

RECOMMENDATION

This is to certify that the Thesis

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Entitled:

A STUDY ON LIQUIDITY MANAGEMENT OF COMMERCIAL BANK

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

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DECLARATION

I hereby declare that the work reported in this entitled “**A Study on liquidity Management of commercial Bank**” submitted to Shankerdev campus is my original work. It is done in the partial fulfillment of the requirements for the Master of Business Studies (MBS) under the supervision and guidance of Prof. Dr.Kamal Das Manandhar and Mr.Arun Neupane

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Liquidity might become the major reason behind the diminishing status and performance of the financial sector in the current scenario. So, considering this prospect a brief account of the liquidity measurement on the trend of the cash flow operation of NABIL Bank, HBL Bank, EBL Bank and SCBL Bank have been tried to highlight during this work.

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Finally, I also wish to place on records my deep sense of gratitude to all those who made this dissertation come alive.

Bijay Gautam
Researcher

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CHAPTER- I

Introduction

1.1 Introduction of the bank

The development of any country depend upon it economic development. The primary goal of any nation including Nepal is need of rapid economic development to promote the welfare of the people and the nation as well. It requires the productivity activities, which in turn is the result of investment venture in productivity enterprise. The establishment of these enterprises needs a huge amount of fund. Existing enterprises and companies within the economy can be viewed as productivity enterprises, which need long term and short-term investment for their operation, growth and existence.

The systematic network of a well-organized financial system of the country has great bearing. It collects scattered financial resources from the masses and invests them among those engaged in commercial and economic activities of the country. In this way, the financial sector provides savers highly liquid divisible antes at a lower risk while the investors received a large pool of resources.

The commercial banking industry, central part of the financial sector, occupies an important place in the frame work of every economy because it provides capital for the development of industry, trade, business and other resources deficits sector by investing the saving collection as the deposit. In this way it contributes to the economic growth of the nation. It is undoubtedly true that CBs perform a number of internal functions. Among them, providing credit is considered as most important one. Credit is the most important functions of commercial banks. This in turn affects overall development of the country. Thus it is clear that commercial banks play the vital role in -the Nepalese financial sectors. Their establishment as a matter of fact has been a turning point in the history of Nepalese modern financial system.

1.2 Growth of Commercial Banks

In Nepal, Nepal Rastra Bank is the central bank. This formulates policy to control and promote the function carried by the banks. NRB has made mandatory for commercial banks to deposit 5% of total deposit in central bank. If the commercial bank doesn't maintain this ratio, the central banks take penalty 6.5% for the first time, 6.5×2 for the second time and 6.5 ×3 for third time and thereafter till maintain the ratio. (Nepal Rastra bank act 2013)

At present, NRB has introduction some fundamental changes in its interest rate policy. It has allowed the commercial banks to fix the interest on deposits as well as credit on the basis of cost and availability of financial resources. This policy framework has introduced an element of competitiveness in the financial sectors.

The commercial banks are contributing in the economic development. It is resources for economic development; it maintains economic confidence of various segments and extra credit to people.

Nepal Bank is first commercial bank established in 1994 under the Nepal Bank Act 1993. Under Banijya Bank Act 2021 BS the government launched "Rastriya Banijya Bank." Its full investment capital employed by government resources. Again the government established the third bank "Agriculture Development Bank" this bank is fully owned by government for the purpose of developing agriculture.

In the present context, the role and importance of the commercial banks loomed larger. In this connection, Nepalese economy has witnessed several changes in the financial system in the last few years so for example financial liberalization. When the government permitted the establishment of foreign Joint Venture Bank in early 1980s. Nepal Arab Bank Limited (Now Nabil bank Ltd) was established in 2041 B.S. as the first joint venture bank then other joint venture banks opened rapidly like Nepal Indosuez Bank Limited (Now Nepal Investment Bank Ltd), in 2042 B.S, Nepal Grindlays Bank Limited (This bank is known as Standard Chartered Bank Nepal). After restoration of democracy elected government adopted the liberalization and market oriented policy. As a result a number of joint Venture Bank and commercial banks increased dramatically like Himalayan Bank Ltd., Nepal State Bank of India Ltd., Nepal Bangladesh Bank Ltd., Bank of Katmandu Ltd., Everest Bank Ltd., Nepal Bank of Ceylon Ltd (Now Nepal Credit and Commercial Bank Ltd) etc.

1.3 The lists of commercial banks are below

Table-1.1

S.N	Commercial Banks	Operation Date (B.S.)	Head office
1	Nepal Bank Limited.	1994/07/30	Katmandu
2	Rastriya Banijya Bank Limited.	2022/10/10	Katmandu
3	Nabil Bank Limited.	2041/03/29	Katmandu
4	Nepal Investment Bank Limited. .	2042/11/26	Katmandu
5	Standard Chartered Bank Nepal Limited.	2043/10/16	Katmandu
6	Himalayan Bank Limited.	2049/10/05	Katmandu
7	Nepal SBI Bank Limited.	2050/03/23	Katmandu
8	Nepal Bangladesh Bank Limited.	2051/02/23	Katmandu
9	Everest Bank Limited.	2051/07/01	Katmandu
10	Bank of Katmandu Limited. .	2051/11/28	Katmandu
11	Nepal Credit and Commercial Bank Limited.	2053/06/28	Siddarthnagar
12	Lumbini Bank Limited.	2055/04/01	Narayanghath
13	Nepal Industrial & commercial Bank Limited.	2055/04/05	Biratnagar
14	Machhapuchhre Bank Limited.	2057/06/17	Pokhara
15	Kumari Bank Limited.	2057/12/21	Katmandu
16	Laxmi Bank Limited.	2058/12/21	Birgunj
17	Siddartha Bank Limited. .	2059/09/09	Katmandu
18	Agriculture development bank	2024/10/07	Katmandu
19	Global Bank Limited.	2063/09/18	Birgunj
20	Citizen Bank International	2064/01/07	Katmandu
21	Sunrise commercial bank limited	2064/06/25	Katmandu
22	Prime bank limited	2064/06/07	Katmandu
23	Bank of Asia Nepal	2064/06/25	Katmandu
24	Development credit bank	2057/10/10	Kathmandu
25	NMB Bank	2053/09/11	Kathmandu
26	Kist Bank LTD	2059/11/09	Kathmandu

1.4 Introductions of Sample Originations.

a) Everest Bank Limited (EBL)

Everest bank limited started in 1994 with a view and objective of extending professionalized and efficient banking services to various segment of the society. EBL joined hands with Punjab national bank (PBN) India as its joint venture partner in 1997. PBN is the latest nationalized bank in India having 110 years of banking with more than 4500 office all over India. In this bank 50% share holding by Nepali promoters and 30 % by general public and 20% by Punjab national bank.

b) Nepal Arab Bank Limited (NABIL)

NABIL bank limited (NABIL) commenced operation on 12 July 1984 as first joint venture bank in Nepal. Dubai Bank Limited, Dubai (later acquired by Emirates Bank International Limited, Dubai) was the first joint venture partner of NABIL. Currently, Ireland is the foreign partner.

NABIL Bank Ltd. had official name Arub Bank Ltd. till 31 December 2001. NABIL is the pioneer in introducing many innovative produces and marketable concept in banking sector in Nepal. Success of NABIL is a milestone in the banking history of Nepal and it paved the way for the banking establishment of many commercial banks and financial institutions.

NABIL provides a full commercial banking service through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover NABIL has a good mane in the market of its highly personalized services to the customers.

The share subscription of NABIL is divided in 5 parts. NB international Ltd. has taken 50%, NIDC 10%, Nepalese general public has taken 30% and remaining of share is taken by NEPSE. The bank was warded as the title of “The bank of the year”.

c) Standard Chartered Bank Limited (SCBL)

Standard chartered bank Nepal limited has been in operation in Nepal since 1987 when it was initially registered a joint-venture operation. Today the bank is an integral part of Standard chartered group who has 75% ownership in the company with 25% shares

owned by the Nepalese public. The bank enjoy the status of the largest international bank currently operation in Nepal.

Standard chartered bank limited is located over 100 nationalities in over 50 countries in the Asia pacific, south Asia, the Middle East, Africa, United Kingdom and Americas this diversity lies at the heart of the bank's value and supports the bank's growth as the world increasingly becomes one market.

d) Himalayan Bank Limited (HBL)

Himalayan bank limited is one of the joint venture commercial bank of Nepal, started operation in June 1992. HBL was incorporated with the objective of extending international standard modern banking service to various sectors of the society. Pursuing its objective, HBL provides a full range of commercial banking services. The bank as far as possible, offers modern technological facilities to its clients based on the unique need and requirement, to extent more efficient services to its customers. Himalayan bank has been adopting innovative and latest banking technology. This is not only helped the bank to constantly improve its services level but has also kept is prepared for future adoption of new technology. HBL has listed on Nepal stock exchange in July 5, 1993. The share participation of the bank is 15% general public and 20% Habib bank. Pakistan. In this way only 20% is foreign ownership in this bank.

1.5 Background of the Study

Banking is a trading of money with mind and technology. The basic mission of objective of any commercial banks is to move scare loan able funds from those who have surplus to those who borrow to buy goods and services and make investment in new equipment and facilities. For this purpose, commercial banks collect deposit from savers group by promising a certain percentage of interest. Out of the collected funds they provide loan to customers. The difference between interest of lending and borrowing is interest spread. It is the major sources of income of all the commercial banks. While giving credit, bank use all deposit and capital, but fulfilling immediate cash need, bank should have to maintain some portion of deposit in terms of cash, bank balance or T-Bill But the bank is not provided, investments of all the deposit money.

The funds are called liquid funds. Liquid funds are the important part of bank. So NRB has formulated different rules and regulation about the liquidity position and its management criterion.

According to the P.S Rose, "A liquid assets possess three essential characteristics: price stability, ready marketability and reversibility. An asset must be considered liquid if its price tends to be reasonably stable over time, if it has an active resale market, and if it is reversible so that investors can recover their original investments without loss."

Liquidity is the availability of cash at the time needed at a reasonable cost. The capacity of banks to exchange cash for deposit is the liquidity. It is the assets of bank 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 liabilities is the liquidity of banks. Liquidity is the part of total assets, which can be paid immediately to meet the current obligation. Commercial banks need high degree of liquidity in its assets. The liquidity of assets refers to the ease and certainty with which it can be turned into cash. Banks must hold sufficiently liquidity in the form of cash and liquid assets, 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 tasks faced by the management. A bank is considered to be liquid if it has ready funds at a reasonable cost at the time these funds are needed. This suggests that a liquid bank has the right amount of immediately spendable funds. On other hands, they can quickly raise funds by selling assets or by borrowing. The liquidity position of banks is very important to maintain the public faith upon banks. People deposit their precious assets and funds into the bank with the faith that banks repay it with guarantee as agreed terms and condition. So the bank must refund the public deposit on demand or on expiry of predetermined time period. When a bank fails to repay deposit money on demand, it leads to the loss of public faith upon banks. The account holders rush into bank to withdraw their deposit money.

Lack of adequate liquidity is often one of the first signs that a bank is in serious financial trouble. The trouble bank usually begins to lose the deposit. This erodes its supply of cash and forces the bank to deposit more liquid assets. In this situation, other

bank became increasingly reluctant to lend the trouble bank any funds without additional security or a higher rate of return. This will reduce the earning of the problem of bank and creates disturb on bank. Such situation leads bank insolvency.

Huge amount of liquidity, opportunity cost of bank will increases. This condition leads to decrease in profit because it is the investment in non earning assets more than requirement. So bank should maintain the appropriate level of liquidity.

1.6 Statement of the Problem

The objective of commercial bank is wealth maximization and the achievement of organization objective contributes to the national economy. It is important to determine the factors affecting the liquidity and its management. This study will try to find out the liquidity of commercial banks.

- How the commercial banks are managing the liquidity in existing practice?
- What are the main causes of increasing or decreasing liquidity in commercial banking sector?
- Do the liquidity position related to security problem?
- Is there any necessity to reform in regulation?

1.7 Objectives of the Study

Holding liquid assets and utilizing in proper investment is one of the major decisions of commercial banks. The main objectives of this study is to examine and liquidity position and its management in Nepalese commercial banks. To fulfill this main objective following specific objective has been formulated.

- To examine liquidity position of commercial banks.
- To analyze the Credit deposit ratio and its impact on liquidity.
- To examine the different ratio regarding the liquidity.

- To make suggestion and recommendation for the improvement of liquidity position of banks.

1.8 Significance of the Study

Management of the liquidity is very important part of day to day operation of the business firm. It is the important topic of financial management and much research work has not been in this topic. This study will depict the picture of liquidity management of commercial banks and also providing the basic data of the concern sectors.

This study through recommendation based on the analysis of data and information will be useful for regulatory authorities, policy makers, and financial manager of corporate bodies, professional analysts, researcher and general public as well. By this study, customer of the bank can be benefited and shareholders can know weather bank is able to utilize fund appropriate or not.

1.9 Limitation of the Study

Every study has its limitation. So, these searches there are several limitations.

- All the data are based mainly on secondary data. Mostly published financial documents like balance sheet, profit and loss account and other related journals, magazines and book are used. For this study, the reliability of this report accuracy of secondary data.
- Simple statistical techniques followed by financial models have been used in the analysis.
- Due to the less small size it may not fully represent Nepal as a whole.
- The study lacks in time and other resources as well.

1.10 Organization of the study

The study will be organized into five chapters. Each chapter will give some aspect of liquidity management in Nepal. First of all entire work on liquidity management would be divided into the following chapters.

Chapter-1 simply includes the background, statement of the problem, significance of the study, objectives of the study, limitation of the study and organization of the study.

Chapter-2 is related with review of literature. This is another way to describe the purpose of study and it tries to find out the answer that how other researcher did their in the same or related topic.

Chapter-3 is research methodology which includes research design, population and sample, data collection procedure, tools for analysis and method of analysis and presentation.

Chapter-4 is the study of data presentation and analysis. This is the major part of the. Obtained data are presented in the tabular bar and other forms and is analyzed by using various statistical tools.

Chapter-5 state the overall summary, conclusion and the recommendation drawn from the whole

CHAPTER- II

Review of literature

Concept of review of literature

The term review of literature is very important for researcher or investigator in the area of concern problem. It distributes the knowledge and information for the researcher to discover the uncover things by other researcher. So, review of literature means reviewing the research studies or other relevant propositions in the related areas of the study. So that, their conclusion and deficiencies may be known and further research can be conducted. It is an integral and mandatory process in research works.

The main reason for a full review of research in the past is to know the outcomes of those investigators in areas where similar concept and methodologies had been used successfully. Further an extensive or even exhaustive process of such review may offer vital links with the various trends and phases in the researches in one's area of specialization, familiarizing with characteristic percepts, concept and interpretation with special terminology with the rationale for understanding one's proposed investigation.

This chapter shows the background of the work and a review of recent and reticent literature. In this regard, basic academic course books specially related to topic, some of the major research works, major articles published in journals and the related thesis are reviewed.

There are significant importances of review of literature in any types of research works, some of which are:

The chapter has been arranged as follows:

- Conceptual Review
- Article Review.
- Research Gap.

2.1 Conceptual Review

2.1.1 Concept of Bank

Generally, an institution established by law, which deals with money & credit is called bank. It is obvious that in a common sense, an institution involved in monetary transactions is called bank. A bank is a financial institution, which plays a significant role in the country. It facilitates the growth of trade & industry, & boost national economy. However, a bank is a resource of economic development, which maintains the self-confidence of various segments of society and extends credit to the people.

A bank is a business organization that receives & holds deposits of funds from others, makes loans or extends credits & transfers funds by written orders of depositors (The Encyclopedia America, 1984: 302)

The business of the banking is collection of funds from community & extending credit to people for useful purposes. Bank plays a vital role in making money from lenders to borrowers. Bank is a profit seeking business, not a community charity profit seeker. It is expected to pay dividend & otherwise, add to the wealth of shareholders (Encyclopedia, 1984: 6).

Hence, in concise, we can say that there is no single universally accepted definition of bank. In brief, it is an institution, which accepts deposits in different accounts, provides loans of different types, and creates credit.

2.1.2 History of Banking in Nepal

The history of banking in Nepal is not very old. It goes at least back to the Lichchhavi era. There were 'Gosthies' to work as credit banks established under the permission of Royal order & they were conducted through local legislation called 'Panchali'. Then the King Jayasthiti Malla from Malla dynasty, allowed 'Tankadhari', a class of people, to deal in depositing & lending of money & ornaments. The Banda who still worked in ornaments used to deal in lending & depositing the ornaments in that time also. Then, the King, Ram Shah, in developing the banking system in Nepal. He found that unorganized lending was taking place in the society at very high interest rates. So, he fixed up the interest rates of lending.

Though it seemed realizing the development of banking in those early times, it could not be materialized till the end of Rana regime. The first government institutionalized credit house called 'Tejarath Adda' was established during the tenure of Prime Minister, Ranoddip Singh (1993-1994 B.S.). The 'Tejarath Office' used to give loans to government employees against the securities of gold, silver, etc. Banking in true sense started with the inception of Nepal Bank Limited on 30th Kartik, 1994 B.S. as the first commercial bank of Nepal under Nepalese Banking Law & Nepal Bank Act 1994 B.S. formulated by the Industrial Board of Nepal.

After that Nepal Rastra Bank was established as a central bank on 14th Baisakh, 2013 under Nepal Rastra Bank Act, 2012 B.S. The bank was empowered by the Act to have direct control over banking institution of the country to manage the circulation of national currency along with foreign exchange rate. Then came Rastriya Banijya Bank established on 10th Magh, 2022 B.S. established under Rastriya Banijya Bank Act, 2021 B.S.

Nepal Arab Bank Limited was established on 26th Ashar, 2041 B.S. as a first joint venture bank in Nepal opened under Banijya Bank Act, 2031 B.S. Having observed the success of Nepal Arab Bank Limited (currently named as Nabil Bank Limited) & of liberal economic policy adopted by the government, various other commercial banks including joint venture banks & privately ownership banks established in Nepal.

2.1.3 Concept of Commercial Banks.

Commercial banks are that financial institutions which deal in accepting deposits of people & institutions & giving loans against securities. They provide working capital needs of trade, industry, & even to agricultural sector. Commercial banks also provide technical & administrative assistance to trade, industries, & business enterprises. Commercial bank is a corporation, which accepts demand deposits, subject to check & makes short-term loan to business enterprises, regardless of the scope of its other services.

A commercial banker is a dealer in money & substitutes for money, such as cheque or bill of exchange. It also provides a variety of financial services (The New Encyclopedia Britanica, 1985: 605).

The American Institute of Banking has laid down for functions of the commercial banks i.e. receiving & handling deposits, handling payments for its clients, granting loan & investment & creating money by extension of credit (American Institute of Banking, 1985: 609).

Principally, commercial banks accept deposits & provide loans, primarily to business firms, thereby facilitating the transfer of funds on the economy (Bhandari, 2003: 65).

In the Nepalese context, a commercial bank is one which exchanges money, deposits money, accepts deposits, grants loans, & performs commercial banking functions (Commercial Bank Act, 2063).

Commercial banks are those banks, which pool together the savings of the community & arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short-term needs of trade & industry such as working capital financing. They cannot finance in fixed assets. They grant loans in the form of cash, credits & overdrafts. Apart from financing, they also render services like collection of bills & cheques, safe keeping of valuables, financial advising, etc. to their customers (Vaidya, 2001:38).

In Nepal, there are 23 commercial banks in Nepal till (2064/65)

2.1.4 Concept of Liquidity

Liquidity management is having cash when needed, Liquidity means having sufficient funds to met regulatory, contractual and relationship obligations when required and at a reasonable cost to the bank. Liquidity needs of commercial banks are unique because in no other types of business there will be such a large proportions of deposit payable on demand. In other organization too, liquidity is required for various purpose. Inadequate liquidity does damage the credit standing of those organizations but if banks fail to

repay the deposit on demand, the bank loses the trust of the public. So, liquidity is the lifeline of the bank. In this regard, the term liquidity management is used to describe money and assets that is ready convertible into money within short span of time.

“Liquidity refers to bank’s capacity to pay off the liabilities in all those currencies. Maintain excess liquidity in one currency while is for other currencies is not effective liquidity management because the liabilities in the demand currency cannot be met.” (Dahal and dahal, 2002:95)

“Liquidity is the availability of cash in the amount and at the time needed at a reasonable cost.” (Rose; S.345)

“Liquidity management is the part of the risk management framework of the financial services industry, which concern all financial institution weather they are commercial banks or development banks of finance companies or other institutions”(Shrestha: 2061 B.S. 16)

One of the most important tasks faced by the management of any bank is ensuring adequate liquidity. A bank is considered to be liquid if it has ready access to immediately spend able funds at a reasonable cost at precisely the time those funds are needed. This suggest that a liquid bank either has the right amount of immediately spend able funds on hand when they are required or can quickly raise liquid funds by borrowing or selling assets.

Liquid bank either has the right amount of immediately spend on hand they are required of can quickly raise liquid funds borrowing or by selling Liquidity management is a tough task to be discharge by the management of every business entity. Managing liquidity for a bank involves having enough cash on hand and being able borrow cash at a reasonable cost in order to meet cash needs exactly when they arise. A bank’s need for liquidity- immediately spends able funds – can be viewed with in a demand- supply framework. The most pressing demand for spend able funds from two sources: customer withdrawing money from their deposit and credit request from

customers the bank wishes to keep either in the form of new request, renewals of expiration loan agreements, or drawing upon existing credit lines.

To meet the foregoing demands for liquidity, banks can draw upon several potential sources normally is receipt of new customers deposit, both from newly new deposit placed in existing accounts. Another important element in the supply of the bank liquidity comes from customers repaying the loan, which provides fresh funds for meeting new liquidity needs, as do sales of bank assets, especially marketable securities from the bank's investment portfolio. These various sources of liquidity demand and supply come together to determine each bank's net liquidity positions at any movement in time.

The significant exposure of banks to liquidity pressures arises from several sources. First, banks borrows large amount of short-term deposit and reserve from individual and business and from other lending institutions and then turn around and make long term credit available to their borrowing customers. Thus, most banks faced some imbalance between the maturity dates on their assets and maturity dates attached to their liabilities. Rarely, will incoming cash flows from assets exactly balance the cash flowing out to cover liabilities.

A problem related to maturity mismatch situation is that bank hold unusually high proportion of liabilities subject to immediate payment, such as demand deposit, money market borrowing. Thus, banks must always stand ready to meet immediate cash demands that can be substantial at times, especially near the end of a week, at the first of each month, and during certain seasons of the year.

Another source of the bank liquidity problem is the bank's sensitivity to change in interest rates. When interest rates rise, some depositors will withdraw their funds in search of higher return elsewhere. Many loans customers may postpone new loan request or speed up their drawing on those credit lines that carry lower interest rates.

Thus, changing rates affect both customers demand for deposit and customers demand

For loans, each of which has potent impact on a bank's liquidity position. Moreover, movement in interest rates affects the market values of assets the bank may need to sell in order to raise additional liquid funds; they directly affect the cost of borrowing in the money market. (Rose; 2002:350)

2.1.5 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.

$$\text{A bank net liquidity position} = \text{Supply of liquidity Flowing into bank} - \text{Demand on the banks for liquidity}$$

Net liquidity position calculation table (Rose, 2002:347)

Supplies of liquidity flowing into the bank	
<i>Income deposit (inflows)</i>	
- The sales of non deposit services.	.....
- Revenues from the sales of non deposit services.	.....
- Customers loan payment	.....
- Sales of bank assets.	.....
- Borrowing from money market.	.....
A. Demand on the bank liquidity.	
<i>Deposit withdrawals (outflows).</i>	
- Volume of acceptable loan request.	.....
- Repayment of bank borrowing.	.....
- Other operating expenses.	.....
- Dividend payments to bank stockholders.	.....
C. A bank's net liquidity positions (A-B)	.....

When the bank's total demand for liquidity exceeds its total supply of liquidity (i.e. $L_t < 0$), management must prepare for liquidity deficit, deciding when where to raise additional liquid funds. On other hand, If at any point in time total supply of liquidity to the bank exceeds all of its liquidity demand (i.e. $L_t > 0$), management must prepare

for liquidity surplus, deciding when and where to profitably invest surplus liquid funds until they are needed to cover future liquidity demands

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 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 off balance sheet liabilities like Letter Of credit (L/C) outstanding guarantee outstanding, forward contract etc.

To Meet Cash Reserve Ratio (CRR)

Each commercial bank must maintain satisfactory minimum cash reserve ratio as prescribe 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. 5.5% of total value of total deposit must be maintain as cash reserve with Nepal Rastra Bank

-) To meet contingencies like priority sector lending
-) To disburse loans and advances
-) To make payment of interest and commissions

To Meet Statutory Liquidity Ratio (SLR)

Each commercial bank must maintain satisfactory minimum statutory liquidity ratio as prescribe by central bank because the directive of central bank must be followed by each commercial bank. At present in Nepal each commercial bank must be investment 6% of total value of total deposit in development treasury bill and must be maintain as cash reserve with Nepal Rastra Bank

-) To maintain good liquidity position.
-) To collect money for development.
-) To control loan providing in unproductive sector.

Supply of Bank Liquidity

The supply of liquidity of a bank 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 deposit. The successful operation and existence of a commercial bank depends upon the proper and profitable mobilization of deposit.

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 time of surplus fund, the bank may invest such funds in government securities, which are very liquid. So investment in the Government (Govt.) securities is also good sources of investment.

2.1.6 Strategies for Liquidity Management

a. Assets Liquidity Management Strategies.

The oldest approach to meeting bank liquidity is known as assets liquidity management. In purest form, this strategy calls for storing liquidity in the form of holding assets, predominantly in cash and marketable securities. When liquidity is needed, selected assets are sold for cash until the entire bank's demand for cash is met.

This strategy is used mainly by smaller banks that find it a less risky approach to liquidity management than relying on borrowing. But assets conversion is not a costless approach to liquidity management. First, selling assets means the bank loses the future earnings those assets would have generated had they not been sold off.

Thus, there is an opportunity cost to storing liquidity in assets when those assets must be sold. Most asset sales also involve transaction costs paid to the security broker. Moreover, the assets in question may need to be sold in a market experiencing declining prices, subjecting the bank to the risk of substantial capital losses. Management must take care that those assets with the least profit potential are sold first in order to minimize the opportunity cost of future earnings foregone. Selling assets to raise liquidity also tends to weaken the appearance of the bank's balance sheet, because the assets sold are often low-risk government securities that give the impression the bank is financially strong. Finally, liquid assets generally carry the lowest rates of return.

b. Borrowed Liquidity Management Strategy

This borrowed liquidity strategy is often called purchased liquidity management. Borrowing liquid funds has a number of advantages. A bank can choose to borrow only when it actually needs funds, unlike storing liquidity in assets where a storehouse of at least some liquid assets must be held at all times, lowering the bank's potential

return because liquid assets usually have such low yields. Then, too, using borrowed funds permits a bank to leave the volume and composition of its assets portfolio unchanged if it is satisfied with the assets it is satisfied with the assets it currently holds. In contrast, selling assets to provided liquidity shrinks the size of a bank as its total assets holding decline.

Borrowing liquidity is the most risky approach to solving bank liquidity problems but also has the highest expected return because of the volatility of money interest rates and rapidly with which the availability of credit can change. The bank's borrowing cost is always uncertain, which adds greater uncertainty to the bank's net earning. These principle sources of borrowed liquidity for a bank include large negotiable CDs, federal funds borrowing, and repurchase agreements

c. Balance (Assets and Liability) Liquidity Management Strategy

Due to risks inherent in relying on borrowed liquidity and the cost of storing liquidity in assets, most banks compromise in choosing their liquidity management strategy and use both assets management and liability management. Under a balanced liquidity management strategy some of the expected demands for liquidity are stored in assets (principally holding of marketable securities and deposit at their banks): while other anticipated liquidity needs are backstopped by advance arrangement for lines of credit from correspondent banks or other suppliers of funds (Rose; 2002:350)

2.1.7 Factors affecting the needs of bank liquidity

A) External environment factors:

- a. ***Prevailing interest rate:*** prevailing interest rate is high, the cash demand through cheque as well as loan demand will also decreased. Hence, an increase in bank interest rate leads to decrease the need of bank liquidity.
- b. ***Saving and investment situation:*** If the income of public is in increasing trends and public expenditure is not increasing like income, this leads to public saving. In this situation, less degree of liquidity is enough in banks.

- c. ***Public investment habit.*** The investment habit of general public plays an important role in the needs of bank liquidity. If people prefer to invest in business, bank should maintain more liquidity. In contrast, they do not like to bear risk, they deposit saving in banks. In this situation, less liquidity will be adequate in banks.
- d. ***Trends of national economy:*** The economy of the country affects greatly the liquidity needs of banks. If the economy is in the growth and boom position, bank can maintain comparatively less liquidity. But banks should maintain more liquidity in the declining and slack economy.

B) Internal environment factors:

- a. ***Lending policy of the bank:*** when bank follows the policy to advance loan more on long-term, it needs more in liquidity. In contrast if bank invests its funds more in short term loan and marketable securities cooperatively, less liquidity will be adequate for such bank.
- b. ***Managerial capacity:*** The managerial talent and attitude of executive also affect the need of bank liquidity. If managers are very talented, experienced and ready to bear higher risk and committed to earn more profit, then less liquidity is maintained and vice versa.
- c. ***Nature of fund:*** Generally, banks holding more current deposit should maintain more liquidity, because current deposit should be refunded on demand. Adversely, banks more fixed deposit should not maintain much liquidity as others do because fixed deposit are not withdrawn before due date. Thus, such deposit can be invested in production sectors.

2.1.8 Why Banks Face significant Liquidity Problem?

It should be clear from the foregoing discussion that banks face major liquidity problems. The significant exposure of banks to liquidity pressures arises from several sources.

First, banks borrow large amount of short- term deposit and reserve from individuals and business and from other lending institution and then turn around and make long term credit available to their borrowing customers. Thus, most banks faces imbalances between the maturity dates on their assets and the maturity dates attached to their liabilities. Rarely will incoming cash flows from assets exactly balance the cash flowing out to cover liabilities.

A problem related to the maturity mismatch situation is that banks hold an unusually high proportion of liabilities subject to immediate payment, such as demand deposit, NOW account, and money market borrowing. Thus, banks must always stand ready to meet immediate cash demand that can be substantial at times , especially near the end of a week, at the first each during certain seasons of the year.

Another source of liquidity problem is the bank's sensitivity to change in interest rates. When interest rates rise, some depositors will withdraw their funds in search of higher elsewhere. Many loan customers may postpone new loan request or speed up their drawing on those credit lines that carry lower interest rates. Thus, changing interest rates affect both customers demand for deposit and customers demand for loans, each of which a potent impact on a bank's liquidity position. Moreover, movement in interest rates affect the market values of assets the bank may need tom sell in order to rise additional liquid fund, and they directly affect the cost of borrowing in the money market. Beyond these factors, a bank must give high priority to meeting demands for liquidity. To fail in the area may severely damage public confidence in the institution. We can imagine the reaction of bank customers if the teller windows and teller machine had to be closed one morning because the bank temporarily out of cash and could not cash cheques or meet deposit withdrawals (As happened to a bank in montena several years ago, prompting a federal investigation). One of the most important tasks of a bank's liquidity manager is to keep close contract with the bank's largest depositors and holders of large unused credit lines to determine is and when withdrawals of funds will be made and to make sure adequate funds are available.

At present, in the economy money supply condition is not good, So liquidity fund of commercial bank is poor and they are facing liquidity problem. The main cause of facing bank liquidity problem is described as below:

Cash holding: The main cause of liquidity problem is people are holding their cash. 90% of financial institution is situated in urban and semi urban place, so more Nepalese people are not depositing their money in the bank. 76% of people take loan from non banking sector.

Remittance flow from other channel: The remittance inflow increase rate is decreasing. In Nepal 30% of total remittance is coming from non banking channel.

Low interest rate: Generally, financial institution providing interest rate is higher than existing inflation rate, on contrary, in Nepal providing interest rate is lower than inflation rate, therefore, bank are unable to motivate depositors to deposit .

Capital Flight: Because of political instability, insecurity, unsuitable industrial environment some industrialist are investing capital in abroad countries like Thailand Singapore and India etc.

Balance of payment: The business deficit of Nepal is increasing with 48% because the export rate is decreasing with 16.8%, on the other hand, import increase rate is 32.8%, so that, balance of payment is negative.

Gold import: Now a day, gold import rate is extremely high, for example, in past six month 22 billion rupees spent for export of gold. Usually in Nepalese market gold import from other countries in dollar and it export in India in Indian currency.

Real estate investment: In present context, in Nepal, investment on real estate is increasing day by day. Therefore the price of real estate is increasing abnormally.

2.1.9 How Bank Solve Liquidity Crisis Problem?

Sometimes Bank face liquidity crisis problem in short time. In this situation Bank face problem to payment of cheque. When the bank can not payment of cheque the bank's credibility is down and then Bank face critical situation on liquidity crisis. If Bank can not solve this problem Bank may gone towards the liquidation situation. So to solve this critical situation Bank should follow the various ways describe as below.

- **Selling Government Securities;** When Bank has more liquidity then Bank invests in Government Securities from Reverse Auction and Outright Sale Auction. But if Bank faces

liquidity crisis then Bank sell Government Securities from Ripo Auction and Outtrimt Purchase Auction and manage the problem.

- **Inter Bank Loan;** If Bank face liquidity problem in short term. Bank takes help from other Bank and manage the problem. Bank borrow loan from other Bank for a one and more days. At present commercial bank face liquidity problem so Inter Bank interest rate has increased to 14.5%.

- **Loan takes from Central Bank;** Bank deposit certain amount of money in Central Bank for a Banking transaction and Bank also maintain certain level of cash reserve ratio in collection of deposit from customer. So when the bank face liquidity crisis in this situation the Bank borrow loan from the central Bank to solve the crisis. At present the lack of liquidity in economy, so Bank Rate is increased to 9.5% from 6.5%.After this supports the Bank can't run smoothly then central Bank take over the Bank management. In this way the central Bank supports to solve the liquidity crisis of Bank.

2.2 Review of Related Thesis and Article.

2.2.1 Review of related thesis

Mr. Ramesh Poudel (2006) had done research entitled “*Liquidity management of commercial banks in Nepal*” of BOK, NIC, HBL, EBL and NABIL. This study has made with the following objectives:

- To examine the liquidity management policy in Nepalese commercial banks.
- To examine the effectiveness of liquidity management in Nepalese commercial banks.
- To provided suggestion and recommendation about liquidity management in commercial banks.
- To analyze the problem of liquidity management in Nepalese commercial banks.
- To identify factors affecting the liquidity position and its management in Nepalese commercial banks.

His major findings are as follows:

- Cash and bank balance to current deposit ratio of NIC is high and EBL is too low. This implies that the liquidity position of NIC is strong, EBL is poor and BOK, HBL and NABIL are in moderate.
- BOK has strong liquidity position; NIC has negative and poor liquidity position. HBL is facing liquidity management problem and NABIL has normal liquidity position.
- Liquid funds to total deposit ratio of all bank's are in decreasing trend. BOK and NABIL are reducing their fund rapidly. Where as most of the deposit of NIC, HBL and EBL are remained as liquid fund.
- NIC and EBL have maintained adequate balance with NRB but BOK, HBL and NABIL have not maintained sufficient reserve in bank for liquidity position.

Rema Dhungana (2006) had done research on “*Liquidity position of commercial banks in Nepal*” of BOK, SCBL, SBI HBL, EBL, NI and NABIL. This study has set out the following objectives:

- To examine liquidity position of commercial banks.
- To examine the relationship between liquidity and profitability.
- To examine the relationship between liquidity and interest rates.
- To suggest improvement for liquidity position of banks in future.

Her major findings are as follows.

- Balance of NRB to total deposit ratio of SBI bank is greater than others banks.
- There is positive correlation between change in deposit and change in total liquid und of BOK, HBL, SBI, SCBL, NIB, EBL but NABIL has negative correlation coefficient.
- There is a positive correlation between total liquid funds and net profit of BOK,NIB and EBL but negative of HBL,SBI,SCBL and NABIL

Mr. Sandesh singh Parajuli (2007) had done research on “*Assets and liquidity management*” of SCBL, HBL and NABIL. This study has set out the following objectives:

- To determine how efficiently assets has been utilized by the banks.
- To give suggestion to the banks on the basis of the study.

- To measure how performing and non- performing loans of the banks.
- To analyze the liquidity position of banks.
- To find out problem and difficulties faced by the banks.

His major findings are as follows.

- Correlation coefficient between total deposit and cash and bank balance is positive of NABIL and SCB banks but negative of HBL.
- Correlation coefficient between current deposit and cash and bank balance is positive of all the banks.
- SCB has good liquidity position than HBL and NABIL.

Mrs. Dipti Koirala (2007) had done research on “*Liquidity management of commercial banks in Nepal*” of SCBL, HBL, NIBL and NABIL. This study has set out the following objectives:

- To assess the liquidity position of selected commercial banks.
- To analyze the problem of liquidity management in selected commercial banks
- To identify the factors affecting liquidity position and its management.
- To examine the effectiveness of liquidity management.
- To evaluate the liquidity turnover, profitability and risk position of selected commercial banks.
- To provide suggestion and recommendation on the basic of major finding.

Her major findings are as follows:

- Liquidity funds to total deposit ratio of HBL is highest than others.
- Balance with NRB to total deposit ratio of NABIL bank’s is highest than others.
- NABIL is maintaining high current ratio than others.
- NABIL and SCBL are more successful in maintain liquid assets but the liquid position of NABIL and HBL is not good.

2.2.2 Review of Article

2.2.2.1 Shiba Raj Shrestha (2061) in his articles, “*The Efficient of liquidity monitoring and forecasting Framework the Nepal Rastra Bank in the Context of*

Liquidity Management in the Nepalese Banking and Financial System” has conducted liquidity management is the part of risk management framework of financial services industry. He found taking high liquidity risk as well as high credit risk are two main factors that cause banks to fail. Although high liquidity risk alone is not likely to cause bank to failure, a liquidity crises usually signals a need for change. He concluded proper liquidity management ensures that bank and financial institutions’ financial commitments and obligation are met. Maintaining adequate liquidity also help in avoiding forced sale of assets. The need for bank liquidity steams from seasonal, cyclical trend and short term irregular movements is deposit and loans. The different sources available to meet these liquidity needs were identify and grouped into assets and liability liquidity sources. The treasury manager must consider the purpose of the liquidity need, the length of time for which funds are needed, the access to liability markets, the cost and the characteristics of various liquidity sources and interest rate forecasts.

2.2.2.2 Leonard Matz (2001) "*Liquidity risk management and self paced A\L management*” undoubtedly suggest that the quantity o liquidity you have or can get must be related to the quantity of liquidity that you think you may need. The quantity of liquidity that you need is mainly, the sum o current liabilities you may lose plus new assets you have to fund liquidity Risk, the amount of liquidity you might need, is highly scenario specific. Liquidity cannot be intelligently measured without using scenario analysis. Sources available in some scenario are less or unavailable in others. He emphasized that the essences of liquidity risk in cash flows. Therefore, fundamentally, liquidity gap analysis is simply an evaluation of the two requirements. “Enough money” and “When we need it” Liquidity risk management tactics are more vital than managing the time profiles of maturing liabilities. He conducted four essential liquidity management tools: always keep some asset liquidity reserve, extend liabilities terms to reduce liquidity risk, be prepared to enhance liquidity quickly at the first sign o increased potential need and image cash flows profiles.

He further recommended that banks should analyze the likely impact of different stress scenarios on their liquidity position and set their limit accordingly. Limits should be appropriate to the size, complexity and financial condition of the bank. Management

should define the specific procedures and approvals necessary for exceptions to policies and limits. The liquidity strategy should set out the general approach the bank will have to liquidity, including various quantitative and qualitative target. This strategy should address the bank's goal of protecting financial strength and the ability to withstand stressful event in the marketplace. Optimal management of liquidity requires a delicate balance between liquidity risk and income. No bank can hold enough liquidity to survive anything close to a "worst case" liquidity crises. The penalty for too little liquidity may be the failure of the bank but too much liquidity carries a penalty as well. So, liquidity risk is highly idiosyncratic, arbitrary and inconsistent.

2.3 Research Gap

By the revision of above mentioned studies, it is found that different studies have different area of coverage. But no one has considered credit -deposit ratio. The major concentration of this present thesis is to make clear picture credit deposit ratio by using the different statistical and financial tools like Ratio analysis, correlation test etc of the sample companies. The main objectives are mentioned in chapter-I. And primary and secondary both types of updated data are used as per required. This study is different than the others related studies according to sampling procedure and size, methodology and mainly objectives.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Introduction

This chapter deals with the research methodology, which are used in the period of research. The basic objective of the chapter is to provide details of various methodologies followed the study. Thus, research methodology is a way to systematic process of the study so that we can solve the research problem. The study will seek the conclusion to the point that what position and recommend the useful as well as meaningful points so that all concerned can be achieve. Research methodology is only one way to reach the objective of the study.

The prime concern of this study is the liquidity position of the commercial bank for analyzing the liquidity risk. Commercial banks liquidity risk is measured by its ability to discharge demand of deposit and loan able fund. The overall approach to the research is presented in this chapter. This chapter also explains the research methodology adopted and implied for the resources used in achieving the permitted objective as stated in the earlier chapter. Research methodology contains of the research design, sources of data, population and sample and method of data analysis.

3.2 Research Design

“A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.”(Kothari, 2000:39)

Research design contains a clear statement of the research problem, procedures and techniques to be used for gathering the information. Research design is needed to facilities the smooth sailing of the various research operation, there by making research as sufficient as possible yielding maximal information with minimum expenditure of effort, time and money. In other words, research design stands for advance planning of

the methods to be adopted for collection the relevant data and the techniques to use in their analysis, keeping in the view of the objective of research. The main objective of the study is to evaluate the liquidity management of selected commercial banks. For this, study is focused on *analytical and descriptive* manner. Data of five *six* fiscal year are collected from various sources are analyzed and tabulated. Different financial and statistical tools are presented to examine the liquidity management of selected commercial banks. "Descriptive researches studied involve the systematic collection and presentation of data to give a clear picture of a particular situation." (Wolf and pant, 2005:98)

3.3 Variable

A variable is a symbol to numbers or values are assigned. (Ker linger, 2002:300) So the variables can take on values. This research intends to identify the factor that affect the liquidity risk of commercial banks. Thus, liquidity is known as dependent variable which is affected by many variables, such variables in this study. The entire factors that affect the liquidity management of commercial banks, is called independent variable.

3.4 Population and Sample

"The term 'population' or 'universe' for means all the members of any well defined class of events of objective." (Pant, 2002:75) The population refers to the organization of the same nature and its services and product in general. So, the total numbers of commercial banks in Nepal are population. There are 25 commercial banks in Nepal at the end of January 2009.

"A sample portion chosen from the population for studying its properties is called sample and the number of units in the sample is known as sample size. The method of selecting for study a small portion of the population to draw conclusion about the characteristics of the population (universe) is known as sampling." (Chaudhary, A.K.2058:171).since study of whole universe is not possible due to lack of time and money and capacity. Thus, among 23 commercial banks five commercial banks have

been chosen as sample. Simple random sampling methods have been used for the selection. Thus probability of being selected is equal for all units. They are:

-) Himalayan bank limited
-) Nabil bank limited
-) Standard chartered bank limited
-) Everest bank limited

3.5 Sources and Nature of Data

The study is based on secondary data as well as primary data were used as per requirement. The natures of primary and secondary data were different. So the natures of two types of data were different. Secondary data are used to analyze the historical trend in liquidity management and primary data are used to find the factor affecting the liquidity management of commercial banks. The relation with liquidity to others variables is analyzed by using primary data

Primary data were drawn by filling a questionnaire from the respondents. The responds of the primary data are senior level of officers and professional of banking sectors. The secondary data were collected from annual report of commercial banks, different web site, journals, bulletin, publication of different authorities etc.

3.6 Data Collection Techniques

The researcher contains of both primary as well as secondary data. Secondary data were collected of various commercial banks (especially annual report) and various publication of NRB. Some of data has been collected from of Nepal stock exchange, different web site, journals, unpublished thesis, news paper, different books, magazine, different authors etc. Only required and related data has been used. Data has been classified and processed before use. So, the data collection procedures also difference. Primary data were drawn by filling a questionnaire from the respondents. The responds of the primary data are senior level of officers and professional of banking sectors.

3.7 Data Analysis Tools

After the collection of research data, an analysis of the data and interpretation of the result are necessary. Analysis of data comes prior to interpretation. The facts and figure collected are being processed with a view to reducing them to manageable properties. Only by such a careful and systematic processing, the data collected will lend itself of statistical treatment and meaningful interpretation leading to formulation of theory of finding. Thus, the data processing comprises of editing, coding, categorization and tabulation is intermediary stage between the collection, analysis and interpretation of data.

This study applies simple as well as complex method. Results are presented in tabular form, figure, graph, chart, and diagram which are very clear, interpreted individually. Financial statement like balance sheet, cash flows, profit and loss etc has been calculated for to achieve objective of study. Different tools o financial tools and statistical are used to make the result more effective, convenience, realizable, authentic and complete. To come on certain focus point of conclusion data were be analyzed. Most effective financial analysis is data analysis.

3.7.1 Financial Tools

Financial analysis is the process of identifying the financial strength and weakness of firm by properly establishing relationship between the items of balance sheet, which represented a snapshot of the firm's financial position at a movement in time and next, income statement that depicts a summary of the firm's profitable overtime. (Horne and wachowicz: 2003:120)

In financial analysis ratio is used as a benchmark for evaluation for financial position and performance of a firm. Financial analysis is a technique of answering various questions regarding the performance of a firm in the past, present and the future.

3.7.1.1 Ratio analysis

The ratios are designed to show relationship between financial accounts. By comparing each firm's debit to its assets and by comparing the interest it must pay to the income it has available for payment for interest. Such comparisons are made by ratio analysis. Ratio analysis is useful both as way to anticipate future condition and more important, as a starting points for planning actions that will influence the future course of events.

The ratio is generally calculated from past financial statement. Ratio analysis is the process of identifying the financial strength and weakness. It truly helps to exploit maximum benefits and repair the weakness to meet challenge. Ratio analysis has limitation, but used with care and judgment, it can be most helpful. Ratio is a parameter to improve the future performance. Ratio is generally express in percentage, proportion and charts

To find out the liquidity position of sample selected commercial banks following ratio have been used.

3.7.1.1.1 Credit Deposit Ratio:

It indicates how much money to give a loan by the bank of total deposit amount. Higher ratio indicates liquidity risk and lower ratio indicates strong liquidity.

Total loan means lending money to customers for certain period of time. At mentioned interest rate which generates interest income to banks. Hence, this ratio explains that ability of banks to mobilize its deposited funds for generating interest income. Higher ratio results higher utilization of deposited fund and vice versa. Here, it should be noted that higher rate always does not reflects better condition of banks there might be chances of shortage of liquidity. The following table exhibits the ratio of total loan to total deposit ratio of Banks throughout study period.

$$\text{Credit deposit ratio} = \frac{\text{Total Loan}}{\text{Total Deposit}} \times 100$$

3.7.1.1.2 Cash and Bank Balance to Current Deposit Ratio

This ratio is designed measure the bank's ability to meet the immediate obligation. This ratio is obtained by dividing cash and bank balance by current deposit.

$$\text{Cash and Bank balance} = \frac{\text{Cash and Bank balance}}{\text{Current Deposit Ratio}} \times 100$$

3.7.1.1.3 Total Liquid funds to Total Deposit Ratio

This ratio is designed to see what proportion of the total deposit accepted by commercial banks is kept as liquid funds. Total liquid funds hold all assets which can be liquid weather needed. It includes cash, bank balance, government securities etc.

$$\text{Liquid funds to total deposit ratio} = \frac{\text{Cash + Bank Balance + Government Securities}}{\text{Total Deposits}} \times 100$$

3.7.1.1.4 Total Investment to total deposit ratio:

It shows the portion of total investment in total deposit. This ratio measures the mobilization of percentage amount of total deposit on investment. Higher ratio indicates the better liquidity position where as lower ratio indicates liquidity risks which may arise in future.

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}} \times 100$$

3.7.1.1.5 Balance with NRB to Total Deposit Ratio

This ratio indicates the proportion of balance with NRB on total deposit ratio. It is used to measure the liquidity position of commercial banks and capacity to pay depositors amount promptly. NRB is the regulatory body of all the commercial banks. In order to

enable the smooth functioning of the commercial banks, NRB has compelled them to hold a certain percentage of their total deposit as a reserve. This is particularly done in order to maintain the strength of commercial banks regarding the liquidity position. This ratio can be calculated by using the following formula.

$$\text{Balance with NRB to Total Deposit} = \frac{\text{Balance with NRB}}{\text{Total Deposit}} * 100$$

3.7.1.1.6 Short Term Investment to Total Deposit Ratio

This ratio shows the proportion of short term investment in the total deposit. This ratio is useful in analyzing the liquidity position of commercial banks. Higher ratio indicates the strong liquidity position and lower ratio means the bank may be liquidity crises in future. This ratio is computed by dividing the short term investment by total deposit. Short term investment included cash & bank balance, money at a call

Short Term Investment to Total Deposit Ratio:

$$= \frac{\text{Short Term Investment}}{\text{Total Deposit}} * 100$$

3.7.1.1.7 Cash in vault to total deposit ratio:

It is designed to manage the liquidity position of the bank. Bank can meet any requirement of liquidity immediately into cash. This ratio shows the capacity of bank to meet demand of deposit immediately. NRB has determined that the ratio of cash in vault to total deposit is 3% average. Higher ratio shows the stronger liquidity. It is calculated by the following formula

$$\text{Cash Vault to Total Deposit Ratio} = \frac{\text{cash in vault}}{\text{Total deposit}} * 100$$

3.7.2 Statistical Tools

Statistical methods are the mathematical techniques used to facilitate analysis and interpretation of numerical data secured from groups of individuals or groups of observations from a single individual. The figures provide details, description, and tabulation as well as analyze data without subjectivity, but only objectivity. The result can be presented in brief and complicated problems can be studied in a very simple way. It becomes possible to convert abstract problems into figures and complex data into the forms of tables.

The various statistical tools used in this study to analyze the collected data are as follows.

3.7.2.1 Arithmetic mean

The most popular and widely used measure of representation of the entire data by one value is what most laymen call an 'average' and what the statisticians call the arithmetic mean. Its value is obtained by adding together all the items and by dividing this total by the number of items.

The formula to calculate mean is given by,

Mean,

$$\bar{x} = \frac{\sum x}{n}$$

Where,

\bar{x} = Arithmetic Mean

x = sum of all values of the variable x.

n = number of the observation

3.7.2.2 Standard Deviation (S.D.):

The standard deviation is absolute measures of dispersion. The greater standard deviation will be magnitude of the deviation of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of serious and vice versa.

$$\text{S.D. } (\sigma) = \sqrt{\frac{1}{n} \sum (x - \bar{x})^2}$$

Where, σ = standard deviation

n = number of items

3.7.2.3 Trend Analysis

Trend analysis implies straight line irrespective of the seasonal and cyclical swing and function trend analysis is used to measure the line of best fit or straight line is obtained or not. Trend analysis is also used to compare the overall performance of difference selected study period. The term best fit is interpreted in accordance with the principle of least square which consists in minimizing the sum of the square of the deviation between the given observed value of the variables and their corresponding estimates values as given by the line of best fit. Absolute amount per unit of time can change by increasing decreasing the trend value.

Trend analysis is also denoted by least squares linear trend analysis. Trend analysis describes the average relationship between two serious where the one serious related to time and other serious to the value of available. Trend analysis gives the best possible mean values of depended variable for a given value of in depended variable. Under this topic, trend of total deposit, loan, total investment etc will study.

Under this topic, trend of different ratios are forecasted for next three year. The projections are based on the following assumption.

) The main assumption is that other thing will remain unchanged.

-) The banks will remain present position.
-) The economy will be remaining present position.
-) NRB will not change its guidelines to commercial banks.
-) The forecast will, be true only when limitation of least square is carried out.

Least square method

This is one commonly used method to describe the trend. This is the mathematical method.

The straight line trend between the dependent variable 'y' and independent variable

'x' (i.e. time) is representing by equation $y_c = a + bx$

Y_c = Estimated value of 'y' for any given of independent

a = y- intercept of value o 'y' when $x=0$ (i.e. $a = \frac{\sum Y}{n}$)

b = slope of the trend line or amount of change in 'y' per unit in x (i.e. $b = \frac{\sum XY}{\sum X^2}$)

Chapter-IV

Data Presentation and Analysis

4.1 Introduction

This chapter is concerned with financial analysis and statistical analysis that is concerned about comparative analysis and interpretation of available data. Various financial and statistical tools have been used in this part. The main purpose of this chapter is to study, evaluate and analyze those major financial performances, which are mainly related to the liquidity management of commercial banks. The various data in respect of different heading are analyzed one by one.

4.2. Financial Ratio Analysis

Ratio analysis is the process of identifying the financial strength and weakness. It truly helps to exploit maximum benefit and repairs the weakness to meet challenges. Ratio is a parameter to improve the future performance. Ratio is generally express in percentage, proportion and charts. Ratio analysis is useful both as a way to anticipate future condition and improvement, as a starting point for planning action that will influence the future course of events.

4.2.1 Credit Deposit Ratio

It indicates that how much money to give loan by the bank out of total deposit amount. Higher ratio indicates liquidity risk and lower ratio indicates strong liquidity.

$$\text{Credit deposit ratio} = \frac{\text{Total Loan}}{\text{Total Deposit}} \times 100$$

Credit deposit ratio of NABIL, HBL, SCBL, and EBL from the year ended 2004 to 2008 are presented in the table below:

Table 4.1: Comparative analysis of credit deposit ratio

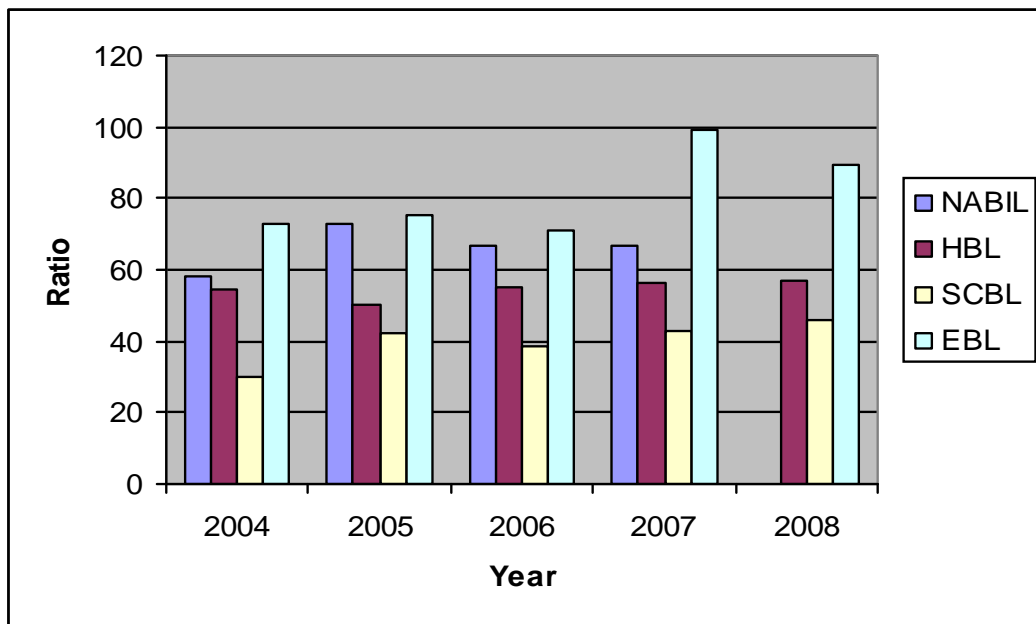
Ratio in %

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	58.01	54.30	30.29	72.97
2005	72.57	50.07	42.12	75.45
2006	66.79	55.27	38.75	71.01
2007	66.60	56.57	42.61	98.99
2008	71.76	57.21	46.09	89.57
Mean	67.15	54.68	39.97	81.6
SD	5.19	2.52	5.31	10.86

Source: Appendix 1

Table 4.1, shows the credit deposit ratio of all four banks under study. Among these four banks EBL has the highest credit deposit ratio because its average is high than other banks. From 2004 to 2008 EBL has the higher ratio than other which we can see on above table. And its fluctuation trend is also high than other. Then NABIL came on second position maintain the highest ratio than HBL and SCBL because its mean is higher. Then, HBL has also maintain the high ratio than SCBL because its average is high than SCBL but its fluctuation trend is very low than other three banks. Likewise SCBL has the lowest ratio than other

Figure: 4.1: Comparative analysis of credit deposit ratio



Source: Table 4.1

4.2.2 Cash & Bank Balance to Current Deposit Ratio

Ratio

This ratio is designed to measure the bank's ability to meet the immediate obligation. This ratio is obtained by dividing cash and bank balance by current deposit. Since cash & bank balance is the most liquid asset, it indicates the institution's ability to cover their deposit. Higher ratio explains higher strength in ability to cover depositors' demand and vice versa. However, maintaining a high ratio might be too costly for the finance company as well.

$$\text{Cash and Bank balance} = \frac{\text{Cash and Bank balance}}{\text{Current Deposit Ratio}} \times 100$$

Cash and bank balance ratio of NABIL, HBL, SCBL, and EBL from the year ended 2004 to 2008 are presented in the table below:

Table 4.2: Comparative analysis Cash & Bank Balance to Current Deposit Ratio

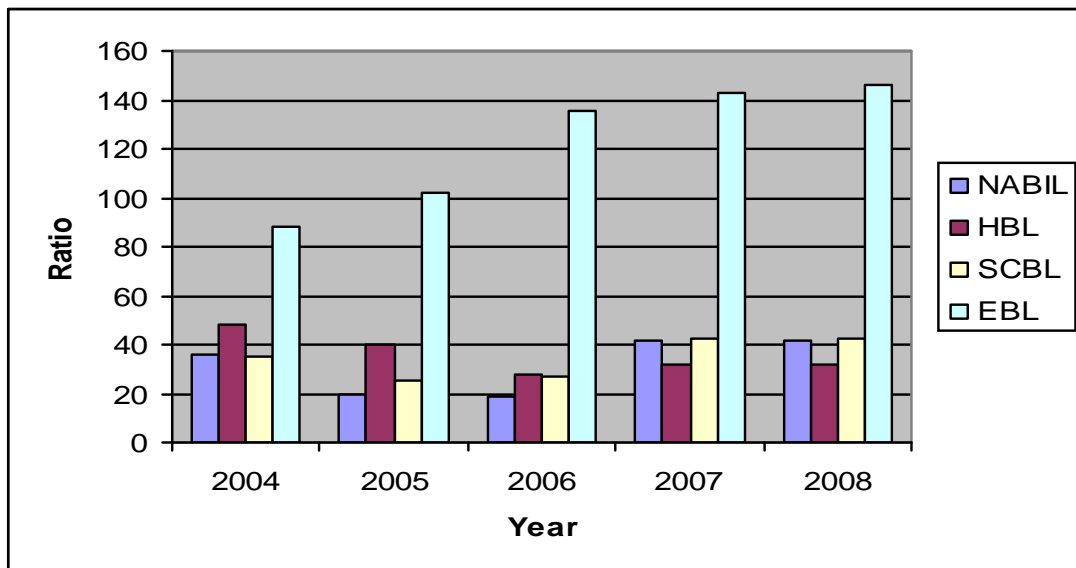
Ratio in %

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	36.09	48.27	34.78	87.78
2005	19.98	39.92	25.51	102.44
2006	19.11	27.86	27.26	135.54
2007	41.23	31.44	42.15	142.86
2008	41.38	31.68	42.48	146.24
Mean	31.56	35.83	34.43	122.97
SD	9.99	10.86	7.15	23.47

Source: Appendix II

Table 4.2, shows cash and bank balance to current deposit ratio of all four banks under study. From the above table it is revealed that cash and bank to current deposit ratio of EBL is the highest than other on average i.e. 122.97. %. It has maintained the high ratio in all year except in year 2004 and also it has highest fluctuation trend than other because it's S.D. is high. Then, HBL has the higher ratio than NABIL and SCBL on average. In the year 2004, HBL ratio is 48.27 %, where as in the year 2008, ratio is 31.68%. SCBL maintain the ratio is 34.43% average which is more than NABIL and its fluctuation trend is low. Similarly NABIL maintain the low ratio among these bank and also it's fluctuates trend is low than HBL and EBL bank.

Figure: 4.2: Comparative analysis Cash and Bank Balance to Current Deposit Ratio



Source: Table 4.2

4.2.3 Total Liquid funds to Total Deposit Ratio

This ratio is designed to see what proportion of the total deposit accepted by commercial banks is kept as liquid funds. Total liquid funds hold all assets which can be liquid weather needed. It includes cash, bank balance, government securities etc. This ratio compares same as prior ratios. But it holds not only cash and bank Balance, not only investment in government securities, it carries total liquid fund that can be easily available to convert whenever necessary to meet companies obligations. That means total liquid fund includes cash, bank balance and investment in government securities. Higher the ratio means higher level of liquidity and vice versa. As we know only having too much liquidity does not means failure of mobilizing funds, hence this ratio only reflects liquidity part of banks

$$\text{Liquid funds to total deposit ratio} = \frac{\text{Cash} + \text{Bank Balance} + \text{Government Securities}}{\text{Total Deposit}} \times 100$$

Liquid funds to total deposit ratio of NABIL, HBL, SCBL, and EBL from the year ended 2004 to 2008 are presented in the table below:

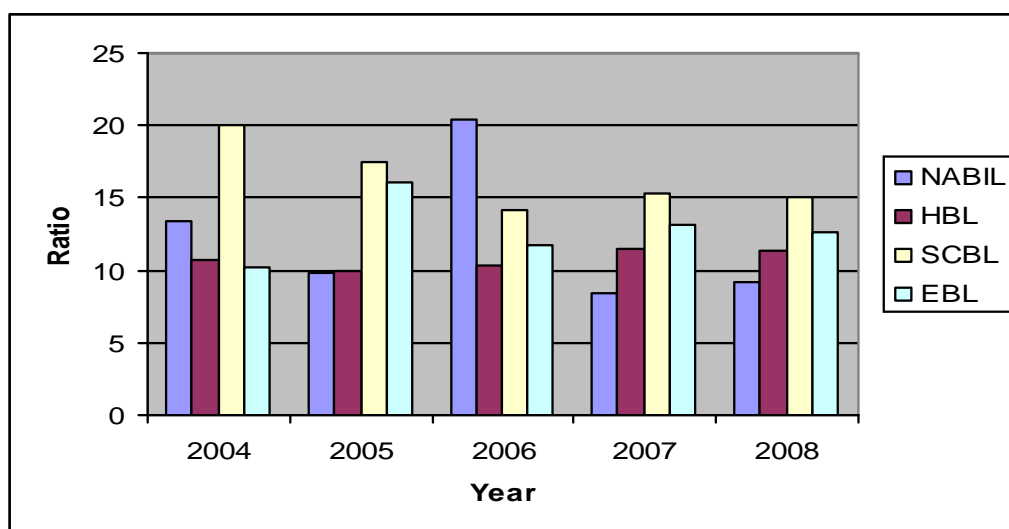
Table 4.3: Comparative analysis Liquid Funds to Total Deposit Ratios**Ratio%**

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	13.38	10.77	20.04	10.16
2005	9.79	9.9	17.43	16.04
2006	20.45	10.28	14.11	11.74
2007	8.41	11.54	15.35	13.15
2008	9.2	11.4	15.1	12.6
Mean	12. 25	10. 78	16. 41	12. 74
SD	4. 44	0. 63	1. 85	1. 94

Source: Appendix III

Table 4.3, shows the total liquid funds to total deposit ratio of four commercial banks. Under the study of four banks, SCBL has the higher ratio on average than other banks because its average is higher than other banks i.e. 16.41%. But its fluctuation trend is medium than NABIL and EBL banks. Then, EBL maintain the higher ratio than other two banks. In the year 2005; But it S.D. is higher than HBL and SCBL banks. Likewise, NABIL also maintain the higher ratio than HBL i.e.12.25% but its S.D is highest than other banks that means it fluctuates more than other bank. Similarly, HBL maintain the low ratio than other three banks as well as S.D. in the year 2004, its ratio is 10.77 and in the year 2008 its ratio is 11. 4 %. Beside this, with the help of the following figure it can be observe more clearly.

Figure 4.3: Comparative analysis Liquid Funds to Total Deposit Ratios



Source: Table 4.3

4.2.4 Total Investment to Total Deposit Ratio:

Ratio

It shows the portion of total deposit in total investment. This ratio measures the mobilization of percentage amount of total deposit on investment. Higher ratio indicates the better liquidity position where as lower ratio indicates liquidity risks which may arise in future.

Year

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}} \times 100$$

Banks mobilize available resource in various sectors out of investment is one. Investment means mobilization of resources in securities issued by Government, banks investment made on fixed deposit to earn higher interest. This tool aims to analyze which banks is being able to mobilize its total deposit in investment. Mobilization of funds in investment depends upon their portfolio management. But for comparison with each other government rules and regulations is to be considered as general. So, in this ratio, higher ratio indicates success in mobilization of funds in investment and vice versa.

Total Investment to total deposit ratio of NABIL, HBL, SCBL, and EBL from the year ended 2004 to 2008 are presented in the table below

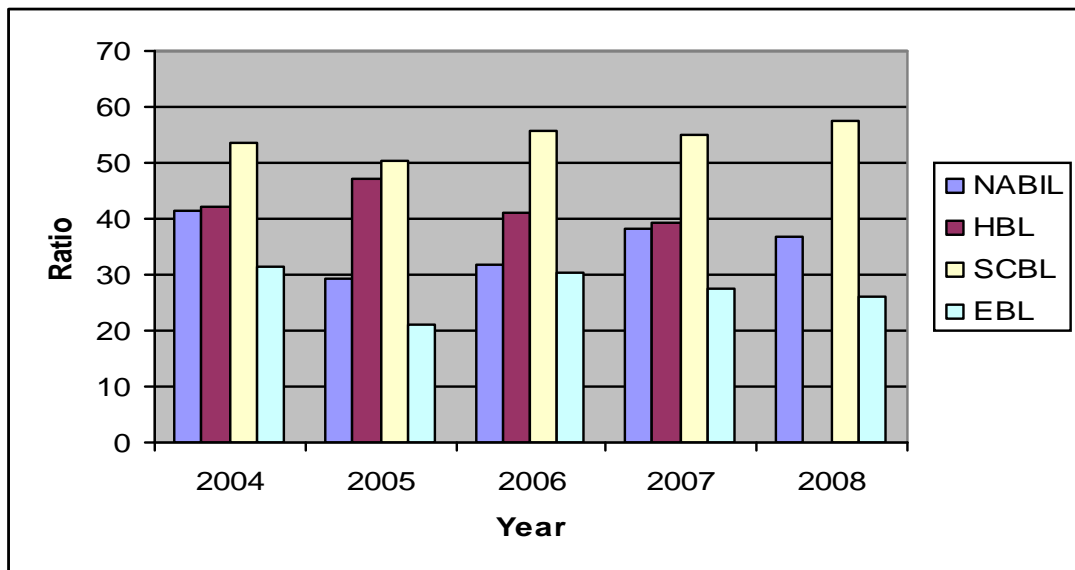
Table 4.4 Comparative analysis Total investment to Total Deposit Ratio

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	41.33	42.22	53.68	31.44
2005	29.25	47.12	50.18	21.08
2006	31.93	41.1	55.71	30.43
2007	38.32	39.35	54.99	27.41
2008	36.86	39.2	57.64	26.1
Mean	35.54	41.8	54.44	27.3
SD	4.37	2.89	2.48	3.66

Source: Appendix IV

From the table 4.4 it is observe that the ratio of total investment to total deposit ratio. In the table, it is seen the highest ratio of SCBL on average i.e.54.44%. But its S.D. is minimum than other banks. Likewise, HBL has the higher ratio than other two banks i.e. 41.8%. In the Year 2004, it has 42.22% and in the year 2008, it has 39.2%. Similarly NABIL maintain the higher ratio than EBL But its S.D. is highest than other banks so it fluctuates more than other banks. Likewise, EBL maintain the low ratio than other banks on average i.e. 27.3%.By comparing the four sample banks, SCBL is highly consistence to average ratio. It has investment huge amount out of total deposit ratio it shows that it liquidity position is week than other banks but it earn more profit due to huge investment. Similarly, SCBL ratio indicates that it has weak position than other two banks as well as it can also earn more interest by investment. Likewise NABIL and EBL maintain high S.D respectively as well as it has also strong position than other banks and NABIL and EBL has strong capacity to meet the immediate obligation.

Figure 4.4: Comparative analysis Total investment to Total Deposit Ratio



Source: Table 4.4

4.2.5 Balance with NRB to Total Deposit Ratio:

This ^{Ratio} indicates the proportion of balance with NRB on total deposit ratio. It is used to measure the liquidity position of commercial banks and capacity to pay depositors amount promptly. NRB is the regulatory body of all the commercial banks. In order to enable the smooth functioning of the commercial banks, NRB has compelled them to hold a certain percentage of their total deposit as a reserve. This is particularly done on order to maintain the strength of commercial banks regarding the liquidity position. This ratio can be calculated by using the following formula.

$$\text{Balance with NRB to Total Deposit} = \frac{\text{Balance with NRB}}{\text{Total Deposit}} * 100\%$$

Table 4.5: Comparative analysis Balance with NRB to Total Deposit Ratio

Ratio%

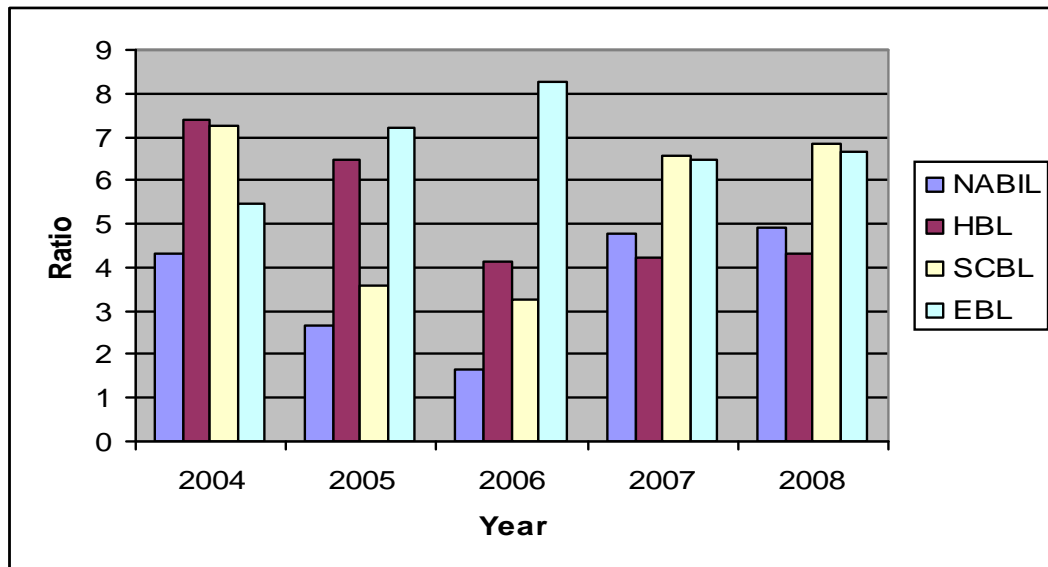
Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	4.3	7.39	7.25	5.48
2005	2.67	6.46	3.58	7.23
2006	1.65	4.14	3.25	8.26
2007	4.77	4.23	6.55	6.48
2008	4.9	4.32	6.85	6.64
Mean	3.66	5.31	5.5	6.82
SD	1.28	1.38	1.72	0.95

Source: Appendix V

Table 4.5 shows the balance with NRB with Total deposit ratio. The average ratio of NABIL is 3.66% which is the lowest ratio than other sample banks. The highest ratio of NABIL is 4.9% in the year 2008 and its lowest ratio is 1.65% in the year 2006. The ratio of HBL is more than NABIL and SCBL on average. The highest ratio of HBL is 7.39% in the year 2004 and lowest ratio is 4.14% in the year 2006. The average ratio of HBL is 5.31% which implies that out of total deposit HBL maintain 5.31% fund in the NRB as reserve which can be used when require. The ratio is higher than NABIL, which depicts the strong capacity of liquidity reserve of HBL. HBL is highly consistent to average ratio during this period. The average ratio of SCBL is 5.5% which is greater than NABIL and HBL. It implies that SCBL has strong liquidity capacity than NABIL and HBL. Then, EBL has the highest ratio than other sample banks. The average ratio of EBL is 6.82%. It indicates that the liquidity capacity of EBL is highest than other.

As NRB has determined the ratio of balanced with NRB to total deposit is 7%. It is the measurement tool of each bank's ratio. During the study, the EBL is only maintaining this ratio as well as HBL and SCBL are the nearing the standard line 7% but NABIL is too less than 7% i.e.3.66%. It shows that liquidity position if HBL and SCBL are satisfactory but poor of NABIL. With the help of following figure it can be seen more clearly.

Figure 4.5 Comparative analyses Balance with NRB to Total Deposit Ratio



Source: Table 4.5

4.2.6 Short Term Investment to Total Deposit Ratio

This ratio shows the proportion of short term investment in the total deposit. This ratio is useful in analyzing the liquidity position of commercial banks. Higher ratio indicates the strong liquidity position and lower ratio means the bank may be liquidity crises in future. This ratio is computed by dividing the shore term investment by total deposit. Short term investment included cash & bank balance, money at a call.

Year

$$\text{Short Term Investment to Total Deposit Ratio} = \frac{\text{Short Term Investment}}{\text{Total Deposit}} * 100$$

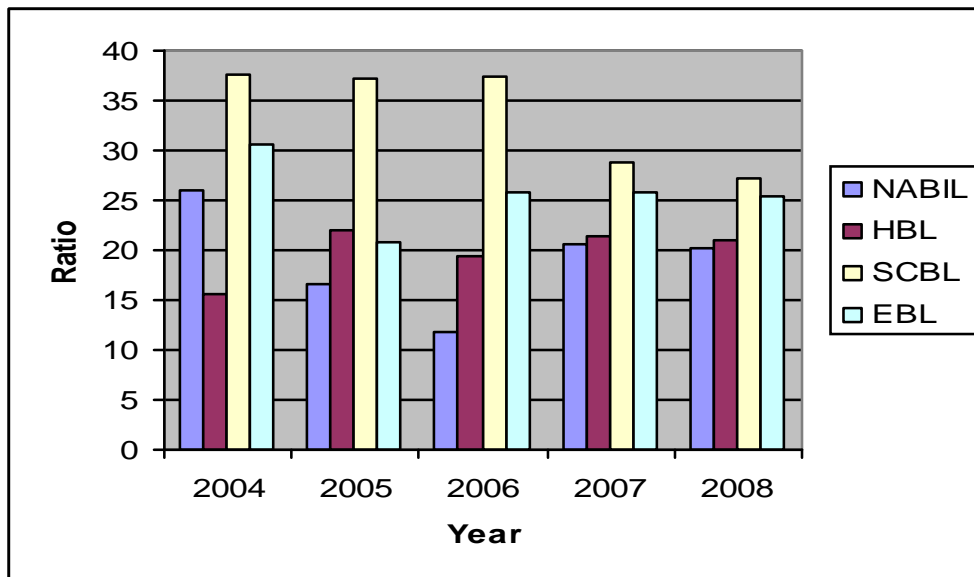
Table 4.6: Comparative analysis Short Term Investment to Total Deposit Ratio
Ratio %

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	26.01	15.59	37.56	30.59
2005	16.55	22.08	37.25	20.80
2006	11.90	19.42	37.49	25.71
2007	20.60	21.48	28.84	25.87
2008	20.19	20.97	27.22	25.32
Mean	19.05	19.91	33.67	25.66
SD	4.68	2.32	4.64	3.1

Source: Appendix VI

From the above table, we saw the short term investment to total deposit ratio of NABIL is 19.05%, the highest ratio and lowest ratio of NABIL in the year 2004 and 2006 is 26.01% and 11.9% respectively. NABIL has the lowest ratio i.e. 19.05% on average than HBL as well as its S.D. is highest than other sample banks. HBL ratio is 19.91% on average which is lowest than other sample banks. Likewise, SCBL has the highest ratio i.e. 33.67% on average. This implies that SCBL has utilized 33.67% of total deposit in short term investment and enjoy two benefits as liquidity and profitability. Similarly EBL has short term investment to total deposit ratio is 25.66% on average, which is higher than NABIL and HBL. So while comparing the ratio of four sample banks it can be concluded that the liquidity position SCBL is strong, EBL has moderate and NABIL and HBL has poor position. It can be seen more clearly from the following chart.

Figure 4.6: Comparative analysis Balance with NRB to Total Deposit Ratio



Source: Table 4.6

4.2.7 Cash in Vault to Total Deposit Ratio

^{Ratio}
Cash in vault denotes the cash in hand of bank. Bank can meet any requirement of liquidity immediately with cash. This ratio shows the capacity of bank to meet the demand immediately. NRB has determined that ratio of cash in vault to total deposit ratio 3% on average. Higher ratio indicates the strong liquidity capacity and vice versa. This ratio is calculated by the following formula.

$$\text{Cash in Vault to Total Deposit Ratio} = \frac{\text{Cash in vault}}{\text{Total Deposit}} * 100$$

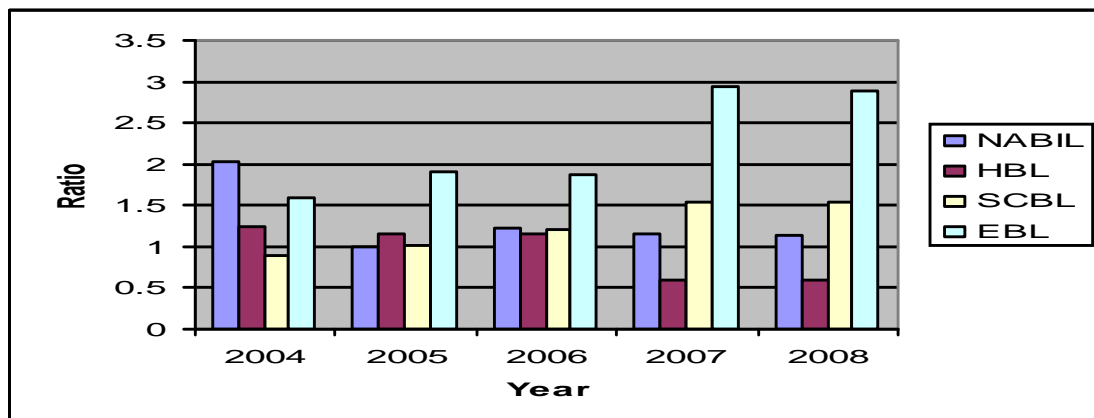
Table 4.7: Comparative analysis Cash in Vault to Total Deposits Ratio

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	2.03	1.25	0.89	1.60
2005	1.00	1.15	1.01	1.91
2006	1.23	1.15	1.21	1.88
2007	1.16	0.59	1.54	2.94
2008	1.13	0.6	1.54	2.88
Mean	1.31	0.95	1.24	2.24
SD	0.37	0.29	0.27	0.56

Source: Appendix VII

Table 4.7, it is revealed that EBL has the highest ratio i.e. 2.24% on average among other sample banks. As compared to each sample banks EBL, have maintain above 2% range but NABIL, HBL and SCBL have below 2%. HBL has maintained the lowest ratio than other banks on average i.e.0.95%. But its fluctuation trend also minimum than other two banks i.e. NABIL and EBL because its S.D. is low i.e.0.27. Likewise NABIL and SCBL maintain the around same ratio i.e. 1.31% and 1.24% respectively. From this study, we can say that all the four sample banks have not maintained the standard ratio. That means all the banks has not kept the enough money as cash in bank. It also shows that sample banks may face the liquidity crises in future. Among these banks, EBL has satisfactory level of ratio but other banks have poor liquidity position.

Figure 4.7: Comparative analysis Cash in Vault to Total Deposits Ratio



Source: Table 4.7

4.3 Square Linear Trend Analysis

Trend analysis is very useful in terms of both commercial banks and to the Shareholders. Through analysis bank can estimate the future investments, Opportunities, rate of return, deposit liabilities etc. Whether to stick in the present Growth rate or to increase or decrease. In terms of shareholders, trend analysis helps to whether to invest on the bank or to leave as per the satisfaction of the growth rate. For Depositors it provides degree of safety in the form of financial credit worthiness of the bank in the bank in the future and the borrowers, it assures about the financial capability of the banks to furnish their loans and advance in the future provided that the present tend continues. The strength line tend line of a serious of data is represented by the following formula.

$$Y_c = a + bx$$

Here, Y is used to designed the trend values to distinguish them from the actual Y values, a is the Y intercept or the computed trend figure of the Y variable when X=0, b represents the slope of the trend line of the amount of change in Y variable that is associate with a change of one unit in X variable in time series analysis represents times.

4.3.1 Trend analysis of Credit Deposit Ratio

Here the credit deposit ratio of four sample banks under five years and the trend value of credit deposit ratio next three years presented in table below.

The following table describes the trend values of credit deposit ratio for eight years

Table 4.8: Comparative trend analysis of credit deposit ratio**Ratio%**

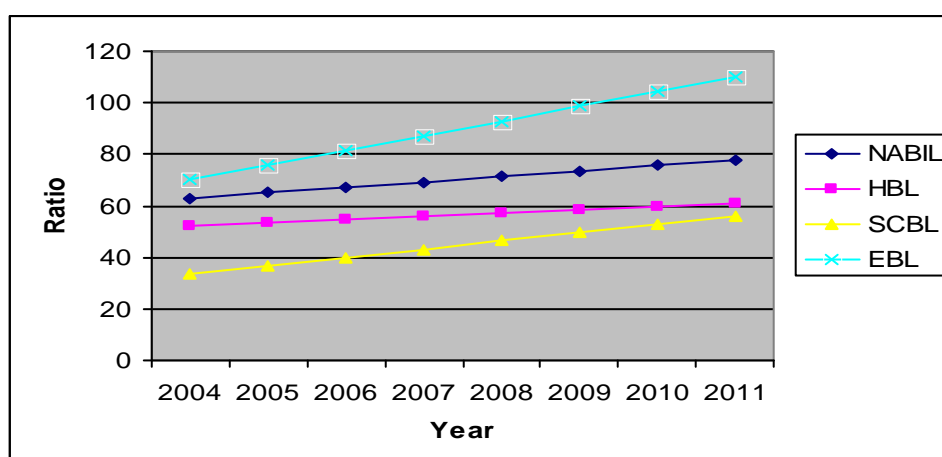
Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	62.85	52.22	33.55	70.26
2005	65.00	53.45	36.76	75.93
2006	67.15	54.68	39.97	81.6
2007	69.3	55.91	43.18	87.27
2008	71.45	57.14	46.39	92.94
2009	73.6	58.37	49.6	98.61
2010	75.75	59.60	52.81	104.28
2011	77.90	60.83	56.02	109.95
Mean	67.15	54.68	39.97	81.6
Rate of change	2.15	1.23	3.21	5.67
Trend equation(y)	67.15+2.15x	54.68+1.23x	39.97 + 3.21x	81.6 + 5.67x

Source: Appendix VIII

Table 4.8, shows the trend analysis of credit deposit ratio of four sample commercial banks. From the table, we show that trend line of all sample banks going up randomly. In the year 2008, the ratio NABIL has 51.1% and its trend line is going up next year but then after it falls down. Likewise, the trend line of HBL is also increasing trend. The ratio of credit deposit ratio of SCBL is increasing up to next year then it decrease rapidly. Similarly, the trend line of EBL has the same trend of SCBL. If other thing remaining same, the ratio of credit deposit ratio of NABIL, HBL, SCBL and EBL will be 77.9%, 60.83%, 56.02% and 109.95% respectively.

The following chart describes the trend value of credit deposit ratio of sample banks for eight years.

Figure 4.8 Comparative trend analysis of credit deposit ratio



Source: Table 4.8

2.3.2 Trend analysis of cash and bank balance to current deposit

Under this topic, to analyze the trend of cash and bank balance to current deposit ratio of four sample commercial banks with comparatively less than five years study period and projected the trend next three years

The following table describes the trend value of credit deposit ratio of sample banks for eight years.

Table: 4.9: Comparative Trend analysis of cash and bank balance to current deposit Ratio%

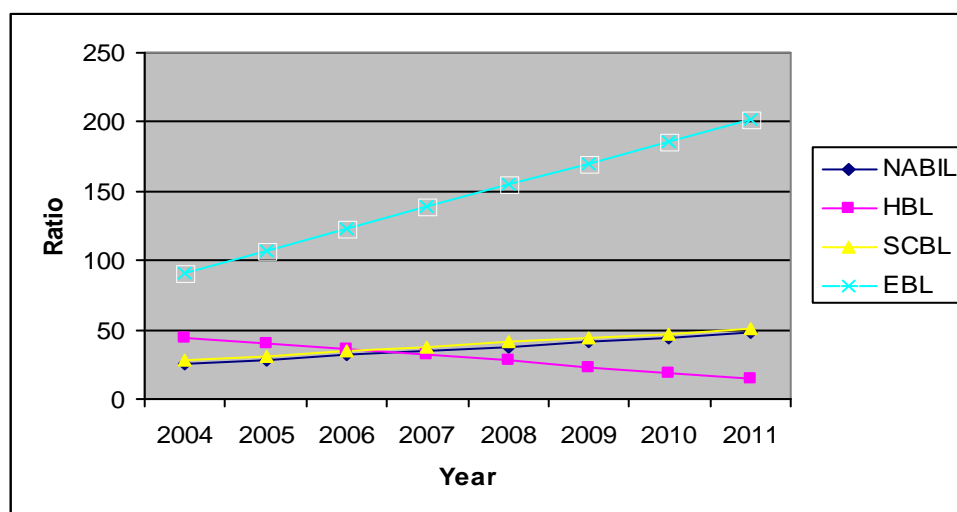
Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	25.2	44.17	28.03	91.51
2005	28.38	40.00	31.23	107.24
2006	31.56	35.83	34.43	122.97
2007	34.74	31.66	37.63	138.7
2008	37.92	27.49	40.83	154.43
2009	41.10	23.32	44.03	170.16
2010	44.28	19.15	47.23	185.89
2011	47.46	14.98	50.43	201.62
Mean	31.56	35.83	34.43	122.97
Rate of change	3.18	-4.17	3.20	15.73
Trend equation(y)	31.56+3.18x	35.83-4.17x	27.83-0.83x	122.97+15.73x

Source: Appendix VIII

Above the table shows trend analysis of the cash and bank balance to current deposit ratio of sample banks. In the table, it is revealed that trend analysis of all commercial banks except HBL have increasing trend. Comparatively, the fluctuation trend of EBL is highest and its trend line is rising up rapidly. The trend line of HBL also rapidly down. The cash and bank balance to current deposit ratio of EBL in the year 2004 is 36.09% then its ratio is increase. If other thing remaining same, the ratio of cash and bank balance to current deposit ratio of NABIL, HBL, SCBL and EBL will be 47.46%, 14.98%, 50.43% and 201.62% in the year 2011 respectively.

The following chart describes the trend value of cash and bank balance to current deposit ratio of sample banks for eight years.

Figure: 4.9: Comparative Trend analysis of cash and bank balance to current deposit



Source: Table 4.9

4.3.3 Trend analysis of Liquid Funds to Total Deposit Ratios

Under this topic, to analyze the trend of Liquid Funds to Total Deposit Ratios of four sample commercial banks with comparatively less than five years study period and projected the trend next three years

The following table describes the trend value of credit deposit ratio of sample banks for eight years.

**Table: 4.10: Comparative Trend analysis of Liquid Funds to
Total Deposit Ratios**

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	14.19	10. 2	18.81	12.34
2005	13.22	10.49	17.61	12.54
2006	12.25	10. 78	16.41	12.74
2007	11.28	11.07	15. 21	12.94
2008	10. 31	11.36	14.01	13. 14
2009	9. 34	11.65	12.81	13. 34
2010	8. 37	11. 94	11.61	13. 54
2011	7. 4	12. 23	10. 41	13.74
Mean	12.25	10. 78	16.41	12.74
Rate of change	-0. 97	0. 29	-1. 20	0. 2
Trend equation(y)	12.25-0.97x	10.78+0.29x	16.41 -1.20x	12.74 + 0. 2x

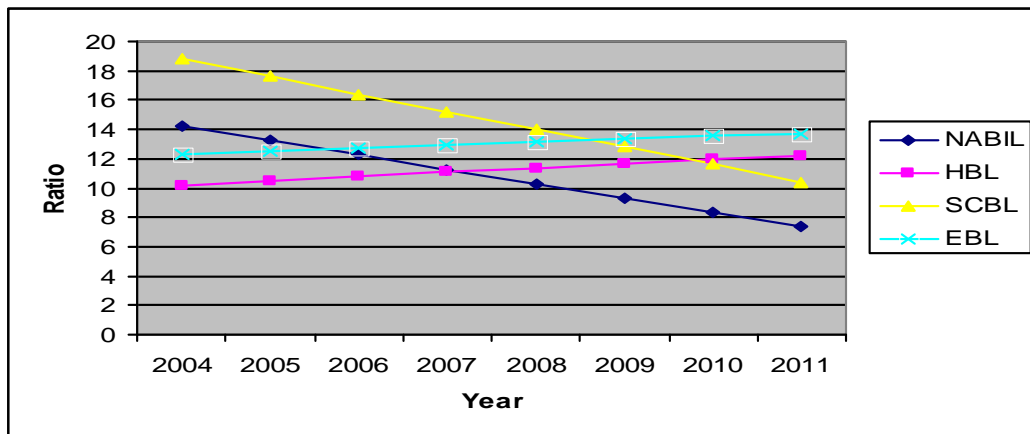
Source: Appendix VIII

From the above comparative table, it has been found that liquid funds to total deposit ratio of four sample banks are in decreasing and increasing trend. The trend of NABIL is less decreasing and the trend of SCBL is high decreasing trend.

If other thing remaining same, the liquid funds to total deposit ratio of NABIL, HBL, SCBL and EBL will be 7.4%, 12.23%, 10. 41% and 13.74 % respectively in the year 2011.

The trend value of total liquid funds to total deposit ratio of sample banks are presented in below chart.

Figure: 4.10: Comparative Trend analysis of Liquid Funds to Total Deposit Ratios



Source: Table 4.10

4.3.4 Trend analysis of Total Investment to Total Deposit Ratio

Under this topic, to analyze the trend of Total Investment to Total Deposit Ratio of four sample commercial banks with comparatively under five years study period and projected the trend next three years

The following table describes the trend value of credit deposit ratio of sample banks for eight years.

Table: 4.11: Comparative Trend analysis of Total Investment to Total Deposit Ratio
Ratio %

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	35.51	44.16	51.9	28.18
2005	35.53	42.98	53.17	27.74
2006	35.54	41.8	54.44	27.3
2007	35.55	40.62	55.71	26.86
2008	35.57	39.44	56.98	26.42
2009	35.58	38.26	58.25	25.98
2010	35.59	37.08	59.52	25.54
2011	35.61	35.9	60.79	25.1
Mean	35.54	41.8	54.44	27.3
Rate of change	0.013	-1.18	1.27	-0.44
Trend equation(y)	$35.54 + 0.013x$	$41.8 - 1.18x$	$54.44 + 1.27x$	$27.3 - 0.44x$

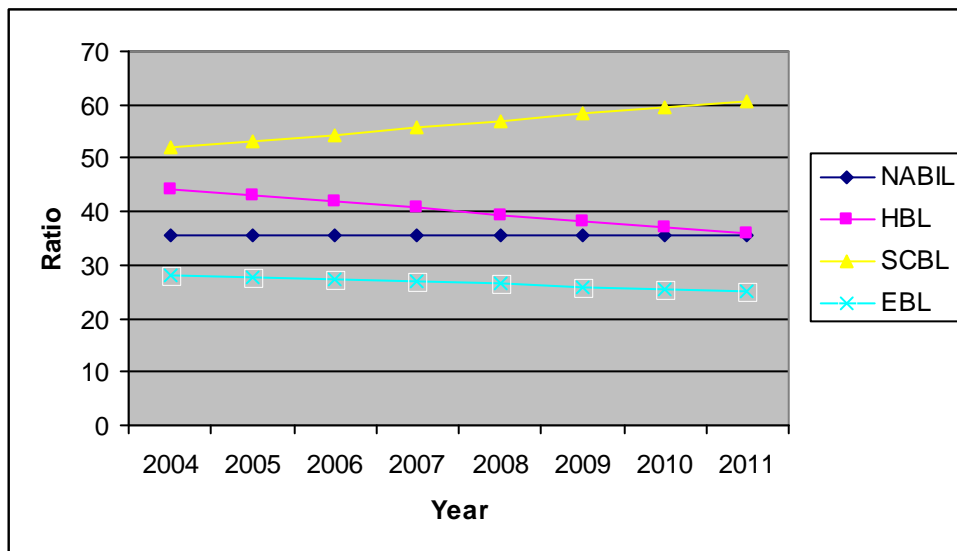
Source: Appendix VIII

From the above comparative table, it has been found that total investment to total deposit ratio of sample banks are in increasing and decreasing trend.

If other thing remaining same, the total investment to total deposit ratio of NABIL, HBL, SCBL and EBL will be 35.61% , 35.9%, 60.79% and 25.1 respectively in the year 2011.

The trend value of total investment to total deposit ratio of sample banks are presented in below chart.

Figure: 4.11: Comparative Trend analysis of Total Investment to Total Deposit Ratio



Source: Table 4.11

4.3.5 Trend analysis of Balance with NRB to Total Deposit Ratio

Under this topic, to analyze the trend of balance with NRB to total deposit ratio Of four sample commercial banks with comparatively under five years study period and projected the trend next three years

The following table describes the trend value of balance with NRB to total deposit ratio of sample banks for eight years.

Table: 4.12: Comparative Trend analysis of Balance with NRB to Total Deposit Ratio

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	3.00	6.99	5.06	6.50
2005	3.33	6.15	5.28	6.66
2006	3.66	5.31	5.5	6.82
2007	3.99	4.47	5.74	6.98
2008	4.32	3.63	5.96	7.14
2009	4.65	2.79	6.18	7.3
2010	4.98	1.95	6.4	7.46
2011	5.31	1.11	6.62	7.62
Mean	3.66	5.31	5.5	6.82
Rate of change	0.33	-0.84	0.22	0.16
Trend equation(y)	3.66 + 0.33x	5.79 - 0.84x	5.5 + 0.22x	6.82 + 0.16x

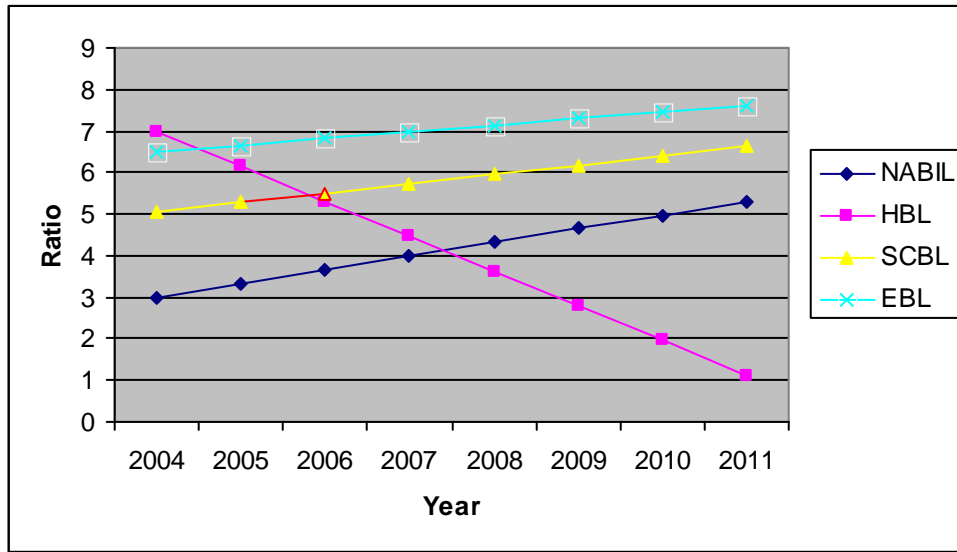
Source: Appendix VIII

From the above comparative table, it has been found that balance with NRB to total deposit ratio of all sample banks except HBL are increasing trend. The decreasing trend of HBL is highest than other banks. In the year 2008, the ratio of HBL is 4.32%.

If other thing remaining same, balance with NRB to total deposit ratio of NABIL, HBL, SCBL and EBL will be 5.31%, 1.11%, 6.62% and 7.62% respectively in the year 2011.

The trend value of balance with NRB to total deposit ratio of sample banks are presented in below chart.

Figure: 4.12: Comparative Trend analysis of Balance with NRB to Total Deposit Ratio



Source: Table 4.12

4.3.6 Short term investment to total deposit Ratio

Under this topic, to analyze the trend of Short term investment to total deposit ratio of four sample commercial banks with comparatively under five years study period and projected the trend next three years

The following table describes the trend value of Short term investment to total deposit ratio of sample banks for eight years.

Table: 4.13: Comparative Trend analysis of Short term investment to total deposit Ratio

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	20.57	17.87	39.49	26.76
2005	19.81	18.89	36.58	26.21
2006	19.05	19.91	33.67	25.66
2007	18.29	20.93	30.76	25.11
2008	17.53	21.95	24.94	24.56
2009	16.77	22.97	22.03	24.01
2010	16.01	23.99	19.12	23.46
2011	15.25	25.01	16.21	22.91
Mean	19.05	19.91	33.67	25.66
Rate of change	- 0.76	1.02	- 2.91	- 0.55
Trend equation(y)	19.05 - 0.76x	19.91+ 1.02x	33.67- 2.91x	25.66- 0.55x

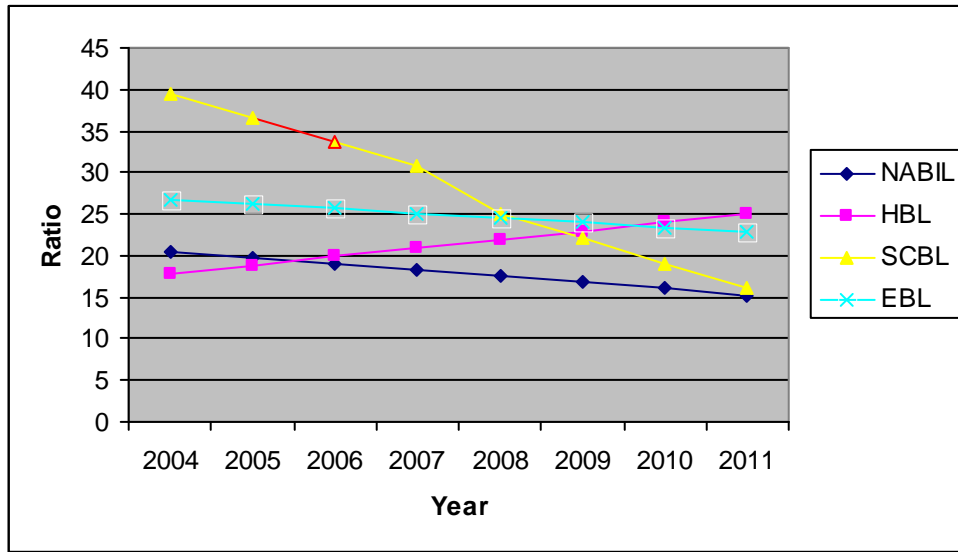
Source: Appendix VIII

From the above comparative table, it has been found that Short term investment to total deposit ratio of all sample banks except HBL are in decreasing trend. The ratio of HBL is increasing very slowly.

If other thing remaining same, Short term investment to total deposit ratio of NABIL, HBL, SCBL and EBL will be 15.25, 25.01 %, 16.21 %, and 22.91%, respectively in the year 2011.

The trend value of Short term investment to total deposit ratio of sample banks are presented in below chart.

Figure: 4.13: Comparative Trend analysis of Short term investment to total deposit Ratio



Source: Table 4.13

4.3.7 Trend analysis of Cash in Vault to Total Deposit Ratio:

Under this topic, to analyze the cash in vault to total deposit ratio of four sample commercial banks with comparatively less than five years study period and projected the trend next three years

The following table describes the trend value of cash in vault to total deposit ratio of sample banks for eight years.

**Figure: 4.14 Comparative Trend analyses of Cash in Vault to
Total Deposit Ratio**

Ratio%

Year	Banks			
	NABIL	HBL	SCBL	EBL
2004	1.63	1.33	0.88	1.52
2005	1.47	1.14	1.06	1.88
2006	1.31	0.95	1.24	2.24
2007	1.15	0.76	1.42	2.60
2008	0.99	0.57	1.60	2.96
2009	0.83	0.38	1.78	3.32
2010	0.67	0.19	1.96	3.68
2011	0.51	0.00	2.14	4.04
Mean	1.31	0.95	1.24	2.24
Rate of change	- 0.16	- 0.19	0.18	0.36
Trend equation(y)	1.31- 0.16x	0.95 - 0.19x	1.24+ 0.18x	2.24+ 0.36x

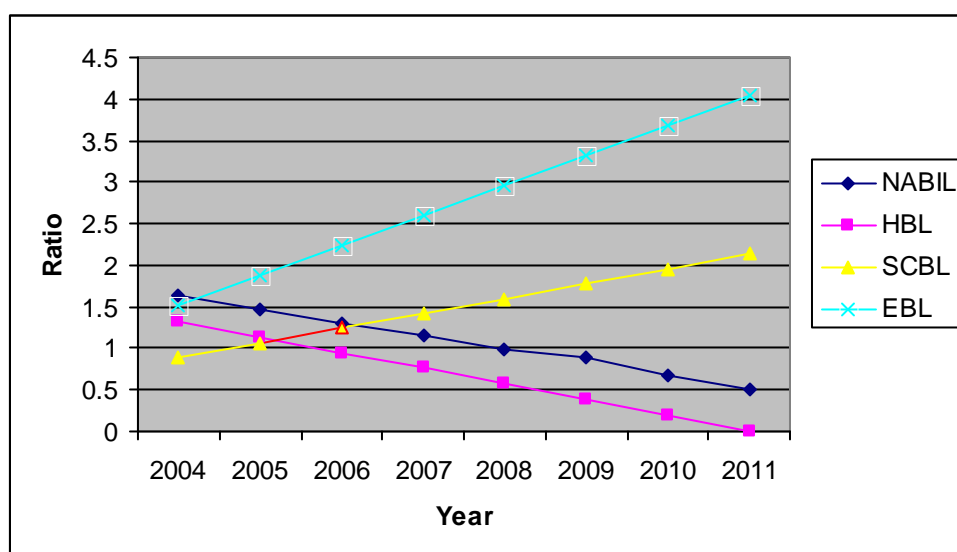
Source: Appendix VIII

From the above comparative table, it has been found that cash in vault to total deposit ratio of NABIL and HBL banks are in decreasing trend. But EBL and SCBL have increasing trend.

If other thing remaining same, cash in vault to total deposit ratio of NABIL, HBL, SCBL and EBL will be 0.51%, 0.00 %, 2.14 % and 4.04 % respectively in the year 2011.

The trend value of cash in vault to total deposit ratio of sample banks are presented in below chart.

Figure: 4.14: Comparative Trend analysis of Cash in Vault to Total Deposit Ratio



Source: Table 4.14

4.4 GAP Analysis

Gap analysis is another tool of liquidity management. It is evolved from of liquidity profile analysis. So it is a bit reliable and scientific tool of measuring liquidity position of commercial banks and NRB has made a regulation to calculate the GAP analysis. From the GAP analysis, we can find out the GAP of commercial bank. So the individual GAP analyses of sample banks are presented below.

4.4.1 GAP Analysis of NABIL

Table: 4.15

Difference Based on Maturity Period						
Year	0-90 days	91-180 days	181-270 days	271-365 days	Above one years	GAP
2004	41036	540	16418	10547	-53266	15275
2005	21304	1712	12062	24337	-59415	0
2006	1896.1	661.5	335.9	1679.2	-4572.7	0
2007	39292	2275	-1478	31877	-71966	0
2008	4107	5920	19773	47155	-76955	0

From the above table, we can see the liquidity position of NABIL banks. In the year 2004, the liquidity position of NABIL banks is strong because its net financial position is highest than other years. But another hand, it also increase the opportunity cost of banks. It indicates that the problem of maturity mismatch between assets and liabilities. But it is improved from next year. After the year 2004, total net financial assets are 0. It indicates that there isn't problem of maturity mismatch between assets and liabilities. Comparatively, the NABIL banks liquidity position are strong of up to 90 days maturity period than other. It is also shows that due to high level of liabilities in above 1 year maturity period level.

4.4.2 GAP Analysis of HBL

Table: 4.16

Difference Based on Maturity Period						
Year	0-90 days	91-180 days	181-270 days	271-365 days	Above one years	GAP
2004	2703	3025	2073	5083	-11191.0	1693
2005	-98	3056	1283	6826	-8386.0	2681
2006	2266	5068	2776	2642	-12752.0	0
2007	6632.47	1847.09	-603.2	-4046.9	-3829.46	0
2008	6565.23	1528.03	-503.25	2025.2	-6750.5	2864.7

During this research, it is found that HBL has adopted this tool from the year 2004 only. In the year 2004 and 2005, it is seen that total there is Rs.1693 and Rs. 2681 million is excess over assets than liabilities. It implies that the bank is highly crisis in liquidity management. Because of higher assets increase the opportunity cost of bank and it reduce the profit of bank. So bank always maintain the assets and liabilities based on maturity period. In the year 2006 and 2007, the bank has maintained the liquidity position.

4.4.3 GAP Analysis of SCBL

Table: 4.17

Difference Based on Maturity Period						
Year	0-90 days	91-180 days	181-270 days	271-365 days	Above one years	GAP
2004	9329	3016	968	2416	-15729	0
2005	3928	2113	3162	2659	-11862	0
2006	-11802	2331	2744	2659	3249	-819
2007	1154	2917	3869	5135	-13075	0
2008	8327	1616	2911	1652	-14506	0

From the above table, it is seen that the liquidity profile of SCBL. SCBL has maintained the liquidity position based on maturity period except one year. But also it is seen that liabilities excess over than assets above one years maturity period in all year except 2006. It implies that the bank may be face liquidity crisis in above than one year's maturity period. But less than one year maturity period, the banks maintain the liquidity position because assets excess over than liabilities. In the year 2006, Rs 819 excess over than liabilities in implies that there is mismatch between assets and liabilities. But it is improve after next year.

4.4.4 GAP Analysis of EBL

Table: 4.18

Difference Based on Maturity Period						
Year	0-90 days	91-180 days	181-270 days	271-365 days	Above one years	GAP
2004	33397	1125	2473	12771	-37445	12321
2005	19476	379	5474	13144	-24777	13696
2006	26397	7842	10640	21270	-47798	18351
2007	17773	19334	11791	19728	-39096	29530
2008	28750	1250	6500	17504	-38025	15979

From the above table, it is seen that the liquidity profile of EBL. Assets excess over the liabilities in total in all year. It implies that EBL does not maintain the liquidity position. It also implies that there is mismatch between assets and liabilities. It was happened that due to the high level of assets, EBL sufficient liquidity fund but it increase the opportunity cost and reduce the banks profit. From the above table, it also shows that bank increase the assets and reduce the liabilities gradually in coming year in total. Another hand, liabilities excess over than assets in above than one year based on maturity period.

4.5 Analysis of Primary Data

Due to examine the liquidity position, factoring affecting the liquidity position and analyze the liquidity management practice in Nepalese commercial banks, primary information were collected from the respondents of the questionnaire. Top level banking professional and managers who have to adequate knowledge of banking industry and longtime experience were respondents. As per the nature of information required the questionnaire was developed.

There were 8 questions in total. These questions were formulated to examine liquidity position of Nepalese commercial banks, trend of liquidity and to analyze the factors affecting liquidity management.

4.5.1 Our Bank is in ‘over liquidity’ position

The responses of the respondents for the question are tabulated below:

Table: 4.19

S. No.	Responses	No.	Percentage
1.	Yes	5.0	71%
2.	No	2.0	29%
	Total	7.0	100%

From the primary responses, it is found that 71% of the respondents were agreed that the bank is in ‘over liquidity position’ and only 29% of the respondents were disagree with statement. So, from this study we can say that Nepalese commercial banks are in over liquidity position.

4.5.2 Our Bank is Able to Maintain the Liquidity

The responses of the respondents for the question are tabulated below:

Table: 4.20

S. No.	Responses	No.	Percentage
1.	Yes	6.0	86%
2.	No	1.0	14%
	Total	7.0	100%

From the primary response, it is found that 86% of the respondents were agreed that the bank is able to maintain the liquidity position. 14% of the respondents were disagreeing with this statement. By this data, Nepalese commercial banks are average liquidity position.

4.5.3 Our Bank is facing Liquidity Crisis

The responses of the respondents for the question are tabulated below:

Table: 4.21

S. No.	Responses	No.	Percentage
1.	Yes	2.0	28%
2.	No	5.0	72%
	Total	7.0	100%

By analyzing the primary response, it was found that 28% of the respondents were agreed that the bank is facing liquidity crisis. And 72% of the responses were

disagreed this statement with this statement. So the primary data shown that the bank is not facing liquidity crises.

4.5.4 The Liquidity position is in Increasing Trend

The responses of the respondents for the question are tabulated below:

Table: 4.22

S. No.	Responses	No.	Percentage
1.	Yes	5.0	72%
2.	No	2.0	28%
	Total	7.0	100%

By analyzing the primary response, it was found that 72% of the respondents were agreed that the liquidity position is in increasing trend. And 28% of the responses were disagreed this statement with this statement. So the primary data shown that the bank's liquidity position is in increasing trend.

4.5.5 There are favorable investments opportunities in Nepal

The responses of the respondents for the question are tabulated below:

Table: 4.23

S. No.	Responses	No.	Percentage
1.	Yes	2.0	28%
2.	No	5.0	72%
	Total	7.0	100%

It is found that only 28% out of the respondents were agreeing that there were favorable investment opportunity in Nepal. The majority respondents i.e. 72% were

disagree with this statement. The data reveals that there is no favorable investment opportunity in Nepal and liquidity position is in increasing trend due to the lack of investment.

4.5.6 Worldwide Depression is the cause of under/over liquidity position in Nepal

The responses of the respondents for the question are tabulated below

Table: 4.24

S. No.	Responses	No.	Percentage
1.	Yes	2.0	28%
2.	No	5.0	72%
	Total	7.0	100%

From the primary response, it is found that 28% of the respondents were agreed that the world wise depression is the cause of under /over liquidity position in Nepal .72% of respondents told that there is no effect in liquidity position in Nepal due to the worldwide depression. So, it reveals that there is some effect in Nepal.

4.5.7 Political instability is the cause of over/under liquidity

The responses of the respondents for the question are tabulated below

Table: 4.25

S. No.	Responses	No.	Percentage
1.	YES	3.0	50%
2.	NO	3.0	50%
	Total	6.0	100%

From the primary response it is found that only 50% out of the respondents were agree with this statement that political instability is the cause of over/under liquidity. 50% respondents were found disagree with this statement.

4.5.8. NRB is effectively monitoring the liquidity management

The responses of the respondents for the question are tabulated below

Table: 4.26

S. No.	Responses	No.	Percentage
1.	Yes	3.0	42.85%
2.	No	4.0	57.15%
	Total	7.0	100%

From the primary response it is found that only 42.85% out of the respondents were agree with this statement that NRB is effectively monitoring the liquidity management. 57.15% respondents were found disagree with this statement.

4.6 Major Finding from the Study

As per nature of data the empirical finding of the study can be categorized in two parts and explain as follows.

4.6.1 The major finding of the study drawn from the analysis of secondary data of sample banks is below.

During the study, all the secondary data has been analyzed financial as well as statistical tools. This topic focused on their major finding from the secondary data analysis, which is derived from the analysis of liquidity management of four sample commercial banks named NABIL, HBL, SCBL and EBL with comparatively applying five years data from 2004 to 2008.

4.6.1.1 Major Finding from Ratio Analysis

- J Credit deposit ratio of EBL is highest than other sample commercial banks and SCBL is low. This implies that SCBL has strong liquidity position and NABIL and HBL are moderate.
- J Total investment to total deposit ratio of SCBL is highest than other sample banks and it implies that SCBL has good back up for liquidity. The ratio of NABIL and HBL is moderate and EBL is low than others.
- J Balance with NRB to total deposit ratio of EBL is highest than others. This implies that liquidity position of EBL has strong. The liquidity position of HBL and SCBL are moderate and NABIL has low.
- J Short term investment to total deposit ratio of SCBL is highest and NABIL is lowest than other sample banks. This implies that SCBL is capable to meet the necessary short term obligation by short term investment and it has efficient to manage liquidity position than others. The ratio of EBL is moderate and the ratio of NABIL and HBL are low which may arise liquidity crises in bank.
- J NRB has determined the ratio of cash in vault to total deposit ratio is 3% in average. But all the banks' ratio are low than 3%. This implies that the banks have maintained as soon as possible low level of cash in vault.
- J Cash and bank balance to current deposit measure the liquidity risk arising from day to day operation. Cash and bank balance of EBL is highest among all the sample commercial banks and SCBL and HBL are in average and as compare to other banks average ratio of NABIL is low that may arise liquidity crises to the bank.
- J Liquid funds to total deposit ratio measure the bank strength to meet uncertain outflow of deposit. The liquid funds to total deposit ratio of SCBL is the highest than others and it has more liquid among than other. NABIL and EBL have average liquidity position and HBL has low liquidity position than others.

4.6.1.2 Major Finding from Trend Analysis.

-) The credit deposit ratios of all sample banks are increasing trend. The ratio of change of EBL is higher than other banks. The ratio of change of HBL is lower than other banks.
-) The trend value of total investment to total deposit ratio of SCBL and NABIL have increasing trend. It implies that EBL and HBL are reducing their ratio and do not maintain liquidity position, It implies that they have increasing their ratio. SCBL and NABIL have maintained liquidity position. .
-) Balance with NRB to total deposit ratio of all sample commercial banks except HBL are in increasing trend. NABIL and EBL are relative increasing than other banks. It implies that all the banks have reduced their balance with NRB.
-) Short term investment to total deposit ratio of NABIL, SCBL, and EBL have decreasing trend but HBL has increasing trend. It implies that HBL has increase their short term investment and SCBL, NABIL, EBL have decrease the ratio and do not maintain the liquidity position.
-) The trend value of cash in vault to total deposit ratio of NABIL, HBL have decreasing trend. SCBL and EBL have increasing trend .The comparative data reveals that SCBL and EBL are in better liquidity position as compared than other banks.
-) The trend of cash and bank balance to current deposit ratio of HBL has decreasing trend and other banks have increasing trend .The rate of EBL is highest than other and its trend id heading downward rapidly. But the trend of NABIL and SCBL are relatively steady during this period. The decreasing trend of HBL is higher and increasing trend of EBL is higher than NABIL and SCBL. It is deficit that NABIL and SCBL are more successful to maintain cash liquid position and other is in moderate liquid position.
-) Liquid funds to total deposit ratio of NABIL and SCBL are in decreasing trend and HBL and EBL are in increasing trend. EBL reducing their liquid

funds rapidly. NABIL has also decreasing their liquid funds. It implies that banks are utilizing their fund in other sector by reducing their liquid funds.

4.6.1.3 Major Finding from GAP analysis

-) NABIL is not able to manage maturity mismatch properly, because GAP of assets and liabilities is high.
-) EBL is very poor to manage maturity matching of assets and liabilities in all year and facing liquidity problem. Because it has not maintain the GAP in all year. Assets excess over than liabilities.
-) HBL also cannot manage maturity matching of assets and liabilities in the year 2004 and 2005. Because GAP of assts and liabilities is seen on two years. But it is improved from the year 2005.
-) SCBL has the better liquidity position than other sample banks. It has managed GAP between assets and liabilities except the year 2006.

4.6.2. Major Finding from the primary data analysis

From the primary data regarding the liquidity management in Nepalese commercial banks, following major finding are drawn out.

-) Nepalese commercial banks are in over liquidity position and nearly average banks are able manage it properly.
-) NRB monitoring for the liquidity management is surface but not effectively.
-) Due to lack of favorable investment opportunity the liquidity position of commercial bank is in increasing trend.
-) World wise depression has some effect in liquidity positions of commercial banks in Nepal.
-) Due to the political instability, a nearly average bank has to face liquidity problem.

Chapter V

Summary, Conclusion and Recommendation

This chapter is the last part of the research study. In this chapter, briefing of the whole study is made. This chapter contains summary, conclusion and recommendation of the study. To know the actual them of the study, following four chapters: introduction, literature review, research methodology and the analysis of the study is summarized, and then conclusion is drawn following analysis part and comparing the theoretical aspect and analysis. Conclusion part answers whether practically relates to the theory or not. Based on conclusion, necessary suggestions are presented in recommendation part. Recommendation is made with the hope of improving present situation of liquidity in Nepalese commercial banks.

5.1 Summary

Liquidity management is having cash when needed, Liquidity means having sufficient funds to met regulatory, contractual and relationship obligations when required and at a reasonable cost to the bank. Liquidity needs of commercial banks are unique because in no other types of business there will be such a large proportions of deposit payable on demand. In other organization too, liquidity is required for various purpose. Inadequate liquidity does damage the credit standing of those organizations but if banks fail to repay the deposit on demand, the bank loses the trust of the public. So, liquidity is the lifeline of the bank. In this regard, the term liquidity management is used to describe money and assets that is ready convertible into money within short span of time.

Basically, the entire research work has focused in the comparatively study in liquidity management in Nepalese commercial banks. For the study, four commercial banks (i.e.

NABIL, HBL, SCBL and EBL) were taken as sample and analyzed their liquidity management practice by taking five years secondary data from 2004 to 2008 as well as primary data. The objective of the study is to find out and analysis the liquidity management practices in Nepalese commercial banks. To fulfill the main objectives following specific objective are formulated.

-) To examine liquidity position of commercial banks.
-) To analyze the Credit deposit ratio and its impact on liquidity.
-) To examine the different ratio regarding the liquidity.
-) To make suggestion and recommendation for the improvement of liquidity position of banks.

To fulfill the research objective the study is divided into five chapters.

In the first chapter, brief introduction of liquidity management, focus of the study significance of the study, research objective, brief introduction of the sample banks, limitation of the study and research scheme are included.

In the second chapter, theoretical review has been made. Different policies, rules and regulation about liquidity management are reviewed. During the study, different books, journals, previous studied, websites, reports are viewed and visited to different professional to know the liquidity management. During, the literate review, it is found that a few researches have been made on this topic.

Research design, population and sample and analysis tools are included in the third chapter. The data were collected from secondary and primary sources for the study. The secondary data were collected from annual report of commercial banks. The primary data and information are collected from questionnaire. After collecting the data from different sources it is analyzed by using financial and statistical tools and techniques.

An attempt has been made to fulfill the objective of the research work in chapter four. In this chapter, all the secondary data as well as primary data are complied, processed

and tabulated as per the necessity and figure, diagrams are also used to present it clearly.

In the chapter five, the summary, conclusion and recommendation are included. The summary of the study , conclusion drawn from the study are presented and necessary suggestion are given to the concern authorities, sample banks well as Nepalese commercial banks, Nepal Rastra bank and government for the betterment of liquidity management.

These studied suffer from the different limitation: it considers four commercial banks for the sample of total commercial banks in Nepal. Time and resources are the constraint of the study. Therefore, the study may not be generated in all case and accuracy depends upon the data collected and provided by the organization and represent.

5.2 Conclusions

From the analysis of data following conclusion have been drawn out:

-) From the analysis of credit deposit ratio, it is seen that liquidity position of SCBL is strong, NABIL and HBL are moderate and EBL is poor.
-) From the analysis of short term investment to total deposit ratio, it is notice that SCBL has strong liquidity position. HBL and EBL have moderate liquidity position and NABIL have poor liquidity position.
-) From the analysis of cash in vault to total deposit ratio, it is found that all four commercial banks have maintain the low level of cash in vault. NRB has determined that the ratio is 3% in average, but no any banks has fulfilled the standard.
-) From the analysis of trend analysis, it is found that credit deposit ratio of all sample banks are increasing trend. It implies that all the commercial banks have increased their loan.

-) From the analysis of cash and bank balance to current deposit ratio of all banks except HBL banks are increasing trend. It implies that HBL is reduction their cash and bank balance. But other sample banks increased their cash and bank balance.
-) From the analysis of GAP analysis, it is found that GAP of NABIL in the Year 2004 is high but it has maintained on following coming year. GAP of HBL also high in the year 2005, again SCBL is high in the year 2006. GAP of EBL has seen in all year.
-) From the analysis of cash and bank balance to current deposit ratio, it was found that EBL has strong capacity to meet the short term obligation, SCBL and HBL is moderate and NABIL has poor liquidity position.
-) From the analysis of liquid funds to total deposit ratio, it is found that SCBL has the strong capacity to meet the short term obligation, NABIL and EBL have moderate and HBL has low strength to meet the short term obligation.
-) From the analysis of total investment to total deposit ratio, it is seen that SCBL has the strong liquidity position because 54.44% amount has investment out of total deposit but EBL has poor liquidity position due to the low investment and NABIL and HBL have moderate liquidity position.
-) From the analysis of NRB to total deposit ratio, it was found that EBL has adequate reserve in NRB to meet the short term obligation of total deposit ratio but HBL and SCBL have moderate liquation position.

During this study, primary data are also used. For this purpose, research question are made and asked to the respondents. From the analysis of all primary data following conclusion are drawn out.

-) Nepalese commercial banks are in over liquidity position and it is increasing trend also. Due to lack of unfavorable investment in Nepal, liquidity management is being difficult and challenging. Liquidity management is influenced by external factors like: national security, political instability and income of depositor's foreign remittance and internal factors like: lending policy of bank, management capacity, strategic planning policy of banks.

-) Lack of proper inspection and supervision of NRB and flexible management.
-) Underdevelopment market for liquidity creating financial instrument and lack of manpower to risk analysis.
-) The policy and rules of liquidity management are adequate but not implemented properly.
-) From the study, it is found that main problems of liquidity management are as follows:
 -) Increasing numbers of loan defaulters and lack of law against them.
 -) High flow of remittance but low investment opportunities.

From the study, it is found that liquidity management practice is still in developing phases. Most of the commercial banks have maintained liquid funds to fulfill the statutory provision only. Since NRB has to treat to commercial banks to maintain liquidity, it is seen that commercial banks are found less sincere to liquidity management. Commercial banks have maintain liquidity measuring tools like liquidity profile analysis and GAP analysis by force, not voluntarily. From this condition it is revealed that commercial banks are not taking it easily and positively but they are felling it is a burden. It should be taken positively and implemented compulsory by commercial banks for the betterment of liquidity risk management, banks creditability and safely for depositor's amount.

Rules and regulation are the guidelines of thing to do or not to do. So, its effect can be seen after the implementation. In order to manage the liquidity effectively, the existing regulation should be effectively put in practice.

5.3 Recommendation

On the basis of analysis and finding of the study, following suggestion and recommendation are made which may be referred to overcome weakness and inefficiency to liquidity risk management and for taking corrective action for the concern authorities, professional, government, NRB and other researchers.

➤ **To Sample Commercial Banks.**

-) Credit deposit ratio of some banks has very high. If credit deposit ratio is high, bank may face liquidity crises in future and if credit deposit ratio is low, it increase the opportunity cost. So, banks are suggested that average credit deposit is maintained.
-) As a result obtain in the study, the ratio of cash and bank balance of EBL is very high than other banks, so it is suggested that the ratio of cash and bank balance has decrease.
-) NRB has determined the cash in vault to total deposit ratio is 3%. But all sample commercial bank's ratio is less than 3%. Banks are suggested that to maintained the deposit ratio.
-) As result obtained in the study, trend analysis of credit deposit ratio of SCBL and EBL banks have increasing trend it implies that all banks has increase the ratio of credit deposit ratio. It is suggested that banks should not increase this ratio because it may bring liquidity crises in future.
-) As results obtain in the study, all banks have not maintained the assets and liabilities between based on maturity period. Due to mismatch between assets and liabilities, it is seen that GAP is high. So, banks are suggested that GAP between assets and liabilities should be reducing by appropriate policy.
-) NRB has determined the ratio of balance with NRB to total deposit ratio is 7%. But only EBL has maintained this ratio. Banks are suggested that the ratio with NRB to total deposit ratio raise up to 7%.

➤ **To The Government**

Government is the responsible body of nation. National economy is influence by policies, rules, regulation and other activities of the government. Based on the search, it is found that government also connected to liquidity risk management procedures. So, as the responsible body of the nation, following points is suggested to government.

-) Liquidity management and other financial activities are affected by nation security. So, national security should be ensured by the table talk and collective bargaining process.
-) Political stability is the major factor in economy so it should be made in the country.
-) Strong rule and regulation should be maintained and effectively implemented against loan defaulters. Most of the loan defaulters are high-class people, top level businessman and leaders. They may influence the commercial banks by force. So, strong law should be made and took into action immediately against them.

➤ **To The Professionals**

Bank can be an effectively and successful in management with the help of dedicated professional. Banking professional are the lifeblood of the bank. So, following points are suggested to the professional.

-) Professional bankers should be more dedicated to the professional and should apply banking tools more effectively.
-) Refreshment training should be taken for the knowledge enhancement on risk analysis and liquidity management.
-) Theoretical and practical knowledge should be tied up by implementation on the banking operation.

➤ **To Others Researchers**

Research may be helpful to fulfill the gap of proper research in liquidity management in Nepalese commercial banks. It may provide adequate knowledge of liquidity management in Nepalese commercial banks. This research studied the existing liquidity management practice, existing liquidity position and factors affecting the liquidity management and banking tools for the study management only. For the father study and analysis, this study may be guideline for other researchers. Other researchers are suggested to study about of every factor to liquidity management.