LIQUIDITY MANAGEMENT OF COMMERCIAL BANK
(with reference to Everest Bank Limited and Nabil Bank Limited)

Submitted by:
Sangeeta Lama

In partial fulfillment of the requirement for the Degree of Master of Business Studies (M.B.S)

Faculty of Management

Patan Multiple Campus
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RECOMMENDATION

This is to certify that the Thesis:

Submitted by:
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(with reference to Everest Bank Limited and Nabil Bank Limited)

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

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VIVA VOICE SHEET

We have conducted the viva-voice examination of the thesis

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

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DECLARATION

I hereby declare that the work reported in this thesis entitled **"Liquidity Management of Commercial Bank (with reference to Everest Bank Limited and Nabil Bank Limited)"** submitted to Office of Dean, Faculty of Management, Tribhuwan University is my original work carried out for the partial fulfillment of the requirement for the Master's Degree in Business Studies (M.B.S) under the supervision of Associate Prof. Mr. Yuga Raj Bhattarai of Patan Multiple Campus.

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LIST OF ABBREVIATION

NRB	:	Nepal Rastra Bank
SLR	:	Statutory Liquidity Ratio
CRR	:	Cash Reserve Ratio
B. S.	:	Bikram Sambat
EBL	:	Everest Bank Limited
PBN	:	Punjab National Bank
ATM	:	Automatic Teller Machine
ABBS	:	Anywhere Branch Banking System
NABIL	:	Nabil Bank Limited
MMAs	:	Money Market Assets
AFS	:	Available For Sales
HTM	:	Held to Maturity
DCGC	:	Deposit and Credit Guarantee Corporation
DDAs	:	Demand Deposit Accounts
NOWs	:	Negotiable Order of Withdrawal accounts
MMDAs	:	Money Market Demand Accounts
CDs	:	Certificate of Deposits
BAFIA	:	Banking and Financial Institutions Act
CFP	:	Cash Flow Projections
ALCO	:	Asset Liability Management Committee
ECB	:	European Central Bank
BOK	:	Bank of Kathmandu
SBI	:	State Bank of India
SCBL	:	Standard Chartered Bank Limited
NIBL	:	Nepal Investment Bank Limited
NIC	:	Nepal Industrial and Commerce Bank
NB	:	Nepal Bangladesh Bank
RBB	:	Rastriya Banijaya Bank
NEPSE	:	Nepal Stock Exchange

CD Ratio	:	Credit- Deposit Ratio
ROA	:	Return on Assets
ROE	:	Return on Equity
NII	:	Net Interest Income
EPS	:	Earning Per Share
MPS	:	Market Price Per Share
DPS	:	Dividend per Share
PE Ratio	:	Price Earning Ratio
GDP	:	Gross Domestic Price
S.D.	:	Standard Deviation
FY	:	Fiscal Year
C.V.	:	Coefficient of Variation

CHAPTER –I

INTRODUCTION

1.1 General Background

Commercial banks are playing vital role for the upliftment of the economy through improved industrial and commercial activities. The primary objective of any commercial banks is to utilize funds from those who have surplus and to those who make investment. For this purpose, commercial banks collect deposit from savers group by promising a certain percentage of interest. Out of the collected funds, they provide loan to customers. The difference between interests of borrowing is interest spread. It is the major sources of income of all the commercial banks. While giving credit, bank use its deposits and capital. But fulfilling immediate cash needs, bank balance or T-bill bank use the fund from liquid funds. Liquid funds plays vital role to any bank. So, NRB has formulated difference rules and regulation about the liquidity position and its management criterion.

One of the most important tasks in the effective management of any financial institution like bank lies in maintaining adequate liquidity. Liquidity can be regarded as the capacity of meeting short-term obligation. Liquidity is the availability of cash at the time needed at a reasonable cost. The capacity of banks to exchange cash for deposit is the liquidity. It is the assets of bank in the form of cash and near about cash. Near about cash means the assets which can be converted into cash immediately without losing the value of them. The bank liquidity is the capacity of bank to meet liabilities.

Liquidity is the part of total assets which can be paid immediately to meet the current obligation. Commercial banks need high degree of liquidity in its assets. The liquidity of assets refers to the ease and certainty with which it can be turned into cash. Bank must hold sufficient liquidity in the form of cash and liquid assets, such as government securities, SLR, CRR in central banks. The

basic sources of bank liquidity are capital and various form of deposit. However, banks can borrow cash from NRB and or other financial institutions for short or specific period. Deposits are liabilities for the bank. People deposit their saving in the bank because they trust on bank that their money will be safe and they get their money at the time of need on their immediate demand. In other words, source of bank fund is people's trust. Bank cannot hold all money without investing them on various sectors. Bank pay cost for capital and its deposit liabilities. Without investment, bank cannot earn profit and cannot pay interest on deposit. So bank invests those funds in various sectors. Investment can be made for both longer and shorter period. Generally investment for longer period provides higher rate of interest because long term investment are more risky than short term investment. So such investment is made on policy backed by vision of their bank. The portfolio risk of any bank consists of credit risk, interest rate risk, market risk, operational risk and liquidity risk. Credit risk to the uncertainty is associated with loan repayment, interest rate risk arise due to the variability of the market interest rate. Another but important thing is liquidity risk.

Liquidity is the availability of cash in the amount and at the time needed at reasonable cost. A bank is considered to be liquid if it has ready access to immediately spendable funds at reasonable cost. Bank needs liquidity for following reasons:

- Customer Deposit Withdrawal
- Credit Requests from Quality Loan Customers
- Repayment of Non deposit Borrowings
- Operating Expenses and Taxes
- Payment of Stockholder Dividends

Therefore, maintaining adequate liquidity is one of the most important tasks to be performed by any financial institution like bank. A bank is considered to be liquid if it either has right amount of immediately spendable funds on hand when they are required or quickly raise funds by borrowing or by selling assets.

A liquid assets process three essential characteristics: price stability, ready marketability and reversibility. An asset must be considered liquid if its price tends to be reasonably stable over time, if it has an active resale market, and if it is reversible so that investors can recover their original investment without loss (Rose 2003).

Lack of liquidity indicates great financial problem caused by lack of people's trust. In such a situation, depositors go on demand of cash rapidly. Furthermore, banks lose its deposit and to a certain extent such immediate demand forces the bank to sell its safer liquid assets to meet short- term obligation which ultimately leads the bank towards insolvency.

Similarly, higher the amount of liquidity, higher will be the opportunity cost of banks which leads to decrease in profit due to investment in non-earning assets more than requirement. Thus bank should maintain the appropriate level of liquidity.

1.1.1 Growth of Commercial Banks in Nepal

Regulatory body for the financial institutions in Nepal- Nepal Rastra Bank has categorized all financial institutions on the basis of the capital they raise. For a commercial bank (as per the NRB Unified Directives 69 it has to have paid up capital of 2 billion. Commercial banks means a bank which operates currency exchanges transactions, accept deposits, provides loan, performs dealing relating to commerce except the banks which have been specified for the cooperative, agriculture, industry or other similar specific objectives.

Nepal Bank Limited is the first commercial bank established in 1994 B. S. under the Nepal bank Act 1993. Under Banijya Bank Act, 2021 the government established Rastriya Banijya Bank with investment capital employed by government resources. Again the government established the third bank

Agriculture Development Bank which is fully owned by government for the purpose of developing agriculture.

When Nepal Government permitted the establishment of foreign joint Venture Bank in early 1980s, Nepal Arab Bank Limited (Now Nabil Bank Limited) was established in 2041 B.S. as the first joint venture bank. Similarly, other joint venture banks like Nepal Indosuez Bank Limited (At present, Nepal Investment Bank Ltd.) were opened. After restoration of democracy, elected government adopted the liberalization and market oriented policy. As a result, number of joint venture banks and commercial banks like Himalayan Bank Ltd, Nepal Bank of Cylon (At present, Nepal credit and commercial Bank Ltd.), Nepal Bangladesh Bank Ltd. increased dramatically.

At present there are 30 licensed commercial banks in Nepal. These commercial banks have given a new horizon to the financial sector of Nepal regarding healthy competition, foreign capital investment and technology transfer as well as skill development through research.

1.1.2 Introduction of Sample banks

a) Everest Bank Limited (EBL)

Everest bank limited started in Nepal in the year 1994 with a view and objective of extending professionalized and effective & efficient banking services to various segment of the society. EBL joined hands with Punjab National Bank (PBN) India as its joint-venture partner in 1997. PBN is the latest nationalized bank in India having 110 years of banking with more than 4,500 offices all over India. In this bank 50% share holdings by Nepali promoters and 30 % by general public and 20 % by Punjab National Bank.

The bank is providing customer-friendly services through 48 Branches, 63 ATM Counters, 3 extension counter & 20 Revenue Collection centers throughout the nation. All the branches of the bank are connected through

Anywhere Branch banking System (ABBS), which enables customers for operational transactions from any branches.

With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, Singapore and UK.

Bank has set up its representative offices at New Delhi (India) to support Nepalese citizen remitting money and advising banking related services.

b) Nabil Bank Limited (NABIL)

Nabil Bank Limited, the first foreign joint venture bank of Nepal started their operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 51 points of representation across the country and over 170 reputed correspondent banks across the globe.

Nabil, 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 measured as a focal objective while doing business.

Operation of the bank including day-to-day operations and the risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit/debit cards, state-of-art software - Infosys Technologies System, Bangalore, India, Internet banking system and Tele-banking system etc.

1.2 Statement of the Problem

Commercial banks are the profit-oriented financial service institutions. They provide credit to those who need the funds ensuring their productive use by mobilizing otherwise rigid and scattered saving of public. But it has to determine how to maintain the appropriate level of liquidity to fulfill short-term obligation such as to meet deposit withdrawal and to fulfill customer's loan demand. Furthermore, it is important to determine the factors affecting the liquidity and its management. The need of liquidity management for economic development of a country is no more to question. But we are facing an acute problem of resource mobilization.

Liquidity and profitability management is an important function of any business because it is the determinant of whether the entity will be in operation in the foreseeable future. Liquidity management is even more crucial as the lifeline of banking itself is money. For a bank, liquidity means having sufficient funds to meet regulatory, contractual and relationship obligation when required and at a reasonable cost to the bank.

Sufficient liquidity is a signal to the wider market as a whole that the bank is prudent, profitable and well managed. This helps to reduce the risk premium that a bank has to pay on its borrowed funds. However, excess enough liquidity is also harmful and thus invites profitability risk. Thus, proper liquidity and profitability management ensures that all of a bank's lending commitments are met. Assessing bank's liquidity position can be challenging. An adequate position for one bank may not be sufficient for another.

Moreover, a position considered adequate for a bank in one time period may not be so in another. In this context, this study will try to discuss on the following issues regarding the liquidity management of commercial banks:

- What is the liquidity position of the selected banks?

- What is the relationship between investment, loan & advances and total deposits?
- What is the deposit and investment position of the sampled banks?
- Is there any trend of deposit, investment, loan & advances and Net profit?

1.3 Objective of the Study

Holding liquid assets and utilizing them in proper investment sector is one of the crucial decisions of commercial banks. In this context, the main objective of this study is to analyze the liquidity position of Everest Bank Ltd. and Nabil bank Ltd. The specific objectives of the study are as follows:

- To examine the liquidity position of selected banks.
- To point out the deposit and investment position of the banks.
- To analyze the relationship between deposit, investment, loans & advances and net profit.
- To indicate the trend of deposit, investment, loans & advances and net profit.

1.4 Significance of the Study

The proper mobilization and utilization of domestic resources become indispensable for any developing country aspiring for a sustainable economic prosperity of the nation. The success and prosperity of the banks relies heavily upon the successful formulation and effective implementation of investment policy. The significances of the study are pointed out as below:

- This study helps to point out how well the banks (Everest Bank and Nabil bank) are utilizing their deposits
- This study is expected to disclose the important information regarding liquidity position of selected banks. Thereby it may be helpful to policy makers and professionals to formulate policies and plans based on the performance of these banks.

- This study helps these banks to compare each other's performance and plan accordingly for future.
- The study guides to investors, customers (depositors, loan takers as well as other types of clients), competitors, personnel of the banks, stockbrokers, dealers, market makers, etc. to take various decisions regarding deposits and borrowings.

1.5 Limitation of the Study

This study is conducted for the partial fulfillment of Master Degree in Business Studies. So it possesses some limitation of its own kind. The limitations of the study are as follows:

- This study is based only on secondary data so it may contain reporting errors.
- The sample chosen for the study are only two commercial banks. The sample banks are Everest bank Ltd and Nabil bank Ltd.
- This study covers the data of only five fiscal years including latest data.
- The conclusion drawn in this study is based on very limited sample, if more sample is added to the study, the findings may be different.

1.6 Organization of the Study

The present study is organized in such way that the stated objectives can easily be fulfilled. The study report has presented the systemic presentation of the research design, analysis, presentation and finding of the study. The study report is designed in five chapters which are as follows:

Chapter 1 – 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, problems of the study, objectives of the study, need or significance of the study and limitation of the study. It is oriented for reports giving them the perspective they need to understand the detailed information about coming chapter. Chapter 2- 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 3- 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 presentation of data. Chapter 4- Presentation and Analysis of Data -This chapter analyzes the data related with study and presents the finding of the study and also comments briefly on them. Chapter 5- Summary, Conclusion and Recommendation- On the basis of the results from data analysis, the research concluded about the performance of the concerned organization for better improvement. The bibliography and appendix have in corporate at the end of study.

CHAPTER – II

REVIEW OF LITERATURE

The review of literature is a crucial aspect of planning of the study. The purpose of reviewing the literature is to develop some expertise on one's area to see what new contribution can be made and to receive some ideas for developing a research design. The present study is simply the continuity in research design. This part includes the review of previous studies, articles and conceptual framework for the related studies. More analysis is not sufficient to present real framework of the study. So review of related materials should be deal with to give the research a clear vision, past study and knowledge provides foundation to the present day.

Review of literature includes the following topics:

2.1 Conceptual Framework

2.2 Review of Related Empirical Studies

2.3 Concluding Remarks

2.1 Conceptual Framework

2.1.1 Liquidity Management

Liquidity means having sufficient funds to meet regulatory, contractual and relationship obligations when required and at a reasonable cost to the banks are unique because there will not be large volume of deposit payable on demand in other types of business. If banks fail to repay the deposit on demand, the bank loses the trust of the public. So liquidity is the lifeline of the bank. In this regard, the term liquidity management is used to describe any types of assets or cash that is readily convertible into money within short span of time to fulfill the short term obligation of any types of organization.

Liquidity refers to bank's capacity to pay off the liabilities in all those currencies. Maintaining excess liquidity in one currency is not effective

liquidity management for other currencies because the liabilities in the demanded currency cannot be met (Dahal and Dahal 2002). Liquidity is the availability of cash in the amount and at the time needed at a reasonable cost (Rose2003).

Liquidity management is the part of the risk management framework of the financial services industry which concerns all financial institution whether they are commercial banks or developmental banks or financial companies or other institutions (Shrestha 2061).

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 a reasonable cost at precise time of those funds are needed. This suggests that a liquid bank has either the right amount of immediately spendable funds on hand when they are required or can quickly raise liquid funds by borrowing or selling its assets.

Liquidity management is a tough task to be discharged by the management of every Business Entity. Managing liquidity for a bank involves having enough cash on hand and being able to borrow cash at a reasonable cost in order to meet cash needs exactly when they arise. To meet the foreign demands or liquidity, banks can use new customer's deposits. Another important element in the supply of the bank liquidity comes from customers repaying the loan which provides fresh funds for meeting new liquidity needs, as do sales of bank assets, especially marketable securities from the bank's investment portfolio. These various sources of liquidity demand and supply come together to determine each bank's net liability position at any point of time.

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

A problem related to maturity mismatch situation is that bank hold unusually high proportion of liabilities subject to immediate payment such as demand deposit, money market borrowing. Thus, banks must always stand ready to meet immediate cash demands that can be substantial at times especially near the end of a week, at the first of each month, and during certain seasons of the year. Another source of the bank liquidity problem is the bank's sensitivity to change in interest rates. When interest rates rise, some depositors will withdraw their funds in search of higher return elsewhere. Many loans customers may postpone new loan request or speed up their drawing on those credit lines that carry interest rates.

Thus, changing rates affect both customer's demand for deposit and demand for loans, each of which has important impact on a bank's liquidity position. Moreover, movement in interest rates affects the market values of assets where the bank may need to sell in order to raise additional liquid funds, they directly affect the cost of borrowing in the money market (Rose 2003).

Liquidity risk involves the inability to increases in assets, manage unplanned changes in funding sources and to meet obligations when required, without incurring additional costs or inducing cash flow crisis.

Primarily, an effective and strong liquidity risk management policy and framework will ensure that a bank has sufficient liquid assets to meet liabilities that fall due short term and to meet any unexpected demands for funds by its depositors or creditors. The effectiveness of a bank's liquidity risk management will determine the extents to which the institution may be subject to cash flow crisis and additional costs (Reserve Bank of Fiji- Banking Supervision Policy Statement No 9A- 2001).

2.1.2 Types of Liquidity

Mainly the liquidity of the firm are categorized under two heading. They are:

1. Assets Liquidity

Banks typically hold some liquid assets to supplement liquidity from deposits and other liabilities. These assets can be quickly and easily converted to cash at a reasonable cost or are timed to mature when the managers anticipate a need for additional liquidity. Liquid assets include those that can be pledged or used in a repurchase agreement. Although management expects to earn some interest income on their liquid assets, their main purpose is to provide liquidity (Reed, Cotter, Gills & Smith 1976).

A firm's primary liquidity assets are

A. Cash and Cash Equivalents
B. Receivables
C. Marketable Securities

A. Cash and Cash Equivalents

Cash creates management control problems because of the ease with which it can be converted to uses outside the firm. It also generates problems in terms of how much cash should the firm have on hand. Too little cash means the firms is likely to have problems covering current expenses (wages, utilities), too much cash means the firm is not getting a return on funds that it could if the excess cash were invested in other short term assets. On the balance sheet, firms indicate their cash and cash equivalents.

Cash is obvious and includes all the forms of cash the firm has on hand (petty cash, bank balances, etc.). Cash equivalents are items that can be converted to cash in a very short time. For example, commercial paper with a maturity of less than 30 days is considered as a cash equivalent. When bank balances are restricted, firms should report cash with the amount restricted identified. Restricted cash amounts may come about because of lenders requiring that compensating balances is maintained by firms with outstanding loan balances.

B. Receivables

Receivables can be separated into two categories i.e. trade receivables and non-trade receivables. Trade receivables are further categorized as accounts receivable and notes receivable. Accounts receivable are accounts for which credit sales were allowed. Thus, accounts receivable should only be associated with the sale of goods on credit. They should not include other forms of receivables. Notes receivables represent short-term lending activity of the firm. In many cases, the receivables that are not credit sale receivables will be grouped under the label notes receivable. Non-trade receivables include advances to officers, advances to subsidiaries, damage deposits, deposits for guarantees, and dividend and interest receivables.

C. Marketable Securities

Marketable securities be classified as one of three types, i.e. held-to-maturity, trading securities, and securities available for sale. Two of these categories, trading securities and available for sale securities are reported on the financial statements at "fair value (analogous to market value)". Securities classified as held-to-maturity are reported at historical cost. (http://www.uic.edu)

i. Money Market Assets

Money market assets (MMAs) are usually the most liquid form of bank's assets. MMAs include:

- Fed funds sold with an overnight maturity or term maturity within 30 days.

- Short-term deposits placed.
- Certificate of Deposits purchased are negotiable in the secondary market.
- Negotiable Banker's acceptances purchased from banks with good credit standing. A banker's acceptance is a time draft drawn on and accepted by a bank. It is often used to facilitate trade transactions, is usually collateralized by merchandise, and is guaranteed by a bank(Reed, Cotter, Gills & Smith 1976).

Large banks generally hold a range of MMAs instruments and may diversify their short term assets to improve yield or maintain market presence. Because large banks have access to wholesale funding sources, they often do not rely on MMAs for liquidity to the same extent as community banks, MMAs are primarily Fed funds sold to their correspondents (Grywinski1991).

ii. The Investment Portfolio

A bank's investment portfolio can provide liquidity in three ways:

- The maturity of a security
- The sale of securities for cash
- The use of "free" securities as collateral in a repurchase agreement or other borrowing.

For an investment security to be saleable, it must not be encumbered, i.e. the security cannot be sold under repurchase agreement or pledged or used as collateral and it must be marketable. A "free" security is an instrument that can be used as collateral in a transaction. A security that is severely depreciated, a small face amount, already pledged or encumbered, or poor credit quality are not a good candidate for collateral and should be considered "free".

Because of these judgmental factors, the amount of free securities owned by a bank cannot easily be determined from the general ledger and

levels are generally estimated. Periodically, management should analyze in detail the investment portfolio to validate the bank's estimates of free securities(Reed, Cotter, Gills &Smith 1976).

For accounting purposes, investment portfolios are separated into two categories and they are available-for-sale (AFS) and held to maturity (HTM). These designation may affect how a bank uses its securities for liquidity purposes.

iii. Cash Operating Accounts

Operating accounts such as vault cash, cash items in process of collection, correspondent accounts and the reserve accounts maintained at the central bank usually are not liquid assets in an ongoing institution. These accounts are needed to accommodate daily business transaction; if these funds are used, they must be replenished before further business activities are conducted. Most well-managed banks maintain the minimum balance needed to accommodate transactions in the accounts, since the balances do not generally earn interest (Reed, Cotter, Gills & Smith 1976).

iv. Reverse Repurchase Transactions

In a securities purchased under resale agreement, also known as a "reverse repurchase agreement," a bank lends money to a counterparty by purchasing a security and agreeing to resale the security to the counterparty at a future date. This is an exchange of the most liquid asset (surplus cash) for a less liquid asset (a security). A reverse repo provides earnings to the lending bank with limited credit risk because the loan is collateralized (Grywinski 1991).

2. Liability Liquidity

Large regional and money center banks and increasingly more community banks rely heavily on liability liquidity. Larger banks

generally have ready access to money markets and usually find that borrowing is the most economical way for them to meet short-term or unanticipated loan demand or deposit withdrawals. While community banks generally do not have the same broad access to money markets, their reliance on liability liquidity is increasing as the availability of core deposits continues to decline.

By managing liabilities instead of assets, banks can tailor liabilities to fit their cash flow needs instead of apportioning asset types of and amounts to a given liability base (Bedi and Mardikar 1993).

A. Retail Funding

Retail funding is supplied by the deposits, a bank receives from the general public, primarily consumers and small businesses. These deposits are most bank's primary funding source and for many banks continue to be a relatively stable source of funds. Retail funds providers usually maintain balances of NPR 500,000 or less, to be fully insured by the Deposit and Credit Guarantee Corporation (DCGC). Retail accounts include:

- Transaction accounts such as demand deposit accounts (DDAs), negotiable order of withdrawal accounts (NOWs), or money market demand accounts (MMDAs) and
- Saving accounts and time certificates of deposit (CDs) (Bedi and mardikar 1993).

B. Wholesale Funding

Many banks are increasing their use of wholesale funding, replacing lost retail deposits with funds provided by professional money managers. Wholesale funds providers are typically large commercial and industrial corporations, other financial institutions, governmental units, or wealthy individuals. Wholesale funds transactions are typically not insured or are in amounts that exceed the DCGC insurance limit. As a result, these funds

are generally very sensitive to credit risk and interest rates, and pose greater liquidity risk to a bank (Singh 2005).

C. Other Debt Securities

Many large banks also use other debt securities to provide longer - term sources of funds. Under the provisions of the Unified Directive and Banking and Financial Institutions Act (BAFIA), if a bank is one of the 100 largest insured banks and owns a financial subsidiary, it must have outstanding "eligible debt" that is rated in one of the three highest investment grade rating categories by a nationally recognized statistical rating organization (Singh 2005).

3. Importance of Liquidity Management

Liquidity risk is a greater concern and management challenge for banks today than in the past. Increased competition for consumer deposits, a wider array of wholesale, capital market funding products and technological advancements have resulted in structural changes in how banks are funded and how they manage their risk (Natarajan2001).

In particular, two recent trends in funding make it more important for banks to actively manage their liquidity risk:

- The increased use of credit- sensitive wholesale funds providers and
- The growth of off-balance-sheet activity (Mishra 2003).

Traditionally, banks have relied upon retail transaction and savings accounts as a primary funding source. These deposits generally represent a stable and low-cost source of funds. However, for the past several years, core deposits as a percentage of assets have steadily declined. More recently, the absolute growth of core deposits has been flat and may well decline in the future as retail consumers continue to evaluate the variety of completing savings and their relative returns. The growth in

and consumers acceptance of, Internet banking and other electronic technologies may accelerate this trend by making it easier for consumers to compare rates and to transfer funds between competing institutions easily and rapidly (Mishra 2003).

Banks are successfully adjusting to this secular shift by using market sources to meet loan demand and investment needs. By using market sources, banks are able to diversify their funding bases among funds providers and across maturities. Unlike core deposits, whose maturities are generally determined by the preferences of depositors, funds in the professional markets can be accessed at a variety of tenors. Many choices among market funding alternative have provided banks with greater flexibility in managing their cash flows and liquidity needs.

Increased reliance on market funding sources however, has left banks more exposed to the price and credit sensitivities of major funds providers. As a general rule, institutional funds providers as more credit sensitive and will be less willing than retail customers to provide funds to a bank facing real or perceived financial difficulties. A bank's ability to access the capital markets may also be adversely affected by events not directly to them (Natarajan2001).

Along with the shift from relatively credit-neutral to credit-sensitive funds providers, bank have turned increasingly to asset securitization and other off-balance-sheet strategies to meet their funding requirements. As these off-balance-sheet activities have grown, they too have grown, they have become increasingly important in the management and analysis of liquidity risk, depending on the specific transaction and the level of interest rates at the time (Ivany1993).

2.1.3 Liquidity Risk

Liquidity risk is the risk to a bank's earnings and capital arising from its inability to timely meet obligations when they come due without incurring unacceptable losses. Bank management must ensure that sufficient funds are available at a reasonable cost to meet potential demands from both funds providers and borrowers. Although liquidity risk dynamics vary according to a bank's funding market, balance sheet, and bank's corporate structure, the most common signs of possible liquidity problems include rising funding costs, requests for collateral, a rating downgrade, decrease in credit lines, or reductions in the availability of long- term funding.

The sophistication of a bank's liquidity management process will depend on its business activities and overall of risk. However, the principles of liquidity management are straightforward: a well-managed bank, regardless of size and complexity, must be able to identify, measure, monitor, and control liquidity risk in a timely and comprehensive manner (Khan and Jain1997).

2.1.4 Early Warning Indicators of Liquidity Risk

Management should monitor various internal as well as market indicators of potential liquidity problems at the bank. These are indicators of potential liquidity problems at the bank. These indicators, while not necessarily requiring drastic corrective action, may prompt management and the broad to do additional monitoring or analysis (Varshney&Swaroop1994).

An incipient liquidity problem may first show up in the bank's financial monitoring system as a downward trend with potential long-term consequences for earnings or capital. Examples of such internal indicators are:

- A negative trend or significantly increased risk in any area or product line.
- Concentrations in either assets or liabilities.

- A decline in indicators of asset quality.
- A decline in earnings performance or projections.
- Rapid asset growth funded by volatile wholesale liabilities or brokered deposits (Varshney&swaroop1994).

Professional analyst and other market participants may express concerns about the bank's credit capacity. Examples of these third-party evaluations include:

- Bank is named in market rumors as a "troubled" bank.
- Downgrades of credit rating agencies.
- Customers are contacting relationship managers, fixed income sales representatives, and branch employees requesting information.

Bearish secondary market activity in the bank's securities may signal declining value. Examples of these market events include:

- Drop in stock price.
- Wider secondary spreads on the bank's senior and subordinated debt and increasing trading of the bank's debt.
- Broker/dealers are reluctant to show the bank's name in the market, forcing bank management to arrange "friendly" broker. Dealer support (Chopra 1989).

Finally, the bank's funding market may begin to contract or demand credit support, better credit terms, or shorter duration lending, any of which may increase liquidity costs. Examples of funding deterioration are:

- Overall funding costs increase.
- Counterparties begin to request collateral for accepting credit exposure to the bank.
- Correspondent banks eliminate or decrease credit line availability, causing the bank to make larger purchases in the brokered funds market.

- Volume of turndowns in the brokered markets is unusually large, forcing bank to deal directly with fewer willing counterparties.
- Rating- sensitive providers, such as trust managers, money managers, and public entities, abandon the bank.
- Counterparties and brokers are unwilling to deal in unsecured or longer dated transaction.
- Transaction sizes are decreasing, and some counterparties are unwilling to enter into even short-dated transactions.
- Bank receives requests from depositors for early withdrawal of their funds, or the bank has to repurchase its paper in the market (Chopra 1989).

When evaluating a bank's potential liquidity risk, the examiners will consider not only the factors considered by bank management but also a bank's current position and trends in the following ratios:

- Loans to deposits (CD Ratio).
- Short-term liabilities to total assets (GAP Analysis).
- On-hand liquidity (CRR/SLR).
- Dependence or reliance on wholesale funding (Varshney & Swaroop 1994).

2.1.5 Relationship of Liquidity Risks to Other Banking Risks

Bankers and examiners must understand and assess how a bank's exposure to other risks may affect its liquidity. The nine categories of risk are credit, interest rate, liquidity, price, foreign currency translation, compliance, strategic, and reputation. These categories are not mutually exclusive any product or service may expose the bank to multiple risks and a real or perceived problem in any area can prevent a bank from raising funds at reasonable prices and thereby increase liquidity risk (Johnson 1940).

The Primary risks that may affect liquidity are reputation, strategic, credit, interest rate, price, and transaction. If these are not properly managed and controlled, they will eventually undermine a bank's liquidity position.

A brief description of how these risks may affect liquidity is provided below:

A. Reputation Risk

Reputation risk is the current and prospective impact on earnings and capital arising from negative public opinion. A bank's reputation for meeting its obligations and operating in a safe and sound manner is essential to attracting funds at a reasonable cost and retaining funds during troubled times.

Negative public opinion, whatever the cause may prompt depositors, other funds providers and investors to seek greater compensation such as higher rates or additional credit support for maintaining deposit balances with a bank or conducting any other business with it. If negative public opinion continues, withdrawals of funding could become debilitating.

To minimize reputation risk and its potential impact on liquidity, bank management should assess the bank's reliance on credit-sensitive funding. A bank that is exposed to significant reputation risk should seek to mitigate liquidity risk by diversifying the sources and tenors of market funding and increasing asset liquidity, as appropriate.

B. Strategic Risk

Strategic risk is the current and prospective impact on earnings or capital arising from adverse business decisions, improper implementation of decisions or lack of responsiveness to industry changes. No strategic goal or objective should be planned without considering its impact on a bank's funding abilities. The bank must be able to raise money required to meet its obligations at an affordable cost. The ability to attract and maintain sufficient liquidity is often

an issue at banks experiencing rapid asset growth. If management misjudges the impact on liquidity of entering a new business activity, the banks strategic risk increases. Management should carefully consider whether the funding planned to support a strategic risk initiative will increase liquidity risk to an unacceptable level.

C. Credit Risk

Credit risk is the current and prospective risk to earnings orcapital arising from an obligor's failing to meet the terms of any contract with the bank or otherwise to perform as agreed. A bank that assumes more credit risk through asset contraptions or adoption of new underwriting standards in conjunction with untested business lines may be increasing its liquidity risk. Credit- sensitive funds providers may worry that the bank's increased credit exposure could lead to credit problems and insufficient profits. The bank's ability to meet its obligations may eventually be compromised. Wholesale funds providers and rating agencies consider the level of past-due loans.

Non-performing loans, provisions to the allowance for loan and lease losses, and loan charge-offs as indications of trends in credit quality and potential liquidity problems. If credit risk is elevated, the bank may have to pay a premium to access funds or attract depositors. If credit risk has undermined the bank's financial viability, funding may not be available at any price. Most large bank failures have involved the combined effects of severe credit and liquidity deterioration.

D. Interest Rate Risk

Interest rate risk is the current and prospective risk to earnings or capital arising from movements in interest rates. Changes in interest rates affect income earned from assets and the cost of funding those assets. If a bank experiences a reduction in earnings from a change in market interest rates, funds providers

may question the financial stability of the bank and demand a premium. They may even refuse to provide funds.

Off-balance-sheet instruments that a bank uses to manage its interest rate risk may also pose liquidity risk. The cash flows of those instruments often are very sensitive to changes in rates, and if not properly managed, can result in unexpected funding requirements or other cash outflows during periods of volatile interest rates (Crosse 1963).

E. Price Risk

Price risk (market risk) is the risk to earnings or capital arising from changes in the value of traded portfolios of financial instruments. Price risk may result in volatile earnings. This risk is most prevalent in large banks that actively trade financial instruments. Price risk is closely monitored by funds providers when assigning a bank's financial position and creditworthiness. If price risk and its perceived impact on earnings or capital are too great, funds providers may require the bank to pay increased rates for funds, may not be willing to invest in longer term maturities, or may not be willing to provide funding on any terms (Crosse 1963).

F. Transaction Risk

Transaction risk is the current and prospective risk to earnings and capital arising from fraud, error, and the inability to deliver products or services, maintain a competitive position and manage information. Systems that directly affect liquidity include wire transfer systems for check and securities clearing, electronic banking, and operations governing credit, debit, and smart card usage. If product lines change, management must adjust the systems to ensure that all transactions can be handled. Significant problems can develop very quickly if the systems that process transactions fail or delay execution. If customers have difficulty accessing their accounts, they may close them, which

will diminish liquidity. Transaction risk should be considered in the bank's contingency planning process (Crosse 1963).

2.1.6 Profit and Profitability

In business, profits are the excess of revenue over cost. In other words, business profits are the residual income, which is equal to sale proceeds minus costs. In a simple term, profits mean the residual balance of earning expected to be available with the firm that is obtained after deducting entire expenses, costs, charges and provision from total revenue of a period of time. Profit is the resources left to the firm for future growth and expansion or reward to be distributed to the entrepreneurship in the form of dividends (Richard 1996).

2.1.7 Need for Profit

Profit is must for the following reasons:

A. Measurement of Performance

Profit is one of the major factors to measure the management efficiency, productivity and performance. Profit is the most widely used yardstick to see what really is to be achieved and where the firm is to go in the future (Saunders & Cornett 2004).

B. Premium to cover costs of staying in business

Business environment is full of risks and uncertainties. To grasp the globally changing technologies, to stay in the market uncertainties, to replace and acquire assets and enhancing business scope etc. require a profit margin (Saunders & Cornett 2004).

C. Ensuring Supply of future Capital

Profit is necessary to plough back in the investment like innovations, Business expansion and self-financing. It also attracts investors for further investment (Mish kin1998).

D. Return to the Investors

Shareholders provide equity capital to the business because they expect that the entity will provide return to their funds at least equal or above market rate of return. To maintain the shareholders expectation, is the most important that a firm should earn sufficient profit so that it can distribute dividends (Mishkin 1998).

2.1.8 Concept of Bank

Generally, an institution established by law which deals with money and credit is called bank. It is obvious that in a common sense, an institution involved in monetary transactions is called bank.

A bank is a financial institution which plays a significant role in the economy of the country. It facilitates the growth of trade and industry and boost national economy. However, a bank is a resource of economic development which maintains the self- confidence of various segments of society and extends credit to the people.

A bank is a business organization that receives and holds deposits of funds from others, makes loans or extends credits and transfers funds by written orders of depositors (The Encyclopedia America1984).

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

Hence, in concise, we can say that there is no single universally accepted definition of bank. In brief, it is an institution which accepts

deposits in different accounts, provides loans of different types, and creates credit.

2.1.9 History of Banking in Nepal

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

Though it seemed realizing the development of banking in those early times, it could not be materialized till the end of Rana regime. The first government institutionalized credit house called "Tejrath Adda" was established during the tenure of Prime Minister, Ranoddip Singh (1993-1994 B.S). The "Tejarath Office" used to give loans to government employees against the securities of gold, silver, etc.

Banking in true sense started with the inception of Nepal Bank Limited on 30thKartik, 1994 B.S. as the first commercial bank of Nepal under Nepalese Banking Law and Nepal bank act 1994 B.S. formulated by the Industrial board of Nepal. After that, Nepal Rastra Bank was established as a Central Bank on 14thBaisakh, 2013 under Nepal Rastra Bank Act, 2012 B.S. The bank was empowered by the Act to have direct control over banking institution of the country to manage the circulation of national currency along with foreign exchange rate. Then came Rastriya

Banijya bank established on 10thMagh, 2022 B.S. established under Rastriya Banijya Bank Act, 2021 B.S. Nepal Arab Bank Limited was established on 26thAshad, 2041 B.S. as a first joint venture bank in Nepal opened under Banijya Bank Act, 2031 B.S. Having observed the success of Nepal Arab Bank Limited (currently named as Nabil Bank Limited) and of liberal economic policy adopted by the government, various other commercial banks including joint venture banks and privately ownership banks established in Nepal.

2.1.10 Concept of Commercial Bank

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

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

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

Principally, commercial banks accept deposits and provide loans, primarily to business firms, thereby facilitating the transfer of funds on the economy (Bhandari2003).

In Nepalese context, a commercial bank is one with "A" class licensed from Nepal Rastra Bank and which exchanges money, deposits money, accepts, grant loans, and performs commercial banking functions (Commercial bank Act, 2063).

Commercial Banks are those banks which pull together the savings of the community and arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short-term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant loan in the form of cash, credits and overdrafts. Apart from financing, they also render services like collection of bills and cheques, safe keeping of valuables, financial advising, etc. to their customers (Vaidya2001).

2.1.11 Functions of Commercial Bank

Commercial banks are the most important types of financial institution for the nation in terms of aggregate assets. Traditional functions of commercial banks are only concerned with accepting deposits and providing loans. But modern commercial banks work for overall development of trade' commerce' services, and agriculture also. The business of banking is very broad in modern business age. The number and variety of services provided by bank will probably expand. Recent innovation in banking include the introduction of credit cards, accounting services for business firm, factoring, leasing, participating in the Euro-Dollar market, and lock-box banking. The main functions of commercial banks are as follows:

A. Accepting Deposits

It is fair deduction that no person or body, corporate or otherwise, can be banker who does not take deposits, issue and pay cheques and collect cheques from his customers. Here, all functions are related with the acceptance of deposits. Therefore, accepting deposits by bank is the oldest function of bank.

A bank accepts in three forms viz. saving, current (or call) and fixed. Saving deposit is one of the deposits collected from small depositors and low-income depositors. The bank usually pay small interest to depositors for their deposits. Current account is also known as demand deposits. Under this, any amount may be deposited. There are no restrictions regarding number and amount of withdrawals as contrary to saving account. The banks do not pay any interest on such account but in the call account as per the mutual understanding Bank may pay certain interest based on the volume of deposit and the tenure, this facility is purely for the large and corporate clients only. A fixed or time deposit is one where customers are requested to keep a fixed amount in the bank for specific period, generally by those who don't need money for stipulated time. The bank pays a higher interest on such deposits.

B. Advancing Loans

The second major function of a commercial bank is to provide loans and advances from the money which it receives by way of deposits for the development of industry, trade, commerce, services, and agriculture. The main purpose of commercial bank is to boost up the development pace of communities and the economy as a whole.

C. Agency Services

The bank also performs number of services on behalf of the customers. The following are the agency functions provided by the bank:

- Dealing with the transaction of foreign exchange business
- Serving as an agent of correspondent on behalf of the customers
- Issuing letter of credit, circulate note, traveler's cheques, etc.
- Purchasing and selling different kinds of securities and remitting funds.
- Keeping valuable article in safe custody.
- Providing financial advice to various persons and bodies whenever required.

D. Creating Money

The major function of the bank that separates it from other financial institution is the ability to create money and to destroy money which is accomplished by lending and investing activities. The power of the commercial banking is of great economic significant as it results in the elastic credit system that is necessary for the economic progress at a relatively steady growth rate (American Institute Of Banking 1985).

2.1.12 Concept of Joint Venture Bank

Joint venture banks are the mode of trading to achieve mutual exchange of goods and services for sharing comparative advantages by performing joint investment scheme between Nepalese investors, financial, non-financial institute as well as private investors and their parent banks each supplying certain % of the total investment. The parent banks which have been experiencing highly mechanized and efficient modern banking management skill and an international of banking institutions, Joint venture banks in Nepal as full-fledged commercial bank under the economy Act, 2021 B.S. and operates under the Banijaya bank Act, 2032 B.S.

Nepal Government's deliberate policy of allowing foreign Joint Venture Banks to operate in Nepal is basically targeted to encourage local traditionally run commercial banks enhancing their banking capacity

through competition, efficiency, modernization, and mechanization via computerization and prompt customer service (Vaidhaya1999).

2.1.13 Needs for Liquidity Mobilization

The following are the reasons for why liquidity mobilization is needed in a developing country like Nepal. Workshop report "Liquidity mobilization why and how" states the following points as the needs for liquidity mobilization:

- Capital is needed for the development of any sector of the country. The objective of liquidity mobilization is to collect the scattered capital in different forms within the country.
- It is much more important to channelize the collected liquidity in the priority sectors of a country. In developing countries like ours, we have to promote our business and other sectors by investing the accumulated capital towards productive sectors.
- The need for liquidity mobilization is felt to control unnecessary expenditure. If there is no saving, the extra money that the people have, can be forwarded by buying unnecessary and luxury goods. So, the government also should help to collect more liquidity, steeping legal procedures to control unnecessary expenditures.
- Commercial banks are playing a vital role for national development. Liquidity mobilization is necessary to increase their activities. Commercial banks are granting loan not only in productive sectors but also in other sectors like food grains, gold and silver etc. however these loans are traditional in nature and are not helpful to increase productivity, but it helps to some extent, to mobilize bank's liquidity.
- To increase saving is to mobilize liquidity. It is because if the production of agriculture and industrial products increases, it gives additional income which helps to save more and ultimately, it plays

a good role in liquidity mobilization(NRB, Banker's Prakashan, Group A 1984).

Low national income, low per capita income, lack of technical know-how, vicious cycle of poverty, lack of irrigation and fertilizers, pressure of population increase, geographical conditions, etc. are the main problems to bring economic development in a under development country like Nepal. Liquidity mobilization helps in capital formation and thereby plays a vital role in economic development of a country.

2.1.14 Liquidity Maintenance (CRR/SLR) of Commercial Banks and NRB Provision

Liquidity is the term used to refer to the capacity of the bank to pay cash in exchange of the deposits. A large part of the bank deposits is withdrawn on demand and hence the bank must maintain a sufficient degree of liquidity as its assets. Such assets may be in the form of cash or other readily realizable assets. The foundation of the entire banking system rests on the confidence that the bank is able to create in the minds of the people. If the confidence is lost and all the depositors decide to withdraw all their deposits from the bank on the same day, even the best institution cannot survive (The same was the reason for the liquidation and closure of few of the Development Banks and Finance Companies in the recent days). The investors feel confident about a bank only if it is able to produce cash on demand. The bank must, therefore, maintain sufficient cash reserves in its vault and the central bank in order to honor every cheque that is presented across the counter.

Holding too much cash in vault is also not a good sign for the bank. Cash is an idle asset and hence holding of large balances in cash will affect the profits of the bank. The cash reserves should not also be very meager. In that case, the bank would be inviting dangers as it may not

be able to produce cash on demand. A prudent banker always keeps an extra amount of cash for the sake of safety. Thus liquidity management is a very tough and crucial job and NRB has formulated certain guidelines regarding the maintenance and management of liquidity to commercial banks in Nepal. According to the new directive 2069, the banks are required to maintain cash balance with NRB of at least 6%(for commercial banks) of its total deposit liability.

2.1.15 Mobilization of Liquidity

When we discuss about the liquidity mobilization, we are concerned with increasing income of the low income group of people and to make them able to save more and to invest again the collected amount in the development activities (NRB, Banker's Prakashan 1984).

The main objective of the liquidity mobilization is to convert the idle saving into active saving (Nepal Bank Patrika 2037).

In developing countries, there is always the shortage of capital for the development activities. There is the need of development in all the sectors. It is not possible to handle and develop all the sectors by the government alone at a time. Private sector also can't undertake large business because the per capita income of the people is very low and their propensity to consume is very high. Due to the low income, their saving is not sufficient for carrying out developmental works.

To achieve the higher rate of growth and per capita income, economic development should be accelerated. Economic development may be defined in a very broad sense as a process of rising income per head through the accumulation of capital.

Capital formation is possible through collecting scattered unproductive and small savings from the people. This collected fund can be utilized in productive sectors to increase employment and national productivity. Liquidity mobilization is the most important source of the capital formation (RBB, Upahar 2055).

Banking transaction refers to the acceptance of deposit from the people for granting loan and advances, and returning the accepted deposit at demand or after the expiry of the certain period according to the banking rules and regulations. This definition clearly states that liquidity mobilization is the starting point of banking transactions. Banking activities can be increased as well as the accumulated liquidity can be mobilized effectively (NRB, Nepal Bank Patrika2037).

A commercial bank changes the scattered unproductive small savings into loan able active savings. The bank not only collects saving but also provides incentives to the savers and helps them to be able to save more (RBB, Uphahar2055).

Commercial banks are set up with a view to mobilize national resources. The first condition of national economic development is to be able to collect more and more deposits. In this context, the yearly increasing rate of commercial banks deposit clearly shows the satisfactory progress of liquidity mobilization (RBB, Uphahar2055).

2.1.16 Factors Affecting the Needs of Bank Liquidity

A. External Environmental Factors

- **Prevailing interest rate**

If prevailing interest rate is high, the cash demand through cheque as well as loan demand will also be decreased. Hence an increase in bank interest rate leads to decrease the need of bank liquidity.

- **Saving and investment situation**

If the income of public is in increasing trends and public expenditure is not increasing trends and public saving. In this situation, less degree of liquidity is enough in banks.

- **Public investment habit**

The investment habit of general public plays an important role in the needs of bank liquidity. If people prefer to invest in business, bank should maintain more liquidity. Contrary to this, if they do not like to bear risk, they deposit saving in banks. In this situation, less liquidity will be adequate in banks.

- **Trends of national economy**

The economy of the country greatly affects the liquidity needs of banks. If the economy is in the position of growth and boom, bank can maintain comparatively less liquidity. But banks should maintain more liquidity in the declining and slack economy.

B. Internal Environmental Factors

- **Lending policy of the bank**

When bank follows the policy of providing advance loan more in long-term basis, it needs more liquidity. Contrary to this, if bank invests its funds more in short term loan and marketable securities comparatively, less liquidity will be adequate for such bank.

- **Managerial capacity**

The managerial talent and attitude of executive also affect the need of bank liquidity. If the managers are very talented, experienced and ready to bear higher risk and committed to earn more profit then less liquidity is maintained and vice versa.

- **Nature of fund**

Generally, banks holding more current deposit should maintain more liquidity, because current deposit should be refunded on demand. Contrary to this, banks should not maintain much liquidity if there is holding of fixed deposits because fixed deposits are not withdrawn before due date. Thus, such deposits can be invested in production sectors.

2.1.17 Why Banks Face Liquidity Problem?

The significant expose of banks to liquidity pressures arises from several sources. First, banks borrow large amount of short-term deposit, reserve from individuals, business and from other lending institution and then turn around and make long term credit available to their borrowing customers. In this situation, most banks face the liquidity problem.

A problem related to the maturity mismatch is that banks hold an unusually high proportion of liabilities subject to immediate payment such as demand deposit and money market borrowing. In this situation, banks must always stand ready to meet immediate cash demand that can be substantial at times, especially near to the end of a week, at the first of certain seasons of the year. Another source of liquidity problem is the bank's sensitivity to change in interest rates. When interest rates rise, some depositors withdraw their funds in search of higher elsewhere. Many loan customers may postpone new loan request or speed up their drawing on those credit lines that carry lower interest rates. In this situation, changing interest rates affect both customers demand for deposit and customer demands for loans, each of which poses a potent impact on the bank's liquidity position.

Moreover, movement in interest rates affects the market values of assets the bank may need to sell in order to raise additional liquid fund and they directly affect the cost of borrowing in the money market. Beyond these factors, a bank must give high priority to meet the demands for

liquidity. If banks fail to maintain such position then it may lose public confidence in the institution. We can imagine the reaction of bank's customers if the teller windows and teller machine had to be closed one morning because the bank is temporarily out of cash and could not cash cheques or meet deposit withdrawals (As was the situation faced by Nepal Bikas Bank, Gorkha Bikas Bank and few other finance companies).

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 withdrawals of funds will be made and to make sure adequate funds are available.

2.2 Review of Related Empirical Studies

Review of related empirical studies has been described in the following sections:

2.2.1 Review of Related Articles

Luckett (1980) concluded that a very basic influence on bank behavior is management philosophy, particularly with respect to bank liquidity. He pointed that banks adjust to changes in Balance Sheet items over which they have no short run control by making extensive use of the various instruments of bank liability management that have been developed in the past 20 years. He further pointed that the combination of these instruments that a particular bank chooses to use for this purpose will be heavily influenced by the circumstances that are unique to the bank and by what that bank perceives to be its least cost method of adjustment.

Matz (2001) study is based on Liquidity Risk management and Self-Paced Assets Liabilities Management. He emphasized that the essences of liquidity risk in cash flows. Therefore, fundamentally, liquidity gap analysis is simply an evaluation of the two requirements "Enough money" and "When we need it". Liquidity risk management tactics are more vital than

managing the time profiles of maturing liabilities. He conducted four essential liquidity management tools:

- Always keep some asset liquidity reserve,
- Extend liabilities terms to reduce liquidity risk,
- Be prepared to enhance liquidity quickly at the first sign of increased potential need,
- Image cash flows profile.

European Central Bank (2002) explained how the ECB estimates credit institutions' liquidity needs in smooth and predictable way and how they constitute a baseline in its allotment decision in main refinancing operations. It suggested that overall liquidity management has facilitate a smooth supply of liquidity and generally managed to keep short term money market rates close to the rate of main refinancing operations. It mainly focused on both the demand for and the supply of liquidity. Only a very small fraction of credit institution's liquidity needs have been met through recourse to standing facilities, implies that the money market has worked efficiently.

Shrestha (2004) concluded that liquidity management is the part of risk management framework of financial services industry. He found taking high liquidity risk as well as high credit risk are two main factors that cause banks to fail. Although high liquidity risk alone is not likely to cause bank to failure, a liquidity crisis usually signals a need for change. He concluded proper liquidity management ensures that bank and financial institutions, financial commitments and obligation are met. Maintaining adequate liquidity also help in avoiding forced sale of assets. The need for bank liquidity steams from seasonal, cyclical trend and short term irregular movements is deposit and loans. The different sources available to meet these liquidity needs were identify and grouped into assets and liability liquidity sources. The treasury manager must consider the purpose of the liquidity need, the length of time for which

funds are needed, the access to liability markets, the cost and the characteristics of various liquidity sources and interest rate forecasts.

Bank for International Settlement (June 2008) concluded that a bank is responsible for the sound management of liquidity risk. A bank should establish a robust liquidity risk management framework that ensures it maintains sufficient liquidity including a cushion of unencumbered, high quality liquid assets, to withstand a range of stress events, including those involving the loss or impairment of both unsecured and secured funding sources. Supervisors should assess the adequacy of both a bank's liquidity risk management framework and its liquidity position and should take prompt action if a bank is deficient in either area in order to protect depositors and to limit potential damage to the financial system. Similarly, a bank should clearly articulate a liquidity risk tolerance that is appropriate for the business strategy of the organization and its role in the financial system. Senior management should develop a strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance and to ensure that the bank maintains sufficient liquidity. They should also continuously review information on the bank's liquidity developments and report to the board of directors on a regular basis. A bank's board of directors should review and approve the strategy; policies and practices related to the management of liquidity at least annually and ensures that senior management manages liquidity risk effectively.

Walt (2008) concluded that the attributed liquidity, or the ability to fund increases in asset and meet obligations as they come due, is crucial to the ongoing viability of any banking organization. Sound liquidity management can reduce the probability of serious problems. Indeed, the importance of liquidity transcends the individual bank, since a liquidity shortfall at a single institution can have system–wide repercussions. For

this reason, the analysis of liquidity requires bank management not only to measure the liquidity position of the bank on an ongoing basis but also to examine how funding requirements are likely to evolve under various scenarios, including adverse conditions.

Brunnermeier and Pedersen (2009) argued that fragility in liquidity is in part due to destabilizing margins, which arise when financiers are imperfectly informed and the fundamental volatility varies. Market liquidity and fragility co-moves across assets since changes in funding conditions affect speculators' market liquidity provision of all assets. Market liquidity is correlated with volatility, since trading more volatile assets requires higher margin payments and speculators provide market liquidity across assets such that illiquidity per capital use, i.e., illiquidity per dollar margin, is constant. He further suggested that Central banks can also improve market liquidity by boosting speculator funding conditions during a liquidity crisis, or by simply stating the intention to provide extra funding during times of crisis, which would loosen margin requirements as financiers' worst-case scenarios improve.

Reserve Bank of Fiji- Banking Supervision Policy Statement (2010) set out the various policies regarding liquidity risk management. This policy statement has suggested about "Sound Practices for Managing Liquidity in banking Organizations". This policy states that the liquidity risk management policy must reflect the daily strategy and longer- term liquidity plans and must have(a) The measurement of liquidity position (b) monitoring liquidity and (c) contingency planning as its major components. This policy also states that banks should calculate (a) loan to deposit ratio (b) loan to adjusted deposit ratio (c) liquid assets to total deposits ratio and (d) liquid assets to total assets ratio, as the indicators that a bank should utilize at a minimum for the measurement of liquidity position.

Similarly, bank should conduct maturity Mismatch Analysis or say Gap Analysis for measuring liquidity position. For this purpose, each bank use maturity mismatch ladders/profile to compare cash inflows and outflows daily and over a series of time-bands which maturity mismatch ladder shows the net future cash flows of the institution's operations in various time-bands. A bank's net funding requirements are determined by analyzing its present and future cash flows at selected maturity dates based on assumptions of the behavior of assets, liabilities and off-balance sheet items. Calculations will include the cumulative net excess or shortfall over the time frame of the liquidity assessment. The policy statement again reveals that Cash Flow Projections should be made for measuring liquidity positions. For this purpose, banks should prepare cash flow projections on a regular basis for measuring and managing their net refinancing risk. Projection should cover cash flows for assets and liabilities and also consider cash flows from planned future activities. Cash flow projections should be calculated on a monthly basis and will be assessed in the course of on-site examinations. Similarly, each bank is to prepare on a monthly basis, a statement of assets and liabilities, with items classed according to its liquidity level or any other specified reports as stated by the central banks. This can be used by the bank as a useful management tool for monitoring operations.

The policy statement further reveals that each bank is required to establish an Asset Liability Management Committee (ALCO) which shall be responsible for the management of the overall liquidity of the institution. Similarly, the ALCO must facilitate, coordinate, communicate and control balance sheet planning with regards to risks inherent in managing liquidity and convergences in interest rates. Beside these, all banks are required to maintain written report of the deliberations, decisions and roles of the ALCO with regards to liquidity risk management. The policy statement further reveals that each bank is

required to formulate a realistic and clear contingency plan for fast and decisive action. A contingency plan must outline the scenarios within which such plans may be activated.

2.2.2 Review of Related Thesis

Unpublished master degrees theses related to the liquidity management have been reviewed as follows:

Pyakurel (2006) found that the normal standard of three banks showed unsatisfactory liquidity position. The researcher has also found that Himalayan Bank Limited has exceeded in using debt with respect to total assets and shareholder's equity. He further found that net profit to net worth ratio of Himalayan Bank Limited was slightly higher than Standard Chartered Bank Nepal Limited and Nabil Bank Limited.

Shrestha (2007) used various financial research and statistical tools to analyze the lending practices and resources utilization of NB bank to determine the impact of growth in deposit on liquidity and to examine the lending efficiency and its contribution to profit. He has found that NB bank 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 credit and advances. He shows up there is highly positive correlation between total deposit, credit and advances of NB bank. He further found that NB bank has provided different schemes to attract good customer from which they issued the deposit to the needed area to make profit for the bank.

Paudel (2008) found that Liquid funds to total deposit ratio of all banks are in decreasing trend. BOK and NIBL are reducing their fund rapidly whereas most of the deposit of NIC, NABIL and EBL are remained as liquid fund. He concluded that NIC and EBL have maintained adequate balance with NRB but BOK, NIBL and NABIL have not maintained sufficient reserve in bank for liquidity position. BOK has strong liquidity position. NIC has

negative and poor liquidity position. NIBL is facing liquidity management problem and NABIL has normal liquidity position.

Dhungana (2009) used some financial research with statistical tools to conclude the overall comparative study of liquidity position of selected banks, their relationship between liquidity and interest rate, liquidity and profitability and outlined to suggest improvement for liquidity position of banks in future. He shows up there is positive correlation between change in deposit and change in total liquidity of BOK, NABIL, SBI, SCBL, NIB, EBL but NABIL has negative correlation coefficient.

Malla (2010) concluded that the high liquidity ratios are maintained by these banks. The measurement of assets management has revealed that the total liability to total assets of NABIL is higher than that of HBL. He found that considering EPS, performance of NABIL is better than HBL but comparing net profit and shareholder's equity, the performance of NABIL is better. The overall liquidity ratio of NABIL is better which has low degree of surviving capacity in the adverse liquidity position caused by interest sensitive deposit.

Dhungana (2011) displayed that most of the insurance companies are found investing in government securities & debenture, share of other company's securities, bank & finance companies. They are not investing in real estate and mutual fund. All insurance companies seem to be risk avoiding while making their investment.

Shrestha (2012) focused towards the real time facing problem and she suggested that only profit making may not be only goals of commercial bank they must invest for industrial growth and create employment opportunity to develop country. She also focused on liquidity position of banking sector as

studied is below standard practice. So the banks should maintain their liquidity position sufficient to assure the customers investment in safe.

2.3 Concluding Remarks

Commercial bank invests its deposit in different sectors according to the directives and circulars of the Nepal Rastra Bank and guidelines and policy of their own bank.NRB is the central bank and the regulator that monitors supervise and guides all Financial Institutions licensed by the bank. NRB policy and guideline change according to time for stability of monetary policy of the country. So, up to dated study over the change of time frame is major concerned for the researcher and concerned organization as well as industry as whole. This study on liquidity management of EBL and NABIL covers the data of 5 years including latest data to analyze and identify the liquidity position of selected banks.

Nabil and EBL being as the sampled banks because NABIL is the first joint venture bank of the country and the first privately owned commercial bank. Till the date, NABIL has been no. 1 bank in terms of highest net income crossing over 1 billion and probably the only bank which has not issued right share but instead increased its capital via bonus share and shareholders being highly returned in terms of dividend and cash bonus.

Similarly, EBL is also one of the joint venture banks with Punjab National bank of India and it is the one of the top bank of India with largest network. EBL is the only joint venture bank (apart from SCBNL) that is managed by foreign management. It is pioneer in various schemes like deposit at ATM, first bank to have access to India via network of Punjab National Bank, first bank to start mobile or wireless banking to remote area of Nepal etc. Both the banks in this quarter have crossed net profit of 1 billion.

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. Since Liquidity Risk Management is crucial and current issue in Nepalese banking sector, it seems that there are limited articles, journals & research conducted about Liquidity management of Commercial Banks in Nepal. By observing findings of above mentioned studies, it is found that different studies have different area of coverage. But no one has considered credit-deposit ratio, maturity mismatch analysis etc. available research reports are outdated, focused to some part of the country and not conducted rigorously. Despite the fact that Liquidity Risk Management is current and urgent issue among Nepalese community, the NRB and commercial banks have failed to main- streamline it. No in depth study has been made at the very moment. Therefore, at this moment, a rigorous study has become urgent for Liquidity Management of Commercial Banks in Nepal.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the systematic way of solving research problems and which ultimately refer to the overall research process. It includes all the procedures from theoretical framework to the collection and analysis of the data. As most of the data are quantitative, the research is based on the specific models. It is composed of both parts of technical aspect and logical aspect, on the basis of historical data. Research is systematic and organized effort to investigate a specific problem that needs a solution. In order to reach and accomplish the objectives of the study, different activities have been carried out. For this purpose, the chapter aims to present and reflect the methods and techniques that are carried out and followed during the study period. 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.

The prime concern of this study is the liquidity position of the commercial bank for analyzing the liquidity risk. The liquidity position of the commercial banks is measured by its ability to discharge the demand of deposit and loan able fund. The overall approach to the research is presented in this chapter. This chapter mainly deals with research methodology used to ascertain the study objectives. Under this, research design, nature and sources of data, population and sample and method of data analysis technique have been described.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aim to combine relevance to the research purpose with economy in procedure. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to objective of this

study. To achieve the objective of this study, descriptive and analytical research design has been used.

It is the process which gives us an appropriate way to reach research goal. It includes definite procedures and techniques which guide in sufficient way for analyzing and evaluating the study. This study is carried out by using both quantitative and qualitative analysis methods. Mostly, secondary data has been used for analysis, but the discussion and personal interview with the concerned employees of the selected bank is also used for qualitative analysis. Hence, research design of this study is based on descriptive and analytical method.

3.3 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
- Dissertation of Central Library of T. U. and Library of Patan Multiple Campus

3.4 Population and Sample

The term 'population' or 'universe' means all the members of any well-defined class of events of objective (Pant, 2002). The population refers to the organization of the same nature and its services and product in general. So, the total numbers of commercial banks in Nepal are population. There are 30 commercial banks in Nepal.

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.

The study of whole universe is not possible due to lack of time, money and capacity. Thus, among 30 commercial banks, two commercial banks have been chosen for the study. They are:

- Everest Bank Limited
- NABIL Bank Limited

3.5 Data Collection Techniques

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 informational gap was found. This gap fulfilled by the discussion with the thesis advisor and finance experts of the security board and the NEPSE.

3.6 Data Analysis Tools

Presentation and analysis of data is one of the important part of the research work. The collected raw data is presented in systematic manner in tabular form and then analyzed by applying different financial and statistical tools to achieve objectives. Besides these, some graph charts and tables are also presented to analyze and interpret the findings of the study. The tools applied are:

3.6.1 Financial Tools

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 financial analytical tools, following liquidity ratios will be used.

i. 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 Current Liabilities which can be presents as,

$$\text{Current Ratio} = \frac{CurrentAssets}{CurrentLiabilities}$$

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

ii. Cash and Bank to Total Deposit ratio

Cash and bank balances are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositor. This ratio can be computed by dividing Cash and Bank Balance by Total Deposit which can be presented as,

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

Cash and bank balance includes cash in hand, cheques and other cash items, balance with domestic and foreign banks. The total deposit includes deposit made by customers though different accounts like current (demand deposit), saving deposit, fixed deposit, call deposit and other deposit accounts.

iii. Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets viz. cash and bank balance among the total current assets of the bank. Higher ratio shows the bank's ability to meet its demand for cash. The ratio is computed by dividing Cash and Bank Balance by Current Assets presented as under,

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

iv. Investment on Government Securities to Current Asset 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 Government Securities to Total Current Asset Ratio =

$$\frac{Investment\ on\ Government\ Securities}{CurrentAssets}$$

B. 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.

i. Loan and Advances to Total Deposit Ratio

This ratio is called credit- deposit ratio (CD 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 advances by total deposit as under,

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

In some case the bank may also add its core capital with the total deposit to compute its CD ratio. As experts says and as per the NRB directives the bank has to maintain CD ratio not more than 80%, banks having CD ratio near to 80% are considered making optimum utilization of their funds for lending.

ii. Total Investment to Total Deposit Ratio

Investment is one of the major factors of credit creation to earn income. This implies the utilization of firm's deposit on investment on government Securities, shares and debenture of other companies and banks. This ratio can be calculated by total investment divided by total deposit as:

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

iii. Loan and Advances to Working Fund Ratio

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,

Loan and Advances to Working Fund Ratio = $\frac{Loan\ \&Advances}{Total\ Working\ Fund}$

iv. 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 Government Securities to Total Working Fund =

$$\frac{Investment\ on\ Government\ Securities}{Total\ Working\ Fund}$$

BFIs have to make around 2% of the total investment in government securities.

C. 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.

i. 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:

Return on Loan and Advances Ratio = $\frac{Net\ Profit/Loss}{Loan\ \&Advances}$

ii. 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,

Return on Total Working Fund Ratio (ROA) = $\frac{Net\ Profit/\ Loss}{Total\ Working\ Fund}$

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

Return on Equity (ROE) = $\frac{Net\ Profit/Loss}{Total\ Equity\ Capital}$

iii. Net Interest Income to Total Operating Income Ratio

This ratio measures the volume of net interest income in total operating income of the bank. The high ratio indicates the high contribution made by lending and investing and vice versa. This ratio can be computed by dividing net interest income by total operating income presented as under,

Net Interest income to Total Operating Income ratio = $\frac{Net\ Interest\ Income}{Operating\ Income\ Ratio}$

More than 70% of the bank's total income comes from Net Interest Income (NII). It is the residue of Interest Income over Interest expense of the bank.

iv. Interest Expense to Total Asset Ratio

This ratio depicts the percentage of interest expense on liabilities (especially on deposit balance and borrowing of the bank) with respect to total working fund; this can be presented as,

Interest expense to Total Asset ratio = $\frac{Interest\ Expense}{Total\ Assets}$

D. Risk Ratio

Risk and uncertainty is a part of business loss. All the business activities are influenced by risk, so business organization cannot achieve a good return as per their desires. The profitability of risk makes banks investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So the bank's options for high profit have to accept the risk and manage it efficiently. A bank has to have ideas of the level of risk that one has to bear while investing its funds. Through following ratios, effort has been made to measure the level of risk inherent in the EBL and NABIL.

i. Credit Risk Ratio

Credit Risk Ratio measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, Credit Risk ratio is expressed as the percentage of Non- Performing Loan to Total Loan and Advances.

Bank utilizes its collected fund by providing credit to different sections. There is risk of default or non- repayment of loan. While making investment, bank examines the credit risk involved in the project. The Credit Risk Ratio shows the proportion of non- performing assets in total Loan and Advances of the bank and vice- versa.

No loan is risk free hence for every new loan, bank makes provision of 1% of the total outstanding amount and as the accounts get degraded as per the NRB directives bank has to make provision of 25%, 50% & 100% of the outstanding amount.

ii. Liquidity Risk Ratio

The Liquidity Risk of the bank defines its Liquidity needs for deposit. The cash and bank balance are the most liquid assets and they are

considered as banks liquidity sources and deposit as the liquidity needs. The ratio of cash and bank balance to Total deposit is an indicator of bank's liquidity of need. This ratio is low if funds are kept idle as cash balance but this reduces profitability increase and also the risk. Thus, higher liquidity ratio indicates less profitable return and vice-versa. This ratio is calculated as below:

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

E. Other Ratios

i. Earning Per Share (EPS)

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

Earnings Per Share (EPS) = $\frac{Net\ Profit/\ Loss}{Total\ No.\ of\ Shares}$

ii. Market Price Per Share (MPS)

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.

iii. Price Earning Ratio

The 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 is widely used by the security analysis to value the firm's performance as accepted by investors. Price Earning Ratio reflects investor’s expectations about the growth

in the firm's earning. Higher ratio indicates the more value of the stock that is being ascribed to future earning as opposed to present earning.

Here, total equity capital includes shareholder's reserve including profit and loss account, general loan loss provision and share capital i.e. ordinary share preference, share capital.

3.6.2 Statistical Tools

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

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

A. Arithmetic Mean

In mathematics and statistics, the arithmetic mean often referred to as simply the mean or average when the context is clear, is a method to derive the central tendency of a sample space. The term "Arithmetic Mean" is preferred in mathematics and statistics because it helps to distinguish it from other averages such as the geometric and harmonic mean.

In addition to mathematics and statistics, the arithmetic mean is frequently used in fields such as economics, sociology and history,

though it is used in almost every academic field to some extent. For example, per capita GDP gives an approximation of the arithmetic average income of a nation's population. The most popular and widely used measures of representation from the entire data by one value are what most laymen call an "average" and what the statistician call the arithmetic mean. Its value is obtained by adding together all the times and by dividing this total by the number of items.

The formula to calculated mean is given by,

Mean, $\bar{X}=\frac{\sum X}{N}$

Where, X = Mean of the values

$\sum X$ = Summation of the values

N = No of observation

B. Standard Deviation (S. D.)

Standard deviation is a widely used measurement of variability or diversity used in statistics and probability theory. It shows how much variation or "Dispersion" there is from the "Average". A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of values.

Technically, the standard deviation of a statistical population, data set, or probability distribution is the square root of its variance. A useful property of standard deviation is that unlike variance, it is expressed in the same units as the data.

The standard deviation is absolute measures of dispersion. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of series and vice – versa.

Standard deviation (σ) = $\sqrt{\frac{\sum(X-\bar{X})^2}{N}}$

Where,

σ= Standard Deviation

$\sum(\boldsymbol{X}-\bar{\boldsymbol{X}})^{\mathbf{2}}$= Sum of squares of the deviations measured from arithmetic average.

N= Number of items

C. Coefficient of Variation

The calculated standard deviation gives an absolute measure of dispersion. Hence where the mean value of the variable is not equal, it 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:

Coefficient of Variation C.V. $=\frac{\boldsymbol{\sigma}}{\bar{\boldsymbol{X}}} \times \mathbf{100}$

D. 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 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 by which it is helpful to make appropriate investment policy for profit maximization. The Karl Pearson coefficient of correlation (r) is given by following formula:

$$r = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

Where,

r = Correlation coefficient

$\sum \mathbf{x_1} = \mathbf{X_1} - \bar{\mathbf{X}}_{\mathbf{1}}$

$\sum \mathbf{x_2} = \mathbf{X_2} - \bar{\mathbf{X}}_{\mathbf{2}}$

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.

E. 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 main sources of data are secondary data. In this chapter, researcher has analyzed and diagnosed liquidity management of Everest Bank Limited and Nabil Bank Limited. All the liquidity management is analyze by calculating following ratio.

4.1 Financial Analysis

In this part, various financial ratios are presented to evaluate and analyze the performance of Everest Bank Limited and Nabil Bank. 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.

Table 4.1
Total Deposit and Cash & Bank Balance of EBL and Nabil Bank (in millions)

Bank	Everest Bank Limited		NABIL Bank	
Years	Total Deposit	Cash and Bank Balance	Total deposit	Cash and Bank Balance
2064/65	23,976.30	2,667.97	31,915.00	2,671.14
2065/66	33,322.95	6,164.38	37,348.00	3,372.51
2066/67	36,932.31	7,818.82	46,411.00	1,400.10
2067/68	41,127.90	6,122.80	49,696.00	2,436.55
2068/69	50,006.10	10,363.31	55,023.70	4,275.82
Average	37,073.11	6,627.46	44,078.74	2,831.22

Source: Annual Report 2064/65 – 2068/69

Figure 4.1

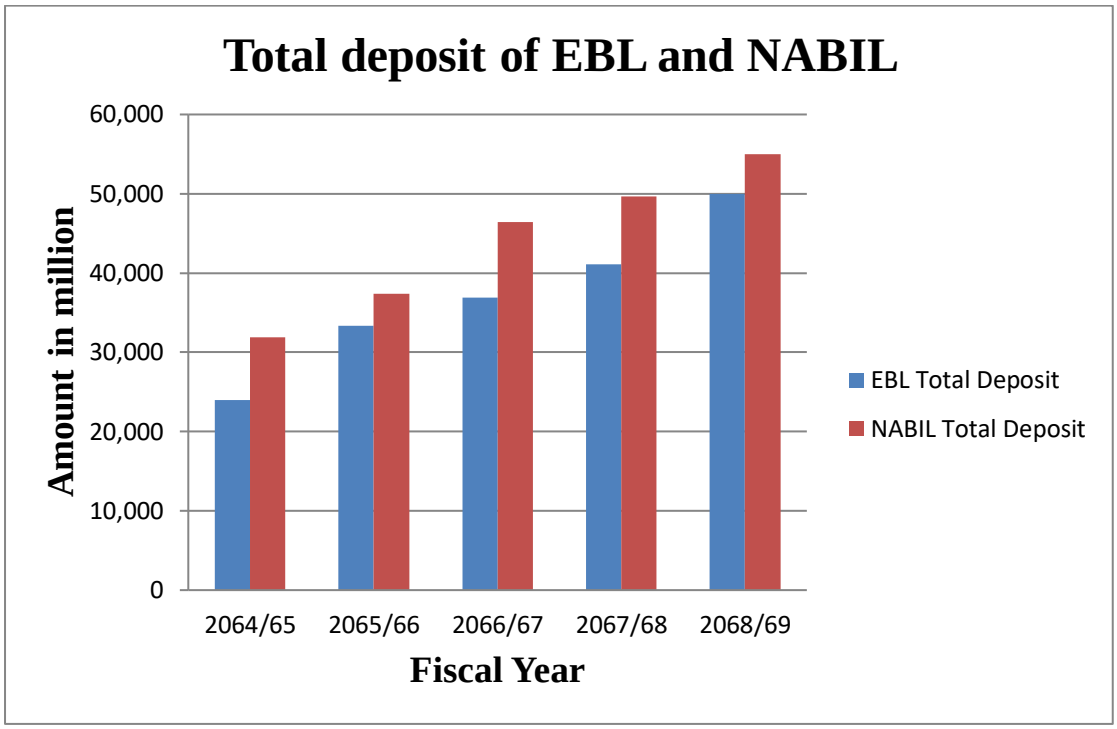


Figure 4.2

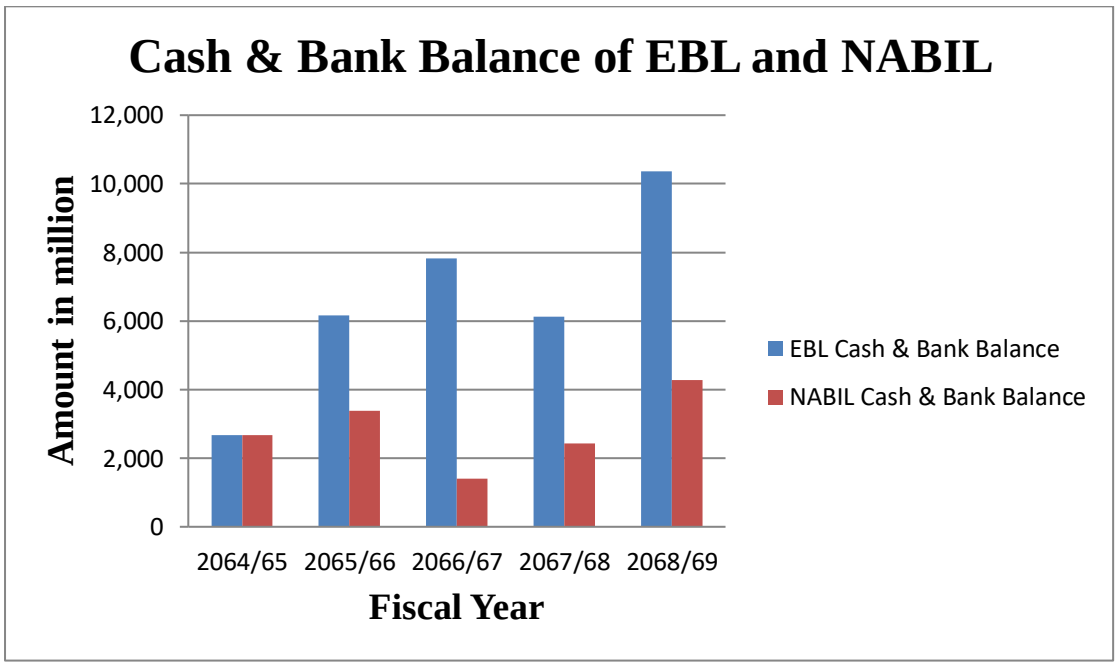


Table 4.1, Figure 4.1 and 4.2 shows the deposit collection and liquidity of EBL and NABIL. The EBL and NABIL both have increasing trend of total deposit over the study period. The average total deposit of EBL is 37,073 and 44,079

of NABIL. Looking at the figures, NABIL seems higher in deposit collection than the EBL.

Contrary to what is observed in the deposit collection, it is found that Nabil is maintaining low level of Cash margin, both in house and at Nostro Accounts. The figure depicts that Nabil is utilizing more of its fund in the form of loans and advances. In the Fiscal Year 2064/65,it can be seen that both the banks have almost similar balances whereas in the years after, Nabil is aggressively deploying its funds and taking higher risk than EBL. The same is seen from the amount of net income that Nabil is making and thus making it Nepal's no. 1 bank with highest net income and Net Interest Income (NII). The same is discussed in the headings further to come.

4.2 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.

4.2.1 Liquidity Ratio

Commercial bank must maintain its satisfactory liquidity position 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.

A. 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 4.2
Current Assets to Current Liability (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	1.12	1.08	1.09	1.00	1.05	1.07	0.042	0.040
NABIL	1.00	1.00	1.00	1.05	1.09	1.03	0.040	0.039

Source: Annual Report & Appendix 1

Looking at the findings, it can be said that EBL is stronger than NABIL in term of its ability to meet immediate obligations. This is mainly because Nabil has more investments and utilized its funds at maximum for better profit and revenue which is seen from the net profit earned by NABIL.

But having said that, NABIL should be more cautious as to maintain its integrity and trust from its customers. In the event that there is flood of depositors demanding back their deposit, it will be very difficult for NABIL to meet this obligation which in turn may lead the bank to closure.

But the condition is improving in the recent years of NABIL as compared to previous years where as it is opposite for EBL. The liquidity risk ratio of EBL is gradually degrading in the recent years.

B. Cash and Bank Balance to Total Deposit Ratio

Cash and Bank Balance to Total Deposit Ratio indicates the bank ability to meet their daily requirement of depositors. Higher ratio shows the greater ability of the firms to meet customer demands on their deposits. Following table shows cash and bank balance to total deposit of EBL and NABIL during the study period.

Table 4.3
Cash and Bank Balance to Total Deposit Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	0.11	0.18	0.21	0.15	0.21	0.17	0.04	0.25
NABIL	0.08	0.09	0.03	0.05	0.08	0.07	0.03	0.39

Source: Annual Report & Appendix 2

Table 4.3 shows that EBL comparatively has more capacity to meet its depositors' obligation than NABIL. As it can be seen that cash & bank balance to total deposit ratio of EBL is more than that of NABIL. This means that NABIL has been holding less cash with it than the amount of deposit collected from its customers. This might be a great threat to NABIL in the case that the bank need to make immediate payments in large volume as it is maintaining low level of liquid cash with it.

The above analysis concludes that the cash and bank balance position of EBL with respect to NABIL is better in order to serve its customer's deposits. It implies the better liquidity position of EBL from the viewpoint of depositor demand but NABIL also near about EBL. In contrast, a high ratio of cash and bank balance may be undesirable which indicates the bank's inability to invest its funds in income generating areas. Thus, EBL should invest in more productive sectors like short-term marketable securities insuring enough liquidity which will help the bank to improve its profitability.

C. Cash and Bank Balance to Current Assets Ratio

Cash and Bank Balance are the most liquid or quick assets. Cash and bank balance to current assets ratio represents the liquidity capacity of the firms as per cash and bank balance. Higher the ratios better the ability of the firms to meet the daily cash requirement of their customers. But high ratio is not so preferred to the firms because firms have to manage the cash and bank balance to current asset ratio in such a manner that firm may not be paid interest on deposits and may not have liquidity crisis.

Following table states the cash and bank balance to current assets of EBL and NABIL during the study period.

Table 4.4
Cash and Bank Balance to Total Current Asset Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	0.10	0.17	0.19	0.12	0.15	0.15	0.04	0.26
NABIL	0.07	0.08	0.02	0.03	0.05	0.05	0.02	0.44

Source: Annual Report & Appendix 3

As per the banking experience, it is adequate for any BFIs to maintain not more than 5% of the total deposit as Cash & Bank Balance to meet the short term cash demand from the customers. As per the Table 4.4, it can be seen that on average, NABIL has maintained optimum level of cash with it, whereas EBL has higher capacity to repay or refund cash at the demand of its customers but on the other hand, it is seen that EBL is holding more level of idle cash. There seems EBL is lacking appropriate strategy and policy to maximize its profit by more aggressively investing its fund.

D. Investment on Government Securities to Total Current Assets Ratio

This ratio examines that portion of commercial bank's current assets which is invested on different government securities. More or less, each commercial bank is interested to invest their collected funds on different securities issued by government in different times to utilize their excess funds and for other purpose as well like – such investments could be counted on the balance of SLR. Although those securities can be sold easily in the financial market or they can be converted into cash, they are liquid assets like cash and bank balance. Government securities are the more secured investment alternatives. These securities are also called risk less investment but less return is generated than others risky assets.

Table 4.5
Investment on Government Securities to Total Current Assets Ratio(in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	0.12	0.14	0.11	0.14	0.09	0.119	0.022	0.185
NABIL	0.12	0.08	0.13	0.12	0.10	0.112	0.021	0.187

Source: Annual Report & Appendix 4

The optimum level of investment in Government securities for any bank is around 2-3% in the given condition: When SLR requirement is 12% (for Commercial Banks) then CRR is 6% (compulsory), Cash balance around 2-3% (average) so the rest will have to be covered by investment in government securities. Looking at the table 4.5, both the banks have maintained high level of investment in government securities.

Had they both maintained optimum level, they would have invested the excess in more profitable and return earning investments like earning, placement or other securities. But again, Government securities are risk free and are zero risk weighted whereas for other investments there is certain level of risk and BFIs have to maintain risk weighted as defined by the central bank.

4.2.2 Assets Management Ratio

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

A. 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 4.6
Loan and Advance to Total Deposit Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	0.76	0.72	0.75	0.76	0.72	0.74	0.02	0.03
NABIL	0.67	0.74	0.70	0.77	0.76	0.72	0.04	0.06

Source: Annual Report & Appendix 5

As per the Table 4.6, NABIL has adopted aggressive lending policy from the fiscal year 2064/65 as it can be seen that the Credit to Deposit ratio has increased from 0.67 to 0.76 during the review period. NRB directives restrict any Banks and Financial to a limit of 80% hence it is seen that both the banks are within the prescribed limit. NABIL seems more fluctuating than EBL during the review period. However average ratio of EBL seems more than NABIL which means the average lending activities of EBL is more consistent of EBL.

B. 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 on investment in various securities. This ratio of EBL and NABIL are calculated and presentation below:

Table 4.7
Total Investment to Total Deposit Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	0.21	0.18	0.14	0.19	0.16	0.17	0.03	0.17
NABIL	0.31	0.29	0.30	0.26	0.26	0.28	0.02	0.08

Source: Annual Report & Appendix 6

Table 4.7 shows that Investment of NABIL is more as compared to EBL. It shows that the NABIL management is more focused on investment of its source of fund, they are aggressively making investment, which can be seen by

the establishment of subsidiaries like NABIL investment fund, NABIL capital etc. It was more than double in the fiscal year 2066/67 of Nabil than EBL.

Looking at the S.D. and C.V. of the sampled banks, it can be easily figured out that NABIL is more consistent and stable in the investment activities than EBL. EBL should strengthen its manpower and strategies for better output by better utilizing its fund. It might be that the management and almost 25% of the share being held by foreign joint venture bank – Punjab National Bank of India.

C. 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 EBL and NABIL which are as follows:

Table 4.8
Loan and Advances to Total Assets Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	0.68	0.65	0.67	0.67	0.64	0.66	0.01	0.02
NABIL	0.58	0.63	0.62	0.65	0.66	0.63	0.03	0.05

Source: Annual Report & Appendix 7

Adopting aggressive strategy, it can be seen that NABIL is investing its fund in the increasing trend. Though of the total asset, loans and advances of NABIL seems little lower than EBL this is mainly because it has a large chunk of its fund invested in its subsidiaries company as well. It can be seen that NABIL has increased its ratio from 58% to 66% in the review period whereas EBL is

consistent and has gradually reduced its portfolio from 68% to 64%. But in total, EBL's portion of investment in lending activities is more than NABIL.

The same can be justified from S.D. and C.V. of both the banks, where C.V. of EBL is 0.02 and 0.05 of NABIL making EBL more consistent over the period of year.

D. Investment on Government Securities to Total Assets Ratio

It is not possible to apply all collection, deposit and other resources into loan and advances for the banks. Therefore, they arrange their total assets in various sectors. Among all possible sectors, investment on government securities is one which is the most secured and risk free but the outcome from such investments are very nominal.

Almost all of the Banks and Financial Institutions have invested their fund in the government securities not for the return they receive but because they have to maintain certain level of SLR (Statutory Liquidity Ratio) and CRR at Nepal Rastra Bank. For the computation of SLR, Balance held at Nostro Accounts, Cash at Vault & ATM, Balance maintained at Central Bank (CRR) and investments in Government Securities are calculated. And since all the rest items do not have return on them so the optimum investment in Government Securities in one hand will help Banks and Financial Institutions to get at least a level of return on their investment and on the other hand will help them maintain the required rate of SLR (12% for commercial banks).

Further to this, other investments made have to be risk weighted at the prescribed rate of percentage but for the investments made in Government Securities, BFIs do not need to make additional risk weight, which will ultimately affect Core Capital of the BFIs and thus affecting the net available fund for further investment.

Table 4.9
Investment on Government Securities to Total Assets ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	0.12	0.14	0.11	0.15	0.11	0.13	0.02	0.17
NABIL	0.13	0.08	0.15	0.15	0.13	0.13	0.03	0.21

Source: Annual Report & Appendix 8

As discussed earlier, Table 4.9 depicts that on average both the banks have the same level of investment made in the Government Securities. Both the banks have comparatively less investment in the Fiscal Year 2068/69 than the previous year because of the country's turmoil economic condition and the acute liquidity crunch the Financial Institutions had to face during the period. They have lesser investments and those invested were in the high earning lending.

Comparing both the institutions, EBL is more consistent and less fluctuating in terms of investing in Government securities. Here again, it can be said that Nabil is more into high yielding investment than for nominal yet secured investment.

4.2.3 Profitability Ratio

The major performance indicator of any firm is profit. The objective of investment policy is to make good return. Any organization has to desire of earning high profit which helps to survive the firm and indicates the efficient operation of the firm. Profit is the essential part of business activities to meet internal obligation, overcome the future contingencies, make a good investment policy, expand the banking transaction etc. Profitability ratios are the best indicators of overall efficiently. Here, those ratios are 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 EBL and NABIL.

A. Return on Loan and advances

Every financial institution makes optimum utilization of its fund. And this ratio helps to measure the earning capacity of Banks and Financial Institutions. Returns on loan and advances ratio of selected banks are presented as follows:

Table 4.10
Return on Loan and advances (in %)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	2.40	2.61	2.95	2.94	2.98	2.78	0.003	0.093
NABIL	3.96	4.02	3.47	3.73	4.14	3.86	0.003	0.069

Source: Annual Report & Appendix 9

As it can be seen that, NABIL has been in the higher side in terms of its return on Loans & Advances from the starting of the review period whereas EBL is gradually increasing its return on its lending. Aggressive investment in the lending of NABIL has resulted in a higher level of return on its lending.

The Table 4.10 also portray that the average earning of NABIL is at the higher side. Net Income of NABIL is as high as NPR 1,696 million net after tax in FY 2068/69.From the prospect of shareholders it is good that EBL too is making optimum utilization of its fund in the lending activities in the recent years.

B. 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 4.11
Return on Total Assets Ratio (in %)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V
EBL	1.65	1.73	2.09	2.10	2.11	1.94	0.002	0.117
NABIL	2.32	2.55	2.37	2.43	2.80	2.49	0.002	0.077

Source: Annual Report & Appendix 10

As in the return on loans & Advance, NABIL having adopted aggressive strategy on investment of its fund, it can be observed that it has consistently grown in its return on total assets. Again having said that, EBL too has gradually increased its return on assets in the recent years.

NABIL has exponently increased the volume of its assets as well as investments the result being high net income and net interest income as well.

C. Net Interest Income to Operating Income Ratio

Major source of income for BFIs is the interest income from its lending and investment activities. Since BFIs are the service industries, a huge chunk of income comprises of other services than its investment activities which might or not involve cash or other near cash assets of the bank. It comprises of pure service to its valued customers. And since BFIs accept deposit, borrowing at a cost, they have to bear the expenses incurred in the process of acquiring these sources of funds.

Hence Net Interest Income or NII is the remaining balance gained by BFIs after servicing its expenditure in acquiring the funds for its investment activities. NII to Operating Income ratio shows how much of the operating income comprise from the lending activities of the banks.

This ratio also measures how successfully the selected banks have been mobilizing their funds in interest generating assets during last from FY2064/65 to FY2068/69, are presented to analyze in the following table.

Table 4.12
Net Interest Income to Operating Income Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	0.76	0.76	0.79	0.82	0.80	0.79	0.027	0.034
NABIL	0.73	0.74	0.76	0.75	0.75	0.75	0.010	0.014

Source: Annual Report & Appendix 11

As the table4.12 shows, NABIL's contribution in operating income from its lending activities is less than EBL. This is mainly because its huge amount of income is from fees, commission etc. from activities other than lending.

NABIL has Nabil Remit (for remittance transaction), Nabil Capital (for carrying out activities like Registrar to Share, IPO management, mutual / investment fund etc.) and it also acts as the counter guarantor for many BFIs for foreign banks, Bank assurance for insurance activities etc. and off course because it has more branch network than EBL, it has more income from such activities.

Needless to say, EBL too with its network and joint venture with Punjab National Bank of India too is making good money from activities other than lending but comparatively less than NABIL.

D. Total Interest Expense to Total Assets Ratio

Total interest expense to total assets ratio help to show and measure the percentage of interest expense by the firm in comparison with total assets. If interest expense to total assets ratio is higher, there will be higher interest expenditure on total assets. The following table shows that total interest expense to total assets of EBL and NABIL.

Table 4.13
Interest Expense to Total Assets Ratio (in times)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	0.023	0.027	0.038	0.055	0.051	0.039	0.01	0.36
NABIL	0.020	0.026	0.038	0.051	0.050	0.037	0.01	0.37

Source: Annual Report & Appendix 12

Despite NABIL having more deposit than EBL the interest expense is less which shows that NABIL is able to collect its fund at a comparatively low rate. The average value is less of NABIL than EBL.

The expenses in the initial year were comparatively less than the recent year. This is mainly due to fierce competition and the increase in the number of players in the market. It is also because of the customer's behavior of shifting to more interest providing banks and they becoming more rate sensitive than in the previous year and also because they have more option in the recent years.

Drastic increments in figures are seen in the fiscal year 067/68 as compared to fiscal year 066/67. During the period almost all the BFIs had to surge their rate of interest in the deposit as to attract more deposit. It was not for a single institution but holistically for the whole industry.

4.2.4 Activity Risk Ratio

Risk and uncertainty is a part of business loss. All the business activities are influenced by risk, so business organization cannot achieve a good return as per their desires. The profitability of risk makes banks investment a challenging task. Bank has to take risk to get return on its investment. The risk taken is compensated by the increase in profit. So the banks options for high profit have to accept the risk and manage it efficiently. A bank has to have idea of the level of risk that one has to bear while investing its funds.

No lending and investment activities undertaken by BFIs are risk free but again having said that, they are in the industry to make business hence it is understood that certain level of risk exists in every activities of the business transaction. To check and balance, there are various committees at board level like Asset Liability Management Committee (ALCO) which ensures that the BFIs has made optimum utilization of their assets and liabilities, Risk Management Committee for ascertaining and accessing risk of the bank etc.
Through following ratios, effort has been made to measure the level of risk inherent in the EBL and NABIL.

A. Liquidity Risk Ratio

Liquidity risk for any BFIs is the capacity to refund or meet the demand of withdraws at any point of time. In the recent years Nepalese Banking Sector faced acute liquidity crunch and failing to meet the demand of withdraw from the customers, few of the institutions have been shut down or are in the process of liquidation. The same lead to merger and acquisition of BFIs like Machhapuchhre Bank & Standard Finance, Bank of Asia & NIC Bank etc.

Because BFIs plays with the people's money, they are more liable and regulated. It is the business of BFIs to invest and lend from deposit they collect but it is equally their liability to meet the demand of withdraw at any point of time without any delay or excuses. And because they survive in the people's trust, failing to meet such demands will make them loose customer's faith and may lead to rapid withdraw, shrunk in the business volume etc. Hence it is important that BFIs maintain adequate level of liquid cash and bank balance. This ratio is calculated as below:

Table 4.14
Liquidity Risk Ratio

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	1.12	1.08	1.09	1.00	1.05	1.068	0.042	0.040
NABIL	1.00	1.00	1.00	1.05	1.09	1.028	0.040	0.039

Source: Annual Report & Appendix 13

As per the Table4.14, on average EBL is more sound and has better capacity to meet immediate cash demand from its depositors as compared to NABIL. Initially NABIL's current asset was just enough to meet its current liabilities whereas in the recent years, the condition has been better. The same is just opposite in the case of EBL, its capacity has been degrading in the recent year.

NABIL is more consistent in the review period in terms of its liquidity capacity than EBL. But again both the banks have maintained adequate current asset to meet its current liabilities.

4.2.5 Other Ratios

A. 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. Earnings 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 4.15
Earning Per Share (in Rs.)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	91.82	99.99	100.16	83.18	88.55	92.74	7.37	0.08
NABIL	115.86	113.44	83.81	70.67	83.57	93.47	20.07	0.21

Source: Annual Report 2064/65 – 2068/69

Table 4.15 shows that NABIL has decreasing EPS which doesn't indicate good signal for the shareholders, whereas EBL has fluctuating figures. The reason for NABIL EPS being in decreasing trend is mainly due to the increment of capital (no. of shares) from 0.68 billion to 2.02 billion, similarly EBL too has been increased it capital from 0.49 billion to 1.23 billion during the review period.

B. Dividend Per Share

Every investment is made at the desire of return and similarly share holder demand certain return on their investment. Depending upon the policy and strategy of BFIs, they may have cash or share as dividend to their shareholders in return from the amount of profit they make. Share Dividend will help the institution to hold cash for further expansion of investment whereas will decrease the capacity of earning to shareholders in that case they may earn from capital gain from the secondary market, whereas in cash dividend the

shareholders might get instant benefit in the firm of cash but the firm may lose the opportunity to make further investment or expand their business.

And in the present context of Nepalese Banking Sector where central bank has instructed the BFIs to increase their capital, most of the BFIs prefer share in the form of dividend which will in one hand help them to keep cash and expand business and on the other hand will help raise their share capital to meet the regulatory compliance.

Table 4.16
Dividend Per Share (in Rs.)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	20	30	30	50	1.58	26.32	17.61	0.67
NABIL	60	35	30	30	40	39.00	12.45	0.32

Source: Annual Report 2064/65 – 2068/69

Table 4.16 shows that the NABIL has been consistent in providing return to its shareholders. It has distributed as high as 60 rupees per 100 rupees of investment. Whereas EBL is not so consistent and in the fiscal year 2068/69 it has returned only 1.58 that may be because it has provided 30% bonus shares to increase its share capital.

It can be concluded that NABIL has adopted the policy of paying high amount in the form of cash dividends and it is trying to capitalize its earnings by keeping it in the form of retained earnings.

C. Market Price Per Share

Market price per share is the price at which shares are traded in the stock market. Shares of listed companies are traded in the secondary market; investors may be of 2 types - short term and long term profit seekers. Here the investors gain or loss if the share is traded at higher or lower prices. Price of share is determined by various factors like the profit a company makes its management team, strategy, assets, provision, investment etc. Beside these

internal factors, the country's economy and the political situation too maters, but in the global context, there are various factors of investments like gold price, US Dollar and the supply of oil etc.

Table 4.17
Market Price Per Share (in Rs.)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	3132	2455	1630	1094	1033	1868.80	907.64	0.49
NABIL	5275	4899	2384	1252	1355	3033.00	1931.15	0.64

Source: Annual Report 2064/65 – 2068/69

Nepalese share market faced the boom around 5 years ago where the NEPSE Index was in the bullish trend and was highest till the date. Most of the company's share were sky rocketing but in the past few years, the market is very sluggish and almost collapsed. Investors without ample cushion lost their fortune, even Warren Buffet of Nepal – Mr. Nirmal Pradhan had to sell his large numbers of share at very low price.

The same can be concluded from the Table 4.17 where both the banks have decreasing trend of market price of their share. Comparing at the C.V. of both the banks, it seems that investors of EBL has lost less than that of NABIL and it is less risky to invest in the share of EBL than NABIL as its price has decreased more than 4 times.

D. 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 earnings 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. Higher ratio indicates the more value of the stock that is being ascribed to future earning as opposed to present earning. High ratio also

indicates that the share of the company is trading at a higher value in the secondary market.

Table 4.18
Price Earning Ratio (in %)

Name of Banks	Fiscal Year							
	2064/65	2065/66	2066/67	2067/68	2068/69	Mean	S.D	C.V.
EBL	34.11	24.55	16.27	13.15	11.67	19.95	9.35	0.47
NABIL	45.53	43.19	28.45	17.72	16.21	30.22	13.77	0.46

Source: Annual Report 2064/65 – 2068/69

As discussed earlier, since both the banks have decreasing trend of EPS, the PE ratio too is in the decreasing trend in the recent year. But comparatively because the market price of NABIL is relatively high in the market, it can be concluded that PE Ratio of NABIL is higher than EBL.

The S.D of EBL is lower than the NABIL and C.V of EBL is higher than the NABIL it indicate its risk to invest in EBL rather than the NABIL.

4.3 Statistical Analysis

For the third objective of the study statistical tools are analyzed. Statistical tool is one of the important tools to analyze the data. There are various tools for the analysis of tabulated data such as mean, standard deviation, regression analysis, co-relation analysis, trend analysis, various types of tests etc. There are convenient statistical tools which are used in this thesis study.

4.3.1 Coefficient of Correlation 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, total assets and net profit, total investment and net profit. The correlation of total deposit, total investment, loan and advances and net profit of EBL and NABIL using Karl

Pearson's coefficient of correlation are also calculated and value of them are analyzed.

Deposit have played very important role in performance of a commercial banks and similarly loan and advances are very important to mobilize the collected deposits. Coefficient of correlation between deposit and loan and advances measures the degree of relationship between these two variables. In this analysis, deposit is independent variable (X) and loan and advances are dependent variable (Y). The main objectives of computing "r" between these two variables is to justify whether deposit are significantly used as loan and advances in proper way or not.

The coefficient of correlation between deposit and investment measures the degree of relationship between these two variables or deposit is significantly utilized or not. In correlation analysis, deposit is independent variable (X) and total investment is dependent variable (Y).

Coefficient of correlation between total assets and net profit is used to measure the degree of relationship between two variable i.e. Loan and advance and net profit of EBL and NABIL during the study period where Loan and advance is independent variable (X) and net profit is dependent variable (Y).

Coefficient of correlation between total investment and net profit measures the degree of their relationship. In the correlation analysis, investment is independent variable and net profit is dependent variable.

Coefficient of Correlation of total deposit, Investment, Loan & Advance and Net Profit between EBL and NABIL shows as follows:

Table 4.19
Coefficient of Correlation Analysis

Components	EBL		NABIL	
	correlation	determination	correlation	determination
Total Deposit and Loan & Advance	0.9950	0.9899	0.9879	0.9760
Total Deposit and Total Investment	0.8135	0.6618	0.9564	0.9147
Loan & Advance and Net Profit	0.9960	0.9920	0.9739	0.9484
Total Investment and Net Profit	0.7807	0.6095	0.8530	0.7276

Source: Annual Report & Appendix 14, 15, 16, 17, 18, 19, 20 & 21

From the Table4.19, it is found that coefficient of correlation between total deposits and loan & advances of EBL and NABIL are 0.9950 and 0.9879. It shows that both have the positive relationship between these two variables. It refers that deposit and loan & advances of EBL move together very closely but not proportionately. Moreover, the coefficient of determination of EBL is 0.9899. It means 98.99 percent of variation in loan and advances has been explained by deposit. Similarly, value of coefficient of determination of NABIL is 0.9760. It refers that 97.60 percent variance in loan and advances are affected by total deposit.

Again, it is found that the coefficient of correlation between total deposit and total investment of EBL is 0.8135. In addition, coefficient of determination of EBL is 0.6618. It means only 66.18 percent of total investment is explained by total deposit. Similarly, there is high degree correlation positive coefficient between total deposit and total investment of NABIL which is indicator by correlation coefficient of 0.9564. The value of coefficient of determination is found 0.9147and this refers that 91.47 percent of the variation in total investment is explained by total deposit.

It also shows that correlation coefficient between Loan and advance and net profit is 0.9960 of EBL. It refers that there is positive correlation between these two variables. Here, 99.60 percent of net profit is contributed by Loan and advance as its coefficient of determination shows of 0.9920. NABIL has also high degree positive correlation i.e. 0.9739between Loan and advance and net profit. The coefficient of determination is 0.9484 i.e. 94.84 percent.

Correlation coefficient between total investment and net profit of EBL is 0.7807 which implies there is positive correlation between total investment and net profit. In addition, coefficient of determination of EBL is 0.6095. It means only 60.95 percent is contribute by total investment. On the other hand, NABIL has high positive correlation between total investment and net profit i.e. 0.8530. The coefficient of determination of NABIL is 0.7276 which means 72.76 percent of profit is contribute by total investment.

4.3.2 Time Series Analysis (Trend 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 previous trend of the financial performance and forecasts the future financial results of the firms. This is calculated by the least square method which is as follows:

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

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. Here the effort has been made to calculate the trend values of Total deposit of EBL and NABIL for past five years and further two year.

Table 4.20
Trend Analysis of Total Deposit of EBL and NABIL

Year (x)	EBL	NABIL
2064/65	25100.20	32365.66
2065/66	31086.66	38222.20
2066/67	37073.11	44078.74
2067/68	43059.57	49935.28
2068/69	49046.02	55791.82
2069/70	55032.48	61648.36
2070/71	61018.93	67504.90

Source: Annual Report & Appendix 22

Figure 4.3

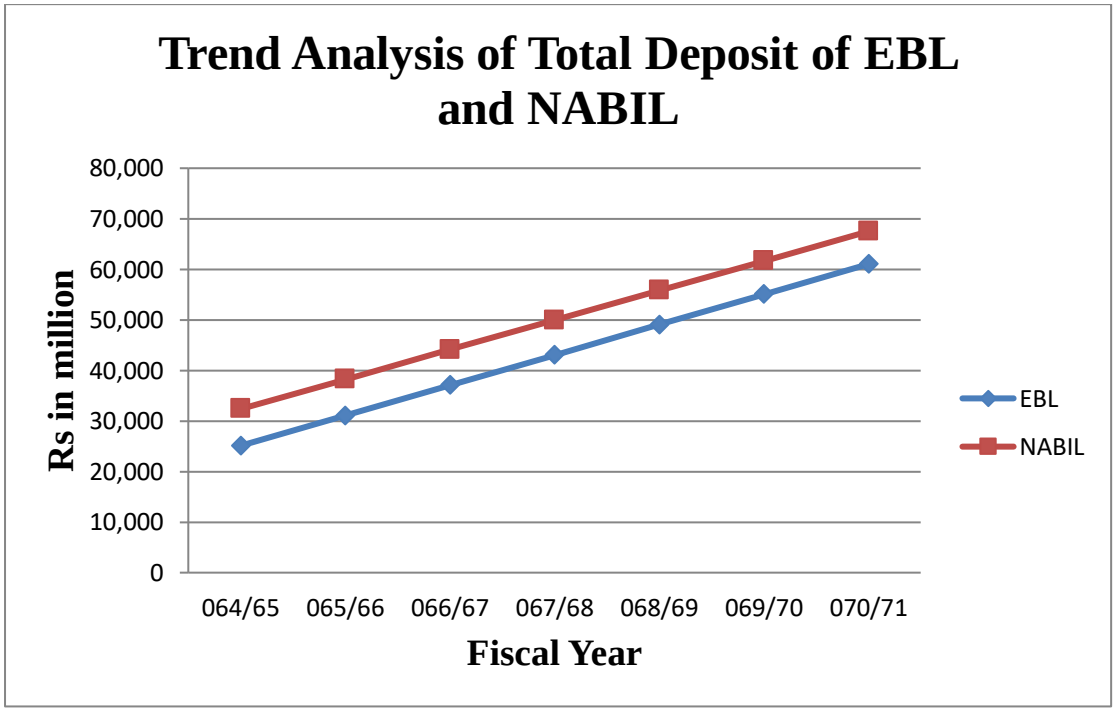


Table 4.20 and Figure 4.3 shows that the total deposits of EBL and NABIL, where both banks are in increasing trend. The rate of increment of total deposit for NABIL seems to be higher than that of EBL. Growth rate of both the banks

in the initial years are higher and is gradually decreasing in the recent years. The reason might be because of the increased players and tough competition in the market.

B. Trend Analysis of Loan and advances

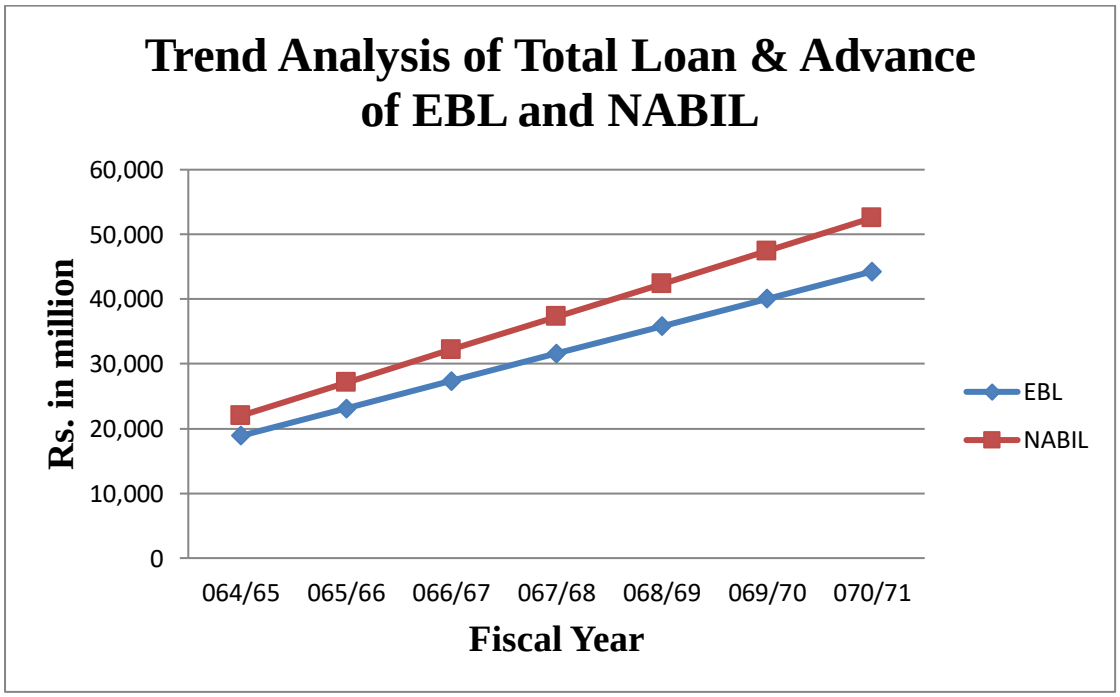
Here the trend values of loan and advances between EBL and NABIL have been calculated for the past five year plus further two years. The following Table shows the actual and trend values of EBL and NABIL:

Table 4.21
Trend line of Total Loan and Advance of EBL and NABIL

Year (x)	EBL	NABIL
2064/65	18886.39	21987.64
2065/66	23118.07	27080.19
2066/67	27349.76	32172.73
2067/68	31581.44	37265.27
2068/69	35813.12	42357.81
2069/70	40044.80	47450.36
2070/71	44276.48	52542.90

Source: Annual Report & Appendix 23

Figure 4.4



As per the figure 4.4, both the banks have been gradually increasing its investment portfolio in Loans & Advances. Looking at the trend, growth rate of EBL is more consistent, whereas NABIL's growth is more steep and shooting than EBL. This means, NABIL is investing more than EBL resulting more profit than EBL. Also EBL seems less aggressive in comparison to NABIL.

C. Trend Analysis of Total Investment

Under this topic, an attempt has been made to analyze trend analysis total investment of EBL and NABIL for past five years and further two year.

Table 4.22
Trend Analysis of Total Investment of EBL and NABIL

Year (x)	EBL	NABIL
2064/65	4844.10	10223.85
2065/66	5584.44	11272.55
2066/67	6324.78	12321.25
2067/68	7065.12	13369.94
2068/69	7805.46	14418.64
2069/70	8545.80	15467.34
2070/71	9286.14	16516.04

Source: Annual Report & Appendix 24

Figure 4.5

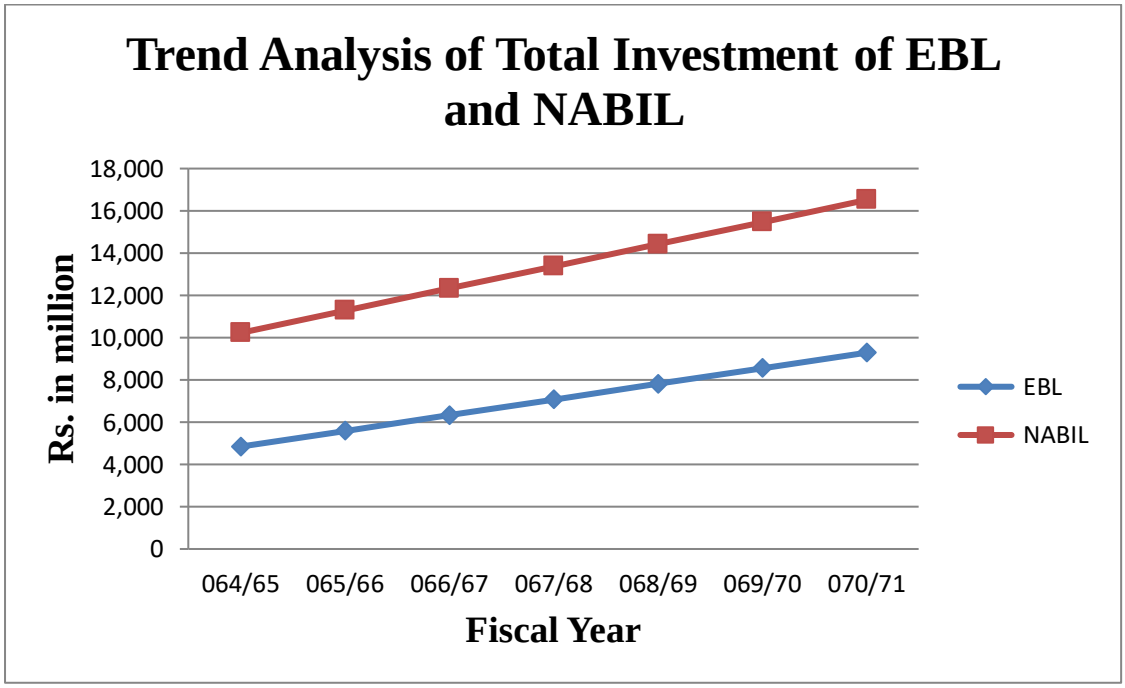


Table 4.22 and Figure 4.5 shows that the Trend of Total Investment between EBL and NABIL. Both banks EBL and NABIL have increasing trend in making investment but there is very high amount of investment in NABIL than EBL. Growth of Total investment as in the investment in Loans & Advances of NABIL seems more aggressive and increasing as compared to EBL.

D. Trend Analysis of Net Profit

Here, the trend values of net profit of EBL and NABIL have been calculated for past five years and further two year.

Table 4.23
Trend Analysis of Net Profit of EBL and NABIL

Year (x)	EBL	NABIL
2064/65	474.44	748.87
2065/66	631.58	969.50
2066/67	788.72	1190.13
2067/68	945.86	1410.76
2068/69	1103.00	1631.39
2069/70	1260.14	1852.02
2070/71	1417.28	2072.65

Source: Annual Report & Appendix 25

Figure 4.6

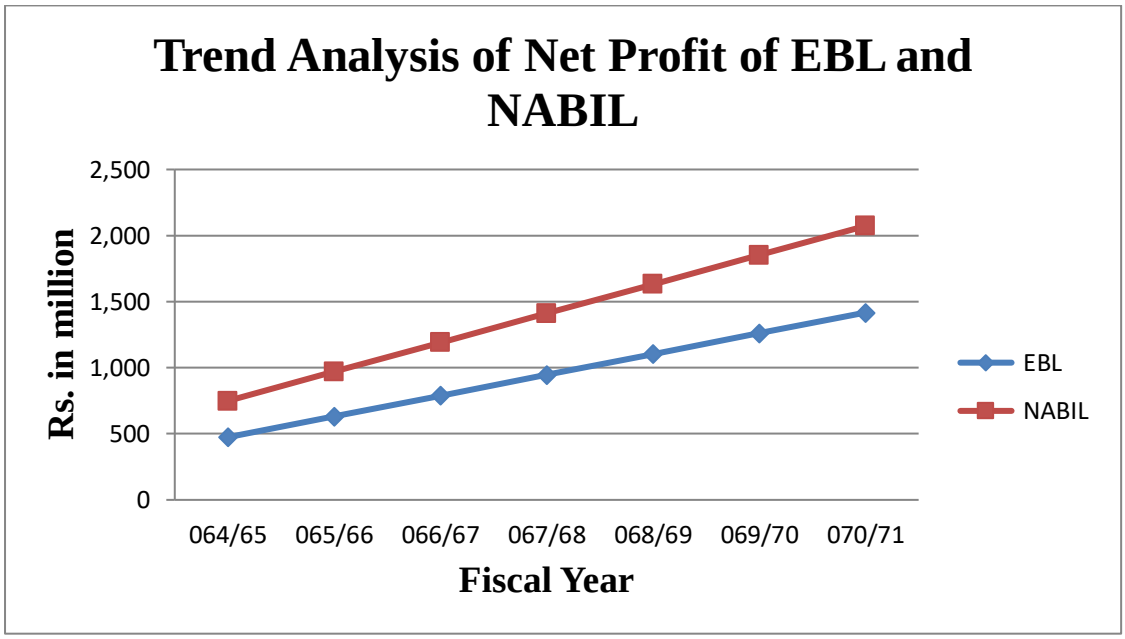


Table 4.23 and Figure 4.6revealthe trend of Net profit of EBL and NABIL. Net profit of both bank EBL and NABIL forecasted in increasing trend. The trend of increasing value of net profit of NABIL is higher than EBL. The trend of Net profit projected to FY2064/65 to FY2070/71.

4.4 Major Findings of the Study

From the above research study, following findings are drawn on the liquidity position of the selected commercial banks.

- The total deposit of EBL and NABIL is increasing trend over the study period. The average total deposit of EBL is NRs.37,073 million and NRs. 44,079 million of NABIL. In comparison the NABIL seems higher in deposit collection than the EBL Bank.
- The liquidity of position of EBL is little higher than NABIL. The average amount of cash balance of EBL is NRs. 6,627 million and NRs.2831 million of NABIL. NABIL has been maintaining low level of Cash Balance with it, making it more riskier in the case of high demand from depositors, whereas EBL has maintain excess cash with it. On the other hand, this signifies that NABIL has made more investment than EBL resulting more profit as compared to EBL.
- Generally banks have to maintain more liquid assets to meet their short term obligation – generally to meet the demand of depositors. Looking at the current ratio, EBL seems more stable and strong than NABIL as it is maintaining low level of cash balance with it.
- Cash and bank balance to total deposit ratio of EBL has higher than NABIL i.e. 17% > 7% which indicates that it has higher liquidity as compare to NABIL. A high ratio of cash and bank balance may be undesirable which indicates inability to invest in more productive sectors like short-term marketable securities insuring enough liquidity which will help the bank to improve its profitability. But liquidity position is good.

- Cash and bank balance to current assets ratio of EBL is higher than NABIL i.e. 15% > 5%.The higher mean ratio shows EBL's liquidity position is better than that of NABIL.
- Average Investment on government securities to current assets during the review period of NABIL is slightly higher than EBL i.e.9.56% >8.89%. It shows both the banks have more or less similar level of investment in government securities.
- The loan and advances to total deposit ratio in average of EBL is higher than NABIL i.e. 73.77% > 72.99%.But in the recent years, adopting aggressive lending strategy, NABIL has invested more in the lending activities than EBL.
- The total investment to total deposit of NABIL is higher than EBL i.e. 28% > 17%. It shows the NABIL is mobilizing its funds on investment in various securities efficiently. It can be said that NABIL is more successful in utilizing its total deposit by investing in other marketable securities as well.
- The loan and advances to total assets ratio of EBL is greater than NABIL i.e. 66% > 63% which shows that major portion of Assets of EBL comprise of investment in Loans & Advances whereas NABIL has assets other than loans and advances. Nabil earns not only from interest on loans but its investments in other assets and other fees, service charge and commission from them as well.
- Investment on government securities to total assets ratio of EBL is lower than NABIL i.e. 12.5% <12.8%. This indicates that NABIL has invested little more portions of total assets on government securities. The higher ratio of NABIL shows that better fund mobilization.
- Return on loan and advances ratio of NABIL is higher than EBL i.e. 3.86% > 2.78%, because of higher investment in Loans & Advances. Having said that, it is equally important for any bank to manage its risk and monitor its loans, to have better and high return on their investment. It is not necessary that higher lending will result in higher profit, if the

loans are not properly assessed then BFIs might have to make provision more than its earning.

- Return on Total Assets ratio of NABIL is higher than EBL i.e. 2.49% >1.94% because NABIL seems more successful in managing and utilizing its available assets.
- Net Interest Income to Operating income ratio of NABIL is lower than EBL i.e. 75% < 79%. It means the greater portion of operating income is occupied by total net interest income for EBL. Whereas NABIL's operating income comprises of fees, commission and other income as well apart from interest income.
- Total Interest Expense to Total Assets ratio of EBL is little higher than NABIL i.e. 3.9% > 3.7%. It shows EBL has high interest expenditure to total assets, which means cost of deposit for EBL is higher as it is collecting funds at a higher cost than NABIL.
- The liquidity risk of the bank defines its liquidity need for deposit. The average mean ratio of EBL is slightly greater than that of NABIL. It signifies that EBL has sound liquid fund to make immediate payment to the depositors.
- Average earning per share of NABIL is greater than that of EBL i.e. NRs. 93.47 > NRs. 92.74. NABIL has more inconsistency inearning per share as its higher coefficient of variation shows. The increasing net profit of NABIL and increase in the capital over the review period might be one of the reasons for the inconsistency.
- The dividend per share of NABIL seems to be higher than of EBL i.e. NRs. 39 > NRs. 26.32 as it has continuously provide more return to its shareholders in the Nepalese Banking sector. NABIL's shareholders are the higher earner in the banking sector.
- MPS of NABIL in the initial years of the review period was more than 5K and the mean price in the review period is almost double than EBL. But due to fluctuating trend of NABIL, EBL's share price is more consistent.

- Profit, number of shares outstanding and MPS are the factor determining earning of shares for any company and since NABIL has topped in all these component hence PE Ratio of NABIL is more and consistent than EBL.
- Both EBL and NABIL have high positive co-relation between total deposit and loan and advances because EBL and NABIL have 0.9950 and 0.9879 of co-relation coefficient between deposit and loan and advances. These relationships are significant. This can be regarded as good indication in financial performance for the banks. The correlation coefficient of both banks is significant.
- There is positive correlation between total deposit and total investment of EBL and NABIL. Whereas NABIL has high degree of positive co-relation i.e.0.9564 than EBL i.e. 0.8135. This indicates that NABIL is successful to mobilize its deposit in order to make good investment in comparison to EBL.
- There is high degree of positive correlation between Loan and advance and net profit of EBL and NABIL. Correlation between Loan and advance and net profit of EBL is 0.9960 and NABIL is 0.9739. The relationship between Loan and advance and net profit of both banks has significant. In calculation, EBL has more significant relationship between Loan and advance and net profit than that of NABIL.
- The degree of relationship between total investment and net profit of NABIL is higher than EBL i.e. correlation coefficient between total investment and net profit of EBL and NABIL is 0.7807 and 0.8530 respectively.
- EBL and NABIL have increasing trend in collecting deposit and the rate of increment of total deposit for NABIL seems to be higher than that of EBL. Here both banks' has aggressively increasing trends.
- Though both the banks have increased their loans and advances by more than 2 folds, NABIL seems more aggressive than EBL. NABIL has more investment in loans and advances.

- The overall investment figure of NABIL is more than EBL. However if we look at the percentage, EBL has increased by almost twice whereas NABIL has increased its portfolio by 1.5 times only during the review period. But if we look at the figure, NABIL has increased more than EBL.
- As per the unaudited financials of 3rd quarter for this FY, NABIL and EBL both has crossed their Net Profit by 1 billion where NABIL has the highest at 1.85 billion which is expected to cross 2 billion by the end of this FY. During the review period, NABIL has increases its net profit almost 3 times and EBL has more than 3 times, but looking at the figure net profit in the FY 68/69 NABIL's net profit has almost double than EBL.

CHAPTER –V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

In this chapter, summary conclusion and recommendation are included. All the summary and conclusion are made according to the date and findings obtained from analysis. Recommendation has been made which would be beneficial for all the concerned management of the bank and other stakeholders.

This research is also concerned about the comparative study on liquidity management of Everest Bank Limited and NABIL Bank limited. The term liquidity refers to the funds like deposit, borrowing, debt and equity whatever bank has retained from investment or utilization of such funds for gaining better profit and return. In conclusion, 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 balance at other banks and NRB for its daily operation and administrative purpose. As per NRB directives and circulars 2069/70 commercial banks are required to maintain cash reserve of 6% at NRB of its total deposit liability. The previous provision of cash in vault maintenance has been withdrawn now.

The researcher has identified that research problem and set objectives to solve research problems about capital structure of selected commercial banks as described in introduction chapter. To make this study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to undertake this research more precisely. This section also includes concept of banking, commercial banks, joint venture banks, deposit, and asset and investment policy. 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 period covered and methods of analysis. This study is mainly conducted on the basis of secondary data collected from annual reports, official report, economic journal, financial statement etc. and authorize web site of concern bank and Nepal stock exchange. The five years financial statement has been examined for the purpose of the study.

The presentation and analysis of data has been made comparatively analytical and their interpretation has been done in chapter four by applying the wide varieties of methodology as stated in chapter three. It includes various financial and statistical tools. In case of financial tools, ratio analysis is done which consists of liquidity ratio, assets management ratio, profitability ratio, risk ratio and other ratios as appropriate. Other ratio includes EPS, DPS and P.E. ratio. 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.

In the aspect of liquidity position, cash and bank balance reserve ratio shows more liquidity position. Cash and bank balance to total deposit has been in fluctuating trend for the past 5 years study period.

5.2 Conclusions

Thus this research is conducted with the major objective of highlighting liquidity management of two commercial banks. The observation and conclusion is derived by analyzing liquidity, asset management position, profitability, risk and other ratio as well as relevant financial and statistical

ratios of commercial banks. This has helped to reach conclusion and provide workable solution for the liquidity management and profitability of selected banks.

It can be concluded from the observance and analysis of above data, the commercial bank should move as per the direction given by the central bank. Bank should have optimum policy to collect the deposit in various accounts. Deposit is the major component of commercial banks to survive in the industry. Higher the deposit higher will be the chance of the mobilization of working fund and profit to be generated. Bank should invest in different sector very carefully, while advancing loan because loan is the blood of commercial banks for survival. If commercial banks do not apply sound investment policy it will be in great trouble in future to collect it in time where there is the possibility of bankruptcy too. Bank should invest their fund in various portfolios after the deep study of the project to be safe from being bankruptcy. If banks concentrate the investment in limited sectors, there is high chance of default risk. Diversifications are indeed required in all types industry but it has seen immense importance in banking sectors as they play with the peoples' money for the benefit of its own. And lastly, it can be said that banks are important for the nation's economic growth as well. It helps in the capital formation to the nation which is the most important element for the economic growth of the country.

Capital helps to solve the various problems arising in the country. And fixed deposit controls the measure economic activity of the nation. Therefore, it is very important for the policymakers to adopt appropriate policy with calculated interest rate so that large capital can be mustered at very low cost encouraging the industrial and commercial activity eventually leading to better economic growth, socio-economic development, employment opportunity, etc.

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 EBL and NABIL effectively and efficiently. This would help to draw some outline and make reforms in the respective banks which are as follows:

In the present context of tough competitive banking industry, banks should attract more customers by providing improved and innovative services and facilities.

Interest rate structure should be carried out and an appropriate interest rate policy should be formulated so as to attract more savings of the general public. More than interest return, customers also look for the security of their deposit, so it is equally important for the BFIs to insure security to their customers.

Staff attitude and the way they behave also impresses the customers and helps create interest to improve the performance of the company. Hence, full co-operation from staff must be obtained. Customer's satisfactions are affected by the services provided by the bank which will affect the collection of deposits. The bank should also provide the training programs to the employees for their professional development.

Since the national economy has just surpassed recession period, all the financial institutions should work towards improving the economic development of the country. The financial institutes should encourage business, industries, production sector and export rather than imports, so as to reduce the outflow of currencies and hold adequate balance reserve of the country. It should more focus on development activities and productive sector and explore new avenues for its better investment.

The Bank should find out new areas/sectors for investing funds from which it can generate maximum profit. In context of present scenario - hydropower, health, education, infrastructure etc. can be considered as the best sector for investment which are more secure and can generate a reasonable profit.

The fee based activities of bank are found to be very popular and also has become important in banking sector. These are commission, discount and fees and other services, so the bank has increase the off balance sheet transaction to increase the profit.

More than 55% of Nepalese are below poverty line where there is less or no saving. Considering the fact, samples banks should target their business segment in the middle and low income families. For this, they have to keep the affordable minimum or zero balance to open the account which will help to expand customer and deposit amount.

To upgrade the financial health of the banks, ratio of bad loan has to be minimized substantially otherwise it has to allocate huge amount in loan loss provision.

The bank has to create the conductive environment for the revival of sick investment and has to analyze the necessity of mobilizing additional resource to revive the overall banking sector.

With the increasing number of branch and branchless network of banks and financial institutions and increasing demand of the shareholder for profit leads to unhealthy competition in the banking industry. So the sampled banks are suggested to make a fair competition in the market and should adopt the policy to live and let others live which make them to compel to think the optimum policy in turn. It is better for the BFIs to go for merger and acquisition to make a strong and consistent bank in the industry.

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APPENDIXES

Appendix: 1

Computation of Current Ratio of EBL & NABIL

Year	EBL		NABIL		Current Ratio of EBL(CR=CA/CL)	Current Ratio of NABIL(CR=CA/CL)
	Current Assets	Current Liabilities	Current Assets	Current Liabilities		
064/65	27,079.70	24,276.30	37,554.00	37,554.00	1.12	1.00
065/66	36,566.90	33,934.90	44,325.00	44,325.00	1.08	1.00
066/67	40,968.00	37,636.80	59,408.00	59,408.00	1.09	1.00
067/68	51,420.20	51,243.40	71,546.19	67,863.43	1.00	1.05
068/69	68,251.60	64,815.20	82,943.93	76,363.48	1.05	1.09

Appendix: 2

Computation of Cash & Bank Balance to Total Deposit Ratio of EBL & NABIL

Year	EBL		NABIL		Cash & Bank Balance to Total Deposit Ratio of EBL =CBL/TD	Cash & Bank Balance to Total Deposit Ratio of NABIL=CBL/TD
	Total Deposit	Cash& Bank Balance	Total Deposit	Cash &Bank Balance		
064/65	23,976.30	2,667.97	31,915.00	2,671.14	0.11	0.08
065/66	33,322.95	6,164.38	37,348.00	3,372.51	0.18	0.09
066/67	36,932.31	7,818.82	46,411.00	1,400.10	0.21	0.03
067/68	41,127.90	6,122.86	49,696.00	2,436.55	0.15	0.05
068/69	50,006.10	10,363.31	55,023.70	4,275.82	0.21	0.08

Appendix: 3

Computation of Cash & Bank balance to Current Assets Ratio of EBL & NABIL

Year	EBL		NABIL		Cash & bank balance to Current Assets Ratio of EBL = CBL/CA	Cash & bank balance to Current Assets Ratio of NABIL = CBL/CA
	Current Assets	Cash &Bank Balance	Current Assets	Cash & Bank Balance		
064/65	27,079.70	2,667.97	37,554.00	2,671.14	0.10	0.07
065/66	36,566.90	6,164.38	44,325.00	3,372.51	0.17	0.08
066/67	40,968.00	7,818.82	59,408.00	1,400.10	0.19	0.02
067/68	51,420.20	6,122.86	71,546.19	2,436.55	0.12	0.03
068/69	68,251.60	10,363.31	82,943.93	4,275.82	0.15	0.05

Appendix: 4

Computation of Investment on Government Securities to Current Assets Ratio of EBL & NABIL

Year	EBL		NABIL		Investment on Government Securities to Current Assets Ratio of EBL = IGS/CA	Investment on Government Securities to Current Assets Ratio of NABIL = IGS/CA
	Current Assets	Investment on Government Securities	Current Assets	Investment on Government Securities		
064/65	27,079.70	3,237.98	37,554.00	4,646.88	0.12	0.12
065/66	36,566.90	5,146.05	44,325.00	3,706.00	0.14	0.08
066/67	40,968.00	4,354.35	59,408.00	7,942.00	0.11	0.13
067/68	51,420.20	7,145.02	71,546.19	8,745.23	0.14	0.12
068/69	68,251.60	6,068.88	82,943.93	7,999.98	0.09	0.10

Appendix: 5

Computation of Loan & Advance to Total deposit Ratio of EBL & NABIL

Year	EBL		NABIL		Loan & Advance to Total deposit Ratio of EBL = L&A/TD	Loan & Advance to Total deposit Ratio of NABIL = L&A/TD
	Loan & Advance	Total deposit	Loan & Advance	Total deposit		
064/65	18,339.08	23,976.30	21,365.05	31,915.00	0.76	0.67
065/66	23,884.67	33,322.95	27,589.93	37,348.00	0.72	0.74
066/67	27,556.36	36,932.31	32,268.87	46,411.00	0.75	0.70
067/68	31,057.69	41,127.90	38,034.10	49,696.00	0.76	0.77
068/69	35,910.97	50,006.10	41,605.68	55,023.70	0.72	0.76

Appendix: 6

Computation of Total Investment to Total deposit Ratio of EBL & NABIL

Year	EBL		NABIL		Total Investment to Total deposit Ratio of EBL = TI/TD	Total Investment to Total deposit Ratio of NABIL = TI/TD
	Total Investment	Total deposit	Total Investment	Total deposit		
064/65	5,059.60	23,976.30	9,939.77	31,915.00	0.21	0.31
065/66	5,948.50	33,322.95	10,826.38	37,348.00	0.18	0.29
066/67	5,008.30	36,932.31	13,703.02	46,411.00	0.14	0.30
067/68	7,743.90	41,127.90	13,081.21	49,696.00	0.19	0.26
068/69	7,863.60	50,006.10	14,055.85	55,023.70	0.16	0.26

Appendix: 7

Computation of Loan & Advance to Total Assets Ratio of EBL & NABIL

Year	EBL		NABIL		Loan & Advance to Total Assets Ratio of EBL = L&A/TA	Loan & Advance to Total Assets Ratio of NABIL = L&A/TA
	Loan & Advance	Total Assets	Loan & Advance	Total Assets		
064/65	18,339.08	27,149.34	21,365.05	37,132.76	0.68	0.58
065/66	23,884.67	36,916.85	27,589.93	43,867.40	0.65	0.63
066/67	27,556.36	41,382.76	32,268.87	52,151.68	0.67	0.62
067/68	31,057.69	46,236.21	38,034.10	58,141.44	0.67	0.65
068/69	35,910.97	55,813.13	41,605.68	63,200.30	0.64	0.66

Appendix: 8

Computation of Investment on Government Securities to Total Assets Ratio of EBL & NABIL

Year	EBL		NABIL		Investment on Government Securities to Total Assets Ratio of EBL = IGS/TA	Investment on Government Securities to Total Assets Ratio of NABIL = IGS/TA
	Investment on Government Securities	Total Assets	Investment on Government Securities	Total Assets		
064/65	3,237.98	27,149.34	4,646.88	37,132.76	0.12	0.13
065/66	5,146.05	36,916.85	3,706.00	43,867.40	0.14	0.08
066/67	4,354.35	41,382.76	7,942.00	52,151.68	0.11	0.15
067/68	7,145.02	46,236.21	8,745.23	58,141.44	0.15	0.15
068/69	6,068.88	55,813.13	7,999.98	63,200.30	0.11	0.13

Appendix: 9

Computation of Return on Loan & Advance Ratio of EBL & NABIL

Year	EBL		NABIL		Return on Loan & Advance Ratio of EBL = NP/L&A	Return on Loan & Advance Ratio of NABIL = NP/L&A
	Net profit	Loan & Advance	Net profit	Loan & Advance		
064/65	451.20	18,339.08	746.47	21,365.05	2.40	3.96
065/66	638.70	23,884.67	1,031.05	27,589.93	2.61	4.02
066/67	831.80	27,556.36	1,139.10	32,268.87	2.95	3.47
067/68	931.30	31,057.69	1,337.75	38,034.10	2.94	3.73
068/69	1,090.60	35,910.97	1,696.28	41,605.68	2.98	4.14

Appendix: 10

Computation of Return on Total Assets Ratio of EBL & NABIL

Year	EBL		NABIL		Return on Total Assets Ratio of EBL = NP/Total Assets	Return on Total Assets Ratio of NABIL = NP/Total Assets
	Net profit	Total Assets	Net profit	Total Assets		
064/65	451.20	27,149.34	746.47	37,132.76	1.65	2.32
065/66	638.70	36,916.85	1,031.05	43,867.40	1.73	2.55
066/67	831.80	41,382.76	1,139.10	52,151.68	2.09	2.37
067/68	931.30	46,236.21	1,337.75	58,141.44	2.10	2.43
068/69	1,090.60	55,813.13	1,696.28	63,200.30	2.11	2.80

Appendix: 11

Computation of Net Interest Income to Operating Income Ratio ofEBL& NABIL

Year	EBL		NABIL		Net Interest Income to Operating Income Ratio of EBL = TII/TOI	Net Interest Income to Operating Income Ratio of NABIL = TII/TOI
	Net Interest Income	Operating Income	Net Interest Income	Operating Income		
064/65	916.05	1,209.90	1,220.26	1,670.43	0.76	0.73
065/66	1,173.94	1,544.97	1,645.21	2,220.98	0.76	0.74
066/67	1,529.66	1,927.98	2,087.62	2,764.09	0.79	0.76
067/68	1,795.15	2,192.94	2,298.60	3,046.13	0.82	0.75
068/69	2,086.66	2,609.74	2,978.25	3,990.48	0.80	0.75

Appendix: 12

Computation of Interest Expense to Total Assets Ratio ofEBL& NABIL

Year	EBL		NABIL		Interest Expense to Total Assets Ratio of EBL = TIP/TA	Interest Expense to Total Assets Ratio of NABIL = TIP/TA
	Interest Expense	Total Assets	Interest Expense	Total Assets		
064/65	632.61	27,149.34	758.44	37,132.76	0.023	0.020
065/66	1,012.87	36,916.85	1,153.28	43,867.40	0.027	0.026
066/67	1,572.79	41,382.76	1,960.11	52,151.68	0.038	0.038
067/68	2,535.88	46,236.21	2,955.43	58,141.44	0.055	0.051
068/69	2,873.33	55,813.13	3,155.49	63,200.30	0.051	0.050

Appendix: 13

Computation of Liquidity Risk Ratio of EBL & NABIL

Year	EBL		NABIL		Liquidity Risk Ratio of EBL = LA/CL	Liquidity Risk Ratio of NABIL = LA/CL
	Liquid Assets	Current Liabilities	Liquid Assets	Current Liabilities		
064/65	27,079.70	24,276.30	37,554.00	37,554.00	1.12	1.00
065/66	36,566.90	33,934.90	44,325.00	44,325.00	1.08	1.00
066/67	40,968.00	37,636.80	59,408.00	59,408.00	1.09	1.00
067/68	51,420.20	51,243.40	71,546.19	67,863.43	1.00	1.05
068/69	68,251.60	64,815.20	82,943.93	76,363.48	1.05	1.09

Appendix - 14

Calculation for Mean value, Standard Deviation & Correlation between Total deposit and Loan & Advance of EBL

Year	Total deposit (X_1)	Loan & Advance (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
064/65	23,976.30	18,339.08	-13096.81	-9010.68	118011119	171526485	81192268
065/66	33,322.95	23,884.67	-3750.16	-3465.09	12994630.9	14063715	12006816
066/67	36,932.31	27,556.36	-140.80	206.60	-29090.3652	19825.2032	42685.532
067/68	41,127.90	31,057.69	4,054.79	3,707.94	15034895.4	16441305.7	13748791
068/69	50,006.10	35,910.97	12,932.99	8,561.22	110722148	167262179	73294478
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 185365.56	$\sum X_2 =$ 136748.78			$\sum x_1 . x_2 =$ 256733704	$\sum x_1^2 =$ 369313509	$\sum x_2^2 =$ 180285039

For Total Deposit,

Mean $(\bar{\mathbf{X}}_1) = \frac{\sum X_1}{N_1} = \frac{185365.66}{5} = 37,073.11$

S.D. $(\boldsymbol{\sigma}) = \sqrt{\frac{\sum (X_1 - \bar{X}_1)^2}{N_1}} = \sqrt{\frac{369313509}{5}} = 8594.34$

For Loan & Advance,

Mean $(\bar{\mathbf{X}}_2) = \frac{\sum X_2}{N_2} = \frac{136748.78}{5} = 27,349.76$

S.D. $(\boldsymbol{\sigma}) = \sqrt{\frac{\sum (X_2 - \bar{X}_2)^2}{N_2}} = \sqrt{\frac{180285039}{5}} = 6004.75$

Correlation between Total deposit and Loan & Advance of EBL,

$$r_{12} = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{256733704}{\sqrt{369313509 \times 180285039}}$$

= 0.99

Appendix - 15

Calculation for Mean value, Standard Deviation & Correlation between Total deposit and Loan & Advance of NABIL

Year	Total deposit (X_1)	Loan & Advance (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
064/65	31,915.00	21,365.05	-12163.74	-10807.68	131461737.9	147956546	116805839
065/66	37,348.00	27,589.93	-6730.74	-4582.79	30845597.04	45302847	21002010
066/67	46,411.00	32,268.87	2332.26	96.15	224235.2338	5439441	9244
067/68	49,696.00	38,034.10	5,617.26	5,861.37	32924845.11	31553621	34355658
068/69	55,023.70	41,605.68	10,944.96	9,432.96	103243277.4	119792062	88980640
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 220,393.70	$\sum X_2 =$ 160,863.64			$\sum x_1 . x_2 =$ 298699693	$\sum x_1^2 =$ 350044518	$\sum x_2^2 =$ 261153391

For Total Deposit,

Mean $(\bar{X}_1) = \frac{\sum X_1}{N_1} = \frac{220393.70}{5}$ = 44,078.74

S.D. $(\sigma) = \sqrt{\frac{\sum (X_1 - \bar{X}_1)^2}{N_1}} = \sqrt{\frac{350044518}{5}}$ = 8367.13

For Loan & Advance,

Mean $(\bar{X}_2) = \frac{\sum X_2}{N_2} = \frac{160863.64}{5}$ = 32172.73

S.D. $(\sigma) = \sqrt{\frac{\sum (X_2 - \bar{X}_2)^2}{N_2}} = \sqrt{\frac{261153391}{5}}$ = 7227.08

Correlation between Total deposit and Loan & Advance of NABIL

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

$$= \frac{298699693}{\sqrt{350044518 \times 261153391}}$$

= 0.9879

Appendix – 16

Calculation for Mean value, Standard Deviation & Correlation between Total deposit and Total Investment of EBL

Year	Total deposit (X_1)	Total Investment (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	${x_1}^2$	${x_2}^2$
064/65	23,976.30	5,059.60	-13096.81	-1265.18	16569825	171526485	1600680
065/66	33,322.95	5,948.50	-3750.16	-376.28	1411111	14063715	141587
066/67	36,932.31	5,008.30	-140.80	-1316.48	185363	19825	1733120
067/68	41,127.90	7,743.90	4054.79	1,419.12	5754231	16441306	2013902
068/69	50,006.10	7,863.60	12932.99	1,538.82	19901541	167262179	2367967
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 185,365.56	$\sum X_2 =$ 31,623.90			$\sum x_1 . x_2 =$ 43822070	$\sum {x_1}^2 =$ 369313509	$\sum {x_2}^2 =$ 7857255

For Total Deposit,

Mean $(\bar{X}_1) = \frac{\sum X_1}{N_1} = \frac{185365.56}{5} = 37073.11$

S.D. $(\sigma) = \sqrt{\frac{\sum (X_1 - \bar{X}_1)^2}{N_1}} = \sqrt{\frac{369313509}{5}} = 8594.34$

For Total Investment,

Mean $(\bar{X}_2) = \frac{\sum X_2}{N_2} = \frac{31623.90}{5} = 6324.78$

S.D. $(\sigma) = \sqrt{\frac{\sum (X_2 - \bar{X}_2)^2}{N_2}}$

$$= \sqrt{\frac{7857255}{5}}$$

= 1253.58

Correlation between Total deposit and Total Investment of EBL,

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

$$= \frac{43822070}{\sqrt{369313509 \times 7857255}}$$

= 0.8135

Appendix - 17

Calculation of Correlation between Total deposit and Total Investment of NABIL

Year	Total deposit (X_1)	Total Investment (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	${x_1}^2$	${x_2}^2$
064/65	31,915.00	9,939.77	-12163.74	-2381.48	28967640	147956546	5671423
065/66	37,348.00	10,826.38	-6730.74	-1494.87	10061560	45302847	2234627
066/67	46,411.00	13,703.02	2332.26	1381.778	3222667	5439441	1909310
067/68	49,696.00	13,081.21	5617.26	759.96	4268894	31553621	577539
068/69	55,023.70	14,055.85	10944.96	1,734.60	18985164	119792062	3008851
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 220,393.70	$\sum X_2 =$ 61,606.23			$\sum x_1 . x_2 =$ 65505925	$\sum {x_1}^2 =$ 350044518	$\sum {x_2}^2 =$ 13401751

For Total Deposit,

Mean $(\bar{X}_1) = \frac{\sum X_1}{N_1} = \frac{220393.70}{5} = 44078.74$

S.D. $(\sigma) = \sqrt{\frac{\sum (X_1 - \bar{X}_1)^2}{N_1}} = \sqrt{\frac{350044518}{5}} = 8367.13$

For Total Investment,

Mean $(\bar{X}_2) = \frac{\sum X_2}{N_2} = \frac{61606.23}{5} = 12321.25$

S.D. $(\sigma) = \sqrt{\frac{\sum (X_2 - \bar{X}_2)^2}{N_2}}$

$$= \sqrt{\frac{13401751}{5}}$$

= 1637.18

Correlation between Total deposit and Total Investment of NABIL,

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{65505925}{\sqrt{350044518 \times 13401751}}$$

= 0.9564

Appendix - 18

Calculation for Correlation between Loan & Advance and Net Profit of EBL

Year	Loan & Advance (X_1)	Total Net Profit (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
064/65	18,339.08	451.20	-9010.68	-337.52	3041283	81192268	113920
065/66	23,884.67	638.70	-3465.09	-150.02	519832	12006816	22506
066/67	27,556.36	831.80	206.60	43.08	8901	42686	1856
067/68	31,057.69	931.30	3707.94	142.58	528678	13748791	20329
068/69	35,910.97	1,090.60	8561.22	301.88	2584461	73294478	91132
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 136,748.78	$\sum X_2 =$ 3,943.60			$\sum x_1 . x_2 =$ 6683154	$\sum x_1^2 =$ 180285039	$\sum x_2^2 =$ 249742

Correlation between Loan & Advance of Net Profit of EBL

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{6683154}{\sqrt{180285039 \times 249742}}$$

= 0.9960

Appendix - 19

Calculation for Correlation between Loan & Advance and Net Profit NABIL

Year	Loan & Advance (X_1)	Total Net Profit (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
064/65	21,365.05	746.47	-10807.68	-443.66	4794935	116805839	196834
065/66	27,589.93	1,031.05	-4582.79	-159.08	729009	21002010	25305
066/67	32,268.87	1,139.10	96.15	-51.0292	-4906	9244	2604
067/68	38,034.10	1,337.75	5861.37	147.62	865237	34355658	21791
068/69	41,605.68	1,696.28	9432.96	506.15	4774469	88980640	256186
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ 160,863.64	$\sum X_2 =$ 5,950.64			$\sum x_1 . x_2 =$ 11158744	$\sum x_1^2 =$ 261153391	$\sum x_2^2 =$ 502720

Correlation between Loan & Advance of Net Profit of NABIL

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{11158744}{\sqrt{261153391 \times 502720}}$$

= 0.9739

Appendix - 20

Calculation for Correlation between Total Investment and Net Profit of EBL

Year	Total Investment (X_1)	Total Net Profit (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
064/65	5,059.60	451.20	-1265.18	-337.52	427024	1600680	113920
065/66	5,948.50	638.70	-376.28	-150.02	56450	141587	22506
066/67	5,008.30	831.80	-1316.48	43.08	-56714	1733120	1856
067/68	7,743.90	931.30	1419.12	142.58	202338	2013902	20329
068/69	7,863.60	1,090.60	1538.82	301.88	464539	2367967	91132
$N_1 = 5$ $N_2 = 5$	$\sum X_1$= 31,623.90	$\sum X_2$= 3,943.60			$\sum x_1 . x_2$= 1093636	$\sum x_1^2$= 7857255	$\sum x_2^2$= 249742

Correlation between Total Investment and Net Profit of EBL

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{1093636}{\sqrt{7857255 \times 249742}}$$

= 0.7807

Appendix - 21

Calculation for Correlation between Total Investment and Net Profit of NABIL

Year	Total Investment (X_1)	Total Net Profit (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
064/65	9,939.77	746.47	-2381.48	-443.66	1056566	5671423	196834
065/66	10,826.38	1,031.05	-1494.87	-159.08	237796	2234627	25305
066/67	13,703.02	1,139.10	1381.78	-51.0292	-70511	1909310	2604
067/68	13,081.21	1,337.75	759.96	147.62	112183	577539	21791
068/69	14,055.85	1,696.28	1734.60	506.15	877966	3008851	256186
$N_1 = 5$ $N_2 = 5$	$\sum X_1$= 61,606.23	$\sum X_2$= 5,950.64			$\sum x_1 . x_2$= 2214000	$\sum x_1^2$= 13401751	$\sum x_2^2$= 502720

Correlation between Total Investment and Net Profit of NABIL

$$\mathbf{r_{12}} = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{2214000}{\sqrt{13401751 \times 502720}}$$

$$= 0.8530$$

Time Series Analysis (Trend Analysis)

Yc=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,

$$a = \frac{\sum y}{\sum n}$$

$$b = \frac{\sum x.y}{\sum x^2}$$

Appendix - 22

Calculation of Trend Analysis of total deposit of EBL & NABIL

Year	x= p-3	x^2	y_1 (EBL)	y_2(NABIL)	$x.y_1$	$x.y_2$	Trend value of EBL Yc= a + bx	Trend value of NABIL Yc= a + bx
064/65	-2	4	23,976.30	31,915.00	-47952.6	-63830	37073.11 +5986.46 *(2)= 25100.20	44078.74 +5856.54 *(2)=323 65.66
065/66	-1	1	33,322.95	37,348.00	-33322.95	-37348	37073.11 +5986.46 *(1)= 31086.66	44078.74 +5856.54 *(1)=382 22.20
066/67	0	0	36,932.31	46,411.00	0	0	37073.11 +5986.46 *(0)= 37073.11	44078.74 +5856.54 *0=4407 8.74
067/68	1	1	41,127.90	49,696.00	41127.9	49696	37073.11 +5986.46 *1= 43059.57	44078.74 +5856.54 *1=4993 5.28
068/69	2	4	50,006.10	55,023.70	100012.2	110047.39	37073.11 +5986.46 *2= 49046.02	44078.74 +5856.54 *2=5579 1.82
Excepted year 069/70	-	-	-	-	-	-	37073.11 +5986.46 *3= 55032.48	44078.74 +5856.54 *3=6164 8.36
Excepted year 070/71	-	-	-	-	-	-	37073.11 +5986.46 *4= 61018.93	44078.74 +5856.54 *4=6750 4.90
$\sum n$= 5	-	$\sum x^2$ =10	$\sum y_1$ =185365.5 6	$\sum y_2$ =220393.7 0	$\sum x.y_1$ = 59864.55	$\sum x.y_2$ = 58565.39		

For EBL

$$a = \frac{\sum y_1}{n} = \frac{185365.56}{5} = 37073.11$$

For EBL

$$b = \frac{\sum x.y_1}{\sum x^2} = \frac{59864.55}{10} = 5986.46$$

For NABIL

$$a = \frac{\sum y_2}{n} = \frac{220393.70}{5} = 44078.74$$

For NABIL

$$b = \frac{\sum x.y_2}{\sum x^2} = \frac{58565.39}{10} = 5856.54$$

Appendix - 23

Calculation of Trend Analysis of Loan & Advance of EBL & NABIL

Year	x= p-3	x^2	y_1 (EBL)	y_2(NABIL)	$x.y_1$	$x.y_2$	Trend value of EBL Yc= a + bx	Trend value of NABIL Yc= a + bx
064/65	-2	4	18,339.08	21,365.05	-36678.16	-42730.11	27349.76 +4231.68 *(2)= 18886.39	32172.73 +5092.54 *(2)= 21987.64
065/66	-1	1	23,884.67	27,589.93	-23884.67	-27589.93	27349.76 +4231.68 *(1)= 23118.07	32172.73 +5092.54 *(1)= 27080.19
066/67	0	0	27,556.36	32,268.87	0	0	27349.76 +4231.68 *0= 27349.76	32172.73 +5092.54 *0= 32172.73
067/68	1	1	31,057.69	38,034.10	31057.69	38034.10	27349.76 +4231.68 *1= 31581.44	32172.73 +5092.54 *1= 37265.27
068/69	2	4	35,910.97	41,605.68	71821.95	83211.37	27349.76 +4231.68 *2= 35813.12	32172.73 +5092.54 *2= 42357.81
Excepted year 069/70	-	-	-	-	-	-	27349.76 +4231.68 *3= 40044.80	32172.73 +5092.54 *3= 47450.36
Excepted year 070/71	-	-	-	-	-	-	27349.76 +4231.68 *4= 44276.48	32172.73 +5092.54 *4= 52542.90
$\sum n$= 5	-	$\sum x^2$ =10	$\sum y_1$ =136748.78	$\sum y_2$ =160863.64	$\sum x.y_1$ = 42316.81	$\sum x.y_2$ = 50925.43		

For EBL

$$a = \frac{\sum y_1}{n} = \frac{136748.78}{5} = 27349.76$$

For EBL

$$b = \frac{\sum x.y_1}{\sum x^2} = \frac{42316.81}{10} = 4231.68$$

For NABIL

$$a = \frac{\sum y_2}{n} = \frac{160863.64}{5} = 32172.73$$

For NABIL

$$b = \frac{\sum x.y_2}{\sum x^2} = \frac{50925.43}{10} = 5092.54$$

Appendix - 24

Calculation of Trend Analysis of Total Investment of EBL & NABIL

Year	x= p-3	x^2	y_1 (EBL)	y_2(NABIL)	$x.y_1$	$x.y_2$	Trend value of EBL Yc= a + bx	Trend value of NABIL Yc= a + bx
064/65	-2	4	5,059.60	9,939.77	-10119.2	-19879.54	6324.78+740.34*(2) = 4844.10	12321.25 +1048.70 *(2)= 10223.85
065/66	-1	1	5,948.50	10,826.38	-5948.5	-10826.38	6324.78+740.34*(1) = 5584.44	12321.25 +1048.70 *(1)= 11272.55
066/67	0	0	5,008.30	13,703.02	0	0	6324.78+740.34*(0) = 6324.78	12321.25 +1048.70 *0= 12321.25
067/68	1	1	7,743.90	13,081.21	7743.9	13081.21	6324.78+740.34*1= 7065.12	12321.25 +1048.70 *1= 13369.94
068/69	2	4	7,863.60	14,055.85	15727.2	28111.70	6324.78+740.34*2= 7805.46	12321.25 +1048.70 *2= 14418.64
Excepted year 069/70	-	-	-	-	-	-	6324.78+740.34*3= 8545.80	12321.25 +1048.70 *3= 15467.34
Excepted year 070/71	-	-	-	-	-	-	6324.78+740.34*4= 9286.14	12321.25 +1048.70 *4= 16516.04
$\sum n$= 5	-	$\sum x^2$ =10	$\sum y_1$=31623.90	$\sum y_2$=61606.23	$\sum x.y_1$ = 7403.40	$\sum x.y_2$ = 10486.99		

For EBL

$$a = \frac{\sum y_1}{n} = \frac{31623.90}{5} = 6324.78$$

For EBL

$$b = \frac{\sum x.y_1}{\sum x^2} = \frac{7403.40}{10} = 740.34$$

For NABIL

$$a = \frac{\sum y_2}{n} = \frac{61606.23}{5} = 12321.25$$

For NABIL

$$b = \frac{\sum x.y_2}{\sum x^2} = \frac{10486.99}{10} = 1048.70$$

Appendix - 25

Calculation of Trend Analysis of Net Profit of EBL & NABIL

Year	x= p-3	x^2	y_1 (EBL)	y_2(NABIL)	$x.y_1$	$x.y_2$	Trend value of EBL Yc= a + bx	Trend value of NABIL Yc= a + bx
064/65	-2	4	451.20	746.47	-902.4	-1492.94	788.72+157.14*(2)= 474.44	1190.13+220.63*(2)= 748.87
065/66	-1	1	638.70	1,031.05	-638.7	-1031.05	788.72+157.14*(1)= 631.58	1190.13+220.63*(1)= 969.50
066/67	0	0	831.80	1,139.10	0	0	788.72+157.14*(0)= 788.72	1190.13+220.63*0= 1190.13
067/68	1	1	931.30	1,337.75	931.3	1337.75	788.72+157.14*1= 945.86	1190.13+220.63*1= 1410.76
068/69	2	4	1,090.60	1,696.28	2181.2	3392.55	788.72+157.14*2= 1103.00	1190.13+220.63*2= 1631.39
Excepted year 069/70	-	-	-	-	-	-	788.72+157.14*3= 1260.14	1190.13+220.63*3= 1852.02
Excepted year 070/71	-	-	-	-	-	-	788.72+157.14*4= 1417.28	1190.13+220.63*4= 2072.65
$\sum n= 5$	-	$\sum x^2$ =10	$\sum y_1$ =3943.60	$\sum y_2$ =5950.64	$\sum x.y_1$ = 1571.40	$\sum x.y_2$ = 2206.31		

For EBL

$$a = \frac{\sum y_1}{n} = \frac{3943.60}{5} = 788.72$$

For EBL

$$b = \frac{\sum x.y_1}{\sum x^2} = \frac{1571.40}{10} = 157.14$$

For NABIL

$$a = \frac{\sum y_2}{n} = \frac{5950.64}{5} = 1190.13$$

For NABIL

$$b = \frac{\sum x.y_2}{\sum x^2} = \frac{2206.31}{10} = 220.63$$

Profile: NABIL BANK LIMITED

Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 51 points of representation across the nation and over 170 reputed correspondent banks across the globe.

Nabil, 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.

Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Bangalore India, Internet banking system and Telebanking system.

Profile: EVEREST BANK LIMITED

Catering to more than 5 lacs customers today, Everest Bank Limited (EBL) is a name you can depend on for professionalized and efficient banking services. Founded in 1994, the bank has been one of the leading banks of the country and has been catering its services to various segments of the society since then. With clients from all walks of

life, the bank has helped develop the nation corporately, agriculturally and industrially. So one can say with all earnestly that Everest Bank Limited is truly a Nepalese bank

Joint Venture Partner

Punjab National Bank (PNB), our joint venture partner (holding 20% equity in the bank) is the largest nationalized bank in India. With its presence virtually in all the important centers at India and over 6000 ATM counters, Punjab National Bank offers a wide variety of banking services which include corporate and personal banking, industrial finance, agricultural finance, financing of trade and international banking. For its excellence in banking services, it was recently awarded the "Best Bank Award 2011"amongst all banks in India by the leading corporate magazine, Business India.

Networks

Everest Bank Limited (EBL) provides customer-friendly services through its Branch Network and all it's branches are connected through Anywhere Branch Banking System (ABBS), which enables customers for operational transactions from any branches. The bank has 50 Branches, 67 ATM Counters, 5 extension counter & 20 Revenue Collection across the country making it a very efficient and accesible bank for its customers, anytime, anywhere.

Performance

Key Financial Highlights					
Particular	**Ashadh End 2065**	**Ashadh End 2066**	**Ashadh End 2067**	**Ashadh End 2068**	**Ashadh End 2069**
Total Business. (Rs in Ten Million)	4,231.54	5,720.76	6,448.87	7,278.97	8662.29
Operating Profit. (Rs in Million)	818.17	1,066.04	1,349.10	1516.69	1790.39
Dividend/Bonus Payments. (In %)					

Cash Dividend	30	30	30	50	1.58% (Tax on Bonus Share)
Bonus	20	30	30	10	30

Awards

- The bank has been conferred with "Bank of the Year 2006, Nepal" by the Banker, a publication of financial times, London.
- The bank was bestowed with the "NICCI Excellence award" by Nepal India chamber of commerce for its spectacular performance under finance sector

Pioneering achievements

- Recognizing the value of offerings a complete range of services, we have pioneered in extending various customer friendly products such as Home Loan, Education Loan, EBL Flexi Loan, EBL Property Plus (Future Lease Rental), Home Equity Loan, Vehicle Loan, Loan Against Share, Loan Against Life Insurance Policy and Loan for Professionals.
- EBL was one of the first bank 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.
- EBL has introduced branchless banking system first time in Nepal to cover unbanked sector of Nepalese society.
- EBL is first bank that has launched e-ticketing system in Nepal. EBL customer can buy yeti airlines ticket through internet.