CHAPTER I
INTRODUCTION

1.1 Background of the Study

Nepal is one of the least developed countries of the world. Poverty has stood as a serious challenge to the country. The country is unable to fulfill the national requirement of people. In such context, it is realized that without industrial development, it is impossible to have social and economic development. So for industrial and economic development, banks play the vital role.

Banks play a significant role in the development of a country. Bank is a financial institution, which maintains the self-confidence of various segments of society and extends credit to the people. The financial institution is an indispensable part for the upliftment of a country. The financial institution is a vast field comprising of banks, financial companies, insurance companies, co-operatives, stock exchange and foreign exchange markets, mutual fund, etc. These institutions collect idle and scattered money from the general public and finally invest in different enterprises that consequently help in reducing poverty, increase in life style of people, increase employment opportunities, and thereby developing society and the country as a whole. Thus, today the financial institutions have become the base for measuring the level of economic development of a country.

For these purposes, commercial banks collect deposits from savers group by promising a certain percentage of interest. Out of the all collected fund they provide loan to investors, consumers and borrowers at a certain percentage of interest. Interest is the cost of fund. Difference between the interest on lending and borrowing of fund is the profit of bank. It is the major source of income of all the 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 principal 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 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 of reserves to other banks through the funds deposited at the central bank. Far more important, in rupee volume, however, are the 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 the 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. The Nepal Rastra Bank (NRB) directs the rules and regulations about the liquidity position and its management criterion, which is the regulatory body of all commercial banks and other financial institutions.

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 or default risk to the uncertainty is associated with loan repayment. Because most of a bank earning assets 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 examiner 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.

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 spendable funds at reasonable cost of precisely the time those funds are needed. This suggests that a liquid bank either has the right amount of immediately spendable funds on hand when they are required or can quickly raise liquid funds by borrowing or by selling assets (Ross, 2001:345).

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 limit any time they are needed. Therefore, they see little need to store liquidity in the form of easily marketed, stable-price assets.

1.1.1 Commercial Banks in Nepal

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 time by the customers to the extent of the amounts available in their current accounts.

Oxford Advanced Learners' Dictionary of Current English defines that bank is an establishment for keeping money and values safely, the money being paid out on the customer's order by means of cheques.

Similarly a definition is given in Encyclopedia, the World Book, America "A bank is a business organization that receives and holds deposits of funds from others and makes loans or extends credit and transfers funds by written orders of deposits”.

Commercial bank is defined in the Commercial Bank Act, 203l, as, "A commercial bank means bank which deals in exchanging currency, accepting deposits, giving

loans and doing commercial transaction" (Commercial Bank Act, 2031).

Thus a bank means financial institution established for the transaction of money. It deals from public and lends money to the borrowers as a loan. It creates credit and exchanges the foreign currency. It is established to fulfill certain objectives such as to facilitate public economic interest, to advance loans for the development of agriculture, industries and trade and to provide banking services to the public.

Commercial banks are very important for the development of national economy. They accept public saving as deposits 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 1990A.D. The first commercial bank is Nepal Bank limited that was established in 30 Kartik 1994 B.S (1937 A.D.). And the second is RBB established in 10/l0/2022 B.S. After a long period of establishment of these two banks, NABIL Bank is the first commercial bank from the private sector establish in 2041 B.S. Then NIBL, SCBNL, HBL etc. There after many other Commercial bank and non commercial banks were set up under the Commercial Bank Act, 2063 and Company Act, 2053. By the end of May 2010, there are 31st commercial banks (Registered in NRB) in Nepal which are listed below.

If the newly opened bank is commercial bank with foreign bank or financial institution; it is permitted to open new commercial banks with head office at Kathmandu valley contracting three years management with 67% investment of foreign such institution, the ratio of ownership of share will be 7:3 between founder and public respectively (Nepal Rastra Bank, 2059:7).

Table 1.1

Commercial Banks in Nepal

S.N.	Name of Bank	Established Date A.D.
1	Nepal Bank Limited	1937
2	Rastriya Banijya Bank	1966
3	Nabil Bank Limited	1984
4	Nepal Investment Bank Limited	1986
5	Standard Chartered Bank Limited	1987
6	Himalayan Bank Limited	1993
7	Nepal SBI Bank Limited	1993
8	Nepal Bangladesh Bank Limited	1993
9	Everest Bank Limited	1994
10	Bank of Kathmandu Limited	1995
11	Nepal Credit and Commerce Bank Limited	1996
12	Lumbini Bank Limited	1998
13	Machapuchhre Bank Limited	2000
14	Kumari Bank Limited	2001
15	Laxmi Bank Limited	2002
16	Siddhartha Bank Limited	2002
17	Agricultural Development Bank Limited	2006
18	Global Bank Limited	2007
19	Citizens Bank International Limited	2007
20	Prime Bank Limited	2007
21	Sunrise Bank Limited	2007
22	Development Credit Bank Ltd.	2001
23	NMB Bank Ltd.	1996
24	Kist Bank Ltd.	2003
25	Janata Bank Ltd.	2010
26	Mega Bank Ltd.	2010
27	Commerz and Trust Bank Ltd	2010
28	Civil Bank Ltd	2010
29	Century bank ltd	2010
30	Sanima Bank Ltd.	2012
31	NIC ASIA Bank Ltd.	2013

Source: ***www. Nrb.org.np***

Commercial banks 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 deposits
b) To provide loans and advances
c) To create credits
d) To perform agency functions
e) To carry out utility functions.

The commercial bank and banker has its own right and duties. The rights are mentioned point-wise as follows (Bashudevan; 1976:513).

- Banker enjoys a general lien over customer's securities in his possession.
- He has an implied right to change a reasonable commission for his service and interest upon loans.
- He has the right of set-off like any other debtors.

He has the right to appropriate payment as per the rules laid down in Clayton's case. 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 (Bashudevan; 1976:513).

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

1.1.2. Profile of the Sample Banks

A. Introduction of Nabil Bank Limited

Nabil Bank Limited, the first foreign joint venture commercial bank of Nepal, started operations in July, 1984. It was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, the bank provides a full range of commercial banking services

through its 27 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. Nabil Bank Ltd, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. To achieve this mission, it has a core set of values by which we live. The values are C.R.I.S.P., i.e. Customer Focused, Result Oriented, Innovative, Synergistic and Professional. They are committed to live our values everyday in everything we do, for it is, these values that make us uniquely NABIL Bank Limited.

The bank is a full services bank providing an entire range of products and services, starting with deposit accounts in local and foreign currency, Visa and Master-Card denominated in rupees and dollars, Visa Electron Debit Cards, Personal Lending Products for Auto, Home and Personal loans, Trade Finance Products, Treasury Services and Corporate Financing. Main aim is to be able to meet customer's entire gamut of financial requirements that is why it prides us in being 'Your Bank at Your Service'

Table: 1.2

Capital Structure of Nabil Bank Limited

Capital as at 2011/12	Amount in Rs. '000'
Authorized Capital	2028773.6
Issued Capital	1448620.5
Paid up Capital	1448620.5

B. Introduction of Everest Bank Limited

Everest Bank Limited (EBL) started its operation in 1994 with a view and objectives of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer friendly services through a network of 32 branches. Punjab National Bank (PNB) is the joint venture partner (holding 20% equity in the bank).

Recognizing the value of offerings a complete range of services, we have pioneered in extending various customer service. EBL was one of the first banks to introduce Any

Branch Banking System (ABBS) in Nepal. EBL has introduced Mobile Vehicle Banking system to serve the segment deprived of proper banking facilities through its Birtamod Branch, which is the first of its kind. Everest Bank is first private commercial bank having largest network. This is one of the lowest NPA among the commercial bank in Nepal. The local Nepalese Promoters hold 50% stake in the Banks equity, while 20% of equity is contributed by joint venture partner PNB whereas remaining 30% is held by the public.

Table: 1.3

Capital Structure of Everest Bank Limited

Capital as at 2011/12	Amount in Rs. '000'
Authorized Capital	20,00,000
Issued Capital	1279607.49
Paid up Capital	1279607.49

C. Nepal SBI Bank Limited (NSBIL)

Nepal SBI Bank Limited was incorporated in 1993 A.D. and operation of the bank was started on July 1993 as a foreign Commercial bank which is managed by the foreign Partner State Bank of India with holding the 50% of equity share under the Commercial bank and technical services agreement assigned between it and Nepalese promoters. SBI Bank was listed in NEPSE on 17/01/1995 A.D. The bank provides loans to agriculture, commerce and industrial sectors. As mentioned in the NEPSE annual report, the main objective of this bank is to carry out the modern banking business in the country under the commercial bank act 1974. Authorized capital, paid up capital, issued capital, par value of shares and number of shareholders of SBI are as follows:

Table: 1.4

Capital Structure of Nepal SBI Bank Limited

Capital as at 2011/12	Amount in Rs. '000'
Authorized Capital	20,00,000
Issued Capital	1861324.239
Paid up Capital	1861324.239

1.2 Focus of the Study

Trading on money is very risky and challenging. In one hand, commercial bank should keep plenty of liquid funds to fulfill their customer's demand and in other hand; there will be equal chance of being idle of the liquid fund. So it is a very important thing to manage liquidity with balancing demand and supply. The main focus of the study is comparative analysis of managing liquidity in Joint venture banks by taking 3 sample banks out of 31.

This study also attempts to analyze the methods of liquidity management in various commercial banks in existing practice and new methodologies in this technical era. This study also concentrated on whether the theories on liquidity management founded by varies economist and bankers match in Nepalese context or not. After the 1995, there was a rumor that the Nepalese banks are full of high liquidity and they are not being able to manage it. Thus this study will also focus to analyze whether it is true or allegedly aired. Thus, how the liquid assets influenced and what is the real solution can be suggested will be the focus point of this study.

1.3 Statement of the Problem

The 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. It seems to be not only general public but also university graduate in commerce and economics cannot calculate the

effect of liquid fund in the economy and various banks are suffering from this problem. More especially 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 affected by the social and economic factors?
- Do the liquidity increases in lack of secured investment opportunities?
- Is there any necessity to reform in regulations?
- How to make optimal management of liquidity in commercial banks?

1.4 Objectives of the Study

Holding liquid assets and utilizing in proper investment project is one of major decision functions of commercial banks and other financial institutions. Hence, the main objective of this study is to examine and analyze liquidity position and its management in Joint venture banks. To fulfill this main objective following specific objectives have been formulated:

- To examine the liquidity policy of sample banks.
- To analyze the liquidity position and management of liquidity of sample banks.
- To examine the relative relation and trend of liquidity of NABIL, EBL and NSBI banks in terms of different kinds of ratios.
- To analyze relation and trend
- To provide suggestions and recommendations base on finding of the study.

1.5 Hypothesis Test

In this study, hypothesis test has been used as one of the important aspects of decision-making. Following hypothesis are tested in this study

a. Total deposit and Loan and advance
b. Net profit and Total deposit

1.6 Significance of the Study

Commercial banks are always guided by the objective of profitability. All financial decisions of commercial banks are for the betterment of shareholders' wealth. There should be an effective system of funds allocation in order to safeguard the banks from the danger of liquidity. An appropriate level must be achieved between them. The study ponders to find out whether commercial banks are alert or not in this regard and possible situations where the banks need additional liquid funds.

A few studies have been made on the 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, but the research have yet been made on the core perspective of the liquidity and its management. So the present study will be of substantial importance for 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 to reduce dependency on foreign assistance and loan.
This study will help regulatory authority to find out liquidity management of the commercial bank. It will be a reference to the concerned personnel and researchers. This study will also show and suggest the available investment opportunities satisfying both objectives (liquidity and profitability) of commercial banks.

1.7 Limitations of the Study

As the study is being carried out in a partial fulfillment of the requirements for the degree of Master of Business Studies, it possesses a number of limitations of its own kind. Some of the basic limitations of the study could be illustrated as follows:

a) Simple statistical techniques followed by financial models have been used in the analysis.
b) Absence of required data concerned with commercial banks limits to detail study.
c) Due to the small sample size it may not fully represent Nepal as a whole.

d) The study has covered only the recent five years data.
e) The study lacks in time and other resources as well.
f) The study is mainly based on the published secondary data so the analysis of the study depends on reliability of the data provided.

1.8 Organization of the Study

The present study is organized in such way that the stated objectives can easily be fulfilled. The structure of the study will try to analyze the study in a systematic way. The study report has presented the systematic presentation and finding of the study. The study report is designed in five chapters which are as follows

Chapter-I: Introduction

This chapter describes the basic concept and background of the study. It has served orientation for readers to know about the basic information of the research area, focus of the study, problems of the study, objectives of the study and need or significance of the study and limitation of the study. It is oriented for readers for reporting giving them the perspective they need to understand the detailed information about coming chapter.

Chapter-II: Review of literature

The second chapter of the study assures readers that they are familiar with important research that has been carried out in similar areas. It also establishes that the study as a link in a chain of research that is developing and emerging knowledge about concerned field.

Chapter-III: Research Methodology

Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. It describes about the various source of data related with study and various tools and techniques

employed for presenting the data.

Chapter-IV: Presentation and Analysis of data

This chapter analysis the data related with study and presents the finding of the study and also comments briefly on them.

Chapter-V: Summary, Conclusion and Recommendation

On the basis of the results from data analysis, the researcher concluded about the performance of the concerned organization for better improvement.
Bibliography, appendix and other supporting documents have also been incorporated at the end of the study

The list of bibliography and appendixes are given at the last for references.

CHAPTER II
REVIEW OF LITERATURE

Review of literature means reviewing research studies or other relevant proposition in the related area of the study so that all the past and previous studies, their conclusion and perspective of deficiency may be known and further researcher can be conducted or done. It is an integral mandatory process in research works. It is a crucial part of all dissertations. In other words it's just like fact are finding based on sound theoretical framework oriented towards discovery of relationship guided by experience, resonating and empirical investigation.

We study the review of literature in dividing two headings:

Conceptual Review

Review of related Studies

2.1 Conceptual Review

Liquidity is defined as bank's capacity to pay cash in exchange of deposits. Liquidity and Profitability are interlinked with each other in banking business. Inadequate liquidity may lead to collapse of the bank while excess liquidity is detrimental bank's profitability. In order to remove demerits associated with maintaining inadequate and excess liquidity, banks should maintain optimum level of liquidity ratio. Banks has to keep liquidity according to the directives and guidelines of Nepal Rastra Bank (NRB Act; 2058).

Liquidity is an important financial tools for the banks. Liquidity ratio measurement is an important tool to measure the financial performance of the firms. Bank has keep certain amount of deposits as liquidity for payment of deposits at call time. If the bank keep by liquidity is meant the readiness with which the bank can convert the assets into cash. Liquidity means short-term solvency of the borrower. A banker is essentially the lender of short-term funds because he knows that the bulk of his deposits are repayable on demand or at short notice. As the banker's deposits are subject to the legal obligation of being repayable on demand and at short notice, he must ensure liquidity also while lending, so that in times of need, he will be able to convert the assets into cash.

2.1.1 Meaning of Liquidity

Liquidity means allocation of funds in close relation to their respective source. Liquidity is the status and parts 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 (Bhandari; 2004: 143).

The amount of liquidity that a commercial bank or the 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, mad be fatal 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 do not mix well (Reed; 2002: 115).

Liquidity means a matter of maintaining what the bank has promised to pay the depositors - cash. In the banking system primary reserves are known as legal reserve and working reserves. The term is economic rather than accounting concept. Legal reserves are the requirement of monetary authority. Bank management, student of banking studies and monetary authority are referring the other names for primary reserve to designate certain ideas and concept regarding banks' assets. Primary reserves include non earning assets such as cash in vault, the deposits carried out by banks with correspondent banks and central bank, and cash items. The cash items represent cheques held on in process of collection by the banks. The objective of primary reserves in banking system is maintaining liquidity and solvency (Reed; 2002: 431-448).

Liquidity denotes the money in use, in the current account, saving account, fixed account and the money in margin account of the economics system, But, definition is not made by the Nepal Rastra Bank Act 2058/2002, the Commercial Bank and Financial Act 2063. But the definition about what "liquid assets" means is found in the acts. Liquid assets means, the cash balances of the bank, the balance held by a

bank in the Nepal Rastra Bank and liquidity appeared in economy (NRB Act; 2058). The commercial banks or financial institutions should keep the stock of liquid asset according to the ratio of liability of deposit fixed by the bank. Section 25 of the Finance Company Act, 2042 (1985), reads as follows for the purpose of this section the term liquid assets means the assets mentioned as follows:

1. Nepalese bank notes and currencies deposited in the co.
2. Deposits of the company in the bank or any other commercial banks.
3. Bonds of his Majesty's Government.
4. Any other assets as specified by the bank from time to time.

For the first time, the NRB has implemented the monetary Policy by issuing the rules of credit control in 31st Shrawan 2031 B. S. (1974). This rule has defined the liquid asset of the commercial banks. It had regarded liquid asset at the cash stock of the commercial banks, short-term security and short bills. It is clear from it that the liquid assets mean the cash and the assets, which can be converted immediately in the time of need.

2.1.2 Importance of Liquidity

The following statements capture the importance and interactions of liquidity and confidence. Liquidity always comes first: without it a bank doesn't open its doors: with it, a bank may have time to solve its basic problems (Howard; 1983: 275).

A bank can't be run without liquidity. The Nepal Rastra Bank from time to time changes the legal provision about the liquidity. The compulsion that the commercial banks 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 the liquidity is considered very sensitive because if it cannot maintain the liquidity, it has to pay fine. The commercial banks financial institutions 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 importance of liquidity is briefly described in point wise as follows: (Bhandari; 2004: 146).

a) To Meet the Expenses for the Bank's Daily Administrative Work

A bank is a legal person. It can't run without, cash stock. The transaction of bank is related to the money. Many types of expense go on taking place in the bank daily. With the lack of expenses, it is nearly impossible for the bank to do its transaction. So the liquidity is necessary for daily expenses that it is spent in an administrative function. The administrative expenditure can't be fulfilled without liquidity. Hence Liquidity is importance for the banks.

b) To pay all Sorts of Deposit

A bank opens the current, saving and fixed account for its customer's and accepts the deposit from the customers. According to the nature of the deposit, the banks should pay in the time when the customers ask. The liquidity needs for it. It can't pay the deposit without liquidity. That is why liquidity is necessary for the payment of all types of deposits.

c) To Maintain Liquidity to Meet the Cash Fund Ratio and Legal Liquidity Ratio

The commercial banks should keep 3% cash as a treasury account in their own account in the banks from the liability of the total deposit and likewise by opening an account in the Nepal Rastra Bank, 7% of the liability of current and saving accounts and 4.5% of the fixed accounts should keep in the Nepal Rastra Banks' account in their own name. In addition to it, there are some small funds in the bank. There, is an addition to it. There are some small funds in the bank. There, is an obligation on a bank to keep cash (money) in such fund. Therefore, to fulfill, all these demands or to keep (maintain) the balance, liquidity is necessary.

d) To Control the Economic Fluctuation and to Keep Safe from the Risk

It can't be said, there will be the same situations of transactions in the bank and the bank will always remain in balanced condition. There will be effect of internal and external circumstances in the nation. Such conditions may have effect on economic sector. The commercial banks too can't remain safe from the effect of economic

sector. There is necessity of liquidity to keep the bank free from such economic rise and fall or economic crisis. The bank should maintain some liquidity of some certain percent cash fund to keep safe from such situations.

e) To Fulfill the Demand of the Debtor

A bank provides loan to 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 obliged to give the loan is granted, the bank is obliged to give the loan to the debtor. Therefore, there is necessity of liquidity in bank to provide fresh loan to the debtors.

f) To Gain Trust or Faith

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

g) Providing Security to the Banks

A bank is a sensitive institution because it is an institution of banking transaction. Hence, the deposits are deposited in different types of account of common people, industrialists and businessmen. Apart from it, 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. Such institutions can be saved from the various risks at any situation. Hence, to provide all kinds of security to the bank, the liquidity is necessary.

2.1.3 Principles or Theories of Liquidity Management

There are apparent conflicts between objectives of liquidity, safety and profitability relating to a commercial bank. Economists have tried to resolve these conflicts by

laying down certain theories from time to time. These principles or theories, in fact, govern the distribution of assets keeping in view these objectives. They have also come to be known as the theories of liquidity management which are discussed as under:

2.1.3.1 Commercial Loan Theory or Real Bills Doctrine

This theory is evolved in early 1920s (Sinkey, 1983: 240). The real bills doctrine states that a commercial bank should advance only short-term self-liquidating productive loans to business firms. Self-liquidating loans are those, which are meant to finance the production, storage, transpiration, and distribution. When such goods are ultimately sold, the loans are considered to liquidate themselves automatically (Sinkey, 1983: 240). Such short-term self-liquidating productive loan passes three advantages. First, they posses liquidity that is why, they liquidate themselves automatically. Second, since they mature in the short run and are for productive purposes, there is no risk of their running into bad debts. Third, being productive such loans earn income for the banks.

2.1.3.2 Asset Conversion or the Shiftability Theory

This theory is developed in second half of 1940s. H.G. Moulton, who asserted that if the commercial banks maintain a substantial amount of assets that can be shifted on to the other banks for cash without material loss in case of necessity, then there is no need to rely on maturities, propounded the shiftability theory of bank liquidity. According to this view, an asset to be perfectly shiftable must be immediately transferable without capital loss when the need for is immediately transferable without capital loss when the needs for liquidity arise. But in a general crisis requires that all banks should possess such assets, which can be shifted on the central bank, which is the lender of the last resort. This theory has certain elements of truth (Bhandari; 2004: 148).

But it has its weakness. First, mere shiftability of assets does not provide liquidity to the banking system. It entirely depends upon the economic circumstances. Second, the shiftability theory ignores the fact that in times of acute depression, the shares and

debentures can't be shifted on to others by the bank. In such a situation, there are not buyers and all who possess them want to sell them. Third, a single bank may have shiftable assets in sufficient quantities but if it tries to sell them when there is a run on the bank, it may adversely affect the entire banking system. Fourth, if all the banks simultaneously start shifting their assets, it would have disastrous effect son both the lenders and borrowers (Bhandari; 2004: 148).

2.1.3.3 The Anticipated Income Theory

The anticipated income theory developed by H.V. Proch in 1950 on the basis of the practice of extending term loans by the USA commercial banks. According to this theory, regardless of the nature and character of a borrower's business, the bank plans the liquidation of the long-term loan from the anticipated income of the borrower. A term loan is for a period exceeding one year and extending to less than five years. It is granted against the hypothecation of machinery, stock and even immovable property. The bank puts restrictions on the financial activities of the borrower while granting this loan. At the time of granting a loan, the bank takes into consideration not only the security but the anticipated earnings of the borrower. In fact, the anticipated income is the main consideration (Bhandari; 2004: 149).

This theory is superior to the real bills doctrine and the shiftabilitv theory because, it fulfills the three objectives of liquidity, safety and profitability. Liquidity is assured to the bank when the borrower saves and repays the loan regularly in installments. It satisfies the safety principle because the bank grants a loan not only on the basis of a good security but also on the ability of the borrower to term-loan and is assured of a regular income. Lastly, the term-loan is highly beneficial for the business (Bhandari; 2004: 149).

2.1.3.4 The Liabilities Management Theory

This theory was developed in late 1960s and early 197Os, According to this theory, there is no need for banks to grant self-liquidating loans and keep liquid assets because they can borrow reserve money in the money market in case of need. A bank can acquire reserves by creating additional liabilities against it, form different sources.

These sources include the issuing of time certificates of deposit, borrowing form other commercial banks borrowing from the central bank, raising of capital funds by issuing shares, and by ploughing back of profits (Sinkey; 1983: 240).

i) Time Certificates of Deposits:

Time certificates of deposits are negotiable in the money market. So a bank can have access to liquidity by selling them in the money market. But there are two limitations. First, if during a boom, the interest rate structure in the money market is higher than the selling rate set by the central bank, time deposit certificates can't be sold in the market. Second, they are not dependable source of funds for the commercial banks. Bigger commercial banks are at an advantage in selling these certificates because they have larger certificates, which they can afford to sell at even low interest rate.

ii) Borrowing from Other Commercial Banks:

A bank may create additional liabilities by borrowing from other banks having excess reserves. But such borrowings from banks having excess reserves are only for a very short duration, for a day or week at the most. The interest rate of such borrowings depends upon the prevailing rate in the money market. But borrowings form other banks are only possible during normal economic conditions.

iii) Borrowing from the Central Bank:

Banks also create liabilities on themselves by borrowing form the central bank of the country. They borrow to meet their liquidity needs for short term and by discounting bills form the central bank. But such borrowings are relatively costlier than borrowing form other sources,

iv) Raising Capital Funds:

Commercial banks acquire funds by issuing debentures. But the availability of funds through this source depends on the amount of dividend or interest rate, which the bank is prepared to pay. Usually the banks are not in a position to pay rate higher than

paid by manufacturing and trading companies. So they are not able to get sufficient funds form this sources.

v) Ploughing Back of Profit:

Another source of liquid funds for a commercial bank is the ploughing back of its profits. But how much it can get from this source will depend upon its rate of profit and dividend policy. It is larger banks that can depend on this source rather than the smaller banks.

2.1.4 The Demand for and Supply of Bank Liquidity

A bank need for liquidity-immediate spendable funds-can be viewed within a demand supply framework. What activities give rise to the demand for liquidity inside a bank and what source can the bank rely upon to supply liquidity when spendable funds are needed are to be considered sincerely. For most banks, the most pressing demands for spendable funds come from two sources:
(1) customers withdrawing money from their deposits, and (2) credit requests from customers the banks wishes to keep, either in the form of new loan requests, renewals of expiring loan agreements, or drawings upon existing credit lines. Other sources of liquidity demand include paying off obligations arising from bank borrowings, such as loans the bank may have received from other banks or from the central bank (i.e., the Federal Reserve, Central Bank). Similarly, payment of income taxes or cash dividends to the bank's stockholders periodically gives rise to a demand for immediately spendable cash. Following table shows more clearly (Ross; 2002: 347).

Table: 2.1

Source of Demand and Supply for Liquidity within the Banks

Supplies of liquid funds come from:	**Demand for bank liquidity arise from:**
Incoming customer deposits	Customer deposit withdrawals
Revenues form the sales of non deposit services	Credit request from quality loan customers
Customer loan repayments	Repayment of non deposit borrowings
Sales of bank assets	Operating expenses and taxes incurred in producing and selling services
Borrowing from the money market	Payment of stockholder cash dividends

Source: Peter Ross (2002), commercial Bank Management, McGraw Hill Book Company, New York, p. 347

To meet the foregoing demands for liquidity, banks can draw upon several potential sources of supply. The most important source normally is receipt of new customer deposits, both from newly opened accounts and form new deposits placed in existing accounts. These deposit inflows are heavy the first of each month as business payrolls are dispensed, and they may reach a secondary peak toward the middle of each month as bills are paid and other payrolls are met. Another important element in the supply of bank liquidity comes from customers repaying their loans, which provides fresh funds for meeting new liquidity needs, especially marketable securities, from the bank's investment portfolio. Liquidity also flows in from revenues generated by selling non-deposit services and from borrowings in the money market.

These various sources of liquidity demand and supply come together to determine each bank's net liquidity position at any moment in time. That net liquidity position at time’t’ is as follows.

Table: 2.2

Net Liquidity Position Calculation Table

A. Supplies of Liquidity Flowing into the Bank:	
Income deposit (inflow)	
+ The sales of non deposit services	……..
+ Revenues from the sale of non deposit services	……
+ Customer loan repayment	…….....
+ Sales of bank assets	……
+ Borrowings from the money market	
B. Demand on the Bank for Liquidity	**……**
Deposit withdrawals (Outflows)	
+ Volume of acceptable loan requests	……
+ Repayments of bank borrowings	……..
+ Other operating expenses	……..
+ Dividend payments to bank stockholders	……..
c. **A bank's net liquidity position (Lt) (A-B)**	**…….**

Source: Peter Ross (2002), commercial Bank Management, McGraw Hill Book Company, New York, p. 347

When the bank's total demand for liquidity exceeds its total supply of liquidity (i.e. Lt <0), management must prepare for a liquidity deficit, deciding when and where to raise additional liquid funds. On the other hand, if at any point in time the total supply of liquidity to the bank exceeds all of its liquidity demands (i.e. Lt>0), management must prepare for a liquidity surplus, deciding when and where to profitably invest surplus liquid funds until they are needed to cover future liquidity demands. Liquidity has a critical time dimension. Some bank liquidity needs are immediate or nearly so. For example, several large CDs may be due to mature tomorrow, and the customers may have indicated that they plan to withdraw these deposits rather than simply rolling them over into new deposits. Sources of funds that can be accessed immediately, such as borrowing reserves from another bank, must be used to meet these near-term liquidity pressures.

Longer-term liquidity demands arise from seasonal, cyclical, and trend factors. For example, liquid funds are generally in greater demand during the fall and summer coincident with school, holidays, and customer travel plans. Anticipating these longer-term liquidity needs, bankers can draw upon a wider array of alternative sources of funds than is true for immediate liquidity needs, such as selling off accumulated liquid assets, aggressively advertising the bank' current menu of deposits and other services, or negotiating long-term borrowings of reserves from other banks. Of course, a bank need not meet all demands for liquidity by selling assets or borrowing new money. For example, just the right amount of new deposits may flow in, or loan repayments from borrowing customers may occur very close to the date that new funds are needed. Timing is critical to liquidity management: bankers must plan carefully how, when, and where needed liquid funds can be raised.

Most liquidity problems in banking arise from outside the bank as a result of the financial activities of its customers. In effect, customer's liquidity problems gravitate towards their banks. If a business is short on liquid reserves, for example, it will ask for a loan or draw down its deposit balances, either of which will require the firm's bank to come up with additional funds. A dramatic example of this phenomenon occurred in the wake of the worldwide stock market crash in October 1987. Investors who had borrowed heavily to buy stock on margin were forced to come up with additional funds to secure their stock loans. They went to their banks in huge numbers, turning a liquidity crisis in the capital market into a liquidity crisis for banks.

The essence of the liquidity management problem for a bank may be described in two succinct statements (Ross; 2002: 348).

1. Rarely are the demands for bank liquidity equal to the supply of liquidity at any particular moment in time. The bank must continually deal with either a liquidity deficit or a liquidity surplus.
2. There is a trade-off between bank' liquidity and profitability. The more bank resources are tied up in readiness to meet demands for liquidity, the lower is that banks' expected profitability (other factors held constant)

Thus, ensuring adequate liquidity is a never-ending problem for bank management that will always have significant implications for the bank's profitability. Liquidity management decision cannot be made in isolation) from all the other service areas and department of the bank.

Moreover, resolving liquidity problems subjects a bank to costs, including the interest cost on borrowed funds, the transactions cost of time and money in finding adequate liquid funds, and an opportunity cost in the form of future earnings that must be forgone when earning assets are sold in order to help meet a bank's liquidity needs. Clearly, management must weigh these costs against the immediacy of the institution's liquidity needs. If a bank winds up with excess liquidity at any time, its management must be prepared to invest those excess funds immediately to avoid incurring an opportunity cost from idle funds that are not generating earnings for the bank.

From a slightly different vantage point, we could say that management of bank liquidity is subject to the risk that interest rates will change (interest rate risk and the risk that liquid funds will not be available in the volume needed by the bank (availability risk). If interest rates rise, financial assets that the bank plans to sell to raise liquid funds, such as government bonds, will decline in value, and some must be sold at a loss. Not only will the bank raise fewer liquid funds from the sale of those assets, but the losses incurred will reduce bank earnings as well. Then, too, raising liquid funds by borrowing will cost more as interest rates rise, and some forms of borrowed liquidity may no longer be available to the bank. If the lenders of liquidity perceive a bank to be more risky than before, that bank will be forced to pay higher interest rates to borrow liquidity, and some lenders will simply refuse to make liquid funds available at all (Ross; 2002: 349).

2.1.5 Why Bank Faces Liquidity Problem

It should be clear from the foregoing discussion that banks face major liquidity problems. The significant exposure of banks to liquidity pressures arises from several sources (Ross; 2002: 349).

First, banks borrow large amounts of short-term deposits and reserves from individuals and businesses and from other lending institutions and then turn around and make long term credit available to their borrowing customers. Thus, most banks face some imbalances between the maturity dates on their assets and the maturity dates attached to their liabilities. Rarely will incoming cash flows from assets exactly balance the cash flowing out to cover liabilities.

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

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

2.1.6 Factors Affecting Needs of Bank Liquidity

Basically, need of bank liquidity is affected by the following factors (Khadka; 2058: 160).

A) External Environmental Factors

1. **Prevailing Interest Rate:** If bank interest is high, the demand of cash is low that why there will be low liquidity needs.
2. Saving and Investment: High level of income and saving produce low level of liquidity and high level of investment produce high level of liquidity needs.
3. Growth and Slackening Position of the Financial Market: Growth and progress of economic and financial market produce low level of liquidity needs but opposite to this slackening position of economic and financial market produces high level of liquidity needs.

B) Internal Environmental Factors

1. **Lending Policy of Bank:** High level of liquidity requires to the bank if it has adopted a long term or mid term loan policy. Otherwise low level of liquidity requirement is applicable for the short-term investment policy adopting bank.
2. **Management Capacity:** low level of liquidity needs to high-risk bearing and capable risk handling management. Other high level of liquidity needs for risk averter and relatively low capable or inefficient management.
3. **Strategic Planning and Fund Flow Situation:** Liquidity needs is affected by bank's investment policy, strategic planning and objectives. It is also affected by the funds flow situation and lending policy. If the bank has collected more amount in current account relatively there will be high level need of liquidity otherwise there is low level of need of liquidity. It depends on maturity matching of assets and liability of banks.

2.1.7 Criterion for Measuring Bank Liquidity

It is very important to study criteria for measuring bank liquidity. The bank liquidity is the most important aspect of a bank. If there is less bank liquidity, the bank can't be run. If there is much liquidity, the bank should, bear great loss economically. Both high liquidity and low liquidity are not good omen for the bank. The bank should be

able to keep the liquidity in balance. This is very difficult task. However the bank liquidity can be measured by the following criterion (Bhandari; 2004: 158).

a) Deposit Investment Ratio

We can measure the liquidity by the deposit investment ratio. The depositor's deposit the cash in the current, saving and fixed accounts. The bank receives the most liquidity as deposit. The bank invests the capital collected by deposit in various profitable and productive sectors in the form of loan by earning much profit from it. The bank has the nature of paying lower interest to the depositors and taking higher interest from the place it invested. And the bank doesn't invest all the cash as loan. Apart from the deposit invested, the bank also has other cash. We can find out the criteria of liquidity from it.

b) Investment in Assets

The criteria of measuring liquidity in a bank, depends on the type of asset, which the bank has made investment. The bank doesn't waste cash stock received from different source of capital. The bank can invest the money, it possesses in different types of assets: such as house land for the bank and other permanent sorts of assets. In such condition, the bank has low liquidity because the investment made in such nature of assets needs much cash. And the bank gains income very low from such nature of assets. But in contrast to it, if the bank has invested in the share of various companies, the investment in government securities and treasury bills and in the debentures of different business institution, bank liquidity is abundant. In this way, the investment that the bank did can be used as the criteria of measuring liquidity.

c) Cash Reserve Ratio

The cash Reserve Ratio too can be taken as criteria of measuring bank liquidity. The commercial bank should maintain the cash reserve ratio as fixed by the central bank by opening as account in central bank and also should maintain the statutory liquidity ratio, in its own treasury. It changes from time to time. We can measure the bank liquidity from this too.

d) Profitability

The bank should be able to earn income from the medium of investment because it is a legal person. The objective of the bank is intensified with the concept of gaining profit. The bank should invest its money to gain the profit. The bank can invest in various ways. A great lead of cash is deposited in a bank form different accounts as deposit. The bank invests as loan, the cash fund and the cash collected from other various sources. In addition to it, the bank spreads it investments in various profitable sectors. The bank provides various banking services to its customers. The bank becomes successful if i: generates income from such all investments and functions. But the bank certainly provides little interest to the account holders who deposit the money in the bank. We can guess the liquidity from the profit of a bank has gained.

e) Investment in Loan

The bank distributes loans in different sectors. The source of loan investment is Important for the various sources of income of the bank. It is an important to know what short of loan and how much loans the bank has distributed. While the bank distributes the loan. If the bank is intensified with the concept of gaining profit, the bank flows loans on a long term and mid term basis. If it has paid its attention to the safety, it invests in short term loan. If a great deal of amount is invested in the short-term loan, bank retains high liquidity. If it has invested in long term, mid term, there is lower liquidity. Thus, loan investment too can be the criteria of measuring the liquidity.

f) Structure of Bank

The organizational structure of a bank: i.e. division, sub division, branches too gives speculation of bank liquidity. If the structure of the bank is in single nature, there is higher liquidity in the bank. If the banks have many branches liquidity is lower because the liquidity remains scattered in different branches and sub ranches. In this way, we can find out the bank liquidity from the structure and the organization structure of a bank.

g) Position of Business

The business organization, institution and companies have special role in the rising and falling of a bank's investment. If the bank is in the position of profit in investment the investors come to the bank with the proposal for loans. The bank too invests by evaluating the business, its investment time and situation. On the contrary to it, the bank goes on lessening the loan, if the position of business time and situation is not good. If the business environment is good, liquidity remains low. If the business environment is not good, liquidity remains high in the bank. In this way the position of business can be the medium to guess the criteria of measuring liquidity.

2.1.8 Strategies for Liquidity Management in Existing Practice

Nepal Rastra Bank implements monitory policy to extend or narrow the loan flowing capacity of commercial banks to manage the liquidity foreign capital and internal loan are the main reason of liquidity growth. It becomes impossible for the central bank to control the growth of the forcing Capital by the implementation of the monetary policy. The central bank use its monetary policy with its internal loans because the main sources of flowing internal loans are the commercial banks and they use the monetary policy as a main device of managing liquidity. In managing the liquidity, the central bank pays attention main device of managing liquidity. In managing the liquidity, the central bank pays attention mainly in two aspects (Bhandari; 2004: 165).

a) Not to make less liquidity which is necessary for the commercial banks to run their transactions?
b) To save the economy from the sustainable effect, that causes to arise, the high liquidity and the liquidity crisis.

The commercial banks should attract the deposit because it is called the raw materials of banking without which the commercial bank can't run. A decision to the effect that in which sector the deposit shall be flowed is important. The amount of the current account is the most important liability for commercial banks. But, it should return immediately at the time of demand. So, there must be a liquid fund. Though the, loan and advance are the most profitable sector in the side of asset. It is not be recovered at the time of demand. Therefore, to make arrangements for liquid assets from its own

assets, to give loan, to fix the quantity of investment and to make the coordination between the assets and liquidity are the most important factor for a commercial bank. The central bank too pays attention to this fact while giving the instruction about liquidity to the commercial banks. In preparing the strategy of liquidity management, the bank should consider many factors. If the banks fail to prepare a good strategy, at can be an in fortunate event for the bank. Bake liquidity has a great importance. Therefore, bank should set the following strategies for the management liquidity (Bhandari; 2004: 166).

a) Strategy Relating to Deposit

The bank can allow opening current, saving and fixed accounts for its customers. Common people, organization and institution in the banks according to their need, they can deposits the cash. Such cash may be accumulated in a great deal as deposit in the banks. The banks should do all works like determination of how "much money will be deposited, which account and what interest rate shall be maintained for which deposit and fixing of minimum and maximum period of the deposits. To set the strategy of liquidity it can analyze the amount accumulated as deposit. It is an internal matter of banks to set up their strategy for the management of liquidity from this the bank may get success in its goal.

b) Strategy Relating to Investment

The bank can't invest if there is scarcity of liquidity. But the bank should invest to gain profit. For this purpose, the liquidity is necessary. The commercial banks are established with the objective of earning profit. So, the bank can't meet its goal in lack of liquidity. Keeping the stock, a bank needs daily liquidity; the bank should set the strategy to invest the rest of the cash fund.

c) Strategy Relating to Reserve Fund

A bank should deposit money in different funds. There is some fund in which it should compulsorily deposit cash. If it can't deposit the amount these funds, it will have to face a disaster. It should be able to manage liquidity well to save itself from

such disaster. It establishes a reserve fund. Some percent of amount gained from profitability is kept in this reserve fund. The bank should set a strategy on such subject as how much cash is to be kept in a bank from the amount of such reserve and how much is to be flowed as investment.

d) Strategy Relating to Dividend

A bank distributes some dividend from profit to its shareholders. But if it lacks liquidity it can issue share certificates instead of distribution of cash. But the bank management should understand that whether such condition prevail in the bank or not. If there is scarcity of liquidity, it should precede the strategy of distributing the share certificates. It is better to set the strategy of distributing the cash, if there is adequate liquidity in the bank.

e) Strategy Relating to Capital

After a bank is established, it needs capital for its operation. It can open another branch or sub branches. It may need a lot of capital for this. In such condition, the bank can collect a capital by issuing its shares and debenture. Some how, it lessens the problem from liquidity. The bank should adopt a strategy whether it should issue the shares, debenture or not.

In this way, the bank can carryout a healthy transaction by adopting abovementioned strategies for management of liquidity. There is also a provision to pay fine, if the cash stock is less than prescribed by the NRB. Hence the management of liquidity is really significant aspect for the banks for the purpose of maintaining liquidity in balance.

2.1.9 Review of Policies in Liquidity Management

A. Cash Reserve Ratio (CRR)

The reserve provision of certain percentage of deposit in own vault and certain percentage with Nepal Rastra Bank is known as CRR. The CRR rate depends on the monetary policy of NRB and it is modified time to time as per the requirement of

economy. It is a tool of monetary policy. Nepal Rastra Bank had started to declare CRR from 1 Ashwin 2023 but currently it is 6%.

B Statutory Liquidity Ratio (SLR)

SLR is another instrument of monetary policy. SLR is known as a legal liquidity reserve of commercial banks. It is a certain percentage of deposit as directives issued by NRB. The concept of SLR is evolved from 2031 B.S. in Nepal. At the starting the rate of SLR was 32% of total deposit. But, this provision is repealed in 2050 B.S. Now, from 2060/61 only CRR rate is in practice in Nepal. Currently the SLR to be maintained by the banks is 15% of its total deposit.

C Provision to Minimize Liquidity Risk

Commercial banks should separate its assets and liabilities based on time interval of maturity period in order to minimize the liquidity risk. Commercial banks shall be liable to report this liquidity profile to the Banking Inspection and Supervision department and Bank Management department quarterly (i.e. the end of Ashwin, Poush, Chaitra and Ashadh). The time interval of maturity period is calculated as follows: (www.nrb.org.np)

1. 0-90 days maturity period assets and liabilities
2. 91-180 days maturity period assets and liabilities
3. 181-270 days maturity period assets and liabilities
4. 271-365 days maturity period assets and liabilities
5. More than 1-year days maturity period assets and liabilities

Provision for having infinite maturity period assets and liabilities:

a) Out of total current deposit core deposit and compensating balance should be included in the more than one-year maturity period time interval.
b) Current deposit is considered as core deposit.
c) Saving deposit is considered as long-term liabilities and included in more than one-year maturity period interval.
d) The commercial banks should calculate the difference of interval-wise assets arid liabilities. The cumulative difference may be positive or negative.

2.1.10 Practice of Liquidity Management in Joint Venture Banks

Nepal Rastra Bank (NRB) is the regulatory body of the banking industry. NRB issues the rules and regulations to facilitate the banking operation in Nepal like other regulations. There is a regulation for maintaining liquidity by commercial banks. Revision in monetary policy and operational procedure is continuation from time to time. The regulation is called Cash Reserve Ratio (CRR). It is directly related to the liquid assets of commercial banks. The regulation specifies the cash reserve ratio of commercial to central bank and its own vault to operate day-to-day operation (transaction). It is a policy instrument of central bank for money supply. Money supply is a variable of monetary policy through which the bank plans to maintain adequate liquidity in the economy. It changes as per the requirement of the economy. According to the central bank's regulation, commercial banks need to consider the following rule to calculate CRR (NRB Act; 2058).

Total deposit means current saving and fixed deposit account as well as call money deposit and certificate of deposit (CD). For this purposes, deposits held in convertible foreign currency, Employee guarantee amount and Margin account would not be included.

a) Fixed deposit means a deposit in local currency accepted with a condition to repay on completion of stipulated time period.
b) Current and saving deposit means all deposit accounts other than fixed deposit.
c) Cash in vault shall include only the local current and foreign currency (except clearing cheque)

A complete procedure for compliance lest is in place. Failure in any respect under the regulation is liable to pay penalty at a very high rate of interest. Procedures for compliance test are as follows:

a) The cash reserve requirement shall be examined on a weekly basis.
b) The balance held in ordinary account with NRB shall be eligible for inclusion in cash reserve. Balance held with NRB in special accounts opened for specific purpose and foreign currency accounts shall not be included for this purpose.

c) Any amount of local currency fund transfer meant to be credited in the account with NRB and lying in transit shall be included in the balance held with NRB.
d) The cash reserve requirement shall be examined against the average weakly balance of deposit liabilities of immediately preceding 4tn week. In case of full holiday in the preceding 4th week, the average deposit of immediately preceding 5th week shall be considered.
e) For the purpose of calculation of weekly average of total deposit, cash balance in vault and balance held with NRB, the total aggregate amount of daily balance form Monday through Friday should be divided b five. In case a holiday falling in the week, the balance of the preceding day shall be considered as the balance for the day.
f) In case of full holidays during the entire week, cash reserve requirement for the week shall not be calculated.
g) For the purpose, all branches offices of the bank shall constitute as one unit.
h) The central bank monitors that the regulation is followed or not.

2.2 Review of Related Studies

2.2.1. Foreign Context

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

2.2.1.1 Liquidity Planning at Small Banks

In 1977 McKinney an American researcher contends that the greatest potential for small banks to improve their funds management through quantitative methods is in better planning of their liquidity positions. The researcher claims that the liquidity needs of small banks can be determined accurately enough using worst-case analysis. This technique employs baseline trend to estimate future loan demand and deposit supplies. Given these estimates, the banks objective is to use stored liquidity or liability management liquidity or both to meet its funds requirements. The worst-case scenario forecasts the bank' greatest liquidity need by projecting maximum loan

demand and minimum deposit supplies. The difference between these projections represents the worst-case liquidity need of the bank. In the worst-caste analysis a ceiling trend is employed on variables that use bank funds (i.e., loans,) and a floor trend on variables that provide bank funds (i.e. deposits). By reversing this procedure (i.e., by applying a floor trend to uses and a ceiling trend to sources), a bank can project what its most-liquid position is expected to be (i.e., the one resulting from minimum loan demand and maximum deposit supplies). The most-liquid and least-liquid projection represents upper and lower bounds for a bank's liquidity planning. By carrying the analysis one step further, it is easy to construct a most likely situation. This can be accomplished by fitting a trend line to the data using regression analysis or by carefully plotting the data and drawing in the trend line (Sinky; 1983: 263).

The three situations described as three types of trends: (1) upward, (2) downward, and (3) level. In each of the situations, the upper and lower bounds represent a range within which future values of the variable are expected to lie. Based upon historical experience or statistical evidence, some degree of confidence will be associated with the upper and lower boundaries (i.e., a 95 percent confidence interval). Of course, this does not mean that some future value cannot punch through the ceiling or floor.

2.2.1.2 Continental's Liquidity Crisis: An Electronic Cash-Out

In 1984 the Bank of America made a research report and concluded that the liquidity crisis and subsequent bailout of Continental Illinois National Bank and its holding company, Continental Illinois Corporation, dominated the financial news continental Illinois had a reputation as an aggressive lender. In addition, it (and other large banks) had purchased (what turned out to be bad energy loans from Penn Square Bank of Oklahoma City, a 1982 failure. As a result, Continental lost both financial and reputational capital, which eventually shook the confidence of large uninsured creditors and precipitated a run on the bank.

The run on Continental was a silent by deadly one- an electric one in which billions of dollars of hot money "impulsed" out of the bank. For the seven day period ended May 17, 1984, which was the height of the crisis. Continental required an infusion of $8 billion to stop its electronic hemorrhaging. Continental's liquidity crisis represents, at

the extreme, the risks of aggressive liability management. Without a substantial foundation of core deposits (i.e., stable local deposits), Continental was vulnerable to an electronic or silent run. Once the marketplace, in the form of uninsured creditors, lost confidence in Continental's creditworthiness, the stage was set for the electronic run to being. The liquidity crisis, collapse, and bailout of Continental in 1984 caused liability managers to rethink their assumption regarding the availability of purchased funds. Prior to Continental's problems, the working assumption was that funds would always be available, especially in the international area. However, even a guarantee by the FDIC of all of continental's liabilities could not stop the silent electronic run on the banks (Sinky; 1983: 244).

2.2.1.3 Bank of New 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 projects 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 runoff in liabilities forced Bank of New England into the Fed's discount window. To get out of the Fed' 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 problems (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 the supervision of the FDIC (Sinky; 1983: 245).

In his statement before the senate Banking Committee on January 9, 1991, (former) Comptroller Clarke stressed that his office had closely supervised Bank of New

England for almost two years before its failure. The supervision included installing new management, asset 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 cannot be answered. A report by the General Accounting Office (GAO [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 we do want is a deposit-insurance system that prevents high-risk banks from being subsidized by low-risk ones and ensures that the costs of bank failures are not foisted on taxpayers.

2.2.1.4 Winning Basketball and Liquidity Crisis for a Community Bank

In 1989 Robert Bacon, president of the First National Bank, Montana experienced a liquidity crisis in his bank virtually. According to the OCC and the FDIC, there was no record that this had ever happened to a U.S. Bank since the FDIC was established. There was, of course, a federal investigation. It revealed that the cause of the bank's liquidity crisis was the local high school's success in a state basketball tournament. As a result of that victory, weekly pay-checks were issued early to government employees on the nearby Blackfoot Indian Reservation and too many of the town's 1,700 residents. Because mot of them were planning to watch the basketball team, the Browning Indians, play 200 miles south in Massuri, they wanted to cash their checks. As a result, it did not take long for the only bank and two local check-cashing stores to run out of cash. By 2:10 P.M.; first National's tellers were left with only small change in their drawers. Not only was the bank caught out of cash, but the town was without liquidity too. One merchant reported, "Business was way down because

nobody in town had money until the bank put out a sign at 11:00 the next morning saying they would cash checks". Another merchant said, The whole town left for the game and they took the money (Sinky; 1983: 243).

2.2.1.5 The Role of Confidence

In 1986 Kane, the American Researcher introduced the idea of confidence function for the bank describing it in terms of four factors: (Sinky; 1983: 238).

- Net worth ("capital adequacy")
- Stability of earnings
- Quality of information (transparency)
- Government guarantees

Without government guarantees, what variable would you add to this function? Liquidity seems like a good choice; banks need liquidity to survive and bank regulators consider liquidity important enough to include it in their CAMEL rating system. Adding liquidity to the confidence equation and defining a liquidity function, we get.

Confidence =f [NW, $\exists_{ROA}$ IQ, L (G, $\exists$L. $\exists$n)]

Where,

NW = Net Worth

$\exists_{ROA}$=stability of earnings measured by the standard deviation ($\exists$) of return on assets (ROA),

IQ = information quality (transparency) regarding the bank's earnings and asset quality

L (G, $\exists_L$ $\exists$D) =liquidity as a function of three variables:

- G= government guarantees (e.g., the too-big-to-fail doctrine [TBTF] and the federal safety net of deposit insurance and lender of last resort)
- $\exists_L$ = variability of loan demand
- $\exists$D = variability of deposit/liability flows

In a time of crisis (lack of confidence), G is the variable of the liquidity function. Under non-crisis conditions, the variability of loan demand and the variability of

deposit/liability flows determine a bank's need for liquidity. If these flows were known with certainty, this chapter on liquidity risk and its management would not exist.

2.2.1.6 Liquidity Need and Risk

In 1987 as illustrated by the case of New York securities firm bank need liquidity in part to meet their liquidity requirements. Bank's customers can meet their liquidity needs by

Withdrawing funds they have on deposit with the bank (i.e. utilizing their existing net cash flows) (Sinky; 1983: 240).

- Drawing down established lines of credit
- Establishing new credit facilities
- Selling assets

Only in the case of severe liquidity crisis or corporate restructuring do businesses want to resort to selling assets, The operation of the market for commercial paper (CP), which is characterized by orderly exit, is a good example of how major corporations meet their liquidity needs with the help of banks. An important characteristic of the CP market is the use of bank backup or standby lines of credit to support CP issuers. To minimize liquidity risks and costs of financial distress, issuers of CP can take several steps. When a firm cannot roll over its commercial paper, which is simply a short-term corporate IOU, it draws on its lines of credit to pay the maturing debt, If the firm's liquidity crisis continues then it will resort to selling assets to pay off the holders of its paper.

The risks of liquidity management have price, quantity, and reputational effects. Price, or interest-rate risk, focuses on the price at which assets can be sold and the rate at which liabilities can be acquired. For example, as described in the Chrysler case, Chrysler did not want to pay a premium for funds. The quantity factor focuses on whether or not assets exist that can be sold (Chrysler had assets to sell) and whether or not funds can be acquired in the marketplace at any cost. To practice active liability management, a bank must maintain its creditworthiness and its reputation in the

money and deposit markets. A bank that doesn't will have to "pay up" for funds (i.e., pay an additional risk premium) or may not even be able to obtain funds. Moreover, a bank that is unexpectedly heavy into the "street" for funds will generate suspicion about its unusual need for liquidity and risk tarnishing its reputation. To avoid raising such doubts, some banks maintain a presence in money markets even if they don't need funds.

2.2.2 Nepalese Context

There are very few independent studies in finance in Nepalese perspective. On the core concept of liquidity management and factors affecting to liquidity position in the commercial banks, very negligible studies have been made. During the study the following independent studies have reviewed about liquidity management in Joint venture commercial banks. In present scenario Nepalese commercial bank have been facing liquidity crisis. So it is being vital problem of commercial banks. Many scholars have been viewed about liquidity crunch.

Dr. Radhe Shyam Pradhan (1994) has done a research for which the researcher carried out a survey of 78 enterprises. Through the research entitled, "Financial Management Practices in Nepal." The researcher found some of the major features of the Nepalese financial management. According to him "the most important one appeared to be maintaining good relation with stockholder. The finding reveals that banks and retained earning are most widely used financing sources. Most enterprises do not borrow from one bank only and they do switch between banks to banks whichever offers best interest rates. Most enterprises find that banks are faxable in interest rate. Among the banks loan, bank loan of less than one year are more popular in public sector where as banks loan of 1-5 years are more popular in private sector. In period of light money, the majority of private sector enterprises fell that bank will treat all firms equally while public sector does not feel so. Similarly, the researcher concluded that the majority of enterprises in traded sector find that bank's interest rate is just right while the majority of non-traded sector find that the some is one higher side".
Mr. Shekhar Bahadur Pradhan (1996) in the article "Deposit Mobilization, its Problem and Prospects" has presented the following problems in the context of Nepal:

- People do not have knowledge and proper education for saving in institutional manner. They so now know financial organizational process, withdrawal system, depositing system etc.
- Financial institutions do not want to operate and provide their services in rural areas.
- He has also recommended about how to mobilize the deposit collection by the financial institutions by rendering their services in rural areas by adding various services.
- By operating rural banking programmes.
- Nepal Rastra Bank must organize training programmes to develop the skilled human resources.
- By spreading a numbers of co-operative societies to develop mini banking services and improves the habits of public on deposit collection to the rural areas.

Dr. Sunity Shrestha (1997) has analyzed in article, "Financial Performance of Commercial Banks using both Descriptive and Diagnostic Approach. In the studies the researcher has concluded the following points:

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

Liquidity management of a bank basically deals with bank's two conflicting goals namely liquidity and profitability. Liquidity is the banks ability to pay depositors on demand. In a broad sense, it is the banks' 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 of bank can obtain the trade off following the method of cash planning managing cash flow, managing optimum cash level and investing idle funds in shiftable assets (Shah; 2056).

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. A bank's liquidity need and its ability to meet such needs are difficult to measure because perception and confidence of actual and potential depositors and money market are all important but very difficult to qualify liquidity need of a bank may be short-term, cyclical and contingent. There as also a statutory provision of maintaining reserves (Bhattarai; 2056).

CRR rate has been reduced as a tool of monetary policy of the country. A Policy to cut down CRR in the vault balance has been adopted in the recent decision. Provision of cash in vault is taken as a prudential norm so that commercial banks do not face payment difficulties. By this action the central bank wants to maintain more liquidity in the banking system. There is discrimination in CRR rate for different deposits liability. The discrimination has been maintained deliberately due to variability of deposits and their behavior. However it is up to the commercial banks to decide appropriate level of cash they need in the vault (Thapa; 2002).

The reserve requirement is to meet daily and contingent liability of commercial banks. The CRR rate must be at a reasonable level by which cost of fund of commercial banks can be lowered. As a result, the bank shall be in apposition to extend loans charging a minimum rate of interest. The lowered CRZ rate is not only beneficial to the commercial banks but also to the country through which cost of production can be reduced, observation of bank balance sheet for FY ending 1996/97 clearly indicates mismanagement of sources and usage of funds, Because of this reason, there have been inadequacy in capital and problem in liquidity of the banks. There are instances where credit deposit ratio (loan and advances to total deposits) of commercial banks

recorded very high in the range of 83 to 89 percent. The credit deposit ratio is beyond the permitted level to a typical bank. Credit deposit ratio should be fixed to a maximum of 80% by the regulatory body in order to avoid any kind of accident (Shrestha; 2003).

2.3 Review of Thesis

A very few thesis reports are related to liquidity management in Joint venture banks. Some of those unpublished thesis reports are viewed here.

Sapkota, (2001) in the thesis "A Study on Fund Mobilizing Policy of Standard Chartered Bank Ltd in Comparison to NBBL Bank Ltd and Himalayan Bank Ltd" have examined the fund mobilizing policy adopted by three commercial banks viz. SCBNL, NBBL and HBL and the way these banks mobilized their funds during five year study period.

The researcher found the overall condition of SCBNL seems in satisfactory position in comparison to NBBL and HBL. In other words, the wri recommends that banks are strongly recommended to provide information about its services, facilities and extension of their services towards rural areas. These three banks are recommended to increase cash and bank balance to meet the need of investment and demand of loan and advances. And banks are to be investing its funds in the purchase of shares and debentures of other financial, non-financial companies, hotels and government companies. The risk, which has to be faced by these commercial banks. Similarly, the study cannot show the fund mobilizing policy of the selected banks for the succeeding years because of time limitation i.e. up to 1999/2000

Gupta, (2003) conducted the thesis paper, "Deposit and Reinvestment Problem of Nepalese Commercial Banks" using various financial tools on Nepal SBI Bank Limited (NSBIL) and Everest Bank Ltd. (EBL). The main objective of the study include finding out ways to utilize the surplus deposit funds in the economic development of the country. Thus, the study has been conducted on the deposit, re-investment position of the banks and the gap between deposits and loans and advances.

Researcher concluded that the deposits and its reinvestment in productive sectors by commercial banks are not stable. The increasing deposits are ideal in the banks and in turn they are investing these funds in other sectors as government securities bearing maximum loss. The researcher found out that the NSBIL's deposit increased highly till 2000/01 A.D. However, its loans and advances were not growing to its point. Likewise, the EBL's percentage growth in loan and advances was lower than investment but the liquidity position of the EBL was found slightly better than NSBIL. The researcher further concluded that EBL had good deposit collection than NSBIL with risk and profitability position of EBL better than NSBIL.

On the basis of the study, the recommendations has made on regards of liquidity position that NSBIL should increase cash and bank balance to meet the current obligations and loan demand than EBL. Both the banks are further suggested to utilize their risk assets and shareholder funds to gain highest profit margin and to manage credit according to the change in deposit.

Shrestha, (2005) in his thesis "Financial performance analysis of Nepal Bangladesh bank ltd" In this study, various financial research and statistical tools have been used to achieve the objective of the study. The analysis of data will be done according to the pattern of data available. Likewise, some financial tools such as ratio analysis and trend analysis have also been used for financial analysis.
The specific objectives of his research are:

- To analyze the functions, objectives procedure and activities of the NB bank
- To analyze the lending practices and resources utilizations of NB bank.
- To determine the impact of growth in deposit on liquidity and lending practices.
- To examine the lending efficiency and its contribution to profit.
- To make suitable suggestions based on the findings of this study. The financial and statistical tools are used.

The researcher found that NB bank has sufficient liquidity. It shows that bank has not got investment sectors to utilize their liquid money. Now, in Nepal many banks and other financial institution are functioning to collect deposits and invest money

somewhere in the investable sectors. Therefore, miniaturization has been increased since liberalization policy taken by the government. Heavy remittance has also helps to increase the amount of deposits in bank. On the other hand, due to political crisis, economic sectors have been fully damaged.

The research findings of the study are summarized as:

NB bank has utilized most funds in the form of credit and advances. More than 75% of total deposits of the bank have been forwarded to customers as a credit and advances. The major part of utilizing deposits and income generating sectors. If the bank has high deposits, bank can provide money to its customers as credit and advances. Therefore, there is highly positive correlation between total deposits and credit and advances of NB bank. Bank is providing different schemes to attract good customers. After attracting deposits from the customers, bank has issued the deposits to the needy area to make profit for the bank.

Gautam, (2006) has conduct research on "A Comparative study on financial performance of Standard Chartered Bank Limited and Nepal Bangledesh bank Limited" Financial performance is analyzed with two important tools. The first most important tools are the financial tools, which includes ratio analysis and other is a statistical tools, which is bankruptcy score.

The objectives of his research are:

To study the existing capital structure of financial position of selected joint venture commercial banks and to analyze its impact on the profitability.

To access the debt servicing of the joint venture commercial bank.

To examine the correlation and the signification of their relationship between different ratios related to capital structure.

To provide suggestions and recommendations for the optimal capital structure of the joint venture commercial bank.

To obtained the objectives, some financial, statistical and accounting tools.

He has found his study were the joint venture banks are operating in Nepal as commercial merchant banks. The growth is still going on as so many new banks are coming into existence after this study. Therefore, JVB’s are operating with higher technology and new efficient methods in banking sector. However, this study has

been undertaking only three JVB's viz. SCBNL and NBBL to examine and evaluation the financial data.

The research findings of the study are the research sample JVB's have used high percentage of total debt in raising the assets. The higher ratio constitutes that the outsider's claim in total assets of the bank is owner's claim. The on an average, NBBL bank constitutes 16.27 times of P/E ratio, which should be reduce as quickly as possible. The financial risk of the banks NBBL average degree of finance leverage constitutes 3.73 times which indicates the higher degree of financial risks 3.73 times which indicates the higher degree of financial risks. Now, in Nepal many banks and other financial institution are functioning to collect deposits and invest money somewhere in the investable sectors. Therefore, efficiency has been increased since liberalization policy taken by the government. Heavy remittance has also helps to increase the amount of deposits in bank

Sedai, (2007) in his dissertation "An Analysis on Lending Policy and Strength of Nepal Investment Bank Ltd" highlighted that aggregate performance of NIBL is satisfactory and pushing upward. Lending strength of NIBL in term of exposure of loan and advances is good and appreciable. The contribution made by bank in industrial as well as agriculture sector of the economy is highly appreciable and its bust up towards national prosperity. The ratio of loan and advances to total asset, loan and advance to shareholder‘s equity indicate a good performance of NIBL in its lending activities.

The main objective and target of this study is to observe the loan disbursement of Nepal Investment Bank Ltd. they are

The breakdowns of the objectives of the study are as follows:

- To evaluate various financial rations of the NIB.
- To determine the impact of deposit in liquidity and its effect on lending practices.
- To analyze trend of deposit utilization towards loan and advances and net profit.
- To offer suitable suggestions based on findings of this study

The main recommendations are drawn according to finding and conclusion. It is recommended that extend their credit and branch in rural area, continue to maintain or further increase the performance, decrease the NPL and make proper loss loan provision, required proper market analysis, diversify the investment sector etc. performance of NIBL seems to be good till the date. There are still many opportunities for further growth of the bank. NIBL is suggested to further improve current position of lending portfolio. The bank should concentrate on financial strength, pe5rsonal integrity and credibility of the borrower of loan disbursement. It should maintain high level of monitoring and control system over the disbursed loan and advances. To create opportunity of business new and attractive lending scheme would be launched to the customer.

Looking at the asset management ratio the performance of NIBL seems good in the area of lending, productivity and impact on national economy. The activity ratio also reflects to the soaring performance of NIBL. The decreasing loss loan provision ratio incate that bank is good enough to judgment in their value customer. The better activity ratio of this bank been a major contributor in managing the lending portfolio according to the demand of the profit oriented business. The high volume of lending activity of NIBL has put this bank in the top position in absolute term. Thus looking at the various summaries and findings, we can conclude that the bank has accelerated its performance in the year 2002/3 and has continued till 2004/5 and the bank has the potentiality to become a leading bank in Nepal.

Limbu (2008) in his dissertation, “Credit Management of NABIL Bank Limited” highlighted that aggregate performance and condition of Nabil bank. In the aspect of liquidity position, cash and bank balance reserve ratio shows the more liquidity position. Cash and bank balance to total deposit has fluctuating trend in 5 years study period. Cash and bank balance to current deposit is also fluctuating. The average mean of Cash and bank balance to interest sensitive ratio is able to maintain good financial condition.

The main objectives of the research study are as follow.

- To evaluate various financial ration of the Nabil Bank.
- To analyze the portfolio of lending of selected sector of banks

- To determine the impact of deposit in liquidity and its effect on lending practices.
- To offer suitable suggestions based on findings of this study.

The main findings and conclusions are according to calculated ratio. In the aspect of assets management ratio, assets management position of the bank shows better performance in the recent years. Non–performing assets to total assets ratio is decreasing trend. The bank is able to obtain higher lending opportunity during the study period. Therefore, credit management is in good position of the bank. In leverage ratio, Debt to equity ratio is in an increasing trend. High total debt to total assets ratio posses' higher financial risk and vice-versa. In the aspect of profitability position, total net profit to gross income, the total interest income to total income ratio of bank is in increasing trend. Earning per share and The Price earning ratio of NABIL is in increasing trend. Loan loss provision to total loan and advances ratio and None-performing loan to total loan and advance ratio of NABIL is decreasing trend. Thus, credit management is in a good position.

In the statistical tools analysis, average mean, correlation analysis and trend analysis have been calculated. Correlation coefficient between total credit and total assets shows high degree of positive correlation. Correlation coefficient between total deposit and loan & advances has high degree of positive correlation it is concluded that increasing total deposit will have positive impact towards loan & advances. Trend analysis tools are done for future forecasting. Trend analysis for total, loan & an advance, Total asset and Net profit is done to see future prospect.

Karki (2009) entitle thesis "The Comparative study on liquidity mobilization of Nabil Banik Ltd. and Standard Chartered Bank Ltd. The main objective of the study is to find out the ways of utilizing the surplus deposit funds and the right reinvestments for the economic development of a country. The specific objectives of the study are as follows:

- To analyze the liquidity position of NABIL and SCBNL Banks
- To analyze the ratio between two banks.
- To analyze the gap between deposits and loan and advances.
- To provide suggestions for the improvement on the basis of findings.

The main finding and conclusion of the study are the overall aspect of liquidity position, liquidity position of SCBNL is comparatively better than NABIL. This indicates that the bank has higher liquidity of SCBNL as compare to NABIL. Cash and bank balance to total assets ratio of SCBNL is higher than NABIL. Investment on government securities to current assets ratio of SCBNL is higher than NABIL. This indicates that SCBNL has invested more portions of current assets on government securities.

An asset management aspect of NABIL is better than SCBNL. The loan & advances to total deposit ratio of NABIL is higher than SCBNL. So, NABIL is more efficiently utilizing the outsiders' funds in extending credit for profit generating sectors. The total investment to total deposit of SCBNL is higher than NABIL. It shows the SCBNL is mobilizing its funds on investment in various securities efficiently. The loan & advances to total assets ratio of NABIL is greater than SCBNL. It refers NABIL has utilized its total assets more efficiently in the form of loan & advances with more risk because it has greater variability in the ratio. SCBNL has earned higher profit in relation to every aspects of the bank than NABIL. Following findings are drawn on the basis of profitability position of NABIL and SCBNL. Return on loan & advances ratio of SCBNL is higher than that of NABIL i.e. 6.98%>4.64%. It refers that SCBNL seems to be success to earn high profit on loan & advances. Return on fixed assets of SCBNL is higher than NABIL. This shows that SCBNL is more successful to earn high profit through the efficient utilization of its fixed assets. NABIL has higher total interest earned to total outside assets to earn higher interest income than that of SCBNL.

Khanal (2010) entitled thesis "Comparative Study on Liquidity Management of Everest Bank Limited And Himalayan Bank Limited The basic objective of the study is to have true insight into the liquidity management of Everest Bank and Nepal Himalayan Bank. This aims to examine its efficiency and effectiveness in disbursing and recovery of loans as well following the directives of NRB Acts and its own policies.

- To analyzed the liquidity management of sample banks
- To analyze the deposit and investment position of the banks.

- To find out the relationship between deposit, investment, loans and advances and net profit.
- To find out the trend analysis of deposit, investment, loans and advances and net profit.

The main conclusion and finding of the study are overall aspect of liquidity position of EBL is comparatively better than HBL. The mean current ratio of EBL is 1.14 and HBL is 1.10. EBL is sound in meeting short-term obligation than HBL. Cash and bank balance to total deposit ratio of EBL has higher HBL which indicates that the bank has higher liquidity of EBL as compare to HBL. Cash and bank balance to current assets ratio of EBL is little higher than HBL. The higher mean ratio shows EBL's liquidity position is better than that of HBL. Investment on government securities to current assets of HBL is higher than EBL. It shows HBL has invested more fund in government securities. EBL has invested little portion of their funds in purchasing of government securities.

Assets management aspect of EBL is better than HBL which is justified by little higher loan and advances to total deposit ratio The total investment to total deposit of HBL is higher than EBL. It shows the HBL is mobilizing its funds on investment in various securities efficiently. It can be said that HBL is more successful in utilizing its total deposit by investing in marketable securities.

Profitability ratios, return on loan and advances ratio of HBL is higher than that of EBL. It refers that HBL seems to be success to earn high profit on loan and advances. Return on total assets ratio of EBL is slightly higher than HBL i.e. 1.50% > 1.28%. But it has greater variability in the ratio. EBL seems successful in managing and utilizing the available assets. Total interest earned to total operating income ratio of HBL is lower than EBL. Total interest paid to total assets ratio of EBL is higher than HBL. It shows EBL has high interest expenditure to total assets. It supports EBL to increase to interest paid to operating income.

For risk position of bank, the average credit risk ratio of EBL is lower than HBL. EBL has efficiently used the total loan and advances than that of HBL. The average mean

ratio of EBL is greater than that of HBL. It signifies that EBL has sound liquid fund to make immediate payment to the depositors. Similarly, in asset Risk Ratio, The mean of EBL is lower than that of HBL It indicate HBL has high ratio of asset risk.

Average Earning per share, dividend per share and average market price per share of EBL higher in comparison to HBL. This considered as better in security analyzing in order to make investment decision. In comparison to both bank trend of deposit and loan and advance of EBL high and trend of investment and profit of HBL is high. So both banks are equal in their liquidity management.

2.4 Research Gap

The review of above relevant literature has contributed to enhance the fundamental understanding and knowledge, which is required to make this study meaningful and purposeful. There are various researchers conduct on lending practice, liquidity analysis, credit policy, financial performance and credit management of various commercial banks. The past researches in measuring liquidity management of bank have been focused on the limited ratios, which are incapable of solving the problems. In this research various ratio are systematically analyzed and generalized. The ratios are categorized according to nature. Here in this research all ratios are categorized according to their area and nature.

In this research comparative study of Comparative analysis of liquidity management of Nabil Bank Ltd, Everest Bank Ltd. and Nepal SBI Bank Ltd s done by measuring various ratios, trend analysis and various statistical tools as well and financial tools. Since the researcher have used data only five fiscal year but all the data are current and fact. This study tries to show liquidity management by applying and analyzing various financial tools like liquidity ratio, asset management ratio, profitability ratio and other ratio as well as different statistical tools like average mean, coefficient of correlation and trend analysis. Probably this will be the appropriate research in the area of liquidity management of Bank and financial institutions. So this research is helpful and beneficial to all concern research worker, student, banker, investor and stakeholder.

CHAPTER - III

RESEARCH METHODOLOGY

The research has been done on Comparative analysis of liquidity management of Nabil Bank Ltd, Everest Bank Ltd. and Nepal SBI Bank Ltd. in order to reach and accomplish the objectives of the study, different activities will be carried out. The research methodology that is adopted for the present study is mentioned in this chapter which deals with research design, sources of data, data collection, processing and tabulating procedure and methodology.

3.1 Research Design

To achieve the objective of this study, analytical and descriptive research designs have been used. Research is a theory building activity. Research design is the plan, structure and strategy of investigations conceived so as to obtain answer to research questions and to control variances. "A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combined relevance to the research purpose with economic in procedure" (Kothari; 1989:59).

Since the main objectives of this study is to analysis liquidity management of the banks, all the indicators that shows the credit management of the banks were calculated using data obtained from the five year end internally generated accounting records maintained by sampled Banks. The study depends on the secondary data. Various financial parameters and effective research techniques are employed to evaluate the research. Furthermore, various descriptive as well as analytical techniques are used. The study is designed as to give a clear picture of the Bank's financial circumstances with the help of available data with useful suggestions and recommendation.

3.2 Sources of Data

There are two sources of data collection. The research is based on secondary source of data. All the adequate data are collected from secondary sources.

This refers to data that are already used and gathered by others. Secondary data are mostly used for this research purpose. So the major sources of secondary data are as follows

- Annual Report of concern Bank.
- Internet and E-mails.
- NRB directives.
- Economy survey of Government of Nepal and Ministry of finance.
- Newspaper, journals, articles and various magazines.

3.3 Population and Sample

The objective of the research is to explore and describe the liquidity management of commercial bank in Nepal from the research point of view. However, with regard to the availability of the financial information, two samples were identified purposively from the banking sector, which comprise of nineteen among the listed. The population Here, the total 31 commercial banks shall constitute the population of the data and two bank under the study constitute the sample under the study. So among the various commercial banks in the banking industry, Here Nabil Bank Limited, Everest Bank Limited and Nepal SBI Bank Limted has been selected as sample for the present study. Likewise, financial statements of five years are selected as samples for the purpose of it.

3.4 Data Collection Procedure

Different tools and techniques were adopted while collecting the data for this study. Collected secondary information are analyzed during the course of the deskwork. However, during the desk study, an information gap was found. This gap fulfilled by the discussion with the thesis advisor and finance experts of the security board and the NEPSE.

3.5 Data Analysis Tools

Presentation and analysis of data is one of the important part of the research work. The collected raw data will first be presented in systematic manner in tabular form and then will be analyzed by applying different financial and statistical tools to

achieve the research objectives. Besides these some graph charts and tables will be presented to analyze and interpret the findings of the study. The tools applied are-

1 Financial Tools

2 Statistical Tools

3.6 Financial Tools

Financial tools also are the measures or the instruments to analyze the collected data form different sources. In this study, the researcher has used the following financial tools to analyze the data.

3.6.1.1 Financial Ratio Analysis

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

a) Liquidity Ratios: This ratio measures the liquidity position of a firm. It measures the firm's ability to meet its short-term obligations. As a Financial Analytical tools, following liquidity ratios will be used.

b.) Current Ratio: This ratio shows the bank's short-term solvency. It shows the ratio of current assets over the current liabilities. This ratio can be computed by dividing the total current assets by total current liabilities, which can be presented as:

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

Higher ratio indicates the strong short-term solvency position and vice-versa.

c) Cash and Bank Balance 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 deposits i.e.

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

d) Short Term Investment to Total Deposit Ratio: This ratio is designed to analyze the liquidity position of commercial banks. It shows the portion of the total deposits in short term investment. Higher ratio indicates the better liquidity position where as lower ratio is the symptom of liquidity risks which may arise in the future. It is computed by using the formula as under:

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

e) Investment on Government Securities to Total Current Assets Ratio: This ratio is calculated to find out the percentage of current assets invested on government securities viz. treasury bills and development bonds. The ratio is stated as under;

Investment on Govt. securities to total current assets ratio =

$$\frac{\text{Investment on Govt. Securities}}{\text{Current assets}}$$

f) Total Investment to Total Deposit Ratio: This ratio is used to find out the ratio of total investment on total deposits. The ratio can be completed by using following formula:

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

g) 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:

$$\text{Current Deposit to Total Deposit Ratio} = \frac{\text{Current Deposit}}{\text{Total Deposit}} \text{x}100$$

h) 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 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:

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

i) 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 met 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 deposit. 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 deposit in NRB and own in hand. It is computed by dividing the cash reserve of commercial banks by total deposit and the formula is:

$$\text{Cash Reserve Ratio (CRR)} = \frac{\text{Cash in Reserve}}{\text{Total Deposit}} \text{x}100$$

j) Balance with NRB to Current Deposit Ratio: This ratio presents the portion of balance with NRB on current deposit. It is used to measure the liquidity position of commercial banks and capacity to pay depositors amount promptly. This ratio can be calculated by using the following formula:

k) Investment on Government Securities to Total Deposit Ratio: This ratio shows the percentage of investment on government securities on total deposit. It presents that how much funds are invested on government securities of total deposit of commercial banks. This ratio is computed by using the following formula:

$$\text{Inv. on Gov. Securities to Total Deposit Ratio} = \frac{\text{Inv. on Gov. Securities}}{\text{Total Deposit}} \text{x}100$$

3.6.1.2 Assets Management Ratios

Asset management ratio measures the proportion of various assets and liabilities in balance sheet. The proper management of assets and liability ensures its effective utilization. The banking business converts the liability into assets by way of its lending and investing functions. The following are the various ratios relating to determine the efficiency of the subjected bank in managing its assets and in portfolio management.

a.) Loan and Advances to Total Deposit Ratio: This ratio is also called credit-deposit ratio (C D ratio). It is calculated to find out how successfully the bank is able to utilize its total deposits on loan and advances for profit generating purpose. Greater ratio implies better utilization of total deposits. This ratio can be obtained by dividing loan and advances by total deposit as under;

$$\text{Loan and Advances to total deposit ratio} = \frac{\text{Loan \& advances}}{\text{Total deposits}}$$

b.) Total Investment to Total Deposit Ratio: Investment is one of the major forms of credit creation to earn income. This implies the utilization of firm's deposit on investment on government securities, shares and debentures of other companies and banks. This ratio can be calculated by total investment divided by total deposit as:

$$\text{Total investment to total deposit ratio} = \frac{\text{Total investment}}{\text{Total deposits}}$$

c.) Loan and Advances to Total Asset: Loan and advances is the major component in the total working fund (total assets), which indicates the ability of bank to utilize its deposits in the form of loan and advances to earn high return. The ratio is computed by dividing loan and advances by total working fund, which is stated as under;

$$\text{Loan and advances to working fund ratio} = \frac{\text{Loans and advances}}{\text{Total working fund}}$$

d.) Investment on Government Securities to Total Asset Ratio: This ratio shows that bank's investment on government securities in comparison to the total working fund. This ratio can be computed by dividing investment on government securities by total working fund, which can be presented as;

Investment on Govt. Securities to total working fund =

$$\frac{\text{Investment on Govt. Securities}}{\text{Total working fund}}$$

3.6.1.3 Profitability Ratios

Profitability ratios are used to indicate and measure the overall efficiency of a firm in terms of profit and financial performance. For better performance, profitability ratios

of firm should be higher. Under this, the following profitability ratio will be computed.

a.) Return on Loan and Advances Ratio: This ratio indicates how efficiently the bank utilizes its resources in the form loans and advances. This also measures the earning capacity of its loans and advances. This ratio is computed by dividing net profit (loss) by loans and advances which can be expressed as;

$$\text{Return on loan and advances ratio} = \frac{\text{Net profit (loss)}}{\text{Loans \& advances}}$$

b.) Return on Total Asset Ratio (ROA): This ratio measures the overall profitability of all working fund i.e. total assets. It is also known as return on assets (ROA). This ratio is calculated by dividing net profit (loss) by total working funds. This can be presented as;

$$\text{Return on total working fund ratio (ROA)} = \frac{\text{Net profit (loss)}}{\text{Total working fund}}$$

The numerator indicates the portion of income left to the internal equities after deduction all costs, charges and expenses.

c.) Return on Equity (ROE): Net worth refers to the owner's claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the bank has used funds of the shareholders. This ratio can be computed by dividing net profit by total equity capital (net worth). This can be calculated as;

$$\text{Return on Equity (ROE)} = \frac{\text{Net profit (loss)}}{\text{Total equity capital}}$$

3.6.1.4 Other Ratios

a) Earning per Share (EPS): EPS refers to net profit divided by total numbers of share outstanding. EPS measure the efficiency of a firm in relative terms. It is a widely used ratio, which measures the profit available to the ordinary shareholders on per share basis. The amount of EPS measures the efficiency of a firm in relative terms. This ratio is calculated as;

$$\text{Earnings per Share (EPS)} = \frac{\text{Net profit (loss)}}{\text{Total number of shares outstanding}}$$

b) Market Price per Share: Market price per share is the price at which shares are traded in the stock market. The secondary markets provide liquidity for securities purchased in primary market. Generally MPS is determined through supply and demand factors.

c) Price Earning Ratio: This ratio is closely related to the earning per share. It is calculated by dividing the market value per share by EPS. Price earning ratio indicates investor's judgments or expectation about the firm's performance. This ratio widely used by the security analysis to value the firm's performance as accepted by investors. Price earning ratio reflects investor expectations about the growth in the firm's earning.

$$\text{Price Earning ratio} = \frac{\text{Market price per Share}}{\text{Earining per Share}}$$

3.7 Statistical Tools

Some important statistical tools will be used to achieve the objective of this study. In this study statistical tool such as mean, standard deviation, coefficient of variation, coefficient of correlation and trend analysis will be used.

i) Mean: A mean is the average value or the sum of all the observation divided by the number of observations and it is given by the following formula:

$$\overline{X} \text{ X} \frac{X}{N}$$

Where, $\overline{X}$ = Mean of the values

X = Summation of the values

N = No. of Observations

ii) Coefficient of variation: The calculated standard deviation gives an absolute measure of dispersion. Hence where the mean value of the variables is not equal, it is not appropriate to compare two pairs of variables based on standard deviation only. The coefficient of variation (C.V.) is given by the following formula in the percentage basis:

$$\text{Coefficient of variation (C.V.)} = \frac{\pm}{\overline{X}} \mid 100$$

iii) 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. Correlation refers to the degree of relationship between two variables. If between two variables, increase or decrease in one causes increase or decrease in another, then such variables are correlated variables. The reliability of the value of coefficient of correlation is measured by probable error. The correlation coefficient describes the degree of relationship between two variables. It interprets whether variables are correlated positively or negatively. This tool analyses the relationship between those variables by which it is helpful to make appropriate investment policy for profit minimization. The Karl Pearson coefficient of correlation (r) is given by following formula:

$$\text{Coefficient of Correlation (r)} = \frac{xy}{N\pm_1\pm_2}$$

The Karl Pearson coefficient of correlation 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 reaches to the value of zero, it is said that there is no significant relationship between the variables.

iv) Trend Analysis: Among the various methods of determining trend of time series, the most popular and mathematical method is the least square method. Using this least square method, it has been estimated the future trend values of different variables. For the estimation of linear trends line following formula can be used:

$y = a + bx$

Where,

y= Dependent variable

x = Independent variable

a = Y – intercept

b = Slope of the trend line

CHAPTER IV
PRESENTATION AND ANALYSIS OF DATA

Introduction review of literature and research methodology is presented in the previous chapters that provide the basic inputs to analyze and interpret the data. Presentation and analysis of data is the main body of the study. In this chapter collected data are analyzed and interpreted as per the stated methodology in the previous chapter. The data are analyzed by using financial and statistical tools to get values of different variables. The analyzed data and result are presented clearly and simultaneously by using tables and figures. The main sources of data are secondary data. In this chapter, researcher has analyzed and diagnosed liquidity management of NABIL, EBL and NSBI Bank Limited. All the liquidity management is analyze by calculating following ratio.

4.1 Financial Analysis

In this part various financials ratios related are presented to evaluate and analyze the performance of commercial Banks i.e. NABIL, EBL and NSBIL. Some important financial ratios are only calculated in the point of view of fund mobilization. The ratios are designed and calculated to highlight the relationship between financial items and figures. It is a kind of mathematical relationship and procedure dividing one item by another.

4.1.1 Financial Ratio Analysis

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

4.1.2 Main component of Liquidity

To operate the business, different kinds of assets are needed. For day-to-day business operation, different types of current assets are required. They are use and need in daily transaction of banking activities. There are various component of liquidity. Here analyzed on main component of liquidity only. The main components of Liquidity of bank are cash balance, bank balance, deposit, investment on Govt. Securities (Short term investment) and current asset are analyzed under.

Table 4.1, 4.2 and 4.3 shows the only main liquidity component cash and bank balance, deposit, investment on Govt. securities and current asset of NABIL, EBL and NSBIL respectively for the study period.

A. Main component of liquidity of NABIL

Here cash and bank balance, total deposit, investment on Govt. securities and current asset of NABIL are taken as main component of Liquidity.

Table 4.1
Main Component of Liquidity of NABIL

(Rs. in Million)

Fiscal Year	Cash and Bank Balance	Total deposit	Investment on Govt. Securities	Current Assets
2007/08	630	19101.07	2300.35	13857.5
2008/09	1399	24491.09	4808.15	16954
2009/10	2671	31304.82	4646.19	20122.1
2010/11	3372.51	37348.26	3706	17337
2011/12	1400.09	46340.7	7942	29576
Average	**1894.52**	**31717.19**	**460.07**	**19569.32**

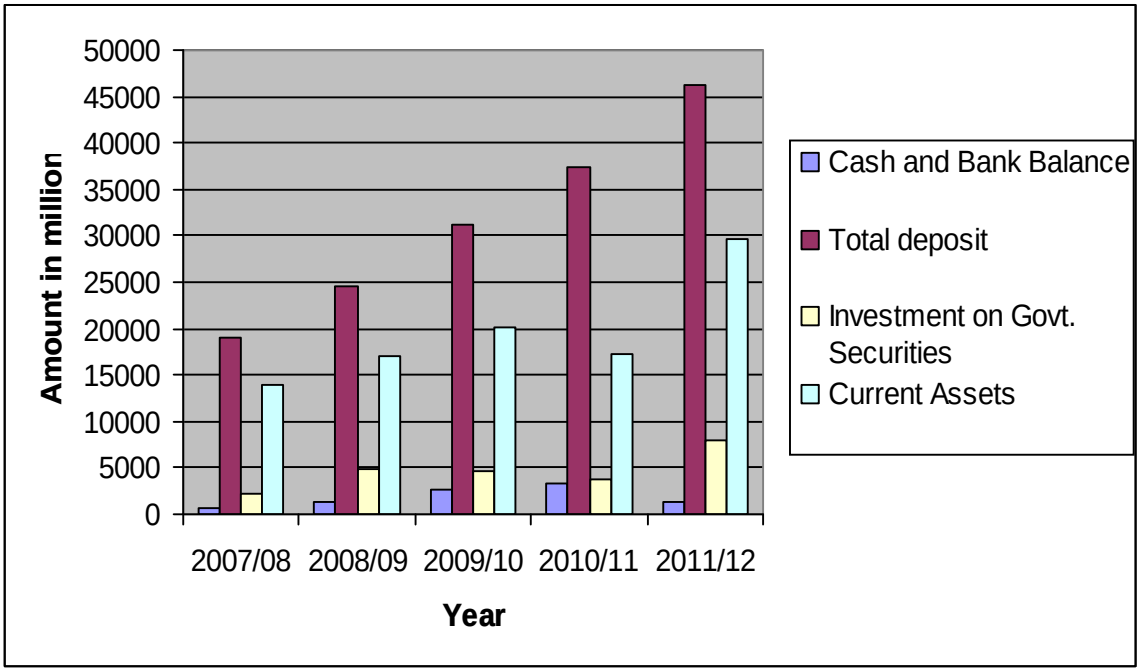
Source: Annual Report of Concern Bank

Above table show the main component of liquidity cash and bank balance, total deposit, investment on Govt. Securities and current asset of NABIL. The cash and

bank balance of NABIL is increasing beside last year 2011/12 of study period. The highest amount of cash and bank balance is Rs 3372.51 million in F/Y 2010/11 and lowest amount is Rs 630 Million in F/Y 2007/08. The average cash and bank balance of NABIL is Rs 1894.54 million. Similarly total deposit of NABIL is increasing trend. The highest amount total deposit is Rs 46340.7 in million F/Y 2011/12 and lowest amount is Rs19101.07 million F/Y 2007/08. The average amount of total deposit is Rs 31717.19 millions. The investment on Govt. securities of NABIL is fluctuating condition in the study period. The highest amount of investment on Govt securities is Rs 7942 million in F/Y 2011/12 and lowest amount is Rs 2300.35 million. The average amount of Govt. securities is Rs 460.07 millions. The curren asset of NABIL is increasing beside F/Y 2010/11. The highest amount current asset is Rs 29576 million and lowest amount is Rs 13857.5 millions. The average amount of current asst of NABIL is Rs19569.323 million respectively. The following figure shows the main liquidity of NABIL.

Figure 4.1

Main Component of Liquidity of NABIL



B. Main component of liquidity of EBL

Here cash and bank balance, total deposit, investment on Govt. securities and current

asset of EBL are taken as main component of Liquidity.

Table 4.2
Main Component of Liquidity of EBL

(Rs. in Million)

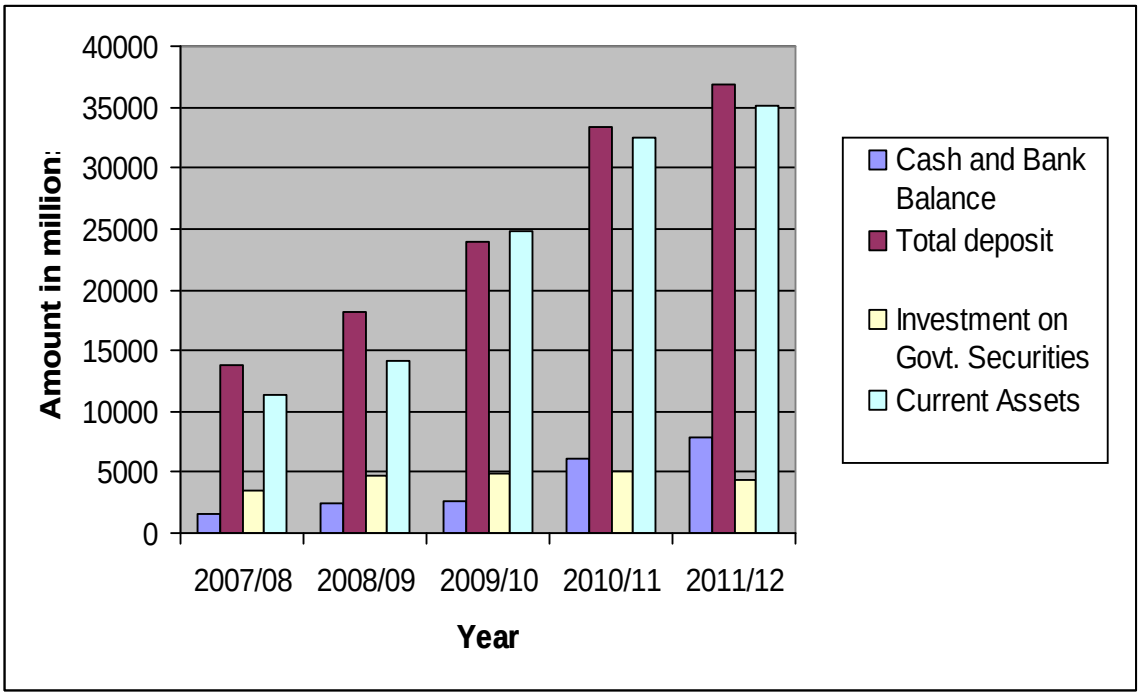
Fiscal Year	Cash and Bank Balance	Total deposit	Investment on Govt. Securities	Current Assets
2007/08	1553	13802.44	3548.62	11398.8
2008/09	2391.42	18186.25	4704.63	14226.8
2009/10	2667.97	23976.3	4821.6	24761.6
2010/11	6164.37	33322.95	5146.05	32425.4
2011/12	7818.81	36932.31	4354.35	35052.2
Average	**4119.114**	**25244.05**	**4515.05**	**23572.96**

Source: Annual Report of Concern Bank

Above table show the main part of liquidity cash and bank balance, total deposit, investment on Govt. Securities and current asset of EBL. The cash and bank balance of EBL is increasing form of study period. The highest amount of cash and bank balance is Rs 7818.81 million in F/Y 2011/12 and lowest amount is Rs 1553 million in F/Y 2007/08. The average cash and bank balance of EBL is Rs 4119.114 million. Similarly, the total deposit of EBL is also increasing tendency. The highest amount total deposit is Rs 36932.31 in million F/Y 2011/12 and lowest amount is Rs 13802.44 million F/Y 2007/08. The average amount of total deposit is Rs 25244.05 millions. The investment on Govt. securities of EBL is increasing trend beside last fiscal year 2011/12 of study period. The highest amount of investment on Govt securities is Rs 5146.05 million in F/Y 2010/11 and lowest amount is Rs 3548.62 million. The average amount of Govt. securities is Rs 4515.05 millions. The current asset of EBL is continuously increasing tendency. The highest current asset amount of EBL is Rs 35052.2 million in F/Y 2011/12 and lowest amount is Rs 13857.5 millions in F/Y 2007/08. The average amount of current asset of EBL is Rs 23572.96 millions. The following figure show the liquidity component of EBL.

Figure 4.2

Current Assets Components of EBL



C. Main component of liquidity of NSBIL

Here cash and bank balance, total deposit, investment on Govt. securities and current asset of NSBIL are taken as main component of Liquidity.

Table 4.3

Main Component of Liquidity of NSBIL

(Rs. in Million)

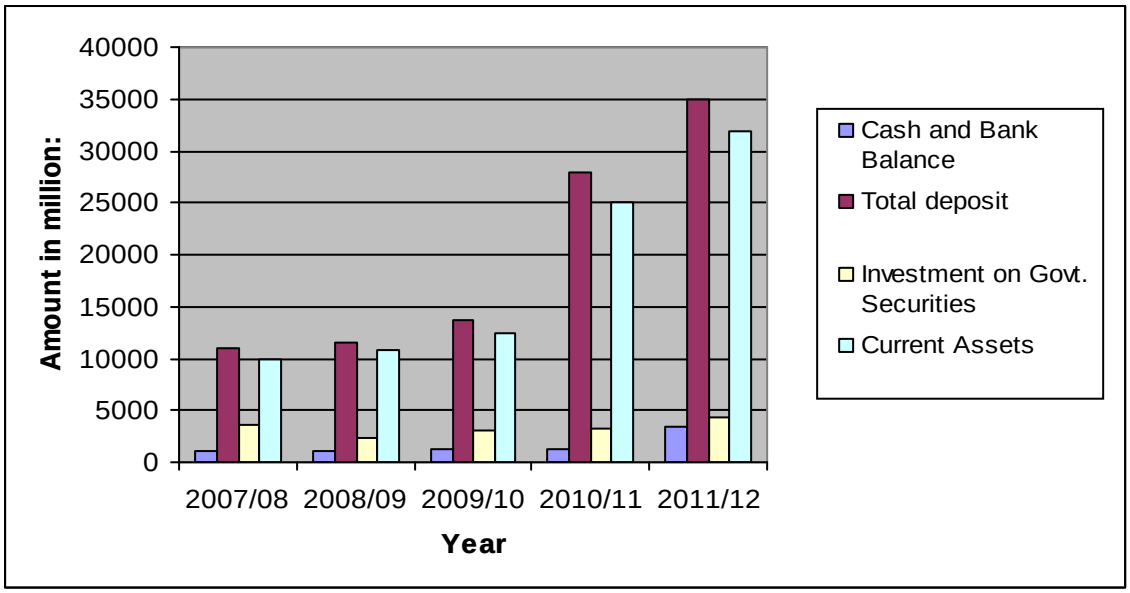
Fiscal Year	Cash and Bank Balance	Total deposit	Investment on Govt. Securities	Current Assets
2007/08	1118.16	11002.04	3591.77	9976.28
2008/09	1122.69	11445.29	2345.58	10854.5
2009/10	1342.96	13715.39	3035.55	12376.8
2010/11	1176.44	27957.22	3306.57	25111.7
2011/12	3441.26	34896.42	4313.32	31966.34
Average	**1640.302**	**19803.27**	**3318.558**	**18057.12**

Source: Annual Report of Concern Bank

Above table show the main element of liquidity cash and bank balance, total deposit, investment on Govt. Securities and current asset of NSBIL. The cash and bank balance of NSBIL is increasing beside F/Y 2010/11. The highest amount of cash and bank balance of NSBIL is Rs 3441.26 million in F/Y 2011/12 and lowest amount is Rs 1118.16 million in F/Y 2007/08. The average cash and bank balance of NSBIL is Rs 1640.302 million. All cash and bank balance of NSBIL is lower than average amount beside last year 2011/12. The total deposit of NSBIL is also increasing trend. The highest amount total deposit is Rs 34896.42 in million F/Y 2011/12 and lowest amount is Rs 11002.04 million F/Y 2007/08. The average total deposit of NSBIL is Rs 19803.27 millions. The investment on Govt. securities of NSBIL is increasing form fiscal year 2008/09 of study period. The highest amount of investment on Govt securities is Rs 4313.32 million in F/Y 2011/12 and lowest amount is Rs 2345.58 million in F/Y 2008/09. The average amount of Govt. securities is Rs 3318.558 millions. The current asset of NSBIL is continuously increasing trend. The highest current asset amount of NSBIL is Rs 31966.34 million in F/Y 2011/12 and lowest amount is Rs 9976.28 millions in F/Y 2007/08. The average current asset amount of NSBIL is Rs 18057.12 million. The amount of first three fiscal years is lower and last two year amount is higher than average current asset of NSBIL. The following figure show the liquidity of NSBIL

Figure 4.3

Main Component of Liquidity of NSBIL



4.1.3 Liquidity Profile Analysis

Liquidity profile analysis is financial cum banking tool, which is very useful to measure liquidity position of commercial banks properly. It is a scientific concept in the banking sector and newly introduced in Nepal. Under directive No. 5, Nepal Rastra Bank has prescribed this tool to measure the liquidity position of commercial banks it is found that this tool has been adopted from 2002 and most of the banks have followed this tool.

In the following section, an attempt has been made to analyze the liquidity position of sampled commercial banks by matching assets and liability based on the maturity period. The individual analyses of liquidity profile of sampled banks are presented below.

4.1.3.1. Liquidity Profile Analysis of NABIL

Table 4.4

Liquidity Profile Analysis of NABIL (Rs. In million)

Year	Particular	Maturity Period					
		0-90 days	91-180 days	181-270 days	271-365 days	Above one years	Total
2007/08	Assets	7241	2106.1	846.6	3663.8	8830.8	22688.3
	Liabilities	3311.8	1878.6	994.4	476.2	16027.4	22688.4
	Difference	**3929.2**	**227.5**	**-147.8**	**3187.6**	**-7196.6**	**-0.1**
2008/09	Assets	5668.5	3141.2	2664.1	5482.8	10667.6	27621.6
	Liabilities	5255.1	2549.2	686.9	767.3	18363.1	27621.6
	Difference	**413.4**	**592**	**1977.2**	**4715.5**	**-7695.5**	**0**
2009/10	Assets	11996.1	1581.7	2313.7	4230.6	17431.9	37554
	Liabilities	8143.4	2834.1	1892.8	2053.3	22630.4	37554
	Difference	**3852.7**	**-1252.4**	**420.9**	**2177.3**	**-5198.5**	**0**
2010/11	Assets	8396	2922	2028	3992	26988	44325
	Liabilities	8280	1215	2116	2858	29856	44325
	Difference	**116**	**1707**	**-88**	**1134**	**-2868**	**0**
	Assets	18501	5274	1779	4022	29832	59408
2011/12	Liabilities	12348	3805	4651	4722	33881	59408
	Difference	**6153**	**1469**	**-2872**	**-700**	**-4049**	**0**

Source: Annual Report of NABIL

Above table show the classification of asset and liabilities based on maturity period of NABIL. the table presented table of liquidity statement of F/Y 2007/08 to 2011/12. The table indicate that it is clear that the there is no mismatch between the short term assets and liabilities of Nabil Bank. The management of short assets has been done very meticulously by the bank. This shows a very strong liquidity position of the bank throughout the study period. The liquidity table is presented according to the format 5.1 prescribed by the Nepal Rastra Bank Directive as provided by the management.

4.1.3.2 Liquidity profile Analysis of EBL

Table 4.5

Liquidity Profile Analysis of EBL

(Rs. In million)

Year	Particular	Maturity Period					
		0-90 days	91-180 days	181-270 days	271-365 days	Above one years	Total
2007/08	Assets	5132.5	1264.5	1296.1	3705.7	4538.8	15937.6
	Liabilities	2492.8	480.3	232.1	1578.7	9318.6	14102.5
	Difference	**2639.7**	**784.2**	**1064**	**2127**	**-4779.8**	**1835.1**
2008/09	Assets	6816.2	2344	1684.9	3381.7	7212.5	21439.3
	Liabilities	5038.9	410.6	505.8	1408.9	11122.1	18486.3
	Difference	**1777.3**	**1933.4**	**1179.1**	**1972.8**	**-3909.6**	**2953**
2009/10	Assets	15323.1	3288.3	2963.3	3186.9	2133.7	26895.3
	Liabilities	5402.5	2911.5	1688.8	1352	12921.5	24276.3
	Difference	**9920.6**	**376.8**	**1274.5**	**1834.9**	**-10787.8**	**2619**
2010/11	Assets	18885.8	2607.6	4138.3	6793.8	4141.5	36566.9
	Liabilities	12685.4	1427.3	1847.9	1327.3	16647	33934.9
	Difference	**6200.4**	**1180.3**	**2290.4**	**5466.5**	**-12505.5**	**2632**
	Assets	24779.8	3817.8	3094.7	3359.9	5915.8	40968
2011/12	Liabilities	14077.1	2685.5	2555.5	2919.4	15399.3	37636.8
	Difference	**10702.7**	**1132.3**	**539.2**	**440.5**	**-9483.5**	**3331.2**

Source: Annual Report of EBL

Above table show the classification of asset and liabilities based on maturity period of EBL. It's also called liquidity statement table. The above table shows liquidity statement table of EBL from F/Y 2007/08 to 2011/12. During the research, there is mismatch between the short term assets and liabilities, the excess of assets over the

liabilities shows its strong liquidity position in the study period. This is a clear example of inefficient management of bank's short term maturity assets. There is difference between the assets and a liability which means that the bank can not proper manage its short term maturity assets properly.

4.1.3.3 Liquidity Profile Analysis of NSBIL

Table 4.6

Liquidity Profile Analysis of NSBIL

(Rs. In million)

Year	Particular	Maturity Period					
		0-90 days	91-180 days	181-270 days	271-365 days	Above one years	Total
2007/08	Assets	5647	1442	1125	1760	3426	13403
	Liabilities	2504	736	1803	798	5971	11814
	Difference	**3143**	**706**	**-678**	**962**	**-2545**	**1589**
2008/09	Assets	5877	1699	2438	839	3310	14165
	Liabilities	3811	1301	1163	1466	4717	12460
	Difference	**2066**	**398**	**1275**	**-627**	**-1407**	**1705**
2009/10	Assets	9245	1113	305	1712	5072	17449
	Liabilities	5737	1607	996	1309	5891	15542
	Difference	**3508**	**-494**	**-691**	**403**	**-819**	**1907**
2010/11	Assets	10346	2539	4995	7230	5664	30776
	Liabilities	6395	2577	6935	5186	7790	28884
	Difference	**3951**	**-38**	**-1940**	**2044**	**-2126**	**1892**
	Assets	13425.3	4031.7	9788.7	4720.6	10238.9	42205.22
2011/12	Liabilities	12742.9	3896.36	11084.95	2452.88	9273.7	39450.82
	Difference	**682.4**	**135.34**	**-1296.25**	**2267.72**	**965.2**	**2754.4**

Source: Annual Report of NSBIL

Above table show the liquidity statement table of the NSBIL. The classification of asset and liabilities based on maturity period of NSBIL is presented. The above table shows liquidity statement table of NSBIL from F/Y 2007/08 to 2011/12. There is difference between the assets and liabilities of NSBIL which means that the bank can not proper manage its short term maturity assets properly. During the research, there is mismatch between the short term assets and liabilities, the excess of assets over the liabilities shows its strong liquidity position in the study period.

The conclusion of individual analysis of NABIL, EBL and NSBIL, NABIL is in proper and efficient track of maturity matching between assets and liabilities. But EBL and NSBIL have over and excess the current asset over the current liability. The excess of assets of EBL and NSBIL shows its strong liquidity position. Comparatively the liquidity positions of all the banks are strong

4.1.4 Ratio Analysis

Ratio analysis shows the mathematical relationship between two accounting figures. It helps to analyze the financial strengths and weaknesses of the banks. It is also inevitable for the quantitative judgment with which the liquidity management of banks can be presented properly.

4.1.4.1 Liquidity Ratio

Commercial bank must maintain its satisfactory liquidity posting to satisfy the credit needs of community, to meet demands for deposit–withdrawals, pay maturity obligation in time and convert non-cash assets into cash to satisfy immediate needs without loss to bank and consequent impact on long-run profit. Liquidity ratio is mainly used to analyze the short-term strength of commercial banks.

i) Analysis of Current Ratio

This ratio measures the liquidity position of the commercial banks. It indicates the ability of Banks to meet the current liquidity.

Table. 4.7

Current Assets to Current Liability (in times)

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	2.08	2.38	1.71
2008/09	1.83	1.93	1.40
2009/10	1.35	2.18	1.28
2010/11	1.2	1.88	1.19
2011/12	1.16	1.58	1.06
Mean	1.524	1.99	1.328
S.D.	0.409	0.305	0.247
C.V	0.269	0.153	0.186

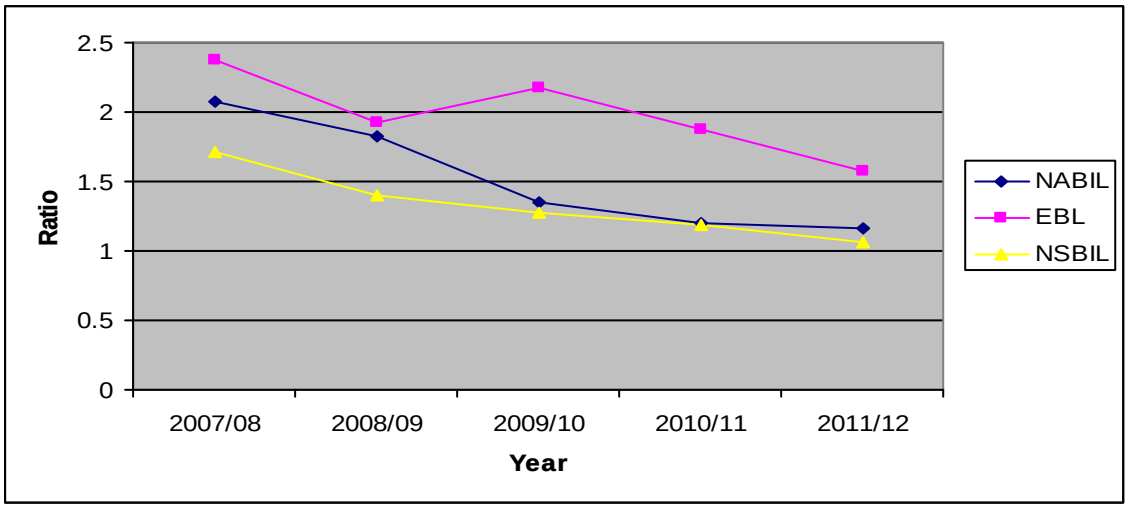
Source: Financial analysis Report of Concern Bank

Above Table shows the current ratio of NABIL, EBL and NSBIL bank during the study period. The current ratios of NABIL and NSBI have decreasing whereas EBL has fluctuating trend. In general, it can be said that all banks have sound ability to meet their short- term obligations. The highest ratio of NABIL, EBL and SBI are 2.08, 2.38 and 1.71 times in F/Y 2007/08. Similarly lower ratios are 1.16 times, 1.58 times and 1.06 times in F/Y 2007/08. . Likewise, S. D. and C.V. of NABIL are 0.409 and 0.269, EBL are 0.305 and 0.153 and SBIL are 0.247 and 0.186 respectively.

The average mean current ratio of NABIL, EBL and NSBIL are 1.524 times, 1.99 times and 1.328 times. It is known that all these three banks have in better liquidity position because the standard ratio is more than 1:1. The average current ratio of EBL is greater than NABIL and NSBIL. It indicates that EBL has high portion current asset rather than current liability. Banks require more liquid assets with compare to current liabilities in order to provide better bank service. The NSBIL has lowest current ratio. Which depict less liquidity position. The C.V. of EBL is lower than other two banks. Which indicates consistently in balance in its current ratio and highest C.V. of NABIL indicates high volatile in its current ratio. The following figure shows the current ratio of NABIL, EBL and NSBIL certainly.

Figure 4.4

Current Ratio of NABIL, EBL and NSBIL



ii) Cash and Bank balance to Current Assets Ratio

Cash and Bank balance to current assets ratio reveals the position of cash and bank into cash and bank balance in total of current assets. Cash and bank balances are highly liquid assets than other current assets. So this ratio scans higher liquidity position than current ratio. Following table shows the data relating to cash and bank balance to current assets.

Table 4.8

Cash and Bank Balance to Current Assets Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	4.55	13.62	11.21
2008/09	8.25	16.81	10.34
2009/10	13.27	10.77	10.85
2010/11	19.46	19.01	4.685
2011/12	4.73	22.31	10.76
Mean	10.052	16.504	9.569
S.D.	6.338	4.508	2.748
C.V	0.630	0.273	0.287

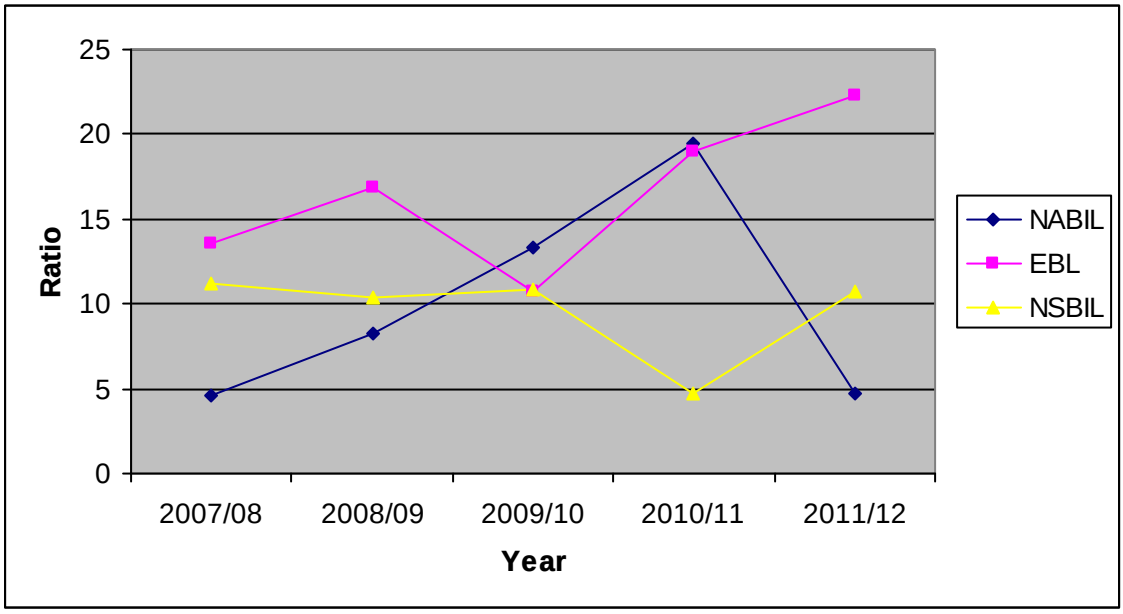
Source: Financial analysis Report of Concern Bank

Above table shows the cash and bank balance to current assets ratio of NABIL, EBL and NSBIL. The cash and bank balance to current assets ratio of all banks have fluctuating trend. The highest ratio of NABIL is 19.46% in year 2010/11 and lowest ratio is 4.55% in year 2007/08. The highest ratio of EBL is22.31% in 2011/12 and lowest ratio is 10.77% in 2009/10. Similarly the highest ratio of NSBIL is 11.21% in 2007/08 and lowest ratio is 4.685% in 2010/11. The standard deviation and coefficient of variation of NABIL are 6.338 and 0.630, EBL is 4.508 and 0.273 and NSBIL are 2.748 and 0.287 respectively.

The average cash and bank balance to current assets ratio of NABIL, EBL and NSBIL are 10.052, 4.508 and 9.569 percent. The average ratio of EBL is greater than NABIL and NSBIL. It indicates that EBL has high portion cash and bank balance form its current asset. It means EBL is slightly sound liquidity position than other banks. The NSBIL has lowest current ratio. Which depict less liquidity position. The C.V. of EBL is also lower than other two banks. Which indicates consistently in balance in its ratio and highest C.V. of NABIL indicates high volatile in its current ratio. The following figure shows the cash and bank balance to current asset ratio of NABIL, EBL and NSBIL

Figure 4.5

Cash and Bank Balance to Current Assets Ratio



iii) Cash and Bank Balance to Current Deposit Ratio

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

Table 4.9

Cash and Bank Balance to Current Deposit Ratio

Ratio in %

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	21.65	135.54	79.40
2008/09	41.20	142.86	58.16
2009/10	50.55	107.05	77.27
2010/11	61.54	126.84	41.07
2011/12	17.71	187.35	120.25
Mean	38.53	139.93	75.23
S.D.	18.705	29.702	29.608
C.V	0.485	0.212	0.393

Source: Financial analysis Report of Concern Bank

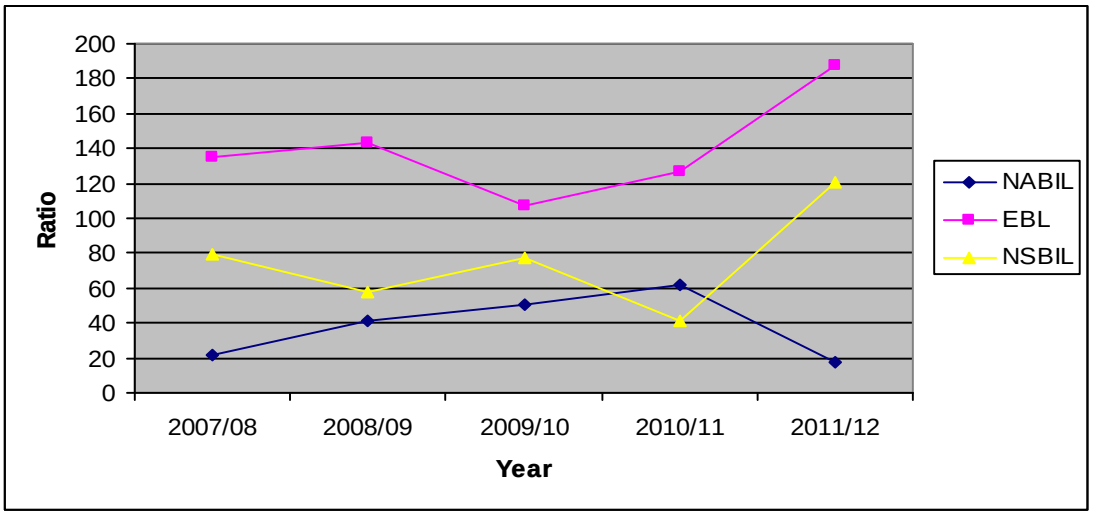
Above table shows the cash and bank balance to current deposit ratio of NABIL, EBL and NSBIL. the cash and bank balance to current deposit ratio of all sample banks have fluctuating trend. The highest ratio of NABIL is 61.54% in year 2010/11 and lowest ratio is 17.71% in year 2011/12. The highest ratio of EBL is 187.35% in 2011/12 and lowest ratio is 107.05% in 2009/10. Similarly the highest ratio of NSBIL is 120.25% in 2011/12 and lowest ratio is 41.07% in 2010/11. The S.D and C.V of NABIL are 18.705 and 0.485, EBL is 29.702 and 0.212 and NSBIL is 29.608 and 0.393 respectively.

The average cash and bank balance to current deposit ratio of NABIL, EBL and NSBIL are 38.53%, 139.93% and 75.23%. The average ratio of EBL is greater than NABIL and NSBIL. EBL has high portion cash and bank balance forms its current deposit and ABIL least. The lower of C.V. of EBL indicates more consistency in its

ratio. Following figure depict clearly about cash and bank balance to current deposit ratio clearly.

Figure 4.6

Cash and Bank Balance to Current Deposit Ratio



iv) Investment of Government treasury bills to Current Assets Ratio

Government securities are slightly liquid assets as well as confidential investment until the state is living. So it is also a very important and very near cash item of current assets. Investments on Government treasury bills to current assets ratio visualize the proportion of investment on government securities to current assets.

Table 4.10

Investment on Government Treasury Bills to Current Assets

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	16.6	31.13	36.003
2008/09	28.36	33.07	21.61
2009/10	23.09	19.47	24.53
2010/11	21.38	15.87	13.17
2011/12	26.85	12.42	13.49
Mean	23.256	22.392	21.761
S.D.	4.659	9.232	9.391
C.V	0.2003	0.412	0.431

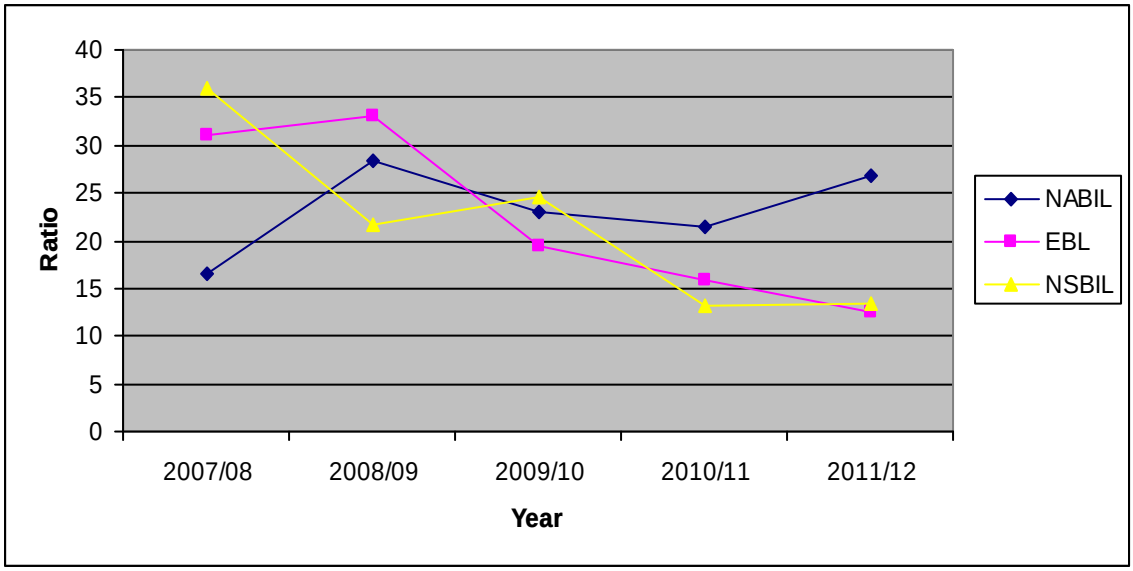
Source: Financial analysis Report of Concern Bank

Above table shows the investment on Govt. Treasury bill to current asset ratio of NABIL, EBL and NSBIL. The investment on Govt. Treasury bill to current asset ratio of al banks have fluctuating trend. The highest ratio of NABIL, EBL and SBI are 28.36% in F/Y 2008/09, 33.07% I F/Y 2008/09 and 36.003 in F/Y 2007/08. Similarly lowest ratios are 16.6% in F/Y 2007/08, 12.42% in F/Y 2011/12 and 13.17% in F/Y 2010/11. Likewise, S. D. and C.V. of NABI are 4.659 and 0.2003, EBl 9.232 and 0.412 and NSBIL are 9.391 and 0.431 respectively.

The average investment on Govt. Treasury bill to current asset ratio of NABIL, EBL and NSBIL are 23.256%, 22.392%, and 21.762%. The average ratio of NABIL has little higher than EBL and NSBIL. It indicates that NABIL has invested little high portion of its current asset. It means NABIL conscious in invest in risk free asset than other banks. The NSBIL has lowest current ratio. Which depict less investment in Govt. treasury bills. The C.V. and S.D of NABIL has also lower than other two banks. This indicates low risky and consistently in its ratio and highest C.V. of NSBIL indicates high volatile in its ratio. The following figure shows the investment on Govt. Treasury bill to current asset ratio of NABIL, EBL and NSBIL

Figure 4.7

Comparative Analysis of Short term Investment to Total Deposit Ratio



v) Investment on Govt. security to Total Investment Ratio

This ratio shows the percentage of investment on government security and Treasury bills on total investment of sampled banks. This ratio is calculated by dividing investment on government security by total investment amount and the formula is:

Table 4.11

Investment on Govt. Security to Total Investment Ratio

Ratio in %

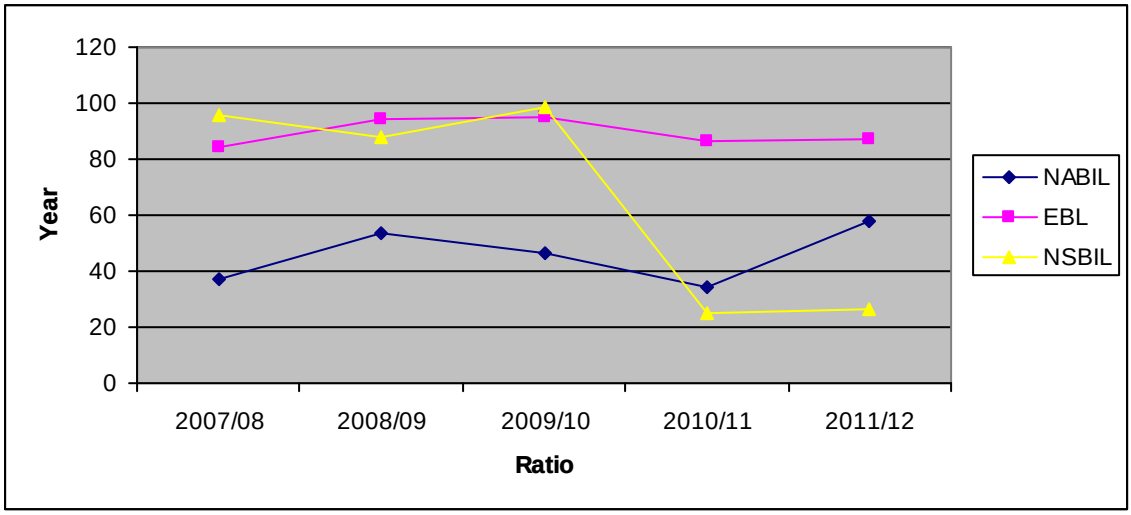
Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	37.23	84.48	95.55
2008/09	53.75	94.39	88.20
2009/10	46.74	95.30	98.27
2010/11	34.23	86.51	24.89
2011/12	58.09	86.94	26.45
Mean	46.01	89.52	66.67
S.D.	10.274	4.956	37.614
C.V	0.223	0.055	0.564

Source: Financial analysis Report of Concern Bank

Above table shows the investment on Govt. securities to total investment ratio of NABIL, EBL and NSBIL. The investment on Govt. securities to total investment ratio of all sample banks have fluctuating trend. The highest ratio of NABIL is 58.09% and lowest ratio is 34.23%. The highest ratio of EBL is 95.30% and lowest ratio is 84.48%. Similarly the highest ratio of NSBIL is 98.27% and lowest ratio is 24.89%. Likewise, S. D. and C.V. of NABI are 10.274 and 0.223, EBL 4.956 and 0.055 and NSBIL are 37.614 and 0.564 respectively. The average mean ratio of NABIL, EBL and NSBIL are 46.01%, 89.52%, and 66.67%. The average ratio of EBL has little higher than NABIL and NSBIL. It indicates that investment of EBL is in govt. securities. It means EBL invested more in risk free asset than other banks. The C.V. and S.D of EBL has also lower than other two banks. This indicates low risky and consistently in its ratio. The following figure shows the investment on Govt. security to total investment ratio of NABIL, EBL and NSBIL.

Figure 4.8

Investment on Govt. Security to Total Investment Ratio



vi) Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are the liquid current assets. This ratio measures the percentage of liquid fund with the bank to make immediate payment to the depositors. Both higher and lower ratios are not desirable. The reserve requirement below 10% of deposit liabilities is noted as fully liberalized, the following table shows the ratio measurement of the years.

Table 4.12

Cash and Bank Balance to Total Deposit Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	3.26	11.25	10.16
2008/09	5.99	13.15	9.81
2009/10	8.37	11.13	9.79
2010/11	9.03	18.50	4.21
2011/12	3.02	21.17	9.86
Mean	5.934	15.04	8.766
S.D.	2.791	4.549	2.551
C.V	0.470	0.302	0.291

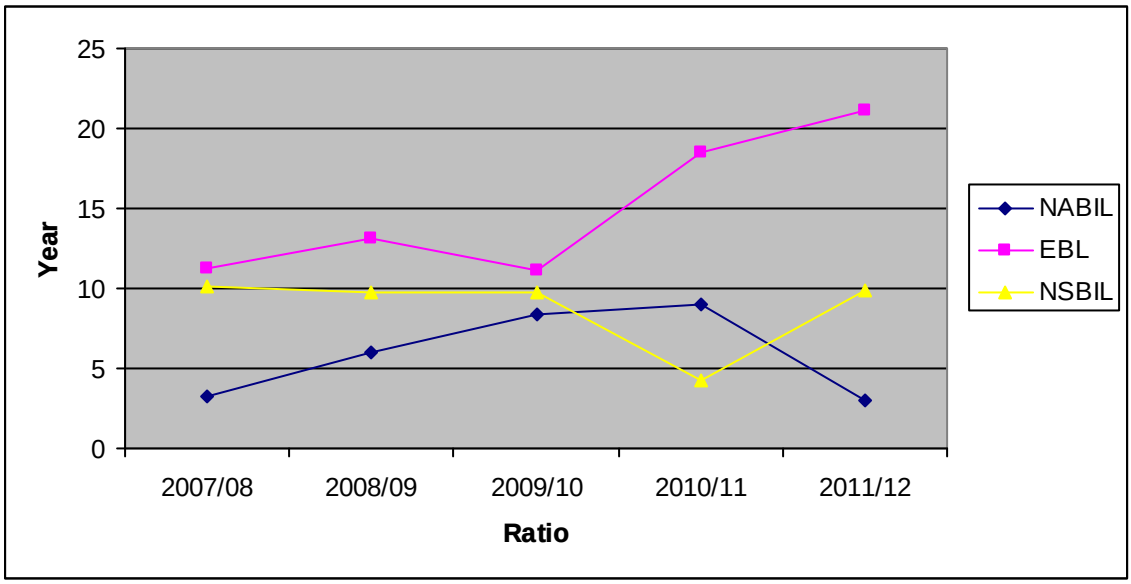
Source: Financial analysis Report of Concern Bank

Above table shows the cash and bank balance to total deposit ratio of NABIL, EBL and NSBIL. The cash and bank balance to total deposit ratio of NABIL is increasing EBL is fluctuating and NSBIL is decreasing trend beside last year. The highest ratio of NABIL, EBL and SBIL are 9.03%, 21.17% and 10.16% in F/Y 2007/08. Similarly the lowest ratio of NABIL is 3.02% in F/Y 2009/10, 11.13% of EBL in F/Y 2009/10 and 4.21% of NSBIL in F/Y 2010/11. The standard deviation of NABIL, ENL and NSBIL are 2.791, 4.549 and 2.551. Similarly coefficient of variation of NSBIL, EBL and NSBIL are 0.470, 0.302 and 0.291 respectively.

The average mean ratio of NABIL, EBL and NSBIL are 5.934%, 15.04% and 8.766% respectively. The average ratio of EBL has higher than NABIL and NSBIL. It indicates that EBL retain more its total deposit as cash and bank balance. The higher ratio of signifies that sound liquid fund to make immediate payment to the depositors but excess liquidity represents low lending and investment opportunities. The C.V. and S.D of NSBIL has lower than other two banks. This indicates low risky and consistently in its ratio and highest C.V. of NABIL indicates high volatile in its ratio. The following figure represents the Cash and Bank balance to Total deposit ratio.

Figure 4.9

Cash and Bank Balance to Total Deposit Ratio



vii) Current Deposit to Total Deposit Ratio

This ratio measures the portions 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 formula is:

Table 4.13

Comparative Analysis of Current Deposit to Total Deposit Ratio

Ratio in %

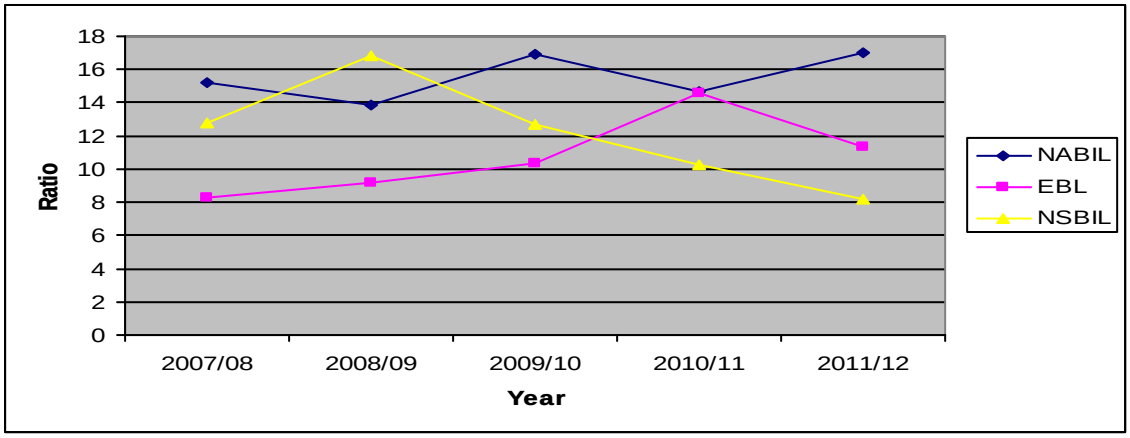
Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	15.24	8.301	12.80
2008/09	13.86	9.20	16.87
2009/10	16.88	10.39	12.67
2010/11	14.67	14.58	10.25
2011/12	17.03	11.30	8.20
Mean	15.54	10.75	12.16
S.D.	1.386	2.424	3.247
C.V	0.089	0.225	0.267

Source: Financial analysis Report of Concern Bank

Above table shows the current deposit to total deposit ratio of NABIL, EBL and NSBIL. The current deposit to total deposit ratio of all sample bank are fluctuating trend in study period. The highest ratio of NABIL is 16.88% in F/Y2009/10, EBL is 14.58 in 2010/11 and 16.87% of NSBIL in F/Y 2008/09. Similarly the lowest ratio of NABIL is 13.86% in F/Y 2008/09, EBL is 8.301% in F/Y 2009/10 and 8.20% of NSBIL in F/Y 2011/12. The S.D. and C.V of NABIL are 1.386 and 0.089, EBL are 2.424 and 0.225 and NSBIL are 3.247 and 0.267 respectively. The average mean ratio of NABIL, EBL and NSBIL are 15.54%, 10.75% and 12.16%. The average ratio of NABIL has higher than EBL and NSBIL. It indicates that NABIL has high portion current deposit in its total deposit. It means NABIL should keep more liquidity for prompt payment. The C.V. of EBL has lower which indicates consistently in its ratio. The following figure shows the current deposit to total deposit ratio of NABIL, EBL and NSBIL.

Figure 4.10

Current Deposit to Total Deposit Ratio



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

Table: 4.14

Cash Balance with NRB to Total Deposit Ratio

Ratio in %

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	1.67	8.25	5.69
2008/09	4.55	6.48	4.86
2009/10	5.84	4.51	2.94
2010/11	7.09	14.36	1.59
2011/12	1.18	15.23	5.28
Mean	4.066	9.766	4.072
S.D.	2.578	4.787	1.742
C.V	0.634	0.490	0.428

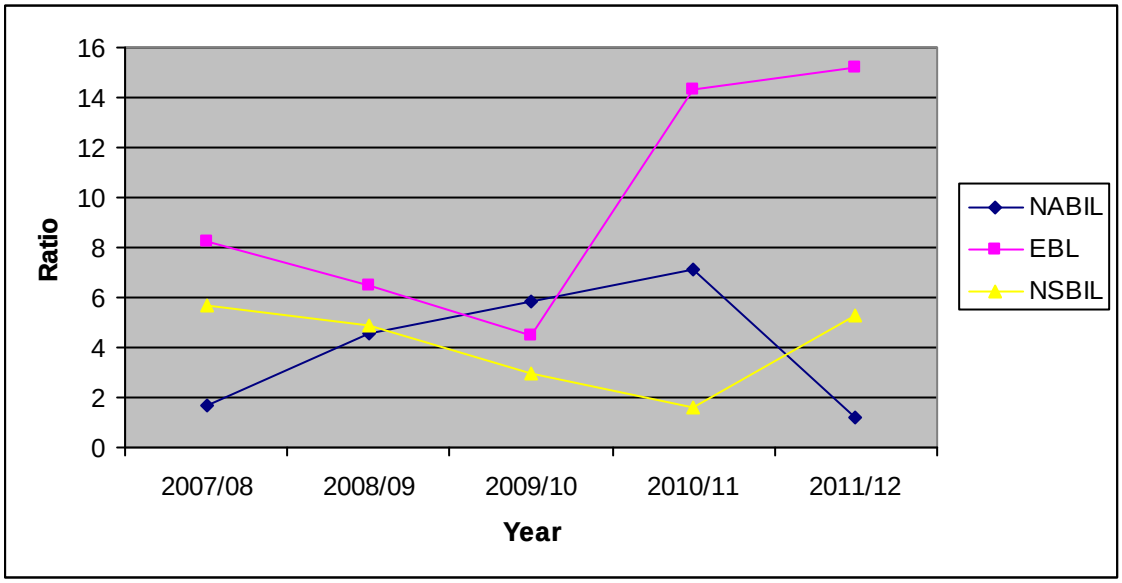
Source: Financial analysis Report of Concern Bank

Above table shows the balance in NRB to total deposit ratio of NABIL, EBL and NSBIL. The table reveals that balance in NRB to total deposit ratio of three sample banks have fluctuating trend. The highest ratio of NABIL is 7.09% in year F/Y 2010/11 and lowest ratio is 1.18% in year 2011/12. The highest ratio of EBL is 15.23% in F/Y 2011/12 and lowest ratio is 4.51% in 2009/10. Similarly the highest ratio of NSBIL is 5.69% in F/Y 2007/08 and lowest ratio is 1.59% in 2010/11. The standard deviation is 2.578 and coefficient of variation is 0.643 of NABIL. Similarly, The standard deviation is 4.787 and coefficient of variation is 0.490 of EBL and the standard deviation NSBIL is 1.742 and coefficient of variation is 0.428.

The average balance in NRB to total deposit ratio of NABIL, EBL and NSBIL are 4.066%, 9.766% and 4.072%. The average balance in NRB to total deposit of EBL is greater than NABIL and NSBIL. It indicates that EBL kept more of total deposit in NRB. Lower average ratio indicates low portion of deposit in NRB of NABL. The C.V. of NSBIL is low which indicates consistently in balance in NRB to total deposit ratio and higher C.V. of NABIL indicates high volatile in its ratio. The following figure shows the balance in NRB to total deposit ratio of NABIL, EBL and NSBIL undoubtedly.

Figure 4.11

Balance with NRB to Total Deposit Ratio



ix) Cash Reserve Ratio (CRR)

Commercial banks are directed by Nepal Rastra Bank, the central bank to maintain certain percentage of their deposit 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 issued notice in monetary policy and prescribed CRR rate as 6% of total deposit but it was revised in 2004 as 5% of total deposit. Since 2004 NRB has withdrawn the other reserve ratio for liquidity purpose like statutory liquidity ratio. Presently commercial banks have to maintain 5.5% of their total deposit in NRB and own in hand. It is computed by dividing the cash reserve of commercial banks by total deposit and the formula is:

$$\text{Cash Reserve Ratio (CRR)} = \frac{\text{Cash in Reserve}}{\text{Total Deposit}} \times 100$$

Table: 4.15

Comparative Analysis of Cash Reserve Ratio (CRR)

Ratio in %

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	3.26	1.88	5.83
2008/09	6.00	2.94	5.60
2009/10	8.37	4.56	5.72
2010/11	9.03	14.26	6.67
2011/12	3.02	15.53	9.03
Mean	5.94	7.83	6.57
S.D.	2.791	6.531	1.438
C.V	0.470	0.834	0.219

Source: Financial analysis Report of Concern Bank

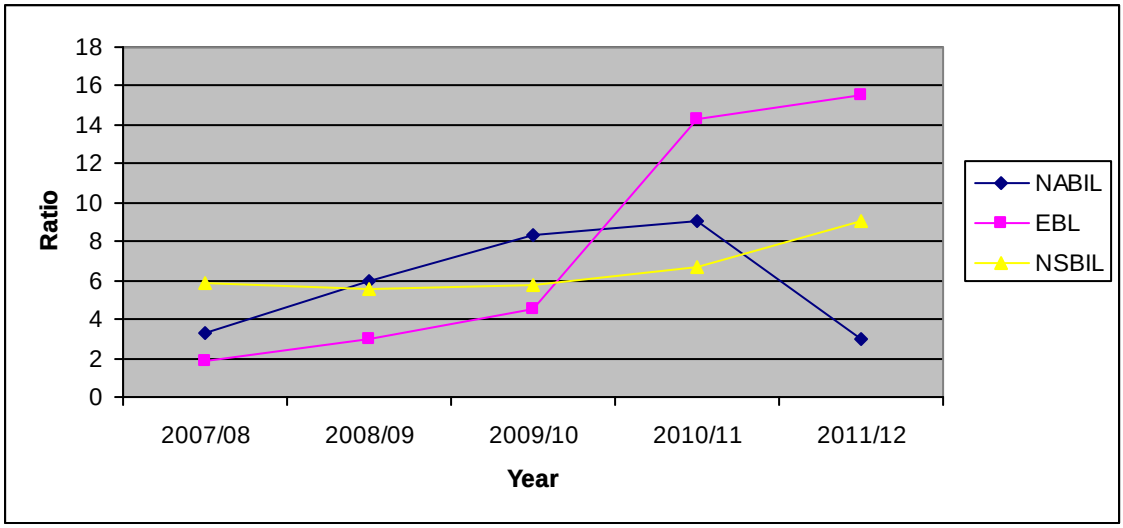
Above table shows the cash reserve ratio (CRR) of NABIL, EBL and NSBIL. The cash reserve ratio (CRR) ratio NABIL is increasing beside F/Y 2011/12 and lest two bank EBL and NSBIL are increasing trend. The highest CRR ratio of NABIL is 9.03% in year F/Y 2010/11 and lowest ratio is 3.02 in year 2011/12. The highest ratio

of EBL is 15.33% in F/Y 2010/12 and lowest ratio is 1.88% in 2007/08. Similarly, the highest ratio of NSBIL is 9.03% in F/Y 2010/11 and lowest ratio is 5.60% in 2008/09. The standard deviation and coefficient of variation of NABIL are 2.791 and 0.470, EBL are 6.531 and 0.834 and NSBIL are 1.438 and 0.219 respectively.

The average CRR ratio of NABIL, EBL and NSBIL are 5.94%, 7.83% and 6.57%. The average CRR of EBL is greater than NABIL and NSBIL. It indicates that EBL kept more amounts in cash reserve. Lower average CRR indicates low portion of cash reserve ratio of NSBIL. The C.V. of NSBIL is low which indicates consistently in its CRR and higher C.V. of EBL indicates high volatile in its cash reserve ratio. The following figure show the cash reserve ratio of NABIL, EBL and NSBIL clearly.

Figure 4.12

Cash Reserve Ratio (CRR)



X) Balance with NRB to Current Deposit Ratio

This ratio presents the portion of balance with NRB on current deposit. It is used to measure the liquidity position of commercial banks and capacity to pay depositor amount promptly. This ratio can be calculated by using the following formula:

$$\text{Balance with NRB to Current Deposit Ratio} = \frac{\text{Balance with NRB}}{\text{Current Deposit}} \times 100$$

Table 4.16

Balance with NRB to Current Deposit Ratio

Ratio in %

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	10.94	99.45	44.46
2008/09	32.79	70.38	28.84
2009/10	34.62	43.37	23.23
2010/11	48.33	98.50	15.50
2011/12	6.95	134.79	64.39
Mean	26.726	89.298	35.284
S.D.	17.365	34.367	19.427
C.V	0.649	0.385	0.551

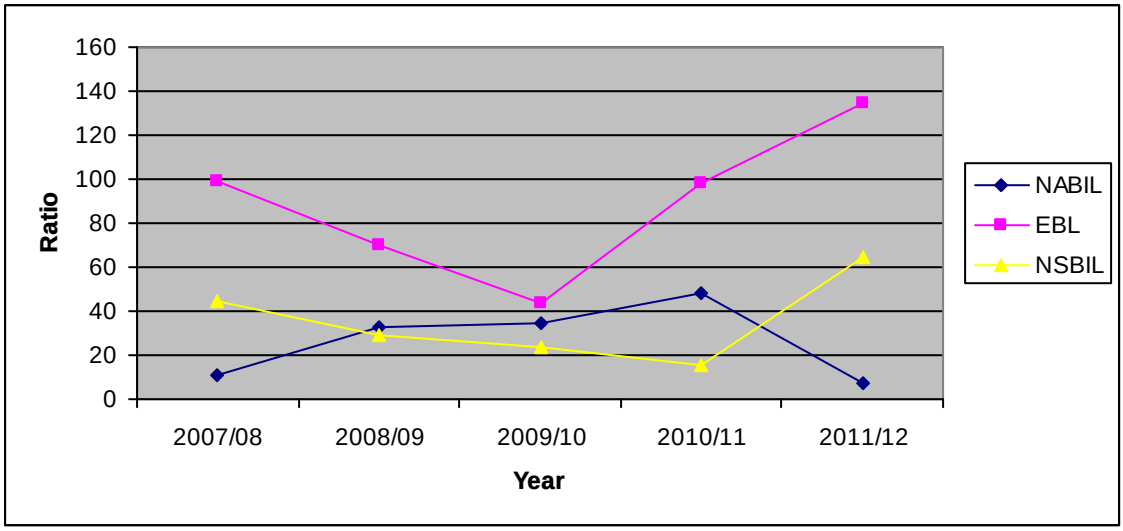
Source: Financial analysis Report of Concern Bank

Above table shows the balance in NRB to current deposit ratio of NABIL, EBL and NSBIL. The balance in NRB to total deposit ratio of three sample banks have fluctuating trend. The highest ratio of NABIL, EBL and NSBIL are 48.33%, 134.79 and 64.39%. Similarly the lowest ratio of are 6.95%, 43.37% and 15.50%. The standard deviation and coefficient of variation of NABIL are 17.365 and 0.649, EBL are 34.367 and 0.385 and the NSBIL are9.427 and 0.551 respectively.

The average balance in NRB to current deposit ratio of NABIL, EBL and NSBIL are 26.729%, 89.298% and 35.284%. The average balance in NRB to current deposit of EBL is higher than NABIL and NSBIL. It indicates that EBL kept more of current deposit in NRB and vice versa. The C.V. of EBL is low, which indicates consistently in ratio and higher C.V. of NABIL indicates high volatile in its ratio. The following figure shows the balance in NRB to current deposit ratio of NABIL, EBL and NSBIL more clearly.

Figure 4.13

Balance with NRB to Current Deposit Ratio



xi) Investment on government Securities to Total Deposit Ratio

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

Table 4.17

Investment on Government Securities to Total Deposit Ratio

Ratio in %

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	16.58	22.04	29.90
2008/09	11.90	19.42	32.65
2009/10	20.60	21.48	20.49
2010/11	14.56	23.46	22.13
2011/12	9.92	12.15	11.83
Mean	14.71	19.71	23.4
S.D.	4.155	4.468	8.242
C.V	0.282	0.227	0.352

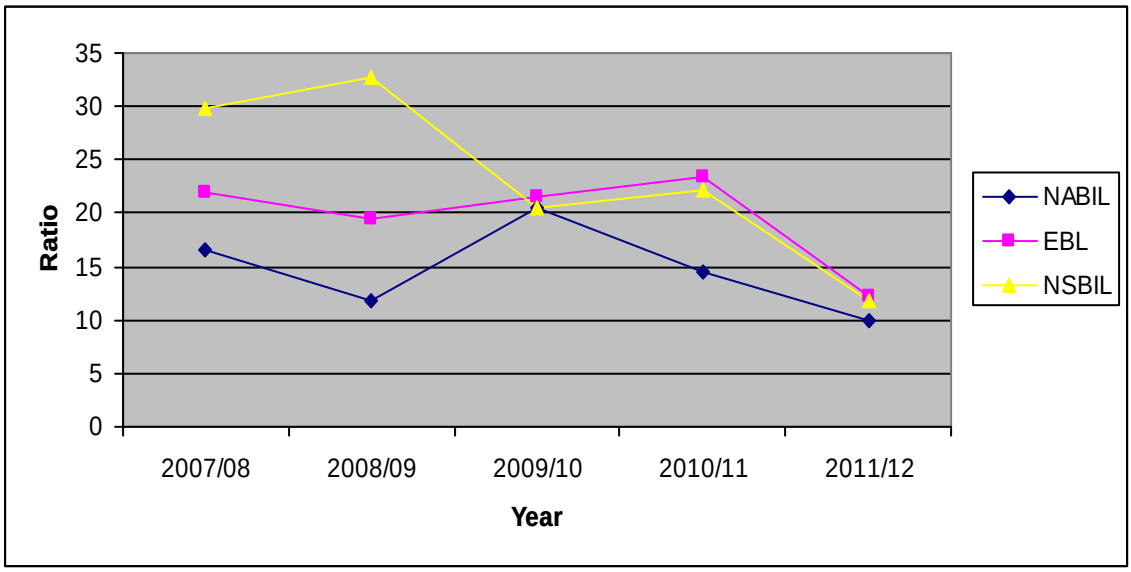
Source: Financial analysis Report of Concern Bank

The table show the investment on Govt. securities to total deposit ratio of NABIL, EBL and NSBIL the investment on Govt securities to total deposit ratio of three sample banks have decreased fluctuating trend. The highest ratio of NABIL is 20.60% in year F/Y 2009/10 and lowest ratio is 9.92% in year 2010/11. The highest ratio of EBL is 23.46% in F/Y 2010/11 and lowest ratio is 12.15% in 2011/12. Similarly the highest ratio of NSBIL is 32.65% in F/Y 2008/09 and lowest ratio is 11.83% in 2011/12. The standard deviation of NABIL, EBL and NSBIL are 4.155, 4.468 and 8.242. similarly coefficient of variation are 0.282 of NABIL, 0.227 of EBL and 0.352 of NSBIL respectively.

The average investment on Govt. securities to total deposit ratio of NABIL, EBL and NSBIL are 14.71%, 19.71% and 23.4%. The investment on Govt. securities to total deposit ratio of NSBIL is higher than NABIL and EBL. It indicates that NSBIL use more total deposit in government securities. NSBIL is investing in government securities the most out its total deposit. The C.V. of EBL is low, which indicates consistently in ratio and higher C.V. of NSBIL indicates high volatile in its ratio. The following figure shows investment on Govt. securities to total deposit ratio of NABIL, EBL and NSBIL.

Figure 4.14

Investment on Government Securities to Total Deposit Ratio



4.1.4.2 Assets Management Ratio

A commercial bank must be able to manage it's assets very well to earn higher profit, so to satisfy it's customers and also for its own existence. Assets management ratio measures how efficiently the bank manages the resources at its command. Through following ratios, assets management ability of banks has been measured.

i) Loan and Advance to Total Deposit Ratio

This ratio actually measures the extent to which the banks are successful to mobilize the total deposit on loan and advances for the purpose of profit generation. A higher ratio of loan and advances indicates better mobilization of collection deposit and vice-versa. But it should be noted that too high ratio might not be better from its liquidity point of view. Following Table shows the loan and advances to total deposit ratio of related banks.

Table. 4.18

Loan and Advance to Total Deposit Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	68.64	71.01	69.32
2008/09	68.13	75.13	82.66
2009/10	68.18	76.49	88.32
2010/11	73.85	71.68	54.13
2011/12	69.53	74.61	50.09
Mean	69.66	73.78	68.90
S.D.	2.405	2.342	16.872
C.V	0.035	0.032	0.245

Source: Financial analysis Report of Concern Bank

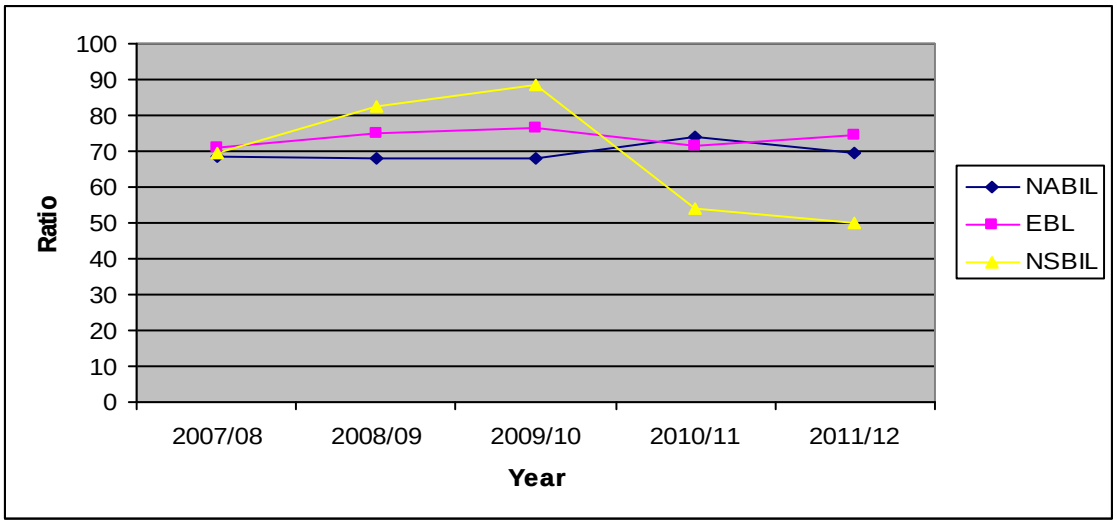
The table shows the loan and advance to total deposit ratio of NABIL, EBL and NSBIL. The loan and advance to total deposit of three sample banks have fluctuating trend. The highest ratio of NABIL is 73.85% in year F/Y 2010/11 and

lowest ratio is 68.13% in year 20097/10. The highest ratio of EBL is 76.49% in F/Y 2009/10 and lowest ratio is 71.01% in 2007/08. Similarly the highest ratio of NSBIL is 88.32% in F/Y 2009/10 and lowest ratio is 50.09% in 2011/12. The standard deviation of NABIL, EBL and NSBIL are 2.405, 2.342 and 16.872. Similarly coefficients of variation are 0.035, 0.032 and 0.245 of NABIL, EBL and NSBIL respectively.

The average loan and advance to total deposit ratio of NABIL, EBL and NSBIL are 69.66%, 73.78% and 68.90%. The loan and advance to total deposit ratio of EBL is higher than NABIL and NSBIL. It indicates that EBL use more total deposit as providing loan and advance. NSBIL provide least loan and advance from total deposit. According to NRB directives less than 80% of loan and advances to total deposit ratio is required to enable better mobilization of collected deposit. The C.V. of EBL is low, which indicates consistently in ratio and higher C.V. of NSBIL indicates high volatile in its ratio. The following figure shows loan and advance to total deposit ratio of NABIL, EBL and NSBIL.

Figure 4.15

Loan and Advance to Total Deposit Ratio



ii) Total Investment to Total Deposit Ratio

Commercial banks and financial companies invest their collected funds in various government securities and other financial or non-financial companies. This ratio

measures how successfully and efficiently the banks are mobilizing their funds at investment in various securities.

Table. 4.19

Total Investment to Total Deposit Ratio

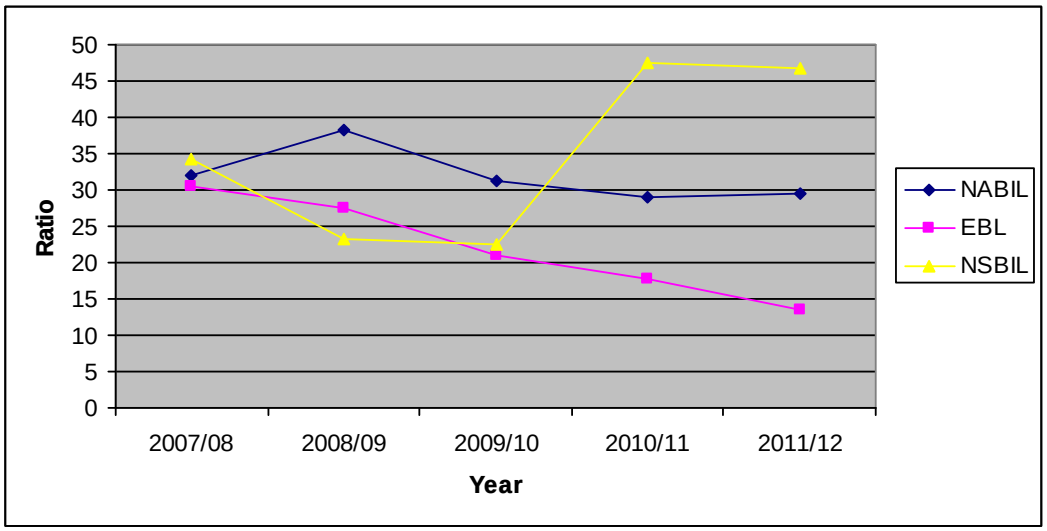
Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	31.94	30.43	34.17
2008/09	38.32	27.41	23.24
2009/10	31.14	21.10	22.52
2010/11	28.99	17.85	47.52
2011/12	29.45	13.56	46.73
Mean	31.97	22.07	34.83
S.D.	3.750	6.884	12.135
C.V	0.117	0.312	0.348

Source: Financial analysis Report of Concern Bank

Above Table shows that total investment to total deposit ratio NABIL, EBL and NSBIL. All banks have fluctuating trend. The highest ratio of NABIL is 38.32 and lowest is 28.99%. The highest ratio of EBL is 30.439% and lowest is 13.56%. Similarly the highest ratio of NSBIL is 47.52% and lowest ratio is 22.52. The S.D. and C.V. of NABIL are 3.750 and 0.117, EBL are 6.884 and 0.312 and NSBIL are 12.135 and 0.348. The average ratio of NABIL, EBL and NSBIL are 31.97%, 22.017% and 34.83%. The highest ratio of NSBIL indicates higher investment from total deposit. Lower C.V of NABIL signifies lower volatile in ratio. With the help of the following figure it can be seen more clearly.

Figure 4.16

Total Investment to Total Deposit Ratio



iii) Loan and Advances to Total Assets Ratio

A commercial bank's working fund plays very active role in profit generation through fund mobilization. This ratio reflects the extent to which the banks are successful in mobilizing their total assets on loan and advances for the purpose of income generation. A high ratio indicates better mobilization of funds as loan and advance and vice-versa. The following table shows loan and advances to total assets of NABIL, EBL and NSBIL.

Table. 4.20

Loan and Advances to Total Assets Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	57.87	61.41	58.51
2008/09	57.04	63.75	68.05
2009/10	57.54	67.55	70.48
2010/11	62.89	64.70	48.94
2011/12	61.88	66.59	45.94
Mean	59.44	64.8	58.38
S.D.	2.724	2.417	10.998
C.V	0.046	0.037	0.188

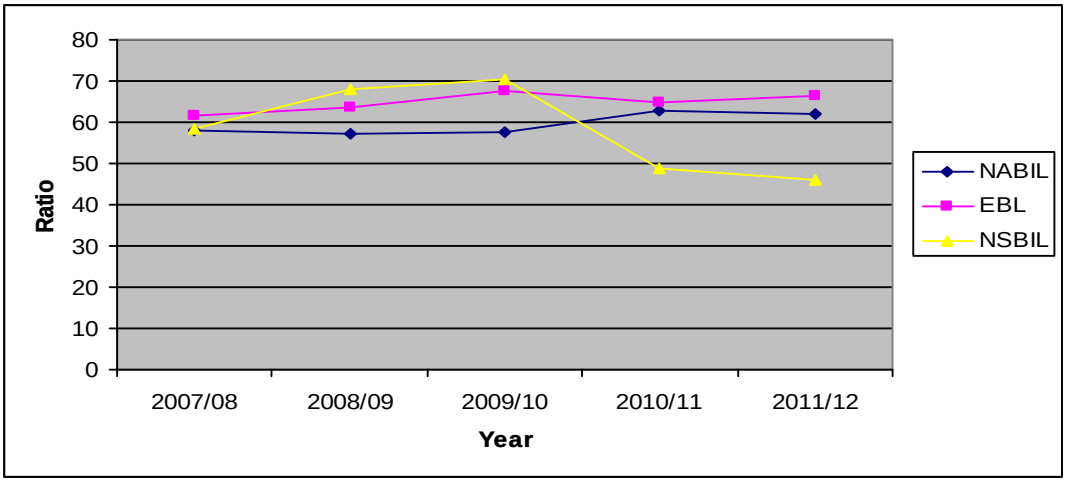
Source: Financial analysis Report of Concern Bank

Above table shows the loan and advances to total assets ratio of NABIL, EBL and NSBIL The loan and advance to total asset of three sample bank have fluctuating trend. The highest ratio of NABIL is 62.89% and lowest ratio is57.04. The highest ratio of EBL is 67.55% and lowest ratio is 61.41. Similarly the highest ratio of NSBIL is 70.48% and lowest ratio is 45.94%. The S.D. of NABIL, EBL and NSBIL are 2.724, 2.417 and 10.99 Similarly C.V is 0.046, 0.037 and 0.188 of NABIL, EBL and NSBIL respectively.

The average ratio of NABIL, EBL and NSBIL are 59.44%, 64.8% and 58.38%. The ratio of EBL is higher than NABIL and NSBIL which indicates that EBL provides higher loan and advance from total asset. EBL is better at mobilizing its total asset as loan and an advance Lower C.V of EBL signifies more consistency in ratio. Following figure shows loan and advance to total asset ratio of NABIL, EBL and NSBIL.

Figure 4.17

Loan and Advances to Total Assets Ratio



iv) Investment on Government Securities to Total Assets ratio

Investment on government securities is a less risky investment. Investment on government securities to total assets ratio measures how successfully selected banks have applied their total assets on various forms of government securities for profit maximization and risk minimization. Higher the ratios better the position of fund mobilization into investment on government securities and vice-versa.

Table. 4.21

Investment on Government Securities to Total Assets Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	10.31	22.23	27.55
2008/09	17.64	21.95	16.87
2009/10	12.51	17.76	17.66
2010/11	8.45	13.94	10.69
2011/12	15.23	10.52	11.34
Mean	12.828	17.28	16.822
S.D.	3.692	5.084	6.772
C.V	0.288	0.294	0.403

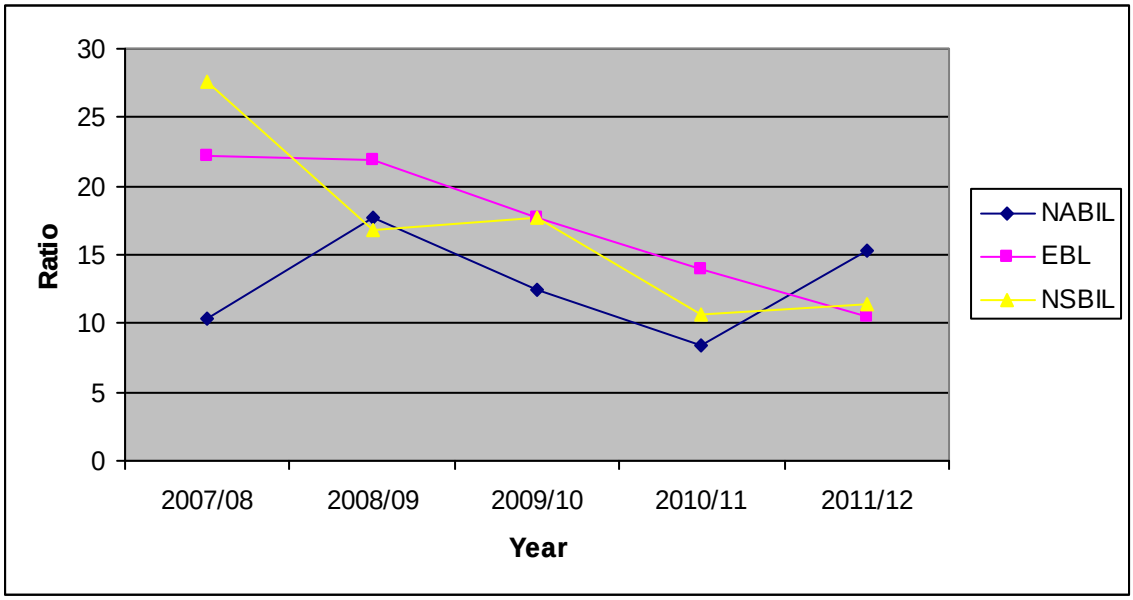
Source: Financial analysis Report of Concern Bank

Above table shows the investment on government treasury bills to Total assets of NABIL, EBL and NSBIL. The ratio of three sample bank have fluctuating trend. The highest ratio of NABIL is 17.64% in year F/Y 2008/09 and lowest ratio is 8.45% in year 2010/11. The highest ratio of EBL is 22.23% in F/Y 2007/08 and lowest ratio is 10.52% in 2011/12. Similarly the highest ratio of NSBIL is 27.55% in F/Y 2007/08 and lowest ratio is 10.69% in 2010/11. The standard deviation of NABIL, EBL and NSBIL are 3.692, 5.084 and 6.772. Similarly coefficients of variation are 0.288, 0.294 and 0.403 of NABIL, EBL and NSBIL respectively.

The average ratio of NABIL, EBL and NSBIL are 12.828%, 17.28% and 16.822%. The ratio of EBL is higher than NABIL and NSBIL which indicates that EBL invest more in govt. securities from its total asset. It means EBL has invested more money in risk free assets. Lower C.V of NABIL signifies more consistency in ratio. Following figure shows the investment on govt. treasury bills to total assets ratio of NABIL, EBL and NSBIL.

Figure 4.18

Investment on Government Securities to Total Assets Ratio



4.1.4.3 Profitability Ratio

Profitability ratios are the best indicators of overall efficiently. Here, these ratios presented and analyzed which are related with profit as well as fund mobilization. Through the following ratios, effort has been made to measure the profit earning capacity of three sample bank NABIL, EBL and NSBIL.

i) Return on Loan and advances

Every financial institution tries to mobilize their deposits on loan and advances properly. So this ratio helps to measure the earning capacity of selected banks. Returns on loan and advances ratio of selected banks are presented as follows.

Table. 4.22

Return on Loan and Advances

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	4.92	2.42	1.53
2008/09	4.34	2.18	2.69
2009/10	3.49	2.46	2.05
2010/11	3.74	2.67	2.09
2011/12	3.53	3.02	2.24
Mean	4.004	2.55	2.12
S.D.	0.614	0.315	0.416
C.V	0.153	0.123	0.196

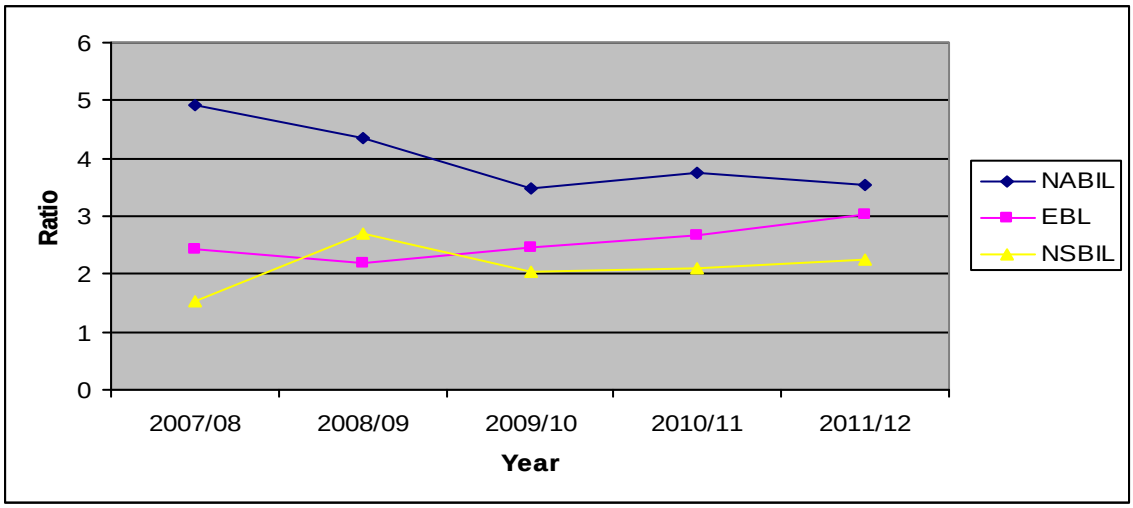
Source: Financial analysis Report of Concern Bank

Above table shows the return on loan and advance of NABIL, EBL and NSBIL. The return on loan and advances ratio of NABIL, EBL and NSBIL have fluctuating trend. The highest ratio of NABIL, EBL and NSBIL are 4.92%, 3.02% and 2.69%. Similarly lowest ratio of NABIL, EBL and NSIBL are 3.49%, 2.18% and 1.53% respectively. The standard deviation and coefficient of variation of NABIL are 0.614 and 0.153, EBL are 0.315 and 0.123 and the NSBIL are 0.416 and 0.196 respectively.

The average return on loan and advance ratio of NABIL, EBL and NSBIL are 4.004%, 2.55% and 2.12%. The ratio of NABIL has higher than EBL and NSBIL which indicates that NABIL getting higher earning by utilizing and providing loan and advance. It means NABIL has utilized the loan and advance for the profit generation. All three banks have less than 5% of earning. Lower C.V of EBL signifies more consistency in ratio. Following figure shows the return on loan and advance of NABIL, EBL and NSBIL.

Figure 4.19

Return on Loan and Advances



ii) Return on Total Assets

This ratio measures the overall profitability of all working fund i.e. Total assets. A firm has to earn satisfactory return on working funds for its survival. The following table shows return on total assets ratio of selected banks.

Table. 4.23

Return on Total Assets Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	2.84	1.49	0.90
2008/09	2.47	1.39	1.83
2009/10	2.01	1.66	1.44
2010/11	2.35	1.73	1.02
2011/12	2.18	2.01	1.03
Mean	2.37	1.656	1.244
S.D.	0.315	0.239	0.386
C.V	0.133	0.144	0.310

Source: Financial analysis Report of Concern Bank

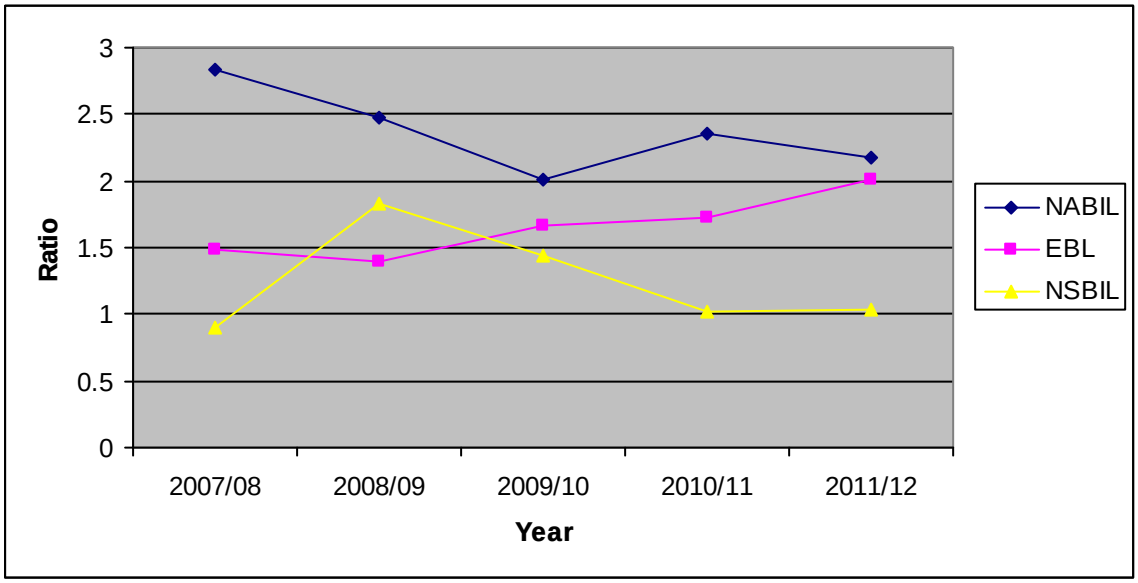
Above table shows the Return on Total Assets of NABIL, EBL and NSBIL. The Return on Total Assets of all sample banks have fluctuating trend. This table states

the net profit to total assets of selected banks during the study period. The highest ratio of NABIL is 2.84% in year F/Y 2007/08 and lowest ratio is 2.01% in year 2009/10. The highest ratio of EBL is 2.01% in F/Y 2011/12 and lowest ratio is 1.39% in 2008/09. Similarly the highest ratio of NSBIL is 1.83% in F/Y 2008/09 and lowest ratio is 0.90% in 2007/08. The standard deviation of NABIL, EBL and NSBIL are 0.315, 0.239 and 0.386. Similarly coefficients of variation are 0.133, 0.144and 0.310 of NABIL, EBL and NSBIL respectively.

The average ratio of NABIL, EBL and NSBIL are 2.37%, 1.656% and 1.244%. The average ratio of NABIL is higher than EBL and NSBIL which indicates that NABIL has utilized it available asset to make earning. It means NABIL has used it asset to revenue generation. The C.V. of NABIL is lower than EBL and NSBIL. Lower C.V of NABIL signifies more consistency in ratio. Following figure shows Return on Total Assets ratio of NABIL, EBL and NSBIL.

Figure 4.20

Return on Total Assets Ratio



iii) Return on Equity

Equity capital of any bank is its owned capital. The prime objective of any bank is wealth maximization or in other words to earn higher profit and there by, maximizing

return on its equity capital. Return on equity measures the profitability of a bank. It reflects extend to which the bank has been successful to mobilize or utilize its equity capital. A higher ratio indicates higher success in mobilizing its owned capital and vice-versa. Following table shows the return on equity of sample banks during the study period.

Table. 4.24

Return on Equity Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	33.91	20.22	11.91
2008/09	32.79	20.51	21.91
2009/10	30.6	24.65	17.52
2010/11	32.94	24.80	18.47
2011/12	29.70	23.48	15.99
Mean	31.99	22.73	17.16
S.D.	1.761	2.223	3.652
C.V	0.055	0.098	0.213

Source: Financial analysis Report of Concern Bank

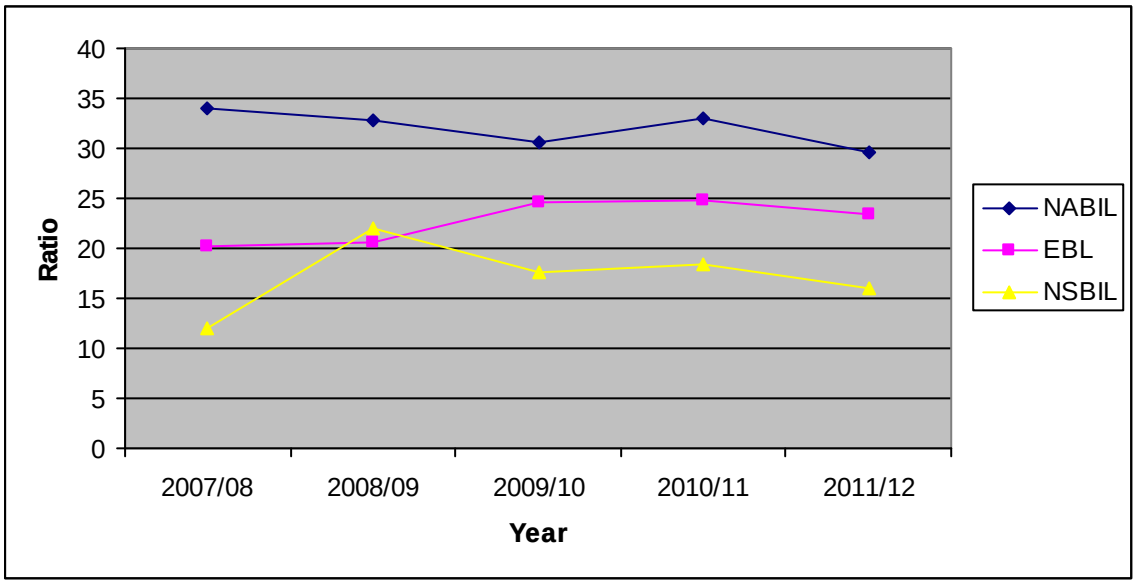
Above table shows the Return on Equity of NABIL, EBL and NSBIL. The Return on equity of all three banks have fluctuating trend. The highest ratio of NABIL is 33.91% in year F/Y 2007/08 and lowest ratio is 29.70% in year 2011/12. The highest ratio of EBL is 24.80% in F/Y 2010/11 and lowest ratio is 20.22% in 2007/08. Similarly the highest ratio of NSBIL is 21.91% in F/Y 2008/09 and lowest ratio is 11.91% in 2007/08. The standard deviation of NABIL, EBL and NSBIL are 1.761, 2.223 and 3.652. Similarly coefficients of variation are 0.055, 0.098 and 0.213 of NABIL, EBL and NSBIL respectively.

The average ratio of NABIL, EBL and NSBIL are 31.99%, 22.73% and 17.16%. The average ratio of NABIL is higher than EBL and NSBIL which indicates that NABIL has utilized it equity to making income. In brief, it signifies that the shareholders of NABIL are getting higher return than EBL nd NSBIL. It can be concluded that

NABIL has better utilized the equity for the profit generation. The C.V. of NABIL is lower than EBL and NSBIL. Lower C.V of NABIL signifies more consistency in ratio. Following figure shows Return on equity ratio of NABIL, EBL and NSBIL.

Figure 4.21

Return on Equity Ratio



4.1.4.4 Other Ratios

i) Earning Per Share

EPS measure the efficiency of a firm in relative terms. It is a widely used ratio, which measures the profit available to the ordinary shareholders on per share basis. Earning per share calculation made over years indicates whether the bank's earning power on per share basis has changed over that period or not but it doesn't reflect how much is paid as dividend and how much is retained in the business. Following table shows the EPS of related banks during the study period.

Table 4.25

Earning Per Share

(Amount in Millions)

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	129.21	62.78	18.27
2008/09	137.08	78.42	39.35
2009/10	108.31	91.62	28.33
2010/11	106.8	99.99	36.18
2011/12	78.61	100.16	23.69
Mean	112.002	86.594	29.164
S.D.	22.807	15.989	8.694
C.V	0.204	0.185	0.298

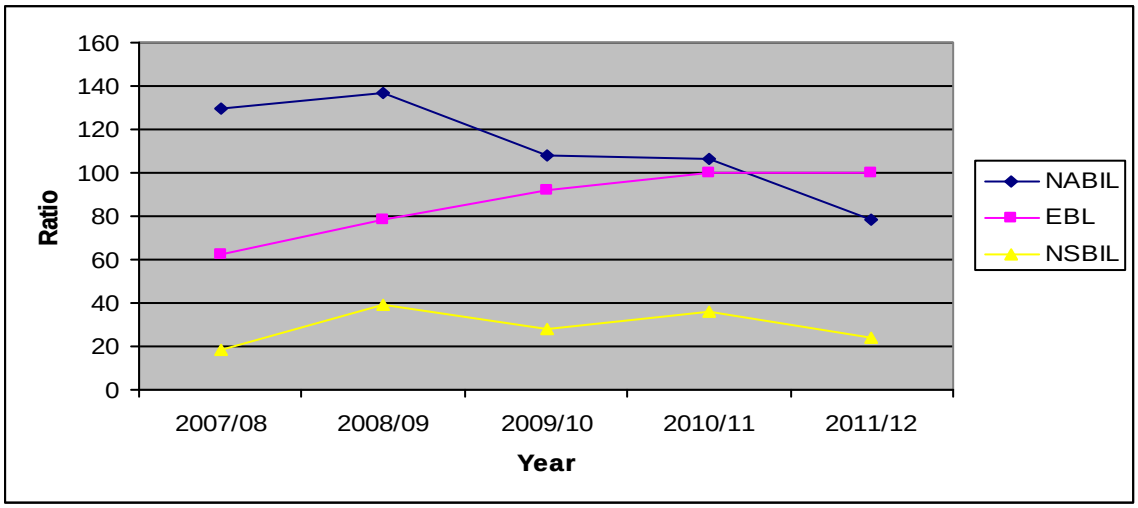
Source: Financial analysis Report of Concern Bank

Above table shows the Earning per share of NABIL, EBL and NSBIL. The Earning per share of NABIL is decreasing, EBL is increasing and NSBIL is fluctuating trend. The highest earning per share of NABIL is 137.08 in F/Y 2008/09 and lowest EPS is 78.61 in F/Y 2011/12. The highest EPS of EBL is 100.16 in F/Y 2011/12 and lowest EPS is 62.78 in F/Y 2007/08. Similarly, the highest EPS of NSBIL is 39.27 in F/Y 2008/09 and lowest EPS is 18.27 in F/Y 2007/08. The standard deviation and coefficient of variation of NABIL are 22.807 and 0.204, EBL are 15.989 and 0.185 and NSBIL are 8.694 and 0.298 respectively.

The average EPS of NABIL, EBL and NSBIL are 112.002, 86.594 and 29.164. The EPS of NABIL is higher than EBL and NSBIL. Which signify that NABIL provide better earning to its shareholder. Higher EPS indicate that NABIL has high earning to provide its shareholder. NABIL is better mobilizing it resources to acquire more earning and successful breed higher EPS. The C. V. of EBL is lower than NABIL and NSBIL. Lower of C.V. of EBL indicates consistency in its variables. The following figure represent Earning per Share of NABIL, EBL and NSBIL.

Figure 4.22

Earning Per Share



ii) Market Price per Share

Market price per share is the price at which shares are traded in the stock market. The secondary markets provide liquidity for securities purchased in primary market. Generally MPS is determined through supply and demand in the market. If demand of share high then automatically increase in its price in market and vice versa.

Table. 4.26

Market Price per Share (in Rs)

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	2240	1379	612
2008/09	5050	2430	1176
2009/10	5275	3132	1511
2010/11	4899	2455	1900
2011/12	2384	1630	741
Mean	3969.6	2205.2	1188
S.D.	1519.93	704.51	534.55
C.V	0.383	0.319	0.445

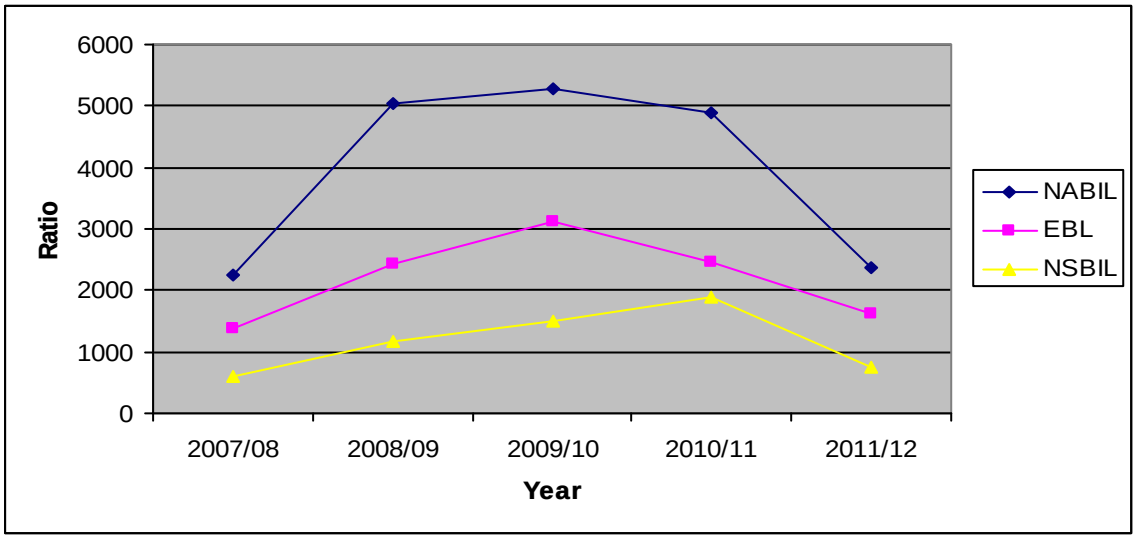
Source: Financial analysis Report of Concern Bank

This table shows market price of the share of NABIL, EBL and NSBIL. The market price of the share of all samples three banks have increasing till 2009/10 and decreasing thereafter. It indicates charm and demand of share of bank fall after F/Y 2009/10. The highest MPS of NABIL is Rs 5275, EBL is Rs 3132 in F/Y 2009/10 and NSBIL is Rs 1900 in F/Y 2010/11. The lowest market price of share of NABIL is Rs 2240, EBL is Rs 1379 and NSBIL is Rs 612 in F/Y 2007/08. The standard deviation of NABIL is 1519.93, EBL is 704 and NSBIL is 534.55 and coefficient of variation of NABIL is 0.383, EBL is 0.319 and NSBIL is 0.445 respectively.

The average mean MPS of NABIL, EBL and NSBIL are 3969.2, 2205.2 and 1188. The average MPS of NABIL is greater than EBL and NSBIL. It indicates that high demand of share of NABIL in market and shareholder are getting higher price. The C.V. of EBL is low which indicates consistently in fluctuation of its market price.

Figure 4.23

Market Price per Share



iii) Price Earning Ratio

This ratio shows the relationship between earning per share and market value per share. This ratio measures the profitability of the firm. In the short run, higher ratio shows the higher efficiency of the management and lower ratio shows the lower efficiency of the management. But for the sustainable fair market price, lower ratio is useful and vice versa.

Table 4.27

Price Earning Ratio

Year	Bank		
	NABIL	**EBL**	**NSBIL**
2007/08	17.34	21.97	33.50
2008/09	36.84	30.99	29.88
2009/10	48.7	34.11	53.33
2010/11	45.89	24.55	52.52
2011/12	30.33	16.27	31.28
Mean	35.82	25.578	40.102
S.D.	12.649	7.120	11.780
C.V	0.3531	0.2784	0.294

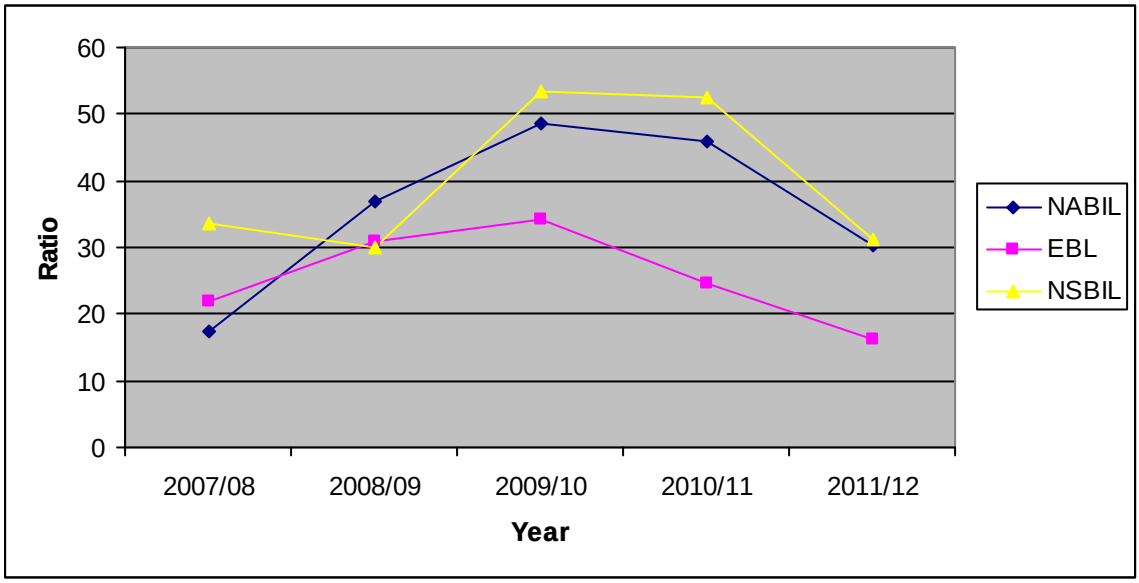
Source: Financial analysis Report of Concern Bank

Above table shows the price earning ratio of NABIL, EBL and NSBIL. The price earning ratio of all three sample banks have increasing first and decreasing trend at later. The highest price earning ratio of NABIL is 48.7 times in F/Y 2009/10 and lowest PE ratio is 17.34 times in 2007/08. The highest ratio of EBL is 34.11 times in F/Y 2009/10 and lowest ratio is 13.27 times in F/Y 2011/12. Similarly, the highest price earning ratio of NSBIL is 53.33 times in F/Y 2009/10 and lowest PE ratio is 29.88 times in 2008/09. The standard deviation and coefficient of variation of NABIL are 12.649 and 0.353, EBL are 7.120 and NSBIL are 11.780 and 0.294 respectively.

The average mean ratio of NABIL, EBL and NSBIL are 35.82, 25.578 and 40.102 times. It indicates that for getting Rs 1 as earning, one should invest Rs 35.82 in NABIL and Rs 25.578 in EBL and 40.102 in NSBIL. The higher PE ratio signify that price of NSBIL is traded in market higher in aspect of its earning than NABIL and EBL. The C.V. of EBL is lower than the NABIL and NSBIL. Which indicate consistency in its ratio. From analysis we conclude that in short run, investor of NSBIL are getting better price of stock because they are selling their shares in high price. It is recommended to sell share of NSBIL and purchase share of EBL according to analysis of price earning ratio. Price Earning Ratio is represented in figure as follow.

Figure 4.24

Price Earning Ratio



4.2 Statistical Tools

In this chapter some statistical tools such co-efficient of correlation analysis between Deposit and loan and advances, deposit and total investment, total assets and net profit, net profit and total deposit, market value per share and book value per share are used to achieve the objective of the study.

4.2.1 Correlation Coefficient Analysis

Co-efficient of co-relation shows the relationship between two or more than two variables. It measures that the two variables are positively or negatively co-related. For this purpose, Karl Pearson's co-efficient of correlation has been taken and applied to find out and analyze the relationship between deposit and loan and advances, deposit and total investment, current assets and net profit, net profit and total deposit NABIL, EBL and NSBIL using Karl Persons coefficient of correlation, value of coefficient of determination (R^2) probable error (P.Er.) and (6 P.Er.) are also calculated and value of them are analyzed.

A. Coefficient of correlation between total deposit and loan & advances

Deposit has played a very important role in performance of a commercial bank and similarly loan & advances are important to mobilize the collected deposits. Coefficient of correlation between deposit and loan and advances measure the degree of relationship between these two variables. In this analysis, deposit is independent variables (X) and loan and advances is dependent variable(Y). The main objective of computing "r" between these two variables is to justify whether deposits are significantly used as loan and advances in a proper way or not. The below table shows the value of "r", "r^2", probable Error (P.Er) and 6 P.Er. Between deposit and loan and advances of NABIL, EBL and NSBIL three sample banks.

Table 4.28

Coefficient of Correlation between Deposit and Loan & Advance

Name of Banks	Evaluation Criterions				
	r	R^2	P.Er.	6 P.Er.	Remarks
NABIL	0.993	0.986	0.0042	0.0253	Significant
EBL	0.997	0.994	0.0018	0.0108	Significant
NSBIL	0.950	0.903	0.0294	0.1765	Significant

Source**:** *Through SPSS Data Editor*

From the above table, it is found that coefficient of correlation between deposits and loan and advances of NABIL, EBL and NSBIL are 0.993, 0.997 and 0.950. It is shows that all have the positive relationship between these two variables. It refers that deposit and loan and advances all banks move together very closely but not proportionately. Moreover, the coefficient of determination of NABIL, EBL and NSBIL are 0.986, 0.994 and 0.903. It means 98.6 percent of variation in loan and advances of NABIL,99.4 percent of variation in loan and advance of EBL and 90.3percemt of variation in loan and advance of NSBIL has been explained by deposit. Least are determined by other factor. The correlation coefficient of all banks is significant because the correlation coefficient is greater than the relative value of 6 P.Er. In other words, there is significant relationship between deposits and loan and advances.

B. Coefficient of correlation between deposit and investment

Coefficient of correlation between deposit and investment measure the degree of relationship between these two variables. In this analysis, deposit is independent variables (X) and investment is dependent variable(Y). The main objective of computing "r" between these two variables is to justify whether deposits are significantly used as investment in a proper way or not. The below table shows the value of "r", "r^2", P.Er and 6 P.Er. Between deposit and investment of NABIL, EBL and NSBIL three sample banks.

Table 4.29

Coefficient of Correlation between Deposit and Investment

Name of Banks	Evaluation Criterions				
	r	R^2	P.Er.	6 P.Er.	Remarks
NABIL	0.978	0.956	0.0131	0.0788	Significant
EBL	0.698	0.487	0.1547	0.9281	Insignificant
NSBIL	0.990	0.980	0.0060	0.0360	Significant

Source**:** *Through SPSS Data Editor*

Above table shows that coefficient of correlation between total deposits and investments of sample banks. The coefficient of correlation between total deposits and investments of NABIL, EBL and NSBIL are 0.978, 0.698 and 0.990. All have the positive relationship between these two variables. It refers that deposit and investment of all banks move together very closely but not proportionately. EBL has lower positive relation. Moreover, the coefficient of determination of NABIL, EBL and NSBIL are 0.956 0.487 and 0.980. It means 95.6 percent of variation in investment of NABIL, 48.7 percent of variation in investment of EBL and 98 percent of variation in investment of NSBIL has been explained by total deposit. Least is determined by other factor. The correlation coefficient of NABIL and NSBIL is significant because the correlation coefficient is greater than the relative value of 6 P.Er. But EBL has insignificant relationship due to correlation coefficient is lower than the relative value of 6 P.Er. In other words, there is significant relationship between deposits and investment of NABIL and NSBIL and insignificant of EBL.

C. Coefficient of correlation between current assets and net profit

Coefficient of correlation between current assets and net profit measures the degree of relationship between these two variables. In this analysis, current assets are independent variables (X) and net profit is dependent variable(Y). The main objective of computing "r" between these two variables is to justify whether net profit is significantly correlated with respective total assets or not. The below table shows the value of "r", "r^2", probable Error (P.Er) and 6 P.Er. Between total current assets and net profit of sample banks.

Table 4.30

Coefficient of Correlation between Current Assets and Net Profit

Name of Banks	Evaluation Criterions				
	r	R^2	P.Er.	6 P.Er.	Remarks
NABIL	0.757	0.573	0.1288	0.7727	Insignificant
EBL	0.969	0.939	0.0184	0.1105	Significant
NSBIL	0.870	0.757	0.0733	0.4350	Significant

Source**:** *Through SPSS Data Editor*

Above table shows that coefficient of correlation between current asset and net profit of three sample banks. The coefficient of correlation between current asset and net profit of NABIL, EBL and NSBIL are 0.757, 0.969 and 0.870. All have the positive relationship between these two variables. It refers that deposit and investment of all banks move together very closely but not proportionately. NABIL has little lower positive relation. Moreover, the coefficient of determination of NABIL, EBL and NSBIL are 0.573, 0.939 and 0.757. It means 57.3 percent of variation in net profit of NABIL, 93.9 percent of variation in net profit of EBL and 75.7 percent of variation in net profit of NSBIL has been explained by current asset. Least is determined by other factor. The correlation coefficient of EBL and NSBIL is significant because the correlation coefficient is greater than the relative value of 6 P.Er. But relationship of NABIL has insignificant due to correlation coefficient is lower than the relative value of 6 P.Er. In other words, there is significant relationship between current asset and net profit of EBL and NSBIL but insignificant relationship between current asset and net profit of NABIL.

D. Coefficient of correlation between total deposit and net profit

Coefficient of correlation between total deposit and net profit measures the degree of relationship between these two variables. In this analysis, deposit is independent variables (X) and net profit is dependent variable(Y). The main objective of computing "r" between these two variables is to justify whether deposits are significantly used to get proper net profit or not. The below table shows the value of "r", "r^2", probable Error (P.Er) and 6 P.Er. between total deposit and net profit of NABIL, EBL and NSBIL.

Table 4.31

Coefficient of Correlation between Total Deposit and Net Profit

Name of Banks	Evaluation Criterions				
	r	R^2	P.Er.	6 P.Er.	Remarks
NABIL	0.959	0.919	0.0242	0.1454	Significant
EBL	0.986	0.972	0.0084	0.0503	Significant
NSBIL	0.863	0.745	0.0769	0.4619	Significant

Source**:** *Through SPSS Data Editor*

Above table shows that coefficient of correlation between total deposit and net profit of three sample banks. The coefficient of correlation between total deposit and net profit of NABIL, EBL and NSBIL are 0.959, 0.986 and 0.863. All have the positive relationship between these two variables. It refers that deposit and investment of all banks move together very closely but not proportionately. EBL has relationship which indicates that it is in better condition for mobilizing the collected deposit to generate more profit in comparison other sample banks. NSBIL has little lower positive relationship than NABIL and EBL. Moreover, the coefficient of determination of NABIL, EBL and NSBIL are 0.919, 0.972 and 0.745. It means 91.9 percent of variation in net profit of NABIL, 97.2 percent of variation in net profit of EBL and 74.5 percent of variation in net profit of NSBIL has been explained by total deposit. Least is determined by other factor. The correlation coefficient of NABIL, EBL and NSBIL is significant because the correlation coefficient is greater than the relative value of 6 P.Er. In other words, there is significant relationship between total deposit and net profit of NABIL, EBL and NSBIL.

4.2.2 Trend Analysis (Time Series Analysis)

Trend analysis plays an important role in the analysis and interpretation of financial statement. Trend in general terms, signifies a tendency. It helps in forecasting and planning future operation. Trend analysis is a statistical tool, which shows the future financial results and forecasted future trend from the previous and present circumstances of the financial performance and condition of the firms.

A) Trend Analysis of Total Deposit:

Deposits are the important part in banking sector. hence its trend for next five years will be forecasted for future analysis. This is calculated by the least square method. Here the effort has been made to calculate the trend values of Total deposit of NABIL, EBL and NSBIL for further five year

Y= a + bx

Where,

Y= dependent variable,

a =Y-intercept,

b = slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

Where as

Y = 31731.188 + 6747.643 *X of NABIL

Y = 25244.1 + 6139.64 *X of EBL

Y = 19803.3 + 6430.07 *X of NSBIL

Table. 4.32

Trend Analysis of Total Deposit

Year	NABIL	EBL	NSBIL
2007/08	19101.1	13802.4	11002
2008/09	24491.1	18186.3	11445.3
2009/10	31304.8	23976.3	13715.4
2010/11	37348.3	33323	27957.2
2011/12	46410.7	36932.3	34896.4
2012/13	60295.9	43663	39093.51
2013/14	68750.4	49802.7	45523.58
2014/15	77204.9	55942.3	51953.65
2015/16	85659.5	62081.9	58383.72
2016/17	94114	68221.6	64813.79

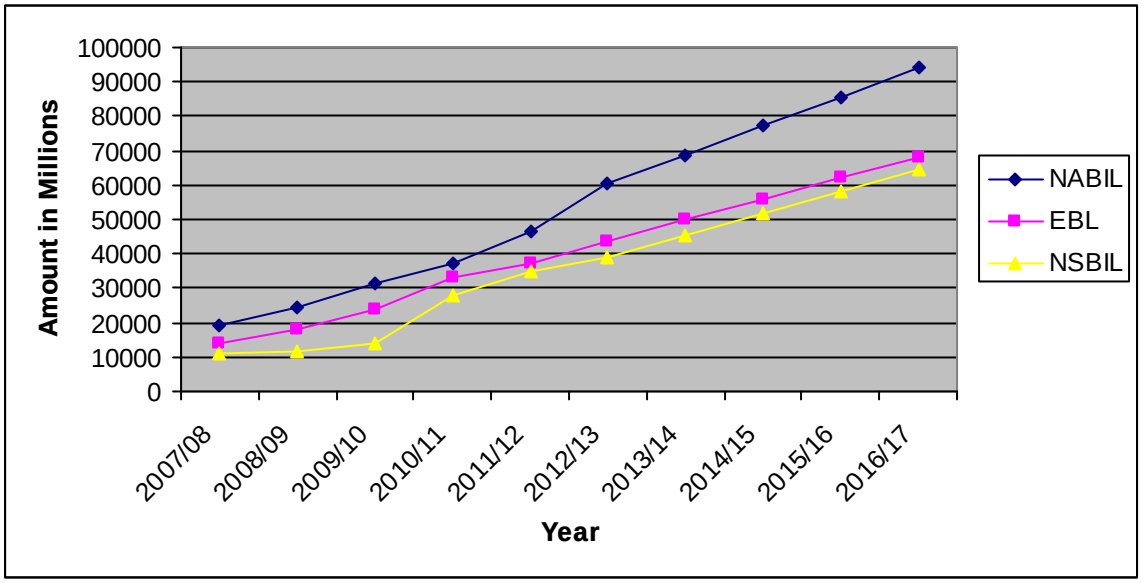
Source: Annul Report of Concern Bank

Appendix -1

Above Table shows trend of total deposit of NABIL, EBL and NABIL. The total deposit of all three sample Banks forecasted increasing trend. The rate of increment of total deposit for NABIL seems to be higher and aggressive than EBL and NSBIL. Increment trend of NABIL is higher, EBL has moderate and NSBIL has lower. Which indicate collecting in total deposit NABIL seems aggressive, EBL seems to moderate and NSBIL seems to be lower. The trend analysis has projected deposit amount in fiscal year FY 2012/13 to FY 2016/17 for further five year. From the above trend analysis it is clear that NABIL has higher position in collecting deposit than EBL and NSBIL. The trend of total deposit of NABIL, EBL and NSBIL are presented in following figure.

Figure 4.25

Trend Line of Total Deposit



B) Trend Analysis of Loan and advances

Here, the trend values of loan and advances of NABIL, EBL and NABIL have been calculated for further five year. The following Table shows the actual and trend values of sample banks.

Y= a + bx

Where,

Y= dependent variable,

a=Y-intercept

b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Y = 21938.434 + 5073.681 *X of NABIL

Y = 18649.1 +4573.07 *X of EBL

Y = 12362.6 + 2537.89 *X of NSBIL

Table. 4.33

Trend Analysis of Loan and Advance

Year	NABIL	EBL	NSBIL
2007/08	12922.54	9801.3	7626.74
2008/09	15545.78	13664.1	9460.45
2009/10	21365.05	18339.1	12113.7
2010/11	27589.93	23884.7	15131.7
2011/12	32268.87	27556.4	17480.6
2012/13	37159.48	32368.3	19976.3
2013/14	42233.16	36941.4	22514.2
2014/15	47306.84	41514.5	25052.1
2015/16	52380.52	46087.5	27589.9
2016/17	57454.2	50660.6	30127.8

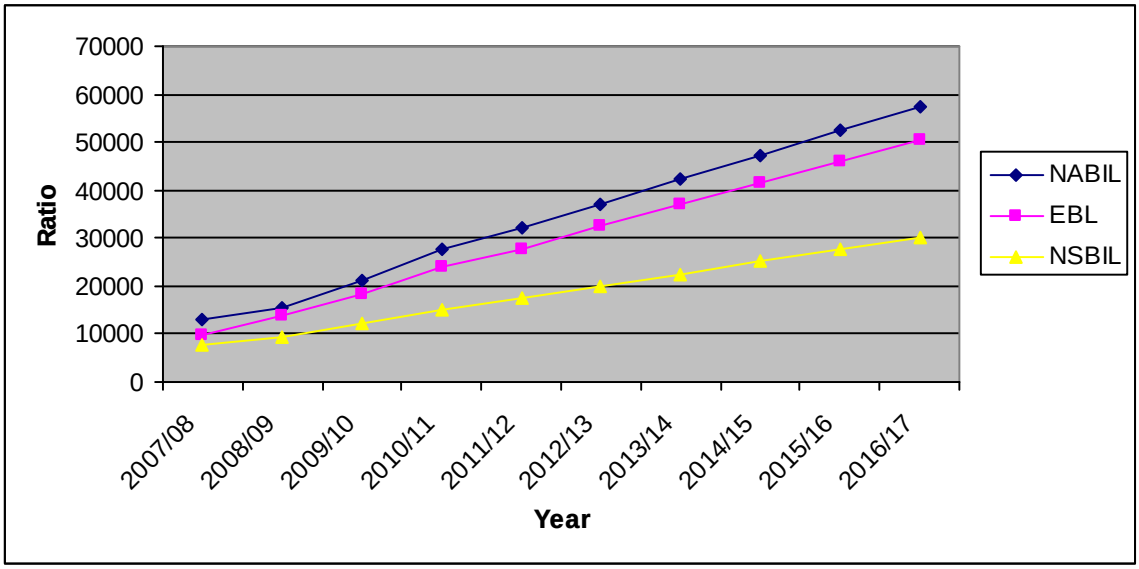
Source: Annul Report of Concern Bank

Appendix - 2

Above Table depicts the trend of loan and advances of NABIL, EBL and NSBIL. The loan and advances of all three sample Banks forecasted increasing trend. The rate of increment of loan and advance t for NABIL seems to be higher and aggressive than EBL and NSBIL. Increment trend of loan and advance of NABIL is higher, EBL has moderate and NSBIL has lower. Which indicate NABIL seems aggressive, EBL seems to moderate and NSBIL seems to be lower in providing loan and advances. The trend projected for father five year F/Y 2012/13 to F/Y 2016/17. From the above analysis, it is clear that all banks mobilizing its collected funds in the form of loan and advances. The trend line of loan and advance of NABIL, EBL and NSBIL are presented in following figure.

Figure 4.26

Trend Line of Total Loan and Advance



C) Trend Analysis of Current Asset

Current asset is main source of liquidity position of commercial bank. Under this topic, an attempt has been made to analyze trend analysis current asset of NABIL, EBL and NSBIL for further five years

Y= a + bx

Where,

Y= dependent variable, a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

Where as

Yc = 19569.3 + 3182 *X of NABIL

Yc = 23573 + 6550.54 *X of EBL

Yc = 18057.1 + 5823.73 *X of NSBIL

Table 4.34

Trend Analysis of Current Asset

Year	NABIL	EBL	NSBIL
2007/08	13857.5	11398.8	9976.28
2008/09	16954	14226.8	10854.5
2009/10	20122.1	24761.6	12376.8
2010/11	17337	32425.4	25111.7
2011/12	29576	35052.2	31966.3
2012/13	29115.3	43224.6	35528.3
2013/14	32297.3	49775.2	41352
2014/15	35479.3	56325.7	47175.8
2015/16	38661.3	62876.2	52999.5
2016/17	41843.3	69426.8	58823.2

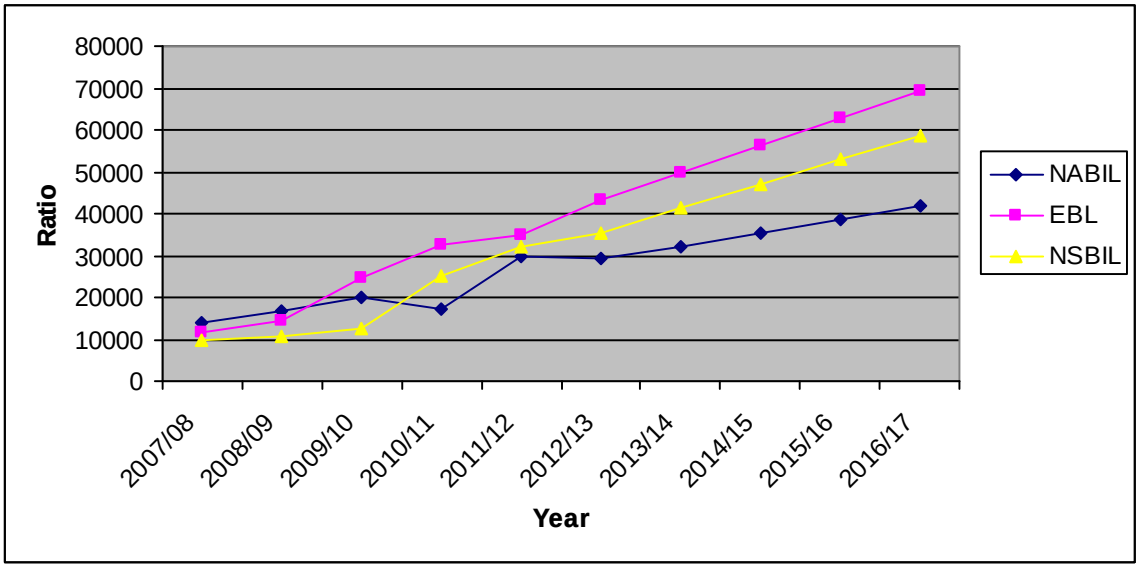
Source: Annul Report of Concern Bank

Appendix - 3

Above Table shows the Trend line of current asset of NABIL, EBL and NSBIL. The Current asset of all three sample Banks forecasted increasing trend. The rate of increment of current asset for EBL seems to be higher and aggressive than NSBIL and NABIL. Increment trend of current asset of EBL is higher, NSBIL has moderate and NABIL has lower. Which indicate EBL kept more current asset NSBIL kept moderate and NABIL kept lower portion of current asset. The trend projected for father five year F/Y 2012/3 to F/Y 2016/17. The trend line of current asset of NABIL, EBL and NSBIL are presented in following figure.

Figure 4.27

Trend Line of Current Assets



D) Trend Analysis of Net Profit

The ultimate objective of commercial bank is to earn net profit. The trend values of net profit of NABIL, EBL and NSBIL have been calculated for five years. The trend of Net profit forecasted based on F/Y 2005/06 to 2009/10 for further five year F/Y 2010/11 to F/Y 2014/15.

Y= a + bx

Where,

Y= dependent variable,

a=Y-intercept,

b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

Yc = 845.168 + 136.477 * X of NABIL

Yc = 491.4 + 152.97 * X of EBL

Yc = 265.558 + 61.094* X of NSBIL

Table. 4.35
Trend Analysis of Net Profit

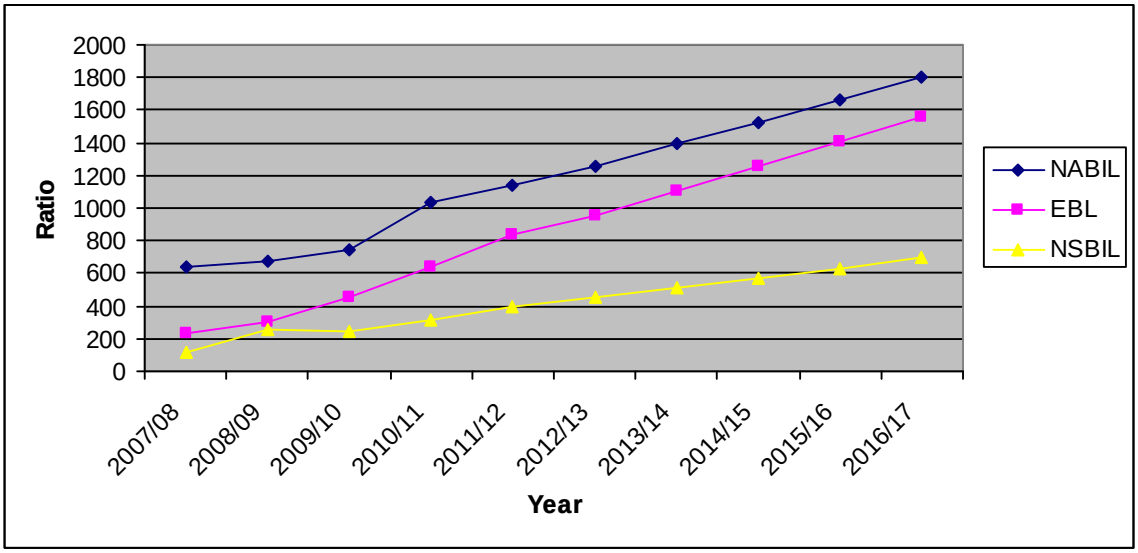
Year	NABIL	EBL	NSBIL
2007/08	635.26	237.29	117
2008/09	673.96	297.99	254.91
2009/10	746.47	451.22	247.77
2010/11	1031.05	638.73	316.37
2011/12	1139.1	831.77	391.74
2012/13	1254.599	950.31	448.84
2013/14	1391.076	1103.28	509.934
2014/15	1527.553	1256.25	571.028
2015/16	1664.03	1409.22	632.122
2016/17	1800.507	1562.19	693.216

Source: Annul Report of Concern Bank
Appendix - 4

The above Table reveals the trend of Net profit of NABIL, EBL and NSBIL. The Net profit of all three sample Banks forecasted increasing trend. The rate of increment of Net profit for NABIL seems to be higher than EBL and NSBIL. The trend show increment of Net profit of NABIL and EBL is aggressive rather than NSBIL. The net profit of NABIL, EBL and NSBIL has been increasing every year by Rs. 136.477 million, Rs. 152.97 million and 61.94 million respectively. The trend of Net profit projected to FY 2016/17 i.e. further five year. In conclusion, NABIL and EBL are doing better in order to generate net profit during the projected study period but increment of NSBIL is little lower though all NABIL, EBL and NSBIL have increasing trend. The trend line of net profit of NABIL, EBL and NSBIL are presented in following figure.

Figure 4.28

Trend Line of Net Profit



4.2.3 T-Test for significant of observed sample correlation coefficient

Suppose r is the observed correlation coefficient in a sample of n pair of observations from vicariate normal population in order to test whether the sample correlation coefficient is significant of any correlation between the variable in the population, t test for significance of an observed sample correlation coefficient is applied. The steps for testing of significance of an observed coefficient are as follows.

Step - 1

Null Hypothesis Ho: p = 0 that is population correlation coefficient is zero in other words the variables are uncorrelated in the population i.e. r is not significant of correlation in the population.

Alternative hypothesis H1: p $\neq$ 0 that is population correlation coefficient is not zero. In other words, the variables are correlated in the population.

Step – 2

Test statistic: under Ho the test statistic is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

i.e. t follows t-distribution with n-2 d.f. .. n being the sample

Step - 3

Obtained the tabulated value of t for (n-2) d.f. at α level of significance according as whether the alternative hypothesis is not tailed test or two tailed test.

Step - 4

Decisions make decision by comparing the calculated value of t with tabulated value of t. if calculated value of t ≤ the tabulated values of t it is not significant and Ho is accepted. Otherwise rejected.

4.2.3.1 Testing of hypothesis for Net profit and Total deposit

A. Testing of hypothesis for net profit and total deposit of NABIL

When correlation coefficient r = 0.959

No of year n = 5

Null hypothesis: p = 0 that is the variables in the population are uncorrelated. i.e. net profit and total deposit are not correlated of NABIL

Alternative hypothesis H1: p ≠ 0 one tailed test that is the variables in the population are correlated. In other words the net profit and total deposit of NABIL are correlated.

Test statistic: under Ho, the test static is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

$$t = \frac{0.959}{\sqrt{1-(0.959)^2}}\sqrt{5-2}$$

t = 5.861

Degree of freedom d.f. n-2 = 5- 2 = 3

Critical value: the tabulated value of t ate 5% level of significance for one tail test and for d.f. at 3 is 2.353

Decision: since the calculated value of t is greater than tabulated value of t, (5.861 ≥ 2.353). So it is significant and Hi is accepted which means that the net profit of and total deposits of NABIL is correlated.

B. Testing of hypothesis for net profit and total deposit of EBL

When correlation coefficient r = 0.986

No of year n = 5

Null hypothesis: p = 0 that is the variables in the population are uncorrelated. i.e. net profit and total deposit are not correlated of EBL

Alternative hypothesis H1: p ≠ 0 one tailed test that is the variables in the population are correlated. In other words the net profit and total deposit of EBL are correlated.

Test statistic: under Ho, the test static is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

$$t = \frac{0.986}{\sqrt{1-(0.986)^2}}\sqrt{5-2}$$

t = 10.242

Degree of freedom (d.f.) n-2 = 5- 2 = 3

Critical value: the tabulated value of t ate 5% level of significance for one tail test and for d.f. at 3 is 2.353

Decision: since the calculated value of t is greater than tabulated value of t, (10.2242 ≥ 2.353). So it is significant and Hi is accepted which means that the net profit of and total deposits of EBL is correlated.

A. Testing of hypothesis for net profit and total deposit of NSBIL

When correlation coefficient r = 0.863

No of year n = 5

Null hypothesis: p = 0 that is the variables in the population are uncorrelated. i.e. net profit and total deposit are not correlated of NSBIL

Alternative hypothesis H1: p ≠ 0 one tailed test that is the variables in the population are correlated. In other words the net profit and total deposit of NSBIL are correlated.

Test statistic: under Ho, the test static is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

$$t = \frac{0.863}{\sqrt{1-(0.863)^2}}\sqrt{5-2}$$

t = 2.958

Degree of freedom (d.f.) n-2 = 5- 2 = 3

Critical value: the tabulated value of t ate 5% level of significance for one tail test and for d.f. at 3 is 2.353

Decision: since the calculated value of t is greater than tabulated value of t, (2.958 ≥ 2.353). So it is significant and Hi is accepted which means that the net profit and total deposits of NSBIL is correlated.

4.2.3.2 Testing of hypothesis for Total deposit and Loan & advance

A. Testing of hypothesis for total deposit and loan & advance of NABIL

When correlation coefficient r = 0.993

No of year n = 5

Null hypothesis: p = 0 that is the variables in the population are uncorrelated. i.e. total deposit and loan & advance are not correlated of NABIL

Alternative hypothesis H1: p ≠ 0 one tailed test that is the variables in the population are correlated. In other words the total deposit and loan & advance of NABIL are correlated.

Test statistic: under Ho, the test static is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

$$t = \frac{0.993}{\sqrt{1-(0.993)^2}}\sqrt{5-2}$$

t = 14.56

Degree of freedom d.f. n-2 = 5- 2 = 3

Critical value: the tabulated value of t ate 5% level of significance for one tail test and for d.f. at 4.56

Decision: since the calculated value of t is greater than tabulated value of t, (14.562 ≥ 2.353). so it is significant and Hi is accepted which means that the total deposit and loan & advance of NABIL is correlated.

B. Testing of hypothesis for total deposit and loan & advance of EBL

When correlation coefficient r = 0.997

No of year n = 5

Null hypothesis: p = 0 that is the variables in the population are uncorrelated. i.e. total deposit and loan & advance are not correlated of EBL

Alternative hypothesis H1: p $\neq$ 0 one tailed test that is the variables in the population are correlated. In other words the total deposit and loan & advance of EBL are correlated.

Test statistic: under Ho, the test static is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

$$t = \frac{0.997}{\sqrt{1-(0.997)^2}}\sqrt{5-2}$$

t = 22.311

Degree of freedom (d.f.) n-2 = 5- 2 = 3

Critical value: the tabulated value of t ate 5% level of significance for one tail test and for d.f. at 3 is 2.353

Decision: since the calculated value of t is greater than tabulated value of t, (22.353 ≥ 2.353). So it is significant and Hi is accepted which means that total deposit and loan & advance of EBL is correlated.

A. Testing of hypothesis for total deposit and loan & advance of NSBIL

When correlation coefficient r = 0.950

No of year n = 5

Null hypothesis: p = 0 that is the variables in the population are uncorrelated. i.e. total deposit and loan & advance are not correlated of NSBIL

Alternative hypothesis H1: p $\neq$ 0 one tailed test that is the variables in the population are correlated. In other words the total deposit and loan & advance of NSBIL are correlated.

Test statistic: under Ho, the test static is

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

$$t = \frac{0.950}{\sqrt{1-(0.950)^2}}\sqrt{5-2}$$

t = 5.296

Degree of freedom (d.f.) n-2 = 5- 2 = 3

Critical value: the tabulated value of t ate 5% level of significance for one tail test and for d.f. at 3 is 2.353

Decision: since the calculated value of t is greater than tabulated value of t, (5.296 ≥ 2.353). So it is significant and Hi is accepted which means that the total deposit and loan & advance of NSBIL is correlated.

4.3 Major Finding of the Study

The major findings of this study derived from the analysis of data are summarized below.

In the earlier part, the researcher has presented and analyzed the various aspects of the study with the help of the financial and statistical tools. In this part, the researcher has enlisted the major findings of the study according to the data presentation and analysis of data. The analysis, which are derived from the liquidity management of three commercial banks named NABIL, EBL and NSBIL. The major findings of the study, based on the financial and statistical tools can be presented as follows:

Major Findings of Financial Analysis

1. The major components of liquidity are cash and bank balance, total deposit, investment on Govt. Securities and current asset. All liquidity component of NABIL is fluctuating condition. The average cash and bank balance of NABIL is Rs 1894.54 million and average amount of total deposit is Rs 31717.19 millions. Similarly, the average amount of Govt. securities is Rs 460.07 millions and average amount of current asst of NABIL is Rs19569.323 million. The highest amount current asset is Rs 29576 million and lowest amount is Rs 13857.5 millions. The current asset of NABIL is increasing.

2. The main part of liquidity cash and bank balance, total deposit, investment on Govt. Securities and current asset of EBL are almost increasing form of study period. The average cash and bank balance and total deposit are Rs 4119.114 million and Rs 25244.05 millions. Similarly, the average amount of Govt. securities is Rs 4515.05 millions. The highest current asset amount is Rs 35052.2 million and lowest amount is Rs 13857.5 millions. The average current asset is Rs 23572.96 millions. The current asset of EBL is continuously increasing tendency
3. The key element of liquidity cash and bank balance, total deposit, investment on Govt. Securities and current asset of NSBIL are increasing. The average cash and bank balance, total deposit and investment on govt. securities of NSBIL is Rs 1640.30 million, Rs 19803.27 million and Rs 3318.56 million. The mean current asset amount of NSBIL is Rs 18057.12 million. The amount of first three fiscal years is lower and last two year amount is higher than average current asset of NSBIL.
4. Liquidity profile Analysis of NABIL, EBL and NSBIL shows table of liquidity statement of F/Y 2007/08 to 2011/12. There is no mismatch between the short term assets and liabilities of NABIL Bank. The management of short assets has been done very meticulously by the bank. During the research of EBL, there is mismatch between the short term assets and liabilities, the excess of assets over the liabilities shows its strong liquidity position. Similarly in case of NSBIL There is difference between the assets and liabilities, there is mismatch between the short term assets and liabilities. NABIL equal but EBL and NSBIL have over and excess the current asset over the current liability.
5. The current ratios of NABIL and NSBI have decreasing whereas EBL has fluctuating trend. The average mean current ratio of NABIL, EBL and NSBIL are 1.524 times, 1.99 times and 1.328 times. It is known that all these three banks have in better liquidity position because the standard ratio is more than 1:1. The average current ratio of EBL is greater than NABIL and NSBIL. The EBL has consistently in current ratio due to lower C.V. All banks have sound ability to meet their short- term obligations
6. The cash and bank balance to current assets ratio of NABIL, EBL and NSBIL have fluctuating trend. The average cash and bank balance to current assets

ratio of NABIL, EBL and NSBIL are 10.052, 4.508 and 9.569 percent. The average ratio of EBL is greater than NABIL and NSBIL. It indicates that EBL has high portion cash and bank balance form its current asset. But NSBIL has least current ratio. EBL has consistently in its ratio due to lower C.V. and NABIL has inconsistency ratio.

7. The cash and bank balance to current deposit ratio of NABIL, EBL and NSBIL have fluctuating trend. The average ratio of EBL is greater than NABIL and NSBIL. EBL has high portion cash and bank balance forms its current deposit and NABIL least. The lower of C.V. of EBL indicates more consistency in its ratio.
8. The investment on Govt. Treasury bill to current asset ratio of NABIL, EBL and NSBIL have fluctuating trend. The average ratio of NABIL, EBL and NSBIL are 23.256%, 22.392%, and 21.762%. The average ratio of NABIL has higher than EBL and NSBIL. NABIL has invested more current asset in invest risk free asset Govt. Treasury bill than other banks and NSBIL has lowest investment. NABIL low risky and consistently in its ratio due to low C.V.
9. The average mean investment on Govt. securities to total investment ratio of NABIL, EBL and NSBIL are 46.01%, 89.52%, and 66.67%. The average ratio of EBL has higher than NABIL and NSBIL. It indicates that investment in govt securities of EBL is high in its total investment. It means EBL invested more in risk free asset than other banks. The C.V. and S.D of EBL has also lower than other two banks. This indicates low risky and consistently in its ratio.
10. The cash and bank balance to total deposit ratio of NABIL is increasing EBL is fluctuating and NSBIL is decreasing trend. The highest ratio of NABIL, EBL and NSBIL are 9.03%, 21.17% and 10.16%. The lowest ratios are 3.02%, 11.13% and 4.21%. The average mean ratio of NABIL, EBL and NSBIL are 5.934%, 15.04% and 8.766% respectively. The average ratio of EBL has higher than NABIL and NSBIL. EBL retain more its total deposit as cash and bank balance. NSBIL has consistently in its ratio due to lower C.V. The higher ratio of signifies that sound liquid fund to make immediate payment to the depositors.
11. The average mean the current deposit to total deposit ratio of ratio of NABIL, EBL and NSBIL are 15.54%, 10.75% and 12.16%. The average ratio of

NABIL has higher than EBL and NSBIL. It indicates that NABIL has high portion current deposit in its total deposit. It means NABIL should keep more liquidity for prompt payment. The C.V. of EBL has lower which indicates consistently in its ratio.

12. The balance in NRB to total deposit ratio of NABIL, EBL and NSBIL reveals fluctuating trend. The average balance in NRB to total deposit ratio of NABIL, EBL and NSBIL are 4.066%, 9.766% and 4.072%. The average balance in NRB to total deposit of EBL is greater than NABIL and NSBIL. It indicates that EBL kept more of total deposit in NRB. Lower average ratio indicates low portion of deposit in NRB of NABL. The C.V. of NSBIL is low which indicates consistently in balance in NRB to total deposit ratio and higher C.V. of NABIL indicates high volatile in its ratio.
13. The average CRR ratio of NABIL, EBL and NSBIL are 5.94%, 7.83% and 6.57%. The average CRR of EBL is greater than NABIL and NSBIL. It indicates that EBL kept more amounts in cash reserve. Lower average CRR indicates low portion of cash reserve ratio of NSBIL. The C.V. of NSBIL is low which indicates consistently in its CRR. Cash reserve ratio of NABIL is fluctuating and lest two bank EBL and NSBIL are increasing trend.
14. The balance in NRB to current deposit ratio of NABIL, EBL and NSBIL have fluctuating trend. The highest ratio of NABIL, EBL and NSBIL are 48.33%, 134.79 and 64.39%. Similarly the lowest ratio of are 6.95%, 43.37% and 15.50%. The average ratio of NABIL, EBL and NSBIL are 26.729%, 89.298% and 35.284%. The average ratio of EBL is higher than NABIL and NSBIL. It indicates that EBL kept more of current deposit in NRB and vice versa.
15. The investment on Govt. securities to total deposit ratio of NABIL, EBL and NSBIL have decreased fluctuating trend. The average ratio of NABIL, EBL and NSBIL are 14.71%, 19.71% and 23.4%. The investment on Govt. securities to total deposit ratio of NSBIL is higher than NABIL and EBL. NSBIL is investing in government securities the most out its total deposit. The C.V. of EBL is low, which indicates consistently in ratio and higher C.V. of NSBIL indicates high volatile in its ratio.
16. The average loan and advance to total deposit ratio of NABIL, EBL and NSBIL are 69.66%, 73.78% and 68.90%. The ratio of EBL is higher than NABIL and NSBIL. EBL use more total deposit as providing loan and

advance. NSBIL provide least loan and advance from total deposit. According to NRB directives less than 80% of loan and advances to total deposit ratio is required to enable better mobilization of collected deposit. The C.V. of EBL is low, which indicates consistently in ratio and NSBIL has volatile in its ratio.

17. The total investment to total deposit ratio NABIL, EBL and NSBIL have fluctuating trend. The average ratio of NABIL, EBL and NSBIL are 31.97%, 22.017% and 34.83%. The highest ratio of NSBIL indicates higher investment from total deposit. Lower C.V of NABIL signifies lower volatile in ratio.
18. The average loan and advances to total assets ratio of NABIL, EBL and NSBIL are 59.44%, 64.8% and 58.38%. The ratio of EBL is higher than NABIL and NSBIL. EBL provides higher loan and advance from total asset. EBL is better at mobilizing its total asset as loan and an advance Lower C.V of EBL signifies more consistency in ratio. The loan and advances to total assets ratio of NABIL, EBL and NSBIL fluctuating trend.
19. The investment on government treasury bills to Total assets of NABIL, EBL and NSBIL have fluctuating trend. The average ratio of NABIL, EBL and NSBIL are 12.828%, 17.28% and 16.822%. The ratio of EBL is higher than NABIL and NSBIL which indicates that EBL invest more in govt. securities from its total asset. It means EBL has invested more money in risk free assets. Lower C.V of NABIL signifies more consistency in ratio.
20. The return on loan and advance of NABIL, EBL and NSBIL have fluctuating trend. The highest ratio of NABIL, EBL and NSBIL are 4.92%, 3.02% and 2.69%. Similarly lowest ratio of NABIL, EBL and NSIBL are 3.49%, 2.18% and 1.53% respectively. The average ratio of NABIL, EBL and NSBIL are 4.004%, 2.55% and 2.12%. The ratio of NABIL has higher than EBL and NSBIL, so NABIL getting higher earning by utilizing and providing loan and advance. It means NABIL has utilized the loan and advance for the profit generation. All three banks have less than 5% of earning.
21. The average return on total assets ratio of NABIL, EBL and NSBIL are 2.37%, 1.656% and 1.244%. The average ratio of NABIL is higher than EBL and NSBIL which signifies that NABIL has utilized it available asset to make earning. It means NABIL has used it asset to revenue generation. Lower C.V of NABIL signifies more consistency in ratio. The returns on total assets of

NABIL, EBL and NSBI have fluctuating.

22. The Return on Equity of NABIL, EBL and NSBIL have fluctuating trend. The average ratio of NABIL is higher than EBL and NSBIL which indicates that NABIL has utilized it equity to making income. It signifies that the shareholders of NABIL are getting higher return than EBL and NSBIL. It can be concluded that NABIL has better utilized the equity for the profit generation. The Lower C.V of NABIL signifies more consistency in ratio.
23. The average Earning per share of NABIL, EBL and NSBIL are 112.002, 86.594 and 29.164. NABIL provide better earning to its shareholder because the EPS of NABIL is higher than EBL and NSBIL. Higher EPS indicate that NABIL has high earning to provide its shareholder. Lower of C.V. of EBL indicates consistency in its variables. The Earning per share of NABIL is decreasing, EBL is increasing and NSBIL is fluctuating trend.
24. The market price of the share of NABIL, EBL and NSBIL have increasing till 2007/08 and decreasing thereafter. The highest MPS of NABIL, EBL and NSBIL are Rs 5275, Rs 3132 and Rs 1900. The lowest MPS are Rs 2240, Rs 1379 and Rs 612. The average MPS of NABIL is greater than EBL and NSBIL. It indicates that high demand of share of NABIL in market and shareholder are getting higher price. The C.V. of EBL is low which indicates consistently in fluctuation of its market price.
25. The average mean ratio of NABIL, EBL and NSBIL are 35.82, 25.578 and 40.102 times. The price earning ratio of NABIL, EBL and NSBIL have increasing first and decreasing trend at later. The higher PE ratio signify that price of NSBIL is traded in market in higher price. The lower C.V. of EBL indicates consistency in its ratio. The investor of NSBIL are getting better price of stock because they are selling their shares in high price. It is recommended to sell share of NSBIL and purchase share of EBL according to analysis of price earning ratio.

Major Findings of Statistical Analysis

26. The coefficient of correlation between deposits and loan and advances of NABIL, EBL and NSBIL are 0.993, 0.997 and 0.950. All banks have positive relationship between these two variables. It refers that deposit and loan and advances of all banks move together very closely but not proportionately. The

98.6 percent of variation in loan and advances of NABIL, 99.4 percent of variation in loan and advance of EBL and 90.3 percent of variation in loan and advance of NSBIL has been explained by deposit. Least is determined by other factor. All banks have significant relationship between deposits and loan and advances.

27. The coefficient of correlation between total deposits and investments of NABIL, EBL and NSBIL are positive i.e. 0.978, 0.698 and 0.990. It refers that deposit and investment of all banks move same direction but not proportionately. The coefficient of determination of NABIL, EBL and NSBIL are 0.956 0.487 and 0.980. It means 95.6% of NABIL, 48.7% of EBL and 98% of variation in investment of NSBIL has been explained by total deposit. There is significant relationship between deposits and investment of NABIL and NSBIL and insignificant of EBL.
28. The coefficient of correlation between current asset and net profit of NABIL, EBL and NSBIL are positive. Here 57.3 percent of variation in net profit of NABIL, 93.9 percent of variation in net profit of EBL and 75.7 percent of variation in net profit of NSBIL has been explained by current asset due to coefficient of determination of NABIL, EBL and NSBIL are 0.573, 0.939 and 0.757. There is significant relationship between current asset and net profit of EBL and NSBIL but insignificant relationship of NABIL.
29. The coefficient of correlation between total deposit and net profit of NABIL, EBL and NSBIL are 0.959, 0.986 and 0.863. The deposit and investment of all banks move together very closely due to positive relation. The coefficient of determination of NABIL, EBL and NSBIL are 0.919, 0.972 and 0.745. It means 91.9 percent of variation in net profit of NABIL, 97.2 percent of variation in net profit of EBL and 74.5 percent of variation in net profit of NSBIL has been explained by total deposit. Least is determined by other factor. The relationship of NABIL, EBL and NSBIL is significant.
30. The trend of total deposit of NABIL, EBL and NABIL forecasted increasing trend. Increment trend of NABIL is higher, EBL has moderate and NSBIL has lower. Which indicate collecting in total deposit NABIL seems aggressive, EBL seems to moderate and NSBIL seems to be lower.
31. The trend of loan and advances of NABIL, EBL and NSBIL Banks forecasted increasing trend. The rate of increment of loan and advance for NABIL seems

to be higher and aggressive than EBL and NSBIL. Increment trend of loan and advance of NABIL is higher, EBL has moderate and NSBIL has lower. The trend projected for father five year F/Y 2012/13 to F/Y 2016/17.

32. The Trend line of current asset of NABIL, EBL and NSBIL banks forecasted increasing trend. The rate of increment of current asset for EBL seems to be higher and aggressive than NSBIL and NABIL. Increment trend of current asset of EBL is higher, NSBIL has moderate and NABIL has lower.
33. The Trend line of net profit of NABIL, EBL and NSBIL forecasted increasing trend. The increment of Net profit of NABIL and EBL is aggressive rather than NSBIL. In conclusion, NABIL and EBL are doing better in order to generate net profit during the projected study period but increment of NSBIL is little lower though all NABIL, EBL and NSBIL have increasing trend.
34. For hypothesis decision, the calculated value of t is greater than tabulated value of t, so it is significant and Hi is accepted which means that the net profit and total deposits of NABIL, EBL and NSBL is interrelated.
35. The calculated value of t is greater than tabulated value of t, so it is significant and Hi is accepted which means in the hypothesis decision total deposits and lending of NABIL, EBL and NSBIL is interrelated.

CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

In this chapter, summary conclusion and recommendation are included. All the summary and conclusion are made according to obtained data from analysis. Recommendation has made which would be beneficial for all concerned person, management of the bank and other stakeholder. This research has been undertaken to evaluate the liquidity management of commercial banks. Three banks have been selected as sample of the study and five year financial statements of respective banks have been used for the study. The study has been divided into five chapters which include introduction, review of literature, research methodology, data presentation and analysis and summary, conclusion and recommendation.

This research is concerned about the comparative analysis of liquidity management of Nabil Bank Limited, Everest Bank Limited and Nepal SBI Bank Limited. The researcher has identified that research problem and set objectives to solve research problems about liquidity management of sample banks as described in introduction chapter. The main objective of the study is to analyze the liquidity management, position of liquidity, asset and profitability ratio of NABIL, EBL and NSBIL offer suitable suggestions based on findings of this study. The research is based on secondary source of data. There also include focus of the study, statement of problem, significant and limitation and organization of the study. To make this study more effective, related literatures have been reviewed. This section includes conceptual review and review of related studies. In conceptual review includes concept and meaning of liquidity, important, significance and principle of liquidity, policies and practice of liquidity management of banks. In the review of related studies includes review of books, journal and articles and review of previous thesis as well.

Research methodology has been described in third chapter, which is a way to solve the research problems with the help of various tools and techniques. This chapter includes the various financial as well as statistical tools to analyze the data in order to

come to the decisions. This chapter includes the research design, population and sample data collection procedure, data analysis etc. These studies is mainly conducted on the basis of secondary data collected from annual reports of concern bank, official report, economic journal, financial statement etc. and authorize web site of Nepal stock exchange and security board of Nepal.

The presentation and analysis of data has been made comparative analytical and their interpretation has done in chapter four by applying the wide varieties of methodology as stated in chapter three. It includes the various financial and statistical tools. In case of financial tools there analyzed various component and profile of liquidity, liquidity ratio, assets management ratio as well as profitability and other ratios. Various statistical tools such as arithmetic mean, standard deviation, coefficient of correlation, trend analysis have been applied to fulfill the objective of this study. The major findings of the study are also included in the final section of the presentation and analysis chapter.

This research is concerned about the comparative analysis of liquidity. The term liquidity refers to the funds like deposit, cash and bank balance, borrowing, debt and equity whatever bank has retain for short term investment or use. Liquidity is the ability of bank to meet its obligations on time, especially in relation to repayment of inter-bank borrowings and customer deposits. Liquidity management is a very crucial job of commercial bank and the bank should maintain adequate amount of cash in its vault and NRB for its daily operation and administrative purpose. As per the arrangement of NRB effective from fiscal year 2006/07, the commercial banks are required to maintain cash reserve of 5.5% with NRB of its total deposit liability with NRB. So bank focus on maintain proper liquidity position and meet requirement of NRB directives as well.

5.2 Conclusions

Thus this research is conducted with the major objective of highlighting liquidity management. The observation and conclusion is derived by analyzing component of liquidity and liquidity ratio, asset, profitability and other ratio as we as relevant

financial and statistical tools. This has helped to reach conclusion and provide workable solution for the liquidity management of selected sample banks.

In the analysis of major components of liquidity cash and bank balance, total deposit, investment on Govt. Securities and current asset, all liquidity component of NABIL is fluctuating but EBL and NSBIL are increasing condition. The average cash and bank balance of NABIL, EBL and NSBIL are Rs 1894.54, Rs 4119.114 and Rs 1640.302 million. The average amounts of total deposit are Rs 31717.19, Rs 25244.05 and Rs 19803.27 millions. Similarly, the average amounts of current asset are Rs19569.323 million, 23572.96 million and Rs 18057.12 million. EBL has highest average amount in cash and bank balance where as NABIL has highest investment on Govt. securities and current asset. Liquidity profile Analysis of NABIL, EBL and NSBIL shows that NABIL has no mismatch between the short term assets and liabilities but EBL and NSBIL have mismatch between the short term assets and liabilities, the excess of assets over the liabilities shows its strong liquidity position.

NABIL, EBL and NSBIL three banks have better liquidity position because the standard ratio is more than 1:1. The average mean current ratio of NABIL, EBL and NSBIL are 1.524 times, 1.99 times and 1.328 times. The cash and bank balance to current assets ratio of NABIL, EBL and NSBIL have fluctuating. The average ratio of EBL is greater than NABIL and NSBIL. EBL has high portion cash and bank balance forms its current deposit and NABIL has least. The average investment on Govt. Treasury bill to current asset ratio of NABIL has higher than EBL and NSBIL. The average mean investment on Govt. securities to total investment ratio EBL has higher than NABIL and NSBIL. It indicates that investment in govt. securities of EBL is high in its total investment. The cash and bank balance to total deposit ratio of NABIL is increasing EBL is fluctuating and NSBIL is decreasing. The average current deposit to total deposit ratio of NABIL has higher than EBL and NSBIL. The balance in NRB to total deposit ratio of NABIL, EBL and NSBIL reveals fluctuating. The average balance in NRB to total deposit of EBL is greater than NABIL and NSBIL. The average CRR ratio of NABIL, EBL and NSBIL are 5.94%, 7.83% and 6.57%. The average CRR of EBL is greater than NABIL and NSBIL. The average NRB to current deposit ratio of EBL is higher than NABIL and NSBIL. The average loan and advance to total deposit ratio of EBL is higher than NABIL and NSBIL. EBL use

more total deposit as providing loan and advance. The average total investment to total deposit ratio of NABIL, EBL and NSBIL are 31.97%, 22.017% and 34.83%. The highest ratio of NSBIL indicates higher investment from total deposit. EBL provides higher loan and advance from total asset.

The average investment on government treasury bills to total assets ratio of EBL is higher than NABIL and NSBIL. The return on loan and advance of NABIL, EBL and NSBIL have fluctuating trend. The average return on loan and advance ratio of NABIL has higher so NABIL getting higher earning by utilizing and providing loan and advance. The average return on total assets ratio of NABIL is higher than EBL and NSBIL which signifies that NABIL has utilized it available asset to make earning. The higher ROE ratio of NABIL indicates that NABIL has utilized it equity to making income. NABIL provide better earning to its shareholder because the EPS of NABIL is higher. Higher EPS indicate that NABIL has high earning to provide its shareholder. The highest MPS of NABIL, EBL and NSBIL are Rs 5275, Rs 3132 and Rs 1900. NABIL has high market price in every year. The price earning ratio of NABIL, EBL and NSBIL have increasing first and decreasing trend at later. The higher PE ratio signify that price of NSBIL is traded in market in higher price. The investor of NSBIL are getting better price of stock because the share trading in high price. It is recommended to sell share of NSBIL and purchase share of EBL according to analysis of price earning ratio.

In the aspect of Statistical Analysis, the correlation between deposits and loan and advances of NABIL, EBL and NSBIL are positive. The 98.6% of NABIL, 99.4% of EBL and 90.3% of variation in loan and advance of NSBIL has been explained by deposit. All banks have significant relationship. The correlation between total deposits and investments of NABIL, EBL and NSBIL are positive. The coefficient of determination of NABIL, EBL and NSBIL are 0.956 0.487 and 0.980. NABIL and NSBIL have significant relationship and EBL has insignificant. The correlation between current asset and net profit of NABIL, EBL and NSBIL are positive. Here 57.3% of NABIL, 93.9% of EBL and 75.7 percent of variation in net profit of NSBIL has been explained by current asset. EBL and NSBIL have significant relationship but insignificant of NABIL. The correlation between deposit and net profit of NABIL, EBL and NSBIL are positive. 91.9 % of NABIL, 97.2% of EBL and 74.5 percent of

variation in net profit of NSBIL has been explained by total deposit. Least is determined by other factor. The relationship of NABIL, EBL and NSBIL is significant. The trend of total deposit and loan and advance of NABIL, EBL and NABIL forecasted increasing trend. Increment trend of NABIL is higher, EBL has moderate and NSBIL has lower. The Trend line of current asset of NABIL, EBL and NSBIL banks forecasted increasing. The rate of increment of current asset for EBL seems to be higher and aggressive than NSBIL and NABIL. Similarly, The Trend line of net profit of NABIL, EBL and NSBIL forecasted increasing trend. The increment of Net profit of NABIL and EBL is aggressive rather than NSBIL. In conclusion, NABIL and EBL are doing better in order to generate net profit but increment of NSBIL is little lower. All the calculated value of t is greater than tabulated value of t, so it is significant and H1 is accepted which means in the hypothesis decision net profiting and total deposit as well as total deposits and lending of NABIL, EBL and NSBIL are interrelated.

5.3 Recommendations

Based on the analysis and finding of the study, the following recommendations can be made as suggestions to make the liquidity management of NABIL, EBL and NSBIL. This would help to draw some outline and make reforms in the respective banks

- Liquidity profile Analysis of NABIL, EBL and NSBIL shows that NABIL has no mismatch between the short term assets and liabilities. This shows a very strong liquidity position of the bank throughout the study period. But EBL and NSBIL have mismatch between the short term assets and liabilities, the excess of assets over the liabilities shows its high liquidity position. So it is recommended to EBL and NSBIL to proper manage of short assets equal to liability which shows very strong liquidity position of the bank
- Generally, banks have to maintain appropriate liquid assets. The current ratios of NABIL, EBL and NSBIL have considerable because all sample banks have more than 1:1 ratio. This can be regarded as good liquidity position because the standard ratio is more than 1:1. The liquidity position affects external and internal factors such as prevalent investment situations, central bank requirements and so on. Considering the growth position of financial market, the lending policy management capabilities, strategic planning and fund flow

situation, bank should maintain enough liquid assets to pay short-term obligations. So, it is recommended to maintain sound liquidity position to NABIL, EBL and NSBIL.

- EBL has high portion cash and bank balance forms its current deposit. The average cash and bank balance to current deposit ratio of NABIL, EBL and NSBIL are 38.53%, 139.93% and 75.23%. EBL has high portion cash and bank balance forms its current deposit and NABIL least. So it is recommended to EBL to invest more deposit for income generation and NABIL to reduce investment and keep deposit as for proper liquidity position.
- The investment on Govt. securities to total investment ratio of NABIL is low. The average mean ratio of NABIL, EBL and NSBIL are 46.01%, 89.52%, and 66.67%. Investment of EBL is in govt. securities is high. It means EBL invested more in risk free asset than other banks. But NABIL has low investment in Govt. securities so it is recommended to increase investment in Govt. securities risk free asset.
- Government securities such as Treasury bills, Development bonds, saving certificates etc. are risk less investment alternatives because they are free of default risk as well as liquidity risk and can be easily sold in the market. In this research study, it has found that both banks, all banks have made some amount of fund in Government securities. But NABIL, EBL and NSBIL are recommended to invest more funds in Government securities risk free asset instead of keeping them idle.
- EBL has high and excess liquidity level so it is recommended to investing in more profitable sectors. Idle assets of theirs in form of excess cash or equivalents should be diverted in various investment opportunities available in the market.
- Cash reserve ratio (CRR) describes whether the commercial banks have met the liquidity requirement as prescribed by NRB. Presently commercial banks have to maintain 5.5% of their total deposit in NRB and own in hand. The average CRR ratio of NABIL, EBL and NSBIL are 5.94%, 7.83% and 6.57%. So all banks meet requirement of NRB. So recommended to always maintain CRR.

- To get success in competitive banking environment, deposit must be utilized as loan and advances. The loan and advance to total deposit ratio of EBL is higher than NABIL and NSBIL. According to NRB directives less than 80% of loan and advances to total deposit ratio is required to enable better mobilization of collected deposit. All bank recommend to increase loan and advance from its total deposit for higher profit.
- EPS and DPS play a vital role to determine the market price of the share and also indicate the financial performance of banks. Higher EPS and DPS indicate the banks. It is recommended to increase EPS and DPS for high demand for stock.
- NABIL, EBL and NSBIL banks are recommended to formulate and implement the sound and effective investment policy to increase volume of total investment and loan and advances that helps to meet required level of profitability as well as social responsibility. The banks consider making investment in rural areas.
- Last political instability directly affected the economic sector. Bank loan and advances is decreasing in this sector. So banks should give priority to these sectors as well as banks should create new investing sector to mobilize deposit.
- Keeping all these in consideration, the NSBIL has little less performance than NABIL and EBL. Therefore, in the future ahead, the NSBIL should improve its weaknesses by adopting the innovative approach to marketing. In the light of growing competition in the banking sector, all banks should be customer oriented. It should strengthen and activate its marketing function as it is an effective tool to attract and retain the customers.
- The bank should develop an innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient and satisfactory way by optimally utilizing the modern technology and offering new facilities to the customers at competitive prices. The bank is also required to explore new market areas. For this purpose, it is recommended to generate strong market which deals with the banking products, places, price and promotion.

BIBLIOGRAPHY

Books, Journals and Articles

Baidya, Shakespeare (2001), *Banking and Insurance Management,* Kathmandu: Taleju Prakashan.

Bhandari, Dilli Raj (2004), *Banking and Insurance: Principle and Practice* Kathmandu: Ayush Publication.

Boxley, James B. (1987), *Banking Management,* New Delhi: Subject Publication.

Brigham E.F., Gapenski, L. C. & Michel, C (1999), *Financial Management,* Singapore Harcourt Asia.

Crosses, H.K. (1963), *Management Policies for Commercial Banks,* New Jersey Prentice Hall Inc.

Desai, V. R. Mutalik (1967), *Banking Development in India,* Bombay: P.C. Mansktol and Sons Pvt. Ltd.

Edmister, Robert O (1980), *Financial Institutions, Markets and Management,* New York: Mc Grow Hill Book Company.

Ghimire, Tulasi Prasad (2004), *Rastriya Banijya Bank Pratiyogita Digdarshan,* Kathmandu: Makalu Books and Stationers.

Gitman, L.J. (1991), *Principles of Managerial Finance,* Singapore Harper Collins.

Government of Nepal. *Commercial Bank Act 2031 B.S.* Kathmandu: Nepal Law Book Management Committee.

Gupta, S C. (1992), *Fundamental of Statistics,* Bombay: Himalayan Publishing House.

Gupta, S P. (1990), *Statistical Methods,* New Delhi: Sultan Chand and Sons Publishers.

Hosek, William R. (1977), *Monetary Theory, Policy and Financial Markets,* New York: Mc Grow Hill Book Company.

Joshi, Shyam (2000). *Economic Policy Analysis.* First Edition. Taleju Prakashan, Bhotahity, Kathmandu.

Kerlinger, F.N. (2002), *Foundation of Behavioural Research,* New Delhi: Surjeet Publications.

Khadka, Sherjung and Singh, Hridaya Bir (2001), *Banking and Insurance: Principle*

Legislation and Practice, Kathmandu: Nabin Prakashan.

Kohn, Meir (1999), *Financial Institutions and Markets,* New Delhi: Tata McGraw Hill Publishing Company.

Kolb, Robert W. and Rodriguez, Ricardo J. (1996), *Financial Institutions and Markets*, U.K., Blackwell Publishers Ltd.

Kothari, C.R. (1992), *Quantitative Techniques,* New Delhi: Vikash Publishing House Pvt. Ltd.

Kothari, C.R. (1994), *Research Methodology,* New Delhi: Vikash Publishing House Pvt. Ltd.

Meir Kohn (1992), *Financial Institution and Market,* New Delhi: Tata McGraw Hill.

Mittra, S (1970), *Money and Banking: Theory, Analysis, and Policy,* New Work Randon House.

Oxford Advanced Learners' Dictionary of Current English, Edited by A.S Hornby (2002), U.K., Oxford University Press.

Pandey, I.M. (1999), *Financial Management,* New Delhi: Vikash Publishing, House.

Panta, P.R. (2003), *Business Environment in Nepal,* Kathmandu: Buddha Academic Enterprise.

Panta, P.R. and Wolf, H.K. (2000), *Social Science Research and Thesis Writing,* Kathmandu: Buddha Academic Enterprises.

Pradhan, R.S. (1994), *Financial Management Practices in Nepal,* New Delhi: Vikash Publishing House Pvt. Ltd.

Pradhan, R.S. (2004), *Financial Management,* Kathmandu: Buddha Academic Enterprises.

Radhashwami, M, and Bashudevan, S.V. (1976), *A Text Book of Banking,* New Delhi: S. Chand and Company.

Reed, Edward W. (2000), *Commercial Banking,* New Jersey: Prentice Hall Inc.

Reed, Edward W., Gill, Edward K., Cotter, Richard V. and Smith. Richard K. (1980), *Commercial Banking, 2*"d Edition, New Jersey: Prentice Hall Inc.

Saunders, Anthony (1994), *Financial Institution Management: Modern Perspective,* Irwin: Boston.

Sharestha, Manohar K and Bhandari Depak B (2004), *Financial Markets and Institution,* Kathmandu: Amita Books Publishers and Distribution.

Sharma, P.K. and Choudhary, A.K. (2002), *Statistical Methods,* Kathmandu. Khanal Books Prakashan.

Shrestha, Manohar K. (1980), *Financial Management.* Kathmandu: Curriculum Development Centre.

Sinkey, Joseph F. (1983), *Commercial Bank and Financial Management,* New Jersey, USA: Prentice Hall Inc.

The American Bankers Association (1972), *Principle of Bank Operation,* USA, American Institute of Banking.

Weston, J.F and Copeland, T.E. (1992). *Managerial Finance,* Chicago: The Dryden Press

Weston, J.F. and Brigham, E.F. (1987), *Essentials of Managerial Finance,* Orlando: The Dryden Press

Thesis

Amatya, Rina (2007), *Deposit mobilization of commercial banks in Nepal.* Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Gautam S. P. (2006). *A Comparative study on financial performance of Standard Chartered Bank Limited and Nepal Bangledesh bank Limited***.** Unpublished Master's Thesis, Central Department of Management, Faculty of Management, T.U. Kathmandu.

Gupta, Banti, (2003) *Deposit and Reinvestment Problem of Nepalese Commercial Banks with special reference to NSBIL and EBL*. Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Gurung, A. K. (2006). *Lending policy and recovery management of Standard Chartered Bank Nepal ltd and NABIL Bank Limited*. Unpublished MBS Thesis, Submitted to Faculty of Management, T.U. Kathmandu.

Karki, Renu (2009) *The Comparative study on liquidity mobilization of Nabil Banik Ltd. and Standard Chartered Bank Ltd.* Unpublished Master's Thesis, Shanker Dev Campus, T.U. Kathmandu.

Khanal, Sunita (2010) *Comparative Study on Liquidity Management of Everest Bank Limited and Himalayan Bank Limited.* Unpublished Master's Thesis, Shanker Dev Campus, T.U. Kathmandu.

Khanal, Sunita (2010) *Comparative Study on Liquidity Management of Everest Bank*

Limited and Himalayan Bank Limited. Unpublished Master's Thesis, Shanker Dev Campus, T. U. Kathmandu.

Limbu, Ram (2008). *Credit Management of NABIL Bank Limited*. Unpublished Master's Thesis, Shanker Dev Campus, T.U. Kathmandu.

Panta, Rajendra P. (2005), *A Study of Deposit and its utilization by Commercial Banks in Nepal.* An Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Poudel, Kishor, (2002) *A Study on Liquidity and Investment Position of Joint Venture Commercial Banks in Nepal*. Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Rayamajhi, Charu (2009), Fund *Raising and its Mobilization in Commercial Banks, A Study of Himalayan Bank Ltd*. Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Sapkota, Uddab Prasad, (2001) *A Study on Fund Mobilizing Policy of Standard Chartered Bank Ltd in Comparison to NBBL Bank Ltd and Himalayan Bank Ltd.* Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Sedai Pradip, (2007). *An Analysis on Lending Policy and Strength of Nepal Investment Bank Ltd.* Unpublished Master's Thesis, Central Department of Management, Faculty of Management, T.U. Kathmandu.

Shrestha, Sunity, (1997) *Lending Operations of Commercial Banks of Nepal and its Impact on GDP,* Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Thapa, Samiksha, (2002) *A Comparative Study on Investment Policy of Nepal Bangladesh Bank Ltd. and Other Joint Venture Banks of Nepal*, Unpublished Master Degree Thesis, Central Department of Management, T.U. Kathmandu.

Websites:

www.nabilbank.com.np

www.ebl.com.np

www.nsbl.com.np

www.nrb.org.np

www.sebonp.com

www.google.com

Appendix - 1

A) Trend Analysis of Nabil Bank Limited

Year(x)	Total deposit (Y)	X = x-2009/10	X^2	XY
2007/08	19101.1	-2	4	-38202
2008/09	24491.1	-1	1	-24491
2009/10	31304.8	0	0	0
2010/11	37348.3	1	1	37348.3
2011/12	46410.7	2	4	92821.4
Tot n= 5	∑Y = 158656	∑X = 0	$\sum X^2$ =10	∑XY = 67476.4

Source: Annul Report of Nabil Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NABIL

a = 31731.2

b = 6747.64

Where as

Yc = 31731.2+6747.64*X of NABIL

B) Trend Analysis of Everest Bank Limited

Year(x)	Total deposit(Y)	X = x-2009/10	X^2	XY
2007/08	13802.4	-2	4	-27605
2008/09	18186.3	-1	1	-18186
2009/10	23976.3	0	0	0
2010/11	33323	1	1	33323
2011/12	36932.3	2	4	73864.6
Tot n= 5	∑Y = 126220	∑X = 0	$\sum X^2$ =10	∑XY= 61396.4

Source: Annul Report of Everest Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

$Y = a + b\ x$……. (I)

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

EBL

a = 25244.1

b = 6139.64

Where as

Yc = 25244.1 + 6139.64 *X of EBL

C.) Trend Analysis of Nepal SBI Bank Limited

Year(x)	Total Deposit(Y)	X = x-2009/10	X^2	XY
2007/08	11002	-2	4	-22004
2008/09	11445.3	-1	1	-11445
2009/10	13715.4	0	0	0
2010/11	27957.2	1	1	27957.2
2011/12	34896.4	2	4	69792.8
Tot n= 5	∑Y = 99016.4	∑X = 0	$\sum X^2$ =10	∑XY= 64300.7

Source: Annul Report of Nepal SBI Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NSBIL

a = 19803.3

b = 6430.07

Where as

Yc = 19803.3 + 6430.07 *X of NSBIL

Appendix - 2

A) Trend Analysis of Nabil Bank Limited

Year(x)	Loan and advances (Y)	X = x-2009/10	X^2	XY
2007/08	12922.54	-2	4	-25845
2008/09	15545.78	-1	1	-15546
2009/10	21365.05	0	0	0
2010/11	27589.93	1	1	27589.9
2011/12	32268.87	2	4	64537.7
Tot n= 5	∑Y = 109692.17	∑X = 0	$\sum X^2$ =10	∑XY = 50736.8

Source: Annul Report of Nabil Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NABIL

a = 21938.434

b = 5073.681

Yc = 21938.434 + 5073.681 * X of NABIL

B) Trend Analysis of Everest Bank Limited

Year(x)	Loan and advances (Y)	X = x-2009/10	X^2	XY
2007/08	9801.3	-2	4	-19603
2008/09	13664.1	-1	1	-13664

2009/10	18339.1	0	0	0
2010/11	23884.7	1	1	23884.7
2011/12	27556.4	2	4	55112.7
Tot n= 5	∑Y = 93245.5	∑X = 0	$\sum X^2$ =10	∑XY = 45730.7

Source: Source: Annul Report of Everest Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

EBL

a = 18649.1

b = 4573.07

Where as

Yc = 18649.1 +4573.07 *X of EBL

C.) Trend Analysis of Nepal SBI Bank Limited

Year(x)	**Loan and advances (Y)**	**X = x-2009/10**	**X^2**	**XY**
2007/08	7626.74	-2	4	-15253
2008/09	9460.45	-1	1	-9460.5
2009/10	12113.7	0	0	0
2010/11	15131.7	1	1	15131.7

2011/12	17480.6	2	4	34961.1
Tot n= 5	∑Y = 61813.2	∑X = 0	$\sum X^2$ =10	∑XY = 25378.9

Source: Annul Report of Nepal SBI Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NSBIL

a = 12362.6

b = 2537.89

Where as

Yc = 12362.6 + 2537.89 *X of NSBIL

Appendix -3

A) Trend Analysis of Nabil Bank Limited

Year(x)	Current Asset (Y)	X = x-2009/10	X^2	XY
2007/08	13857.5	-2	4	-27715
2008/09	16954	-1	1	-16954
2009/10	20122.1	0	0	0
2010/11	17337	1	1	17337
2011/12	29576	2	4	59152

Tot n= 5	∑Y= 97846.6	∑x = 0	∑ X^2 = 10	∑xy = 31820

Source: Annul Report of Nabil Bank Limited

Let trend line be

Y = a + b x……. (I)

Y= dependent variable,

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Where x = X - Middle year

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NABIL

a = 19569.3

b = 3182

Y = 19569.3 + 3182 *X of NABIL

B.) Trend Analysis of Everest Bank Limited

Year(x)	**Current Asset (Y)**	**X = x-2009/10**	**X^2**	**XY**
2007/08	11398.8	-2	4	-22798
2008/09	14226.8	-1	1	-14227
2009/10	24761.6	0	0	0
2010/11	32425.4	1	1	32425.4
2011/12	35052.2	2	4	70104.4
Tot n= 5	∑Y= 117865	∑x=0	∑ X^2 =10	∑xy = 65505.4

Source: Annul Report of Everest Bank Limited

Y= a + bx

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

EBL

a = 23573

b = 6550.54

Where as

Yc = 23573 + 6550.54 *X of EBL

C.) Trend Analysis of Nepal SBI Bank Limited

Year(x)	**Current Asset (Y)**	**X = x-2009/10**	**X^2**	**XY**
2007/08	9976.28	-2	4	-19953
2008/09	10854.5	-1	1	-10855
2009/10	12376.8	0	0	0
2010/11	25111.7	1	1	25111.7
2011/12	31966.3	2	4	63932.7
Tot n= 5	∑Y= 90285.6	∑x=0	∑ X^2 =10	∑xy = 58237.3

Source: Annul Report of Nepal SBI Bank Limited

Y= a + bx

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

Here,

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NSBIL

a = 18057.1

b = 5823.73

Where as

Yc = 18057.1 + 5823.73 *X of NSBIL

Appendix - 4

A) Trend Analysis of Nabil Bank Limited

Year(x)	Net Profit (Y)	X = x-2009/10	X^2	XY
2007/08	635.26	-2	4	-1270.5
2008/09	673.96	-1	1	-673.96
2009/10	746.47	0	0	0
2010/11	1031.05	1	1	1031.05
2011/12	1139.1	2	4	2278.2
Tot n= 5	∑Y = 4225.84	∑X = 0	$\sum X^2$ =10	∑XY = 1364.77

Source: Annul Report of Nabil Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$$a = \frac{SY}{N}$$

$$b = \frac{SXY}{SX^2}$$

NABIL

a = 845.168

b = 136.477

Where as

Yc = 845.168 + 136.477 * X of NABIL

B.) Trend Analysis of Everest Bank Limited

Year(x)	**Net profit (Y)**	**X = x-2009/10**	**X^2**	**XY**
2007/08	237.29	-2	4	-474.58
2008/09	297.99	-1	1	-297.99
2009/10	451.22	0	0	0
2010/11	638.73	1	1	638.73
2011/12	831.77	2	4	1663.54
Tot n= 5	∑Y = 2457	∑X = 0	$\sum X^2$ =10	∑XY = 1529.7

Source: Annul Report of Everest Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$a = \frac{SY}{N}$

$b = \frac{SXY}{SX^2}$

EBL

a = 491.4

b = 152.97

Where as

Yc = 491.4 + 152.97 * X of EBL

C.) Trend Analysis of Nepal SBI Bank Limited

Year(x)	**Net profit (Y)**	**X = x-2009/10**	**X^2**	**XY**
2007/08	117	-2	4	-234
2008/09	254.91	-1	1	-254.91
2009/10	247.77	0	0	0
2010/11	316.37	1	1	316.37
2011/12	391.74	2	4	783.48
Tot n= 5	∑Y = 1327.79	∑X = 0	$\sum X^2$ =10	∑XY = 610.94

Source: Annul Report of Nepal SBI Bank Limited

Where,

Y= dependent variable

a=Y-intercept, b=slope of trend line or annual growth rate,

X = deviation from some convenient time periods.

Let trend line be

Y = a + b x……. (I)

Where x = X - Middle year

$a = \frac{SY}{N}$

$$b = \frac{SXY}{SX^2}$$

NSBIL

a = 265.558

b = 61.094

Where as

Yc = 265.558 + 61.094* X of NSBIL