significant. Liquid fund comprises of those assets, which can be converted into cash within short period without any decline in their value. Cash in hand, balance with NRB, balance with other financial institution, balance with domestic bank balance held abroad, call money are included in calculating the liquid fund. This ratio measures banks ability to discharge its current liability in an adverse condition without undergoing its liquidity risk.

$$\text{Liquid Fund to Current Liabilities Ratio} = \frac{\text{Liquid Fund}}{\text{Current Liabilities}}$$

Liquid fund to current liabilities ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.3

Liquid Fund to Current Liabilities Ratio

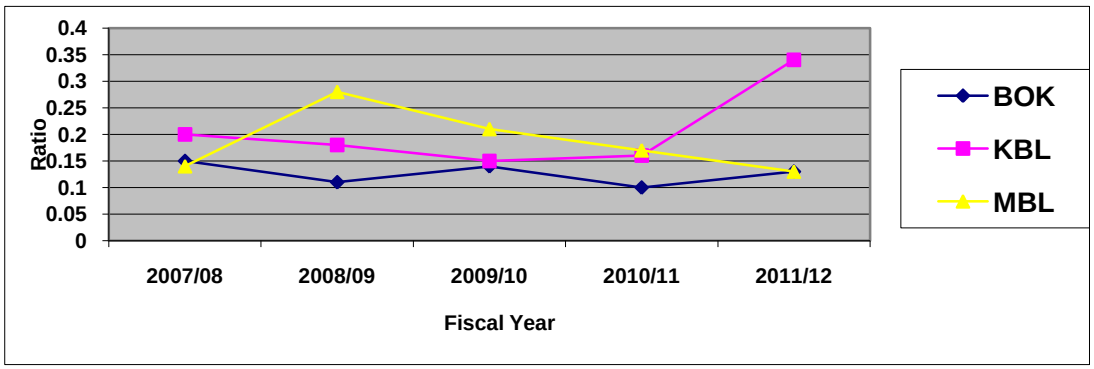
Banks	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	0.15	0.11	0.14	0.10	0.13	**0.13**	**0.02**	**15.38%**
KBL	0.20	0.18	0.15	0.16	0.34	**0.21**	**0.09**	**42.85%**
MBL	0.14	0.28	0.21	0.17	0.13	**0.19**	**0.06**	**31.58%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure shows the liquid fund to current liabilities ratios of BOK, KBL and MBL during the study period.

Figure No. 4.3

Liquid Fund to Current Liabilities Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and figure shows the liquid fund to current liabilities ratios of three banks ranged from 0.10 of BOK in year 2010/11 to 0.34 of KBL in year 2011/12 respectively. Measuring the ratio of all three commercial banks on an average, KBL has the highest range i.e. 0.21. This means KBL can better serve the unanticipated demand of current liability than other two commercial banks. BOK has the lowest range i.e. 0.13. This decreased has caused due to high degree of increase in investment.

According to the C.V analysis BOK seems highest consistency in its performance. It has lower chance of facing the risk. But KBL has the lesser consistency. It has higher level of risk factor for evaluating the total risk as well as its risk per unit also tends to be higher than other commercial banks.

iv. Liquid Fund to Total Deposit Ratio

The deposit constitutes the major parts of the bank liability. Flow of this liability is always certain in the banks liquidity management. Hence, the ratio of liquid fund to total deposits indicates the banks strength to meet uncertain outflow of deposit.

$$\text{Liquid Fund to Total Deposit Ratio} = \frac{\text{Liquid Fund}}{\text{Total Deposit}}$$

Liquid fund to total deposit ratios of BOK KBL and MBL during the study period are presented in table.

Table No. 4.4

Liquid Fund to Total Deposit Ratio

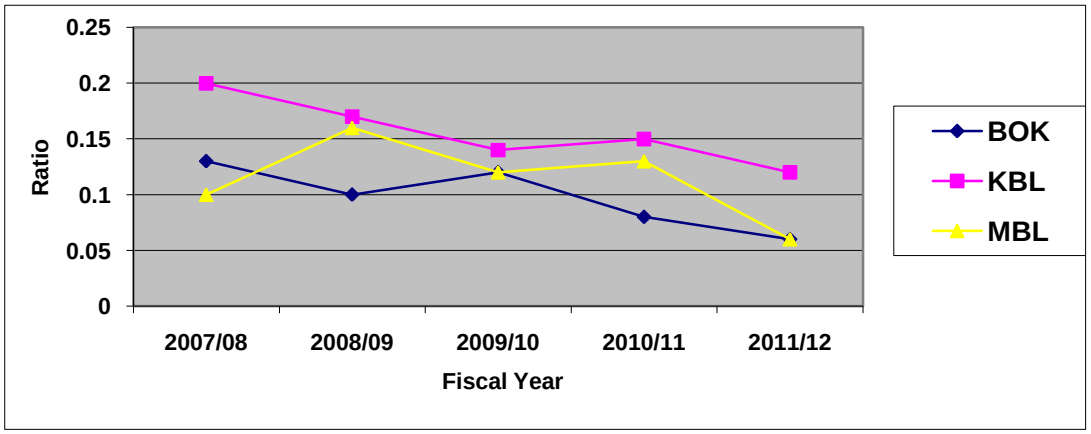
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	0.13	0.10	0.12	0.08	0.06	**0.10**	**0.03**	**30.00%**
KBL	0.20	0.17	0.14	0.15	0.12	**0.16**	**0.03**	**20.00%**
MBL	0.10	0.16	0.12	0.13	0.06	**0.11**	**0.03**	**30.30%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows liquid fund to total deposit ratios of BOK, KBL and MBL during the study period.

Figure No. 4.4

Liquid Fund to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and chart show the liquid fund to total deposit ratio of BOK, KBL, and MBL with comparatively. The ratio has ranged from 0.06 of BOK in year 2011/12 to 0.20 of KBL in year 2007/08 respectively. The ratio has fluctuated trend in BOK. The ratio of KBL is in fluctuating trend. It has sharply declined in year 2008/09. The decreased has caused by decreasing in liquid fund which adversely affects its ability to meet the uncertain outflow of deposits. MBL has comparatively decreased ratio in year 2009/10 and 2011/12.

The mean ratio of KBL is highest i.e. 0.16 followed by MBL and BOK i.e. 0.11 and 0.10. This ratio implies that in adverse condition KBL and MBL can survive better than BOK bank. While measuring C.V, KBL seems more consistency and has lower chance of risk.

v. Investment on Government Security to Current Assets

Government securities are the safest place to make investment. But the government securities are not as much liquid as cash and bank balance. They can easily sell in the market or they can be converted into cash. The main purpose of this ratio is to examine the portion of commercial banks in current assets that invested on different government securities. We have

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

Investment on government security to current assets ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.5

Investment on Government Security to Current Assets Ratio

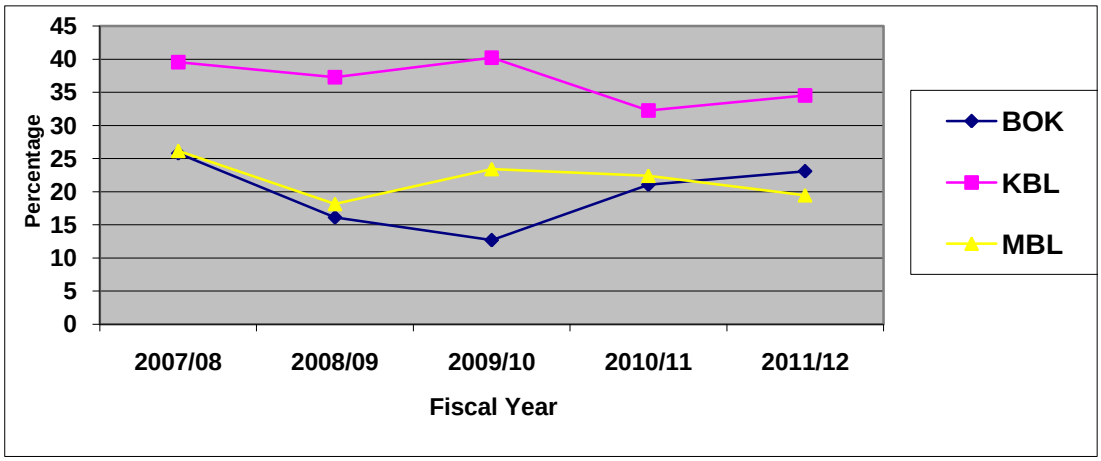
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	25.78	16.12	12.69	21.06	23.09	**19.75**	**8.50**	**43.04%**
KBL	39.56	37.28	40.22	32.27	34.55	**28.86**	**4.57**	**15.84%**
MBL	26.18	18.15	23.43	22.42	19.47	**16.69**	**3.23**	**19.35%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure shows the Investment on government security to current assets ratios of BOK, KBL and MBL during the study period.

Figure No. 4.5

Investment to Government Security to Current Assets Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and figure show that BOK bank and MBL have invested their fund in government securities in fluctuating trend. The ratio has ranged from 12.69 of BOK in year 2009/10 to 40.22 of KBL in year 2009/10. KBL leads all the years with grossly increasing trend. The ratio of BOK in year 2007/08 and ratio of MBL in year 2007/08 has increased sharply as compare to other years.

Measuring the investment on government security to current assets ratio on an average, KBL could meet highest i.e. 28.86 followed by BOK i.e. 19.75 and MBL i.e. 16.69. The sharp fluctuation on the ratio also seems in the C.V analysis. Lack of lending opportunity and declining economic growth may have lead banking business invest in government security.

vi. Loan and Advances to Current Assets Ratio

This ratio shows the extent to which the banks are successful to mobilize current assets on loan and advances. The commercial banks are interested to invest their funds as loan and advances. A high ratio of loan and advances to current assets indicates better mobilization of liquidity and vice-versa. Granting the loans and advances always carries a certain degree of risk. Thus, this asse4t of banking business is regarded as risky assets. This ratio measures the management attitudes towards risky assets. The low ratio is indicative of low productive and high degree of safety in liquidity and vice-versa. The interaction between risk and return determines this ratio. We have,

$$\text{Loan \& Advances to Current Assets Ratio} = \frac{\text{Total Loan \& Advances}}{\text{Current Assets}}$$

Loan & advances to current ratios of BOK KBL and MBL during the study period are presented in table.

Table No. 4.6

Loan & Advances to Current Ratio

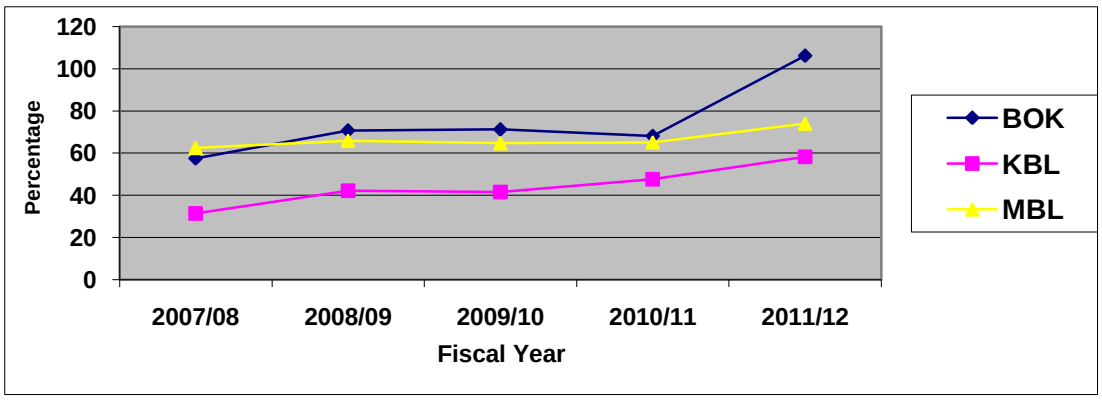
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	57.50	70.71	71.26	68.11	106.18	**74.75**	**16.85**	**22.54%**
KBL	31.40	42.14	41.61	47.68	58.25	**44.22**	**9.15**	**20.68%**
MBL	62.46	65.85	64.70	65.12	74.06	**66.44**	**4.34**	**6.53%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows the loan and advances to current assets ratios of BOK, KBL and MBL during the study period.

Figure No. 4.6

Loan and Advances to Current Assets Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

According to the above table and figure, we can see the ratio of loan and advances to current assets of BOK, KBL and MBL with comparative base. All three banks have invested on loan and advances in the fluctuating trend during the period under study. BOK bank has the best performance in year 2011/12 i.e. 106.18. KBL's performance in maintaining high degree of loans and advances ratio is poorer than other two banks in the study period. It can be suppose that KBL is shifting its business to other fee based activities.

Measuring the ratio on an average, BOK is highest i.e. 74.75 followed by MBL i.e. 66.44 and KBL i.e. 44.22. It means BOK and MBL are more sensitive in investment in productive sector than KBL. On the basis of coefficient of variation, MBL bank seems more consistency than other two banks i.e. BOK & KBL.

vii. Fixed Deposit to Total Deposit Ratio

Fixed deposit is long term and high interest charge bearing deposit. But increased fixed deposit may be an advantage so far it permits the deploy funds in long term credit. This ratio is calculated in order to find out the proportion of total deposit that is long term and high interest charge bearing. The greater proportion of fixed or long term deposit, the lesser will be the proportion of current or short-term deposit in the total deposit. It can be calculated by dividing the amount of fixed deposit by the amount of total deposit. We have,

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

Fixed deposit to total deposit ratios of BOK KBL and MBL during the study period are presented in table.

Table No. 4.7

Fixed Deposit to Total Deposit Ratio

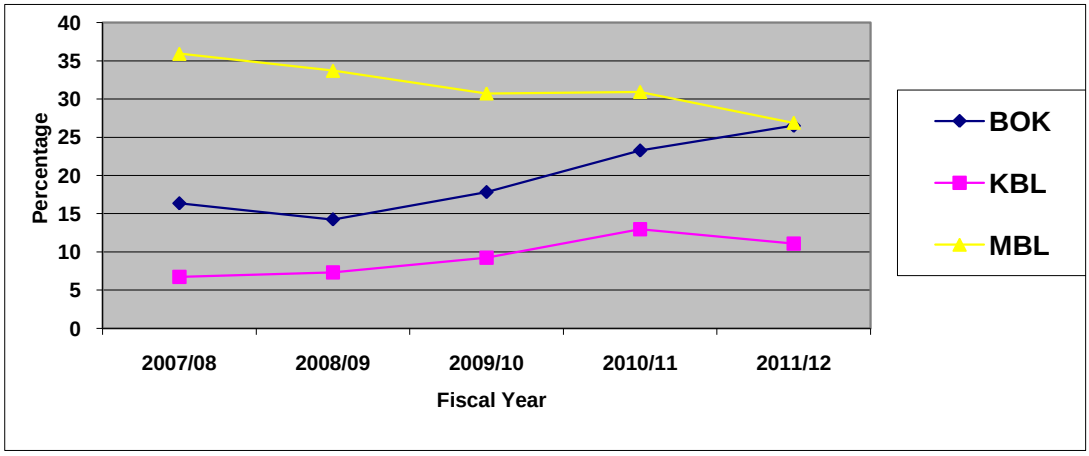
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	16.36	14.25	17.83	23.28	26.52	**19.65**	**4.90**	**24.94%**
KBL	6.75	7.33	9.26	12.97	11.10	**9.48**	**2.33**	**24.58%**
MBL	35.94	33.71	30.74	30.94	26.89	**31.64**	**3.14**	**9.52%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure shows the fixed deposit to total deposit ratios of BOK, KBL and MBL during the study period.

Figure No. 4.7

Fixed Deposit to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table shows the fixed deposit to total deposit ratio of BOK, KBL and MBL comparatively. The ratio has ranged form 6.75 of KBL in year 2007/08 to 35.94 of MBL in year 2007/08. BOK and KBL bank has increased trend of fixed deposit and MBL have decreased constantly up to year 2009/10. And slowly increases in 2010/11 but decreased again in 2011/12.

Measuring the ratio on an average, MBL hold higher mean ratio than other i.e. 31.64 and followed by BOK with 19.65 and KBL 9.48. Due to high interest rate banks are uninterested to hold fixed deposit. In case of C.V analysis MBL bank has higher consistency than other banks while BOK has less consistency.

viii. Saving Deposit to Total Deposit Ratio

Saving deposit is deposited by public in a bank with an explicit objective of increasing their wealth. So interest rate plays a significant role. In other deposits like fixed and current deposits are not interests sensitive. Fixed deposits have fixed term to maturity and fluctuation in interest rate does not allow its movement in short-term. Current deposit does not carry an interest rate. So, it is not sensitive towards interest rate. Saving deposit to total deposit ratio measure the banks ability to meet its sudden outflow of saving deposits due to change in interest rate. This ratio can be calculated by dividing the amount of saving deposit by the amount of total deposit which is given as under:

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

Saving deposit to total deposit ratios of BOK KBL and MBL during the study period are presented in table.

Table No. 4.8

Saving Deposit to Total Deposit Ratio

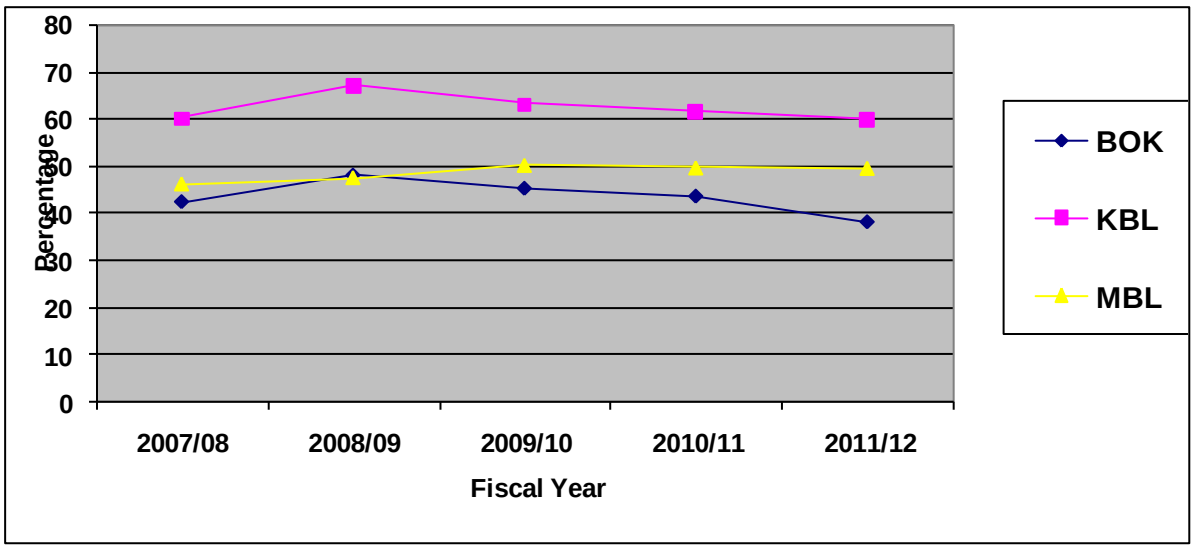
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	42.45	48.17	45.33	43.64	38.10	**43.54**	**3.78**	**8.68%**
KBL	60.35	67.40	63.30	61.85	60.03	**62.59**	**2.77**	**4.43%**
MBL	46.26	47.60	50.20	49.65	49.56	**48.65**	**2.14**	**4.40%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows the saving deposit to total deposit ratios of BOK, KBL and MBL during the study period

Figure No. 4.8

Saving Deposit to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and figure show the saving deposit to total deposit ratio BOK, KBL and MBL comparatively. In the study period, the ratio has ranged form 38.10 of BOK in year 2011/12 to 67.40 of KBL in year 2008/09. BOK bank and KBL have fluctuating trend of saving deposits while MBL have increasing trend. Measuring saving deposit to total deposit on an average, KBL bank has high proportion of saving deposit i.e. 62.59. Therefore the proportion of fixed deposit was less comparing other banks. The ratio of KBL bank has remarkably increased in year 2008/09. Increased in KBL has caused by decreased fixed deposit and call margin. Since the saving deposit is the short term obligation, it means the liquidity of KBL is higher than other bank. The CV of BOK is 8.68% which is higher than the C.V of KBL and MBL i.e. 4.43% and 4.40% respectively. It means BOK is less consistency than other two commercial banks.

ix. Cash & Bank Balance To Total Deposit Ratio

This ratio employed to measure whether cash and bank balance is sufficient to cover its current deposit, saving deposit and call margin. It is calculated by dividing cash and bank by total deposits as

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

In this study, cash and bank balance includes cash on hand foreign cash in hand, cheques and other cash items, balance with domestic bank and balance held abroad. The total deposits include current deposits, saving deposits, fixed deposits, money at call and short notice and other deposits.

It is hidden fact that the depositors would not withdraw the total deposits at a time so a certain margin of cash is kept by the bank. This ratio includes that I the ratio is higher, there is higher liquid and if lower, the bank is less liquid.

Cash and bank balance to total deposit ratios of BOK KBL and MBL during the study period are presented in table.

Table No. 4.9

Cash and Bank Balance to Total Deposit Ratio

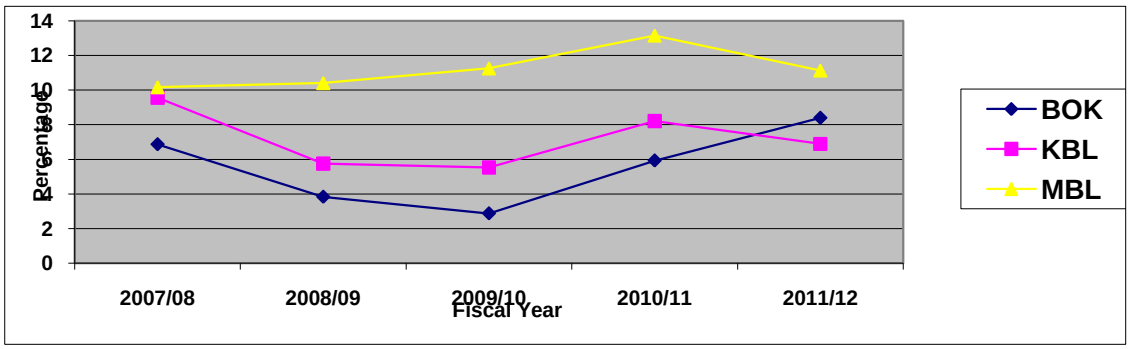
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	6.87	3.83	2.87	5.93	8.40	**5.59**	**3.39**	**60.64%**
KBL	9.56	5.75	5.53	8.21	6.89	**7.19**	**2.25**	**31.29%**
MBL	10.16	10.40	11.25	13.15	11.13	**11.22**	**1.05**	**9.35%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows cash and bank balance to total deposit ratios of BOK, KBL and MBL from the year ended 2007/08 to 2011/12

Figure No. 4.9

Cash and Bank Balance to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and diagram show the cash and bank balance to total deposit ratio of BOK, KBL and MBL comparatively. MBL has the highest ratio in all the year i.e. up to 2011/12. Its shows the capacity of the bank to meet unanticipated calls on total deposit. The ratio of KBL has decreased significantly in year 2008/09 i.e.5.75 which shows the bank efficiency to manage and utilize its assets into cash does not seem to be efficient.

Measuring the ratio on an average, MBL has highest ratio i.e. 11.22 followed by BOK i.e. 8.40 and KBL i.e. 6.89. While measuring the risk, BOK has the higher risk factor than other banks. In one sense the chance of risk fluctuation is higher with BOK whereas MBL has lower chance of risk. Therefore, among these bank it has high-degree of surviving capacity in the adverse liquidity position.

x. Investment on Government Securities to Total Deposit Ratio

This ratio shows the proportion of investment on government securities on total deposit. The government securities are safest place to make investment for bank. But government securities are not so much liquid as cash and bank balance.

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

Investment on government securities to total deposit ratios of BOK KBL and MBL during the study period are presented in table.

Table No. 4.10

Investment on Government Securities to Total Deposit Ratio

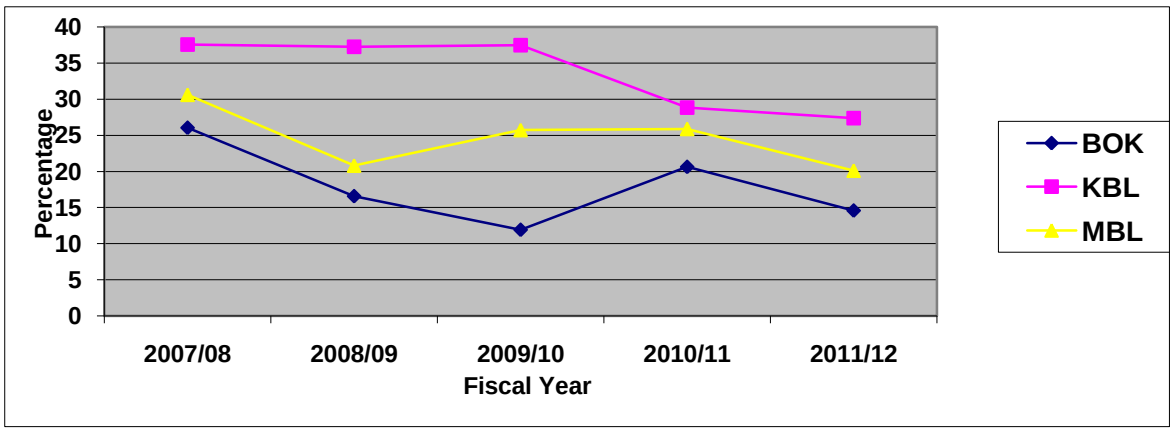
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	26.01	16.55	11.90	20.60	14.56	**17.92**	**7.79**	**43.47%**
KBL	37.56	37.25	37.49	28.84	27.36	**33.70**	**5.96**	**17.69%**
MBL	30.59	20.80	25.71	25.87	20.11	**24.62**	**3.98**	**16.17%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure shows the investment on government securities to total deposit ratios of BOK, KBL and MBL during the study period.

Figure No. 4.10

Investment on Government Securities to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The above given ratios show the investment on government securities to total deposits of BOK, KBL and MBL comparatively. The ratio BOK has decreasing trend. In the study period it has 26.01 highest ratios and 11.90 lowest ratios in year 2007/08 and 2009/10 respectively. Similarly, KBL and MBL have highest ratio 37.56 and 30.59 in year 2007/08 and have lowest ratio 27.36 and 20.11 in year 2011/12 respectively. If the trend of investment in government securities and other instrument stands go up and investment on loan and advances go down, the profitability position of the banks badly affected due to low return.

On the basis of C.V analysis MBL has the highest consistency. The chance of risk fluctuation is lower with bank comparing to other banks

4.1.2 Profitability Ratio

i. Interest Income to Interest Expenses Ratio

The ratio of interest income to interest expenses measures the gap between interest rates offered and interest rate charged. Since NRB has restricted the gap between the interest offered and interest charged, in average, should not be more than 5%, the difference in this ratio is mainly caused by the ratio of fund mobilized and fund collected. The credit creation power of commercial banks has high impact on this ratio. We have,

$$\text{Total Interest Earned to Interest Expenses} = \frac{\text{Total Interest Earned}}{\text{Interest Expenses}}$$

Interest income to interest expenses ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.11

Interest Income to Interest Expenses Ratio

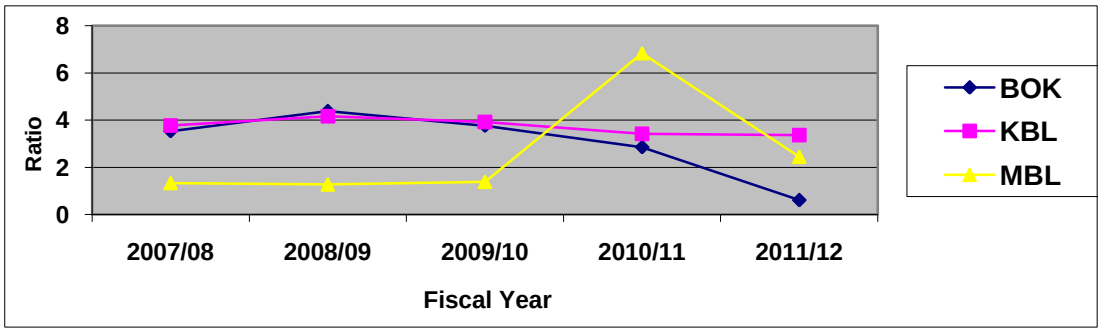
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	3.54	4.39	3.77	2.86	0.61	**3.10**	**1.50**	**48.39%**
KBL	3.78	4.17	3.92	3.42	3.37	**3.60**	**0050**	**13.89%**
MBL	1.34	1.28	1.39	6.84	2.45	**2.63**	**2.48**	**94.30%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows the interest income to interest expenses ratios of BOK, KBL and MBL during the study period.

Figure No. 4.11

Interest Income to Interest Expenses Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above ratio indicates BOK and KBL have high degree of gap between interest offered and interest charged. BOK and KBL are charging high interest to the borrowers and offering low interest rate to the depositors. The increased volume of fixed deposits and high interest rate paid there on has caused BOK ratio to in early year of the research and goes down to 0.61 in year 2011/12. Than after BOK has decreasing trend of fixed deposit till 20011/12 and then decreased up to last year during the study period. The highest cost of deposits and low volume of non-interest bearing deposits in the deposit of MBL has caused the gap between interest income and interest expenses to be the least.

In average study, KBL has highest ratio i.e. 3.60 followed by BOK and MBL i.e. 3.10 and 2.63 respectively. On the basis of C.V analysis, KBL seems more consistency than other and MBL has less consistency.

ii. Net Profit to Loan and Advances

Net profit to Loan and advances reflects extend to which the banks are successful in mobilizing the loan and advances to acquire profit. This ratio reveals the profit generating capacity of commercial banks through loan and advances. Higher ratio is preferable. We have,

$$\text{Return on Loan \& Advances Ratio} = \frac{\text{Net Profit or Loss}}{\text{Total Loan \& Advances}}$$

Net profits to loan and advances ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.12

Net Profit to Loan and Advances

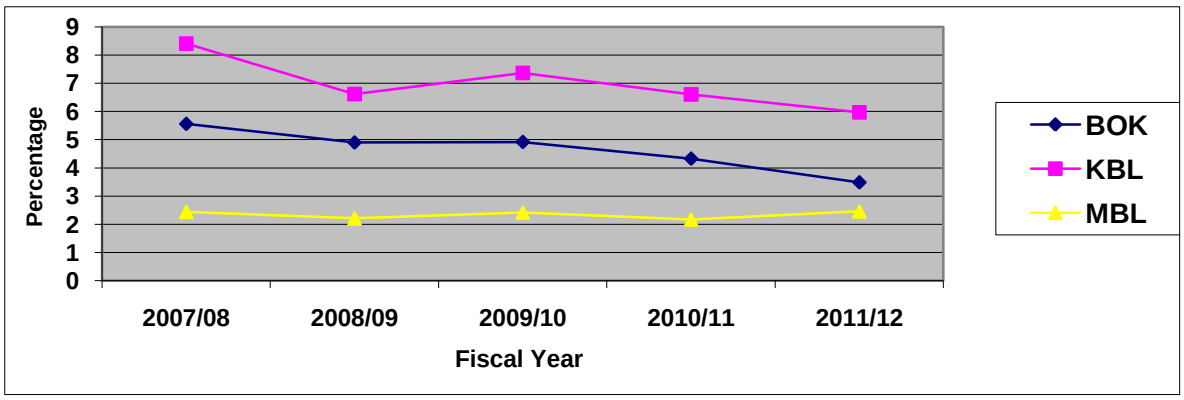
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	5.56	4.90	4.92	4.33	3.49	**4.34**	**0.75**	**17.28%**
KBL	8.41	6.62	7.37	6.6	5.97	**6.51**	**1.00**	**15.36%**
MBL	2.44	2.21	2.42	2.17	2.46	**2.34**	**0.15**	**6.41%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure shows the net profit to loan and advances ratios of BOK, KBL and MBL during the study period.

Figure No. 4.12

Net Profit to Loan and Advances Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table shows the net profit to loan and advances ratio of BOK, KBL and MBL comparatively. KBL has the highest ratio i.e. 8.41 in year 2007/08 and lowest ratio i.e. 5.97 in year 2011/12. Similarly, BOK and MBL have highest ratio 5.56 and 2.46 in year 2007/08 & 2011/12 respectively and have lowest ratio 3.49 and 2.17 in year 2011/12 and 2010/11 respectively. BOK bank has fluctuating trend in this ratio. KBL has also decreasing trend but the highest ratio than other two banks throughout the study period while MBL has the lowest ratio.

The performance of KBL seems the best with mean ratio of 6.51. This implies that KBL is successful to acquire profit through loan and advances than other two banks. BOK and MBL have the mean ratio of 4.34 and 2.34 respectively. On the basis of C.V analysis MBL seems more consistency in its performance.

iii. Net Profit to Total Assets (Return on Assets)

This ratio is useful in measuring the profitability of financial resource invested in the firm's assets. It is used for evaluating the total funds or investment of company. The return on assets or profit to assets ratio is calculated by dividing the amount of net profit by the amount of total assets employed. We have,

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

Net profit to total assets ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.13

Net Profit to Total Assets

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	2.72	3.02	2.84	2.47	2.01	**2.61**	**0.42**	**16.09%**
KBL	2.27	2.46	2.55	2.42	2.46	**2.43**	**0.15**	**6.17%**
MBL	1.49	1.43	1.49	1.38	1.66	**1.49**	**0.09**	**6.04%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The above table show the net profit earned to total assets ratio of BOK, KBL, and MBL comparatively. The ratio has been ranged form 1.38 of MBL in 2010/11 to 3.02 of BOK in year 2008/09. The ratio of BOK is in increasing trend. It implies that the bank is successful in generating the profit by investing the firm's resource. MBL has the lowest ratio throughout the study period among three banks. It shows the capacity of utilization of the financial resources is very low to generate the profit.

Measuring the average ratio, the mean ratio of BOK is 2.61 and is the highest ratio. KBL and MBL have 2.43 and 1.49 respectively. This ratio shows the BOK's best performance. According to C.V analysis, MBL seems to be more consistency i.e. 6.04% than BOK and KBL i.e. 16.09% and 6.17% respectively.

iv. Net Profit to Total Deposit Ratio

Net Profit to total deposit ratio reflects the extent to which the banks are success to mobilize deposit to earn profit. Higher ratio is preferable. We have,

$$\text{Net Profit to Total Deposit} = \frac{\text{Net Profit}}{\text{Total Deposit}}$$

Net profit to total deposit ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.14

Net Profit to Total Deposit Ratio

Banks	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	3.22	3.55	3.28	1.17	2.34	**2.71**	**1.04**	**38.38%**
KBL	2.54	2.79	2.86	2.81	2.75	**2.75**	**0.16**	**5.82%**
MBL	1.78	1.67	1.72	1.63	1.88	**1.74**	**0.09**	**5.17%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The above table shows the net profit to total deposit ratio of BOK, KBL and MBL comparatively. From this table it can be concluded BOK, KBL and MBL have fluctuating trend of ratio. Under the study period, BOK has highest ratio 3.55 in year 2008/09 and lowest ratio 1.17 in year 2010/11. Similarly, KBL and MBL have highest ratio 2.86 and 1.88 in year 2009/10 and 2011/12 and have lowest ratio 2.54 and 1.63 in year 2007/8 and 2010/11 respectively.

Measuring the average, KBL has the highest ratio in terms of net profit i.e. 2.75 followed by BOK and MBL i.e. are 2.71 and 1.74 respectively. This ratio shows the KBL's best performance and it sound like desirable return has been expected form loan and advances as well as the fund management has been properly mobilized by this bank. On the basis of C.V analysis MBL has more consistency than BOK and KBL.

4.1.3 Turnover Ratio

i. Total Investment to Total Deposit Ratio

A commercial bank mobilizes its deposit by investing its fund in different securities issued by government and other financial or non-financial companies. This ratio measures the extent to which the banks are able to mobilize their deposit on investment in various securities. A high ratio indicates the success in mobilizing deposit in securities and vice versa. We have,

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

Total investment to total deposit ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.15

Total Investment to Total Deposit Ratio

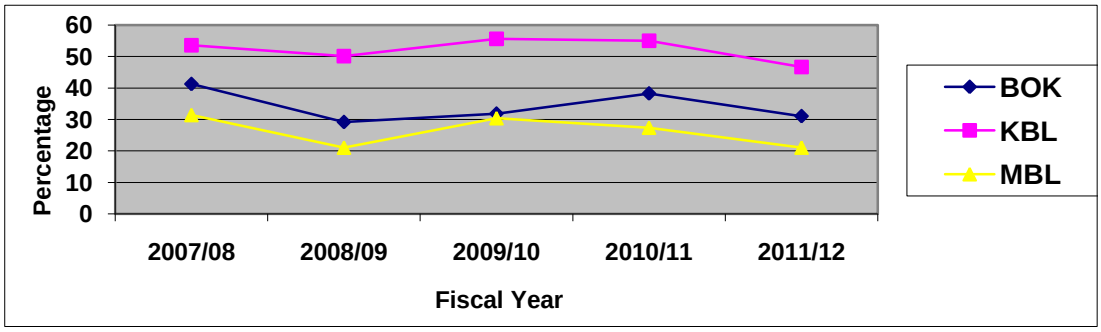
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	41.33	29.27	31.93	38.32	31.14	**34.40**	**5.23**	**15.20%**
KBL	53.68	50.18	55.71	55.10	46.75	**52.28**	**4.80**	**9.18%**
MBL	31.44	21.08	30.43	27.41	21.10	**26.29**	**6.08**	**23.13%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows the total investment to total deposit ratios of BOK, KBL and MBL from the year ended 2007/08 to 2011/12

Figure No. 4.13

Total Investment to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and chart show the total investment to total deposit ratio of BOK, KBL and MBL comparatively. From the above it can be concluded that all the banks have fluctuating trend of ratio under the study period. In the study of mean ratio, BOK and MBL are not as much success as KBL in deposit mobilization. The mean ratio of BOK and MBL i.e. 31.14 and 21.10 respectively is less than KBL i.e. 46.75.

On the basis of CV analysis KBL seems higher consistency than other bank. It has lower chance of risk fluctuation. It can be concluded that BOK and MBL are not successful in mobilizing of its collected deposit in investment than KBL

ii. Loans and Advances to Total Deposits Ratio

Loan and advances is the major area of fund mobilization of commercial banks. Loans and advances is the first type of application of funds, which is more risky as compare to other type of investment. This ratio measures the bank's ability to utilize the depositor's funds to earn profit by providing loan and advances. This ratio is compute by dividing loan and advances by total deposits. We have,

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

In this study, loan and advances refer to total of loan, advances, cash, credit, local and foreign bills purchased & discounted and total deposits refer to total of all kind of deposits.

Generally, a high ratio reflects higher efficiency to utilize depositor's fund. But much ratio may be problem for liquidity point of view.

Loan and advances to total deposit ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.16

Loan and Advances to Total Deposit Ratio

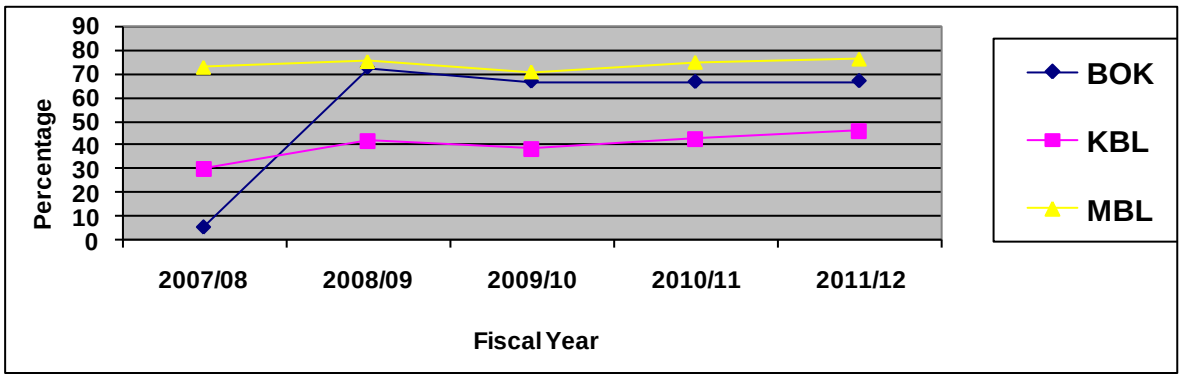
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	5.8	72.57	66.79	66.61	66.94	**66.34**	**4.91**	**7.40%**
KBL	30.30	42.12	38.75	42.61	46.12	**39.98**	**5.51**	**13.78%**
MBL	72.97	75.45	71.01	75.13	76.49	**74.21**	**3.76**	**5.07%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The following figure shows the loan and advances to total deposit ratios of BOK, KBL and MBL during the study period.

Figure No. 4.14

Loan and Advances to Total Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table and figure show loan and advances to total deposit ratio of BOK, KBL and MBL comparatively. MBL has the highest ratio comparing up to 2009/10 year. KBL has the lowest ratio throughout five years period. The ratio of BOK seems to be in fluctuated trend. The increase has made due to the increase in loan and advances in the particular period.

Measuring the ratio on an average, the overall performance of KBL seems the best with mean ratio of 46.12 under five year study period. MBL and BOK have the mean ratio of 76.49 and 66.94 respectively. On the basis of C.V analysis, BOK seems to be more consistency than other two banks.

iii. Loan and Advances to Saving Deposit Ratio

Loan and advances to saving deposit ratio reflects how much the banks are successful in mobilizing their saving deposit in loan and advances for the profit generating purpose. It is computed dividing the loan advances by saving deposits.

$$\text{Loan \& Advances to Saving Deposit Ratio} = \frac{\text{Total Loan \& Advances}}{\text{Saving Deposit}}$$

Generally high ratio reveals higher efficiency in utilizing the assets. But it should be noted that too high ratio might not be better form its liquidity point of view.

Loan and advances to saving deposit ratios of BOK KBL and MBL during the study period are presented in table below.

Table No. 4.17

Loan and Advances to Saving Deposit Ratio

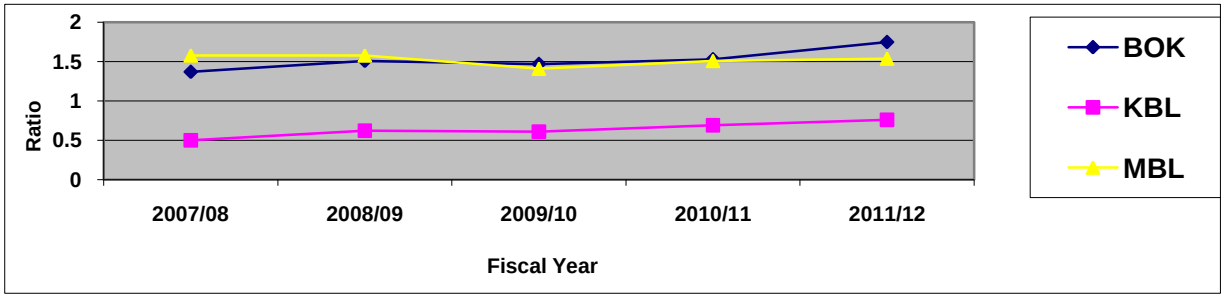
BANKS	2007/08	2008/09	2009/10	2010/11	2011/12	Mean	S.D	C.V
BOK	1.37	1.51	1.47	1.53	1.75	**1.53**	**0.14**	**9.15%**
KBL	0.50	0.62	0.61	0.69	0.76	**0.64**	**0.09**	**14.06%**
MBL	1.58	1.58	1.41	1.51	1.54	**1.52**	**0.12**	**7.89%**

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The figure below shows the loan and advances to total deposit ratios of BOK, KBL and MBL during the study period.

Figure No 4.15

Loan and Advances to Saving Deposit Ratio



Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

Above table shows the loans and advances to saving deposit ratio of BOK, KBL and MBL comparatively. In the study period BOK has 1.75 highest ratio and 1.37 lowest ratio in year 2011/12 and 2007/08 respectively. Similarly, KBL and MBL have highest ratio 0.69 and 1.58 in year 2010/11 and 2007/08 and have lowest ratio 0.50 and 1.41 in year 2007/08 and 2009/10 respectively. The ratio of BOK is in increasing trend but KBL and MBL are in fluctuated trend. The lack of reliable investment opportunity and fear of losing the principle may cause decrease in loan and advances.

Measuring the average ratio, MBL and BOK has invested more part of saving deposit in loan and advances i.e. 1.52 and 1.53 respectively than KBL i.e. 0.64. On the basis of C.V analysis, BOK seems more consistency than other.

4.2 Relationship with Liquidity & Profitability

The sole objective of commercial banks is earned profit. Ability to earn from the maximum use of available resources by the organization is known as profitability. It is the measure of efficiency and the search for it provides an incentive to achieve efficiency. Profit is the indicator of an efficient operation of the commercial banks. They acquire profit by providing different services to its customers or by making investment of different kinds. Sufficient profit is must to have good liquidity, grab investment opportunities, expand transaction, finance government in need of development fund, to overcome the future contingencies and meet fixed internal obligations of the banks.

Here we must distinguished liquidity form profitability. Profitability is a measure of operating performance whereas liquidity is a measure of financial condition. It is possible for an enterprise to be profitable and yet unable to pay its current obligations.

Table No. 4.18

Total Liquidity and Profitability/Losses to Total Deposit

	Fiscal Year					
Banks		**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**
BOK	Liquidity	13.38	9.79	12.22	8.41	5.93
	Profitability	3.22	3.55	3.28	1.17	2.34
KBL	Liquidity	20.04	17.43	14.11	15.35	11.98
	Profitability	2.54	2.79	2.86	2.81	2.75
MBL	Liquidity	10.16	16.04	11.74	13.15	6.33
	Profitability	1.78	1.67	1.72	1.63	1.88

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

The table presented above shows percentage of liquidity and profitability to total deposit of commercial banks. Banks need liquidity to meet its various financial obligations and for its day to day operation also. Having right amount of liquidity at the right time and at the right place is very essential for the banks.

Observing the profitability side of the banks, there is some differences in the profitability position. The above table shows the profitability position of commercial banks over the period of five years starting form fiscal year 2007/08 to 2011/12.

The figures suggest us that KBL is the most liquid bank among these three banks. It has maintained relatively the high amount of liquidity throughout the study period. It has 20.04%, 17.43%, 14.11%, 15.35% and 11.98% in the fiscal year 2007/08, 2008/09, 2009/10, 2010/11 and 2011/12 respectively. The profit of KBL has not shown consistency. It has remarkable decrease in year 2007/08.

From the profitability point of view, BOK bank has been earning a consistent level of profit throughout the study period. It has earned 3.22%, 3.55%, 3.28%, 1.17% and 2.34% in the fiscal year 2007/08, 2008/09, 2009/10, 2010/11 and 2011/12 respectively.

MBL is the average liquid bank among these three banks. It has maintained relatively the high amount of liquidity throughout the study period. It has 10.16%, 16.04%, 11.74%, 13.15% and 6.33% in the fiscal year 2007/08, 2008/09, 2009/10, 2010/11 and 2011/12 respectively. The profit of MBL has not shown consistency. It has remarkable fluctuated trend till the last year during study period.

Either excess or less holding of liquidity, both will hamper the smooth operation of the banks. So, utmost care should be given while holding liquidity by the commercials banks.

4.3 Coefficient of Correlation Analysis

In this study Karl Pearson's coefficient of correlation is used to find out the relationship between current assets an loan and advances, total deposit to loan and advances, total deposit and net profit, deposits and liquid fund to net profit.

4.3.1 Correlation Coefficient between Total Deposit to Loan and Advances

Deposit and loan and advances are very important liabilities and assets of the bank. Deposit is mobilized as the loan and advances. Proper mobilization of deposit is very crucial function of commercial banks. Banks can make profit through loan and advances. The relation between deposit and loan must be optimum to gain profit. This tool measures the degree of relationship between these two variables. In this analysis, deposit is independent variables(x) and loan and advances is dependent variables(y). The main reason of finding out "r" between

these two variables is to justify weather deposit are significantly used as loan and advances in a proper way or not.

The table below shows the value of r, r^2, probable error (P.E.) and 6P.E. between deposit and loan and advances of BOK, KBL, and MBL for the study period.

Table No 4.19

Correlation Coefficient between Total Deposit to Loan and Advances

Banks	(r)	(r^2)	P.E.	6 P.E.	Remarks
BOK	**0.9553**	**0.9126**	**0.0264**	**0.1584**	Significant
KBL	**0.8877**	**0.7880**	**0.0640**	**0.3840**	Significant
MBL	**0.9461**	**0.8951**	**0.0316**	**0.1896**	Significant

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

In the case of BOK, it is found that the coefficient of correlation between deposit and loan and advances is 0.9553. It shows there is high degree of correlation between these two variables. The coefficient of determination (r^2) is 0.9126 which depicts that the dependent variable i.e. loan and advances is explained by the independent variable i.e. deposit by 91.26%. Similarly probable error (P.E.) of this bank is 0.0264 It is used to find out the significance of the obtain value. Here, since r> P.E., the value of 'r' > 6 P.E. It shows that the 'r' is definitely significant.

In case of KBL, it is found that the coefficient of correlation between total deposit and loan and advances is 0.8877. It shows positive relationship between two variables. The coefficient of determination (r^2) is 0.7880 which shows that the dependent variable i.e. loan and advances is explained by the independent variables i.e. total deposit about 78.80%. Since r> P.E. >6 P.E., the value of r is definitely significant.

Similarly, in case of MBL, the value of coefficient of correlation between deposit and loan and advances is 0.9461 which shows that positive relationship between these variables. The coefficient of determination (r^2) 0.8951, it means the coefficient of variable i.e. loan and advances is explained by the independent variable i.e. deposit about 89.51%. Since r> P.E. >6 P.E., the value of r is definitely significant.

In conclusion of the calculation we can say that there is a positive relationship between deposit and loan and advances of all the banks. If deposit is increases loan and advances will

definitely increase. The relationship between the variables of all the banks are significant and the value of (r^2) shows high percent of dependent variable which has been explained by independent variable. This indicates that the banks are successful in mobilizing the deposits in proper way for loan and advances. Moreover we can conclude that BOK has the highest correlation between these variables and KBL has the least. This means BOK has better mobilized its collected deposit.

4.3.2 Correlation Coefficient between Current Assets and Loan and Advance

Correlation coefficient between current assets and loan and advances measures the degree of relationship between these two variables. Here current assets are independent variable (x) and loan and an advance is dependent variable (y). The objective behind the calculation of this correlation is to find out whether current assets is significantly mobilized as loan and advances.

The table shows the 'r', 'r^2', probable error (P.E.) and 6 P.E. Between the current assets and loan and advances during the study period.

Table No 4.20

Correlation Coefficient between Current Assets and Loan and Advance

Banks	(r)	(r^2)	P.E.	6 P.E.	Remarks
BOK	**0.7496**	**0.5619**	**0.1321**	**0.7926**	Insignificant
KBL	**0.8708**	**0.7583**	**0.0729**	**0.4374**	Significant
MBL	**0.9328**	**0.8701**	**0.0392**	**0.2352**	Significant

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

In case of BOK, the coefficient of correlation between current assets and loan and advances is 0.7496 which means there is high degree of correlation between these variables. The coefficient of determination (r^2) is 0.5619 which depicts that the dependent variable loan and advances is explained by the independent variable current assets about 56.19%. Similarly, the probable error (P.E.) and 6 P.E. are 0.1321 and 0.7926 respectively. Since r > P.E. But, r < P.E. it means that the 'r' is definitely insignificant In conclusion we can say that there is negative relationship between current assets & loan and advances of BOK bank. If the total current assets decreases, loan and advances will definitely increased.

In case of KBL and MBL, the correlation coefficient is 0.8708 and 0.9328 respectively and both have also positive value. It shows the positive relationship between current assets and loan and advances. The coefficient of determinants (r^2) of KBL is 0.7583 and MBL is

0.8701. It shows that the relationship between loan and advances of KBL is explained by current assets 75.83%, where as in case of MBL current assets explain 87.01% of the loan and advances. The probable error of KBL and MBL are 0.0729 and 0.0392 respectively. The value of 'r' is greater than probable error. This means the coefficient of correlation is significant for both banks.

In conclusion of calculation we can say that there is positive relationship between current assets and loan and advances of KBL and MBL. But negative relationship between current assets and loan & advances of BOK is appeared. If current assets increases, loan and advance will be definitely increase KBL and MBL, but vice versa with BOK. The value of r^2 shows high percent in dependent variable. Moreover, we can say that MBL has the highest correlation between these variables.

4.3.3 Correlation Coefficient between Deposit and Net Profit

Deposit is mobilized to earn profit. Coefficient of correlation between deposit and net profit measures the relationship between deposit and net profit measures the relationship between these two variables (y). The purpose of computing coefficient of correlation between deposit and net profit is significantly correlated with respective deposit or not.

The table shows the value of 'r' and 'r^2', Probable Error (P.E.) and 6 P.E. between deposit and net profit for the study period.

Table No 4.21

Correlation Coefficient between Deposit and Net Profit

Banks	(r)	(r^2)	P.E.	6 P.E.	Remarks
BOK	**0.3343**	**0.1118**	**0.2679**	**1.6075**	Insignificant
KBL	**0.9609**	**0.9234**	**0.0231**	**0.1386**	Significant
MBL	**0.9547**	**0.9114**	**0.0267**	**0.16041604**	Significant

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

In case of BOK, the coefficient of correlation between deposit and net profit is -0.3343 which means that there is low degree of correlation between these variables. The Coefficient of determination of BOK is 0.1118 which depict that the dependent variable net profit is explained by independent variable deposit about 11.18%. Similarly, the Probable error (P.E.) and 6 P.E. are 0.2679 and 1.6075 respectively. Hence r < 6PE, the value of 'r' is insignificant.

In case of KBL, the correlation coefficient is 0.9609 which means the relation between deposit and net profit is highly positive. The coefficient of determinates is 0.9234, it shows

that the relationship between net profit is explained by deposit is 92.34%. Hence r> P.E. >6 P.E., therefore the result is defiantly significant.

Similarly, in case of MBL, the correlation coefficient between deposit and net profit is 0.9547 which means there is high degree of relationship between these variables. The Coefficient of determination is 0.9114, it shows that relationship between net profit is explained by deposit is 91.14%. Since the value of 'r' is greater than P.E. and 6 P.E., this means the value of 'r' is definitely significant.

In conclusion of calculation we can say that there is low degree of relationship between deposit and net profit of BOK banks. There is positive relationship between deposit and net profit of KBL and MBL banks. If total deposit increases, net profit will be definitely increased. The value of r^2 shows high percent in dependent variable. Moreover, we can say that MBL has the highest correlation between these variables.

4.3.4 Correlation Coefficient between Liquid Fund and Net Profit

Correlation coefficient between liquidity and profitability measures the degree of relationship these variables. Here Liquid fund is independent variable (x) and net profit is dependent variable (y). It shows whether the net profit is significantly correlated with liquid fund or not.

The table shows the 'r', 'r^2', probable error (P.E.) and 6 P.E. between the liquid fund and net profit during the study period.

Table No 4.22

Correlation Coefficient between Liquid Fund and Net Profit

Banks	(r)	(r^2)	P.E.	6 P.E.	Remarks
BOK	0.0710	0.0050	0.3001	1.8006	Insignificant
KBL	-0.1674	0.0280	0.2932	1.7592	Insignificant
MBL	0.3614	0.1306	0.2622	1.5732	Insignificant

Sources: Annual Report of BOK, KBL and MBL (2007/08 to 2011/12).

In case of BOK, it is found that the coefficient of correlation between liquid fund and net profit is 0.0710. It shows low positive relationship between these two variables. The coefficient of determination (r^2) is 0.0050 which depicts the dependent variable i.e. net profit is explained by the independent variable i.e. liquid fund by 5.00%. Similarly probable error (P.E.) of this bank is 0.3001. Here, since r < P.E., the value of 'r' < 6 P.E. It shows that the 'r' is definitely insignificant.

In case of KBL, it is found that the coefficient of correlation between liquid fund and net profit is -0.1674. It shows negative relationship between two variables. The coefficient of determination (r^2) is 0.0280 which shows that the dependent variable i.e. net profit is explained by the independent variables i.e. liquid fund only about 2.80%. Since r < 6 P.E., the value of r is definitely insignificant.

Similarly, in case of MBL, the value of coefficient of correlation between deposit and loan and advances is 0.3614 which shows there is very low degree of relation between these variables. The coefficient of determination (r^2) is 0.1306; it means the coefficient of variable i.e. net profit is explained by the independent variable i.e. liquid fund about 13.06%. Since r < 6P.E., the value of r is definitely insignificant.

In conclusion of the calculation we can say that there is a positive relationship between liquid fund and net profit of BOK & MBL has negative relationship between Liquidity Fund and Net Profit. But MBL has given importance to the liquidity factor. That is why it has highly positive correlation and the value of 'r' which is also high. If liquid fund increases net profit will also increase. Here the number of observations that we have considered is small so that might be the case of this result also. And we can see better results in the future when the number of observations will rise.

4.4 Major Findings

The following points present a comprehensive summary to the main findings of the study:

- The ratio of liquid fund to current liability has some degree fluctuation among the banks as compare to above ratio. The mean ratio is ranged from 0.10 to 0.34 and it has increasing trend. KBL shows the highest inconsistency in this ratio.
- Liquid fund to total deposit ratio measures the banks strength to meet the uncertain outflow of deposit. KBL has the highest mean ratio. The overall ratio is in decreasing trend. KBL has highest fluctuation in this ratio. Overall analysis of this ratio indicates that KBL can survive better than other two banks in adverse condition. The high degree of core deposits in the composition of liquidity of commercial banks requires them to maintain low liquidity ratio as compare to other industries. This calculation of liquidity of KBL bank shows the high liquidity ratio maintained by this bank.

- The ratio of investment on government security to current assets has measured the total proportion of government securities in current assets. KBL has invested the highest proportion government securities and this ratio is significantly above than the ratios of other two banks. MBL and BOK has very fluctuating trend in their investment in government securities.
- The ratio of loan and advances to current assets has measured the proportion of loan and advances in current assets that is used to increases the income of the banks. BOK bank has deployed the highest proportion of its current assets as loan and advances. The mean ratio of BOK and MBL does not have deviated significantly but KBL has low ratio.
- The fixed deposit to total deposit ratio has deviated significantly among the banks. They have decreasing trend in this ratio. Due high interest rate banks are uninterested to hold fixed deposit. This indicates that they are implementing different policy to collect the deposit. Similarly, saving deposit to total deposit ratio has measured the liquidity risk arising from fluctuation of interest rate in market. The mean ratio BOK and MBL does not have deviated significantly but KBL has low ratio. KBL has very high proportion of fixed assets in deposit mix.
- The saving deposit to total deposit ratio of all banks fluctuate between 38.10 and 67.40. The mean ratio of KBL is significantly above than ratios of two banks. Its shows the capacity of the bank to meet unanticipated calls on total deposit. The ratio of KBL has decreased significantly in year 2008, 2009 and 2010, which shows the bank efficiency to manage and utilize its assets into saving deposit does not seem to be efficient.
- The gap between BOK and KBL in respect of interest income and interest expenses is highly deviated. The one rupee of interest expenses has been able to earn 3.60 in KBL. This ratio have resulted the reciprocal result as measured by loan & advances to the total deposit and total investment to total deposit ratio. If the mobilization of fund has caused impact on this ratio, the result would be the same as that demonstrated by the above ratios. The high volume of money at call has helped KBL to increase its interest income which is not measured by above ratios. Interest expenses has resulted this ratio to be the reciprocal of earlier. KBL being the superpower in the technology and modern banking has succeeded in collecting the fund in the cheapest price.

- Net profit to loan and advances ratio reflects the extent to which the banks are successful in mobilizing the fund to acquire income. The mean ratio among the banks has highly deviated. The performance of KBL is significantly better and successful in acquiring profit through loan and advances than other two banks. It has the highest ratio. The performance of BOK is moderate. MBL shows significantly lower return against loan and advances as it has the lowest ratio among these banks.
- Return on assets ratio is useful in measuring the profitability of financial resource invested in the firm's assets. BOK bank has the highest ratio followed by KBL and MBL. BOK and KBL have satisfactorily level of performance in mobilizing the firm's resources. They have not highly deviated ratio. But MBL has remarkable low ratio. Net Profit to total deposit ratio reflects the deposit utilization capacity of banks to earn profit. All banks have fluctuating trend of ratio. Due to the past condition, banks withdrew their investment form various sectors. However in year 2009, KBL and BOK bank has decreased trend in ratio. MBL has the lowest ratio among the banks
- In the profitability ratio, the performance of KBL is significantly better than other two banks. KBL has succeeded to utilize its resources in better way. BOK bank has moderate performance. MBL has very poor performance. It has not succeeded to utilize its collected fund to generate the income.
- Total investment to total deposit ratio has measured the proportion of total deposit that is used to increase the income of the banks in total deposit. KBL has deployed the highest proportion of its total deposit in earning activities and this ratio is significantly above than the ratio of other two banks. BOK and MBL performance in investing activities has not increased proportionately as compare to total deposit increment. These two banks are not as much as successful in mobilizing the deposits into the investing activities.
- Loan and advances to total deposits ratio has measured the proportion of total deposit that is used to generate income of the banks as loans and advances. MBL has deployed the highest proportion of its total deposits as loan and advances followed by BOK and KBL. This indicates that in fund mobilizing activities, MBL is significantly better than KBL and BOK. Their loan and advances has not increased proportionately as compare to the deposits.

- The Loan and advances to saving deposits ratio of BOK is in increasing trend but KBL and MBL are in fluctuated trend. The lack of reliable investment opportunity and fear of losing the principle may cause decrease in loan and advances. The average ratio, BOK and MBL has invested more part of saving deposit in loan and advances i.e. 1.53 and 1.52 respectively then KBL i.e. 0.64. On the basis of C.V analysis, MBL seems more consistency than other.
- The measurement of liquidity has revealed that all the banks are capable in discharging their current liability by current assets. MBL is maintaining high current ratio than BOK and KBL. Comparatively low volume of current liability and high volume of current assets in assets and liability mix of MBL has resulted high current ratio. BOK has also high consistency than other banks
- Cash and bank balance to current assets measure the liquidity risk arising form day to day operation. The ratio of MBL is higher than KBL and BOK. Though this ratio is frequently used in assessing short-term financial liquidity, it should not be consider perfect measure. A low cash and bank balance may indicate extraordinary managerial skill rather than reflect financial weaknesses. In the basis of C.V analysis MBL seems more consistency than other.
- Measuring the Cash & Bank Balance to Total Deposits ratio on an average, MBL has highest ratio i.e. 11.22 followed by KBL i.e. 7.19 and BOK i.e. 5.59. While measuring the risk, BOK has the higher risk factor than other banks. In one sense the chance of risk fluctuation is higher with BOK whereas MBL has lower chance of risk. Therefore, among these banks it has high degree of surviving capacity in the adverse liquidity position.
- The Investment on Government Securities to Total Deposits ratio BOK has decreasing trend. In the study period it has 26.01 highest ratios and 11.90 lowest ratios in year 2007/08 and 2009/10 respectively. Similarly, KBL and MBL have highest ratio 37.56 and 30.59 in year 2007/08 and 2007/08 and have lowest ratio 28.84 and 20.80 in year 2008 and 2007. On the basis of C.V analysis MBL has the highest consistency. The chance of risk fluctuation is lower with bank comparing to other banks
- The C.V of BOK is the highest in almost of the cases and this has significantly differed from the C.V of KBL & MBL. This indicates that there is a high degree of variation in the performance of BOK. Since the variance has caused due to the

fluctuating trend of every components. The performance of BOK is developing in most of the cases.

- BOK, the coefficient of correlation between deposit and net profit is low degree of positive correlation between these variables. Hence r < 6PE, the value of 'r' is insignificant. This reveals that though 'r' is positive, incensement of deposit may or may not increase profit. In case of KBL, the correlation coefficient is highly positive. MBL, the correlation coefficient between deposit and net profit high degree of relationship between these variables. Hence r> P.E. >6 P.E., therefore the result is defiantly significant. We can say that there is low degree of positive relationship between deposit and net profit of BOK. If total deposit increases, net profit will be slightly increased and there is positive relationship between deposit and net profit of KBL and MBL banks. If total deposit increases, net profit will be definitely increased. The value of r^2 shows high percent in dependent variable. Moreover, we can say that KBL has the highest correlation between these variables.
- BOK, the coefficient of correlation between current assets and loan and advances is 0.7496 which means there is positive of correlation between these variables. In case of KBL and MBL, the correlation coefficient is 0.8708 and 0.9328 respectively and both have also positive value. It shows the positive relationship between current assets and loan and advances. The value of 'r' is greater than probable error. But, BOK's r is less than 6PE. This means the coefficient of correlation is significant for KBL & MBL and insignificant for BOK. There is positive relationship between current assets and loan and advances of all banks. If current assets increase, loan and advance will be definitely increased. The value of r^2 shows high percent in dependent variable. Moreover, we can say that MBL has the highest correlation between these variables.
- We can say that there is a low degree of positive relationship between liquid fund and net profit of MBL and BOK. But KBL has negative relationship between liquid fund and net profit. But MBL has given importance to the liquidity factor. That is why it has highly positive correlation and the value of 'r' is also highest than others. But all banks are insignificant. If liquid fund increases net profit will also slightly increases of MBL and BOK. Here the number of observations that we have considered is small so that might be the case of this result also. And we can see better results in the future when the number of observations will rise. But

in case of KBL it has negative correlation between liquid fund and net profit, it means if liquid fund increase, net profit will decreases.

- The correlation chapter has shown generally high degree of significant correlation between all the variables measured except in the case of liquid fund to net profit. The correlations between deposit and loan & advances and current assets & loan and advances have high degree of positive correlation. This concludes that a unit of increment in total deposit and current assets are most likely to increase the volume of loan and advances. As far as the net profit and its correlation with total deposit, KBL has very high degree of positive correlation. But it seems that KBL has given importance to the profit factor. That is why it has highly positive correlation and the value of 'r' is also highly significant. If deposit fund increases net profit will also increase.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter highlights some selected actionable conclusions and recommendations on the basis of the major findings of the study derive from the analysis of KBL and NBBL bank. In order to carry out this study mainly secondary data are used. The analysis of the data is carried out with the help of varies financial and statistical tools.

5.1 Summary

Banks are the backbone of the country's economic development. They are providing a foundation to develop country through economic ways. Now days there are thirty one commercial banks are operation in all over the country. The data, which were used in this dissertation, are secondary nature. They were obtained from concerned banks annual report, literature, publication, balance sheet, profit and loss account, previous thesis report, different web site, related books and booklets, journal and articles and NEPSE. For the analysis and interpretation of data, various related financial and statistical tools, which are used in this study are liquidity ratio, assets management ratio, profitability ratio, growth ratio, risk ratio, sources and uses of funds and cash flow analysis. Similarly, statistical tools, which are used in this study are, mean, standard deviation, coefficient of variation, coefficient of correlation.

To fulfill the objective of the study all secondary data are compiled, processed and tabulated in the second last chapter. To make the analysis easier and understandable line chart are also used. This study also bounded by many limitations, such as secondary data, unreliability of time and resources are the constraints of the study. In this study the focus is given to the quantities. Qualitative factors are not studies. Therefore the study may not be generalized in all cases and accuracy depends upon the data collected and provided by the concerned organization.

This study "A Study on Liquidity Management of Nepalese Commercial Banks" is primarily prepared for the partial fulfillment of the requirement of the master of business studies (MBS). This study is mainly based on secondary data provided by concern banks and security board of Nepal (SEBON). Among the listed companies Bank of Kathmandu, Kumari Bank and Machhapuchchhre Bank have selected as a sample of study. The main objective of

the study is to assets the liquidity management. However due to the time and resource constraints all types of analysis are not conducted and information are gathered from the period of 2007/08 to 2011/12.

The collected information is presented analyzed and conclusion is drawn from the study.
Chapter One is concerned with the introduction of the whole study. It explained about the concentration of the study objectives and organization of the study which provides guideline for entire study.
Chapter Two is for the review as well as the review of related previous studies is conducted.
Chapter Three specifies the guidelines, tools and research design to achieve the objectives of the study.
In Chapter Four, the analysis of data, some statistical and financial tools are used. This chapter contains analysis and evaluation of data. The relevant finding drawn on the basis of analysis and interpretation of provided data.
In chapter Five, main findings are concluded as the conclusion of the study. Based on the analysis and conclusion of the study some recommendations are made in this chapter.

5.2 Conclusion

- Total deposits of all the three banks have increasing trend. The deposit collection of BOK is higher than KBL and MBL. The total investment of three banks has increasing trend. It is found that the total investment of KBL is higher in compared to BOK & MBL. The net profit of BOK, KBL & MBL is in increasing trend. It is found that the net profit of KBL is the highest among three sample banks.

- The result showed that **t**he overall liquidity strength of KBL can be considered the best among the banks. However, the liquidity risk arising form interest rate in KBL is the most likely. Since the market is highly sensitive towards the interest rate and KBL has been generally been offering low interest rate as compare to other banks. If KBL cannot tie up its saving deposits holder form it's advanced and personalized banking systems, the failure in liquidity in KBL is most likely than other two banks in coming future.

- Total investment to total deposit ratio has measured the proportion of total deposit that is used to increase the income of the banks in total deposit. KBL has deployed

the highest proportion of its total deposit in earning activities and this ratio is significantly above than the ratio of other two banks. BOK and MBL performance in investing activities has not increased proportionately as compare to total deposit increment. These two banks are not as much as successful in mobilizing the deposits into the investing activities. Loan and advances to total deposits ratio has measured the proportion of total deposit that is used to generate income of the banks as loans and advances.

- The growth of deposits is higher than the growth of loan and advances and opportunity in investing activities limited. The liquidity position of three banks is likely to increase in the coming future. This certainty increase the capability of these banks in increasing their credit but if the economy did not take the upward trend and existing violence and political instability continues, the liquidity caused by flow of deposits would caused the great damage in profitability.

- The probability in KBL is most likely if this bank does not go on looking new are of lending. The lower liquidity in BOK and MBL indicate better productivity of their fund than KBL. Looking upon the increasing trend of deposit and loan and advances, the performance of MBL seems good in the area of investment and impact on national economy. However, profitability ratio has reflected the poor performance of MBL. Interest income to interest expenses ratio and profitability position are the indicative of KBL better performance than other two banks. The better profitability ratio of KBL has proved this bank the best in managing the best in liquidity policy according to the demand of profit-oriented business. But overall moderate position in the baking business has put the BOK in the top position in absolute term.

- The correlations between deposit and loan & advances and current assets & loan and advances have high degree of positive correlation. This concludes that a unit of increment in total deposit and current assets are most likely to increase the volume of loan and advances. As far as the net profit and its correlation with total deposit, BOK has low degree of positive correlation. But it seems that BOK has not given importance to the liquidity factor. That is why it has low degree of positive correlation and the value of 'r' is also insignificant. If liquid fund increases net profit will also increases but nominally.

- MBL has deployed the highest proportion of its total deposits as loan and advances followed by BOK and KBL. This indicates that in fund mobilizing activities, MBL is significantly better than KBL and BOK. Their loan and advances has not increased proportionately as compare to the deposits. The ratio of BOK is in increasing trend but KBL and MBL are in fluctuated trend. The lack of reliable investment opportunity and fear of losing the principle may cause decrease in loan and advances.

5.3 Recommendations

- Future researchers are recommended to focus into non financial performance indicators such as job satisfaction, service quality performance, customers' satisfaction, stakeholders support, government rating, supervisor's teamwork, human resource development, human resource planning, human resource management, job designation etc.
- The proportion of high interest bearing deposit in deposit mix of MBL is very high and this has result the highest interest expenses. Fixed deposit is high interest bearing deposit and bank is not success to mobilize its deposit properly. The growth rate in deposits as compare to loan and advances is high. Hence this bank is suggested to reduce the interest rate to some extend. This will result the low growth rate in deposit. Consequently offsets the liquidity arising from high propensity of deposits.
- KBL and BOK are investing more parts of its deposits in government securities. If the trend of investing in government securities and other instruments tends go up and investment tends go down, the profitability position of both bank badly effected due to low return.
- Since all the banks have less investment in comparison to deposits, all are strongly recommended to follow the liberal investment policy so that more percentage of deposit can be invested to different profitable sectors. Because, analysis shows that investment is a significant factor which affects the net profit of the bank. Subsequently, a skillful administration is the must because negligence may become a reason of principle loss.
- As examined by interest income to interest expenses ratio, the interest gap in KBL and BOK is highly unfavorable for the nation development. Since this gap is not existed due to the credit creation power of these banks, as the total loan and advances to total deposits ratio is not even 1:1, this gap has its reason with high interest offered. Thus, banks are recommended to lower this gap specially by charging low interest in

investment. Lowering this gap results, in high volume of loans and advances and helps in increasing the sustainable liquidity mobilization practice.

- The high volume of liquidity shows that the high degree of investment strength has been prevailing in all of these banks. The lack of reliable investment opportunity and fear of losing the principle in rural sectors has been keeping these banks to less orient toward the investment function. Hence, the government should take appropriate action to initiate these banks to attract to flow of credit in rural economy. Posing the compulsions by directives does not create long term healthy liquidity mobilization practices unless the commercial banks are not self motivated to flow credit in this sector.

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APPENDIX –A

Loan & Advances to Current Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	57.50	70.71	71.26	68.11	106.18
KBL	31.40	42.14	41.61	47.68	58.25
MBL	62.46	65.85	64.70	65.12	74.06

Fixed Deposit to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	16.36	14.25	17.83	23.28	26.52
KBL	6.75	7.33	9.26	12.97	11.10
MBL	35.94	33.71	30.74	30.94	26.89

Saving Deposit to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	42.45	48.17	45.33	43.64	38.10
KBL	60.35	67.40	63.30	61.85	60.03
MBL	46.26	47.60	50.20	49.65	49.56

Cash and Bank Balance to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	6.87	3.83	2.87	5.93	8.40
KBL	9.56	5.75	5.53	8.21	6.89
MBL	10.16	10.40	11.25	13.15	11.13

Investment on Government Securities to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	26.01	16.55	11.90	20.60	14.56
KBL	37.56	37.25	37.49	28.84	27.36
MBL	30.59	20.80	25.71	25.87	20.11

Total Investment to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	41.33	29.27	31.93	38.32	31.14
KBL	53.68	50.18	55.71	55.10	46.75
MBL	31.44	21.08	30.43	27.41	21.10

APPENDIX –B

Loan and Advances to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	5.8	72.57	66.79	66.61	66.94
KBL	30.30	42.12	38.75	42.61	46.12
MBL	72.97	75.45	71.01	75.13	76.49

Loan and Advances to Saving Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	1.37	1.51	1.47	1.53	1.75
KBL	0.50	0.62	0.61	0.69	0.76
MBL	1.58	1.58	1.41	1.51	1.54

Interest Income to Interest Expenses Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	3.54	4.39	3.77	2.86	0.61
KBL	3.78	4.17	3.92	3.42	3.37
MBL	1.34	1.28	1.39	6.84	2.45

Net Profit to Loan and Advances

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	5.56	4.90	4.92	4.33	3.49
KBL	8.41	6.62	7.37	6.6	5.97
MBL	2.44	2.21	2.42	2.17	2.46

Net Profit to Total Assets

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	2.72	3.02	2.84	2.47	2.01
KBL	2.27	2.46	2.55	2.42	2.46
MBL	1.49	1.43	1.49	1.38	1.66

Net Profit to Total Deposit Ratio

Banks	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	3.22	3.55	3.28	1.17	2.34
KBL	2.54	2.79	2.86	2.81	2.75
MBL	1.78	1.67	1.72	1.63	1.88

APPENDIX - C

Current Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	1.099	1.113	1.0732	1.155	1.35
KBL	0.9698	1.0226	0.981	0.946	2.29
MBL	1.56	2.00	1.98	1.47	2.18

Cash and Bank Balance to Current Assets Ratio

Banks	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	6.81	3.74	3.07	6.06	13.27
KBL	10.76	5.53	5.94	9.18	8.71
MBL	8.70	9.08	10.25	11.40	10.77

Liquid Fund to Current Liabilities Ratio

Banks	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	0.15	0.11	0.14	0.10	0.13
KBL	0.20	0.18	0.15	0.16	0.34
MBL	0.14	0.28	0.21	0.17	0.13

Liquid Fund to Total Deposit Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	0.13	0.10	0.12	0.08	0.06
KBL	0.20	0.17	0.14	0.15	0.12
MBL	0.10	0.16	0.12	0.13	0.06

Investment on Government Security to Current Assets Ratio

BANKS	2007/08	2008/09	2009/10	2010/11	2011/12
BOK	25.78	16.12	12.69	21.06	23.09
KBL	39.56	37.28	40.22	32.27	34.55
MBL	26.18	18.15	23.43	22.42	19.47