### **CHAPTER - 1**

#### INTRODUCTION

#### 1.1 GENERAL BACKGROUND

Economic development demands transformation of savings or resources into the actual investment. It is financial funds from surplus spending units to deficit units. Capital formation is one of the important factors in economic development. The capital formation leads to increase in size of national output, income, and employment. Profit made by business community constituted the major part of saving. A key factor in the development of an economy is the mobilization of domestic resources. As intermediaries, the financial institutions help the process of resource mobilization. Financial institutions transfer the resources by mobilizing them from surplus units and in turn lend these funds to deficit units. In this way the financial institutions provide savers highly liquid, divisible assets at lower risk while the investors receive a larger pool of resources. Banking sector play an important role in the economic development of country.

The history of modern banking business in Nepal is not that long. Prior to modern banking system in Nepal, all the monetary transaction were carried out by money lenders. These indigenous money lenders were suppose to meet all the needs of the people as a result of which most of the productive sectors remained far beyond the organized banking system. In 1938 AD only Nepal Bank Ltd. Was established with 49%

ownership of public and 51% ownership of the government which primarily focused on creation of banking habit of the mass and later facilitated banking transaction of the people to greater extent. Then in 1956 AD Nepal Rastra Bank established as central bank as regulatory body. Similarly government established Nepal Industrial Development Corporation (NIDC) which worked to provide financial assistance to establish modern industries in private sectors. Later other commercial banks like Rastriya Banijya Bank established in 1966 AD with the view of providing economic welfare of the general public. Likewise Agricultural Development Bank of Nepal (ADB) was established in Government sector for providing financial assistance in agriculture sector,. Then in 1984 AD, Nepal Arab Bank Ltd (currently NABIL) the first joint venture bank started its operation to collect deposits and to fulfill growing credit requirements.

Like wise with the innovation, deregulation and globalization in banking sector many more commercial banks were established in Nepal. They proved to be valuable means in accelerating the industrial sector in Nepal by granting financial assistance and uplifting the economy. Therefore government has been introducing different policies to deve4lop the banking activities of Nepal. The effort of commercial bank is to maximize it's total net earnings (profit) by employing it's fund productively. Funds from surplus units are being transferred to deficit sectors and by doing so it has contributed in economic development of nation.

Today there exist different private sector financial institutions. Different commercial banks, insurance companies, finance companies, development banks, co-operative societies etc were established after the introduction of "Financial Sector Reform" in 1980 AD. As per the macro

economic indicators of Nepal January 2007, NRB research department statistics division, currently there are 25 commercial banks (including ADB), 78 finance companies, 58 development banks and 12 rural development banks operating under banking and financial institution ordinance 2061. Various reforms were introduced in Commercial Bank Act 2031 BS. The change in Bank Act 2031 BS encourag3ed various foreign banks and private sector to operate in the banking sector. However foreign participation in the financial sector is allowed only the joint collaboration with domestic partners. The ultimate objective of this policy is transmission of banking, managerial and technical know how in the economy. The impact of this policy has ultimately lead to existence of large number of successful joint venture commercial banks in Nepal.(Macro Economic Indicators of Nepal, January 2007).

Of 25 commercial banks two are government controlled and rest is joint venture bank. The commercial bank Act 1974 sets our regulation for licensing supervisor and cancellation of license of commercial bank. The joint venture bank currently comprises nine in number the first of which started in 1984. The Comparative growth of commercial bank till mid April 2000 is shown in table.

Table A: List of Commercial Banks of Nepal

Commercial Bank	Year of establishment
Nepal bank ltd.	1937 .A.D
Rastriya Banijya Bank	1966 A.D.
Nepal Arab Bank ltd. (NABIL)	1984 A.D
Standard Charter Bank ltd.	1987 A.D
Himalayan Bank ltd.	1993 A.D
Nepal SBI Bank ltd.	1993 A.D
Nepal Bangladesh Bank ltd.	1994 A.D
Everest Bank ltd.	1994 A.D
Bank Of Kathmandu ltd.	1995 A.D
NIC Bank ltd.	2055(B.S)
Lumbini Bank ltd	2055(B.S)
Siddhartha Bank ltd	2058(B.S)
Laxmi Bank ltd	2058(B.S)
Kumari Bank ltd	2059(B.S)
Investment Bank ltd	2060(B.S)
Agricultural Bank ltd	2024(B.S)
Nepal Credit & Commerce Bank ltd	2053(B.S)
Machapuchhre Bank ltd	2057(B.S)
Global Bank ltd	2063(B.S)
Citizens Bank Int. ltd	2064(B.S)
Prime Com. Bank ltd	2064(B.S)
Sunrise Bank ltd	2064(B.S)
Bank of Asia Nepal ltd	2064(B.S)
Development Credit Bank ltd	2057(B.S)
NNB Bank ltd	2053(B.S)

Commercial banks represent the largest group of depository institution. They banks are channels to collect scattered saving and mobilize them by investing in productive sectors. Banks today, have gained extensive importance in public. Their major function is being confined to acceptance of deposit and extending loans to productive sectors. Banks collects deposit by offering various deposit schemes with attractive interest rates. Funds collected through acceptance of deposit are being mobilized through different ways. One of the major means is lending. Lending Portfolio mainly comprise of business lending and personal lending. Business lending of a bank represents financing of vehicle (for personal and commercial purpose), housing loan, mortgage loan and various other personal loans. In pokhara, trade finance has major scope since there are very few manufacturing organizations and large number of flourished retail businesses. Due to various marketing tools for e.g. ATM there has been increase in deposits. Lending is one of the major means for the proper utilization of collected deposits. Lending covers maximum proportion in mobilization of deposit. (Banerjee and Mullainathan, 2005).

NABIL bank ltd. is the first joint venture bank in Nepal established in 12<sup>th</sup> July 1984 under technical service agreement with Dubai Bank Limited, Dubai (later acquired by Emirates Bank International Limited, Derim, Dubai). Currently, N.B. (International) Limited, Ireland is the foreign partner. At present the authorized and issued capital of the bank is Rs.500 million and 492 million respectively. The major share holders of Nabil are N.B. International Limited, Ireland (50%), financial institution (20%) and Nepalese public (30%). NABIL bank ltd. has established 28 branches in all the development region of kingdom. The direction

regarding administration and support is managed by its head office, Katmandu. NABIL bank ltd, in Pokhara was established in 1996.

NABIL bank ltd. is one of the leading and the 1<sup>st</sup> joint venture commercial bank of Nepal, which has proven of accomplishment. It is the pioneer bank to initiate customer focused and relationship marketing banking in Nepal. Recently the UK based publication of Financial Times, London magazine, "The Banker" has awarded NABIL bank ltd. The "Bank of the Year 2004" award mainly on grounds of Banking operations, Quality and Quantity, Human Resource Management, Quality of Asset and Profitability.

NABIL bank ltd. Is in business to provide a broad array of financial products and services to wide spectrum of corporate, non-corporate clientele and individuals. Providing some of the products may entail assumption of credit risk on a customer or a third party, in respect of which the bank earns income by way of interest, fee etc. it is the policy of the NABIL bank ltd. to provide financial products and services of high quality and maintain steady and reliable revenue stream. (Credit Policy Guidelines of NABIL bank ltd. 2002/03).

## 1.2 Focus of the Study

The study aims at analysis of deposit collection and mobilization of NABIL bank ltd. by using descriptive and analytical research design. The reason for selection of focus of study about NABIL bank ltd.; one of the leading joint venture commercial bank is due to its past performance and record of accomplishment. The study is concentrated on deposit volume, it's sources, volatility, trends, cost involved and sectors of deposit mobilization. Besides, trends of NRB balance of total deposits ratio, vault

to total deposits ratio and liquid funds to total deposits ratio with comparing to industrial average is also analyzed in the research. Thus, whole energy and effort concentrate on analysis of Nabil bank's deposit collection and its mobilization. The study covers the period of past seven years starting from 2058 to 2062.

#### 1.3 Statement of Problem

The major problem in almost all underdeveloped countries and Nepal is no exception, is that of capital formation and proper utilization. In such, commercial banks have to shoulder more responsibilities and act as development banks due to lack of other specialized institutions.

Availability of funds is major element that determines the loan portfolio balance and term structure of the liabilities. For commercial banks the funds are available through collection of idle funds from the public. Based on the deposit available effective decisions regarding investment are made. Deposit collected from public are mobilized in different sectors for eg: offering loans in different profitable sectors. Credit extended by commercial is related to national interest of the country. Almost every commercial bank engaged in delivering business lending products in some way or the other to obtain the best out of the business. This has ultimately increased trade business and competition among the banks which finally is benefiting the consumers. This has generated some sort of economic movement in the present adverse economic depression. With these tools banking industry are able to sustain their profitability and market share.

Under this fact, the purposed study will be reasonable and a researcher expects that the study on deposit collection and mobilization of NABIL banks ltd. will be able to solve the following research problems.

- 1. What are the current deposit collection position and its composition?
- 2. What are the trends of deposit collection in the past seven years?
- 3. What is the volume of interest payment to the depositors?
- 4. What are the sectors for mobilizing collected deposit?
- 5. What is the liquidity position of the bank?

# 1.4 Objectives of the Study

The objective of the study is to analyze the deposit collection and its mobilization of Nabil, Pokhara branch. The specific objectives are:

- 1. To analyze the current deposit collection position and its composition
- 2. To measure trend of deposit collection over the past seven years
- 3. To access the interest payment to depositors
- 4. To access the sectors for mobilizing of the collected deposit
- 5. To measure the liquidity position of the bank
- 6. To give appropriate suggestions

# 1.5 Significance of the Study

This study may provide guidelines to bank for further improvement and achievement of efficiency in deposit collection and mobilization of NABIL bank ltd. further, it can be used as reference by the researchers, and students regarding the study of deposit collection and mobilization of NABIL bank ltd. it will also be beneficial for the other financial institutions regarding proper deposit collection and its mobilizations.

# 1.6 Limitations of the Study

The study is conducted as an academic requirement for degree of master of business studies due to which it may not able to expose every aspects of the topic. The study has following limitations.

1. The study is focused only on deposits aspects (i.e its collection and utilization) of NABIL bank ltd.

- 2. Data of last seven years only will take into consideration to conduct the study.
- 3. The study principally has been based on secondary data like annual report and other publication of the bank, thus the finding and conclusion drawn from the study may not be widely generated.
- 4. Study is carried on within framework of study of deposit aspects of NABIL bank ltd. only so the study may not be able to represent whole industry.

## 1.7 Organization of the Study

This study is organized into five chapters; introduction, review of literature, research methodology, data presentation and analysis and summary, conclusions and recommendation.

Introduction chapters include the general background, focus of the study, statement of the problem, objectives of the study, importance of the study, limitations of the study and organization of the study. Similarly, the second chapter deals with review of available literature. It includes conceptual review and review of related studies. Research methodology chapter three is concerned with the methodology adopted in the research work. It consists of research design, sample and population, sources of data. Methods of analysis and financial tools to measure financial performance. In the same way, presentation and analysis of data is included in chapter four. Finally, the summary of the research report, conclusions and recommendations are given in chapter five. sources of data, methods of analysis and financial tools to measure financial performance. In the same way, presentation and analysis of data is included in chapter four. Finally, the summary of the research report, conclusions and recommendations are given in chapter five.

### **CHAPTER-2**

#### **REVIEW OF LITERATURE**

This section provides current stage of the research work and guidelines for further study and helps to avoid unnecessary duplication of research work. It highlights upon the literatures that are available in the area of deposit collection and mobilization sector and commercial banking sector. This chapter is divided into two parts – conceptual framework and review of related studies.

### 2.1 Conceptual Framework

This sub-chapter presents the theoretical aspect of the study. It includes the concept of commercial bank, functions of the commercial banks, concepts of capital, sources of capital, concept of deposit, sources of deposit and its uses.

## 2.1.1 Concept of Commercial Bank

Commercial banks are institution which deals with money and credit. It accepts deposits from the public, makes the fund available to those who need them, and helps in the remittance of money from one place to the other. Commercial banks are the most important source of institutional credit in the money market. A Commercial bank is a profit seeking business firm, dealing in money or rather dealing in claims to money. It is a financial institution that creates demand deposits, that is, deposit account which is subject to withdrawal by the owner on demand as subject to transfer to a third party by means of a cheque or exchange for bills of exchange, government bonds, the secured or unsecured promise of businessman to repay etc.

It is a financial intermediary – a sort of middleman between people with surplus funds and people in needs of funds. It accepts deposits for the purpose of lending or investment and thereby hopes to make a profit – profits which are adequate enough to enable the bank to pay the interest at the prescribed rates to its depositors, meet establishment expenses, build reserves, pay dividend to the shareholders, etc. in general, commercial banks are those financial institutions, which play the role of financial intermediary in collection and disbursement of funds from surplus unit to deficit unit. (Wisniwski, Sylvia, 226, 1999).

Summarizing the above, banks are those financial institutions whose goal is to collect the small scattered resources in one bulk and utilizing them in further productive sector and rendering other valuable services to the community at a profit.

The New Encyclopedia Britanica, USA (1991), has defined commercial bank as "Commercial bank was first used to indicate that the loans extended were short term loans to business, though later loans were extended to consumers, governments and other non business institutions as well. In general, the assets of commercial bank tend to be liquid and carry less risk than the assets held by other financial intermediaries."

#### 2.1.2 Functions of Commercial Bank

Commercial bank performs different functions such as core function and support function to the business world as well as general people. Core functions included two types of functions- fund based and non fund based functions. Similarly, support functions are those functions carried out to fulfill core functions. American Institute of Banking (1972), has fixed out four major functions of commercial bank, receiving payments, handling

payments, making loans and investment and creating money by extension of credit. Similarly, Upadhaya and Tiwari (2037) have argued that there three major functions of commercial bank. They are primary functions (accept deposits and provide loans and advances); agency functions (sales and purchase of securities, working as an agent and trustee of customer, transfer of funds and provide financial information) and general functions (safe custody of valuable assets, issue of credit instruments, dealing with foreign exchange and complication of trade information and statistics.)

## 2.1.2.1 Primary Functions

The primary functions of commercial banks are deposits providing loans and advances and creasing credits.

# i. Accepting deposits

This is the oldest function of a bank and the banker used to charge commission for keeping the money in its custody when banking was developing as an institution. Now a days, bank accepts three kinds of deposits from its customers. The first is the 'saving' deposits on which the bank pays interest relatively at low rate to the depositors who are usually small savers. Depositors are allowed to withdraw their money by cheque up to a limited amount during a week or a year. Businessmen keep their deposits in current accounts. They can withdraw any amount standing to their credit in current deposits by cheque without notice. The bank does not pay interest on such accounts but instead levies service charges to its customers. Current accounts are known as demand deposits. A bank accepts fixed or time deposits. Savers who do not need money for a stipulated period from 6 months to longer periods ranging up to 10

years or more are encouraged to keep it in fixed deposits. But there is always the maximum limit of the interest rate on fixed deposits.

#### ii. Advance and Loans

One of the primary functions of a commercial bank is to advocate loans to its customers. A bank lends a certain percentage of the cash lying in deposits at a higher interest than it pays on such deposits. This is how it earns profit and carries on its business. The bank advances loans in the following way:

<u>Cash Credit</u> The bank advances loans to businessmen against certain specified securities. The amount of the loan is credited to the current account of the borrower. In case of a new customer, a loan account for the sum is opened. The borrower can withdraw money through cheques according to his requirements but pays interest on the full amount.

<u>Call Loans</u> There are very short-term loans advanced to the bill brokers for not more than fifteen days. They are advanced against first class bills or securities. Such loans can be recalled at a very short notice. In normal times, they can also be renewed.

Overdraft A bank often permits a businessman to draw cheques for a sum greater than the balance lying in his current account. Bank provides the overdraft facility up to a specific amount to the businessman. But bank charges interest only on the overdrawn amount.

<u>Discounting Bills of Exchange</u> If a creditor holding a bill of exchange wants money immediately, the bank provides the money by discounting the bill of exchange. It deposits the amount of the bill in the current account of the bill holder after deducting its rate of interest for the period

of the loan, which is not more than 90days. when the bill of the exchange matures, the bank gets it payment from the banker of the debtor who accepted the bill.

#### iii Credit Creation

Credit creation is one of the most important functions of the commercial banks. Like other financial institutions, its aim at earning profits. For this purpose, it accepts deposits and advance loans by keeping small cash in reserve for day-to-day transactions. When a bank advances a loan, it opens an account in the name of the customer and does not pay him in cash but allows him to draw the money by cheque according to his needs, By granting a loan, the bank creates deposit

### 2.1.2.2 Agency Functions

Commercial bank performs a number of agency functions. A bank acts as an agent I of its customers in collecting and paying cheque, bills of exchange, drafts dividends etc. It also buys and sells shares, securities, debentures etc for its customers. Further, it pays subscriptions, insurance, premium, rent, electricity and water bills and other similar charges on behalf of its clients. It also acts as a trustee and executor of the property and will of its customers. Moreover the bank acts as the consultants to its clients. It also remit money from one place to another by means of cheques, drafts, wire transfer etc. For some of these services, the bank charges a normal fee while it renders others free of charge.

#### 2.1.2.3 General Functions

Besides the above noted services, the commercial bank performs a number of other general functions. It acts as the custodian of the valuables of its customers by providing those lockers where they can keep their jewelry and valuable documents. It issues various forms of credit instruments, such as cheque, drafts and traveler's cheque etc., which facilitate transactions. The bank also issues letters of credit acts as a referee to clients. It underwrites shares and debentures of companies and helps in the collection of funds from the public. Moreover, it provides statistics on the money market and business trends of the economy. A commercial bank finances foreign trade of its customers by accepting foreign bills of exchange and collecting them from the foreign banks. It also transacts other foreign exchange business-buying and selling of foreign currency.

# 2.1.3 Concept of Deposits

The bulk of resources employed by a modern bank consists of borrowed money (that is, deposits), which is lent out as profitably as is consistent with safety. Increase in deposits provides a bank with additional cash (which is an asset); the increase in cash supplements its loan able resources and permits a more than proportionate increase in its loans.

An increase in deposits may arise in two ways. (1) when a bank makes a loan, it may transfer the sum to a current account, thus directly creating a new deposit; or it may arrange a line of credit for the borrower upon which he will be permitted to draw checks, which, when deposited by third parties, likewise create new deposits. (2) an enlargement of government expenditure financed by central bank may occasion a growth

in deposits, since claims on the government that are equivalent to cash will be paid into the commercial bank as deposits. In the first instance, with the increase in the bank deposits goes a related increase in the potential liability to pay out cash; in second case, the increase in deposits with the commercial banks is accompanied by a corresponding increase in commercial bank holdings of money claims that are equivalent to cash.

Bank deposits are the large part of the "money supply". They come in different types depending on withdrawal restrictions like saving deposits, Money market deposit account (MMDA), time deposit, certificate of deposit, small-denomination time deposit, large-denomination time deposit, transaction deposit checkable (checking) deposit, demand deposit, automatic transfer service (ATS) deposit, negotiable order of withdrawal (NOW) deposit etc. in the United Sates, all of these deposits that are smaller than \$100,000 are insured by the FDIC (Federal Deposits <u>Insurance Corporation</u>). FDIC insure each depositor up to a certain amount, therefore the depositors' saving are protected even if the bank fails. This removes the incentive to withdraw deposits simply because others are withdrawing theirs. In banking, Confidence is steadier if there exists a central bank to act as a "lender of last resort". Another means of maintaining confidence employed in some countries is deposit insurance, which protects the small depositor against loss in the event of a bank failure. Such protection was the declared purpose of the "nationalization" of bank deposits in Argentina between 1946 and 1957; banks receiving deposits acted merely as agents of the government-owned and government-controlled central bank, all deposits being guaranteed by the state. (Financial Institutions Market, 2003).

## 2.1.4 Types of Deposits

'Banking' has been defined as the accepting, for the purpose of lending of investment, of deposits of money from the public, repayable on demand or otherwise and withdrawal by cheque, draft, and order or otherwise. Demand liabilities mean liabilities, which are not demand liabilities. The main categories of deposits are (i) demand deposits; (ii) saving deposits (iii) term deposits and (iv) call deposits.

## (i) Demand Deposits (Current Accounts)

Demand deposit is normally meant for corporate, embassies and foreign missions. Such deposit does not earn any interest; on the contrary, the holders of such accounts pay service charges to banks. These accounts are operated through cheques and there is no restriction on the number of transactions in a demand deposit account. Normally, businessmen hold this kind of accounts for their day to day operations. Further, the account holder can avail of overdraft facility through this type of account.

# (ii) Saving Deposits

These kinds of deposits are normally meant for individuals and non profit making entities. Such deposits earn some rate of interest although the holders of such accounts enjoy tremendous flexibility in terms of deposits is 2.0 percent in NABIL bank ltd. This type of account is preferred by individuals, who hold it basically for transaction and saving purposes. These are operated through cheques and no service charge is levied on the account holder. However, one has to maintain a stipulated minimum balance to avail the cheque book facility. Corporate entities are not allowed to open savings bank accounts.

## (iii) Term or Fixed Deposits

Term deposit is non transaction account which is closed at maturity. These kinds of deposits are repayable after the expiry of a certain period. In the case of fixed deposits the period of the deposits is usually fixed at the time of depositing the money. The fixing of the period enables the banker to invest money or otherwise employ it in business without having to keep a reserve and this is one of the reasons why fixed deposits are so popular with banks. Customers usually keep their money as fixed deposits with a view to earn interest as well as withdraw the same on the expiry of the stipulated period in case they need it either for meeting certain expenses or employing it in more profitable manner. A fixed deposit account holder can opt for premature withdrawal but with loss of interest income on his fixed deposit. The rates of interest on term deposits vary over the length of the maturity period. Consequent upon interest rate deregulation, various banks are offering term deposits with various maturity period and various interest rates. Traditional term deposit accounts are the recurring deposit accounts and plain fixed deposit accounts, which combine the features of recurring deposits, savings bank deposits and term deposits. The deposit amount, along with interest accrued, is paid on the date of maturity. Term deposit holders can avail of loans against the term deposit, subject to margin. The interest rate to be charged by the bank for this loan is higher than the interest rate offered.

# (iv) Call Deposits

Call deposit is the hybrid of current or demand deposit and saving deposits. It is normally opened by big depository customers. Interest is paid on call deposits. Withdrawal restrictions are not made in call accounts.

### (v) Margin Deposits

This deposit is non interest bearing deposits. Banks open such deposits in various forms like guarantee margin, L/C margin, employee guarantee etc.

Bank deposit accounts can be held individually or jointly. The holder of the account also enjoys the facility of nomination. The interest income from bank deposits is taxable under Income Tax Act. The prevailing tax provision on interest earned from bank is 6% on the interest income for individuals and 15% on the interest income for others. However a tax exemption is provided to the units specifically exempted by the government. Deposit received from depositors as well as the interest payable thereon shall be credited to the accounts of depositors.

Nepal Rastra Bank has allowed opening of account in different foreign currencies like US dollars, sterling pound, EURO, Japanese yen, Swiss frank, Australian dollar, Canadian dollar, Singapore dollar, Danish kroner etc. normally firms and companies in export and tourism sector can open foreign currency account in banks out of their currency earning from export and tourism sector. Opening and operation of foreign currency accounts is regulated by NRB.

#### 2.1.5 Meaning of Deposit Mobilization

Vogel (1984), Adams (1985) and others have a pointed out that a financial institutions mobilizing savings must respond to the depositors' requests for safety, efficiency and stability. In addition, it also needs to deliver the products demanded at a reasonable price. Because the roles are reversed in credit business, the institution must convince depositors that it will handle their funds with care and provide them with benefits

such as return and/or liquidity. Hence, the business of deposit taking should increase institutional efficiency and profitability and strengthen the professionalism of the governance structure by introducing greater customer-orientation.

Successful mobilization of institutional savings can only be ensured by the existence of demand-driven savings products offered by appropriate institutional structures. A broader understanding of the savings decisions of poor households has shown that appropriate supply can attract significant volumes of savings. Furthermore, a much larger number of clients can be reached through savings mobilization than through credit-granting.

Deposit mobilization especially requires more sophisticated risk and liquidity management capabilities. Lending and savings operations can produce synergies with regard to costs and gaining knowledge about clients' financial behavior. However, the maturity structure of small saving combined with the strong risk adversity of deposit-taking institutions might induce the crowding-out of small or micro borrowers. Therefore, the trade-offs between credit and savings operations must be balanced. To ensure the institutional liquidity, depository institutions try to attract savings with limited withdrawals, which is often counter to preferences. Because customer prefers liquid deposit customers' facilities, liquidity management must cope with sudden changes in depositors' liquidity requirements and frequent withdrawals. Particularly in rural areas, natural disasters may cause the massive withdrawal of deposits and induce rapid depletion of funds. Studies should be conducted on the determinants of savings behavior, the implementation of early warning systems and access to a lender of last resort.

Deposit mobilization plays a vital role for the economic development of underdeveloped and developing countries, underdeveloped developing countries. Underdeveloped countries like Nepal face major problems for economic development like low national income, low per capita income, and lack of technical know how, poverty, pressure of population growth, geographical situation etc. for the economic development of the nation these aspect are to be taken into the consideration and for this capital is required. Capital formation is possible through collection of scattered unproductive and small savings from the people. Small deposits from individual customer are often the largest segment of these deposits and represent the most diversified and stable funding source. Mobilization of internal resources i.e deposit has greater significance for external source is not dependable to meet the required capital. So deposit mobilization is the dependable source for formation of required capital. Deposit mobilization helps in circulation of idle money. The meaning of deposit mobilization is to convert idle saving into active saving. Banks to provide incentives to the depositors and thus encourage the depositors to create habit of saving. The scattered deposits collected are further invested in productive sectors which increase national productivity. Further from the investment there will be generation of income to the investors. Thus there is circulation of idle money which ultimately leads to the economic development of the nation.

Commercial banks are considered to be the best in deposit mobilization. They collect savings/deposits scattered inform of saving deposits, current deposit and fixed deposits through their out spread branches over the country. Effective deposit mobilization by commercial banks help in acquisition of surplus capital from capital hoarding sectors which are further invested in deprive sectors. This helps to fulfill the gap between

these two sectors and maintain proper co-ordination as the surplus sectors will earn interest income in their deposits and deprive sectors will meet their capital requirement through loan and advances.

### 2.1.6 Uses of Deposits

The scattered and idle savings of unproductive sectors from each individual are accumulated in organized way by the banks financial institutions inform of deposits. Commercial bank collects deposits of public in different forms of deposits like saving deposit, current deposit, fixed deposits etc. deposits are the primary source of fund for the commercial banks. Deposits collected are to be well managed since it is the liability of the bank and there is involvement of cost in form of interest earned to be paid to the depositors. 'Banking' is considered as the accepting deposits, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise and withdrawal by cheque, draft, and order or otherwise. Demand liabilities, means liabilities which must be met on demand, and time liabilities mean liabilities, which are not demand liabilities. Banks do prime function by (a) mobilizing liquid deposits from the public, (b) lending the liquid deposits to borrowers who, in turn, invest the money in rather illiquid assets and (c) providing the payments system, which is the basic lubricant for smooth functioning of the economic system. The first two functions represent a significant potential source of bank failures. The liquid bank deposits, along with the illiquid loans, make bank indifferently vulnerable to depositor runs or panic withdrawal of deposits. Thus deposits collected are used for different purposes which are as mentioned below which will yield income as well through productive investments. (Winsniwski, Sylvia, 242, 1999).

## 2.1.6.1 Cash Holding/ Cash at Vault

Commercial banks are to be required to hold certain minimum cash position in their vault in order to maintain its liquidity. To ensure that funds are available to meet the liquidity needs at lower cost, the treasury manager of the banks and FIs must manage its money position to comply with the reserve requirements as well as managing its liquid sources. Minimum cash position requirement is being defined by the central bank that is NRB.

A cash position refers to the amount in the process of collection and currency and demand balances due from other banks and the central bank. Numerous transactions that cause in an inflow or outflow of cash during a day continually change the cash position of the banks and FIs. Because cash yields no income, cash holdings must be limited to a minimum. The treasury/ fund manager may invest any access cash or may acquire as small cash sources from inter bank loans or from discount window at the central bank.

Once the liquidity needs of the banks and FIs has been estimated, the treasury manager must decide how these needs are to be funded. The banks and FIs must choose between two general liquidity management strategies, namely, assets management and liquidity management. In assets management assets are soled to meet liquidity needs. In the liability management, money is borrowed to meet liquidity needs. A combination of these strategies is normally employed. The following guidelines must be kept in mind by the treasury manager while managing the liquidity position of the banks and FIs:

- 1. The treasury manager must co-ordinate and keeps track of the activities and strategies of the funds-raising and funds-using departments and the banks and FIs.
- 2. The treasury managers should know the timing of large withdrawals from big credit clients or depositors in order to plan.
- 3. The priorities and objectives of liquidity management should be clear and properly communicated.
- 4. The needs and decision must be evaluated on a continuous basis to invest access liquidity and avoid liquidity shortages.

A financial institutions must always be liquid to meet depositors' and creditors' demand in order to maintain public confidence. Their needs to be effective assets and liability and management system to minimize maturity mismatches between assets and liabilities and to optimize returns.

# 2.1.6.2 NRB Balance (CRR)

The portion (expressed as a percent) of depositors' balances bank must have on hand as cash. This is a requirement determined by the country's central bank, which in the U.S is the <u>Federal Reserve</u>. The reserve ratio affects the money supply in a country. This is also referred as the "cash reserve ratio" (CRR). For example, if the reserve ratio in the U.S is determined by the Fed to be 11%, this means all <u>bank</u> must have 11% of depositors money on reserve on the bank. So, if a bank has deposits of \$1 billion, it is required to have 110 million on reserve.

Liquid asserts as defined by commercial bank acts includes cash involved, Balance held in Current Account with other banks, Balance held with Nepal Rastra Bank and other as specified by NRB. In order to

ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at anytime to inject the confidence in depositors regarding the safety of their deposited funds arrangement for requirement of cash reserve ratio is well defined by NRB. Only the balance held in ordinary account with NRB shall be eligible for inclusion in cash reserve. Balance held with NRB in special account for special purpose and foreign currency accounts shall not be included for the purpose. Likewise total deposit of the bank means current, saving and fixed deposit accounts as well as deposit and certificate of deposit. For the purpose of deposit held in convertible foreign currency, employ guarantee amount and margin account should not be included.

## NRB Directives related to Liquidity

NRB had given the instruction to the commercials banks since 2023 B.S. to deposit the amount the amount ratio of 8% from their deposit liability. In the beginning of 2047 B.S. the increase in the quantity of internal credit was very high and began to show negative effect on economy. The deflation grew up to 21%. So, high liquidity appeared in economy, hence, control of the negative effect that may fall on economy to improve the growth of price rate and improvement of the position of loss of running account and control the capacity of flowing the loan of the commercial banks, was necessary and NRB second time prescribed liquidity ratio. It made compulsory to invest 24% the amount of the bank in H.M.G. Bond, treasury bills, or NRB Bonds. With some signs of improvement of economy, the investment ratio was revised accordingly, since Poush 2049 B.S. Since the beginning of 2050 B.S., the economy showed improvement and the rate of deflation fell down to 8.8%. With this, the provision of investing in the government securities is removed.

With effective from, 2054, Chaitra 31<sup>st</sup>, commercial banks were required to maintain liquidity of 8% of the total Current & Saving deposits and 6% of the fixed deposits, in addition to 3% of total deposit in cash at vault. Since then the NRB reserve requirement has been changed. To ensure adequate liquidity, following arrangements have been put into force by NRB effective from 22<sup>nd</sup> July 2002 (2059/04/06).

### Prevailing directives as to Cash Reserve Ratio Requirement

a)	Balance at NRB	1.	7% of Current & Savings deposits liabilities
		2.	4.5% of Fixed deposit liabilities.
b)	Cash at Vault	2%	of Total deposit liabilities

The compliance of liquidity maintenance, the NRB applies following procedures:

- a) The CRR maintained by the banks will be examined on the basis of average weekly balance of deposit liability immediately preceding 4<sup>th</sup> week. A week shall comprise from each Sunday through Saturday.
- b) CRR will not be calculated for the week which is fully off i.e. full holidays for the week.
- c) Weekly statement of deposit balances to be submitted to NRB inspection and supervision department within 15 days from the date of end of the week for examining the balance held with NRB against the average weekly balance of deposit liabilities of preceding 4th week.
- d) Weekly average of Monday to Friday of total deposit, cash in vault and NRB balance is calculated by dividing by 5.
- e) In case of any holiday befalling in the week the balance of preceding day shall be considered as the balance of the day.

Penalty will be levied for failing to maintain the adequate liquidity as above under any of the following conditions.

- a) In the case of shortfall in maintenance of NRB balance but cash at vault is exactly 2%.
- b) In case of shortfall in NRB balance but cash at vault is more than 2% then up to 1% excess cash of total deposit is added in the balance with NRB then on such shortfall account (after adding up to 1% excess)
- c) In case of shortfall in cash in vault as well as shortfall in NRB balance then on total shortfall amount.

The applicable rate of penalty on shortfall amount is as follows:

First time shortfall = Equivalent to bank rate/highest refinance rate

Second time shortfall = Equivalent to 2 times of bank rate

Third time shortfall and all subsequent shortfalls = Equivalent to 3 times of bank rate.

For the purpose of application of bank rate, the highest refinance rate as prescribed by NRB shall be considered as the bank rate and penalty on shortfall amount shall be calculated at such highest refinance rate.

Penalty at existing rate on shortfall amount shall be on weekly basis. Such shortfall amount shall be on weekly basis. Such shortfall shall be multiplied by the % of bank rate and divided by 52, NRB bank Act 2058 came into effect from January 30, 2002 and section 47 of the Act has provided for imposition of penalty as specified by NRB.

As per the macro economic indicators of Nepal January 2007, NRB research department statistics division, CRR over the years has been presented as below.

(Percent Per Annum)	Mid-July							
(1 creent 1 ci /Aintuin)	2003	2004	2005	2006	2007	2008		
Cash Reserve Ratio (CRR)	6.0	6.0	5.0	5.0	5	5.5		
With NRB								
Cash in Vault	2.0				-	-		
CRR is applied in commercial banks' total domestic deposit.								

Maintenance of CRR as per NRB directives is to maintain the liquidity of the commercial banks. In evaluating the adequacy of a FI's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile. In general, funds management practices should ensure that an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner and to fulfill the legitimate banking needs of its community. Practices should reflect the ability of the institution to manage unplanned changes in funding sources, as well as react to changes in market conditions that affect the ability to quickly liquidate assets with minimal loss. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue reliance on funding sources that may not be available in times of financial stress or adverse changes in market conditions.

Controlling Liquidity Risk To assess how well the banks and FIs are managing its liquidity position, the management should be cautious on

the following signals from the marketplace that indicate a pending liquidity problem:

- Public confidence in terms of withdrawal of deposits from the banks and FIs.
   Share price behavior, falling share prices indicate perceived liquidity problems.
   Risk premiums on money market borrowings.
   Losses because of the hasty sale of assets for liquidity purposes.
- Inability to meet the demands of new credits customers.
- More frequent and larger borrowings from the central bank.

Considering the aforementioned technique, the treasury manager must also consider the purposes of the liquidity need, the length of time for which funds are needed, the access to liability markets, the costs and characteristics of various liquidity sources and interest rate forecast. It is revealed that the large banks have better access to liability liquidity sources due to the better quality assets and a broader capital base. The small banks have to rely more on assets for liquidity. Thus, an effective liquidity management is essential to reduce costs.

The variation of minimum cash reserve requirements as a direct means of quantitative credit control has become increasingly general in recent years. The practice has largely derived from experience in the United States. In its origin the U.S. insistence on stated minimum reserve requirements for commercial banks was simply a means of prescribing minimum standards of sound behavior. Only later did such ratios come to be seen as a useful supplementary quantitative credit control. (Federal Reserve Bank of New York, January 3, 1997).

#### Loan & Advances

Deposits accepted by commercial banks are to be mobilized and so loan and advances is also one of the sectors for utilizing the deposits collected. The deposit of public collected are granted in form of loan & advances and the accepted deposits are released as per the regulations of the bank i.e. either at demand or on expiry of certain period. Loans are normally offered in areas that yield productive results. NABIL bank Ltd. does offer variety of loan & advance.

# **Working Capital Loan**

NABIL bank ltd. offers wide range of flexible products like overdraft, demand loan, time loan, short term loan, import loan etc that can accommodate all specific needs for the customers' working capital requirements, whether the need arises for maintaining primary assets inventory, meeting operating costs, financing receivables, importing goods etc depending on the nature of specific business and trade cycle. Overdraft/Short term loans finances day-to-day business activities. Basically, this loan helps to build your inventory and receivables to a desired level, against which the loan will be disbursed.

# **Fixed Capital Loan**

NABIL bank ltd. finances the requirements of customer if they are looking to finance their projects or acquire fixed assets. Generally, this is a long term loan for acquiring or purchasing machinery, equipment, land and building. The tenure of repayment is cash flow based.

## **Import Loan**

For financing international and local trade transactions of customers through letter of credit, they may get our finance to import goods into the form of trust receipt or time loan, bank's acceptance etc. NABIL bank ltd. facilitates to import using its extensive banking network around the globe.

Documentary Credit (DC), popularly known as letter of credit is the safest and convenient means of paying for exports among all other existing methods of payment. It is widely used to effect payments in domestic and international trade. A written undertaking is issued by a bank (usually referred to as the issuing bank) on the instructions of the buyer of goods to the seller. The payment is made under conditions stated in the undertaking. Payments are always up to a stated limit and against stipulated documents. As per the definition of International Chamber of Commerce (ICC) "documentary credit is any arrangement however named or described whereby a bank, (the issuing bank) acting at the request and in accordance with the instructions of a customer (the applicant), is to make payment to or to the order of a third party (the beneficiary) or is to pay, accept or negotiate bill of exchange (drafts) drawn by the beneficiary, or authorize such payments to be made or such drafts to be paid, accepted or negotiated by a other bank against stipulated documents in compliance with stipulated terms and conditions." NABIL team at trade operations - import is dedicated for a quality customer service with a swift and reliable output. It understands customers' requirement and are also are equally concerned for the risks to which their customers are exposed while doing their import transactions. Therefore the team will not only process your requests but will also provide you with important information useful or your business.

## **Export Loan**

Different products to finance on funding requirement for completion of various stages of export processes such as pre-shipment loan, post-export loan (post-shipment loan), negotiation / documentary bill purchase etc can also be done by NABIL bank ltd. Such credit facility can be availed in foreign currency as well as local currency.

To facilitate the needs and requirements of exporters, NABIL team at trade operations - export is committed for delivering unparalleled processing and advisory services. NABIL bank ltd. is committed to help customer realize that your export proceeds at the earliest possible through our correspondent banks.

## **Project Finance**

For any feasible project, committed to take it up for funding from fixed capital to working capital loan - right from the establishment stage which may include financial services like letter of credit and guarantee are also offered by NABIL bank ltd. Medium and long term loan products having flexible characteristics in terms of time period, installment etc, depending on the project cash flow and borrowers' repayment ability are offered for creating fixed and movable assets required for projects under consideration.

# **Consortium/Syndication Loan**

With the expertise in diverse field of business NABIL bank ltd. is capable of arranging consortium finance/loan syndications for large projects.

#### **Hire Purchase Loan**

NABIL bank ltd. offers hire purchase loan for customer committed to purchase of vehicles - be it for personal or commercial purpose. The hire purchase loan product

## **Housing Loan**

NABIL bank ltd. is committed to provide finance for purchase or construction of land and house to have a shelter of one's dream with attractive features available beyond market offerings at competitive interest rates and extended loan tenures, with flexible repayment and partial payment features.

#### Mortgage Loan

NABIL mortgage loan product provides hassle free finance facilities for individuals and corporate bodies to meet their various needs like development of commercial complexes, acquisition of residential complexes, commercial properties, repairs and renovation of residential or commercial property, or to meet requirements etc. by simply mortgaging their idle properties and availing of needed cash flow.

Within the scope of above-mentioned products, NABIL bank ltd. can also tailor different products and facilities in commensurate to your business needs.

#### **Fixed Assets**

Fixed assets are produced assets that are used repeatedly, or continuously, in processes of production for an extended period of time. They consist of <u>equipment and software</u> and <u>structures</u> (including, by

convention, owner-occupied housing), but exclude consumer durables. All assets or long term nature (fixed) owned by the bank is accounted under this head and exhibited in the balance sheet at written down value after deducting the depreciation from the total cost. Amount of investment in fixed assets refers to the volume of activities in construction and purchases of fixed assets in monetary terms. It is a comprehensive indicator which shows the size, pace, proportional relations and use orientation of the investment in fixed assets. By means of construction and purchase of fixed assets, more advanced technologies and equipment are adopted in the national economy, and new sectors are established, which promote the adjustment of economic structure and the regional distribution of productive forces and enhance the economic strengths so as to provide the material conditions for improving people's livelihood.

Exhibition of the expenses incurred on capital construction (which is subject to capitalization on completion) by including in the statement of fixed assets would help disclose the amount of fixed assets in realistic manner.

Fixed assets of bank normally includes land and building, vehicles, machinery, office equipments and others like lease hold assets. Capital construction expenses include payment made in respect of building construction work in progress or work in progress in respect of installation of furniture in the building. However advance payment made against supply of fixed assets shall not be included under this head.

It has been general practice to charge off in full the amount of low-cost, frequently used, small durable equipments and capital goods. The basic reason in doing so is to avoid trouble and complications in providing depreciation, which otherwise result in capitalization. hence, bank management has adopted a policy as not to capitalize the amount of equipment or merchandise costing up to certain amount. The same shall be disclosed in accounting practice.

Bank can adopt any depreciation policy that conforms to generally accepted accounting principles. However disclosure in respect of policy adopted shall be provided. The bank management shall have the liberty to determine the rates of depreciation. In respect to rate of depreciation, Company Act, 2053 has provided that all companies shall adhered to the depreciation rate as per accounting policies relating to profit and loss account under section 84 of the said Act.

#### **Investments**

A commercial bank i an institution that operates for profits. Like other industrial or commercial enterprise, a bank too, seeks to earn maximum income through the suitable employment of its resources. It is a financial intermediary - a sort of a middleman between people with surplus funds and people in need of funds. It accepts deposits for the purpose of lending or investment and thereby hopes to make a profit - profits which are adequate enough to enable the bank to pay interest at the prescribed rates to its depositors, meet establishment expenses, build reserves, pay dividend to the shareholders, etc. In general, commercial banks are those FIs, which play the role of financial intermediary in collection and disbursement of funds from surplus unit to deficit unit.

Investment of commercial banks can be in form of government securities (treasury bills, development bond, national saving bond), NRB bonds, foreign government securities, shares, debentures and bonds, and other investments (certificate of deposit, mutual fund, local bank, foreign bank etc).

A government security has the following features:

- The face value of all the securities is Rs.100.
- Interest is paid on a semi-annual basis i.e. every 6 months i.e. A security with a coupon of 7.40% will draw an interest payment of Rs.3.70 every six months.
- Accrued Interest is always calculated on a 30/360-day count.

It made compulsory to invest 24 percent the amount of the total deposit of the commercial bank in HMG Bond, treasury bills, or NRB Bonds. With some signs of improvement of economy, the investment ratio was revised accordingly, since Poush 2049 B.S., Since the beginning of 2050 B.S., the economy showed improvement and the rate of deflation fell down to 8.8%. With this, the provision of investing in the government securities was removed.

Investment other than in government securities, foreign government securities, NRB bonds. shares. debentures and bonds shall be included in the other investments head. The likely items to be included in this head are:

a) Interest bearing investment/placements made with other local or foreign bank with maturity period of more than 7 days.

b) Investment made by the bank at of the employees related funds e.g. provident fund, pension and gratuity fund, welfare fund (other than reserve) etc.

The price of a government security in the markets is determined by the forces of demand and supply, as is the case in any market. The price of a Government Security in the marketplace also depends on a number of other factors and will fluctuate according to changes in

- Economic conditions.General money market conditions including the position of money supply, in the economy.
- Interest rates prevalent in the market and the rates of new issues.
- Credit quality of the issuer.

#### **NRB Policy relating to Investments**

Investment held for trading purpose and other purposes shall be shown separately. Investment in shares, debentures and government securities shall be valued at the lower of the cost or market price and is disclosed in the accounting policies. In case of shares, debentures and other securities listed in the stock exchange the prices fluctuate and accordingly with a view to exhibit the balance sheet in true and fair manner, where market value of shares, debentures and securities are lower than the cost price appropriate provisioning against such possible loss has to be made. Such possible loss amount shall be deducted from the total cost of investment and only the net amount shall be exhibited in the balance sheet. Under "Investment", unlisted securities shall be valued at cost and such fact shall be disclosed in accounting policies.

#### **Assets & Liabilities Management (ALM)**

The inherent uncertainty of their cash flows, cost of funds and return on investments has prompted banks to seek out greater efficient in the management of their assets and liabilities. This need has led to studies concerned with how to structure a bank's assets and liabilities to make optimal trade offs among risk, return and liquidity. These studies focus on determining how funds should be used in various economic scenarios. Important factors in these decisions include: balancing of anticipated sources and uses of funds to meet liquidity and capital adequacy constraints while concurrently maximizing profitability.

Current research has stressed two approaches. The first, based on Markowitz's (1959) theory of portfolio selection, assumes that returns are normally distributed and that the bank manager utilizes risk-averse utility functions. The value of an asset then depends not only on the expectation and variance of its return but also on the covariance of it's return with the returns of all other existing and potential investments. The second approach assumes that a bank seeks to maximize its future stream of profits or expected profits subject to portfolio mix constraints.

The concept of asset & liabilities management (ALM) evolved since the early 1980's. It was pioneered by financial institutions, but now corporations also apply ALM techniques. Traditionally, banks and insurance companies used accrual accounting for essentially all their assets and liabilities. They would take on liabilities, such as deposits, life insurance policies or annuities. They would invest the proceeds from these liabilities in assets such as loans, bonds or real estate. All assets and liabilities were held at book value. Doing so disguised possible risks arising from how the assets and liabilities were structured. In managing

its assets and liabilities in light of uncertainties in cash flows, cost of funds and return on investments, a bank must determine its optimal trade-off between risk, return and liquidity. (Saunders, Anthony, & Cornett, Marcia Million, 2004)

Things started to change in the 1970s, which ushered in a period of volatile interest rates that continued into the early 1980s. US regulation, which had capped the interest rates that banks could pay depositors, was abandoned to stem a migration overseas of the market for USD deposits. Managers of many firms, who were accustomed to thinking in terms of accrual accounting, were slow to recognize the emerging risk. Some firms suffered staggering losses. Because the firms used accrual accounting, the result was not so much bankruptcies as crippled balance sheets. Firms gradually accrued the losses over the subsequent 5 or 10 years. Accrual accounting could disguise the problem by deferring losses into the future, but it could not solve the problem. Firms responded by forming 'asset-; liability management (ALM departments to assess asset-liability risk. They established ALM committees comprised of senior managers to address the risk.

Increasingly, managers of financial firms focused on asset-liability risk. The problem was not that the value of assets might fall or that the value of liabilities might rise. It was that capital might be depleted by narrowing of the difference between assets and liabilities-that the values of assets and liabilities might fail to move in tandem. Asset-liability risk is a <u>leveraged</u> form of risk. The capital of most financial institutions is small relative to the firm's assets or liabilities, so small percentage changes in assets or liabilities can translate into large percentage changes in capital.

Techniques for assessing asset-liability risk came to include gap analysis and duration analysis. These facilitated techniques of gap management and duration matching of assets and liabilities. Both approaches worked well if assets and liabilities comprised fixed cash flows. Options, such as those embedded in mortgages or callable debt, posed problems that gap analysis could not address. Duration analysis could address these in theory, but implementing sufficiently sophisticated duration measures was problematic. Accordingly, banks and insurance companies also performed scenario analysis.

With scenario analysis, several interest rate scenarios would be specified for the next 5 or 10 years. These might specify declining rates, rising rates, a gradual decrease in rates followed by a sudden rise, etc. Scenarios might specify the behavior of the entire yield curve, so there could be scenarios with flattening yield curves, inverted yield curves, etc. Ten or twenty scenarios might be specified in all. Next, assumptions would be made about the performance of assets and liabilities under each scenario. Assumptions might include prepayment rates on mortgages or surrender rates on insurance products. Assumptions might also be made about the firm's performance--the rates at which new business would be acquired for various products. Based upon these assumptions, the performance of the firm's balance sheet could be projected under each scenario. If projected performance was poor under specific scenarios, the ALM committee might adjust assets or liabilities to address the indicated exposure. A shortcoming of scenario analysis is the fact that it is highly dependent on the choice of scenarios. It also requires that many assumptions be made about how specific assets or liabilities will perform under specific scenarios.

In a sense, ALM was a substitute for market-value accounting in a context of accrual accounting. It was a necessary substitute because many of the assets and liabilities of financial institutions could not--and still cannot--be marked to market. This spirit of market-value accounting was not a complete solution. A firm can earn significant mark-to-market profits but go bankrupt due to inadequate cash flow. Some techniques of ALM--such as duration analysis--do not address <u>liquidity</u> issues at all. Others are compatible with cash-flow analysis. With minimal modification, a gap analysis can be used for cash flow analysis. Scenario analysis can easily be used to assess <u>liquidity risk</u>.

Firms recognized a potential for liquidity risks to be overlooked in ALM analyses. They also recognized that many of the tools used by ALM departments could easily be applied to assess liquidity risk. Accordingly, the assessment and management of liquidity risk became a second function of ALM departments and ALM committees. Today, liquidity risk management is generally considered a part of ALM.

The scope of ALM activities has widened. Today, ALM departments are addressing (non-trading) foreign exchange risks and other risks. Also, ALM has extended to non-financial firms. Corporations have adopted techniques of ALM to address interest-rate exposures, liquidity risk and foreign exchange risk. They are using related techniques to address commodities risks. For example, airlines' hedging of fuel prices or manufacturers' hedging of steel prices are often presented as ALM. (Saunders, Anthony, & Cornett, Marcia Million, 2004)

## Management of Assets & Liabilities as per Nepal Rastra Bank Directives

Within 90 days from the date of receipt of directives through an inspection report, the bank shall amend its asset/liabilities management policies and procedures for the maintenance of adequate liability position and shall submit to NRB, inspection and supervision department containing the following. While amending the policies and procedures special attention to be provided to the following.

- 1. The cost and use of borrowed funds.
- 2. The volume of liquid assets required to provide for unanticipated needs.
- 3. The use of short term financial resources to provide for potential fluctuation in deposits in order to assist in providing adequate liquidity.
- 4. The volume of loan and off balance sheet transaction commitments and ensuring match with funding sources.
- 5. Arrangement as to submitting regular reports on management of account by bank management to the BOD.
- 6. Regulation relating to timeframe for implementation of regulatory directives issued in connection with inspection and supervision of banks.

## **Review of Related Studies and Papers**

This sub-section presents review of articles and review of dissertations.

#### 2.2.1 Review of Articles

Different research works are carried out by different scholars and those issues are reviewed in this section, which are related with the area of the study. Saving requires more sophisticated risk and liquidity management capabilities. Lending and savings operations can produce synergies with regard to costs and gaining knowledge about clients' financial behavior. However, the maturity of savings combined with the strong risk adversity of deposit-taking financial institutions might induce the crowding-out of small borrowers. Therefore, the trade-offs between credit and savings operations must be balanced.

Pradhan (1996) presented a short glimpse on investment in different sectors, its problem and prospects, through his article "Deposit Mobilization, its Problem and Prospects." The article expressed that deposit is the life blood or any financial institutions, be it commercial bank, finance company, co-operative or non government organization. Further added, in consider4ation of 10 commercial banks and nearly three dozen of finance companies, the latest figure does produce a strong feeling that a serious review must be made of problems and prospects of deposit sector. Except few joint venture banks, other organizations rely heavily on the business deposit receiving and credit disbursement. In the light of this, Pradhan has pointed out following problems of deposit mobilization in Nepalese perspective:

- 1. Due to the lesser office hours of banking system people prefer for holding the cash in the personal possession.
- 2. Unavailability of the institutional services in the rular areas.
- 3. No more mobilization and improvement of the employment of deposits in the loan sectors.

4. Due to the lack of education most of Nepalese people do not go for saving in institutional manner. However, they are very much used of saving, be it in the form of cash, ornaments or kind. Their reluctance to deal with institutional system are governed by their lower lever of understanding about financial organizations, process requirements, office hours withdrawal system, availability of depositing facilities and so on.

The study mentioned, deposit mobilization carried out effectively is in the in the interest of depositors, society, financial sector and the nation. Lower level of deposit raising allows squeezed level of loan delivery leaving more room to informal sector. That is why higher priority to deposit mobilization has all the relevance.

Bajracharya (1990) in his article, "Monetary Policy & Deposit Mobilization in Nepal" has stated that mobilization of domestic savings is one of the prime objectives of the monetary policy in Nepal, commercial banks and active financial intermediary for generating resources in the form of deposit of private sector and providing credits to investor in different sectors of the economy.

Thapa (1994) has explained his view that the commercial banks including foreign joint venture banks seem to be doing pretty well in mobilizing deposits. Likewise loans and advances of these banks are also increasing. But compared to the high credit needs particularly by the new emerging industries, the banks still seem to lack adequate funds. The banks are increasing their lending to non traditional sectors along with traditional sectors.

Vogel (1984), Adams (1985) and others have pointed out that a financial institution mobilizing savings must respond to the depositors' requests for safety, efficiency and stability. In addition, the financial institution needs to deliver the products demanded at a reasonable price. Because the roles are reversed in the credit business, the institution must convince depositors that it will handle their funds with care and provide them with benefits such as return and/or liquidity. Hence, the business of deposit taking should increase institutional efficiency and profitability and strengthen the professionalism of the governance structure by introducing greater customer-orientation.

Burkett (1986) pointed out that Interest rate regulation has proved to be a significant disincentive for savings mobilization. A policy of adequate real interest rates on deposits is "inconsistent with policies of low-interest-rate lending." If interest rate ceilings exist for loans and deposits, the financial spread to cover costs shrinks and thus often makes savings mobilization too costly. Even if official deposit interest rate ceilings do not exist, MFIs must fix them at very low levels to cover their costs when loan interest rate ceilings exist. This often results in negative real interest, which represent strong disincentives for depositors to save in financial institutions. Low-interest refinancing opportunities such as do not quasi-equity and soft loans or cheap rediscount facilities at the central bank also make deposit-taking a costly, and thus unattractive, alternative. Further to this, minimum reserve requirements may significantly contribute to the cost of savings mobilization by freezing a portion of the capital-earning capacity at no or very low interest.

Jackson (1975) conducted a study on commercial bank regulation structure and performance. The study was carried out to identify the determinants of commercial banks allocation efficiency. Both theoretical and empirical microeconomic analysis has applied to examine the competitive effects of banking influences. In this paper, the nature of banking was examined, showing that banks are essentially financial intermediaries that are engaged in greater competition than is commonly believed. Many theories of the firm as a bank are presented emphasizing efficiency-distorting forces such as liquidity provisions. Almarin Phillip's model of complex interaction between banking firms and other influences on observed performance was used to summarize banking theories. For the empirical analysis purpose, data were collected by covering 1644 banks over the periods 1969-1971. Regression analysis was used to measure the relationship among variables. As a conclusion, the study showed that, the relatively "desirable" banking performance is associated with several traits including bank asset size, non-bank competition, low cash holdings, low labor cost, state non member basic status, multi-bank company legislation, national bank status, low time deposits and low equity capitalization. Demand levels and temporal variations also significantly affect the banking performance. Furthermore, the study showed that the commercial bank regulation, structure and performance are interrelated with each other.

Kashyap, Rajan and Stein (2002) present a model in which a risk-management motive explains the combination of transactions deposits and loan commitments: as long as the demand for liquidity from depositors through the checking account is not highly correlated with liquidity demands from borrowers, an intermediary will be able to reduce its need to hold cash by serving both customers. Thus, their model yields

a diversification synergy between demand deposits (or transactions deposits more generally) and loan commitments. As evidence, they show that banks offering more transaction deposits (as a percentage of total deposits) tend also to make more loan commitments (also scaled appropriately). The correlation is robust across all size categories of banks.

#### 2.2.2 Review of Dissertations

Large numbers of research on were conducted by different scholars relating the varied aspects especially focused on the financial performance of the financial institutions. This chapter is confined to the review of dissertations submitted by researchers which has relevance in this research and has supported it as well.

Sharma (2005) conducted a study on capital structure of selected commercial banks in Nepal. The objective of the study was to evaluate the capital structure position of the commercial banks i.e. total debt & equity capital. The study has taken past seven years of data i.e. of FYs 2001/02 to 2007/08 BS. The financial tools used for computing the capital structure position were -- capital adequacy ratio, core capital adequacy ratio, supplementary capital ratio, total debt to equity ratio and interest coverage ratio. The researcher in his research observed that debt to equity ratio in commercial banks of Nepal was high, as the banks were using higher proportion to total debt in their total financing. He also concluded that banks being highly levered are taking advantage of leverage by owing total assets. However commercial banks in Nepal have adequate capital and are sufficient to meet the banking operation as per NRB standard.

Acharya (2002) performs a study on investment and deposit pattern of joint venture banks in Nepal. The objective of this study was to carry out the comparative analysis and evaluation of deposit collection and investment of Nepal Bangladesh Bank Ltd. (NBB) and Himalayan Bank Ltd. (HBL). This study has covered the time span of FYs 1995/96 to 1999/2000. In this study, he has used financial ratios viz. liquidity, profitability; turnover, statistical tools viz. Karl Pearson's correlation coefficient, coefficient of variation and simple average. The researcher found that average fixed deposit to total deposit of NBB was found to be greater than average ratio of HBL. But the average ratio with respect to short term loan to total deposit of HBL was greater than of NBB. In regard to investment in government securities HBL proved to be better than NBB during the study period. So on the whole HBL was superior to NBB with respect to total investment to total deposit ratio.

K.C. (1992) has conducted study on "Investment Policy of NABIL bank Ltd. in comparison to Nepal Bangladesh Bank Ltd." The researcher's main objective of the study was to evaluate the liquidity, assets management efficiency, profitability, non performing assets and investment portfolio of both the banks. He has analyzed the fund mobilization and investment policy of NABIL and NB banks. Through research the researcher found that the liquidity position of NABIL s comparatively not better than that of NB bank. The liquidity ratios are moderately fluctuating which means the bank has not properly formulated consistent liquidity policy. As per the study, NABIL is slightly weaker in mobilizing its deposits in different sectors in comparison NB bank. The researcher at the last suggested diversifying the investment policy on different areas having more yields. He further recommended exploring new deposit sources by means of innovative approach.

Shrestha (2006) performed research on Investment Portfolio of Pokhara Finance Ltd. In her study, Shrestha has analyzed deposit mobilization and investment trends in different sectors made by the company. Six years of data from 2055 BS to 2061 BS has been taken into consideration for conducting the research. The researcher found that the said company had his liquidity during the period and has focused more on loan and advances than on other government securities. From the study she has concluded that Pokhara Finance has to relate to maintenance of appropriate risk return trade off between credit outflow by the way of loans and investments and strict monitoring of it's repayment to ensure timely cash inflows. She further recommended launching demand driven or customer oriented schemes so as to initiate depositors and to focus on diversification of investments.

Bhandari (2006) did study of evaluating financial performance of Himalayan Bank in the framework of CAMEL. Datas from 1999 to year 2004 A.D. were taken into consideration for the research work. The analysis revealed adequate capital of the bank. The non-performing loans though in decreasing trend is still a matter of concern. The bank is still with better ROE however it is in decreasing trend. The decreasing trend of net interest margin shows management slack monitoring over the bank's earning assets. The liquid funds to total deposit ratio is above the industrial average ratio. NRB balance and cash in vault to total deposit ratios are below the industrial average ratio during the study period. The bank is recommended to lower the proportion of loan loss provision by increasing the quality of assets by strengthening the credit appraisal and follow-up measures. He further suggests to increase its yield as its net profit. The decreasing trend of profit of the bank may loose the confidence of the shareholders and other stakeholders.

Shahi (1999) in his study entitled "Investment Policy of Commercial banks in Nepal" concluded that, commercial banks are the prime mover of the economic development of the nation. He has studied the investment policy of Nepal Bank Ltd. (NBL) in comparison to other joint ventures banks of Nepal. He recommended NBL to have control over its cost of funding. He found that NBL weak in collecting cheaper funds i.e. current and saving deposit and also pays higher interest on deposit than that of joint venture banks. Higher administrative expenses due to over staffing, loan loss provision, less productivity of management and poor quality of loans has led to the low profitability of the bank. He also recommends NBL to formulate and implement effective cost of funding for its credit and investment policies.

Likewise, Deoja (2001) conducted study entitled "A Comparative Study of the Financial Performance between Nepal State Bank of India Limited and Nepal Bangladesh Bank Limited." The researcher's main objective of study was to evaluate the trend of deposits and loan and advances of NSBIL and NBBL and to evaluate the liquidity, profitability, capital structure, turnover and capital adequacy position of NSBIL and NBBL. Through research found that the cash and bank balance to current assets, saving deposit to total deposit etc. of NSBIL are higher while fixed deposit to total deposits, loans and advances to current assets of NBBL are higher and NBBL has better turnover than NSBIL in terms of loan and advances to total deposits ratio and loan and advances to fixed deposit ratio. Through the study of the different ratios has concluded that both banks are highly leveraged.

Bhandari (1978) carried out study on lending policy of commercial bank in Nepal. During her study she found that important aspect of commercial bank is lending its funds effectively more than deposit

collection. Unless proper lending of resources is done deposit collection will be useless. It leads to disparity in economic life of people. There will be low capital formation and so less rate of development. So only increase in interest rate cannot develop the economy of nation. Though it's obvious that higher interest rates do motivate savers and so may generate higher volume of deposits.

Many researches have been conducted on deposits aspects of various financial institutions. It has focused only on deposit collection and very few have focused on investments aspects. The researches have not covered the areas for deposit mobilizations. Besides, cost involved in deposit collection i.e. interest payment to the depositors has not been considered. This study attempts to analyze the total deposit aspects. Composition of deposit collection along with interest payment to depositors are analyzed. Likewise, various sectors for deposits mobilization also have been presented in detail.

#### **CHAPTER III**

#### RESEARCH METHODOLOGY

This chapter is concerned with procedures that are adopted in this research work. It includes research design, justification of selection of the study unit, nature and sources of data, methods of data collection, data analysis tools and limitations of methodology. To accomplish the objectives mentioned above in chapter one, the study has adopted the following research procedures.

#### 3.1 Research Design

The study is designed within the framework of descriptive and analytical research design to achieve the objective of the study. Descriptive research seeks to find out the fact with the help of sufficient data and information. Some financial and statistical tools have been applied to examine facts and descriptive techniques have been adopted to evaluate deposit collection and mobilization of NABIL bank ltd.

## 3.2 Justification for the Selection of Study Unit

NABIL bank ltd. is the first joint venture bank in Nepalese banking industry established in 1984 and now is one of the leading joint venture commercial banks. The reason for its selection as study nit is due to its past performance and record of accomplishment. In due course of its operation, Nabil has a taken a leading and sensitive role in Nepalese financial intermediation. Like commercial banks, Nabil bank has extended their branches in different parts of the kingdom with the increase in scale of operation. Thus in view of wide range operation of Nabil, this study attempts o give the actual glimpse on efficient

mobilization of idle saving of individuals collected in form of deposits and also provide prompt corrective actions for self regulation mechanism and problem solving.

#### 3.3 Nature & Sources of Data

This research work is mostly based on secondary data. So secondary source is the major source for data required to conduct research work. The annual reports of the bank form the major sources of data. The regulatory data were collected from NRB directives and reports. The basic conceptual information was collected NRB publications and work papers. Besides, following sources were used to collect required data for the study.

- NRB reports & bulletins and it's official website
- Various publication related to the subject matter of the study
- Various articles published in journals and financial magazines
- Official Website of NABIL bank ltd.
- Various research papers and Dissertations

Additional information's were generated through discussions with concerned staffs of the bank.

#### 3.4 Data Collection Method

The study since is based on secondary data above mentioned sources were used for gathering necessary informations. The annual reports and other information of NABIL bank ltd. have been obtained from the Pokhara Branch and website of the bank, NRB directives. Banking and Financial Statistics and other publications are collected from the website of NRB. Existing literature on the subject matter was

collected from various research papers placed in Western Regional Library (T.U.), Pokhara. Likewise, the review of working papers conducted by various international scholars on the related matter was done through internet surfing to various websites. The conceptual review was done through assistance of related text books by various writers and publications available in the Western Regional Library (T.U.).

## 3.5 Data Analysis Tools

Presentation and analysis of the collected data is the core of the research work. The collected raw data are first presented in systematic manner in tabular forms and then are analyzed by applying different financial and statistical (descriptive) tools to achieve the research objectives. Besides, some graphs, charts and tables are presented to analyze and interpret the findings of the study. The data analysis tools used are discussed below.

#### 3.5.1 Financial Ratio Analysis Tools

Financial ratio analysis tools basically help to analyze the financial strength and weakness of a firm. Ratio analysis is one of the important financial tools that have been used in the study. Ratio is simply one number expressed in term of another and it expresses the quantitative relationship between any two numbers. There are different ratios to analyse and interpret the financial statement of a bank however financial ratios related to the subject matter of the research is used in the study which are as below.

## **Total Liquid Fund to Total Deposits Ratio:**

Total liquid funds to total deposits ratio is the expression of numerical relationship between total liquid funds and total deposits of a bank. It measures the proportion of total liquid funds in total deposits. Further more, it shows the overall short-term liquidity position. The higher ratio implies the better liquidity position and lower ratio shows the inefficient liquidity position of the bank. It is calculated by using the following model:

Total Liquid Funds to Total Deposits Ratio = 
$$\frac{\text{Total liquid Ratio}}{\text{Total Deposit}}$$

Where,

Total liquids funds = cash in hand + foreign currency in hand + balance with NRB + balance with domestic bank + balance held abroad + calls deposits

#### Cash Reserve Ratio (CRR)

It is the minimum amount of reserves a bank must hold in the form account balance with NRB and cash held in vault. This ratio ensures minimum level of the bank's first line of defense in meeting depositor's obligations. Commercial banks are required to maintain cash reserve ratio in two forms; NRB Balance and Cash at Vault specified as the Percentage of total deposits as follows:

#### NRB Balance to Total Deposits Ratio

NRB balance to total deposits ratio shows the numerical relationship between NRB balance and total deposits of a bank. It measures the proportion of NRB balance in total deposits. Following model is used to determine the NRB balance to total deposits ratio

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

#### **Cash in Vault to Total Deposit Ratio**

Cash in vault to total deposits ratio indicates the relationship between cash in vault to total deposits. It shows the percentage of total deposit maintained as vault. It is worked out by using the following model:

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

Where, Cash in vault = cash in hand + foreign currency in hand

#### Loan and Advances to Total Deposit Ratio

Loan and advances to total deposit ratio measures the proportion of total deposits mobilized by granting loan and advances. It shows the extent to which bank is capable of mobilizing its total deposits in loan and advances for the purpose of income generation. Higher ratio indicates better mobilization of total deposit collected and so vice versa. However from the liquidity view higher ratio is not preferable. It is calculated as below.

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

Where,

Loan & Advances = Total long term loan + current liabilities.

#### **Total Investments to Total Deposit Ratio**

Total investments to total deposit ratio measures the extent to which bank are able to mobilized their deposits on investment in various securities. The ratio indicates the proportion of total deposits mobilized by making investments considering appropriate liquidity level. Higher ratio indicates better mobilization of total deposit collected and so vice versa. It is calculated as below.

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

Where,

Total Investments = Government securities + NRB bonds + Foreign Government securities + Shares, Debentures and bonds + other investments

#### 3.5.2 Statistical Tools

#### **Average Mean**

A simple arithmetic mean is used to summarize the data as a representative of mass data. A mean is the average value or the sum of all observations divided by the number of observations. Mean is expressed as

$$Mean = \frac{Sum of the Values}{No of Value}$$

$$=\frac{x_1\,\Gamma\,x_2\,\Gamma\,x_3\,\Gamma....x_4}{n}$$

where,

n = number of values

 $x_1$  = individual value for the period n

#### **Standard Deviation**

Standard deviation is the absolute measure of dispersion of the values and shows the deviation or dispersion in absolute term (Kothari, 1989). Here, the standard deviation is used to find out the deviation in absolute term. Standard deviation is determined in the following way.

Standard Deviation (
$$_{x}$$
) =  $\sqrt{\frac{(XZ\overline{X})^{2}}{n}}$ ,

Where,

n = Number of observations

x = individual value,

 $\overline{X}$  = Simple Arithmetic Mean

#### **Coefficient of Variation**

Coefficient of variation is the relative measure of dispersion based on the standard deviation. It is most commonly used to measure the variation of data and is more useful for the comparative study of variability in two or more series or graphs or distribution. Symbolically, the coefficient of variation is defined as:

Co-efficient of Variation (C.V.) = 
$$\frac{X}{\overline{X}} | 100\%$$
,

Here,

= Standard Deviation

 $\overline{X} = Mean$ 

CV = Coefficient of Variation

#### **Coefficient of Correlation**

The study measures relation between the various variables. The correlation between the different variables of a bank is compared to measure the relationship between the individual variables. Correlation refers to the degree of relationship between two variables. If between two variables increase or decrease in one causes increase or decrease in another, then such variables are correlated variables. The reliability of the value of coefficient of correlation is measured by probable error. The correlation coefficient between two variables describes the degree of relationship between those two variables. It interprets whether two or more variables are correlated positively or negatively. This tool analyzes the relationship between those variables of the bank which are helpful to

make appropriate investment policy regarding deposit collection, fund mobilization and profit maximization. The Karl Pearson coefficient of correlation (r) is given as below.

Coefficient of correlation (r) = 
$$\frac{xy}{N_1^{\dagger}_1^{\dagger}_2}$$

Here,

$$x = (x - \overline{X})$$

$$y = (y - \overline{Y})$$

 $\exists_1$  = Standard Deviation of series x

 $\exists_2$  = Standard Deviation of series y

N = Number of Pairs of Observation

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

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

The coefficient of correlation has been interpreted based on probable error (P.Er.). If the value of correlation coefficient is greater than 6 times the value of probable error, the correlation coefficient is deemed as significant and reliable. If the value of correlation coefficient

is less than the value of probable error, the correlation coefficient is said to be insignificant and there is no evidence of correlation.

In the study, Karl Pearson's coefficient of correlation has been used to find out the relationship between the following variables.

- i) Correlation between Deposits and Loan and advances.
- ii) Correlation between Deposits and Investments.

## **Least Square Trend Analysis**

Least square trend analysis has been used to find out the trend of total deposits, loan and advances and investments. The general equation used for trend is given by:

y = a + bx

Where,

y = Dependent Variables,

x = Coded time in year (independent variable)

a = Y-intercept

b = Slope of the trend line.

In the above model,

$$a = y - bx$$

$$b = \frac{xy Znxy}{x^2 Znx^2}$$

## **Chapter IV**

#### DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation and analysis of data collected from different sources. The study is conducted with reference to deposit collection and mobilization of NABIL bank ltd.

## 4.1 Analysis of Deposit Position & its Composition

Deposit collection is one of the major functions of commercial banks as deposit is the primary source of dung. Commercial bank collects deposits of public in different forms of deposits like saving deposit, current deposit, fixed deposit etc. Deposits collected are to be well managed since it is the liability of the bank and there is involvement of cost in form of interest earned which is to be paid to the depositors. Based on cost, deposits are categorized as two group one as interest free deposits and other as interest bearing deposits. Interest free deposit comprises of current deposits (both local and foreign currency), margin deposits (of L/C, guarantee) and other deposits (of financial institutions, organized institutions and individuals). Likewise interest-bearing deposits comprises of saving deposits, fixed deposit (of institutions, individuals and others both in local and foreign currency) and call deposits (of financial institutions and other organized institutions). The total deposits of the bank are the sum of interest free deposits and interest bearing deposits, which are given below.

Table 4.1: Deposit Composition of NABIL (in million)

Fiscal	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	Mean
year (as								
at mid								
July)								
Interest	3,412.57	3,424.69	3,186.49	3,140.41	3,276.39	3,757,51	8,727,55	3,522.32
Free								
Deposits								
Current	2,703.82	2,034.00	2,688.97	2,799.18	2,910.59	3,395,24	5,284,37	3116.60
Deposits								
Margin	364.29	381.32	304.68	296.98	322.90	312,06	361,78	334.86
Deposits								
Other	74.46	9.37	192.84	44.25	42.90	50,81	81,40	70.86
Deposits								
Interest	12,363.86	10,022.97	11,10610	11,446.11	16,071.01	19,584,17	26,187,50	15,253.24
Bearing								
Deposits								
Saving	4,972.06	5,229.70	5,994.12	7,026.33	8,770.76	10,187,35	12,159,97	7762.90
Deposits								
Fixed	2,446.85	2,252.54	2,310.57	2,078.54	3,449.09	5,435,19	8,464,09	3775.41
Deposits								
Call	4,944.96	2,540.70	2,801.41	2,341.24	3,851.16	3,961,63	5,563,44	3714.93
Deposits								
Total	15,506.43	13,447.66	14,292.59	14,586.52	19,347.40	23,341,68	31,915,05	18775.56
Deposits								

Source: Annual Report.

As shown in the table 4.1 the total shows that volume of deposits is quite fluctuating over the study period of first four years and then it increased dramatically in last year 2007/08. The deposits volume is minimum with Rs.13,447 million in year 2002/03 and is maximum with Rs.31915.05 million in the year 2007/086. The deposits volume were almost consistent from 2001-2005 as there were immerse of so many other commercial banks and financial institutions that diverted the customer deposit. But in the year 2006 it rose up as the bank had

launched new deposit scheme with comparatively higher rate of interest and other facilities. Of the total deposits volume the interest bearing deposits cover the major part than of interest free deposits. Both the interest free deposits and interest bearing deposits are consistent in the year 2001 to 2005 and later increased in 2008. This indicates that NABIL bank ltd. has been successful in capturing the deposits from the market during the study period of 7 year.

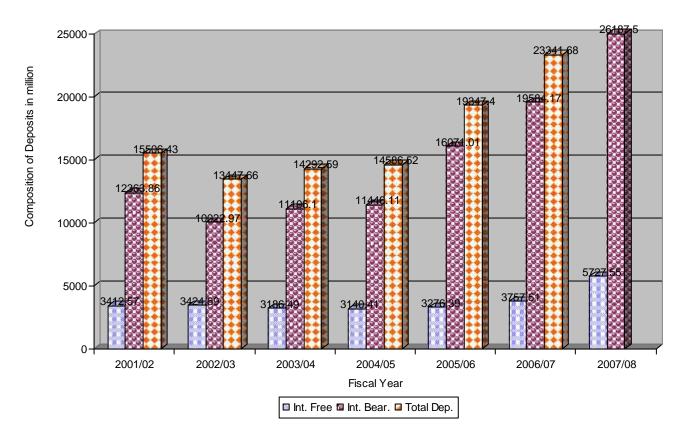


Fig.4.1: Deposit Composition of NABIL (in million)

Fig.4.1 shows the observed total deposits of the NABIL bank ltd. within the study period of last seven years. In the chart, the interest bearing deposits covers the major portion of the total deposit volume. The bar diagram of total deposit volume over the year 2001 to 2005 is quite at the consistent level where as in 2008 it is the highest. The interest bearing deposits trend over the 7 years is also observed to be same as the trend of total deposit volume. Whereas as the interest free deposit volume if almost same over all the seven years of study. Overall it indicates banks capacity to collect maximum the deposit volume from the public.

#### 4.1.1 Analysis of Cost of Deposit

The cost of deposits refers to the interest to be paid to depositors. Analysis of cost of deposits of NABIL bank ltd. has been done below.

# 4.1.1.1 Trend Analysis of Interest Expense on Deposit to Total Operating Revenue

The ratio of total interest expense on total operating revenue measures the total cost involved for collection of deposits. This ratio is calculated by dividing the total interest expenses on deposits only by total revenues. A high level of interest expense ultimately results from maximum deposits volume collected by the bank. Besides interest rate offered on deposits also affect the volume of interest expense. A high or increasing ratio of expenses to total revenues may give indication of increase in cost and so is likely to affect profitability. Other interest expense on borrowing (debentures, bond, loan from NRB, inter bank / financial institution borrowing etc) also has to be borne by the bank. Interest expense on total deposit comprise of interest to be paid to the depositors of fixed, saving and call accounts, both local and foreign currencies.

Commercial bank's earnings originate from interest on loans and advances, investments, commissions and discounts, foreign exchange rate gains and other miscellaneous income. Conversely, it expends on, depositors' interest, staff salary, provident fund allowances and other operating expenses like rent, water and electricity, fuel expenses, audit free expenses, management expenses, depreciation, miscellaneous expenses, and all other expenses directly related to the operation of bank.

Table 4.2: Interest Expense on Total Deposit to Total Operating Revenue

FY (as at mid July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Interest Expense on Deposit (in	456.77	307.50	265.47	227.90	345.97	314.5	342.47
million)							
Total Operating Revenue (in	1,639.12	1,340.50	1,333.65	1,438.44	1,716.67	2036.11	2428.87
million)							
Total Interest Expense on Deposit	27.87	22.94	19.91	15.84	20.15	15.45	14.10
to Total Operating Revenue (%)							

Source : Annual reports.

As shown in Table 4.2. The total expense on total deposit volume to total operating revenue is in decreasing trend. The ratio in 2001/02 stood at 27.87%, which later decreased over six years i.e. to Rs.15.84% in 2004/05, which was minimum, and finally in the year 2007/08 it decreased to 14.10%. The ratio of 27.87% in the year 2001/02 is maximum during the observed period. With the fluctuation in deposit volume the interest expense also has been fluctuating over period taken for study.

Fig.4.2: Interest Expense on Total Deposit to Total Operating Revenue

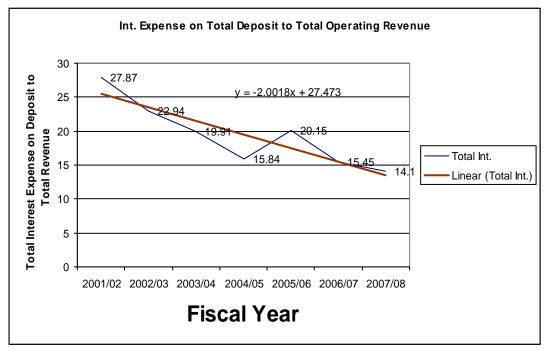


Fig.4.2 exhibits the observed total interest expense on deposit to total operating revenue ratio of NABIL bank ltd. with least square trend line within the study period of last seven years. As shown in the chart, the observed ratio declined downward only up to 2005 from 2001 and later only in 2006, the slope is upward. The ratio is in continuous decreasing trend to reach at thee all time minimum of 15.84% in FY 2004/05. And the slope is upward 20.15% in FY 2005/06 and again continuous decrease 14.1% in FY 2007/08. The slope of the trend line determined by the least square method is negative i.e.-0.0225 which speaks the decreasing trend of ratio. The negative slope thus indicates decreasing interest expenses with respect to income, which is due to decrease in deposit volume as well as decrease in interest rate offered by the bank and this has ultimately contributed to larger operating revenues.

## 4.1.1.2 Trend Analysis of Net Interest Income of NABIL

The net interest income margin measures the net return on the bank's earning assets (investment securities and loans and leases). It is calculated by deducting the total interest expense from the total interest income. Interest income is generated from loan, advances and overdraft, investments, balances in other banks, money at call and short notice and others like inter-bank loan and FCY placements. Interest expense incurs due to bank's deposit liability and borrowings from NRB or other inter bank or financial institutions.

Generally, the net interest margin ratio should be 3% to 4% with respect to earning assets and higher is better in banking industry (World Bank, 1996). However it highlights the fact that looking at returns without looking at risk can be misleading and potentially dangerous in terms of bank solvency and long run profitability (Saunders and Cornett, 2004).

Table 4.3: Net Interest Income

Fiscal year	r (as at	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	Mean
mid July)									
Total	Interest	1,120.18	1,017.87	1,001.62	1,068.75	1,310.00	1587.76	1987.70	1297.84
Income (in	million)								
Total	Interest	462.08	317.35	282.95	243.54	357.16	99.50	108.90	267.35
Expense	(in								
million)									
Net	Interest	658.11	700.52	718.67	825.20	952.84	148826	1869.80	1030.49
Income (in	million)								

Source: Annual reports.

In the past seven years, the Net interest income of NABIL bank ltd. was distributed over 658.11 million of 2001./02 and 1869.80 million of 2007/08., The minimum volume was observed in 2001/02 with Rs.658.11 million and the maximum volume was found n the concluding year 2007/08 with Rs.1869.80 million. Net interest income continuously increased over the study period of seven years and is in increasing trend. The mean of net interest income is Rs.1030.49 million for the study period. Throughout the review period the NIM ratio was found slightly above the generally accepted benchmark.

Fig.4.3: Trend of net Interest Income of NABIL

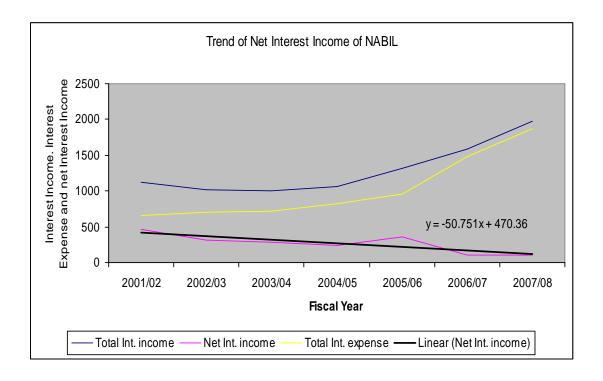


Fig.4.3 shows the trend of Net interest income along with total interest income and total interest expense from 2001/02 to 2007/08. The slope of the trend line obtained from least square trend line is positive

period. It was found increasing continuously over the years of study. The total interest income is also in the increasing trend though it remained constant for the three years i.e. / 2002/03 to 2004/05 and it increased in final year. Likewise the interest expense is in declining trend. It decreased since 2002/03 to 2004/05 and increased in 2006 to Rs.357.16 million and also decreases in 2007/08 to Rs 108.90. The increase in net interest income over the years indicates bank's capacity to maintain higher interest margin than the benchmark, despite consistent interest income in some year.

#### **4.1.2** Analysis of Uses of Deposits

Commercial bank collects deposits of public in different forms of deposits like saving deposit, current deposit, fixed deposit etc. Deposits are the primary source of fund for the commercial banks. Deposits collected are to be well managed since it is the liability of the bank and there is involvement of cost in form of interest earned to be paid to the depositors. Deposits collected are mobilized in different sectors. Thus deposits collected are used for different purposes that make up composition of assets.

The banks' assets composition represents the varied nature and consequence of the bank's function and investment policies. Usually bankers seem to arrange their assets appearing in balance sheet in descending order of liquidity. The capital and liabilities of banks are invested in various assets in the form of cash and bank balance, placements, investments, bills purchase, loans and advances and fixed assets. Of these, loans usually make the largest portion of all the assets, as

they are the least liquid form of assets and it falls under high-risk category of assets. Loans and advances contain the high proportion of potential risk to the bank's capital. Management spends significant time, energy, and resources on their asset portfolio, particularly the loan portfolio, Problems within this portfolio can detract from their ability to successfully and profitably manage other areas of the institution. Risks to the solvency of financial institutions most often derive from an impairment of assets, which in turn can arise from deterioration in the financial health and profitability of the institutions' borrowers, especially the non-financial corporations sector. Assets not only determine the soundness of a bank but also its capacity to earn profits.

Table 4.4: Uses of deposit in percentage

Fiscal Year (as at mid July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	Mean
								Year
								(as at
								mid
								July)
Cash (%)	1.80	1.13	1.71	0.86	1.07	1.00	1.38	1.279
Bank Balance (%)	4.16	5.78	4.08	2.42	1.76	4.15	5.81	4.029
Cash Money at Call (Placements) (%)	0.18	4.05	5.49	5.09	7.77	2.06	5.26	4.27
Net Investment (%)	46.51	36.41	34.85	25.06	27.67	32.82	26.77	32.87
Loan & advances & overdraft (%)	42.19	46.83	48.91	62.04	57.87	57.04	57.54	53.20
Fixed Assets (%)	1.35	1.52	2.02	2.12	1.43	1.05	1.61	1.59
Other Assets (%)	3.81	4.28	2.94	2.42	2.43	1.88	1.63	2.77
Total Assets (%)	100	100	100	100	100	100	100	

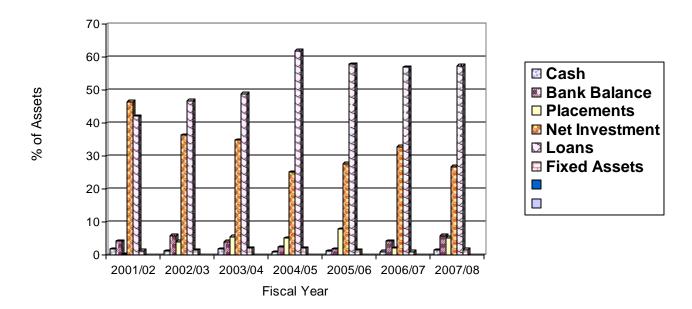
Source: Annual reports.

Table 4.4 shows assets composition of NABIL bank ltd. over the period 2001/02 to 2007/08. As shown in the table, percentage of cash and bank balance (which form the most liquid of all assets) almost remained at the

consistent level though it was in fluctuating trend in the initial 3 years. Cash and bank balance were 5.96%, 6.91%, and 5.79% and later decreased in later 2 years with 3.28% and 2.83% and increased two years with 5.15 and 7.19 cumulatively. The average cash and bank balance of 5 years was 4.82%. Money at call was minimum in FY 2001/02 at 0.18% then increased rapidly for the next 2 years and decreased slightly in 2004/05 and again increased and reached the maximum in FY 2005/06 at 7.77%. And again decreased two years in FY 5.26%. The investments composition of the total assets has shown steady decrease during the review period with 46.51% in 2001/02 and 27.77% in 2007/08. The investment proportion in the seven years period is averaged 33.79%. While in general, the total proportion of investments showed steady decrease in the review period, the loan and advances proportion seemed increasing since 2001/02. This movement observed was a switch over of investment into loans and advances since 2001/02 and 57.87% in 2007/08 with an average of 53.20%. The loan and advances were highest with 62.01% when investment was the lowest with 25.06%. As it can be seen from the Fig.4.3 major part of total assets was held in form of loans and advances and investment. Similarly, fixed assets proportions increased steadily during the period with 1.35% in 2001/02 and 2.12% in 2004/05 and slightly decreased in 2007/08 to 1.59%. The other assets proportions remained fluctuating around average 2.77%.

Assets composition of the commercial banks remained largely same in last seven financial years. As it can be seen from the tables given above major part of total assets were held in the form of loans and advances and investment, which falls under high-risk category of assets.

Fig.4.4: Uses of Deposits of NABIL



The Fig.4.4 shows the areas where deposits collected by the bank have been mobilized during the study period. It can be also said as assets composition of the bank. It reveals that asset composition of NABIL bank ltd. like in every bank remained largely in loans and investment during the last seven financial years. It is also observed that there was a switch over of investment into loans and advances since 2001-2006.

Table 4.5 Investment Composition (%)

Fiscal Year (as at mid July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
HMG Securities	50.25	59.50	62.93	56.57	37.25	53.69	46.64
Treasury Bills	30.70	26.42	37.58	15.58	19.79	45.62	38.02
Development Bonds	19.12	32.51	25.35	40.99	17.46	8.07	8.62
National Saving Bonds	0.43	0.58	0.00	0.00	0.00	0.00	0.00
Company Shares	0.27	0.37	0.38	0.64	0.45	0.65	0.80
NHFDC Limited	0.03	0.04	0.04	0.05	0.03	0.03	0.02
Far Western Rural Development Bank	0.02	0.02	0.03	0.04	0.02	0.02	0.03
Mid Western Rural Development Bank	0.04	0.05	0.05	0.07	0.05	0.03	0.03
Eastern Rural Development Bank	0.04	0.05	0.05	0.07	0.05	0.03	0.03
NIDC Capital Markets Limited	0.00	0.00	0.01	0.01	0.00	0.00	0.00
Others Banks/Agencies	0.15	0.20	0.21	0.41	0.29	0.56	0.72
Debentures & Bonds	0.00	0.00	1.91	9.68	1.24	2.56	2.44
IDBI Bank Bond	0.00	0.00	0.00	8.03	0.00	0.74	0.00
Dev. Banks of Singapore Bond	0.00	0.00	1.27	1.65	1.24	0.00	0.70
Korea Dev. Bank Bond	0.00	0.00	0.64	0.00	0.00	0.00	0.00
ICIC Bank Bond						1.82	1.74
Shares in Subsidiary Companies	0.00	0.00	0.00	0.00	0.00	0.00	00.00
Other Investments	19.48	40.13	34.78	33.17	46.43	43.09	50.12
Mutual Funds	0.01	0.02	0.02	0.03	0.02	0.01	0.01
Local Banks	0.00	0.21	0.21	0.53	1.06	0.14	-
Foreign Banks	49.47	39.90	34.55	32.61	60.00	42.94	50.11
Net-Investment (at cost) after Provision	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Nabil audited annual report 2001-2008

As shown in Table 4.5 of the total Investments, in FY 2001/02, maximum of 49.47% was invested in foreign banks followed by 30.70% in government treasury bills, 19.12% in government development bonds and remaining in other bonds and mutual funds. The proportion in foreign

banks and government treasury bills showed decrease through the period and conversely showed increase in government development bonds and share debenture and other bonds except in final year of the study, i.e. in the year 2008 investments in foreign banks increased to 50.11% along with increase in government treasury bill.

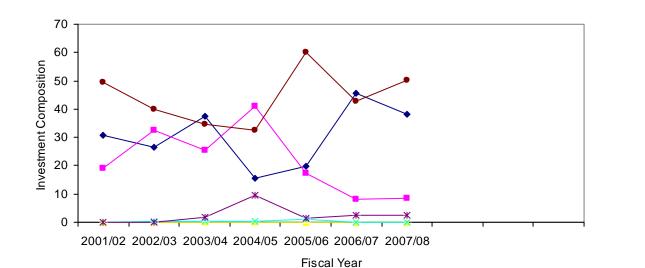


Fig. 4.5: Investment Composition (%)

Govt. Treasury Bills

Local Banks

Fig.4.5 exhibits the investment composition in terms of percentage. Of the total investments it is compose of investment in government treasury bills, government development bonds, national saving bond and remaining in other shares, bonds, debentures and mutual funds followed by investment in foreign banks as well. The proportion in foreign banks and government securities decreased and so showed decrease in overall investment. Investment in government securities is declining due to

Govt. Dev. Bonds

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\* Shares, Debentures & Bonds → Foreign Banks

Mutual Fund

government instability however investments in foreign banks have increased in the final year of the study.

Likewise loan, advances and bills purchased were the other area covering major part of total assets volume. In other words, deposits collected have been largely mobilized in loan, advances and bills purchased and so the volume and composition of NABIL bank ltd.

In FY 2001/02, business loan stood at Rs.7.13 million and was observed decreased to Rs.6.86 million in 2003/04. Again it increased and reached to Rs.9.78 million in the final year of the study. Consumer loan is observed increasing since 2003/04 till 2005/06 from 1.09 million to Rs.2.70 million. The proportion of bills purchased is consistent in the first two years and is then declining for the later two years. Finally it increased to Rs.0.2 million in 2005/06. In general, the total proportion of loan, advances and bills purchased show steady increase in the review period. The loan, advances and bills purchased proportion increased since 2001/02 from Rs.7.43 million to Rs.12.92 million in 2005/06. This movement observed was a switch over of investment into Loans and advances since 2001-02.

# 4.1.3 Analysis of Liquidity Position of the Bank

The level of liquidity influences the ability of a banking system to withstand shocks. Liquidity risk arises when an FI's liability holders like depositors demand immediate cash for the financial claims they hold with and FI. The most liquid asset is cash, which FIs can use directly to meet liability holders' demands to withdraw funds. Day to day withdrawals by liability holders are generally predictable and large FIs can expect to borrow additional funds on the money and financial markets to meet any

sudden shortfalls of cash. At times FIs face a liquidity crisis due to either a lack of confidence on the FIs' problem or some unexpected need for cash, the liability holders may demand larger withdrawals than usual. This turns the FIs' liquidity problem into a solvency problem and causes it to fail (Saunders and Cornett, 189 2004).

A commercial bank must maintain satisfactory liquidity position to satisfy the credit needs of the community, to meet demands for deposits withdrawal, pay maturity obligation in time and convert non cash assets into cash to satisfy immediate needs without loss to the bank and without consequent impact on long run profitability of the bank. To measure the liquidity position of the bank, the following measures of liquidity ratio has been calculated and its analysis has been done below.

## 4.1.3.1 Liquid Assets to Total Deposit Ratio

The ratio of liquid assets to deposit measures the levels of liquid assets available with the bank to meet short-term obligations. It measures overall liquidity position. Cash in hand, foreign currency in hand; balance with NRB, balance with domestic bank, balance held abroad and money at call are included in total liquid fund. This ratio is computed by dividing liquid assets by total deposits. The higher ratio implies the better liquidity position and lower ratio shows the inefficient liquidity position of the bank. As per NRB direction, only investments in government securities are considered as liquid.

Table 4.7: Liquid Funds to Total Deposit Ratio

Fiscal Year ( as at mid -July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/2007	2007/08
Liquid Funds (in million)	5,805.46	5,882.07	5,970.25	4,224.49	5,031.05	7,005.47	9,559.94
Total Deposits (in million )	15,506.43	13,447.66	14,119.03	14,586.61	19,347.39	23,342.28	31,915.05
Liquid Funds/Total Deposits(%)	37.44	43.74	42.29	28.96	26.00	30.01	29.95
*Industrial Average (%)	32.40	29.00	20.20	19.80	15.20	13.34	13.06
Variance from Industrial avg. (%)	+5.04	+14.74	+22.09	+9.16	+10.80	+16.67	16.89

Source: Annual report banking and financial statistics NRB No. 51 July 2008

Table 4.7 shows that the liquid funds to total deposit ratio of NABIL during the period FY 2001/02 to FY 2007/08. The ratios are in increasing trend for the first two years, thereafter it continuously decreased for the next three years. The liquid assets to deposit ratio was minimum in 2007/08 was 29.95% when the deposit was maximum Rs.31,915.05 million. Likewise the ratio was maximum in 2002/03 with 43.74% when the deposits were lowest with Rs.13, 447.66. The extreme levels of the ratio are inversely proportional to the deposit level, in absolute terms. The ratios are in fluctuation trend. The ratios were greater than the industrial average ratios in all observed year i.e. difference is positive in all period. Overall, the bank held liquid assets percentage above the industrial average.

Fig. 4.6: Liquid Funds to Total Deposit Ratio Vs Industrial Average

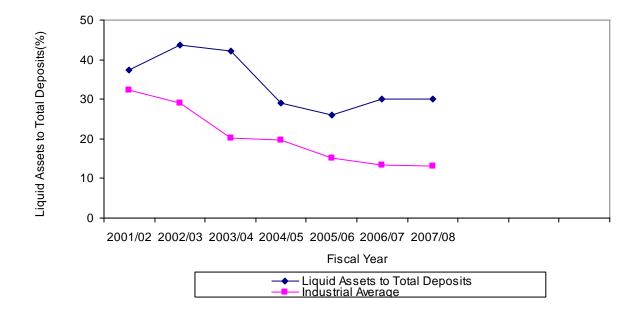


Fig.4.6 exhibits the liquid fund to total deposits ratio of the bank in comparison to the industrial average ratio within the study period of last seven years. In the chart, the total liquid fund to total deposit curve of the bank is above the industry average curve in all observed fiscal years. This fact implies that the overall liquidity position of the bank is better than industrial average ratio. However the liquidity is in decreasing trend as the bank has switched to investing on more profitable assets.

# **4.1.3.2** NRB Balance to Total Deposit Ratio

This ratio shows whether bank is holding the balance as required to NRB. To ensure adequate liquidity in the commercial banks, to meet the depositors' demand for cash at any time, to inject the confidence in depositors regarding the safety of their deposited funds NRB has put the directives to maintain certain percent of total deposit in NRB by the commercial Banks. The bank should strictly comply with the directives.

Total deposit means current, savings and fixed deposit account as well as call account deposit and certificates of deposits. For the purpose, deposits held in convertible foreign currency, employees guarantee amount and margin account will not be included (NRB Directive Manual, 2004). The following table shows the NRB Balance to total deposit ratio with compared to industrial average ratio.

Table 4.8: NRB Balance to Total Deposit Ratio

Fiscal Year (as at mid July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
NRB Balance (in million rs)	506.67	892.75	606.69	389.71	318.36	1,113.47	1,829.47
Total Deposits less Margin & FCY Dep. (million)	11,489.78	9,642.07	10,415.51	10,963.69	14,291.99	18,072.47	24,529.80
NRB Balance/Total Deposit(%)	4.41	9.26	5.82	3.55	2.33	6.16	7.46
Industrial Average (%)*	12.50	13.40	8.90	9.70	7.10	7.23	6.88
Diff. From Industrial average (%)	-8.09	-4.14	-3.08	-6.15	-4.87	-1.07	+0.58

Source: Annual report banking and financial statistics NRB No. 51 July 2008

Table 4.8 shows that NABIL bank ltd. has maintained reserve with NRB below the industry average. The above calculation is based on year-end volumes of deposit and NRB balance where as NRB calculates CRR on weekly average balances. As regard to the deposit volume, it is also fluctuating in randomly over the study period. The volume of deposit decreased in year 2002/03 and thereafter increased till the 2007/08. Likewise NRB balance also fluctuated, it was in increasing trend up to 2002/03 and then in decreasing trend and again increasing trend up to 2007/08. NRB balance to total deposit ratio of the bank is increasing in earlier two years then decreasing in later three years during the observed years. The NRB balance to deposit ratio showed maximum in 2002/03 with 9.26% when the deposit volume was minimum. And

despite the highest deposit volume was observed in 2007/08, the NRB balance to deposit ratio was seen lowest. The ratios were less than industrial average ratio in all observed years i.e. different is negative and positive in 2007/08. This implies that deposit of NABIL bank ltd. with NRB is less than that of average.

Fig 4.7: NRB Balance/Deposit ratio vs. Industrial Average

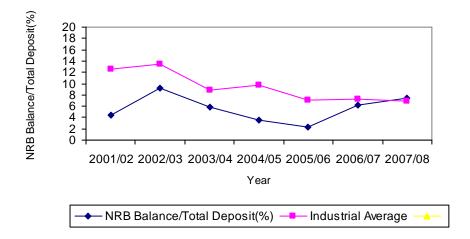


Fig.4.7 shows the NRB balance to total deposit ratio compare with the industrial average ratio within the study period of last five years. As shown in the Chart, the NRB balance to total deposit curve of NABIL bank ltd. is below the industrial average curve in all years during the study period. This fact implies that the balance with NRB of the bank is less than the average balance. The gap between the ratio of NRB balance to total deposit with the industry average shows that the bank has not maintained the balance with NRB as per the directives over the study period. The gap was minimum in 2007/08 and maximum in 2001/02. un

# 4.1.3.3 Cash at Vault to Total Deposit Ratio

This ratio shows the percentage of total deposits held as cash in hand at vault. This ratio measures the percentage of most liquid fund with the bank to make immediate payment to the depositors. This ratio is computed by dividing cash in vault by total deposits. Cash in hand and foreign currencies in hand are included as cash in vault. So, sufficient and appropriate cash reserve in the vault should be maintained. Total deposits mean current, savings and fixed deposit account as well as call account deposit and certificates of deposits. For the purpose, deposits held in convertible foreign currency, employees guarantee amount and margin account will not be included (NRB Directive Manual, 2004).

Table 4.9 : Cash at Vault to Total Deposit Ratio

Fiscal Year (as at mid July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Cash in Vault (in million Rs.)	318.16	187.78	286.89	146.35	237.81	270.40	511.43
Total Deposit less Margin & FCY	11,489.7	9,642.07	10,415.51	10,963.6	14,291.99	18,072.47	24,529.80
Dep. (in million)							
Cash at Vault /Total Deposits (%)	2.77	1.95	2.75	1.33	1.66	1.50	2.08
*Industrial Average (%)	2.80	3.20	2.90	1.80	1.90	2.17	2.32
Diff. From Industrial Average (%)	-0.03	-1.25	-0.15	-0.47	-0.24	-0.67	-0.24

Source: Annual report banking and financial statistics NRB No. 51 July 2008

Table 4.9 shows that volume of cash at vault is fluctuating and so are the volume of deposits. The ratio was maximum in 2001/02 with 2.77% and lowest in 2004/05 with 1.33%. The ratio has decreased in year 2002 and then increased in year 2003. Then in 2004 the ratio decreased again to minimum and finally increased in the final year 2007/08 with 2.08%. Cash in vaults have increased randomly over the

study period and also the increase is at lower rate then increase in deposits. So, increase in cash in vault (relatively lower rate) has fluctuating trend in the ratio for these years. But in year 2001, cash in vault is maximum, so the ratio is observed maximum. Ratio is less than the industry average in all observed year.

Fig.4.8: Cash at Vault / Deposit ratio vs Industrial Average

Fig.4.8 exhibits the observed cash in vault ratio of the NABIL bank ltd. compared with industrial average ratio within the study period of last five years. In the chart, the ratio curve indicates fluctuation of ratio in alternate years. In 2002/03 the ratio curve is replicating the industry average in opposite direction. The ratio is observed below the industry average in all the review period. IN two instances in 2001/02 and 2006/07 when the ratios were almost at equilibrium with the industry average, the ratios were above the NRB standard of 2%. Overall it indicates banks capacity to keep cash position in fluctuating.

### 4.1.4 Analysis of Asset management Position of the Bank

The inherent uncertainty of their cash flows, cost of funds and return on investments has prompted banks to seek out greater efficient in the management of their assets and liabilities. This need has led to studies concerned with how to structure a bank's assets and liabilities to make optimal trade offs among risk, return and liquidity.

Every commercial bank must be able to manage it's assets properly to earn high profit maintaining appropriate level of liquidity. Proper asset management of bank refers to the efficiency of the bank to manage it's assets in profitable way by mobilizing it's funds in the best possible way. To measure the asset management position of the bank, the following measures of asset management ratio has been calculated and its analysis has been done below.

# 4.1.4.1 Loan and Advances to Total Deposit Ratio

Commercial bank's collects deposits from the individual and institutional depositors in form of different accounts offered. These funds collected are further extended inform of loan and advances to different borrowers inform of working capital loan, fixed capital loan, import loan, export loan, hire purchase loan, mortgage loan, housing loan etc. Bank in return make earning from interest on Loans & Advances granted. However, it should also be noted that before lending bank should consider various aspects like risk analysis, diversification, bank's credit policy, NRB rules and regulations, customer's behaviors etc.

The ratio of total loan and advances to total deposit is used as a proxy measure of the asset management quality. This ratio is calculated by dividing the total loans and advances by total deposits. This ratio measures the extent to which bank is successful to mobilize it's total deposits on loan and advances for the purpose of income generation. A high ratio indicates better mobilization of deposits collected and so vice versa. However it should be also well noted that excessive high ratio might not be better from the liquidity viewpoint and it may reflect an inefficient asset management. This can be, but necessarily due to asset management deficiencies and is likely to negatively affect profitability.

Table 4.10: Loan and advances to Total Deposits Ratio

Fiscal Year (as at mid July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Total Loan & Advances (in million )	7,437.89	7,755.95	8,189.99	10,586.17	12,922.54	15,545.78	21,365.05
Total Deposits (in million)	15,506.43	13,44766	14,119.03	14,586.61	19,347.40	23,342.28	31,915.05
Total Loan & Adv to Total Deposit	47.97	57.68	58.01	72.57	66.79	66.60	66.94
Ratio (%)							
*Industrial Average (%)	60.00	61.10	61.10	59.90	64.90	60.71	68.69
Diff. From Industrial Average (%)	-12.03	-3.42	-3.09	12.67	1.89	+5.89	-1.75

Source: Annual report banking and financial statistics NRB No. 51 July 2008

As shown in Table 4.10, the total loan and advances to total deposits is in increasing trend from 2001/02 to 2007/8 and is slightly declined in 2007/08. The ratio increased in 2001/02 from 47.97% to 72.57% in 2004/05 which is the maximum of all the review period. The ratio however decreased thereafter from 66.79% to 66.94 2004/05 which is the minimum ratio of the observed years. The mean ratio of the review period was 60.60%. It can be concluded that as the ratios are satisfactorily consistent during the study period, Nabil is mobilizing is efficiently

mobilizing the collected deposits. Ratio is less than the industry average in first three study period and is higher in the later two years.

Fig 4.9: Total Loan and Advances / Total Deposit Ratio Vs Industrial Average

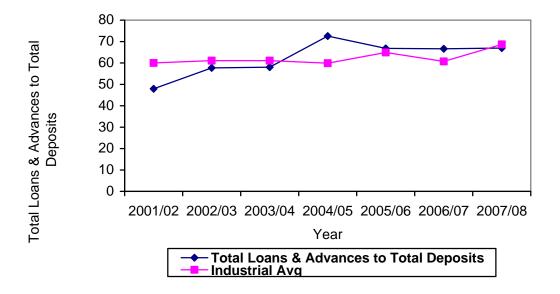


Fig.4.9 exhibits the observed total loan and advances to total deposits ratio of NABIL with industrial average ratio within the study period of last seven years. As shown in the chart, the observed ratio increased upwards from 2001/02 till 2004/05 with continuous increasing trend and reached the maximum of 72.57% and again decreased in 21007/08 with 66.94%. The ratio is observed below the industry average in the first three years of review period and got higher than the industry average in later two years. In two instances in 2003/04 and 2007/08 when the ratios were almost at equilibrium with the industry average. Overall it indicates banks capacity to maintain increasing loan and advances with respect to increase in deposits, which is considered as satisfactory asset management quality.

## **Total Investment to Total Deposit Ratio**

Besides loan and advances, a commercial bank may mobilize it's deposits by making investments in different securities issued by government and other financial and non financial organized institutions. This ratio is computed by dividing total investments by total deposits. This ratio measures the extent to which banks are able to mobilize their deposits on investments in various securities. In the process of making investment portfolio various factors like availability of fund, liquidity requirement, central bank norms etc are to be well considered. This ratio indicates the proportion of deposits mobilized for the purpose of income generation as well as maintaining liquidity in appropriate level. A high ratio indicates success of bank in mobilizing deposits in investments and so vice versa.

Table 4.11: Total Investments to Total Deposits Ratio

Fiscal Year ( as at mid -July)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/2007	2007/08
Total Investments (in million)	8,199.51	6,031.18	5,835.95	4,275.53	6,178.53	8,945.31	9,939.77
Total Deposits (in million )	15,506.43	13,447.66	14,119.03	14,586.61	19.347.40	23,342.28	31,915.05
Total Investments To Total Deposit Ratio (%)	52.88	44.85	41.33	29.31	31.93	38.32	31.14
*Industrial Average (%)	14.00	18.50	22.30	21.20	23.80	28.21	27.71
Diff. from Industrial avg. (%)	38.88	26.35	19.03	8.11	8.13	10.11	+3.43

Source: Annual report banking and financial statistics NRB No. 51 July 2008

As shown in Table 4.11, the total investments to total deposits has been in decreasing trend during the review period of 2001/02 to 2004/05 i.e. from 52.88% to 29.31% which is the minimum of all the review period and later increased slightly to 38.32% in the year 2006/07 and again declined to 31.34% in the year 2007/08. The continuous decline in total investment is due to the bank's policy to switch over of investment into loans and advances since study period of seven year. Bank has withdrawn investments and has diverted it's funds towards loan and advances as the return from investments especially government securities are lower as compared to that of others. The ratios were greater than the industrial average ratios in all observed year i.e. difference is positive in all period.

Fig.4.10: Total Investments to Total Deposit Ratio Vs Industry Average

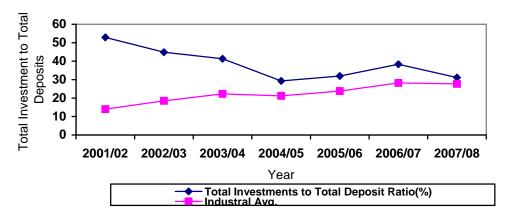


Fig.4.10 exhibits the observed total investments to total deposits ratio of NABIL bank ltd. in comparison to the industrial average ratio within the study period of last five years. As shown in the chart, the total investments to total deposit curve is above the industry average curve in all the study period. However the observed ratio is in decreasing trend which indicates decreasing investments with respect to increasing

deposits. This shows bank has switched from deposit mobilization from investments to other more profitable sectors. The negative slope thus indicates this shows that bank has switch.

## 4.1.5 Analysis of Correlation of Deposits with other variables

The study has analyzed the correlation of deposits with loan and advances and investment in addition loan and advances with investment has also analyzed.

# 4.1.5.1 Correlation between Deposits and Loan & Advances

The correlation between deposits and loan & advances measures the degree of relationship between these two. In commercial banks, deposits are the main source of fund for lending. Similarly loan and advances are very important for mobilization of collected deposits. So how increase in deposits of bank impact in the volume of loans and advances is measured by correlation. Here deposit is considered as independent variable and loans & advances as dependent variable.

Table 4.12: Correlation between Deposits and Loan & Advances

Corre	lation Coefficient (r)	P.E.	6* P.E.r	Remarks
0.974	28	0.01294	0.07764	r >6* P.E.r

As shown in Table 4.12 the correlation coefficient (r) between deposits and loan & advances of NABIL is 0.97428 and Probable Error times 6 is found 0.07764. As r > 6P.E.r, and r is positive and near to 1, it

clarifies that there is positive relationship between the deposits and loan and advances during the study period of seven years.

## **4.1.5.2** Correlation between Deposits and Investments:

The correlation between deposits and investments measures the degree of relationship between deposits and investments made by the bank. How the increases in deposits impact the investments is measured by correlation coefficient. Here also deposit is taken as independent variable and investment as dependent variable.

Table 4.13: Correlation between Deposits and Investments

Correlation Coefficient (r)	P.E.	6* P.E.r	Remarks
0.46	0.201	1.206	r <6*P.E.r

As shown in Table 4.13 the correlation coefficient (r) between deposits and investments of NABIL bank ltd. is 0.46 and Probable Error times 6 is found 1.206. As r <6 P.E.r, coefficient between deposits and investment is not significant. However as r is positive it clarifies that there is positive correlation between deposits and investments during the study period however relationship is quite nominal.

#### 4.1.5.3 Correlation between Loan & Advances and Investments:

The correlation between loan & advances and investments measures the degree of relationship between loan & advances and

investments made by the bank. This correlation measures whether the bank has a rigid policy to maintain a consistent relationship between these two assets or other factors like seasonal opportunity, economic demand, NRB directives etc have impact on volume of both loan & advances and investments. Generally every bank gives priority on loan and advances then to investments so volume of investments does not impact on loans. However either increase or decrease in volume of loans & advances directly decrease or increase the investments.

Table 4.14: Correlation between Loan & Advances and Investments

Correlation Coefficient (r)	P.E.	6* P.E.r	Remarks	
0.6592	0.1441	08484	r <6*P.E.r	

As shown in Table 4.14 the correlation coefficient (r) between loan & advances and investments of NABIL bank ltd. is 0.6592 and Probable Error times 6 is found 0.8484. As r <6 P.E.r, coefficient between loan and advances and investment is not significant. As value of (r) is negative it clarifies that there is negative correlation between loan & advances and investments.

# 4.2 Major Findings

The major findings of the study on deposit collection and mobilization of NABIL bank ltd. are as follows:

## **4.2.1** Total deposits:

Total deposits volume of NABIL bank ltd. remained largely in interest bearing deposits in the last seven financial years. The deposit volume in interest free deposits is the deposit of current deposits, margin deposits and other deposits which contributes less to the total deposit volume. The interest free deposits remained almost the same over the study period. The total deposits volume was found in increasing trend though it was at lower rate.

# 4.2.2 The cost of deposits:

The cost of deposits i.e. the total expense on the total deposit volume to total is in decreasing trend. With the fluctuation in deposit volume the interest expense also has been fluctuating over period taken for study. However the deposit volume has been increasing trend where as the cost on deposits is in decreasing trend which is due to bank offering lower interest rates as they had sufficient volume of deposits. Whereas the total operating revenue are in increasing trend.

#### **4.2.3** The Net interest income:

In the past seven years, the Net interest income of NABIL bank ltd. continuously increased. The slope of the trend line obtained from least square trend line is positive which shows increasing trend of NIM during the study period. Throughout the review period bank maintained higher interest margin.

### **4.2.4** Mobilization of deposits:

Mobilization of deposits of NABIL bank ltd. like in every banks remained largely in the loans and investment in the last seven financial years. IN the study period of 7 years, the average composition of Cash, Bank Balance, Money at Call, Investment, Loan & Advances, fixed and other assets were 1.28%, 4.30%, 4.27%, 32.67%, 53.20% and 1.59% and 2.77% respectively. The switch over of net investments on to loan and advances since 2002/03 was observed. The investment is in decreasing trend due to decrease in investment in government securities as a result of government instability.

# 4.2.5 The liquid assets:

The liquid assets to total deposit ratio of NABIL bank ltd. during the period FY 2001/02 to FY 2007/08 are in fluctuating trend for the first two years. The liquid assets to deposit ratio was minimum in 2007/08 when the deposit was maximum. Likewise the ratio was maximum in 2002/03 when the deposits were lowest. The extreme levels of the ratio are inversely proportional to the deposit level, in absolute terms. The ratios were greater than the industrial average ratios in all observed year i.e. difference is positive in all period. Overall, the bank held liquid assets percentage above the industrial average.

### 4.2.6 CRR of Nabil Bank:

The NB balance to deposit ratio showed maximum in 2002/03 when the deposit volume was minimum. And despite the highest deposit volume was observed in 2007/08, the NRB balance to deposit ratio was seen highest, NABIL bank ltd. has maintained cash reserve with NRB below the industry average, which however necessarily does not conclude inadequate cash reserve Ratio at NRB since the calculation is based on year-end volumes of deposit and NRB balances and NRB calculates CRR on weekly average balances, ratio is observed low which is a limitation of the study. However the ratio is decreasing and getting below the industry average.

#### 4.2.7 The volume of cash:

The volume of cash at vault is fluctuating alternately over the study years. The ratio is less than the industry average in all observed years, cash in vaults have increased randomly over the study period and also the increase is at lower rate than increase in deposits. The ratio is observed below the industry average in all the review period. In overall it indicates banks capacity to keep cash position in volatile.

## 4.2.8 The slope obtained:

The slope obtained from total loan and advances to total deposits ratio of the bank is positive. The positive slope of the trend line obtained with least square trend line also supports the increasing of the ratio since FY 2001/02. This reflects the increasing trend of ratio. The slope thus indicates increasing loan and advances with respect to increase in deposits, which is considered as satisfactory asset management quality.

#### 4.2.9 The total investment:

The total investment to deposit ratio of the bank fluctuated over the study period. The ratio is fluctuating in downward trend. The slope of the trend line determined by the least square method is negative indicating the down ward trend in ratio during the period of seven years. The decreasing trend of ratios implies that decreasing investments with respect to increasing deposits. This shows that bank has switch deposit mobilization from investments to other areas.

# 4.2.10 Relation between deposit and loan:

Correlation analysis shows that the correlation coefficient (r) between deposits and loan and advances of NABIL bank ltd. is 0.804 and so it is found that that there exist perfectly positive correlation between deposits and loan & advances bank during the study period. Likewise the value of 6PE is found to be 0.24. Here r> 6\*PE so the correlation coefficient between deposits and loan & advances is significant. As r is positive and near to 1 and so it can be concluded that there is high degree of association between deposits and loans & advances and both of them are directly related.

## **4.2.11** Best fit between deposit and investment:

The correlation analysis shows that the correlation coefficient (r) between deposits and investments of the bank is 0.801385 and so it is found that that there positive correlation between deposits and investments during the study period. Likewise the value of 6PE is found to be 0.60. Here r> 6\*PE so the correlation coefficient between deposits and investment is significant.

### 4.2.12 Relation between loan & advance and investment:

The correlation analysis shows that the correlation coefficient (r) between loan & advances and investments of the bank is 0.659496 and so it is found that there is negative correlation between loan & advances and investments during the study period. Likewise the value of 6PE is found to be 0.90. Here r< 6\*PE so the correlation coefficient between loan & advances and investment is not significant. As r is negative and so it can be concluded that there is negative relation.

#### **CHAPTER V**

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter includes three aspects of the study - summary, conclusion and recommendations. The first aspect summarizing the whole study, the second draws the conclusion, and the last one forwards the recommendations.

## **5.1 Summary**

The study was carried out as academic requirements for master's degree of business studies, on the topic of "Deposit Collection & Mobilization of NABIL bank ltd." The study was started with the objective to find out the fact about deposit collection pattern and it's mobilization of NABIL bank ltd. The analysis of deposit collection is done to obtain a better insight into a bank's deposits total aspects. Bank effectiveness in deposit collection and mobilization is judged on the basis of it's liquidity position, asset management position, cost on deposits management etc. There has been continuous increase in numbers of commercial banks and almost all of them are earning profit, but it has now become a challenge for these banks to attract customers for deposit and retain them for long periods. Thus, the interest was expressed to analyze the deposit collection and its mobilization of NABIL bank ltd.

The study was conducted with the general objective to analyze and evaluate effectiveness of NABIL bank ltd. in deposit collection and its mobilization. In addition with this specific objectives of the study were to analyze the trend in deposits, loan advance advances, investments, asset composition, asset management ratios, liquidity ratios, cost involved in deposit collection and correlation between the deposit and it's dependent variables of the bank is period of year 2001/02 to year 2007/08 A.D.

Various materials were reviewed in order to build up the conceptual foundation and to find out the clear destination of the research work. Meaning and functions of commercial banks, concepts of deposits and deposit mobilization, directives of NRB, uses of deposits, concept of assets liabilities management, concept of loan and, its types, concept of investments and it's benefits, concept of liquidity, its need, and liquidity management techniques etc. were reviewed as conceptual review. On the other hand, review of articles and review of dissertations were included in research review section of the report.

The research covers only seven year's period from year 2001/02 to year 2007/08 A.D. It is concerned with the deposit collection and mobilization analysis of the commercial bank. The study was designed within the framework of descriptive and analytical research design and the analysis has been made in the same way. For the study purpose, NABIL Bank Ltd. is drawn as a study unit with applying convenience-sampling technique out of 25 commercial banks. The required data, and information were collected from secondary sources. In addition with this, primary data also are used in this research work, which was collected, by using unstructured interview with concern staffs of the bank. Financial

ratios, simple mathematical and statistical tools have been implied to get the meaningful result of the collected data in this research work.

The analysis has been made the bank's ratios with compare to NRB standard, industrial average and trend of ratios. The position of deposits is in increasing trend in all the year despite the low interest rate offered and increasing numbers of commercial banks. This shows that bank have been successful in studying the market need and tapping the potential deposits with best possible means. Similarly bank has been able to maintain continuous increase in net interest margin. The compositions of assets where deposits are mobilized are well managed and deposit is mobilized in evenly manners. However assets mainly composed of loan & advances and investments. The cash in vault to total deposits ratios and NRB balance to total deposits ratio are below the industrial average and NRB directives where as the liquid funds to total deposits ratios are above the industrial average during the study periods. This shows that the liquidity position of the bank in overall is good but the bank is do not strictly follow the NRB directives. There is limitation in CRR ratio calculation as it is based on year-end volume only rather than weekly average and hence cannot be justifiable when compared with NRB norms. The assets management ratios like total loan & advances to total deposits and total investments to total deposits are favorable to the bank. Where the total loan & advances to total deposits ratio were in increasing trend except in the final year of study and total investments to total deposits were in decreasing trend though it increased in last year. It has indicated that there has been switch from investments to loan & advances. The relationship between deposits and loan and advances is found significant and also the correlation is directly and positively associated.

#### 5.2 Conclusions

Based on the findings, following conclusions have been drawn as a concluding framework of the study on deposit collection and mobilization of NABIL Bank Ltd.:

## **5.2.1 Increasing of Deposit:**

The deposit volume of NABIL bank ltd. during the study period of seven year from 2001/02 to 2007/08 shows that it has been consistent or is increasing at lower rate in the first three year and has increased dramatically in the final year. This shows that bank is putting additional effort and is aggressively caught up in deposit collection. It can be also observed that interest bearing deposits contributed major part of total deposits volume.

### **5.2.2 Interest Expenses:**

The cost involved in deposit collection or the total interest expense to total operating revenue is in decreasing trend. The cost of deposits collection and volume of deposit is heading towards opposite direction. Deposits is increasing though at smaller rate whereas interest expense on deposits is decreasing. This was due to the effect of interest rate offered by the bank to the public.

### **5.2.3** The Increasing Trend of Net Interest:

The increasing trend of net interest margin shows that spread between interest revenues and interest costs management has been able to achieve by close control over the bank's earning assets and the pursuit of the cheapest sources of funding.

## **5.2.4** The Assets Composition:

The assets composition of the bank during the study period reveals that movement of investments was observed in switch over in to loan and advances during the study period except on final year. As it can be seen the major part of total assets was held in form of loans and advances and investment, which falls under high-risk category of assets.

## **5.2.5** The Liquid Funds:

The liquid funds to total deposit ratio is above the industrial average ratio. This shows that there is very high proportion of liquid funds than the proportion of investment in income generating asset and shows lack of specific policy of invest of additional idle funds to high income generating assets in the form of investment.

#### **5.2.6 Sufficient Amount of Balance:**

The NRB balance to total deposits ratio is below the industrial average during the study period. This shows that the bank has not maintained sufficient amount of balance that must held in NRB.

# 5.2.7 Liquid Fund:

The cash in vault to total deposit ratio is below the industrial average ratio and NRB standard during the study period. This shows that ignoring the percentage of most liquid fund with the bank to make immediate payment to the depositors. It also indicates that the bank is running with the inadequate liquidity to meet its short-term obligation.

## **5.2.8** The Increasing Trend of Assets Management Ratios:

The increasing trend of assets management ratios i.e. loan and advances to deposits shows that the capability of the management to deposits to loan & advances is increasing. With the increase in deposit volume the loan & advances extended is also increasing. Whereas on the contrary the ratio of investments to deposits is decreasing. The bank's investment is in declining trend due to decrease in investment in government securities and diverting the fund in loan and advances i.e. riskier sectors yielding higher rate of return.

## 5.2.9 Loan & Advances and Deposits and Investments:

The correlation analysis shows that there is positive correlation between deposit and loan & advances and deposits and investments. Whereas the correlation between investments and loan & advances is negative during the study period. It is also found that correlation between deposits and loan & advances is significant but correlation between investment and deposits and loan & advances and investments is not significant.

#### **5.3 Recommendations**

The following recommendations are made based on the conclusions as regard to Deposits aspects of NABIL bank ltd.

5.3.1 The total deposit volume composed of interest bearing deposits and interest free deposits proportion is in increasing trend. This means the bank has been able to lure the customers of competitive market for

deposits. The bank needs to update customer's demand and arrange for special schemes, facilities and services in order to enhance the volume of deposit collection considerably by synchronizing the NRB directives as well.

- 5.3.2 Bank has been mobilizing major portion of deposits in loan & advances compared to investments as it yield higher return contributing to increase in operating revenues being involvement of high risk in loan & advances. As bank is diverting major deposits in loan & advances during the study period, there is high probability of loan default in future. So bank is advised to maintain up to international standards and increase quality of assets. Besides bank management also has to form loan recovery committee for credit appraisals and follow up measures.
- 5.3.3 During the study period of seven year it is observed that bank made a switch from investments to loan and advances as it yield comparatively higher return. There has been decrease in investment in government securities due to government instability. However since the government securities are risk free assets, with fixed rate of return bank should make appropriate investment portfolio in order to maintain equilibrium level of risk free and risky assets.
- 5.3.4 The interest expense on deposits to total operating profit ratio during the study period of seven years is in decreasing trend except in the final year. Like wise, net interest margin income of the bank is also in increasing trend through by lower ratio. the bank needs to focus more on interest income and other incomes leading to increase in total operating revenues and further control the operating expenses, which would cushion in competitive environment.

- 5.3.5 As the liquidity position of the bank is found to be high especially in liquid funds, the bank is recommended to look upon new area of lending and investment that helps in minimizing the idle funds. Otherwise, this may impact the profitability negatively. And the bank's vault to total deposits ratio and NRB balance to total deposits ratio are below the industrial average during the study period so strictly following the NRB directives is better for regulatory mandatory.
- 5.3.6 The asset management ratios i.e. loan & advances to deposits is increasing and investments to deposit is decreasing. Bank is advised to examine carefully the portfolio management strategies to maintain equilibrium in the portfolio of loans and investments and make continuous effort to explore new, competitive and high yield opportunities to maximize profit.

#### APPENDIX I

		APPE	ENDIX I			
A. AS	SSETS	FY 2058-59	FY 2059-60	FY 2060-61	FY 2061-62	$\mathbf{FY}$
2062-63	FY 2063-64	FY 2064-05				
2002-03	11 2005-04	1 1 2004-05				
Cash		318,158,820	187777015	286886222	146352555	
Casii	237818512	270406787	511426584	200000222	140332333	
Local	Currency	285369093	154683818	263166658	132448302	
Local	Currency	220109142	243058422	485566916	132770302	
Foreig	n Currency	32,789,727	33,093,197	23,719,564	13,904,253	
Poleig	17,709,370	27,348,564	25,859,668	25,719,504	13,904,233	
Rank	Balance	733,661,029	956,990,468	683,600,321	413,028,058	
Dank	Daiance	392,420,076	1,160,321,144	2,159,714,471	413,020,030	
Nenal	Rastra Bank	506674844	892746559	606694594	389705047	
riopar	rastra Baim	318358771	1,113,415,436	1,829,478,769	207702017	
Other 1	Local Banks	23,910,006	16,151,315	37,849,492	26,204,520	
o there	Bootal Balling	26,904,282	31,454568	2301306	20,201,320	
Foreig	n Banks	203,076179	48,092,594	39,056,235	2,881,508	
1 01018	47,157,023	15451140	307230639	27,020,200	2,001,000	
Money	y at Call	31,368,000	670204297	918733400	868428307	
1,10110,	1734901943	563532632	1952360700	710,00100	000120007	
Investi	ment at cost	8,199,514,813	603175547	5835948498	4275528208	
mvesti	6178533108	8945310567	9939771428	3033740470	4273320200	
HMG	Securities	4,120,294,813	3588772854	3672626438	2418431378	
TIMO	2301463338	4808348503	4646883136	3072020430	2+10+31370	
Тторен	ry Bills	2,517,317,913	1593339152	2139314736	664627668	
Treasu	1222468660	4085835004	3788386842	2139314730	004027000	
Dovole	opment Bonds	1,567,976,900	1960433702	1479311702	1753803710	
Deven	1078994678	722513499	858496294	14/9311/02	1/33603/10	
Nation	al Saving Bonds	35,000,000	35000000			
	any Shares	22,220,000		22,220,000	27,363,000	
Compa	•	57853000	22,220,000 80551900	22,220,000	27,303,000	
MHED	27,563,000 C Limited			2 125 000	2 125 000	
NHLD		2,125,000	2,125,000	2,125,000	2,125,000	
Eog W	2,125,000	1 500 000	1 500 000	1 500 000	1 500 000	
rai w	estern Rural Dev.	1,500,000	1,500,000	1,500,000	1,500,000	
M: 1	1,500,000	1,500,000	1,500,000	2 000 000	2 000 000	
M1d-W	restern Rural	3,000,000	3,000,000	3,000,000	3,000,000	
F	3,000,000	3,000,000	3,000,000	2 000 000	2 000 000	
Easteri	n Rural	3,000,000	3,000,000	3,000,000	3,000,000	
MDC	3,000,000	3,000,000	3,000,000	200.000	200.000	
	Capital Markets	300,000	300,000	300,000	300,000	
Other 1		12,295,000	12,295,000	12,295,000	17438000	
ъ.	17938000	50353000	73051900	111225000	44 550 4400	
Deben	tures & Bonds	220104542		111225000	415724180	
C1	76629082	229104542		242684440		
	in Subsidiary	4 055 000 000	1.420102702	21.41102070	1416424650	
Otner	investment	4,057,000,000	1420182693	2141102060	1416434650	
Martan	3775002688	3861002627	5076994672	1257000	2255167	
Mutua		1,000,000	1257000	1257000	2255167	
T 1 1	2358170	2307916	2551956	12500000	22500000	
Local		12500000	12500000	12500000	22500000	
г :	65704000	12500000	4993890816	2127465060	1201670402	
Foreig	n banks	4,056,000,000	2406425693	2127465060	1391679483	
T>+11	3706940518	3846194711	80551900	22/22225	120002614	
Bills p	urchase & Dis.	302,358,410	301689083	236232975	120903614	
<b>T</b> •	240876666	239868902	205200356	24000226	72007202	
Local	02024052	55,612,910	46752478	24990336	72907382	
<b>-</b> ·	83834862	79018461	172348114	011040600	4700 6000	
Foreig		246,745,500	254936605	211242639	47996232	
	157041804	160850441	32852242			

Loan, Advances & Over	:. 7,135,536,266	7454262902	7953759876	10465266388
12681666487	15305909828	21159852962		
Local	7,050,665,802	7378029069	7582466725	10261188129
	12681666487	15305909828	21159852962	
Foreign	84,870,464	76223833	371293151	204078259
Fixed assets	237638807	251915161	338126262	361235392
319086147	286895224	598038998		
Other assets	671016247	708610519	492199 084	413339570
544668139	512050004	606393650		
Non-Banking Assets				
Interbranch Assets				
Loan Loss Provision				
<b>Total Assets</b>	17629252392	16562624992	16745486638	17064082093
	22329971078			

B. LIABILITIES & CAPITAL		2058/59	FY 2059/60	FY 2060/61	FY 2061/62	
	FY 2062/63	FY 2	063/64 FY 20	064/65		
Shares Capital	491654400 491654400		491654400	491654400	491654400	
			491654400	689216000		
Authorised Capital	500000000		500000000	500000000	500000000	
50000000	500000000 16000		000000			
Issued Capital	491654400		491654400	491654400	491654400	
491654400						
Paid-Up Capital	491654400		491654400	491654400	491654400	
491654400	491654400 68921		16000			
Reserve Funds	6547	773894	822533056	990027903	1165983908	1383340017
General Reserve	568832115		652079277	743200000	847000000	
975000000	1565394313 17479		982989			
Share Premium	74000		74000	74000	74000	
74000	74000		74000			
Capital Adjustment Res.	49165440		103247424	162800000	228300000	
300300000	105000000					
Retained Earning	2110372		29794031	29794031	29981908	
33438017	113381555		162544589			
Contigent Reserve	3750000		4750000	5750000	6750000	
7750000	8500000 95000		000			
Dividend Equalization Fund				11931872	13500000	
2000000	100000000			100000000		
Exchange Fluctuation Res.	28263967		30010324	33900000	37800000	
44200000	55700000 64100		0000			
Special Reserve Fund	2578	3000	2578000	2578000	2578000	
2578000	2578000 25780		000			
Other Reserve						

Borrowi	ng from Other Ba	nk 41729	8060	961461153	229660000	17062680	
	173201710	882572500	136000	00000			
Local		41729	8060	961461153	229660000	17062680	173201710
Nepal Ra	astra Bank-Repurch	nase 17994	9060	606337342			
	astra Bank-Refinan		9000	5123811			
•		600000000	600000	0000			
Other Bo	orrowings	10000	0000	350000000			
Foreign	C						
Deposits		15506	428215	16447661064	14119032115	14586608707	
Ir	19347399440						
Current	1,01,0,,110		18737	3034002537	2688966557	2799184977	
Current	2910589772	3395239772	528436		2000,0000,	2///10.//	
Savings	2)1030)//2		56618		5994121406	7026334402	
Buvings	8770759429	10187354402			3771121100	7020331102	
Call	0110137427		60238	2540701246	2801405837	2341328577	
Cuii	3851159944	3961633457			2001403037	2341320377	
Fixed	3031137777		45914		2310571784	2078535135	
TIACU	3449094149	5435189720			2310371704	2070333133	
Others	3447074147		258		19284000	44249385	
Others	12007227				19284000	44249383	
м.	42896336	50807875	814040		204692521	20/07/221	
Margin	222000010		7450		304682531	296976231	
	322899810	312060101	361782		4-240020-	440==0000	
Bills pay			859	108943551	173499287	119753038	
	112606739	83514820	238421				
Other Lia		49134		730371768	741612933	717352651	
	821771772	887970646	942090				
Total Lia	abilities	17629	252392	16562624992	16745486638	17064082093	
	22329971078						

## APPENDIX II NABIL BANK LIMITED

Comparative Income and Expense Statement (Amount in Actual)

<b>A.INCOME</b>	2001-0	)2	2002-03	2003-04	2004-05
2005-06	2006-07				
<u>Interest Income</u> 1,309,998,500		84,120 1,978,6	1,017,872,280 96,727	1,001,616,901	1,068,746,769
Loans, Advances & Overd				761,616,605	831,829,635
988,413,451	1,167,255,366				
Loans & Advances		2,580		517,962,940	560,469,027
655,993,120 Overdrafts	789,386,811	989,764 3,453		243,653,665	271,360,608
332,420,331	377,868,556	506.479	9.065	243,033,003	271,300,000
<u>Investments</u>			174,861,230	198,941,190	173,985,895
145,112,444	152,005,445				
Treasury Bills			61,802,717	78,792,956	62,620,921
37,289,515	71,195,842				
Development Bonds	65,445			112,113,971	88,442,986
92,907,974				4.074.004	
National Savings Certific	ates 2,995,0	537	3,019,085	1,854,081	-
- Od - J				c 100 100	22 021 000
Other Investments	10,431,846	1 / 001	- <b>5</b> 60	6,180,182	22,921,988
14,914,955		,	,	1 927 620	1 00/ 271
Agency Balances 3,299,933	3,445,0 4,844,709			1,827,629	1,884,371
Local Banks	4,044,709	3,349,	003		
	3 445 (	589	2 317 666	1,827,629	1,884,371
3 299 933	3,445,0 4,844,709	3 549 (	683	1,027,027	1,004,571
Money at Call & Short				10,185,740	21,444,455
	62,940,438			10,100,710	21,111,100
Local Banks	360.75	1	<u>-</u>	388,329	1,734,652
2,312,904	1,387,874	6,503,	123	,	, ,
Foreign Banks	_			9,797,411	19,709,803
37,169,241	61,552,564	28,911	,689		
Others		2,515	64,305,736	29,045,737	39,602,413
133,690,527					
Commission & Discoun		6,964	144,405,701	138,574,407	128,883,480
138,293,913	150,608,550				
Bills Purchase & Discou				7,238,595	6,134,477
6,322,210				5 572 710	001 (40
Locals 882,240	2,086,3 503,044	512		5,573,718	821,643
			1,351,976	1 664 977	5,312,834
Foreign 5,439,970	6,409,437	5,427,0		1,664,877	3,312,034
Commission	93,876		132,877,604	129,778,847	113,473,829
113,770,318	121,956,753	130,52		127,770,047	113,473,027
Letter Of Credit	41,942		55,708,621	45,835,835	32,660,396
31,413,940	34,462,484	35,060		.0,000,000	22,000,000
Guarantee	20,037		25,022,036	23,533,764	22,309,605
20,684,491	23,005,527	25,732		, ,	, ,
Collection Fees	5,364,0		1,913,769	2,371,864	2,598,879
2,243,020	2,774,728	2,829,			
Remittance Fee	19,370	,843	41,090,764	43,651,993	38,934,663
34,470,010	32,123,215	39,764	,835		
Credits Cards	7,162,		9,142,414	14,385,391	16,970,286
24,958,857	29,590,799	27,133			
<u>Others</u>	16,307		5,683,315	1,556,965	8,768,224
18,201,385	21,739,316	19,349	,341		

Exchan	ge Gain 185,483,662	200 026	154,219	),398 106 48°	144,075,171	157,324,299	184,878,868	
Dovoluo	105,405,002	209,920	,107 - 12 606 :	190,40 <i>1</i> 556	6 085 426	15,300,154	15,280,960	
Kevaiua	25 260 491	<b>45 987</b> 3	12,000,. 379	33 AAA	6,985,426 784	13,300,134	13,280,900	
Tradino	Gain	43,707,0	141 612	93, <del>111</del> , 9842	137 089 745	142,024,145	169,597,908	
Trading	25.260.491	163,938	.788	163.042	137,089,745 2,631	1 12,02 1,1 13	100,501,000	
Non-one	erating Income	100,500	(50.239	)	86.946.330	92,780,639	72,241,283	
11022 00	erating Income 735,324	5,280,64	41	<sup>^</sup> 24,083,	737	>=,. 00,00>	, ,	
Profit/Lo	oss on Sale of Ass	sets	(373,23	9)	7.223	347,465	(524,942)	
	(499,486)	(2,104,6	508)	586,930	)	- ',	(- ,- ,	
Dividen	(499,486) d 469,205	, , ,	323,000	)	418,000	456,000	476,853	
	469,205	720,323		1,850,8	62			
Others			-		86,521,107	91,977,174	72,289,372	
	73,557,805	43,594,9	929	50,780,	86,521,107 834			
Recover	y from Book Wri	te Off	-		86,521,107 834	91,977,174	72,289,372	
	73,557,805	43,594,9	929	50,780,	834			
Accounts <u>Others Income</u>								
<b>Others</b>	<u>Income</u>		250,374	<b>l,804</b>	34,150,842	38,754,927	55,933,830	
	82,897,862	87,574,5	553	97,444,	578			
Rent on	Safe Deposits Lo	ckers	1,191,0	48	1,587,251	1,222,675	1,683,000	
	1,835,592							
Issue &	Renewal of Credi	t Cards	5,363,3	03	5,505,768	9,909,732	8,257,311	
	8,819,196							
	Renewal of ATM					479,504	3,630,710	
	7,257,359	8,606,40	)1	12,829,	400			
						9,912,134	7,877,445	
	8,988,260 Charges	9,647,57	71	9,622,0	72			
Services	Charges		5,336,2	16	5,546,763	7,394,846	22,230,077	
	41,451,574	44,147,2	223	61,914,	129			
Provisio	n Write Back		227,989	9,217	6,221,650	-	-	
0.1	-		50 <b>2 155</b>	_	1.075.110	0.025.025	10077007	
Others	4.4.7.4.7.004	10 100	602,477	20015	4,276,412	9,836,036	12,255,287	
	14,545,881	13,469,6	528	29,916				
Total			1 620 0	65 047	1 427 450 224	1 420 051 172		
Total	1 510 694 220	1 700 20		บ <b>ว,</b> บ4/ ว กวา ๑	1,427,450,324 04,471 2,452,9	1,447,031,173 47 311		
	1,510,084,430	1,/90,20	11,401	2,031,8	04,4/1 2,452,9	41,411		

## APPENDIX III Assets Composition of Nabil Bank

			2001/02	2002/03	2003/04
2004/05	2005/06	2006-07	2007-08		
	Cash		318,158,820	187,777,015	286,886,222
146,352,555	237,818,512	270,406,987	511,426,584		
	Bank Balance		733,661,029	956,990,468	683,600,321
413,028,059	392,420,076	1,129,418,864	2,154,714,471		
	Money at Call or	Short Notice			
	(Placements)		31,368,000	670,204,297	918,773,400
868,428,307	1,734,901,943	563,532,632	1,952,360,700		
	Net Investment (A	At Cost) after			
	Provision		8,199,514,813	6,031,175,547	5,835,948,498
4,275,528,208	6,178,533,108	8,945,310,567	9,939,771,428		
	Loans, Advances	& Overdrafts	7,437,894,676	7,755,951,985	8,189,992,851
10,586,170,002	12,922,543,153	15,545,778,730	21,365,053,318		
	Fixed Assets		237,638,807	251,915,161	338,126,262
361,235,392	319,086,147	286,895,224	598,038,998		
	Other Assets		671,016,247	708,610,519	492,199,084
413,339,570	544,668,139	512,050,004	606,393,650		
	Total Assets		17,629,252,392	16,562,624,992	16,745,486,638
17,064,082,093	22,329,971,078	27,253,393,008	37,132,759,149		

# APPENDIX IV Investment Composition of Nabil Bank

2003-04	Investment 2004-05 20	005-06	2006-07	2000-01	2007-08	2001-02	2002-03
2005-04	HMG Securities	005-00	2000-0	2,732,95		4,120,294,813	3,588,772,854
3,672,626,438		,301,463,338	4,808,3		4,646,88		0,000,772,004
-,- ,,	Treasury Bills	, , ,	,,-	1,857,68		2,517,317,913	1,593,339,152
2,193,314,736		,222,468,660	4,085,8		3,788,38		
	Development Bonds			840,270,		1,567,976,900	1,960,433,702
1,479,311,702		,078,994,678	722,513		858,496		25 000 000
	National Savings Bo	ond		35,000,0	00	35,000,000	35,000,000
-	-						
	<b>Company Shares</b>			18,820,0	00	22,220,000	22,220,000
22,220,000		7,563,000	57,853,		80,551,9		
	NHFDC Limited			2,125,00	0	2,125,000	2,125,000
2,125,000		,125,000					
	Far Western Rural I						1,500,000
1,500,000	, ,	,500,000			1,500,00		2 000 000
2 000 000	Mid-Western Rural					3,000,000	3,000,000
3,000,000		,000,000			3,000,00		2 000 000
2 000 000	Eastern Rural Devel	,000,000				3,000,000	3,000,000
3,000,000	3,000,000 3, NIDC Capital Mark		3,000,0	00 100,000	3,000,00	300,000	300,000
300,000	300,000	lets Littlited		100,000		300,000	300,000
300,000	Other Banks/Agenc	iec		9,095,00	0	12,295,000	12,295,000
12,295,000	17,438,000 17		50 353	000			12,273,000
12,233,000	Debentures & Bon	. , ,	50,555,	-	75,051,	-	_
415,72	4,180 76,629,082		,542	242,684,	400		
,	Shares in Subsidia			-		-	-
-	-						
	Others Investment			4,952,52		4,057,000,000	2,420,182,693
2,141,222,060		,775,002,688	3,861,0	02,627			1 257 000
1 257 000	Mutual Fund	257,000	1 257 0	1,000,000		1,000,000	1,257,000
1,257,000	1,257,000 1, Swift Investments	,257,000	1,257,0	00	1,257,00	00	
998,16		1.050.0	16	1,294,95	6	-	-
990,10	Local Banks	1,030,9	10	1,234,33	U	_	12,500,000
12,500,000	22,500,000 65	5.704.000	12,500	000	_		12,500,000
12,500,000	Foreign Banks	2,701,000	12,500,	4,951,52	9.500	4,056,000,000	2,406,425,693
2,127,465,060		,706,940,518	3,846,1		4,993,89		,,,
	Less: Provisioning			-		-	-
120,000	2,425,000 2,	,125,000	10,998,	105	26,790,7	780	
	Net Investment		00:-:	7,704,30		8,199,514,813	6,031,175,547
5,835,948,498	4,275,528,208 6,	,178,533,108	8,945,3	10,567	9,939,77	71,428	

## APPENDIX V NABIL BANK LIMITED

Calculation of Liquidity Ratios

	Liquid	Assets to Total D	eposits	2001-02	2002-03	2003-04
	2004-05	2005-06	2006-07	2007-08		
	Cash			318,158,820	187,777,015	286,886,222
	146,352,555	237,818,512	270,406,987	511,426,584		
	NRB B	alance		506,674,844	892,746,559	606,694,594
	389,705,047	318,358,771	1,113,415,436	1,829,470,769		
	Bank Balance			226,986,185	64,243,909	76,905,727
	23,323,012	74,061,305	16,003,428	330,243,702		
	Placem	ent		31,368,000	670,204,297	918,733,400
	868,428,307	1,734,901,943	563,532,632	1,952,360,700		
	Investm	nent		4,120,294,813	3,588,772,854	3,672,626,438
	2,413,939,370	2,301,463,338	4,808,348,503	4,646,863,136		
	Secureo	l Loan against owi	n FDR	212,402,401	77,975,366	104,713,423
	135,948,000	182,823,470	203,247,042	169,752,284		
	Secureo	l Loan against Gov	vt. Sec	389,578,159	400,346,046	303,688,177
	246,790,000	181,625,000	30,515,755	119,800,645		
	Total L	iquid Assets		5,805,463,222	5,882,066,046	5,970,247,981
	4,224,486,291	5,031,052,339	7,005,469,783	9,559,937,820		
	Total D	eposits		15,506428,215	13,447,661,064	14,119,032,115
	14,586,608,707	19,347,399,440	23,342,285,327	31,915,047,467		
	Liquid	Assets to Total De	posits	37.44%	43.74%	42.29%
28.96%	26.00%	30.01%	29.95%			
	Industri	al Average (%)		32.40%	29.00%	20.20%
19.80%	18.10%	13.06%	15.70%			
	Varian	ce from Industria	ıl avg	5.04%	14.74%	22.09%
9.16%	7.90%	16.95%	14.25%			

	NRB to	Total Deposits		2001-02	2002-03	2003-04
	2004-05	2005-06	2006-07	2007-08		
	NRB B	alance		506,674,844	892,746,559	606,694,594
	389,705,047	318,358,771	1,113,415,436	1,829,470,769		
	Total D	eposits Less Marg	in & FCY Dep	11,489,779,957	9,642,070,110	10,415,514,200
	10,963,692,429	14,291,995,416	18,072,475,905	24,529,797,200		
	NRB B	alance/Total Depo	sit (%)	4.41%	9.26%	5.82%
3.55%	2.23%	6.16%	7.46%			
	Industri	al Average (%)		12.50%	13.40%	8.90%
9.70%	9.28%	6.88%	7.23%			
	Varianc	e from Industrial	Avg	-8.09%	-4.14%	-3.08%
6.15%	-7.05%	0.72%	0.23%			
	Margin	Account Balances	3	364,287,450	381,315,421	304,682,531
	296,976,231	322,899,810	312,060,101	361,782,186		
	FCY De	eposits		3,652,360,808	3,424,275,533	3,398,835,384
	3,325,940,047	4,732,504,214	4,957,749,321	7,023,468,081		

	Cash at	t Vault to Total <b>D</b>	<b>Deposits</b>	2001-02	2002-03	2003-04
	2004-05	2005-06	2006-07	2007-08		
	Cash at	Vault (in Millions	s)	318,158,820	187,777,015	286,886,222
	146,352,555	237,818,512	270,406,987	511,426,584		
	Total D	eposits Less Marg	in & FCY Dep	11,489,779,957	9,642,070,110	10,415,514,200
	10,963,692,429	14,291,995,416	18,072,475,905	24,529,797,200		
	Cash at	Vault/Total Depo	sit (%)	2.77%	1.95%	2.75%
1.33%	1.66%	1.50%	2.08%			

	Industr	ial Average (%)		2.80%	3.20%	2.90%
1.80%	2.10%	2.32%	2.97%			
	Variance from Industrial Avg				-1.25%	-0.15%
-0.47%	-0.44%	-0.82%	0.89%			
	Margin	Account Balance	es	634,287,450	381,315,421	304,682,531
	296,976,231	322,899,810	312,060,101	52,361,782,186		
FCY Deposits				3,652,360,808	3,424,275,533	3,398,835,384
	3,325,940,047	4,732,504,214	7,957,749,321	7,023,468,081		

 $\sqrt{}$ 

APPENDIX VI Co-relation between Total Deposit and Loan & Advances

FY	Deposit(x)	Loan & Adv.(y)	(x-x)	$(\mathbf{x}-\mathbf{x})^2$	(y-
$\mathbf{y}) \qquad (\mathbf{y}\mathbf{-y})^2$	(y-y)				
2001-02	15.50	7.44	-3.39	11.49	-
4.53	20.52	15.36			
2002-03	13.45	7.75	-5.44	29.69	-
4.22	17.80	22.16			
2003-04	14.12	8.18	-4.77	22.75	-
3.79	14.36	18.08			
2004-05	14.58	10.58	-4.31	18.58	-
1.39	1.93	5.99			
2005-06	19.35	12.92	0.46	0.21	
0.95	0.90	0.437			
2006-07`	23.34	15.54	4.45	19.80	
3.57	12.74	15.89			
2007-08	31.91	21.36	13.02	169.52	
9.39	88.17	122.26			
	$\sum x = 132.25$	$\sum y = 83.77$		272.04	
		200.97			
	$\mathbf{x} = 1$	132.25 = 18.89	y = 83.77	<u>=</u> 11.97	

4. Covariance 
$$= \frac{1}{n} \sum_{t=1}^{n} (x-x) (y-y)$$
$$= \frac{1}{7} (200.97)$$
$$= 28.71$$

22.34 = 4.73

5. Correlation (r) = 
$$\frac{\text{Cov xy}}{\text{x}} = \frac{28.71}{29.4679}$$

$$= 0.97428$$

#### Calculation of P.E

PE =0.6745 × 
$$\frac{1-r^2}{\sqrt{n}}$$
  
= 0.6745 ×  $\frac{1-0.94922}{\sqrt{7}}$   
= 0.6745 ×  $\frac{0.05078}{2.6457}$   
=0.6745 × 0.01919

= 0.01294

#### APPENDIX VII

	Co-relation	between Total Deposi	it and Loan & Ad	lvances		
$\mathbf{FY}$	Deposit(x)	Investment(y)	(x-x)	$(\mathbf{x}\mathbf{-}\mathbf{x})^2$	(y-y)	(y-y
$(\mathbf{x}\mathbf{-}\mathbf{x})\ (\mathbf{y}\mathbf{-}\mathbf{y})$	_	-				
2001/02	15.50	8.20	-3.40	11.56	-	
1.56	2.44	5.31				
2002/03	13.45	6.03	-5.45	29.71	-	
3.73	13.92	20.33				
2003/04	14.12	5.83	-4.78	22.85	-	
3.93	15.45	18.79				
2004/05	14.58	4.27	-4.32	18.67	-	
5.49	30.14	23.72				
2005/06	19.35	6.18	0.45	0.21	-	
3.58	12.82	-1.62				
2006/07	23.34	8.94	4.44	19.72	-	
0.82	0.68	-3.64				
2007/08	31.91	9.94	13.01	169.26		
0.18	0.04	2.35				
	132.25	68.29		271.98		
	75.49	65.24				

Mean(x) = 
$$\underline{132.25}$$
 = 18.90  $y = \underline{68.29}$  = 9.76  $y = \underline{68.29}$   $y = \underline{68.29}$ 

0.79

S.D. 
$$\sigma x = \sqrt{\sigma^2 x} = \sqrt{38.86} = 6.23$$
  $\sigma y = \sqrt{\sigma^2 y} = \sqrt{10.79} = 3.28$ 

Covariance = 
$$\frac{1}{n} \sum_{t=1}^{n} (x-x) (y-y)$$
  
=  $\frac{1}{n} (65.25) = 9.33$   
Correlation =  $\frac{\text{Cov } xy}{\sigma x} = \frac{9.33}{\sigma x} = \frac{9.33}{20.31} = 0.46$ 

#### Calculation of PE

PE=0.6745 × 
$$\frac{1-r^2}{\sqrt{n}}$$
  
= 0.6745 ×  $\frac{1-(0.46)^2}{\sqrt{5}}$   
=0.6745 × 0.298  
= 0.201

#### **APPENDIX VIII**

FY	Total Loans(x)	Total Investme	ent(y) $(x-x)$	$(\mathbf{x}\mathbf{-}\mathbf{x})^2$	(y-y)	
$(y-y)^2$	(x-x)					
		(y-y)				
2001/02	7.44	8.20	-4.53	20.5209	1.15	
1.3225	-5.21					
2002/03	7.75	6.03	-4.22	17.8084	-1.02	
1.0404	4.30					
2003/04	8.19	5.83	-3.78	14.2884	-1.22	
1.4884	4.61					
2004/05	10.59	4.27	-1.38	1.9044	-2.78	
7.7284	3.84					
2005/06	12.92	6.18	0.95	0.9025	-0.87	
0.7569	-0.83					
2006/07	15.54	8.94	3.57	12.7449	1.89	
3.5721	6.75					
2007/08	21.36	9.94	9.39	88.1721	2.89	
8.3521	27.14	83.77		49.39		
156.341	.6	24.2608	40.60			

Variance (
$$^{2}x$$
) =  $\frac{1}{2}\sum_{x=0}^{\infty}(x-x)^{2}=\frac{1}{2}(156.34)$   $^{2}y=\frac{1}{2}\sum_{x=0}^{\infty}(y-y)^{2}=\frac{1}{2}$  (24.2608)

 $y=\frac{1}{2}\sum_{x=0}^{\infty}(y-y)^{2}=\frac{1}{2}$ 
 $y=\frac{1}{2}\sum_{x=0}^{\infty}(y-y)^{2}=\frac{1}{2}$ 

Covariance = 
$$\frac{1}{2} \sum_{x=1}^{\infty} (x-x) (y-y)$$
  
 $\frac{1}{2} (40.60) = 5.8$   
Correlation (r) =  $\frac{\text{Cov } xy}{x} = \frac{5.8}{(4.726)(1.8617)} = 0.6592$ 

## **Calculation of PE**

PE= 
$$0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$
  
=  $0.6745 \times \frac{1 - (-0.6592)^2}{\sqrt{7}}$   
=  $0.6745 \times \frac{0.5654}{\sqrt{7}}$ 

## APPENDIX IX Some Ratios of COMMERCIAL BANKS

		Mid-July					
	2001	2002	2003	2004	2005	2006	
A. GDP, DEPOSITS, CREDIT & INVES.							
1. Deposit/ GDP	44.25	43.85	41.42	43.56	42.82	44.53	
2. Credit/ GDP	26.56	26.80	25.30	26.09	27.78	27.03	
3. Investment/ GDP	6.19	8.10	9.22	9.25	10.21	12.56	
4. Credit & Investment/GDP	32.76	34.91	34.52	35.34	37.99	39.60	
5. Time Deposit/ GDP	35.62	35.06	32.61	33.40	33.48	34.89	
6. Current Deposit/ GDP	8.63	8.79	5.86	6.28	5.88	5.72	
7. Credit/ Total Deposit	60.03	61.13	61.08	59.89	64.86	60.71	
8. Investment/ Total Deposit	14.00	18.48	22.26	21.24	23.84	28.21	
9. Credit & Investment/ Total Deposit	74.03	79.60	83.34	81.13	88.70	88.93	
10. Time Deposit/ Total Deposit	80.49	79.95	78.74	76.67	78.17	78.36	
11. Current Deposit/ Total Deposit	19.51	20.05	14.16	14.43	13.73	12.84	
12. Credit to Govt.Entp./ Total Credit	2.67	2.34	2.30	1.80	1.49	2.82	
13. Credit to Pvt. Sector/ Total Credit	97.33	97.66	97.70	98.20	98.51	97.18	
B. LIQUIDITY							
1. NRB Balance/ Total Deposit	12.51	13.44	8.91	9.72	7.08	7.23	
2. Vault/ Total Deposit	2.79	3.19	2.87	1.83	1.89	2.17	
3. Total Liquid Fund/ Total Deposit	32.43	28.97	20.15	19.78	15.20	13.34	
C. CAPITAL ADEQUACY							
1. Capital/ Total Deposit	4.53	5.51	5.79	(4.36)	(7.58)	(6.09)	
2. Capital/ Total Credit	7.54	9.01	9.49	(7.29)	(10.82)	(10.03)	
3. Capital/ Total Assets	3.27	3.71	3.87	(3.00)	(4.65)	(4.14)	
4. Capital Fund/ Risk weighted Assets	(5.49)	(9.88)	(12.04)	(9.07)	(6.33)	(5.30)	