CHAPTER I

INTRODUCTION

1.1 Background of study

Financial Institutions play an important role in the economic growth and development of any country. They help to mobilize the frizzed and scattered savings of the people and play an intermediary role to make investment of the collected fund in different productive sectors. They help to fulfill the requirements of trade and industry in the country and plays greater role in reducing poverty, raising employment opportunities and raising people's life standard.

Bank's are the most important and essential financial institution in any nation. Banks are differentiated from other institution, as they can not create credit though they accept deposits but the banks do so. An ordinary banking business consists of changing cash for bank deposits and bank deposits for cash; transferring bank deposits from one person or corporation to another; giving bank deposits in exchange for bills of exchange, government bonds, the secured or unsecured promises of businessmen to repay etc.

In general banks are those financial institutions that offer the widest rage of financial services especially credit, savings and payment services and perform the widest range of financial functions of any business firm in the economy. "Bank of Venice" established in 1157 in Venice, Italy was the first bank in the world.

In this modern era, banks are required to cater wide ranges of banking services and products to the meet the demands of different walks of life. A single banking institution can not offer all the services, hence different types of banks e.g. Commercial banks, Development bank, Merchant bank, Industrial banks etc emerged in the banking industry to concentrating in particular sectors.

The basic function of every commercial bank is to pool the surplus fund from the society and invest these funds in various productive sectors. So the national economy can grow and increase the living standard of citizens. For these purpose, commercial banks collect deposits from savers group by

promising a certain percentage of interest. Interest is the cost of fund. Difference between the lending and borrowing of fund is the profit of the bank. It is the major source of income of all commercial banks.

Commercial banks furnish credit to finance consumption and investment spending. Credit consists of a loan of funds in return for a promise of future payment. Basically, the principle business of commercial banks is to make loans to qualified borrowers or at least to assist them to find credit from some other sources. Loans are the highest yielding assets that a bank can add to its portfolio and they often provide the largest portion of traditional bank's operating revenue.

Commercial banks make loans and advances to other banks through interbank lending and deposition of the funds at the central bank. They provide direct loans to business and individuals. These loans arise from the negotiation between the bank and its customers resulting a written agreement designed to meet the specific credit needs of the customer and requirement of the bank for adequate security and income for the specific period at a specific interest cost.

For the balancing of lending and borrowing of funds, there should be adequate reserve funds in the commercial banks. These funds are called liquid funds. To provide money for demands depositors and other contingency purpose banks should maintain proper liquidity position.

Liquidity is that part of the total assets, which can be paid immediately to meet the current obligation. The liquidity of assets refers to the ease and certainty with which it can be turned into cash. A liquid asset possesses 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 investment without loss. All assets – real and financial - differ in their degrees of liquidity. Generally, financial assets, especially bank deposit and stocks and bonds issued by major corporations, tend to be highly liquid; on the other hand, real assets, such as a home or an automobile, may be extremely difficult to sell in a hurry without taking substantial loss.

Bankers manage portfolios of assets and liabilities and the accompanying information flows. The key portfolio risks of bank are **credit risk, interest rate risk and liquidity risk.** These specific risks

generate variability in banks cash flows – a common general definition of risk in finance. Excessive risk taking and adverse economic conditions are the ingredients for bank failure.

Credit risk or default risk to the uncertainty is associated with loan repayment because most of a bank earning asset is in the form of loans; problems with loan quality have been the major cause of bank failure. Symptoms of poor quality include high level of non performing loans, loan losses and classified loans (i.e. substandard, doubtful and loss). A high proportion of loans relative to total assets and repaid growth of the loan portfolio are potential early-warning signals of loan quality problems, which may indicate potential failure. In contrast, high performance banks tend to have high quality loan portfolio as characterized by low level of non performing loans and loan losses.

Most of the banks borrow short and lend long, that's why they take on interest rate risk, variable rate loans and off-balance-sheet activities in the form of hedging instrument (i.e. interest rate swap) are techniques for managing interest rate risk.

Another but important thing is liquidity risk. Liquidity is defined as bank's capacity to pay cash in exchange of deposits. Liquidity needs of commercial banks are unique because in no other types of business there will be such a large proportions of deposits payable on demand. In other organizations too, liquidity is required for various purposes. Inadequate liquidity does damage credit-standing of those organizations but if banks fail to repay the deposit on demand, the bank loses the trust of the public. This leads to "runs" in the bank and probably bankruptcy thereof.

Liquidity is the lifeline of the bank. Bank maintains liquidity in the form of (i) Cash and Bank Balance (ii) placements/money at call or short notice (iii) investment in government securities and other securities readily convertible in to cash.

Demand for Bank liquidity arises mainly for two reasons (i) Deposit Withdrawal/Repayment of Borrowings and (ii) Disbursement of Loans and Advances.

Liquidity is the availability of cash in the amount and at the time needed at a reasonable cost. 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 funds at a reasonable cost of precisely

the time those funds are needed. This suggests 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 by selling assets. [1]

Lack of adequate liquidity is often one of the first signs that a bank is in serious financial trouble. The troubled bank usually begins to lose deposits which erodes its supply of cash and forces the institution to dispose of its more liquid assets. Other banks become increasingly reluctant to lend the troubled bank any funds without additional security or a higher rate of interest, which further reduces the earnings of the problem institution and threatens it with failure. Many banks assume that liquid funds can be borrowed virtually without any time limit they are needed. Therefore, liquidity management is far more important than we may realize because a bank can be closed if it cannot raise enough liquidity even though technically, it may still be solvent. One of he example, in 1991 the Federal Reserve forced the closure of the $10 billion southeast bank of Miami because it could not come up with enough liquidity to repay the loans it had received from the FED. Moreover, the competence of a bank's liquidity managers in an important barometer of management's overall effectiveness in achieving the bank's goals.

1.2 Commercial Banks at a glance:

According to A. C. Hart, "A banker or bank is a person or company carrying on the business of receiving money and collecting drafts for customers subject to the obligation of honoring cheque drawn upon them from times by the customers to the extent of the amounts available in their current accounts". [2]

'A single institution cannot fulfill all the services demanded by the customers. Different types of banks e.g. commercial banks, development banks, exchange banks, industrial banks, central bank etc. emerged in the banking industry specialized in different functional areas. Commercial banks are those who perform all kinds of banking functions as accepting deposits, advancing loans, credit creation and

1 Peter S. Ross 2002), Commercial Bank Management, New York: McGraw Hill Book Company, p 345
2 M. Radhashwami and S.V. Bashudevan (1976), A text Book of Banking, New Delhi: S. Chand & Company, p. 150

agency functions. They provide loans to trade & industry and also operate off-balance sheet functions such as issuing guarantees, bonds, letter of credit etc". [3]

The commercial banks are those who pool together the savings of the community in the firm of various deposits and arrange for their productive use by giving loans and financing the trade of a country.

"Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short-term needs of trade and industry such as working capital financing. They can't finance in fixed assets. They grant loans in the form of cash credits and overdrafts. Apart from financing they also render services like collection of bills and cheque, safekeeping of valuables, financial advising etc, to their customers". [4]

According to the American institute of Banking, "Commercial bank is a corporation which accepts demand deposits subjects to check and make short term loans to business enterprise regardless of the scope of its other services." [5]

In the Nepalese context, the Nepal Commercial Bank Act 2031 B. S. defines a commercial bank as, "A Commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and performing commercial banking transaction." [6]

Commercial banks are very important for the development of national economy. They accept public savings and advance them as loans to the persons, business organizations and government when they required. The development of commercial banks is in increasing trend after the restoration of democracy in 1990 A.D. The first commercial bank in Nepal is the Nepal Bank Limited which was established in 1937 A.D. Prior to this there was no such organized banking system in the country. Fifty one percent of it's shares are owned by the government and controlled its operations to a large extent. After then Rastriya Banijya Bank, a state-owned commercial bank was established in 1966 to facilitate the growth of domestic banking services and to help in the foreign trade.

Nepal has opened its door to foreign commercial banks to operate in the mid -1980. Nepal Arab Bank Limited (Now NABIL Bank Limited) was the first joint venture commercial banks in Nepal, established

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3 Vaidya Shakespeare, Money & Banking, Sagun Printing press (1997) p. 31
4 Vaidya Shakespeare, Money & Banking, Sagun Printing press (1997) p. 31
5 American Institute of Banking, " Principles of Bank Operation", USA 1972 p. 345
6 Commercial Bank Act 2031 B.S.

in 1984. The bank was co-owned by the Emirates Bank International Limited (Dubai), Nepalese government and general Nepalese public. Then Nepal Grindlays Bank Limited (now Standard Chartered Bank Limited) was established as the second Joint Venture commercial bank in 1985.In the year 1986, Later on Nepal Indosuez Bank Limited (now Nepal Investment Bank Limited) was established in 1986 which was jointly owned by the French Banque Indosuez, Rastriya Banijya Bank, Rastriya Beema Sansthan and general Nepalese public. Similarly Himalayan bank Limited was established in 1992 in joint venture with a Pakistani bank. It is the first joint venture bank which is managed by the Nepalese Chief Executives.

The number of commercial bank branches operating in the country in the year 2007 totaled 442, of which 395 belonged to 22 commercial banks and the remaining 47 belonged to Agricultural development Bank, performing commercial banking activities.

The size of total assets of commercial banks increased continuously over the last few years. The total asset which was Rs. 251482.6 million in mid-July 2001 has been expanded to Rs. 490620.6 million in mid-July 2007. Which is almost 95% growth as compared to the figure of mid-July 2001 over the seven years period. Loans and advances remained major component in total assets of the commercial banks during 2001-07. The total loans and advances as percent of total assets was 43.0 percent in mid-July 2001. It has reached to 47 percent in mid-July 2007. The share of liquid funds in total assets for the commercial banks is in decreasing trend for the period 2001 to 2007. It has decreased from 22.11% in mid-July 2001 to 8.99% in mid-July 2007

The number of Commercial Banks operating in the country, the date of their establishment and their head offices are presented in the following table.

Table 1.1 Commercial Banks in Nepal

S.N	Name Of Bank	Date Of Establishment	Head Office
1.	Nepal Bank Limited	1994/07/30	Kathmandu
2.	Rastriya Banijya Bank	2022/10/10	Kathmandu
3.	NABIL Bank Limited	2041/03/29	Kathmandu

4.	Nepal Investment Bank Limited	2042/11/16	Kathmandu
5.	Standard Chartered Bank Nepal Limited	2043/10/16	Kathmandu
6.	Himalayan Bank Limited	2049/10/05	Kathmandu
7.	Nepal SBI Bank Limited	2050/03/23	Kathmandu
8.	Nepal Bangladesh Bank Limited	2050/02/23	Kathmandu
9.	Everest Bank Limited	2051/07/01	Kathmandu
10.	Bank of Kathmandu Limited	2051/11/28	Kathmandu
11.	Nepal Credit and Commerce Bank Limited	2053/06/28	Siddharthanagar
12.	Lumbini Bank Limited	2055/04/01	Narayangadh
13.	Nepal Industrial & Commercial Bank Limited	2055/04/05	Biratnagar
14.	Machhapuchhre Bank Limited	2057/06/17	Pokhara
15.	Kumari Bank Limited	2056/08/24	Kathmandu
16.	Laxmi Bank Limited	2058/06/11	Birgunj
17.	Siddhartha Bank Limited	2058/06/12	Kathmandu
18.	Global Bank Limited	2063/09/18	Birgunj
19.	Citizen Bank International Limited	2064/01/07	Kathmandu
20.	Prime Bank Limited	2064/06/07	Kathmandu
21.	Sunrise Bank Limited	2064/06/24	Kathmandu
22.	Bank of Asia Nepal Limited	2064/06/25	Kathmandu

Source: Nepal Rastra Bank, Banking & Financial Statistics, Vol. 47, Mid July 2007

Hence, out of 22 commercial banks 16 are non joint venture and 6 are joint venture in investment with foreign banks. These all are profit oriented entities. They provide various types of services to public, business organizations and government. They play a vital role in the development of national economy. The commercial banks are money trader, for which they should be careful about the risk of money market and liquidity.

There are many functions of commercial banks and the principal functions are as follows:

a) To accept deposit
b) To provide loans and advances
c) To create credits

d) To perform agency functions
e) To carry out utility functions
f) To provide safe custody
g) To render financial guidance
h) To assist in foreign trade.

The commercial bank and banker has its own right and duties. The rights are mentioned as follows:

a) Banker enjoys a general lien over customer's securities in his possession.
b) They have an implied right to change a reasonable commission for his service and interest upon loans
c) They have the right to set-off like any other debtors
d) They have the right to appropriate payment as per the rules laid down in Clayton's case.
e) Banker need not seek out the creditor to make the payment. It is the creditor who should demand payment.

Similarly, the duties of banker are as follows:

a) To receive the customer's money and cheques and other instruments for collection.
b) To repay the customer's deposit on the presentation of customer's mandate known as the cheque.
c) To maintain secrecy in respect of customer's account and affairs.
d) To give a reasonable notice before closing a customer's account.

1.3 Focus of the study

Liquidity is the availability of cash at the time needed at a reasonable cost...

Each and every business organization needs appropriate amount of liquidity (i.e. cash and other near cash items) to run its daily operations. Near about cash means the assets, which can be converted into cash immediately without loosing the value of them. The liquidity totally depends on how big or small an organization is? Big organization such as bank, manufacturing organization, finance companies needs huge amount of liquidity and small organization needs small amount of liquidity. The liquidity requirement is different for different organization. The bank's capacity to meet immediate maturing

liabilities is the liquidity of the bank. Commercial banks should keep plenty of liquid funds to fulfill their customer's needs and in other hand; there will be equal chance of being idle of the liquid fund. So it is very important to manage liquidity with balancing demand and supply. The main focus of this study is comparative analysis of managing liquidity in Nepalese commercial banks by taking 4 sample banks.

The study also attempts to analyze the methods of liquidity management in various commercial banks. This study is to uncover the liquidity position and liquidity requirement of the selected commercial banks. It is the arrangement and allocation of funds in such a way that can be drawn immediately without any loss on principle. Even though liquidity exists in each and every business organization, this study is confined only with the liquidity aspect of commercial banks.

Thus, how the liquid assets influenced and what the real solution can be suggested will be the focus point of this study.

1.4 Significance of the study

Liquidity is defined as bank's capacity to pay cash in exchange of deposits. Liquidity needs of commercial banks are unique because in no other types of business there will be such a large proportions of deposits payable on demand. In other organizations too, liquidity is required for various purposes. Inadequate liquidity does damage credit-standing of those organizations but if banks fail to repay the deposit on demand, the bank loses the trust of the public. This leads to "runs" in the bank and probably bankruptcy thereof. [7]

People put their money in the banks without obtaining security because they are confident that the banks keep their money safely and repays on demand or on agreed date, together with interest where applicable. The moment people feel that the bank is not safe or it can not repay the money on demand there will be 'runs' in the bank and this may lead to the closure of any bank.

7 Dahal, Bhuvan A Hand Book to Banking Union Press (2002) p. 95

Similarly, a bank always put efforts in maximizing its profitability because its shareholders expects a fair rate of return, employees expect attractive salary etc. Hence the importance of liquidity and profitability in a bank is paramount. They are also recognized as two wheels of a cart because in the absence of any of them, the bank can not forge ahead. Their characteristics seem antagonistic to each other because liquidity is maintained at the cost of profitability and vice versa. But the fact is only the liquid banks can attract more low cost deposits. This helps bank reduce interest expense and give loan to good customers at lower rate which results in the less provision and high net profit.

There should be effective strategies in order to safeguard the banks from the danger of liquidity. The study ponders to find out whether commercial banks are alert or not in this regard.

A few studies have been made on liquidity management in commercial banks. Most of the studies made up to present on capital market are related to financial performance, investment, capital structure analysis, dividend policy, risk and return etc. So this study will be of substantial importance to investors, planners, researchers, professionals, executives and students to meet their personal and organizational objectives. This study intends to help the national economy through mobilization of idle capital of average Nepalese in productive sectors to accelerate the economic growth and reduce dependency on foreign assistance and loan.

This study will help regulatory authority to find out liquidity management of the commercial banks. It will be a reference to the concerned personnel and researchers.

1.5 Statement of the problem

Since objective of the commercial banks is wealth maximization and the achievement of organizational objectives 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 position of commercial banks. More specifically the study is expected to answer the following research questions:

- How the commercial banks are managing liquidity in existing practice?
- What are the main causes of increasing or decreasing liquidity in commercial banking sector?

- Do the liquidity position is affected by the political, social and economic factors?
- Do the liquidity related to security problem?
- Do the liquidity increases in lack of secured investment opportunities?
- How to make optimal management of liquidity in commercial banks?

1.6 Objectives of the study

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

- 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 suggestions and recommendations on the basis of major findings.
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1.7 Organization under study

- **NABIL Bank Limited**

  NABIL Bank Limited is the first joint venture bank having commenced its operation on 12 July 1984. Under the technical services agreement approved by NRB, the management of the bank has vested under a technical service agreement with Dubai Bank Limited, Dubai. Initially 50% of its share was owned by Dubai Bank Limited, U.A.E. and 20% of the share by Nepalese Financial

Institutions. Remaining Shares were undertaken by the general public of Nepal. The shares owned by Dubai Bank Ltd. were transferred to Emirates Bank International Limited (EBIL), Dubai by virtue of its annexation with the later.

Later on EBIL sold it's entire 50% equity holding to National Bank Ltd., Bangladesh. National Bank Ltd., Bangladesh is managing the bank in accordance with the technical services agreement signed between it and the bank on June 1995. The bank has changed its name from Nepal Arab Bank Limited to NABIL Bank Limited from 1st January 2002.

NABIL provides a full range of commercial banking service through its outlets spread across the nation and reputed correspondent banks across the globe.

- **Nepal Investment Bank Ltd. (NIBL)**

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. Investment Bank was joint commercial enterprises between credit Agricole Indosuez (one of the largest banking group in the world) and the Nepalese.

- **Standard Chartered Bank (SCBNL)**

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation in association with Australia and New Zealand (ANZ) Banking Group as Nepal Grindlays Bank. Initially 50% of it's share was owned by ANZ Gringlays Bank PLC 35% by Nepal Bank Limited and 15% by general public.

The share owned by ANZ Grindlays Bank Limited, Australia were transferred to Standard Chartered Bank PLC United Kingdom on August 2000. Consequently, the name of the bank was changed from Nepal Grindlays Bank Limited to Standard Chartered Bank Nepal Limited effective 16 July 2001.

Standard Chartered Bank Nepal limited is the first bank in Nepal to offer any branch banking, launch of credit cards, launch ATMs with international card accepting facility, being a member of SWIFT etc. 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 enjoys the status the largest international bank currently operating in Nepal.

Standard Chartered has a history of over 150 years in the Banking and operates in many of the world's fastest-growing markets with an extensive global network of over 1,400 branches in over 50 countries in the Asia Pacific Region, South Asia, the Middle East, Africa, the United Kingdom and the Americas.

Standard Chartered Group employs more than 70,000 people representing over 100 nationalities, worldwide. The Bank is trusted across its network for its standard of governance and its commitment to making a difference in the communities in which it operates.

- **Himalayan Bank Limited (HBL)**

Himalayan Bank Limited is the fourth Joint-venture bank of Nepal established in 1992 under the Commercial Bank Act 2031 with the objective of providing modern banking facilities and granting loan to agriculture, commerce and industry. The bank is established by the distinguished business personalities of Nepal in partnership with Habib Bank Limited, one of the largest commercial bank of Pakistan.

This is the first Joint Venture bank managed by Nepali Chief executive. HBL is the second largest joint venture bank in having total assets after SCBNL. It is the first commercial bank of Nepal with maximum shareholding by the Nepalese private sector. Besides commercial activities, the Bank also offers industrial and merchant banking

1.8 Limitations of the study

Every study has its limitations. As the study is being carried out in partial fulfillment of the requirements for the degree of Masters of business studies, it possesses a number of limitations of its own kind. Basically, shortage of time, reliability of statistical tools used and lack of research experience are the main limitations. Some other limitations are as follows:

- All the data are secondary in nature. Mostly published financial documents like balance sheet, profit and loss account and other related journals, magazines and books would be used that is why the outcome may depend on the reliability of secondary data.
- Simple statistical techniques followed by financial models have been used in the analysis.
- Due to small sample size it may not fully represent Nepal as a whole.
- The study lacks in time and other resources as well.
- Absence of required data concerned with commercial banks limits to detail study.

1.9 Organization of Study

This study is divided into five chapters. Before starting the body of thesis, several pages of Preliminary materials such as title page approval sheet, viva voice sheet, acknowledgements, table of contents, list of figures, list of tables, abbreviations used etc. have been presented.

First of all the entire work on liquidity management would be broken into the following chapters

Chapter 1:	Introduction
Chapter 2:	Review of Literature
Chapter 3:	Research Methodology
Chapter 4:	Data Presentation and Analysis
Chapter 5:	Summary, Conclusion and Recommendation

Chapter 1 simply includes the introduction of our thesis work such as the overview of the main area under study, purpose, objectives, limitations and significance of the study.

Chapter 2 simply includes all the topics describing how the entire data have been collected and designed to carryout the entire tasks of our thesis report

Chapter3 includes the main introductory contents of the topic on which we have focused our work so that it can explain what the theoretical concepts are on which the thesis will be carried out.

Chapter 4 contains the entire contents related to data presentation and analysis. In fact, this is an important chapter that shows the presentation of data collected from the bank.

Chapter 5 includes the last contents of the entire report. It includes summary, conclusion and suggestions, which are required to make improvements in the banks position in terms of progressing or deteriorating the management of liquidity.

CHAPTER II
REVIEW OF LITERATURE

2.1 Theoretical Review

2.1.1 Liquidity

Liquidity refers to the speed and ease with which an asset can be converted to cash. Gold is relatively liquid asset; a custom manufacturing facility is not. Liquidity actually has two dimensions: ease of conversion versus loss of value. Any assets can be converted to cash quickly if cut the price enough. A highly liquid asset is therefore one that can be quickly sold without significant loss of value. An illiquid asset is one that cannot be quickly converted to cash without a substantial price reduction.

Assets are normally listed on the balance sheet in order of decreasing liquidity, meaning that the most liquid assets are listed first. Current assets are relatively liquid and include cash and those assets that we expect to convert to cash over the next 12 months. Accounts receivables, for example, represents amounts not yet collected from customers on sales already made. Naturally, we hope thee will convert to cash in the near future. Inventory is probably the least liquid of the current assets, at least for many businesses.

"Liquidity means allocation of funds in close relation to their respective source."[8] "Liquidity is the status and part of the assets that can be used to meet the obligation in the commercial banks. Liquidity can be viewed in terms of liquidity stored in the balance sheet and in terms of liquidity available through purchased funds." [9]

Liquidity is valuable. The more liquid a business is, the less likely it is to experience financial distress (that is, difficulty in paying debts or buying needed assets). Unfortunately, liquid assets are generally less profitable to hold. For example, cash holdings are the most liquid of all investments, but they sometimes earn no return at all they just sit there. There is therefore a trade-off between the advantages of liquidity and forgone potential profits.

The term liquid assets are said to be used to describe money and assets that are readily convertible into money. Different assets may be said to exhibit different degrees of liquidity. Money itself is, by definition, the most liquid assets; other assets have varying degree of liquidity, depending upon which they can be turned into cash. (Van Horne, 2000)

Cash balance is perfectly liquid assets. To hold it in larger quantity is not thought good. High cash balance increases the cost. Therefore, any organization doesn't want to hold cash more than it needs. But it is difficult to know what proportion of cash the organization should hold. However, any organization makes cash holding policy and exercise to keep cash as less as it can.

"The amount of liquidity that a commercial banking system should maintain is one of the basic problems of the bank management. If too much liquidity is maintained, it means that the bank and the banking system are foregoing income. Too, little, however, may be fatel not only to an individual bank but to the commercial banking system as a whole, the financial structure of the country, and the economy of the nation. Too little liquidity and the demands of the depositors in the form of 'runs' on the banks are like oil and water, they don't mix well." [10]

8 Shrestha, Manohar K & Bhandai Dipak B., Financial Markets & Institution, Amita Books Publishers (2004) p 256
9 Bhandari Dilliraj, Banking & Insurance: Principle & Practice, kathmandu, Aayush Publications, p. 143
10 Reed, Edward W. , Commercial Bank Management, New York, McGrow Hill Book Company, 2002, p 115

2.1.2 Sources of Liquidity

Just as it is important to understand the sources of the liquidity risk, corporate management needs to know the possible sources of cash if the need arises. Under a stress situation, neither the liabilities nor the assets are exactly equal to their book values. Therefore, a high surplus position does not necessarily eliminate liquidity problems that may face a bank under stress. It is the interplay of liquidity risks in the assets and liabilities that determines the exposure.

Assets have different degrees of liquidity. Custom designed assets and assets such as limited partnerships may not be readily marketable. Even assets that are technically liquid, such as corporate bonds, may not be immediately liquid when one is trying to sell billions of money of assets within a few days. Further, due to interest rate increases or credit deterioration of the bond issuer, assets may have to be sold at less than book value or what is normal circumstances would be fair value. Some assets that appear on the balance sheet are not even available for sale.

Before a risk situation strikes, a bank should take an inventory of its potential sources for liquidity, both with regard to how much liquidity each source provides and what the numerous considerations exist for using those particular sources. The following list represents various liquidity sources that are common in the banking sectors.

2.1.2.1 Asset Securitizations:

As an alternative to selling assets (such as commercial mortgages), consideration may be given to securitizing assets, when determining the values to be assigned to assets, consideration is given to cost (and time) to securitize an asset or asset class. The cost will depend upon the general appetite of the capital market for such instruments, the amount an investment bank would charge to do the work to securitize the assets, legal cost etc. One item to keep in mind is that if a bank needs to securitize assets to raise cash quickly, the cost to do so may be more than historically been observed in the capital markets. Although the underlying assets owned by the bank may still be of excellent quality there may be a stigma associated with the bank at that time leading to a widening of required spreads.

2.1.2.2 Borrowing:

While a bank is in good financial shape, it may wish to establish durable, evergreen (i.e., always available) liquidity lines of credit. The credit issuer should have an approximately high credit rating to increase the changes that the resources will be there when needed. Attention is needed regarding the terms of the line of credit to ensure that the loans would be available during a stress scenario with little or no negative repercussions.

2.1.2.3 Asset Sales:

Since assets are not all equally liquid, when assets must be sold the bank should have a priority order of sales. Lower quality publics and non-private issues can be liquidated, but they typically take longer to sell and the cash that they bring in will probably be somewhat below their fair value. Fair value may be above or below book value, which may be a concern for portfolios backing products that allow a book value option. The difference between the fair value and the estimated amount of cash that can be raised by a sale is often called a “haircut” in liquidity assessment. Investment managers who are closest to the particular deals should evaluate the size of a “haircut” on any particular asset or group of assets.

2.1.2.4 Selling additional business:

If a bank is in a severe stress situation, selling additional business is probably not a viable option. However, if the bank needs cash in less stressful circumstances but does not want to sell or to borrow, an additional sales push may be considered.

2.1.3 Why manage liquidity?

“Cash and marketable securities are liquid assets, and they are maintained to meet the liquidity need of the firms. There is no difference between these two types of assets from the view point of the purpose they are maintained for. Therefore, they are perfectly substitutable for one another. The only difference, however, is that marketable securities earn some returns whereas the cash balance does not. The purpose

of managing liquid assets is therefore, to minimize the opportunity cost of holding cash and maximize the returns on the portion of the funds that is not required immediately." [11]

Business firm need to maintain a certain degree of liquidity in the form of cash in hand, bank deposits, and/or marketable securities to meet daily operating expenses and short term financial obligations. Since the cash balance in hand and the deposits in checking account i.e. current account do not earn any returns, it is unwise to maintain the required amount of liquidity only in the form of cash or non-interest bearing accounts. Interest rates in recent years on various types of short term financing have surged up so high that they have considerably raised the opportunity cost of holding cash. Because of this reality, financial managers are more concerned these days to maximize the returns on the available funds and reduce the cost of external financing. For the same reason, over the past years, academicians as well as financial managers have devoted much of their efforts in developing and refining the techniques of cash management.

A bank can't run without liquidity. The Nepal Rastra Bank from time to time changes the legal provision about the liquidity. The compulsion that the commercial bank should keep the cash in their various funds shows the importance of liquidity. The commercial banks and financial institutions should maintain the balance of cash fund in required quantity that the law and rules made by the Nepal Rastra Bank. The importance of liquidity is considered very sensitive because if it cannot maintain the liquidity, it has to pay fine. The commercial Banks should keep the stock of liquid assets in the ratio of their deposit liability, as fixed by the Nepal Rastra Bank. The central bank can give the interest with the rate fixed by the bank from time to time to the amount in the fund. The following points describe why to manage liquidity or the importance of liquidity management.

2.1.3.1 To meet the expenses of the Bank's daily Administrative work

11 Pradhan, R.S. Financial management Practices in Nepal, New Delhi, India, Vikas Publicshinh House 1994

A bank is a legal person. It cannot run without cash stock. The transaction of the bank is related to the money. Many types of expenses take place daily. So, without cash, it is impossible for the bank to carry out its day to day transactions. Therefore liquidity is necessary for daily expenses or to carry out daily administrative work.

2.1.3.2 To pay all sorts of deposit

A bank opens the current, saving and fixed account for its customers. According to the nature of the deposit, the bank should pay whenever the customer asks. And it cannot pay the deposit without liquidity. That is why liquidity management is necessary for the payments of all types of deposits.

2.1.3.3 To maintain liquidity to meet the cash fund ratio and liquidity ratio

NRB has guided commercial banks in Nepal to maintain at least 5.5% of their deposits liabilities as reserve by way of cash and bank balance. Such requirement is called as cash reserve ratio CRR and is revised by NRB from time to time. CRR has been extensively used as a means to control commercial banks credit especially where capital market is not well developed. CRR is used to influence the investment portfolio of the commercial banks.

2.1.3.4 Providing security to the Banks

A bank is an institution which carries out banking transaction. The deposits of different customers are saved in different types of accounts. Apart from this, the bank itself invests the cash in different sectors. The cash as a form of loan can be distributed in different sectors from the bank. So, the bank is regarded as a sensitive and important institution. Hence to provide all kinds of security to the bank, the liquidity is necessary.

2.1.3.5 To control the economic fluctuation

The bank will not always remain in balanced condition and it cannot be said that there will be the same situations of transactions in the bank. There may be some type of internal and external circumstances which may have effect on the nation. Those circumstances may also affect the economic sector and the

bank cannot remain free from those effects. So, there is necessity of liquidity to keep the bank free from such economic crisis or economic fluctuations.

2.1.3.6 To gain trust or faith

A bank has a great responsibility because of the financial institution that does monetary transactions. For this a bank should perform many types of functions. It has to pay attention to the time and will of the customers to provide banking services. For the name and fame a bank should earn the trust of customers. There must be liquidity to gain trust from the public.

2.1.3.7 To fulfill the demand of the debtor

A bank provides loan to the debtors and earns income from it. Many kinds of people come to the banks with the purpose of loan. After the loan is granted the bank is obiliged to give the loan to the debtors.

2.1.4 Principles for the Assessment of Liquidity Management in Banking Organizations.

2.1.4.1 Developing a Structure for Managing Liquidity

Each bank should have an agreed strategy for the day-to-day management of Liquidity. This strategy should be communicated throughout the organization. A bank's board of directors should approve the strategy and significant policies related to the management of liquidity. The board should also ensure that senior management takes the steps necessary to monitor and control liquidity risk. The board should be informed regularly of the liquidity situation of the bank and immediately if there are any material changes in the bank's current or prospective liquidity position.

Each bank should have a management structure in place to execute effectively the liquidity strategy. This structure should include the ongoing involvement of members of senior management. Senior management must ensure that liquidity is effectively managed, and that appropriate policies and

procedures are established to control and limit liquidity risk. Banks should set and regularly review limits on the size of their liquidity positions over particular time horizons.

A bank must have adequate information systems for measuring, monitoring, controlling and reporting liquidity risk. Reports should be provided on a timely basis to the bank's board of directors, senior management and other appropriate personnel.

2.1.4.2 Measuring and Monitoring Net Funding Requirements

Each bank should establish a process for the ongoing measurement and monitoring of net funding requirements. A bank should analyze liquidity utilizing a variety of "what if" scenarios. A bank should review frequently the assumptions utilized in managing liquidity to determine that they continue to be valid.

2.1.4.3 Managing Market Access

Each bank should periodically review its efforts to establish and maintain relationships with liability holders, to maintain the diversification of liabilities, and aim to ensure its capacity to sell assets.

2.1.4.4 Contingency Planning

A bank should have contingency plans in place that address the strategy for handling liquidity crises and include procedures for making up cash flow shortfalls in emergency situations.

2.1.4.5 Foreign Currency Liquidity Management

Each bank should have a measurement, monitoring and control system for its liquidity positions in the major currencies in which it is active. In addition to assessing its aggregate foreign currency liquidity needs and the acceptable mismatch in combination with its domestic currency commitments, a bank should also undertake separate analysis of its strategy for each currency individually.

A bank should, where appropriate, set and regularly review limits on the size of its cash flow mismatches over particular time horizons for foreign currencies in aggregate and for each significant individual currency in which the bank operates.

2.1.4.6 Internal Controls for Liquidity Risk Management

Each bank must have an adequate system of internal controls over its liquidity risk management process. A fundamental component of the internal control system involves regular independent reviews and evaluations of the effectiveness of the system and, where necessary, ensuring that appropriate revisions or enhancements to internal controls are made. The results of such reviews should be available to supervisory authorities.

2.1.4.7 Role of Public Disclosure in Improving Liquidity

Each bank should have in place a mechanism for ensuring that there is an adequate level of disclosure of information about the bank in order to manage public perception of the organization and its soundness.

2.1.4.8 Role of Supervisors

Supervisors should conduct an independent evaluation of a bank's strategies, policies, procedures and practices related to the management of liquidity. Supervisors should require that a bank have an effective system in place to measure, monitor and control liquidity risk. Supervisors should obtain from each bank sufficient and timely information with which to evaluate its level of liquidity risk and should ensure that the bank has adequate liquidity contingency plans.

2.1.5 Approaches to liquidity management

There are a number of approaches which financial institutions or commercial banks may adopt to manage their liquidity.

2.1.5.1 Stock of Liquid Assets

In the normal course assets required to meet minimum requirement are not available to satisfy liquidity needs and financial institutions need to maintain a working buffer above the minimum level.

Discretionary liquid assets need to be of high quality and/or readily marketable to ensure that they can be realized as required without significant loss. This implies that valuations of liquid assets needs to be regularly adjusted to reflect market conditions and that any liquid assets which are pledged to support borrowings should be deducted from both the numerator and the denominator in calculating the liquid assets ratio.

A liquid assets ratio may not be sufficient in itself to manage liquidity because of its static nature, susceptibility to distortion by short term balance sheet movements and inability to take account of off-balance sheet obligations.

2.1.5.2 Limits on Maturity Mismatching

A financial institution needs to monitor and control the gaps between maturing assets and liabilities in various time bands. The maturity profile also needs to take account of off-balance sheet cash flows.

The construction of such maturity profiles relies heavily on assumptions such as the proportion of maturing liabilities that a financial institution will be able to roll-over and the behavior of liabilities and assets with no fixed maturity date (eg call deposits and overdrafts). The assumptions will, of course, vary under different scenarios and according to the business profile of the financial institution. The appropriateness of the assumptions needs to be reviewed from time to time. Control over maturity gaps in the shorter time periods obviously needs particular attention as this is the area in which financial institutions have least room to maneuver.

2.1.5.3 Diversification of Liabilities

As part of its liquidity management strategies a financial institution should seek to:

- Maintain a diversified funding base: and

- Establish strong and lasting relationships with depositors and other liability holders.

A financial institution should establish a policy regarding concentration of sources of funding so as to avoid an excessive reliance on any one counterpart (including related entities) or any one product or funding market. It should also undertake regular statistical analysis of liabilities to detect any signs that the deposit base is becoming more volatile.

A stable core of deposits and avoidance of reliance on large and potentially volatile deposits are significant components in successful liquidity management.

2.1.5.4 Access to Wholesale Markets

The ability to obtain funds in the interbank market or other wholesale markets can be an important source of liquidity but access may be substantially reduced or delayed in crises conditions. As well as meeting maturing obligations there may also be calls for early repayment or denial of access to funding lines in terms of "material adverse change" clauses

Financial institutions should estimate their "normal" borrowing capacity in such markets and establish a policy regarding reliance on these markets accordingly.

2.1.5.5 Foreign Currency

Where a financial institution has significant foreign currency funding its liquidity policy should address the measurement and monitoring of liquidity in foreign currencies. For example, a financial institution needs to assess the convertibility of individual currencies, the timing of access to funds, the impact of potential disruptions in foreign exchange markets and exchange risks.

2.1.5.6 Intra-group Liquidity

Where liquidity is managed on a group basis (i.e. for a financial institution and its subsidiaries) liquidity management strategies should address any regulatory or legal impediments to group members accessing liquidity. Branches and subsidiaries of foreign banks may have lines of liquidity support available to them from associated entities offshore entities. This support could be of particular value in the event of a crisis affecting only local operations but could prove ineffective in a crisis affecting the global group.

2.2 Review of Related Studies

2.2.1 Review of Books

In a book published by the World Bank titled, "Excess Liquidity and Monetary Overhangs", it was stated that there is mostly excess liquidity on the financial institutions of the developing economies. Similarly, the IMF opines that excess liquidity is a great problem for developing economies and results not from dearth of lending opportunities or demand for funds but from a number of system and institutional shortcomings (IMF 1985).

Thus it was clear that the problem of liquidity or excess liquidity to be specific is a regular phenomenon in the developing economies, and since we are also a developing economy, it is important to understand the trend of liquidity position in the financial institutions and its effect on the financial system of our country. There is, however, not sufficient amount of studies conducted in this sector in our country.

In the book principle of Money, Banking and Financial Markets" L.S Ritter and W.L. Silber have demonstrated the relation between excess supplies of the economy. Their views can be summarized as follows:

All depository financial institution is required to hold liquid assets as reserves partly because it is mandatory and partly because of the kind of business it is in. When a bank receives cheques drawn on another bank, it gains reserves if the cheque is drawn on the same bank. An individual bank can safely land and create credit up to the multiple of the original injection of excess reserves. Therefore, if the banking sector as a whole has excess reserves or the liquid assets, they must either try to increase their reserves or reduce their demand deposits due to which the money supply will decrease.

In this study the liquid assets of the commercial banks have been used as an indicator of the money supply of the economy. Such a relationship between the two variables is justified by the use of statistical tools as well. The correlation between the two variables as computed in the appendix is 0.09838, which is significant well beyond the 0.01 level of significance. (Ritter & Silber, 1993: P.153).

2.2.2 Review of Journals & Research works

Prof. Dr. Manohar Krishna Shrestha in his study "WC management in PE's: A study on financial results and constraints", has considered ten selected PE's and studied the WC management of those PEs. He stated that managers often lack basic knowledge of WC and its overall impact on the operative efficiency and financial viability of Public enterprises. He has focused on the liquidity, turnover and profitability position of sampled enterprises. Based on these factors, he has brought certain policies issues of Nepalese PEs such as lack of suitable financial planning, negligence towards working capital management, deviation liquidity and turnover of assets and inability to show positive relationship between turnover and return on net WC. He has also suggested the measure to overcome such policy issues like identification of needed funds, regular checks, and development of management information system, positive attitude towards risk and profit, and determination of right combination of short-term and long-term sources to finance WC requirements.

In order to understand the context of liquidity management of a commercial banks, managerial approach of funding, liquidity operation and its liquidity planning under alternative scenario are important elements. For the finding out the elements, a commercial bank has to formulate a specific policy. The policy should be specific regarding the use of certain financial instruments. An important element of policy is liquidity-reporting structure that keeps informed senior management in a regular basis. By this information system, higher authorities are always aware of possible and potential requirement and timely review is carried out for the solution. The system also provides the opportunity to re-examine and refine a liquidity policies and practices in the light of a commercial bank liquidity experience and developments in its business.

Liquidity management of commercial bank basically deals with two conflicting goals liquidity and profitability. Liquidity is the bank's ability to pay to depositors on demand. In broad sense, it is the bank's ability to convert its assets into cash without delay and minimum loss. The main technique of liquidity management is to trade-off between profitability and liquidity. Managers can obtain the trade-off following the method of cash planning, managing cash flow, managing optimum cash level and investing idle funds in shift able assets. Commercial banks must manage liquid assets efficiently as they are non-earning assets. Management of liquid assets minimizes the amount invested in cash assets without taking risk. A commercial bank liquidity need and its ability to meet such needs are difficult to

measure because perception and confidence of actual and potential depositors and money markets are all important but very difficult to qualify. Liquidity need of bank may be short term cyclical and contingent. There is also a statutory provision of maintaining reserves.

The reserve requirement is to meet the daily and contingent liability of the bank. The CRR rate must be at the reasonable level by which cost of funds of the banks can be lowered. As a result, the banks shall be in a position to extend loans charging a minimum rate of interest. The lower CRR rate is not only beneficial to the commercial banks but also to the country through which cost of production can be reduced.

2.2.3 Review of Empirical Studies

Mr. Kishor Poudel on "Liquidity & Investment position of Joint venture banks in Nepal considered the financial statements of both banks for five years period (2096/97-2000/01). On the study he found that the liquidity position of EBL is comparatively better than NABIL's. In all the parameters EBL has achieved a comparatively liquid position. However, there are some instances where EBL has maintained liquid funds more than requirement. The interest receivable ratio of EBL similar to NABIL's though it is a small bank in terms of volume of business. It is because of poor assets quality of EBL, which in turn, hits liquidity position of the bank.

A study made by Mr. Keshava Gadtaula on **"Working Capital Management Of Nepal Tea Development Corporation (NTDC)".** His study is based on ten years financial statements from the fiscal year 1982/83 to 1991/92. He has used various statistical tools like standard deviation, coefficient of variation, regression analysis, test of hypothesis, ratio analysis, trend analysis etc to complete the study. From the analysis of the above tools, it is easy to find out the working capital situation of the corporation was neither poor nor bad.

A research work of Bhogendra Dangi in "A Comparative Study of Financial performance of Standard Chartered Bank Nepal Limited, NABIL Bank Limited and Himalayan Bank Limited " has also been considered helpful for the study. In his analysis, as indicated by the liquidity ratios, the three joint venture commercial banks should consider to strengthen their liquidity position. There was wide range

of fluctuation in the cash and bank balances to total deposit ratio of these banks. In case of loan and advances to total deposit, HBL was suggested to manage untilising more of its deposit. Similarly NABIL & SCBNL were suggested to utilize more of their savings deposit in extending loans and advances. In his study, SCBNL was found to be in better liquidity position than NABIL and HBL which meant SCBNL was more succeful in utilizing their assets for profit generation.

2.2.4 Review of Independent Studies

The following independent studies have been viewed during the study:

2.2.4.1 Foreign Context

In foreign context following independent case studies viewed during the study.

Bank of England's Liquidity Crisis

On January 6, 1991, the OCC declared the Bank of New England (and two affiliated banks) insolvent. The story of its failure and liquidity crisis goes like this [Clarke (1991) and Lohr (1991) provide details] : Through aggressive lending in the 1980s, Bank of New England developed a large concentration of commercial real estate loan-ventures that seemed like positive net-present value projects at the time. In 1989, however, as the New England economy turned sour, cash flows from the project dries up, and the banks' loan quality, earnings, and stock price plunged. Institutional providers of funds such as mutual funds, pension funds, corporations, and other banks began a silent run-on-the-bank. The run off in liabilities forced Bank of New England into the Fed's discount window. To get out of the Fed's window, the bank had to sell assets, cut employees, and draw on Treasury tax-and-loan accounts. As the economy continued to deteriorate in 1990, the situation worsened. Press coverage of the bank's problem (e.g., the announcement of up to a $450 million loss for the fourth quarter of 1990) and of the insolvency of a private insurance fund in Rhode Island worried small (insured) depositors to the extent they began withdrawing money. In two days (January 4-5), the bank lost almost $1 billion in deposits, On January 6 (Sunday); the bank was closed, opening the next day as a bridge bank under supervision of the FDIC.

In his statement before the Senate Banking Committee on January 9, 1991, (former) Comptroller Clarke stressed that his office has closely supervised Bank of New England for almost two years before its failure. The supervision included installing new management, assets sales and cost reductions, suspension of dividends, and attempts to recapitalize the bank. He concluded that the salvage attempt

had failed because of "the severity of the economic downturn in New England" nevertheless; the original managers put the bank in a vulnerable position by betting too heavily on commercial real-estate loans. A more diversified loan portfolio would have given the bank more time; whether it would have saved it can't be answered. A report by the General Accounting Office (GAO) in 1991 concluded that Bank of New England failed because of three factors:

1. Liberal lending practices
2. Poorly controlled growth
3. Concentration in commercial real-estate loans in a severely declining regional economy.

Should the OCC have stopped the Bank of New England from concentrating its loan portfolio in commercial real estate? No, because in the final analysis, we do not want bank regulators determining how credit it allocated. What do we want is a deposit-insurance system that prevents high-risks banks from being subsidized by low-risk ones and ensures that the costs of bank failures are not foisted on taxpayers.

Working Capital Management of BANGLADESH TOBACCO COMPANY LTD. (BTC)

BANGLADESH TOBACCO COMPANY LTD. (BTC) was a sister concern of British American Tobacco Company Ltd. (BATC). The history of BTC goes back to 1926 when Messrs Usher Smith and Hadridas Roy opened a branch office of Imperial Tobacco Company Ltd. It was formed with the assets and liabilities of Indian tobacco Company (ITC) Ltd. held in Pakistan. The War of Liberation was fought in 1971 and a new country, Bangladesh was born. On the second day of February 1972, Bangladesh Tobacco Company Limited was incorporated under the Company Act of 1913 with the assets and liabilities of Pakistan Tobacco Company Limited. The share of BATCO was 67 percent, while 32 percent share was given to the Bangladeshi shareholders. The paid up capital was Tk. 3.75 crores.

Working capital management of BATBC Ltd. is highly effective. The project is very much profitable. There is available internal source of fund due to satisfactory amount of period during the period under

study. Mill has no problem in management of inventory, debtors, cash balances and current liabilities. The liquidity position of the company is also very much satisfactory due to good turnover of current assets, inventory debtors and cash balances. The company enjoys good facility of cash credit and other working capital loan from different commercial banks. There is no difficulty in repayment of current liabilities out of the operating profit. In addition to operating profit, there is ample non-operating profit on security investment, dividend and other revenues. Planning and Control of cash balances follow cash-flow statement. It shows the sources and uses of cash over the period. Regular funds flow statements are also prepared by the company. This helps in designing working capital planning, control, monitoring, and utilization and productive maintenance of optimum size of working capital. Financial statement shows the current assets and current liabilities in classified form. There is good collection of receivables due to good credit and collection policy. Credit sales are made frequently but no stockpiling and stuck up debtors are found. Due to good utilization of working capital, the business growth of the company is also highly satisfactory. Market prices of shares are increasing year after year due to good dividend and good image in the market. The company has a good share within the direct foreign investment. Government has given more facilities for the direct foreign investors. This has increased the managerial efficiency of the tobacco company. However, in view of the concluding remarks, the following suggestions are given for increasing efficiency in working capital management.

(a) Particular norms for working capital management should be followed to reduce the market risk.
(b) Liquidity management activities may be more organized through using idle funds for productive investments.
(c) Inter firm comparison should be made from time to time with similar organization.
(d) Horizontal analysis and vertical analysis through ratio techniques would be more meaningful.
(e) Financial information system should be introduced to develop financial discipline in working capital management.
(f) Working Capital Norms for maintaining optimum quantity of raw materials, Work - in- Progress, Finished goods & store and spares are to be developed.
(g) Financial forecasting, planning and control devices are to be more intensive to enhance the efficacy of cash management.

Islamic Modes of Finance and Associated Liquidity Risks

The recent literature on liquidity in Islamic banks focuses on management of surplus liquidity and deals with difficulties faced by Islamic banks in parking it for sort-term earning opportunities. Ahmed (2000), Al-Sadah (2000), and Yousuf (2001) are some examples. It does not discuss liquidity shortages, possibly because majority of Islamic banks in the Middle-East are currently experiencing abundance of liquidity. Nevertheless the risk of liquidity shortage is not of lesser importance because if non-earning excess liquidity is a source of protracted illness for the banks by way of reducing their earnings potential, a shortage of liquidity is an acute syndrome that can cause sudden death of a bank. Another strand of emerging literature dealing with the risk factors of Islamic banks has so far discussed credit and operational risks but analysis of liquidity risk per se has not been adequately addressed.

Allianz Capital Panelized

A Delhi consumer court has penalized private finance company 'Allianz Capital and Management Services' for its failure to return deposits on maturity and direct it to pay penal interest fot the same.

Delhi consumer disputes redressal forum-II has directed Allianz Capital to refund the deposits at the agreed rate of interest and also to pay 18% interest on the whole amount from the date of maturity and till final payment. Hearing a complaint field by two investors Anu and Vipin Bansal, the consumer court also hauled up the finance company for "deficiency in service" and ordered it to pay a litigation cost of Rs 250 to each depositors.

Rejecting the contention of the company that it was facing severe liquidity crunch, the court president T C Gupta and member N Rajkumar and S P Chopra said "insuffiency of liquidity of funds is no ground for withholding the payment of various amount in deposits."

The two complaints had deposited Rs 15,000 each with Allianz Capital on 6th March 1997 for one year which promised 15% interest. However, the depositors approached the court after the company failed to return their deposits in spite of several requests.

The company said that Reserve Bank of India's (RBI) notification in January 1998 which has placed certain constraints on accepting fresh deposits has resulted in liquidity crunch.

Rejecting the contention of the company on the basis of RBI guidelines, the court said that thw apex bank had directed all non-banking companies with "downgrade rating" to promptly pay back the total amount of deposits by 31st December, 2000 in three phases beginning December 31, 1998.

The court also observed that the guidelines does not imply a bar on the company's repayment as alleged by the private finance company.

The court directed the finance company to comply with its order within three months of the passage of the order. It also said that if the company failed to comply with the order, its action will invite action under relevant provisions of Consumer Protection Act (CPA). 1986.

Chapter III
Research Methodology

Introduction

Methodology is the research method used to test hypothesis. Research Methodology is a systematic way of solving the research problem. It describes the methods and process applied in the entire aspects of the study. It refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view.[1]

It refers to the methods that are used for conduction of research or performing research operation. It can be defined as "A systematic process that is adopted by the researchers in studying a problem with certain objective in view". In other words, research methods are those methods, which are used by the researchers during the course of studying his/her research problem.

The prime concern of this study is the liquidity position of the commercial banks 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 contains the research design, variables, sample size, sample selecting procedure, data collection procedure, data processing tools and techniques etc.

3.2 Research Design

This study is an intensive study based on an analysis of the past financial performance of these banks. Descriptive research design is used to make their comparison. The study is also a explanatory research as it is based on the past performance.

Research design is the plan, structure and strategy of investigation concerned so as to obtain answers to research questions and to control variance. A research design is purely and simply the

framework or plan for a study that guides the collection and analysis of data. A true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion.

To achieve the objective of this study, historical and comparative analytical research design has been used. This study is based on past data of the banks. The research methodology is based on the secondary and primary type of data. Historic and comparative research design is adopted along with trend analysis.

3.3 Variables

A variable is a symbol to which numerals or values are assigned. So, the variables can take on values. This research intends to identify the factor that fosters the liquidity risk of commercial banks. Thus liquidity is known as dependent variable, which is affected by many other variables. The entire factor that affects the liquidity of commercial banks are security problem, investment opportunity and other rules and regulations relating liquidity risk management, etc are the independent variables.

3.4 Populations and Sample

The population refers to the organization of the same nature and its services and product in general. Thus, the total number of commercial banks constitutes the population of the data and the banks under study constitute the sample for the study.

3.5 Sources and Nature of data

The study is based on secondary data as well as primary data. Secondary data were collected from official publication of the commercial banks. In addition to above, supplementary data and

information were collected from relevant institutions and authorities such as Nepal Rastra Bank, Securities Board of Nepal, Nepal Stock Exchange and their prospective publications and also from journals, websites, unpublished thesis reports, newspapers etc.

Secondary data are used to analyze the historical trend in liquidity management and primary data are used to find the factors affecting the liquidity management of commercial banks. The relation with liquidity to other variables as described in 3.3 is analyzed by using primary data, which is drawn by filling a questionnaire from the respondents.

3.6 Data Collection Techniques

The research consists of both primary as well as secondary data. Since the nature of these two types of data is different, the data collection procedure also varies. To collect the secondary data, published materials are viewed in various sports. Books by different authors, unpublished thesis reports, journals, magazines, internet websites, AGM reports of commercial banks, bulletins published by NRB are the major sources of secondary data. Most of the data were obtained by visiting campus library of people's campus, SEBO/N and Nepal Rastra Bank Library.

The primary data was collected through scheduled questionnaire opinion survey, observation and personal interview to the learners and practitioners of commercial and central banks of Nepal.

3.7 Data Analysis Tools

In order to analyze the problem under study, financial and statistical tools were used to analyze the data. Average (mean), Standard Deviation, Coefficient of Variation, Trend Analysis, Financial Ratios were used in the study. Results are listed and tabulated under various headings. The results were compared with the corresponding results of the past in order to interpret them in a meaningful way. A brief description of the tools is given below.

3.7.1 Statistical Tools

Statistical tools are the measures or the instruments to analyze the collected data from different sources. In statistics, there are numerous statistical tools to analyze data of various natures. Following statistical tools has been used to analyze the data.

3.7.1.1 Average (Mean)

An average is a single value related from a group of values to represent them in someway, a value, which is supposed to stand for the whole group of which it is part, as typical of all the values in the group. There are various types of averages, Arithmetic Mean (A.M., simple and weighted), median, mode, geometric mean, harmonic mean, are the major types of averages. The most popular and widely used measures representing the entire data by one value are the A.M. The value of the A.M is obtained by adding together all the items and by dividing this total by the number of items.

Mathematically,

Arithmetic Mean (A.M.) is given by, $\overline{X}$ X$\frac{X}{n}$

Where,

$\overline{X}$ = Arithmetic Mean

X = Sum of all the values of the variable X

n = Number of observations

3.7.1.2 Standard Deviation

The standard deviation (∃) measures the absolute dispersion. The greater the standard deviation, greater will be the magnitude of the deviation of the values from their mean. A standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series and vice versa.

Mathematically,

Standard Deviation (∃) = $\sqrt{\frac{1}{n}}$ $(X \text{ Z} \overline{X})^2$

3.7.1.3 Coefficient of Variation

The standard derivation is absolute measures of dispersion: whereas the coefficient of variation (CV) is a relative measure. To compare the variability between two or more series, CV is more appropriate statistical tool.

Mathematically,

$$\text{Coefficient of Variation (CV)} = \frac{\pm}{X} \times 100$$

3.7.1.4 Trend Analysis:

Trend analysis is a significant tool of horizontal financial analysis. It is a dynamic method to indicate the charges in terms of financial statement. Trend analysis helps to identify the controllable items of given period and future forecast can be made for ongoing concern. It is one of the useful tools in making a comparative study of the financial statement of the number of years. It makes easy to identify the changes in an item or in a group of items over a period of time and to draw the conclusion regarding the changes there on.

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

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

Least Square Method:

This is one of the most commonly used methods 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 responding by equation $Y_c = a + bx$

Where,

Y_c = estimated value of 'y' for any given value of independent variable X.

a = y – intercept of value of 'y' when x = 0 [i.e., a = $\frac{Y}{n}$]

b = slope of the trend line or amount of change in 'y' per unit change in 'x'

[i.e., a = $\frac{XY}{X^2}$]

3.7.1.5 Measures of Correlation

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

Correlation refers to the degree of relationship between two variables. Thus, measures of correlation calculate the mathematical relationship between two variables. The measures of correlation called the correlation coefficient or correlation index summarizes in one figure the direction and degree of correlation.

The Karl Pearson's Coefficient of Correlation r = $\frac{XY}{N \pm x \pm y}$

Where,

X = (X-X)

Y= (Y-Y)

σx = Standard deviation of series x

σy = Standard deviation of series y

N = No of pairs of observation

Probable Error of r (p. Er) = $0.6745 \frac{1 - r_2}{\sqrt{N}}$

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

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

3.7.2 Financial Tools

Financial tools also are the instruments to analyze the collected data from different sources. In this study, the following financial tool has been used to analyze the data.

3.7.2.1 Financial Ratio Analysis

Financial Ration Analysis is a tool, through which economic and financial position of the organization can be fully to X-rayed. It is the indicated quotient of two mathematical expressions and the relationship between two or more things. Therefore to find out the liquidity risk position of the sampled commercial banks, the following ratios are examined:

3.7.2.1.1 Liquidity ratio

i. Current Ratio

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

$$\textit{Current Ratio} = \frac{\textit{Current Assets}}{\textit{Current liabilities}} \times 100$$

ii. Cash and Bank to Current Deposit Ratio

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

$$\textit{Cash and Bank Balance to Current Deposit Ratio} = \frac{\textit{Cash \& Bank balances}}{\textit{Current Deposit}} \times 100$$

iii. Liquid Funds to Total Deposit Ratio

This ratio is designed to see what portion of the total deposits accepted by commercial banks is kept as liquid funds. This ratio is calculated by dividing total liquid fund by total deposit and formula is:

Liquid Funds to Total Deposit Ratio =

iv. Short-term Investment to Total Deposit Ratio.

This ratio is designed to analyze the liquidity position of commercial banks. It shows the portion of total deposits in short term investment. Higher ratio indicates the better liquidity position whereas lower ratio is the symptom of liquidity risks which may arise in the future. It is computed by using the formula as under:

Short-term Investment to Total Deposit Ratio = ***X 100***

v. Current Deposit to Total Deposit Ratio.

This ratio measures the portion of current deposit on total deposit. It clarifies what percentage of the total deposits is collected from current deposit. It is computed by dividing current deposit by total deposit and formula is;

Current Deposit to Total Deposit Ratio = ***X 100***

vi. Balance With NRB to Total Deposit Ratio:

Nepal Rastra Bank (NRB), the central bank, is the regulatory body of all the commercial banks. In order to enable to 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 is calculated by using the following formula:

Balance with NRB to Total Deposit Ratio = ***X100***

vii. Investment on government securities to total deposit ratio:

This ratio shows the percentage of investment on government securities on total deposit. It shows of the total deposit how much funds are invested on government securities. This ratio is computed by using the following formula:

Inv. on govt. securities to total deposit ratio=

$$\frac{\textbf{\textit{Inv. on govt securities}}}{\textbf{\textit{Total deposit}}} \textbf{\textit{ X 100}}$$

viii. Cash in Vault to Total Deposit Ratio

This ratio is designed to manage the liquidity position of the bank. This is also a liquidity measuring tool. This ratio is calculated by the following formula:

Cash in Vault to Total Deposit Ratio = ***x 100***

ix. Cash Reserve Ratio (CRR)

Commercial banks are directed by Nepal Rastra Bank, the central bank, to maintain certain percentage of their deposits liabilities with NRB in own account in order to enable them to maintain the sound liquidity position. Cash reserve ratio (CRR) describes whether the commercial banks have methodology the liquidity requirement as prescribed by NRB or not. In 2003, NRB issued notice in monetary policy and prescribed CRR rate as 6% of total deposit but it was revised in 2004 as 5% of total deposits. Since 2003, NRB has withdrawn the other reserve ratio for liquidity purpose like statutory liquidity ratio. Presently, commercial banks have to maintain 5% of their total deposits in NRB and own in hand. It is computed by dividing cash reserve of commercial banks by total deposit and the formula is:

Cash Reserve Ratio (CRR) = ***x 100***

3.7.2.1.2 Turnover Ratio:

i. Total Investment to Total Deposit Ratio.

This ratio is used to find out the ratio of total investment on total deposits. Following formula can complete the ratio:

Total Investment to Total Deposit Ratio = ***x 100***

ii. Loans and advances to Total deposit Ratio:

This ratio measures the bank's ability to utilize the depositor's funds to earn profit by providing loans and advances. This ratio is computed by dividing loans and advances by total deposits. We have,

$$\textit{Loans \& Advances to Total Deposit Ratio} = \frac{\textit{Loans and Advances}}{\textit{Total Deposits}} \times 100$$

iii. Loans & Advances to Saving deposits:

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

$$\textit{Loans \& Advances to Saving Deposit Ratio} = \frac{\textit{Loans \& Advances}}{\textit{Saving deposits}} \times 100$$

Chapter- Four
Data Presentation and Analysis

4.1 INTRODUCTON

Keeping in view the objectives stated in chapter – I, the available data and information in liquidity management of four banks namely, NABIL, NIBL, SCBNL, HBL are presented and analyzed in the present chapter. Here the study presents the colleted data for various purpose of analysis. The data are analyzed by using financial and statistical tools to get the values of different variables. The analyzed data and results are presented clearly and simultaneously by using tables and graphs.

4.2 Financial Ratio Analysis

Financial ratio analysis is a tool through which economic and financial position of organization can be fully X-rayed. It is the indicated quotient of two mathematical expressions and the relationship between two or more things. Therefore, to find out the liquidity position of the sample commercial banks, the following ratios are examined.

4.2.1 Liquidity Ratio

4.2.1.1. Current Ratio

Current ratio is one of the most widely used measures of liquidity. It measures the degree to which current assets cover current liabilities. A higher ratio indicates greater assurance of ability to pay current liability. A low ratio indicates that the bank may not be able to meet short-term obligations. A high ratio indicates excessive current assets leading to under utilization of the

bank's resources. Whether a current ratio is high or low is difficult to determine. For this the financial analysts has to consider the banks past ratios or the ratios of similar banks.

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

Current Ratio = Current Assets / Current liabilities

Current ratio of NABIL, NIBL, SCBNL & HBL from the year ended 2001 to 2007 are presented in the table below:

Table: 4.1

Current Ratio

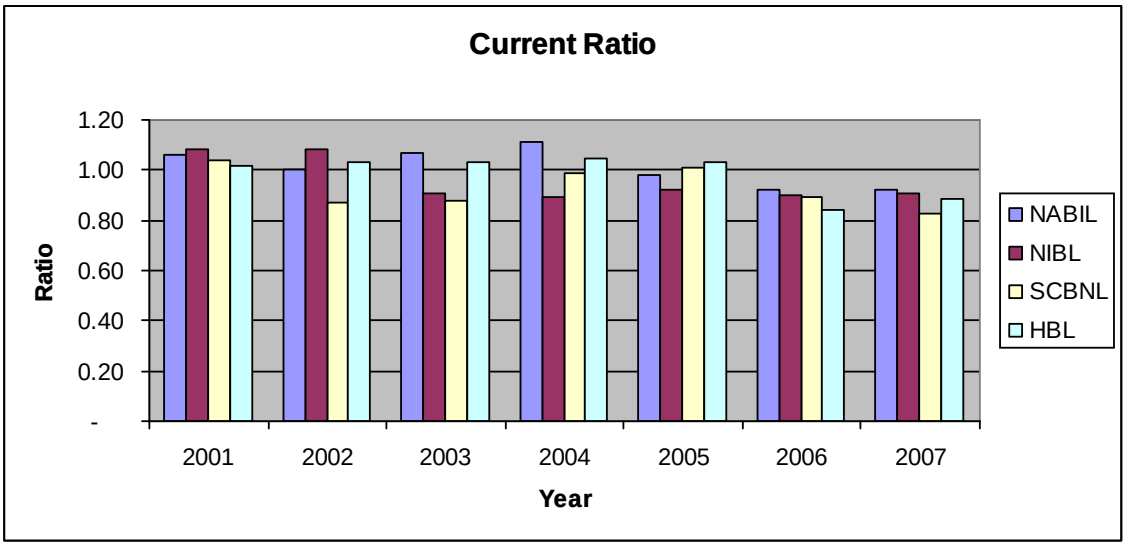
Years	**Banks**			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	1.06	1.08	1.04	1.02
2002	1.00	1.08	0.87	1.03
2003	1.07	0.91	0.88	1.03
2004	1.11	0.89	0.99	1.05
2005	0.98	0.92	1.01	1.03
2006	0.92	0.90	0.89	0.84
2007	0.92	0.91	0.83	0.89
Mean	1.01	0.96	0.93	0.98
SD	0.07	0.08	0.08	0.08

C.V.	0.07	0.08	0.08	0.08

Source: Appendix I

Above table shows the current ratio of all the four banks under study. The current ratio is determined by dividing current assets by current liabilities. The ratio of NABIL has been fluctuating upward up to the year 2004. In the year 2005, 2006 & 2007 it is in decreasing trend. The current ratio of NIBL is in decreasing trend. Likewise the current ratio of SCBNL is fluctuating in decreasing trend year after year.

Fig: 4.1



Source: Table 4.1

4.2.1.2 Cash and Bank Balances to Current Deposit Ratio

Cash and bank balance is said to be the first line of defense of every bank. This ratio shows the banks liquidity capacity in the basis of cash and bank balance that is the most liquid assets. High ratio indicates the bank's ability to meet the daily cash requirements of their customer deposits and vice versa. Lower ratio is also very dangerous as the bank may not be able to make the payment against the cheques presented by the customers. Therefore, bank has to balance the cash and bank balance to current assets ratio in such a manner that it should have the adequate cash for

the customer's demand against deposit when required, and less interest is required to be paid against the cash deposit. We have,

Cash and Bank Balance to Current Deposit Ratio

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

Table: 4.2

Comparative analysis of Cash and Bank Balances to Current Deposit Ratio (in million Rs)

Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	7.20	9.79	5.76	6.95
2002	12.56	8.17	7.21	18.81
2003	6.84	20.88	5.39	11.42
2004	12.08	24.69	6.07	7.06
2005	6.07	24.62	4.84	5.78
2006	8.96	34.49	6.37	7.69
2007	8.76	36.08	8.49	4.00
Mean	8.92	22.67	6.30	8.82
SD	2.35	10.05	1.13	4.58
C.V.	0.26	0.44	0.18	0.52

Source: Appendix II

Above table shows the cash and bank balance to current deposit ratios of four banks. From the above table, it is revealed that cash and bank balance to current deposit ratio of NIBL is the highest among other banks.

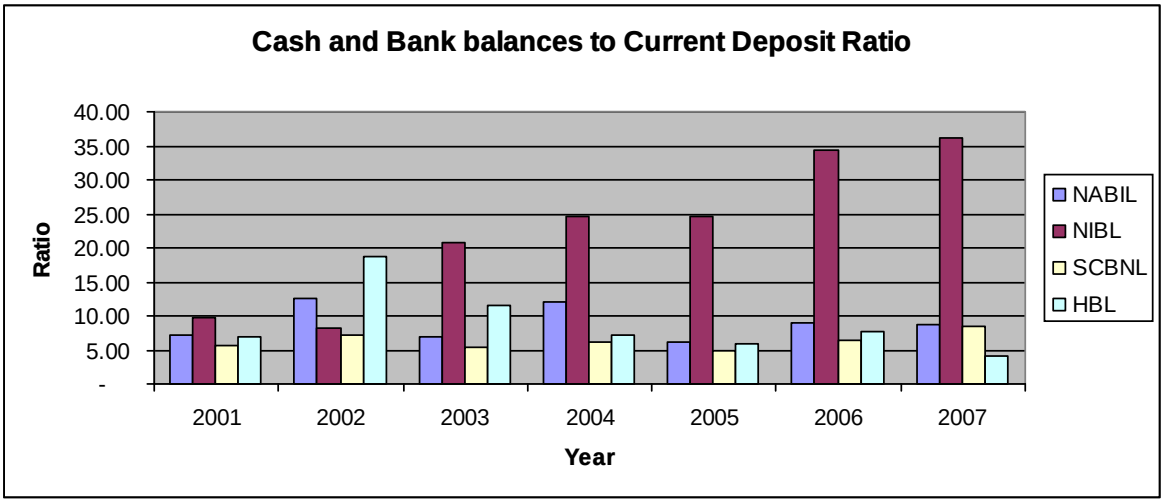
NABIL has second highest ratio in average than other banks (i.e. 8.92%). The trend of this ratio is fluctuating. The highest ratio is 12.56%, in the year 2002 and it has the lowest ratio of 6.84% in the year 2003.

Similarly, the cash and bank balance to current deposit ratio of NIBL is in increasing trend. Among all the other banks, NIBL has the highest ratio in average than all other banks. It has the highest ratio (i.e. 36.08%) in 2007 and the lowest ratio is (8.17%) in the year 2002.
Likewise, among all other banks, SCBNL has the lowest cash and bank balance to current deposit ratio in average. This ratio has fluctuated from year to year.

In the year 2002, HBL has the highest ratio (i.e. 18.81%) than other banks whereas in the year 2007, it has the lowest ratio of 4.00%. The cash and bank balances to current deposit ratio of HBL have fluctuated between 4.00% to 18.81%).

During the study period, NABIL has come after NIBL for high liquidity position. As compare to other banks average ratio of SCBNL is too low i.e. only 6.30% that may arise a liquidity crisis to the bank.

Fig: 4.2



Source: Table 4.2

4.2.1.3 Liquid Fund to Total Deposit Ratio

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

$$\text{Liquid fund to total deposit ratio} = \frac{\text{Liquid Fund}}{\text{Total Deposits}}$$

Liquid Fund to Total Deposit ratio of the four banks from the year ended 2001 to 2007 are presented in the table below:

Table: 4.3

Comparative analysis of Liquid Funds to Total Deposit Ratio

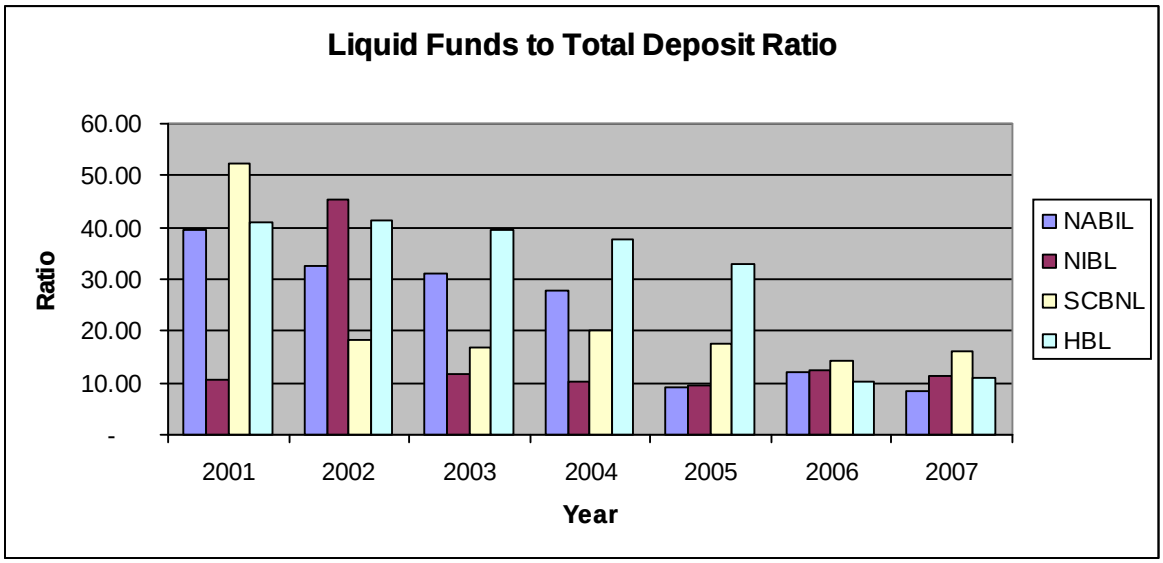
Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	39.68	10.50	52.41	40.84
2002	32.53	45.49	18.25	41.19
2003				

	30.97	11.69	16.90	39.43
2004	27.78	10.38	20.04	37.84
2005	9.22	9.40	17.43	32.92
2006	12.22	12.44	14.11	10.12
2007	8.41	11.40	16.22	10.90
Mean	22.97	15.90	22.19	30.46
SD	11.80	12.11	12.45	12.87
C.V.	0.51	0.76	0.56	0.42

Source: Appendix III

Above table shows the liquid funds to Total deposit ratio of NABIL, NIBL, SCBNL and HBL respectively. The ratio of NABIL and SCBNL is in decreasing trend and the average value is 22.97% and 22.19 % respectively. Likewise, the ratio of NIBL and HBL is fluctuating in decreasing trend. The liquid fund to total deposit ratio of HBL is the highest (i.e. 30.46%) among others and it is more liquid among others.. The highest ratio of NIBL is 45.49% and the lowest ratio is 9.40% and the average ratio is 15.90%. It implies that the ratio of liquid fund to total deposit is quite lower as compared to others. The ratio of SCBNL is in decreasing trend and the average ratio is 22.19% and the value of C.V is 0.56 which shows the consistency of ratio during the study period. Similarly, the average ratio of NABIL is 22.97%. It reveals that the capacity of NABIL to meet immediate obligation is good.

Fig: 4.3



Source: Table 4.3

4.2.1.4 Short Term Investment to Total Deposit Ratio:

This ratio shows the portion of short term investment in the total deposit. This ratio is useful in analyzing the liquidity position of commercial banks. Higher ratio indicates the better liquidity position of commercial banks whereas the lower ratio means the bank may be in the liquidity crisis in future. It is computed by dividing the short term investment by total deposit.

$$\textit{Short term Investment to Total Deposit Ratio} = \frac{\textit{Short term Investment}}{\textit{Total Deposit}}$$

Table: 4.4

Comparative analysis of Short term Investment to Total Deposit Ratio

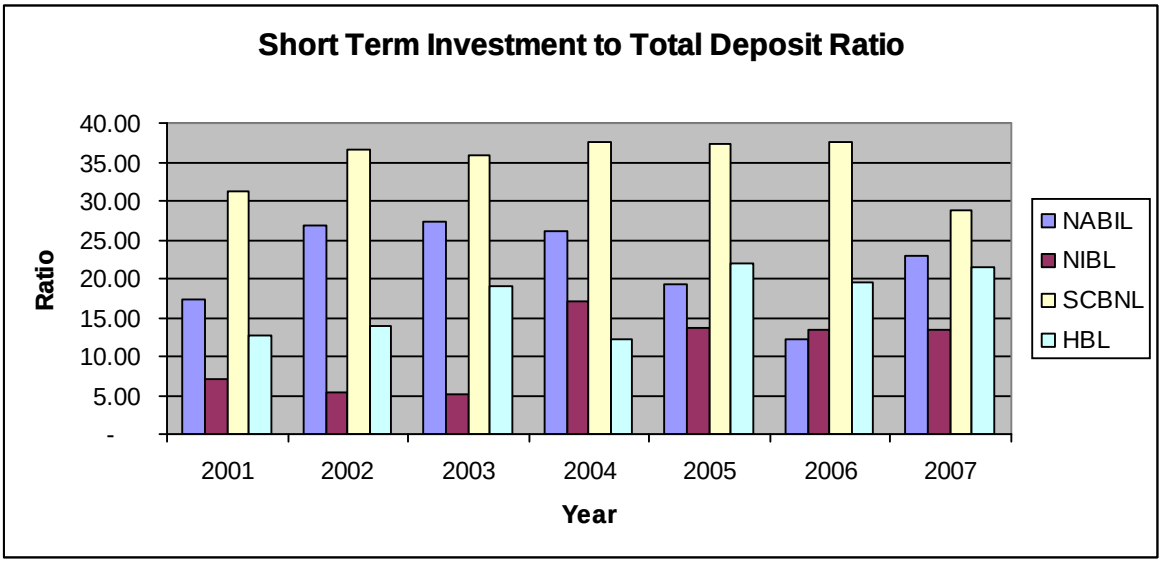
Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	17.25	7.05	31.18	12.63
2002	26.81	5.37	36.53	13.92
2003	27.26	5.05	35.84	18.95
2004				12.22

	26.05	17.09	37.56	
2005	19.38	13.67	37.24	22.03
2006	12.26	13.33	37.50	19.44
2007	22.96	13.30	28.88	21.58
Mean	21.71	10.69	34.96	17.25
SD	5.23	4.42	3.23	3.91
C.V.	0.24	0.41	0.09	0.23

Source: Appendix IV

From the above table, it is clear that the short term investment to total deposit ratio of NABIL is 21.71% in average. The highest ratio is 27.26% in average in the year 2003 and the lowest ratio is 12.26% in the year 2006. The short term investment to total deposit ratio of NIBL is 10.69% in average. This ratio is the lowest among all the other banks. Likewise, the highest ratio of SCBNL is 37.56% in the year 2004 and among all other banks SCBNL has the highest ratio i.e. 34.96% in average which implies that SCBNL has utilized 34.96% of total deposit in short term investment and enjoyed two benefits as liquidity & profitability. Similarly HBL has short term investment to total deposit ratio of 17.25% in average. So while comparing the ratios of all the banks, it can be concluded that the liquidity position of SCBNL is strong, NABIL & HBL are moderate and NIBL is in poor position. It can be seen more clearly from the following chart.

Fig: 4.4



Source: Table: 4.4

4.2.1.5 Current Deposit to Total Deposit Ratio

This ratio measures the portion of current deposit on total deposit. It clarifies how much percentage of the total deposit is collected from current deposit. It is computed by dividing current deposit by Total deposit and the formula is:

$$\textit{Current Deposit to Total Deposit Ratio} = \frac{\textit{Current Deposit}}{\textit{Total Deposit}}$$

Table: 4.5

Comparative analysis of Current Deposit to Total Deposit Ratio (in million Rs)

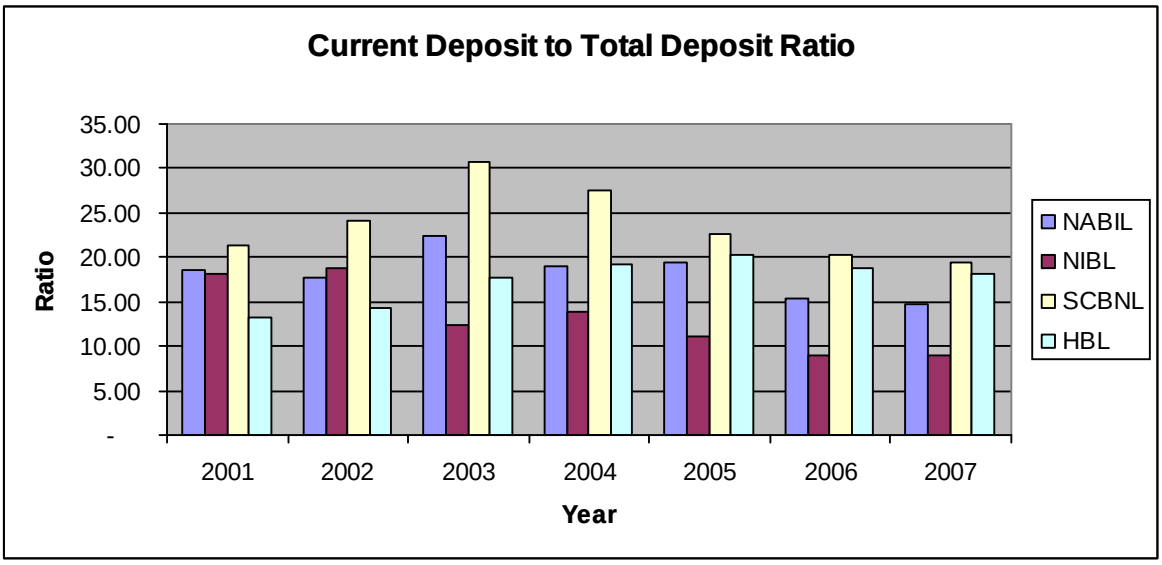
Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	18.67	18.07	21.25	13.14
2002	17.72	18.86	24.05	14.27
2003	22.51	12.36	30.76	17.63
2004	19.06	13.88	27.49	19.13
2005				

	19.49	11.11	22.52	20.19
2006	15.26	9.01	20.31	18.88
2007	14.76	8.88	19.46	18.21
Mean	18.21	13.17	23.69	17.35
SD	2.45	3.73	3.80	2.44
C.V.	0.13	0.28	0.16	0.14

Source: Appendix V

From the above table, it is clear that current deposit to total deposit ratio of NABIL, SCBNL & HBL is in fluctuating trend whereas the current deposit to total deposit ratio of NIBL is in decreasing trend. During the study period, the average ratio of current deposit to total deposit of NABIL is 18.21%. The average ratio of NIBL is lowest among all others i.e. 13.17% which means that out of total deposit, 13.17% comes from current deposit. Likewise, SCBNL has the highest average ratio of current deposit to total deposit i.e. 23.69%. Similarly, the current deposit to total deposit ratio of HBL is 17.35% in average. With the help of the following figure, it can be seen more clearly.

Fig: 4.5



Source: Table: 4.5

4.2.1.6 Balance with NRB to Total Deposit Ratio

Nepal Rastra Bank, the central bank, is the regulatory body of all 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 is calculated by using the following formula:

$$\textit{Balance with NRB to Total Deposit Ratio} = \frac{\textit{Balance with NRB}}{\textit{Total Deposit}}$$

Table: 4.6

Comparative analysis of Balance with NRB to Total Deposit Ratio

Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	3.22	4.99	4.27	6.09
2002	2.38	3.98	2.34	3.74
2003				

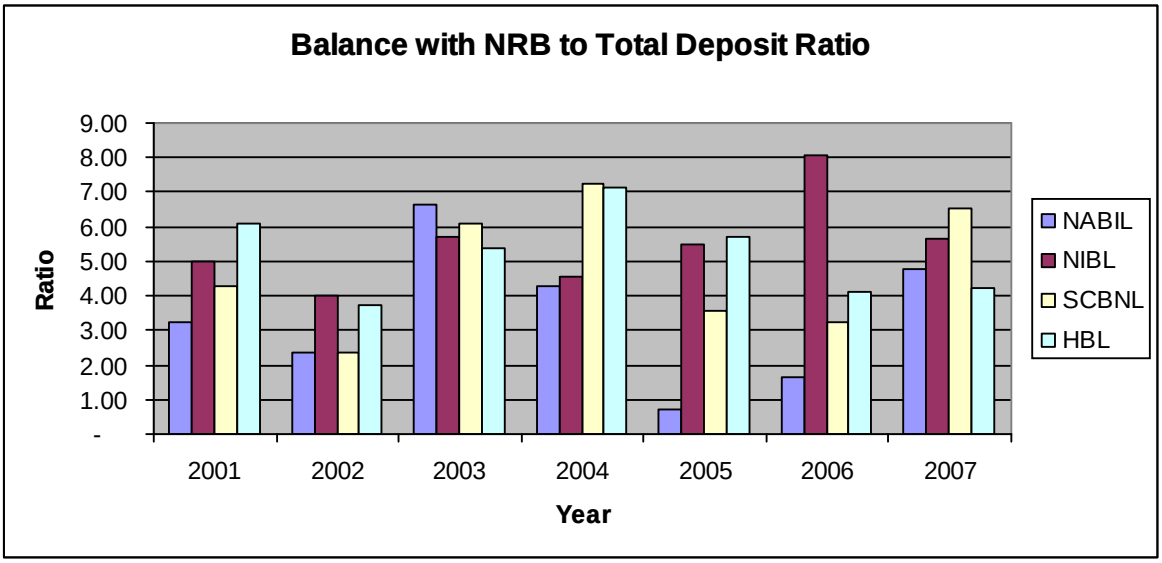
	6.64	5.69	6.08	5.38
2004	4.30	4.56	7.25	7.14
2005	0.74	5.47	3.58	5.69
2006	1.65	8.06	3.25	4.13
2007	4.77	5.64	6.55	4.24
Mean	3.39	5.48	4.76	5.20
SD	1.87	1.20	1.73	1.13
C.V.	0.55	0.22	0.36	0.22

Source: Appendix VI

From the above table it is clear that the ratios of the banks are fluctuating. The highest ratio of balance with NRB to total deposit of NABIL is 6.64% in 2003 and the lowest ratio is 0.74% in 2005. The average ratio is 3.39% which implies that out of total deposit NABIL has maintained 3.39% fund in the NRB as reserve.

The average ratio of balance with NRB to total deposit of NIBL is 5.48% which is the highest among others comparatively. It depicts the strong capacity to liquidity reserve of NIBL. Likewise, the highest ratio of SCBNL is 7.25% in 2004 and the lowest ratio is 2.34% in 2002. The average ratio is 4.76% which implies that 4.76% of total deposit is with NRB. The average ratio of HBL is 5.20% during the study period.

Fig: 4.6



Source: Table: 4.6

4.2.1.7 Investment on government securities to Total Deposit ratio

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

Investment on government securities to total deposit ratio

$$= \frac{\text{Investment on government securities}}{\text{Total deposit}}$$

Investment on government securities to total deposit ratio of NABIL, SCBNL, NIBL and HBL from the year ended 2001 to 2007 are presented as follows:

Table: 4.7

Investment on Government Securities to Total Deposit Ratio (in million Rs)

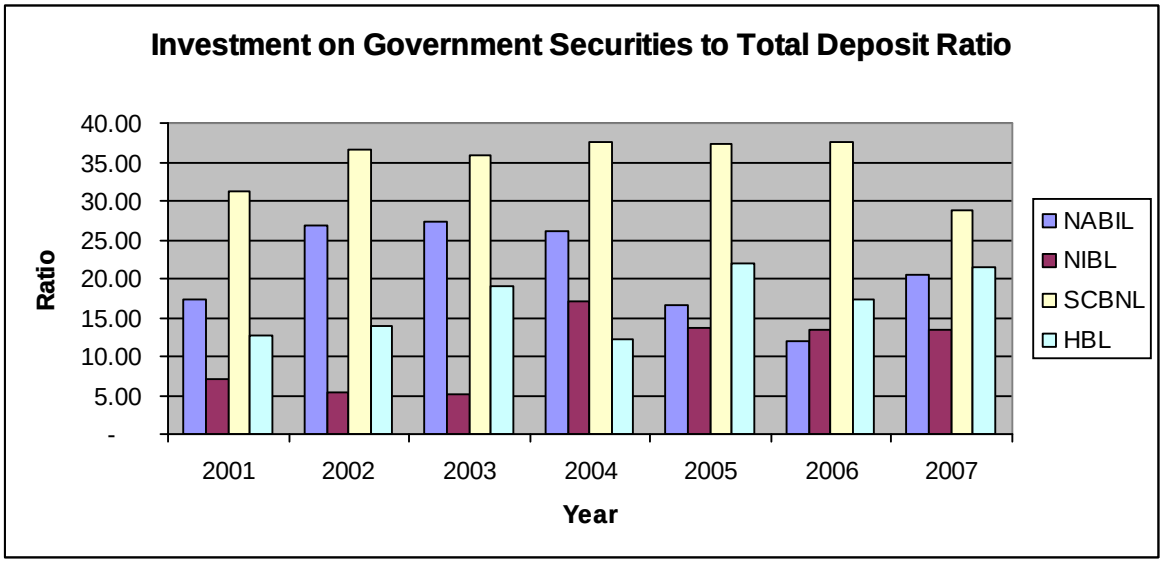
Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	17.25	7.05	31.18	12.63
2002	26.81	5.38	36.53	13.92

2003	27.26	5.05	35.84	18.95
2004	26.05	17.09	37.56	12.22
2005	16.55	13.67	37.24	22.03
2006	11.88	13.33	37.50	17.30
2007	20.59	13.30	28.88	21.58
Mean	20.91	10.70	34.96	16.95
SD	5.55	4.42	3.23	3.81
C.V.	0.27	0.41	0.09	0.22

Source: Appendix VII

From the above table, it is clear that the investment on government of all the banks is in fluctuating trend. The ratio of investment on government securities of SCBNL is the highest among others i.e. 34.96% in average which implies that SCBNL has invested 34.96% of total deposit on government securities. NABIL & HBL has invested 20.915% and 16.95% of their total deposit respectively whereas NIBL has invested only 10.70% of its total deposit on government securities. With the help of the following figure it can be seen more clearly.

Fig: 4.7



Source: Table: 4.7

4.2.1.8 Cash in Vault to Total Deposit Ratio:

This ratio is designed to manage the liquidity position of commercial banks. This ratio is calculated by using following formula:

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

Table: 4.8

Comparative Analysis of Cash in Vault to Total Deposit Ratio

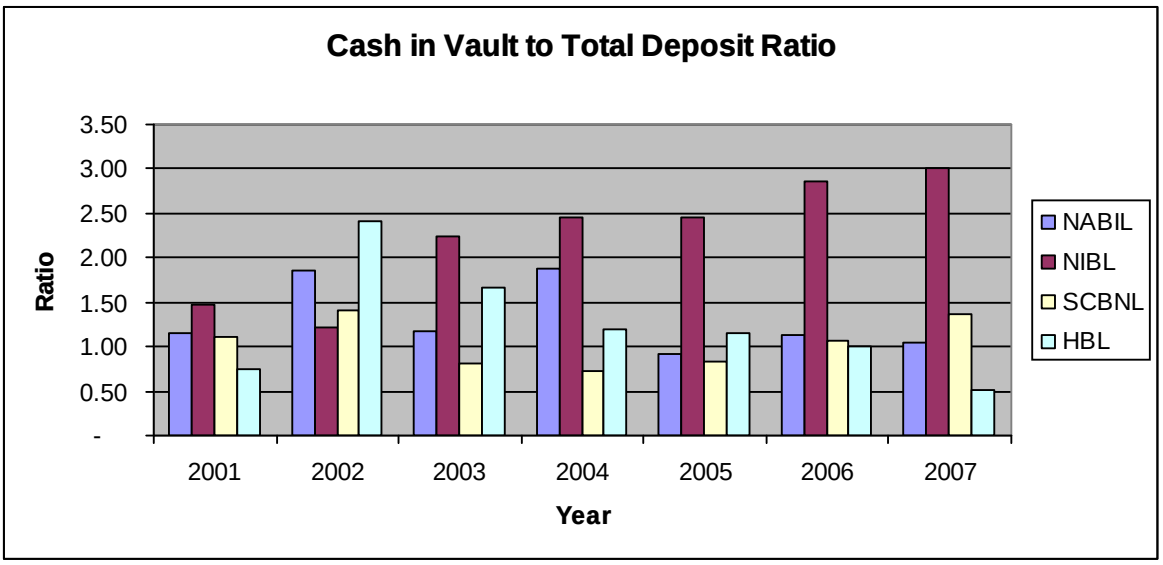
Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	1.15	1.48	1.10	0.75
2002	1.86	1.22	1.41	2.42
2003	1.17	2.25	0.82	1.67
2004	1.87	2.46	0.73	1.20

2005	0.91	2.46	0.84	1.16
2006	1.14	2.86	1.06	1.00
2007	1.04	3.01	1.37	0.52
Mean	1.31	2.25	1.05	1.25
SD	0.36	0.62	0.25	0.59
C.V.	0.28	0.28	0.24	0.47

Source: Appendix VIII

From the above table it is revealed that the lowest ratio of cash in vault to total deposit pertains to SCBNL which is around 1%. It can also be seen that cash in vault to total deposit ratio of all the banks are in fluctuating trend and the ratios of each bank are nearly less than 2%, which implies that the banks have maintained as possible as low level of cash in vault. With the help of following figure it can be seen more clearly.

Fig: 4.8



Source: Table: 4.8

4.2.1.9 Cash Reserve Ratio:

Commercial banks are directed by the Nepal central bank, the central bank to maintain certain percentage of their deposits liabilities with NRB in own account in order to enable them to maintain the sound liquidity position. Cash reserve ratio (CRR) describes whether the commercial banks have met the liquidity requirement as prescribed by NRB or not. In 2003, NRB prescribed CRR rate as 6% of total deposit but it was revised in 2004 as 5% of total deposit. We have,

$$\textit{Cash Reserve Ratio} = \frac{\textit{Cash in Reserve}}{\textit{Total Deposit}}$$

Table: 4.9

Comparative analysis of Cash in reserve to Total Deposit ratio

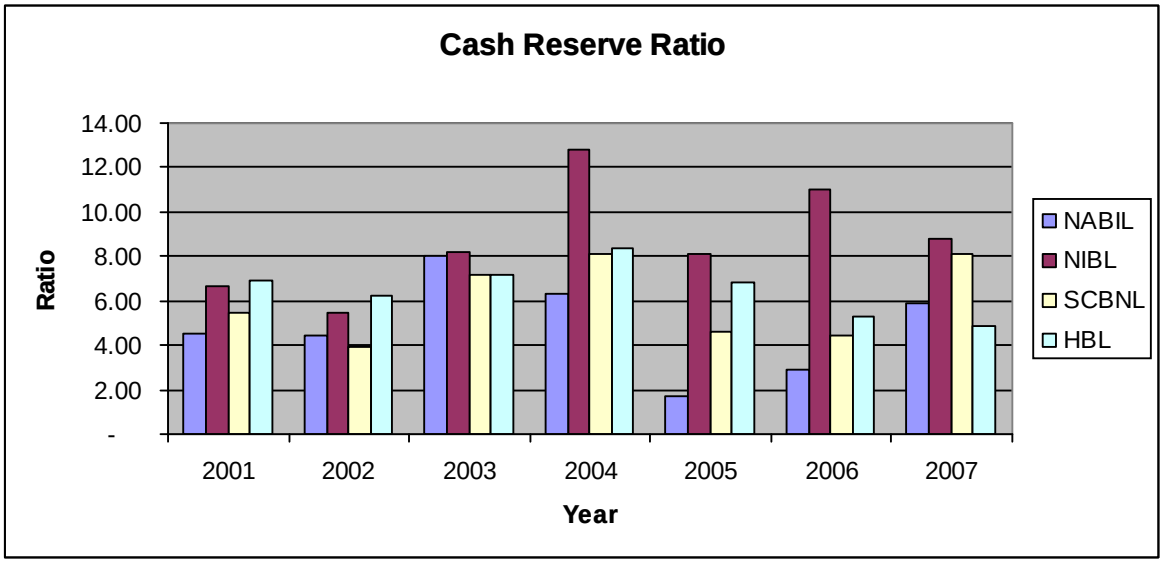
Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	4.54	6.67	5.49	6.94
2002	4.45	5.46	3.96	6.23
2003	8.06	8.22	7.14	7.20
2004	6.34	12.82	8.14	8.34
2005	1.74	8.10	4.59	6.84
2006	2.87	11.03	4.46	5.29
2007	5.93	8.76	8.08	4.84
Mean	4.85	8.72	5.98	6.53
SD				

	1.98	2.32	1.65	1.10
C.V.	0.41	0.27	0.28	0.17

Source: Appendix IX

From the above table, it is clear that the Cash reserve ratio of all four banks is in fluctuating trend. The average CRR of all three banks except NABIL is more than the standard set by NRB i.e. 5%. This shows that the three banks have tied up their funds in excess deposit in NRB, which ultimately affects the profitability negatively. In average all the banks are in strong liquidity position. With the help of the following figure it can be seen more clearly.

Fig: 4.9



Source: Table: 4.9

4.2.2 Turnover Ratio

4.2.2.1 Total Investment to Total Deposit Ratio

Commercial bank mobilizes its deposits by investing its fund in different securities issued by government and other financial or non financial companies. This ratio measures the extent to

which the banks are able to mobilize their deposit on investment in various securities and vice versa. We have,

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

Table: 4.10

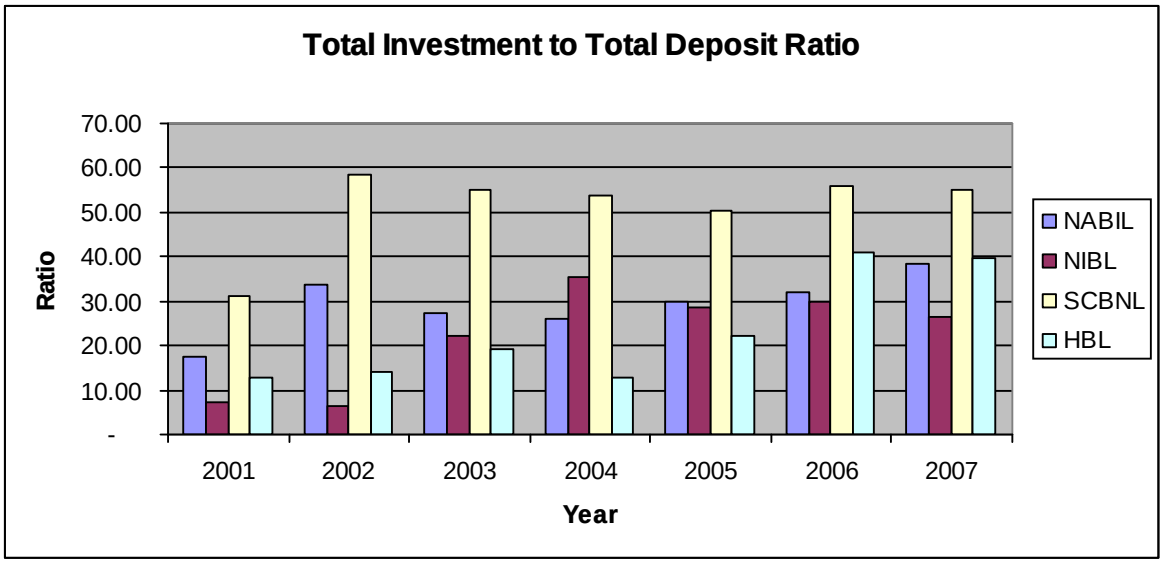
Comparative analysis of Total Investment to Total Deposit Ratio

Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	17.38	7.35	31.25	12.69
2002	33.84	6.28	58.58	14.11
2003	27.44	22.03	55.22	19.11
2004	26.22	35.64	53.85	12.65
2005	29.84	28.58	50.17	22.19
2006	31.91	29.97	55.75	41.16
2007	38.35	26.62	55.05	39.53
Mean	29.28	22.35	51.41	23.06
SD	6.15	10.52	8.55	11.41
C.V.	0.21	0.47	0.17	0.49

Source: Appendix X

From the above table, it is revealed that NABIL has invested 29.98% of total deposit in average during the study period. The highest ratio of total investment to total deposit is 38.35% in the year 2007 and the lowest ratio is 17.38% in the year 2001. In aggregate the ratio is gradually heading upward. Likewise, NIBL has invested only 22.35% of the total deposit. The highest ratio is 35.64% in the year 2004 and the lowest ratio is 6.28% in the year 2002. Among all the other banks SCBNL has invested more i.e. 51.41% of total deposit. The highest ratio is 58.58% in the year 2002 and the lowest ratio is 31.25%. HBL has invested only 23.06% of total deposit which is not satisfactory at all. The highest ratio is 41.16% in the year 2006 and the lowest ratio is 12.65% in the year 2004. With the help of the following figure it can be seen more clearly.

Fig: 4.10



Source: Table: 4.10

4.2.2.2 Loans and Advances to Total Deposit Ratio:

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

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

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

Loans and advances to Total Deposit Ratio NABIL, NIBL, SCBNL and HBL from the year ended 2001 to 2007 are presented in the following table.

Table: 4.11

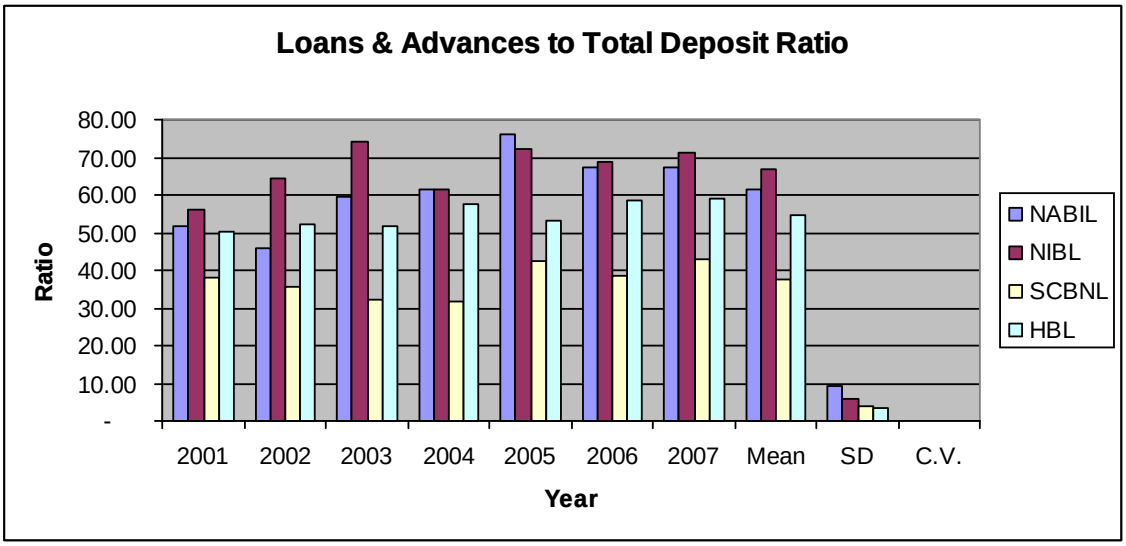
Comparative analysis of Loans & Advances to Total Deposit Ratio

Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	51.60	56.05	37.84	50.17
2002	46.01	64.51	35.84	52.02
2003	59.51	74.12	32.14	51.87
2004	61.25	61.29	31.80	57.47
2005	75.95	72.22	42.46	53.34
2006	67.30	68.72	38.63	58.64
2007	67.08	71.39	42.77	59.09
Mean	61.24	66.90	37.36	54.66
SD	9.37	6.08	4.10	3.38
C.V.	0.15	0.09	0.11	0.06

Source: Appendix XI

From the above table it is clear that NABIL has the highest ratio of 75.95% in the year 2005 and lowest ratio is 46.01% in the year 2002 and it has the ratio of 61.24% in average. It reflects a higher efficiency to utilize depositor's fund. Likewise, NIBL has the loans and advances to total deposit ratio of 66.09% in average which is comparatively higher than other banks under study. Similarly, SCBNL and HBL have the ratio of 37.36% and 54.66% in average. SCBNL has the lowest ratio as compared to other banks under study. With the help of the following figure it can be seen more clearly.

Fig: 4.11



Source: Table: 4.11

4.2.2.3 Loans and advances to saving Deposit Ratio:

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

$$\textit{Loans and advances to saving deposit Ratio} = \frac{\textit{Loans and Advances}}{\textit{Saving Deposits}}$$

Table: 4.12

Comparative analysis of Loans & Advances to Saving Deposit Ratio

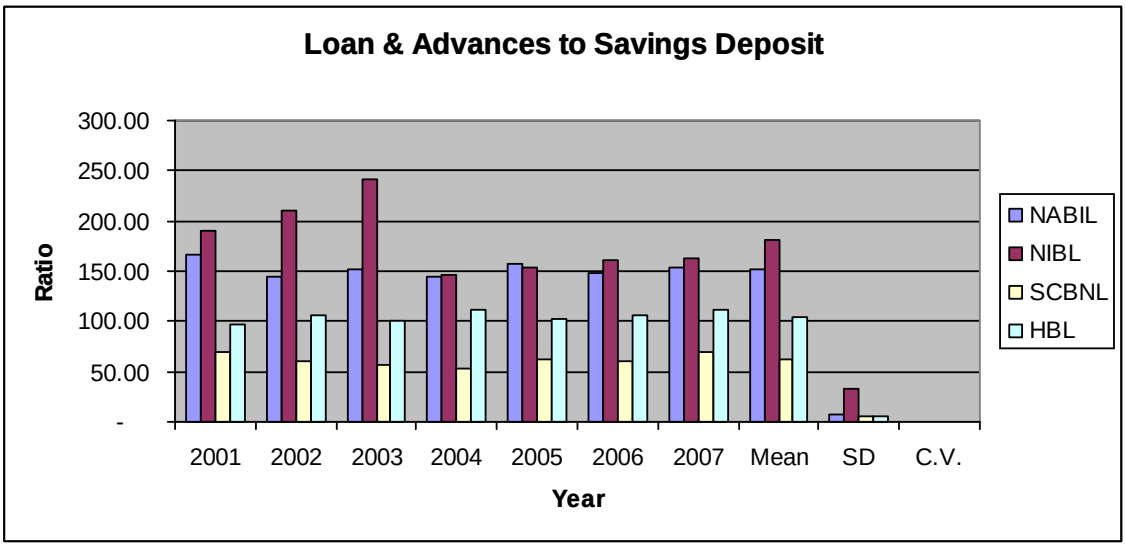
Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	166.22	189.39	69.47	96.43
2002	144.65	210.93	60.11	106.27
2003	152.69	241.28	56.70	100.49
2004	144.06	145.76	52.16	111.62
2005	157.66	153.58	63.05	103.05
2006	148.46	160.94	61.00	106.39
2007	153.70	162.74	69.13	111.96
Mean	152.49	180.66	61.66	105.17
SD	7.23	32.36	5.81	5.25
C.V.	0.05	0.18	0.09	0.05

Source: Appendix XII

Above table shows the loans and advances to saving deposit ratio of NABIL, NIBL, SCBNL and HBL comparatively. In the study period NABIL has the ratio of 152.49% in average and NIBL has 180.66% in average which is the highest among other banks under study. Similarly SCBNL has the ratio of 61.66% in average which is the lowest ratio among others. Likewise, HBL has the ratio of 105.17% in average.

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

Fig: 4.12



Source: Table: 4.12

4.3 Least Square Linear Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variables are repeated in the future. Trend analysis has been adapted to measures the trend behaviors of these banks. This method is widely used in practices. The straight line trend of a series of data is represented by the following formula.

$Yc = a + bx$

Here Y is used to designate 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 associated with a change of one unit in X variables in time series analysis represents times.

4.3.1Trend analysis of cash and bank balances to current deposit ratio

Here the trend value of cash and bank balances to current deposit ratio of NABIL, NIBL, SCBNL and HBL is calculated for seven years and projected the trend value for the next five years.

The following table describes the trend values of cash and bank balances to current deposit ratio of sampled banks for twelve years.

Table: 4.13

Comparative Trend analysis of Cash and Bank Balances to Current Deposit Ratio

Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	9.28	8.18	5.67	12.75
2002	9.16	13.01	5.88	11.44
2003	9.04	17.84	6.09	10.13
2004	8.93	22.67	6.30	8.82
2005	8.81	27.50	6.52	7.50
2006	8.69	32.33	6.73	6.19
2007	8.57	37.16	6.94	4.88
2008	8.45	41.99	7.15	3.57
2009	8.34	46.82	7.37	2.26
2010	8.22	51.66	7.58	0.94
2011	8.10	56.49	7.79	(0.37)
2012				

	7.98	61.32	8.00	(1.68)
Mean (a)	8.93	22.67	6.30	8.82
Rate of Change (b)	(0.12)	4.83	0.21	(1.31)
Trend equation (y)	8.93-0.12x	22.67+4.83x	6.30+0.21x	8.82-1.31x

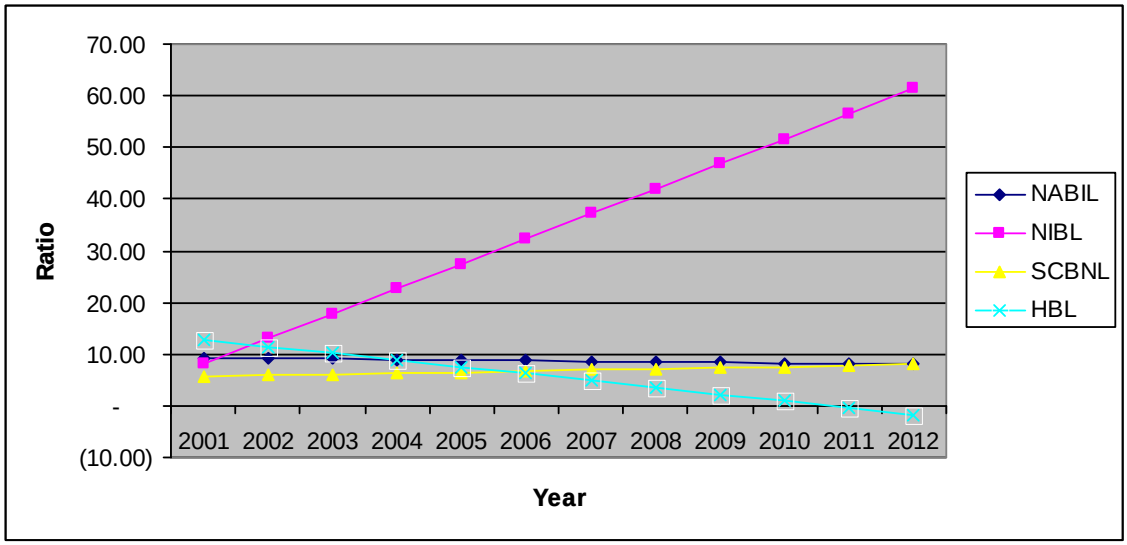
Source: Appendix XIII

The above table shows the trend analysis of Cash and Bank balances to Current Deposit ratio of four sample banks. From the table above, it is clear that the trend line of cash and bank balances to current deposit ratio of NABIL and HBL is in decreasing trend. Whereas, the trend of the ratio of NIBL is positively heading upward rapidly. Likewise the trend of cash and bank balances to current deposit ratio of SCBNL is also increasing slowly year by year.

The trend line of cash and bank balances to current deposit ratio of four banks is presented below:

Fig: 4.13

Comparative Trend analysis of Cash and Bank Balances to Current Deposit Ratio



Source: Table: 4.13

4.3.2 Trend Analysis of Liquid Funds to Total Deposit Ratio

Here the trend value of liquid funds to total deposit ratio of NABIL, NIBL, SCBNL and HBL is calculated for seven years and projected the trend value for the next five years.

The following table describes the trend values of liquid funds to total deposit ratio of sampled banks for twelve years.

Table: 4.15

Comparative Trend Analysis of Liquid Funds to Total Deposit Ratio

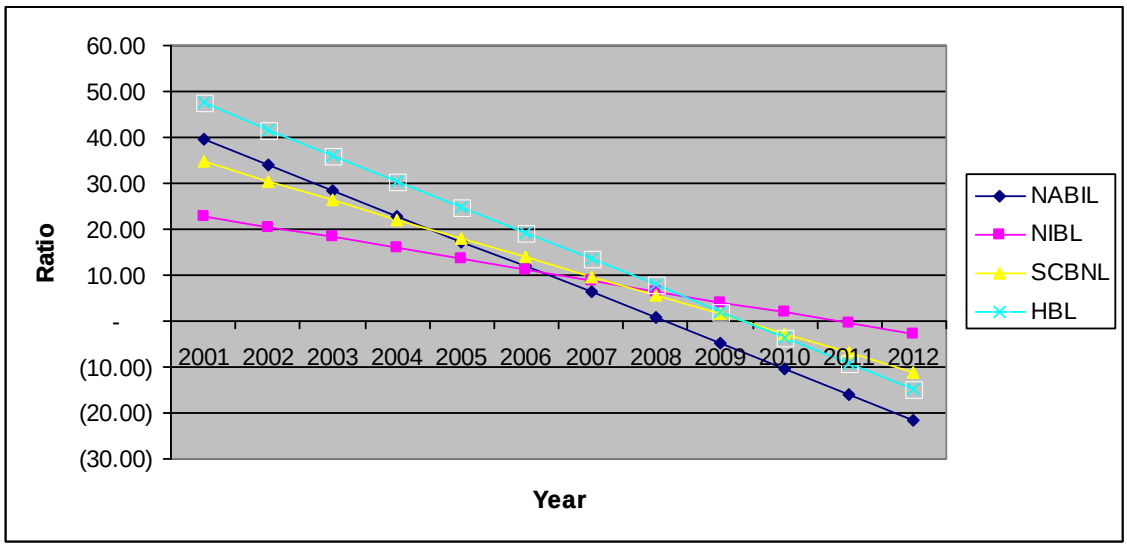
Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	39.71	22.94	34.66	47.44
2002	34.13	20.59	30.50	41.78
2003	28.55	18.25	26.35	36.12
2004	22.97	15.90	22.19	30.46
2005	17.40	13.55	18.04	24.80
2006	11.82	11.21	13.88	19.14
2007	6.24	8.86	9.73	13.48
2008	0.66	6.52	5.58	7.82
2009	(4.92)	4.17	1.42	2.16
2010	(10.49)	1.82	(2.73)	(3.50)
2011	(16.07)	(0.52)	(6.89)	(9.16)
2012	(21.65)	(2.87)	(11.04)	(14.81)
Mean (a)	22.97	15.90	22.19	30.46

Rate of Change (b)	(5.58)	(2.35)	(4.15)	(5.66)
Trend equation (y)	22.97-5.58x	15.90-2.35x	22.19-4.15x	30.46-5.66x

Source: Appendix XIII

The above table shows the comparative trend analysis of liquid funds to total deposit ratio of four sampled banks. From the table, it is clear that the trend of liquid fund to total deposit ratio of NABIL is decreasing year after year. From the year 2009, it is decreasing negatively. Likewise, the trend of this ratio of all other three banks is also decreasing rapidly year after year.

Fig: 4.15



Source: Table: 4.15

4.3.3 Comparative trend analysis of Current Deposit to total Deposit Ratio

Here the trend analysis of current deposit to total deposit ratio has been analyzed comparatively under seven years study period and projected the trend value for next five years.

Table: 4.16

Comparative trend analysis of Current Deposit to total Deposit Ratio

Years	**Banks**			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	20.32	18.36	25.95	14.45

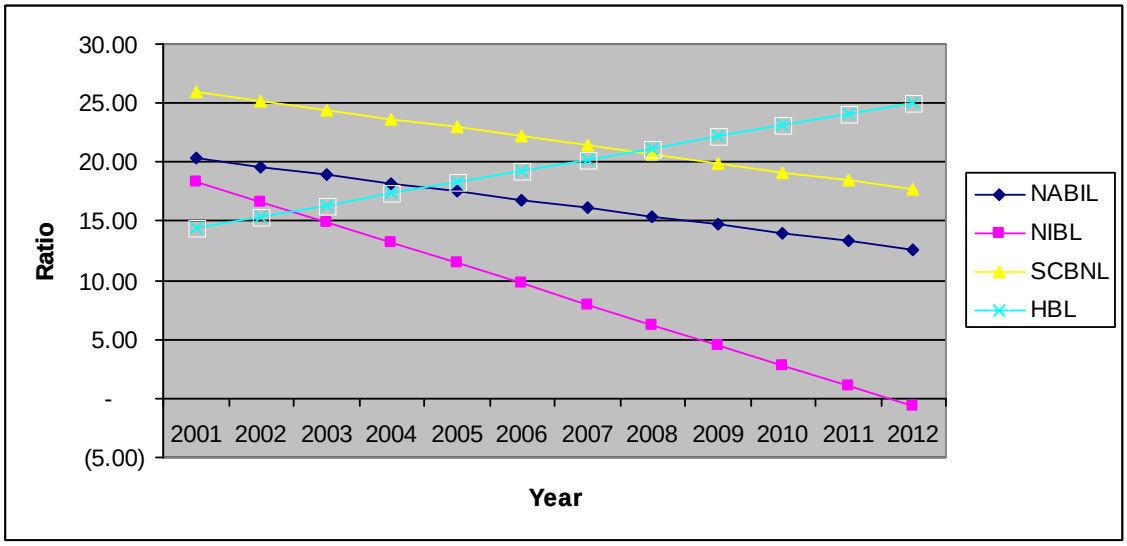
2002	19.61	16.63	25.20	15.42
2003	18.91	14.90	24.44	16.38
2004	18.21	13.17	23.69	17.35
2005	17.51	11.43	22.94	18.31
2006	16.81	9.70	22.18	19.28
2007	16.11	7.97	21.43	20.24
2008	15.41	6.24	20.68	21.21
2009	14.70	4.50	19.92	22.17
2010	14.00	2.77	19.17	23.14
2011	13.30	1.04	18.42	24.10
2012	12.60	(0.69)	17.66	25.07
Mean (a)	18.21	13.17	23.69	17.35
Rate of Change (b)	(0.70)	(1.73)	(0.75)	0.96
Trend equation (y)	18.21-0.70x	13.17-1.73x	23.69-0.75x	17.35+0.96x

Source: Appendix

From the above table, it can be seen that the trend value of current deposit to total deposit ratio of NABIL and SCBNL is decreasing slightly year after year. There is a rapid decreasing trend in NIBL.Whereas, the trend of HBL is increasing.

Trend line of current deposit to total deposit ratio of sampled banks are shown below.

Fig: 4.16



Source: Table: 4.16

4.3.4 Trend analysis of investment on government securities to total Deposit Ratio

Here under this topic, the trend analysis of investment on government securities to total deposit ratio of four banks is calculated under seven years study period. Following table represents the trend values of Investment on government securities to total deposit ratio of four banks for twelve years.

Table: 4.17

Comparative trend analysis of Investment on Government Securities to Total Deposit Ratio

Years	Banks			
	NABIL	NIBL	SCBNL	HBL
2001	24.19	6.06	35.34	13.02
2002				

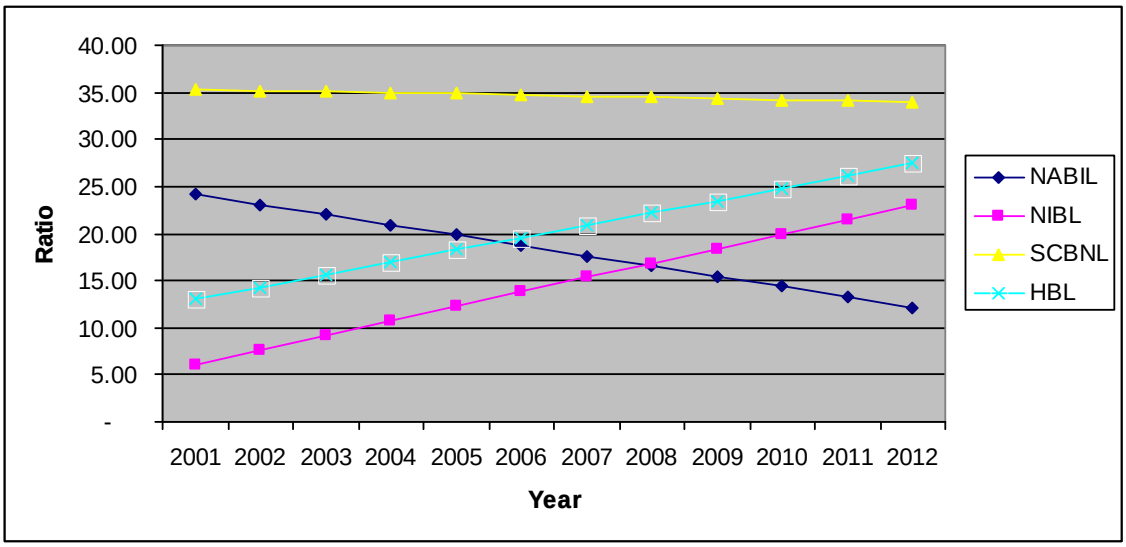
	23.10	7.61	35.22	14.33
2003	22.00	9.15	35.09	15.64
2004	20.91	10.70	34.96	16.95
2005	19.82	12.24	34.83	18.26
2006	18.73	13.79	34.71	19.57
2007	17.64	15.33	34.58	20.88
2008	16.55	16.88	34.45	22.19
2009	15.46	18.42	34.32	23.50
2010	14.36	19.97	34.20	24.81
2011	13.27	21.51	34.07	26.12
2012	12.18	23.06	33.94	27.43
Mean (a)	20.91	10.70	34.96	16.95
Rate of Change (b)	(1.09)	1.55	(0.13)	1.31
Trend equation (y)	20.91-1.09x	10.70+1.55x	34.96-0.13x	16.95+1.31x

Source: Appendix

From the table, it is clear that the trend value of investment on government securities to total deposit ratio of NABIL is in decreasing trend but it is increasing slowly year after year. The trend value of NIBL is increasing rapidly. In the year 2001 it is 6.06 whereas in the year 2012 the trend value is 23.06. Similarly, the trend value of investment on government securities to total deposit

ratio of HBL is increasing slowly year after year. Whereas, the trend value of SCBNL is in decreasing trend, but in a very slow pace.

Trend line of investment on government securities to total deposit ratio of sampled banks are shown below.



Source: Table

4.3.5 Trend analysis of Cash in Vault to Current Deposit Ratio

Here in this topic the trend value of cash in vault to current deposit ratio of four banks NABIL, NIBL, HBL & SCBNL is comparatively analyzed under seven years study period and projected the trend value for next five years.

Following table represents the trend values of cash in vault to current deposit ratio of four banks for twelve years.

Table: 4.18

Comparative Trend analysis of Cash in Vault to Current Deposit Ratio

Years	Banks			
	NABIL	**NIBL**	**SCBNL**	**HBL**
2001	1.52	1.38	1.03	1.68
2002	1.45	1.67	1.04	1.53

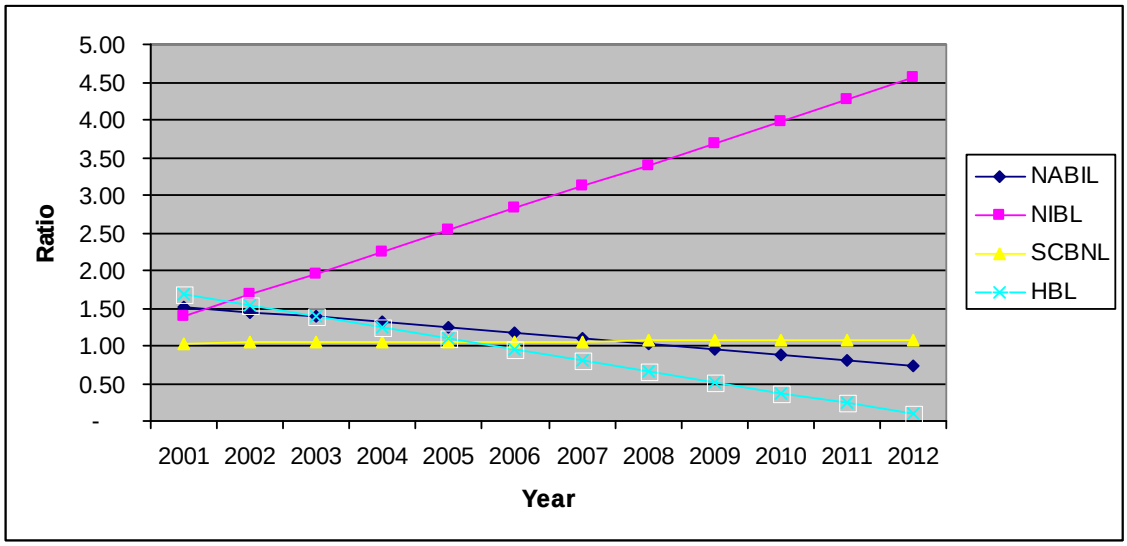
2003	1.38	1.96	1.04	1.39
2004	1.31	2.25	1.05	1.25
2005	1.23	2.54	1.05	1.10
2006	1.16	2.83	1.05	0.96
2007	1.09	3.11	1.06	0.81
2008	1.02	3.40	1.06	0.67
2009	0.94	3.69	1.07	0.52
2010	0.87	3.98	1.07	0.38
2011	0.80	4.27	1.08	0.23
2012	0.73	4.56	1.08	0.09
Mean (a)	1.31	2.25	1.05	1.25
Rate of Change (b)	(0.07)	0.29	0.00	(0.14)
Trend equation (y)	1.31-0.07x	2.25+0.29x	1.05+0.00x	1.25-0.14x

Source: Appendix

From the above table, it is clear that the trend value of cash in vault to total deposit ratio of NIBL is in increasing trend. Whereas the trend value of other two banks NABIL and HBL are in decreasing trend. The trend value of SCBNL is increasing slowly but the trend.

The following chart can make clearer about the trend line of cash in vault to total deposit ratio.

Fig: 4.18



Source: Table: 4.18

4.4 Statistical Analysis

Under this, some statistical tools such as Trend Analysis, Coefficient of correlation analysis are analyzed to achieve the objectives of the study. They are as follows.

4.4.1 Coefficient of Correlation analysis between Liquidity and Profitability

The theoretical relationship between these two variables should be adverse as higher liquidity implies lower profitability. Thus to show the relationship between these variables, Karl Pearson's coefficient of correlation (r) is determined. Also to test the significance of the calculated correlation coefficient the probable error (P.E) is also calculated and shown below.

The calculations are done from Statistical Tool of Microsoft Excel and fitted the table below.

Interpretation of Correlation Coefficient:

It always lies between +1 and –1.

When r = +1, there is perfect positive correlation.

When r = -1, there is perfect negative correlation.

When r = 0, there is no correlation.

When r lies between 0.7 to 0.999, (-0.7 to –0.999) there is a high degree of positive (or negative) correlation.

When r lies between 0.5 to 0.699, there is moderate degree of correlation.

When r is less than 0.5, there is a low degree of correlation.

Here, R = Correlation Coefficient.

P.E = Probable Error.

N = Number of Observations.

Probable Error:

If the value of ***r*** < P.E, there is no evidence of correlation, i.e., the value of ***r*** is not at all significant.

If r > 6 P.E, then ***r*** is highly significant.

In other cases, nothing can be concluded.

Table: 4.19

Coefficient of Correlation between Liquidity and Profitability

NABIL BANK LTD

Fiscal Yr	Liquidity (X)	Profitability (Y)	XY	X^2	Y^2
2001	19,170.10	291.40	5,586,167.14	367,492,734.01	84,913.96
2002	18,307.80	271.60	4,972,398.48	335,175,540.84	73,766.56
2003	17,980.70	416.20	7,483,567.34	323,305,572.49	173,222.44
2004	18,075.30	455.30	8,229,684.09	326,716,470.09	207,298.09
2005	16,032.00	518.60	8,314,195.20	257,025,024.00	268,945.96
2006	19,681.10	635.20	12,501,434.72	387,345,697.21	403,479.04
2007	24,978.90	673.90	16,833,280.71	623,945,445.21	454,141.21
	134,225.90	3,262.20	63,920,727.68	2,621,006,483.85	1,665,767.26

r = 0.52

From the above table, it is found that coefficient of correlatio

n between liquidity and profitability of Nabil Bank Ltd. is 0.52, which shows an moderate degree of relationship between these two variables. It can be concluded that there is a moderate degree of correlation between liquidity and profitability.

Table: 4.20

Coefficient of Correlation between Liquidity and Profitability

NEPAL INVESTMENT BANK LTD

Fiscal Yr	Liquidity (X)	Profitability (Y)	XY	X^2	Y^2
2001	5475	56.4	308,790.00	29,975,625.00	3,180.96
2002	5327.5	57.11	304,253.53	28,382,256.25	3,261.55
2003	7680.5	116.81	897,159.21	58,990,080.25	13,644.58
2004	11278.1	152.6	1,721,038.06	127,195,539.61	23,286.76
2005	13976.6	232.15	3,244,667.69	195,345,347.56	53,893.62
2006	18316.9	350.53	6,420,622.96	335,508,825.61	122,871.28
2007	24259.6	501.4	12,163,763.44	588,528,192.16	251,401.96
	86,314.20	1,467.00	25,060,294.88	1,363,925,866.44	471,540.71

r = 0.99

The data reveals the fact that coefficient of correlation between liquidity and profitability of Nepal Investment Bank Ltd. is 0.99, which shows a highly significant relationship between these two variables. It can be concluded that there is a very high degree of correlation between liquidity and profitability.

Table: 4.21

Coefficient of correlation between Liquidity & Profitability

Standard Chartered Bank Limited

Fiscal Yr	Liquidity (X)	Profitability (Y)	XY	X^2	Y^2
2001	21321.5	430.8	9,185,302.20	454,606,362.25	185,588.64
2002	16072.1	479.2	7,701,750.32	258,312,398.41	229,632.64
2003	18622	506.9	9,439,491.80	346,778,884.00	256,947.61
2004	20979.4	537.8	11,282,721.32	440,135,224.36	289,228.84
2005	19543	539.2	10,537,585.60	381,928,849.00	290,736.64
2006	21898.9	658.8	14,426,995.32	479,561,821.21	434,017.44
2007	22808.2	691.7	15,776,431.94	520,213,987.24	478,448.89
	141,245.10	3,844.40	78,350,278.50	2,881,537,526.47	2,164,600.70

r = 0.60

The calculated data reveals that coefficient of correlation between liquidity and profitability of Standard Chartered Bank Ltd. is 0.60, which shows a moderate degree of correlation between these two variables.

Table: 4.22

Coefficient of Correlation between Liquidity and Profitability

HIMALAYAN BANK LTD

Fiscal Yr	Liquidity (X)	Profitability (Y)	XY	X^2	Y^2
2001	20578	277	5,700,106.00	423,454,084.00	76,729.00
2002	21346.6	235	5,016,451.00	455,677,331.56	55,225.00
2003	24506.9	212.1	5,197,913.49	600,588,147.61	44,986.41
2004	26654.6	263.1	7,012,825.26	710,467,701.16	69,221.61
2005	27923.7	308.3	8,608,876.71	779,733,021.69	95,048.89
2006	24387.17	457.5	11,157,130.28	594,734,060.61	209,306.25
2007	28396.3	491.8	13,965,300.34	806,349,853.69	241,867.24
	173,793.27		56,658,603.08	4,371,004,200.32	792,384.40

		2,244.80			

r = 0.46

From the above table, it is found that coefficient of correlation between liquidity and profitability of Himalayan Bank Ltd. is 0.46, which shows an low degree of correlation between liquidity and profitability.

Table: 4.23

Correlation Coefficient of liquidity & Profitability of commercial Banks

Commercial Banks	r	P.E	6 P.E.	n	Remarks
Nabil Bank	0.52	0.18	1.80	7	Inconclusive
Nepal Investment Bank	0.99	0.01	0.06	7	Highly Significant
Standard Chartered Bank	0.60	0.16	0.96	7	Inconclusive
Himalayan Bank	0.46	0.20	1.20	7	Inconclusive

Coefficient of correlation (r) between total annual liquidity and annual profitability measures the degree of relationship between these two variables. As we know that there is an inverse relationship between the liquidity and profitability i.e., if liquidity increases, the profitability decreases and vice-versa. So, the basic purpose of computing coefficient of correlation between these two variables (i.e., liquidity and profitability) is to find out whether excess or less holding of liquidity affects the profitability or not.

From the above, it is found that coefficient of correlation between liquidity and profitability of Nabil Bank Ltd., Standard Chartered and Himalayan Bank, we found similar relationship except Nepal Investment Bank Ltd.

Here, Nepal Investment Bank is the only bank that has given due importance to the liquidity factor. That is why it is highly correlated i.e., 0.99 and is greater than 6 P.E, which shows the relationship between the total liquidity and profitability of Investment Bank Ltd. is highly

significant. Here the number of observations that we have considered is small so that might be the case of this result also. And we can see better results in the future when the number of observations will rise.

4.5 Analysis of Primary Data

4. 6 Empirical Findings of the Study

As per the nature of the data, the empirical findings of the study can be categorized into two parts and explained as follows:

4.6.1 Empirical Findings from the Primary Data Analysis.

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

a) Nepalese commercial banks are in over liquidity risk position and nearly average banks are being able to manage it properly.
b) Due to lack of investment opportunity, the liquidity position is in increasing trend and absence of proper liquidity risk management can be harmful.

c) Two types of factors affecting the liquidity risks are found. First are external factors like national security, political instability, income of depositors, foreign remittance and fear of possibility of loan defaulters in the Nepalese commercial banks. Second are internal factors like lending policy of banks, management capacity, strategic planning and funds flow situations.

d) NRB is monitoring the liquidity risk management in surface but not effectively, it is not implemented properly.

e) NRB's interventions are necessary to maintain effective liquidity management.

f) Most of the banks are investing their funds in government securities and term loan.

g) The main problems about liquidity management are:

- Low investment opportunity and high flow of remittance.
- Increasing number of loan defaulters and lack of strong law to minimize it.
- Lack of proper inspection and supervision of NRB and flexible management.
- Underdeveloped market for liquidity creating financial instrument and lack of manpower to risk analysis.

4.6.2 Empirical findings of the secondary data analysis.

During the study, all the secondary data has been analyzed by using financial as well as statistical tools. This topic focused on the major findings from the secondary data analysis, which are derived from the analysis of liquidity management of four commercial banks named NABIL, NIBL, SCBNL and HBL with comparatively applying seven years data from 2001 to 2007. The major findings of the study drawn from the analysis of secondary data of sampled banks are given below.

4.6.2.1 Findings from ratio Analysis

Current ratio measures the degree to which current assets cover current liabilities. A higher ratio indicates the greater assurance of ability to pay current liability. A low ratio indicates that the bank may not be able to meet short term obligation. The study has revealed that all the banks are capable of discharging current liability by current assets. NABIL is maintaining high current ratio than others.

Cash and bank balances to current deposit measures the liquidity risk arising from day to day operation. The ratio has ranged from 6.3 to 22.67 A cash and bank balance to current deposit ratio of NIBL is the highest among all other banks. During the study period, NABIL has come after NIBL for high liquidity position. As compare to other banks average ratio of SCBNL is too low i.e. only 6.30% that may arise a liquidity crisis to the bank.

Liquid funds to total deposit ratio measures the banks strength to meet uncertain outflow of deposits. The liquid fund to total deposit ratio of HBL is the highest among others and it is more liquid among others. It implies that the ratio of HBL is consistent as its s.d. is 12.87 and c.v. is 0.42. The ratio of SCBNL is in decreasing trend and the average ratio is 22.19%. It reveals that the capacity of SCBNL to meet immediate obligation is good. Similarly, the average ratio of NABIL is 27.97% and the value of C.V is 0.51 which shows the consistency of ratio during the study period. The ratio of liquid fund to total deposit of NIBL is quite lower as compared to others.

The short term investment to total deposit ratio of NABIL is fluctuating whereas other banks are in increasing trend, SCBNL is able to utilize 34.96% of total deposit. Likewise, NABIL, NIBL & HBL are utilizing 21.71%, 10.69% & 17.25% of total deposit in short term investment respectively. From the above analysis, we can say that SCBNL is in better liquidity position and NABIL & HBL are in moderate while NIBL is in poor position.

Current deposit to total deposit ratio of NABIL and NIBL is decreasing slightly year after year. Similarly the ratio has also decreased in case of SCBNL in the last four years. The current deposit to total deposit of SCBNL is the highest which means that SCBNL is efficiently collecting its deposits from current depositors. Whereas, the current deposit to total deposit ratio of HBL, NABIL & NIBL are in average. From the above liquidity risk is higher in SCBNL than the other three banks.

In case of NRB balance to total deposit ratio, NIBL and SCBNL are in better position than NABIL and HBL banks. It is a regulatory (NRB requirement of the banks to maintain such ratio at the minimum level and these revised from time to time. NRB takes actions on non compliance to such requirements, hence banks always should comply with such requirement. The ratio of SCBNL is stronger than the other banks which show better liquidity position.

The comparative analysis reveals that the investments on government securities of all the banks are in fluctuating trend. SCBNL has the highest ratio among others which reveals that it is secure

and non risky. The NABIL and HBL are in moderate and NIBL has invested lowest percentage of its total deposit in government securities.

In case of the ratio of cash in vault to total deposit, all the three banks except NIBL have this ratio less than 2% . The ratio of all the banks are in fluctuating trend and the ratios of each bank are nearly less than 2% (except NIBL which have 2.25%), which implies that the banks have maintained as possible as low level of cash in vault.

Cash reserve ratio (CRR) describes whether the commercial banks have met the liquidity requirement as prescribed by NRB or not. In 2003, NRB prescribed CRR rate as 6% of total deposit but it was revised in 2004 as 5% of total deposit. The average CRR of all three banks except NABIL is more than the standard set by NRB i.e. 5%. This shows that the three banks have tied up their funds in excess deposit in NRB. In average all the banks have met prescribed level of liquidity position.

Total investment to total deposit ratio measures the proportion of deposit that is used to increase the income of the banks in total deposit. SCBNL has deployed the highest proportion of its total deposits in earning activities and this ratio is significantly above than the ratio of other three banks. NIBL & HBL performance in investing activities has not increased proportionately as compare to the deposit increment.

Loans and advances to total deposits ratio has measured the proportion of total deposit that is used to generate income of the banks as loans and advances. NIBL has deployed the highest proportion of its total deposit as loans and advances. This indicates that NIBL is significantly better than others in fund mobilizing activities. However SCBNL have deployed least amount of its total deposit in loans and advances.

4.6.2.2 Findings from Trend Analysis

The trend of cash and bank balances of NABIL and HBL are in decreasing trend. Whereas the trend of this ratio of NIBL is increasing rapidly year after year. Thus the trend line of NIBL is heading upward rapidly and there is minor increment of this ratio in each year in case of SCBNL. Thus it is depicted that NIBL & SCBNL are more successful in maintaining liquid assets. Whereas the liquid position of NABIL & HBL is not good.

Liquid funds to total deposit ratio of all the banks are in decreasing trend. Most of the deposits of NABIL & HBL remained as liquid funds. Whereas, NIBL & SCBNL are reducing the liquid funds more rapidly.

The trend value of current deposit to total deposit of NABIL & NIBL is decreasing. Whereas, the trend value of SCBNL & HBL are in increasing trend. From this it can be depicted that the portion of current deposit is high in case of NABIL & NIBL and low in SCBNL & HBL.

The trend value of investment on government securities to Total deposit ratio is in increasing trend in all the banks except NABIL and SCBNL. In case of NABIL the trend value is decreasing moderately each year whereas the same is more stable in case of SCBNL over the review period. It can be seen that the greater portion of total deposit of SCBNL is invested on government securities in all the years. In average, SCBNL is the most efficient to invest on government securities as compared to other. Whereas, NABIL seems to be less efficient than other.

The trends of cash in vault to current deposit ratio of NIBL is increasing each year. However, the trends of other two banks are decreasing. Thus it is indicated that NIBL is in better liquidity position as compared to others.

4.6.2.3 Findings from the Correlation:

Correlation coefficient analysis between liquidity and profitability of commercial banks reveals the following findings:

The correlation coefficient between total liquidity and profitability of NABIL, SCBNL and HBL has positive relationship but gave us insignificant and inconclusive results. This results shows that these commercial banks have not paid attention much to the liquidity risk management.

Correlation of Nepal Investment Bank Ltd. is positive and highly significant and highly correlated. Data shows that NIBL has given due importance to liquidity factor.

Chapter- V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, Summary and Conclusion of the research as well as Recommendations are presented separately. After summarizing and concluding the research, recommendations are suggested for the effective liquidity management of Nepalese commercial banks. The researcher has tried to give suggestions and recommendations to the concerned groups; commercial banks, Nepal Rastra Bank, banking professionals, government and further researcher based on this research.

5.2 Summary

Management of liquidity is an important aspect of the financial management of every commercial bank. Liquidity management of a commercial bank basically deals with two conflicting goals namely liquidity and profitability. Liquidity is the banks ability to pay to depositors on demand. A bank must manage liquid assets efficiently as they are non-earning assets. Management of liquid assets minimizes the amount invested in cash assets without taking exercise risk. Liquidity need of a bank may be short-term cyclical and contingent. The real performance of a Commercial bank cannot be judged simply on the basis of profitability; there are other factors that directly or indirectly affect bank's performance and liquidity is one of the prime factors.

Basically the entire research work has focused on the comparative study on liquidity management of Nepalese commercial banks. For the study, four commercial banks (i.e., NABIL, NIBL, SCBNL and HBL) were taken as sample and analyzed their liquidity management practice by taking seven years secondary data from 2001 to 2007 as well as primary data. The objective of the study is to find out and analyze liquidity management practice in Nepalese commercial banks. To fulfill the main objectives, following specific objectives were formulated.

a) To assess the liquidity risk position of selected commercial banks.
b) To identify the factors affecting liquidity position and its management.
c) To examine the relationship between liquidity and profitability.
d) To evaluate the liquidity, turnover, profitability and risk position of selected commercial banks.
e) To provide suggestions and recommendations on the basis of major findings.

To fulfill the research objectives, the study is divided into five chapters.

In the first chapter, brief introduction of liquidity management, focus of the study, significance of the study, statement of problem, research objectives, brief introduction of the sample banks, limitation of the study and organization of study are included.

In the second chapter, theoretical review has been made. Different theories, policies, rules and regulations about liquidity management are reviewed. During the study, different books, journals, previous studies, websites, reports are viewed and visited to different professionals to know the liquidity management. During the literature review, it was found that there are a few researches that have been made on this topic.

Research design, population and sample and analysis tools are included in the third chapter. The data are collected from secondary and primary source for the study. The secondary data are colleted from annual papers of sample banks, SEBO/N, and Nepal Rastra Bank. The primary data and information are collected from the informal interview. After collecting the data from different source, it is analyzed by using financial and statistical tools and techniques.

An attempt has been made to fulfill the objectives of the research work in chapter four. In this chapter all the secondary as well as primary data are complied, processed and tabulated as per the necessary figures; diagrams are also used to present it clearly.

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

This study suffers from different limitations; it considers four banks for the sample of total commercial banks in Nepal. Time and resources are the constraints of the study. Therefore, the study may not be generalized in all cases and accuracy depends upon the data collected and provided by the organizations and respondents.

5.3 Conclusion

From the analysis of data, following conclusion has been drawn out.

- From the analysis of current ratio, all the four banks have same kind of ratios. NIBL and SCBNL have more current liabilities than current assets that mean the liquidity position is very poor compared to NABIL and HBL.
- By analyzing cash and bank balance to current deposit ratio, it is seen that the liquidity position of NIBL is strong, NABIL and HBL are moderate and SCBNL is poor, which may arise liquidity risk to the bank.
- From the analysis of liquid funds to total deposit ratio, it is found that HBL has the strong capacity to meet the short-term obligations. NABIL and SCBNL has moderate and NIBL has the low strength to meet the short-term obligations.
- Most of the Investment of SCBNL is made in short-term investment. So, SCBNL can convert its short-term investment into cash i.e., liquid fund to meet the requirements of payment. Thus, it is the most efficient to manage liquidity among other banks. NABIL and HBL have utilized their funds in moderate manner but NIBL is poor to do it.
- Due to the highest current deposit to total deposit ratio of SCBNL, most of its deposit comes from the current deposits and it is depicted the highest liquidity risk in SCBNL but other banks are in average.
- NRB has prescribed the standard CRR should be 5%, NIBL, HBL and SCBNL has effectively maintained the CRR above 5% but NABIL bank seems to be poor in managing the cash reserves.
- From the analysis of total investment to total deposit ratio, it can be conclude that SCBNL has deployed the highest proportion of its total deposits in earning activities. NABIL is moderate and NIBL and HBL have the low investment ratio compared to the total deposit.
- NIBL has utilized the highest proportion of its total deposits into loans and advances. This shows that NIBL is significantly better than others in fund mobilizing activities. But it may be risky from liquidity point of view. SCBNL has low ratio among others, which shows that a very low amount of total deposits are deployed into loans and advances.
- From the study of secondary data and primary data, it is found that most of the banks are increasing their fund to invest in government securities and term loan. Reserve balance and investment have inverse relationship. So, by the analysis, it is also found that, most of the banks are reducing their fund on reserve.

- From the trend analysis, it is found that liquid funds to total deposit ratio of all banks are in decreasing trend whereas investment in government securities to total deposit have increased. This means the banks are reducing the liquid funds to total deposits and increased the investment in government securities.
- From the coefficient of correlation analysis, it is found that NIBL is the only bank that has maintained its liquidity factor with profitability.
- Correlation between Liquidity and Profitability of NIBL is highly significant. NABIL, SCBNL and HBL have insignificant and inconclusive results regarding liquidity and profitability.

During the study, primary data were also used. For this purpose, personal meetings were done with respondents and the opinions obtained during the meetings have been incorporated in this research. From the analysis of primary data, following conclusions are drawn out:

- Nepalese commercial banks are in over liquidity position and it is in increasing trend also. Due to the lack of unfavorable investment opportunities in Nepal, liquidity management is being difficult and challenging. Liquidity risk management is influenced by the external factors like national security, political instability, income of depositors, foreign remittance and fear of possibility of loan defaulters and internal factors like lending policy of banks, management capacity, strategic planning and funds flow situation in Nepalese commercial banks.

- The policies and rules of liquidity risk management are adequate but not implemented properly.

- From the study it is found that the main problems of liquidity risk management are:
  - High flow of remittance but low investment opportunities.
  - Increasing numbers of loan defaulters and lack of strong law against it.
  - Lack of proper inspection and supervision of NRB and flexible management.
  - Underdeveloped market for liquidity creating financial instruments and lack of manpower to risk analysis.

- Following techniques are found to manage liquidity risk in existing practice:

- Managing liquidity by demand and supply theory.
- Maintaining proper risk management analysis.
- Matching principle of assets and liabilities.
- Preparing liquidity profile and GAP analysis in the maturity basis.

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

- Rules and regulations are the guidelines of things to do or not to do. So, its effects can be seen after the implementations. In order to manage the liquidity effectively, the existing regulation should be effectively put in practice.

5.4 Recommendations

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

To NABIL

The following points are recommended to NABIL.

- Balance with NRB to total deposit should be increased.

- Cash reserve ratio should be increased.
- Total investment to total deposit ratio should be increased.
- Since the correlation between liquidity and profitability is insignificant, proper attention should be paid to the liquidity risk management for better results.

To NIBL

The following points are recommended to NIBL.

- Cash and bank balance to current deposit is significantly higher than the competitor banks. Hence the same is suggested to get lowered.
- Liquid Fund to total deposit is significantly lower than other banks hence recommended to increase.
- Short-term investment to total deposit ratio should be increased as it has the lowest ratio among others.
- Balance with NRB to total deposit should be increased.
- Investment on Government Securities to Total Deposit Ratio may be improved.
- CRR is in increasing trend which may be reduced to match with NRB requirement.
- Total investment to total deposit ratio should be increased.
- Loans and advances to saving deposit should be reduced because higher ratio is not good from liquidity point of view.

To SCBNL

The following points are recommended to SCBNL.

- Cash and bank balance to current deposit ratio is significantly lower than the major competitor banks. Hence suggested to maintain a proper liquidity position.
- Bank balance with NRB to total deposit should be increased.
- Cash in vault to current deposit should be increased otherwise it may suffer from liquidity risk.
- Portion of Current deposit is higher than other banks which reduces the cost of fund however the bank may fall in to liquidity risk and the bank should attempt to increase other deposits (term deposit) rather than current deposit.

- Investment on Government Securities to Total Deposit Ratio is significantly higher. Hence the same may be reduced to maintain proper liquidity position.
- Loans and advances to total deposit should be increased.
- Loans and advances to saving deposit should also be increased subsequently.
- Since the correlation between liquidity and profitability is inconclusive, proper attention should be made for better management of liquidity risk.

To HBL

The following points are recommended to SCBNL.

- Balance with NRB to total deposit ratio should be increased.
- Short term Investment to Total Deposit should be increased.
- Total investment to total deposit ratio should be increased.
- Over liquidity position should be reduced by managing maturity mismatch. Investing in consumer finance and searching other reliable investment areas can manage it.
- Correlation coefficient between liquidity and profitability is shown inconclusive here so, proper attention should be made to liquidity factor for effective results.

- Over liquidity position should be reduced by managing maturity mismatch. Investing in consumer finance and searching other reliable investment areas can manage it.
- Correlation coefficient between liquidity and profitability is shown inconclusive here so, proper attention should be made to liquidity factor for effective results.

All commercial Banks

Based on the findings of the research, following points are suggested to all the commercial banks.

- Liquidity position is in increasing trend. It may turn into the cause of inflation, low profitability and inefficiency of Nepalese commercial banks. So, to overcome from these problems, new

investment opportunities should be searched. Home loan, education loan, development loan, consortium financing, loan to foreign employment, loan to research work and over night loan etc. shall be the examples of new opportunities.

- An effort should be made on human resource development on the risk analysis management and liquidity risk management.

- An effort should made on the development of market for the liquidity generating assets like Treasury bills, Options and Bank Call deposits etc.

- Satisfied employees are the backbone of the banks. So, necessary steps should be forwarded to develop satisfied and obedient employees, which may reduce the problems of bank defaulters and corruptions.

To NRB

NRB is the regulatory body of all commercial banks. Rules and regulations are made and implemented by the central bank to commercial banks. So, as a central bank NRB is suggested the following points:

- Regular monitoring and evaluation should be made for the effective liquidity risk management.

- As a central bank, NRB has a duty to regulate the commercial banks. So, those commercial banks that do not send the data in time should be made alert; the received data should be analyzed and stored for future reference.

- It is very difficult to collect the necessary data by going bank to bank and the related banks also feel a burden to response the research student. So, NRB should play a role of data bank. Arrangement should also be made for such students to obtain copy of annual reports of financial institutions comprising their financials, future plans etc. from a single point.

To the Government

Government is the responsible body of nation. National economy is influenced by the policies, rules, regulations and other activities of the government. Based on the research, it is found that government is also connected to liquidity risk management procedure. So, as the responsible body of the nation, following points is suggested to government:

- Liquidity management and other financial activities are affected by national security. So, national security should be ensured by the table talk and collective bargaining process.

- Political stability should be made in the country.

- Strong law should be made and effectively implemented against loan defaulters.

- Most of the loan defaulters are high-class people, top-level businessmen and leaders. They may influence the commercial bank by force. So, strong law should be made and took into action immediately against them.

To the Professionals

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

- Professional bankers should be more dedicated to the profession and should apply banking tools more effectively.
- Theoretical and practical knowledge should be tied up by implementation on the banking operation.
- Refreshment training should be taken for the knowledge enhancement on risk analysis and liquidity management.
- Brain storming and group discussion programmes should be made to search further investment opportunities.

To Other Researchers

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

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